

|              |                    |                    |              |           |
|--------------|--------------------|--------------------|--------------|-----------|
| F.A.I. RTE.  | SECTION            | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 90/94<br>290 | 0101.6-2P-1-3 (13) | COOK               | 37           | 1         |
|              | ILLINOIS           | CONTRACT NO. 60W36 |              |           |

\* 37 + 5 = 42  
D-91-271-13

STATE OF ILLINOIS 08-02-13 LETTING ITEM 113  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

F.A.I. 90 /94  
AT I-290 (CIRCLE INTERCHANGE)  
VARIOUS LOCATIONS  
SECTION: 0101.6-2P-1-3 (13)

TUNNEL BULKHEADING  
COOK COUNTY  
C-91-271-13



**COLLINS ENGINEERS**  
ILLINOIS PROFESSIONAL DESIGN FIRM No. 184-000993  
123 N. WACKER DR.,  
SUITE 900  
CHICAGO, IL 60606  
(312) 704-9300

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED APRIL 8, 2013

*[Signature]*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 10 2013  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2013  
*[Signature]*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

*[Professional Engineer Seal]*  
MATTHEW G. REMPFER  
NO. 062-054553  
EXPIRES 11-30-2013  
4/5/2013

COLLINS ENGINEERS, INC.  
MATTHEW G. REMPFER  
NO. 062-054553  
EXPIRES 11-30-2013

PROJECT LOCATED IN CITY OF CHICAGO

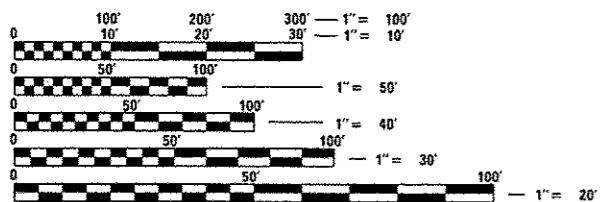
FOR INDEX OF SHEETS, SEE SHEET NO. 2

**DESIGN DESIGNATION**

DESIGN DESIGNATION:

|               | ADT(2012) | ADT(2040) | DESIGN SPEED | POSTED SPEED |
|---------------|-----------|-----------|--------------|--------------|
| VAN BUREN ST. | 4,600     | 5,000     | 30           | 30           |
| HALSTED ST.   | 21,000    | 23,000    | 30           | 30           |
| HARRISON ST.  | 16,800    | 17,000    | 30           | 30           |

DISTRICT 1 DESIGN /CONSULTANT SERVICES: BRIAN KUTTAB, P.E. (847)705-4431 SCHAUMBURG, ILLINOIS



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

C.U.A.N.  
CHICAGO UTILITY ALERT NETWORK  
(312) 744-7000

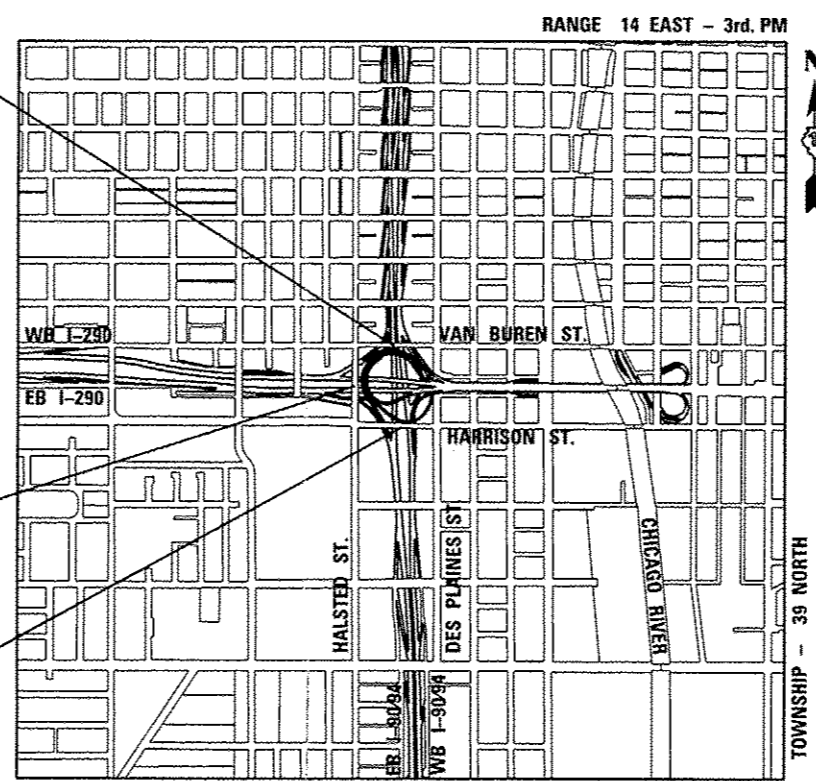
PROJECT ENGINEER: ADDIS ABEBAW  
PROJECT MANAGER: BRIAN KUTTAB

CONTRACT NO. 60W36

LOCATION 1:  
VAN BUREN ST.

LOCATION 2:  
HALSTED ST.

LOCATION 3:  
HARRISON ST.



LOCATION MAP  
(SCALE: 1" = 1/2 MI)

PROJECT GROSS LENGTH = 1740 FT. = 0.33 MILE  
PROJECT NET LENGTH = 1740 FT. = 0.33 MILE

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

Rev.

INDEX OF SHEETS

|         |  |
|---------|--|
| 1       | TITLE SHEET  |
| 2       | INDEX OF SHEETS, GENERAL NOTES AND HIGHWAY STANDARDS                               |
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| 5-5A.   | OVERALL BULKHEAD AND CONCRETE FILL PLAN  |
| 6-8     | STAGING AND TRAFFIC CONTROL PLANS  |
| 9       | PLAN - LOCATION NO. 1 - VAN BUREN STREET   |
| 10      | PLAN - LOCATION NO. 2 - HALSTED STREET   |
| 11      | PLAN - LOCATION NO. 3 - HARRISON STREET  |
| 11A.    | PLAN - LOCATION NO. 4 - GATESHAFT NO. 2  |
| 12      | TUNNEL NOTES AND DETAILS   |
| * 13-17 | RECORD DRAWINGS - TUNNEL AND PUMP STATION  |
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| 31      | TC10 - TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS |
| 32      | TC14 - TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)     |
| 33      | TC17 - PARTIAL RAMP AND SHOULDER CLOSURE DETAILS                                   |
| 34      | TC22 - ARTERIAL ROAD INFORMATION SIGN  |
| 35-37   | TC24 - CITY OF CHICAGO TYPICAL PAVEMENT MARKINGS                                   |

\* Added 17A, 17B, 17C.

INDEX OF HIGHWAY STANDARDS

| STANDARD NO. | DESCRIPTION   |
|--------------|---|
| 000001-06    | SYMBOLS, ABBREVIATION, AND PATTERNS                                     |
| 701101-03    | OFF ROAD OPERATIONS - MULTILANE LESS THAN 15 FEET FROM EDGE OF PAVEMENT |
| 701400-06    | APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY                            |
| 701401-07    | LANE CLOSURE FREEWAY/EXPRESSWAY   |
| 701411-08    | MULTI-LANE, TRAFFIC CONTROL AND ENTRANCE OR EXIT RAMP                   |
| 701446-04    | TWO LANE CLOSURE, FREEWAY/EXPRESSWAY                                    |
| 701501-06    | URBAN LANE CLOSURE 2L, 2W, UNDIVIDED                                    |
| 701606-08    | URBAN LANE CLOSURE, MULTI LANE, 2W + MOUTABLE MEDIAN                    |
| 701801-05    | SIDEWALK CORNER OR CROSSWALK CLOSURE                                    |
| 701901-02    | TRAFFIC CONTROL DEVICES   |

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)

THE CHICAGO DEPARTMENT OF WATER MANAGEMENT (CDWM) SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION.

THE CONTRACTOR WILL NOT BE ABLE TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE DEPARTMENT.

THE CONTRACTOR SHALL BE PROVIDED A FIELD OFFICE TO BE SHARED WITH ADJACENT CONSTRUCTION PROJECTS IN THE AREA.

10 FT (3 M) TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL CONTACT THE IDOT TRAFFIC CONTROL SUPERVISOR AT (847) 705-4155 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER AT (847) 705-4412 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACING THE PERMANENT PAVEMENT MARKINGS.

ALL PAVEMENT PATCHING AND SIDEWALK REPLACEMENT AREAS AFFECTED BY THE IMPROVEMENT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

SAFE WORKING PRACTICES SHALL BE CONTINUOUSLY DEMONSTRATED BY THE CONTRACTOR. THE TUNNEL ENVIRONMENT IS TO BE CONSIDERED HOSTILE AND DUE CAUTION SHALL BE EXERCISED IN ALL MANNERS OF WORK PERFORMANCE AND INSPECTION. THE CONTRACTOR IS REQUIRED TO PREPARE AND SUBMIT A SAFETY AND DISINFECTION PLAN PRIOR TO ANY ENTRANCE INTO THE TUNNELS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF BULKHEAD TUNNEL. (SPECIAL).

THE DRAWINGS HAVE BEEN PREPARED FROM EXISTING WATER TUNNEL PLANS WHICH HAVE NOT BEEN VERIFIED AS TO THEIR ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS AND DETAILS ON THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

WATER TUNNEL LOCATIONS AND SUBSURFACE FEATURES SHOWN ARE BASED UPON ORIGINAL WATER TUNNEL DRAWINGS. EXISTING FEATURES ARE NOTED WHERE INFORMATION IS AVAILABLE.

ALL WATER TUNNEL ELEVATIONS ARE WITH RESPECT TO THE CITY OF CHICAGO DATUM (CCD). ALL PAVEMENT ELEVATIONS ARE WITH RESPECT TO NAV88. THE ELEVATION CORRELATION IS ELEV. 579.88 NAV88 = ELEV. 0.0 CCD

THE CONTRACTOR SHALL PERFORM ALL WORK IN FULL COMPLIANCE WITH OSHA STANDARDS AND REQUIREMENTS. IDOT'S STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND CHICAGO DEPARTMENT OF WATER MANAGEMENT REQUIREMENTS, AS APPLICABLE.

**ALL LANDSCAPE AREA AFFECTED BY THE IMPROVEMENT SHALL BE RESTORED WITH TOPSOIL, NUTRIENTS, AND SEEDING AS DIRECTED BY THE ENGINEER.**

GENERAL NOTES (CITY OF CHICAGO)

BEFORE STARTING ANY EXCAVATION WITHIN THE CITY OF CHICAGO, THE CONTRACTOR SHALL CONTACT "C.U.A.N." (CHICAGO UTILITY ALERT NETWORK) AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)

FILE NAME = D:\2280\2280\_21 - Circle Interchange Tunnel Bulkheading\CADD SHEETS\016R\05-11-19m.dwg



|                           |            |           |
|---------------------------|------------|-----------|
| USER NAME = rgall         | DESIGNED - | REVISED - |
| PLOT SCALE = 2.0000' / 1" | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013     | CHECKED -  | REVISED - |
|                           | DATE -     | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, &  
HIGHWAY STANDARDS

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

| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|--------------------|--------|--------------|-----------|
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 2         |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |

Rev.

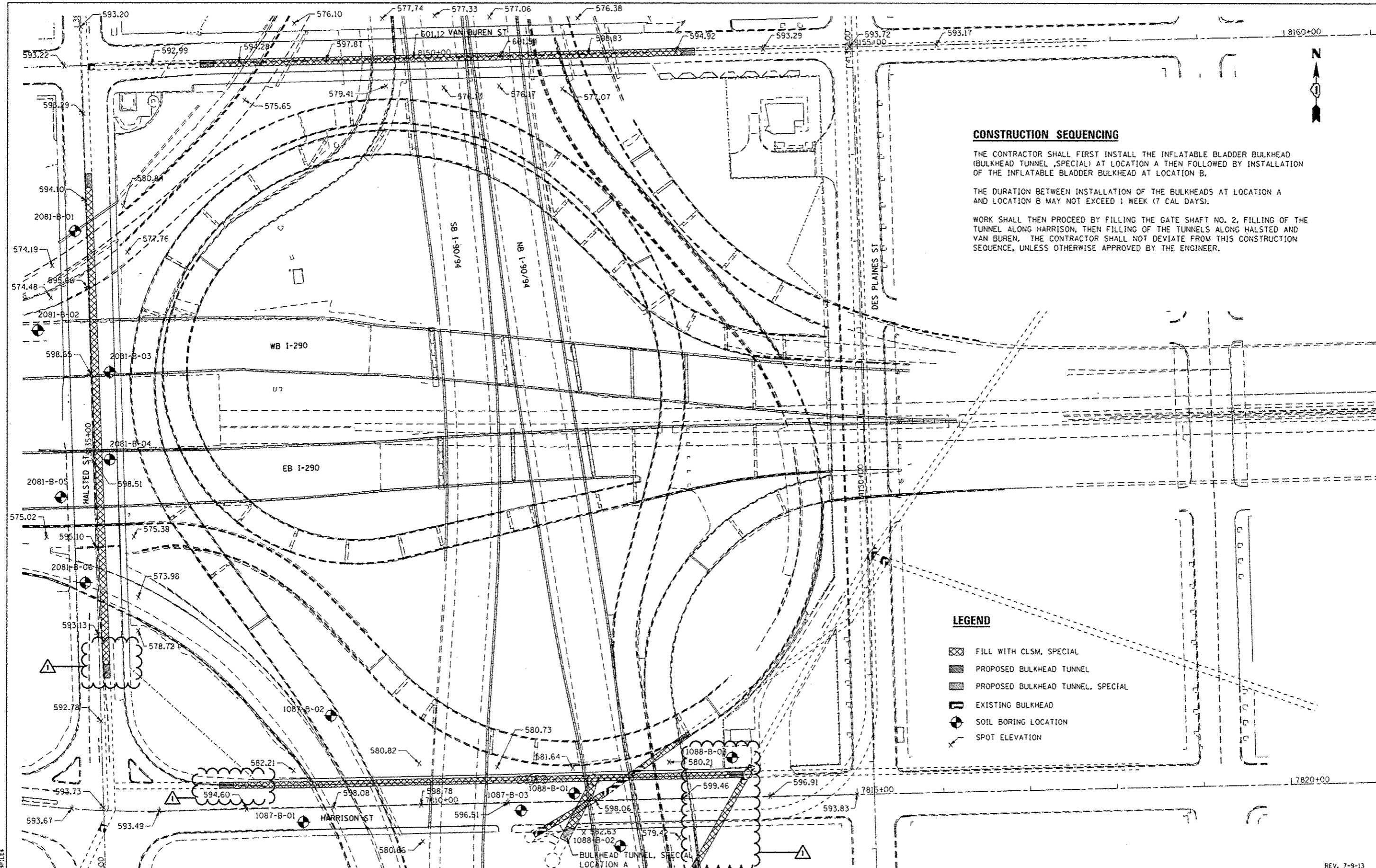


| CODE NO.           | ITEM  | UNIT            | TOTAL QUANTITY | CONSTR. CODE  |         |
|--------------------|---|-----------------|----------------|---------------|---------|
|                    |   |                 |                | URBAN ROADWAY | UTILITY |
|                    |   |                 |                | 0004          | 0043    |
| * X0327599         | BULKHEAD TUNNEL   | LSUM            | 1              | 1             |         |
| * X0327600         | BULKHEAD TUNNEL (SPECIAL)   | LSUM            | 1              | 1             |         |
| X5930100           | CONTROLLED LOW-STRENGTH MATERIAL, SPECIAL   | CU YD           | 3495           | 3495          |         |
| <del>5610116</del> | <del>DUCTILE IRON WATER PIPE FITTINGS-36" X 24" 2 BELL MECHANICAL JOINT REDUCER</del> | <del>EACH</del> | <del>1</del>   | <del>1</del>  |         |
| <del>5610117</del> | <del>DUCTILE IRON WATER PIPE FITTINGS-30" X 24" 2 BELL MECHANICAL JOINT REDUCER</del> | <del>EACH</del> | <del>1</del>   | <del>1</del>  |         |
| <del>5610122</del> | <del>DUCTILE IRON WATER PIPE FITTINGS-24" 2 BELL MECHANICAL JOINT 1/4 BASE</del>      | <del>EACH</del> | <del>2</del>   | <del>2</del>  |         |
| <del>5610124</del> | <del>DUCTILE IRON WATER PIPE FITTINGS-36" MECHANICAL JOINT SLEEVE</del>               | <del>EACH</del> | <del>1</del>   | <del>1</del>  |         |
| <del>5610128</del> | <del>DUCTILE IRON WATER PIPE FITTINGS-30" MECHANICAL JOINT SLEEVE</del>               | <del>EACH</del> | <del>1</del>   | <del>1</del>  |         |
| <del>5610130</del> | <del>WATER MAIN CONTROL VALVE 16 INCH</del>   | <del>EACH</del> | <del>1</del>   | <del>1</del>  |         |
| ⊙ Z0076606         | TRAINEES  | HOUR            | 500            | 500           |         |
| ⊙ Z0076604         | TRAINEES - TRAINING PROGRAM GRADUATE  | HOUR            | 500            | 500           |         |
| * 21101615         | TOPSOIL FURNISH AND PLACE 4"  | SQ YD           | 55             | 55            |         |
| * 25000210         | SEEDING, CLASS 2A   | ACRE            | 0.1            | 0.1           |         |
| * 25000460         | NITROGEN FERTILIZER NUTRIENT  | POUND           | 10             | 10            |         |
| * 25000500         | PHOSPHORUS FERTILIZER NUTRIENT  | POUND           | 10             | 10            |         |
| * 25000600         | POTASSIUM FERTILIZER NUTRIENT   | POUND           | 10             | 10            |         |

ⓐ ©0042 \* Specialty Items

Rev. 6-4-13

Rev



**CONSTRUCTION SEQUENCING**

THE CONTRACTOR SHALL FIRST INSTALL THE INFLATABLE BLADDER BULKHEAD (BULKHEAD TUNNEL, SPECIAL) AT LOCATION A THEN FOLLOWED BY INSTALLATION OF THE INFLATABLE BLADDER BULKHEAD AT LOCATION B.

THE DURATION BETWEEN INSTALLATION OF THE BULKHEADS AT LOCATION A AND LOCATION B MAY NOT EXCEED 1 WEEK (7 CAL DAYS).

WORK SHALL THEN PROCEED BY FILLING THE GATE SHAFT NO. 2, FILLING OF THE TUNNEL ALONG HARRISON, THEN FILLING OF THE TUNNELS ALONG HALSTED AND VAN BUREN. THE CONTRACTOR SHALL NOT DEVIATE FROM THIS CONSTRUCTION SEQUENCE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

**LEGEND**

- FILL WITH CLSM, SPECIAL
- PROPOSED BULKHEAD TUNNEL
- PROPOSED BULKHEAD TUNNEL, SPECIAL
- EXISTING BULKHEAD
- SOIL BORING LOCATION
- SPOT ELEVATION

FILE NAME: 1-FILES

**COLLINS ENGINEERS**

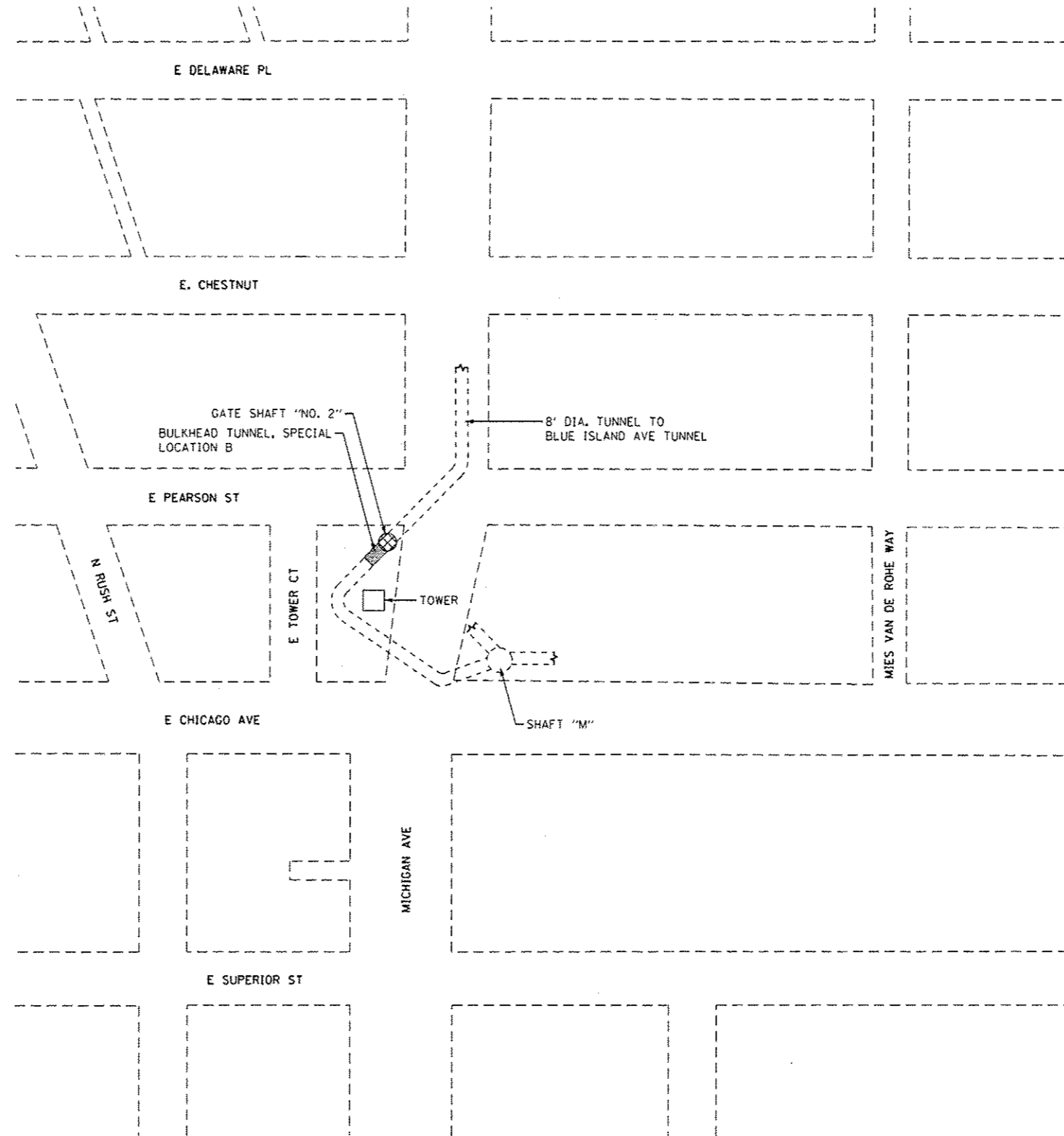
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|--|-------------|------------|------------------|
| USER NAME: <i>mromper</i>                      | DESIGNED: - | REVISED: - | 5/30/2013 R.A.G. |
| PLOT SCALE: 1/8" = 100.0000' / 1" = 1000.0000' | DRAWN: -    | REVISED: - |                  |
| PLOT DATE: 7/10/2013                           | CHECKED: -  | REVISED: - |                  |
|  | DATE: -     | REVISED: - |                  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|  |  |
|--|--|
| <b>OVERALL BULKHEAD AND CONCRETE FILL PLAN</b> |  |
| SCALE: _____                                   | SHEET NO. 1 OF 2 SHEETS STA. _____ TO STA. _____ |

|   |                            |             |                    |             |
|---|----------------------------|-------------|--------------------|-------------|
| P.A.I. RTE. 90/94                                 | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37    | SHEET NO. 5 |
| FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT |                            |             | CONTRACT NO. 60W36 |             |

REV. 7-9-13



**LEGEND**

- FILL WITH CLSM, SPECIAL
- PROPOSED BULKHEAD TUNNEL
- PROPOSED BULKHEAD TUNNEL, SPECIAL
- EXISTING BULKHEAD
- SOIL BORING LOCATION
- SPOT ELEVATION

ADDED SHEET 7-9-13

FILE NAME: 7-FILES

**COLLINS ENGINEERS**

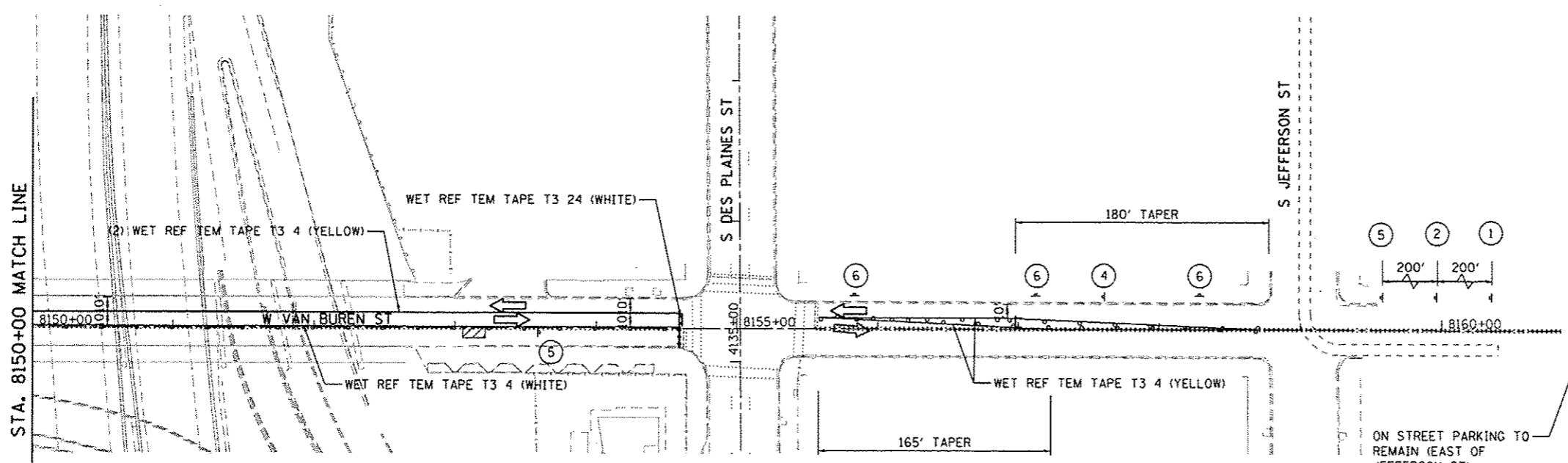
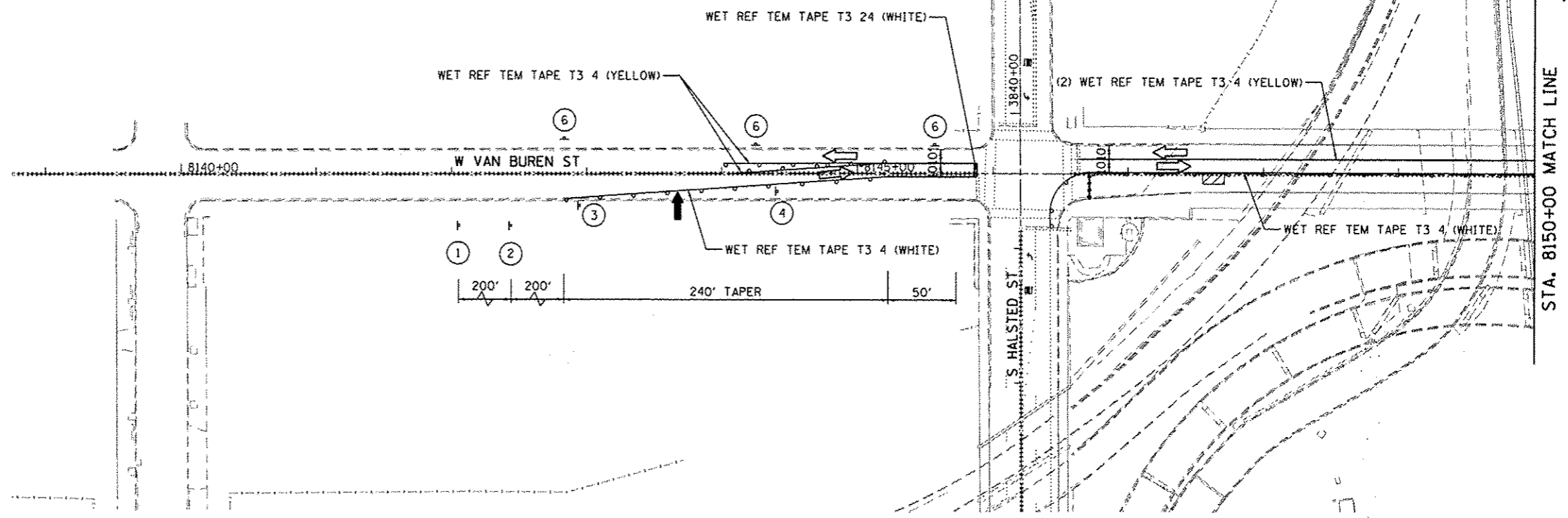
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| PLOT DATE: 7/10/2013         | CHECKED: -  | REVISED: - |
|                              | DATE: -     | REVISED: - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**









**OVERALL BULKHEAD AND  
CONCRETE FILL PLAN**




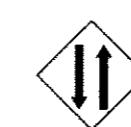


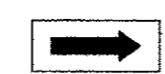
SCALE: SHEET NO. 2 OF 2 SHEETS STA. TO STA.

| F.A.I. RTE.                                       | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|--------------------|--------|--------------------|-----------|
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 5A        |
| FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |



**LEGEND**

-  WORK AREA
-  CONE, DRUM OR BARRICADE (NOT REQUIRED FOR MOVING OPERATIONS)
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  FLAGGER WITH TRAFFIC CONTROL SIGN
-  BARRICADE OR DRUM WITH FLASHING LIGHT
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  ARROW BOARD
-  TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY THE ENGINEER)

-  W20-1103(0)-48 ①
-  W20-7(0)-48 ②
-  W1-3L(0)-48 ③
-  W1-3L(0)-48 ④
-  W1-3R(0)-48 ⑤
-  R7-1D 12" x 18" ⑥
-  W-1-6R(0)-6030 (ABOVE BARRICADE) ⑦

NOTES:  
 1. FOR ADDITIONAL TRAFFIC CONTROL AND SIGN DETAILS SEE HIGHWAY STANDARD 701606.

FILE NAME: J:\7298\7298\_21 - Circle Interchange - Tunnel Bulkhead\CD00\CAD00 SHEET(S) 2981.28-HOT-Stage 1.Dwg\Plan.dwg

**COLLINS ENGINEERS**

|                              |            |           |
|------------------------------|------------|-----------|
| USER NAME = rgo1             | DESIGNED - | REVISED - |
| PLOT SCALE = 100.0000' / in. | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013        | CHECKED -  | REVISED - |
|                              | DATE -     | REVISED - |

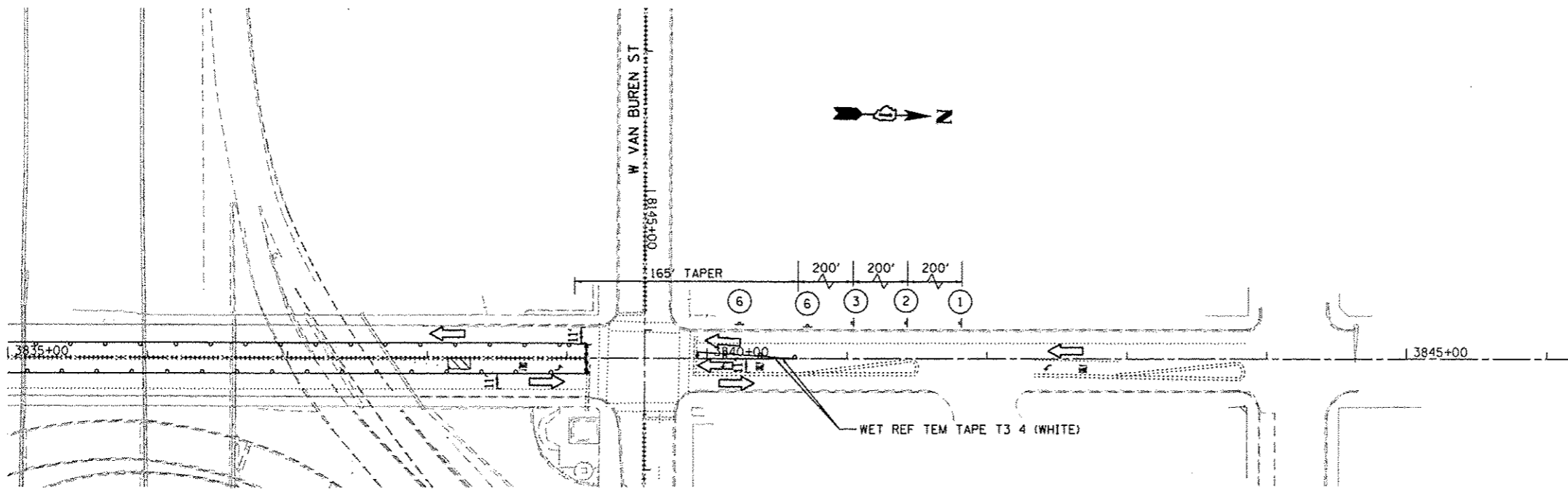
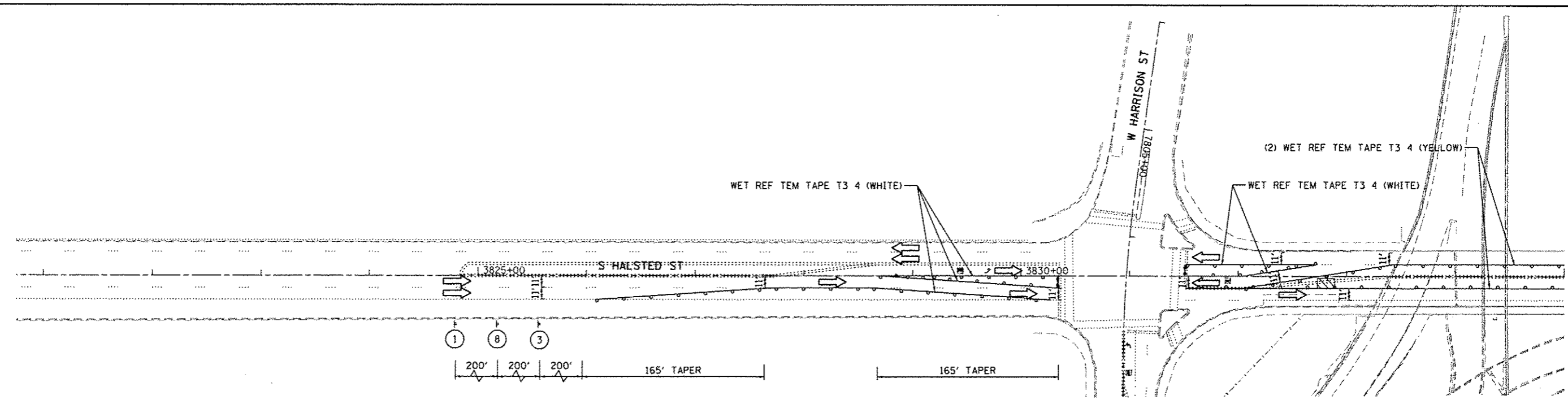
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

|                               |           |           |              |
|-------------------------------|-----------|-----------|--------------|
| <b>MAINTENANCE OF TRAFFIC</b> |           |           |              |
| <b>VAN BUREN ST.</b>          |           |           |              |
| SCALE:                        | SHEET NO. | OF SHEETS | STA. TO STA. |

|   |                    |        |                    |           |
|---|--------------------|--------|--------------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 6         |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |



FILE NAME: I:\7281\7281-21 - Circle Interchange Tunnel Bulkhead\mg\CAD00\CAD00 SHEETS\7281.28-MOT-Stage 1\Halsted.dgn



- 1 ROAD CONSTRUCTION AHEAD (W20-1103(O)-48)
- 2 LEFT LANE CLOSED AHEAD (W20-5L(O)-48)
- 3 [Worker with shovel symbol] (W20-7(O)-48)
- 6 NO PARKING ANY TIME (R7-1D 12" x 18")
- 7 [Arrow symbol] (W-1-6R(O)-6030 (ABOVE BARRICADE))
- 8 RIGHT LANE CLOSED AHEAD (W20-5R(O)-48)

- LEGEND**
- [Hatched box] WORK AREA
  - CONE, DRUM OR BARRICADE (NOT REQUIRED FOR MOVING OPERATIONS)
  - ⊥ SIGN ON PORTABLE OR PERMANENT SUPPORT
  - FLAGGER WITH TRAFFIC CONTROL SIGN
  - ⊕ BARRICADE OR DRUM WITH FLASHING LIGHT
  - ⊞ TYPE III BARRICADE WITH FLASHING LIGHTS
  - ← ARROW BOARD
  - ⊞ (with flashing light symbol) TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY THE ENGINEER)

NOTES:  
 1. FOR ADDITIONAL TRAFFIC CONTROL AND SIGN DETAILS SEE HIGHWAY STANDARD 701606.

**COLLINS ENGINEERS**

|                                     |            |           |
|-------------------------------------|------------|-----------|
| USER NAME = rge11                   | DESIGNED - | REVISED - |
| PLOT SCALE = 1/8" = 100.0000' / in. | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013               | CHECKED -  | REVISED - |
|                                     | DATE -     | REVISED - |

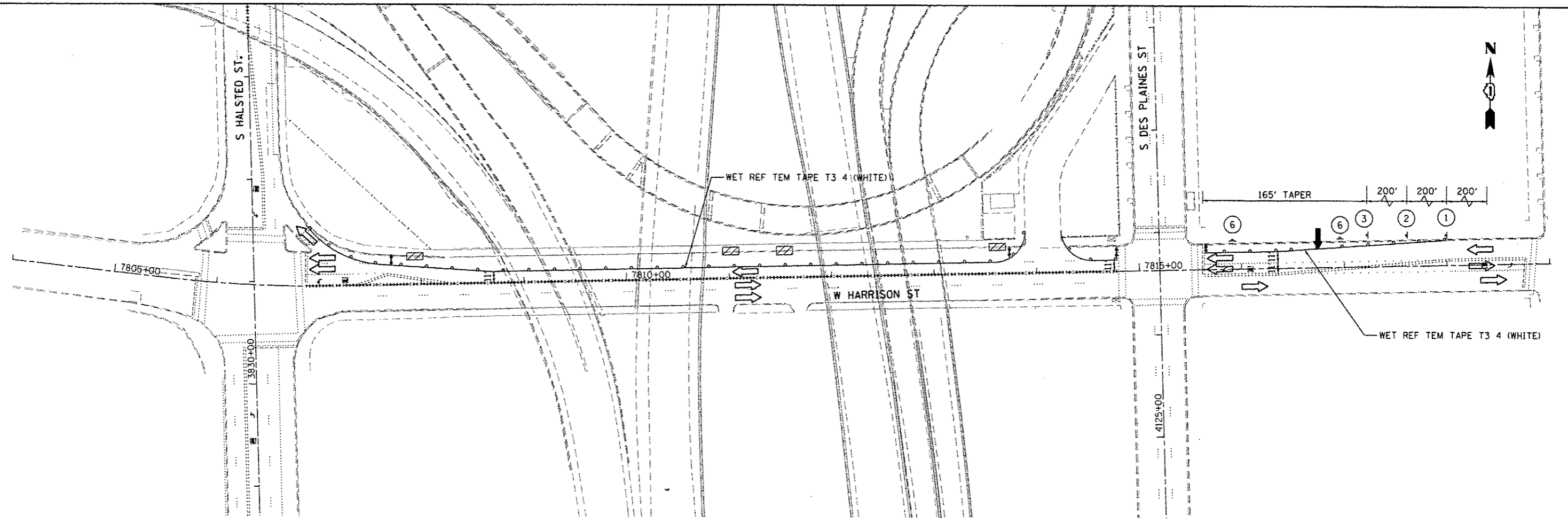
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

|  |                                  |
|--|----------------------------------|
| <b>MAINTENANCE OF TRAFFIC<br/>   HALSTED ST.</b> |                                  |
| SCALE:   | SHEET NO. OF SHEETS STA. TO STA. |









| F.A.T. RTE.                                       | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|--------------------|--------|--------------------|-----------|
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 7         |
| FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |







FILE NAME: I:\2280\729821 - Circle Interchange Tunnel Bulkheading\CADD\C600 SHEETS\7298328-MOT-Stage 1-Harrison.dgn



**LEGEND**

-  WORK AREA
-  CONE, DRUM OR BARRICADE (NOT REQUIRED FOR MOVING OPERATIONS)
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  FLAGGER WITH TRAFFIC CONTROL SIGN
-  BARRICADE OR DRUM WITH FLASHING LIGHT
-  TYPE III BARRICADE WITH FLASHING LIGHTS
-  ARROW BOARD
-  TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY THE ENGINEER)

-  W20-1103(O)-48  
①
-  W20-5R(O)-48  
②
-  W20-7(O)-48  
③
-  R7-10  
12" x 18"  
⑥

NOTES:  
1. FOR ADDITIONAL TRAFFIC CONTROL AND SIGN DETAILS SEE HIGHWAY STANDARD 701606.

**COLLINS ENGINEERS**

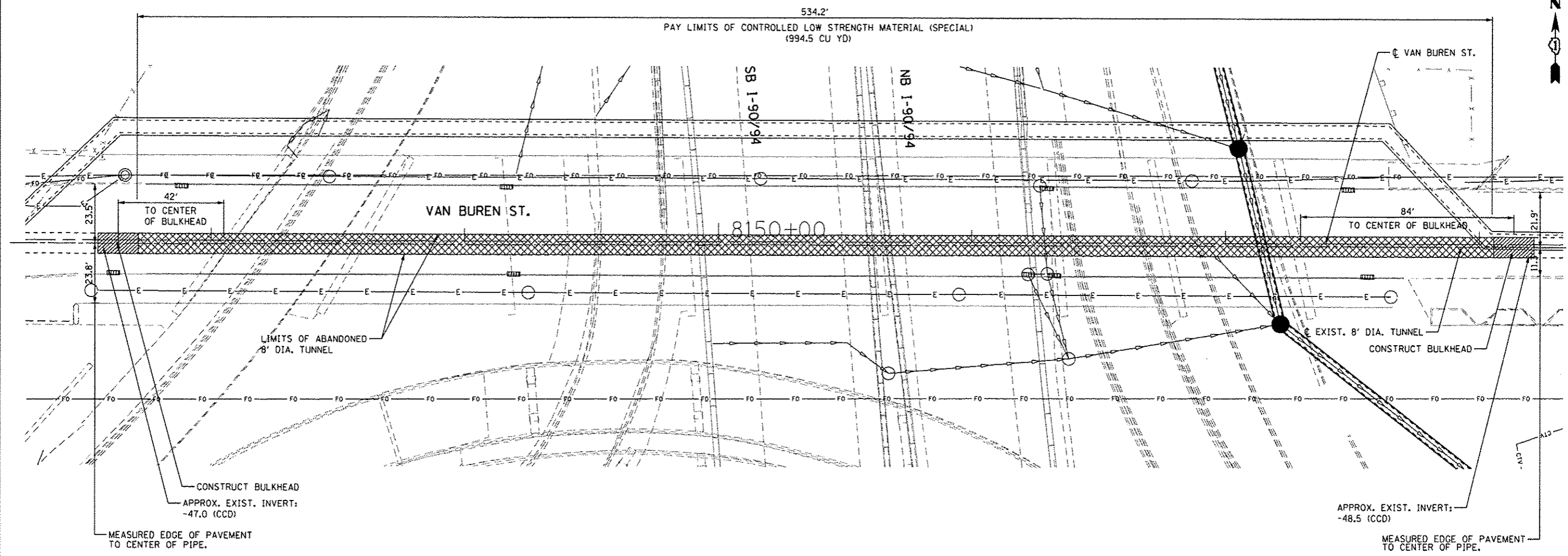
|                              |            |           |
|------------------------------|------------|-----------|
| USER NAME = rpg11            | DESIGNED - | REVISED - |
| PLOT SCALE = 100.0000' / in. | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013        | CHECKED -  | REVISED - |
|                              | DATE -     | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC  
HARRISON ST.**

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

| F.A.I. RTE.                                       | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|--------------------|--------|--------------------|-----------|
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 8         |
| FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |



- NOTES:
1. LOCATION OF EXISTING WATER TUNNEL SHOWN FROM EXISTING RECORD DRAWINGS WHICH HAVE BEEN INCLUDED TO AID THE CONTRACTOR IN LOCATING THE EXISTING TUNNEL. THE CONTRACTOR SHALL LOCATE THE EXISTING TUNNEL AS DESCRIBED IN THE SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS "LOCATE TUNNEL".
  2. ABANDONED TUNNEL SHALL BE FILLED WITH CLSM BETWEEN PROPOSED BULKHEADS.

LEGEND

|  |  |
|--|--|
|  | PROPOSED BULKHEAD                                    |
|  | EXISTING BULKHEAD                                    |
|  | FILL WITH CONTROLLED LOW STRENGTH MATERIAL (SPECIAL) |

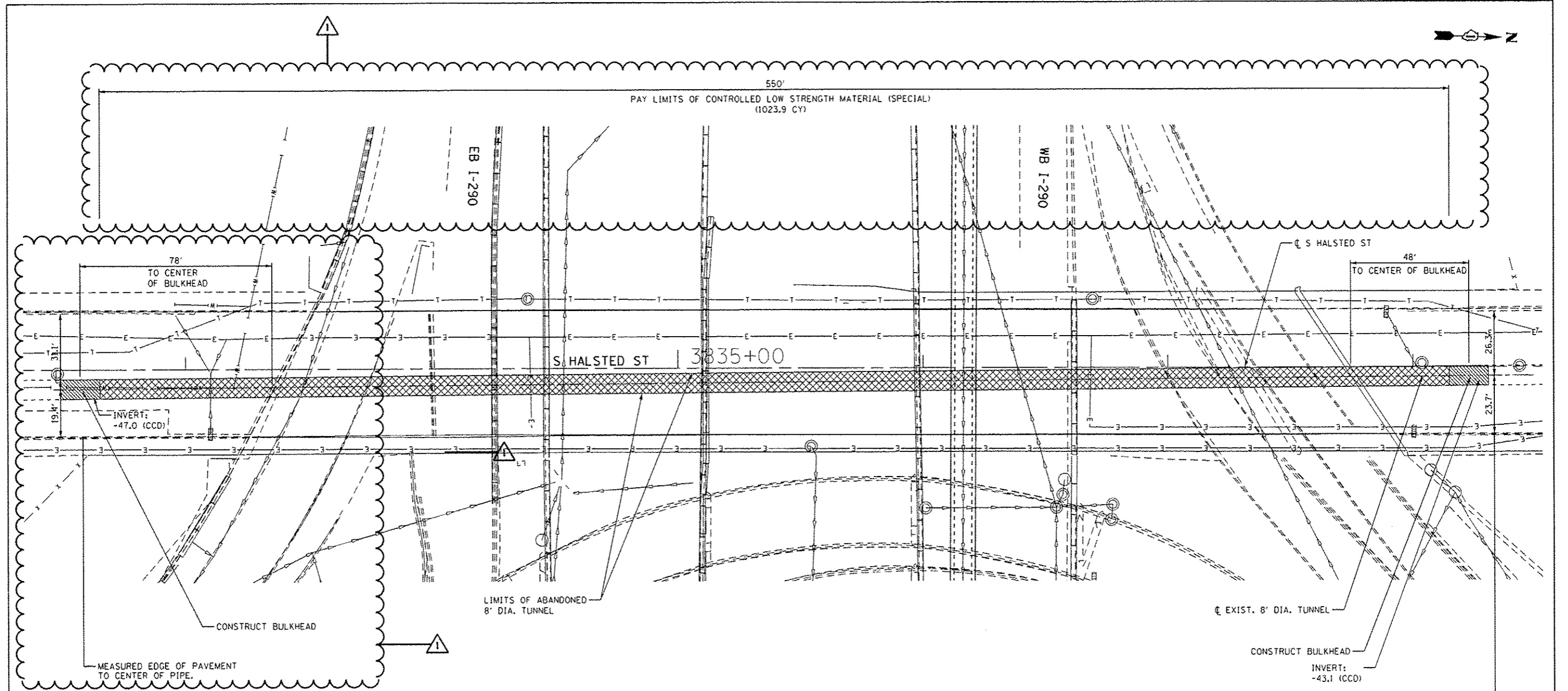
FILE NAME: I:\7298\7298.21 - Circle Interchange Tunnel Bulkheading\CORD\CORD\_SHEETS\7298.21-28-ht-0a-Plan.mxd

|                          |                          |             |            |
|--------------------------|--------------------------|-------------|------------|
| <b>COLLINS ENGINEERS</b> | USER NAME: rgo11         | DESIGNED: - | REVISED: - |
|                          | PLOT SCALE: 1/8" = 1'-0" | DRAWN: -    | REVISED: - |
|                          | PLOT DATE: 4/12/2013     | CHECKED: -  | REVISED: - |
|                          |                          | DATE: -     | REVISED: - |

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

|   |           |           |              |
|---|-----------|-----------|--------------|
| <b>PLAN - LOCATION NO. 1</b><br><b>VAN BUREN STREET</b> |           |           |              |
| SCALE:  | SHEET NO. | OF SHEETS | STA. TO STA. |

|  |                    |        |              |           |
|--|--------------------|--------|--------------|-----------|
| F.A.I. RTE.  | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94  | 0101.6-2P-1-3 (13) | COOK   | 37           | 9         |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT<br><b>CONTRACT NO. 60W36</b> |                    |        |              |           |



- NOTES:
1. LOCATION OF EXISTING WATER TUNNEL SHOWN FROM EXISTING RECORD DRAWINGS WHICH HAVE BEEN INCLUDED TO AID THE CONTRACTOR IN LOCATING THE EXISTING TUNNEL. THE CONTRACTOR SHALL LOCATE THE EXISTING TUNNEL AS DESCRIBED IN THE SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS "LOCATE TUNNEL".
  2. ABANDONED TUNNEL SHALL BE FILLED WITH CLSM BETWEEN PROPOSED BULKHEADS.

**LEGEND**

|  |  |
|--|--|
|  | PROPOSED BULKHEAD                                    |
|  | EXISTING BULKHEAD                                    |
|  | FILL WITH CONTROLLED LOW STRENGTH MATERIAL (SPECIAL) |

**COLLINS ENGINEERS**

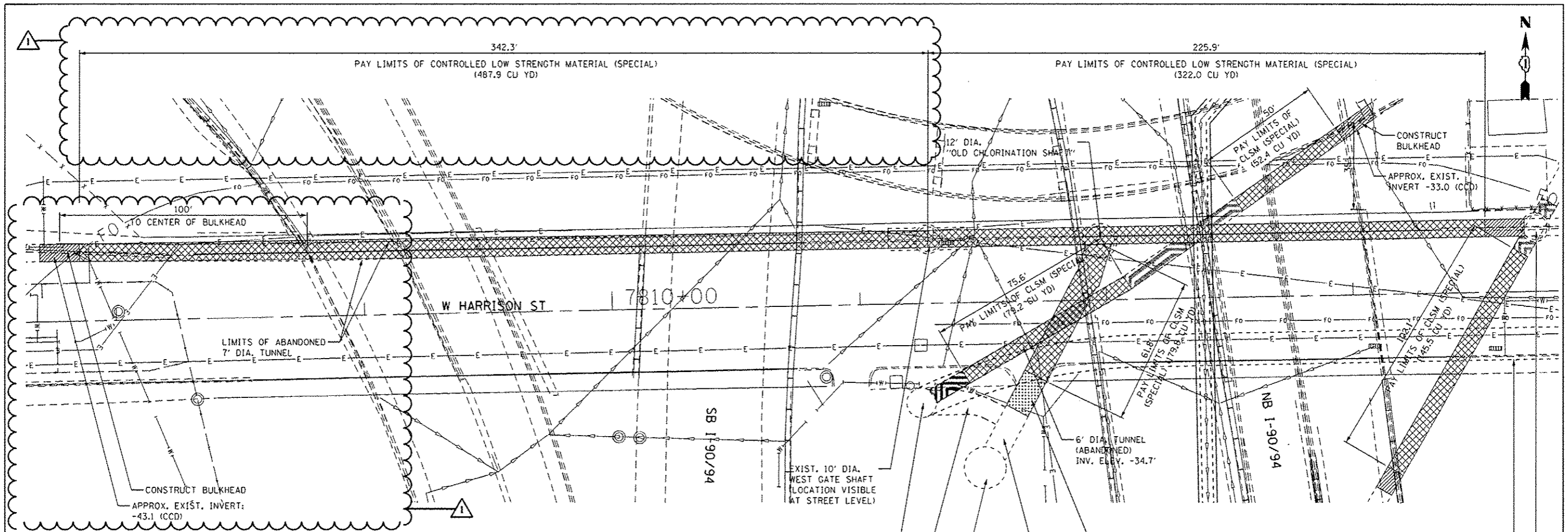
|                                |                             |           |
|--------------------------------|-----------------------------|-----------|
| USER NAME : rgal1              | DESIGNED - 5/30/2013 R.A.G. | REVISED - |
| PLOT SCALE : 48,0000 1" = 400' | DRAWN -                     | REVISED - |
| PLOT DATE : 5/30/2013          | CHECKED -                   | REVISED - |
|                                | DATE -                      | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PLAN - LOCATION NO. 2  
HALSTED STREET**

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

|   |                            |             |                 |              |
|---|----------------------------|-------------|-----------------|--------------|
| F.A.I. RTE. 90/94                               | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37 | SHEET NO. 10 |
| CONTRACT NO. 60W36                              |                            |             |                 |              |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                            |             |                 |              |



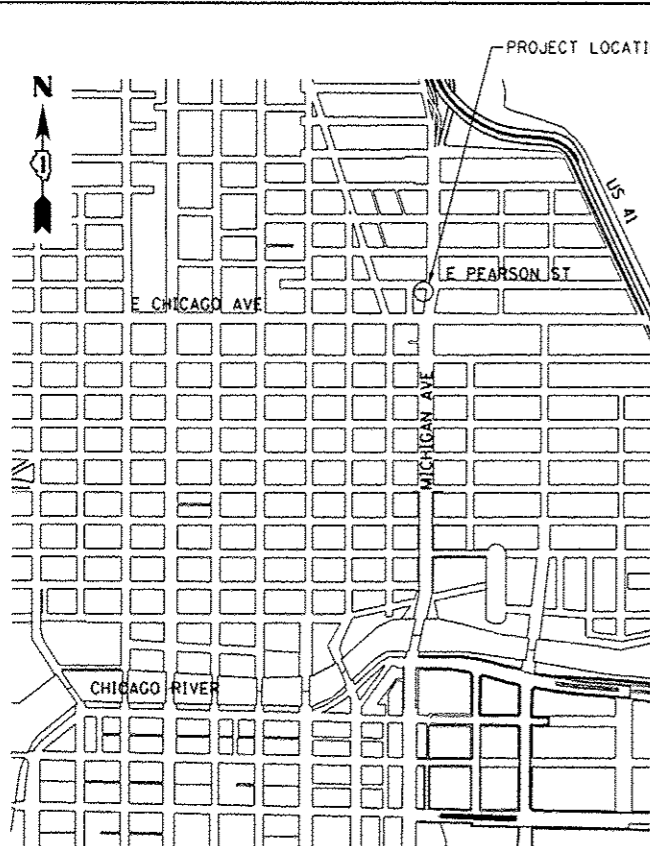
- NOTES:**
1. LOCATION OF EXISTING WATER TUNNEL SHOWN FROM EXISTING RECORD DRAWINGS WHICH HAVE BEEN INCLUDED TO AID THE CONTRACTOR IN LOCATING THE EXISTING TUNNEL. THE CONTRACTOR SHALL LOCATE THE EXISTING TUNNEL AS DESCRIBED IN THE SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS "LOCATE TUNNEL".
  2. ABANDONED TUNNEL SHALL BE FILLED WITH CLSM BETWEEN PROPOSED BULKHEADS.
  3. SEE SHEETS 13-17 FOR ADDITIONAL DETAILS WITH REGARDS TO EXISTING TUNNEL CONFIGURATION AND CERMAK PUMP STATION 12' DIA. CHLORINATION SHAFT AND 17' DIA SCREEN GATE SHAFT.
  4. CONTRACTOR SHALL BE ADVISED THAT THE EXISTING WEST GATE SHAFT ON HARRISON IS IN THE OPEN POSITION AND THE TUNNEL ALONG HARRISON STREET IS FULL WITH WATER. SEE TUNNEL DETAIL NOTES ON SHEET 12 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  5. CONCRETE SHALL VERIFY FIELD CONDITIONS OF INSERVICE WATER TUNNEL PRIOR TO THE START OF ANY WORK. SEE CONCRETE BULKHEAD, SPECIAL.

- LEGEND**
- PROPOSED BULKHEAD TUNNEL
  - PROPOSED BULKHEAD TUNNEL, SPECIAL
  - EXISTING BULKHEAD
  - FILL WITH CONTROLLED LOW STRENGTH MATERIAL (SPECIAL)

|  |                             |            |                             |   |  |   |                    |              |              |           |
|--|-----------------------------|------------|-----------------------------|---|--|---|--------------------|--------------|--------------|-----------|
|  | USER NAME : mrampler        | DESIGNED - | REVISED -  5/30/2013 R.A.G. | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>PLAN LOCATION NO. 3<br/>HARRISON STREET</b> | F.A.I. RTE.                                     | SECTION            | COUNTY       | TOTAL SHEETS | SHEET NO. |
|  | PLOT SCALE : 40,0000' / in. | DRAWN -    | REVISED -  6/7/2013 M.G.R.  |   |  | 90/94   | 0101.6-2P-1-3 (13) | COOK         | 37           | 11        |
|  | PLOT DATE : 7/10/2013       | CHECKED -  | REVISED -                   |   |  | CONTRACT NO. 60W36                              |                    |              |              |           |
|  |                             |            | DATE -                      | REVISED -   | SCALE:   | SHEET NO. OF SHEETS                             |                    | STA. TO STA. |              |           |
|  |                             |            |                             |   |  | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |              |              |           |

REV. 7-9-13

FILE NAME : 1-FILES



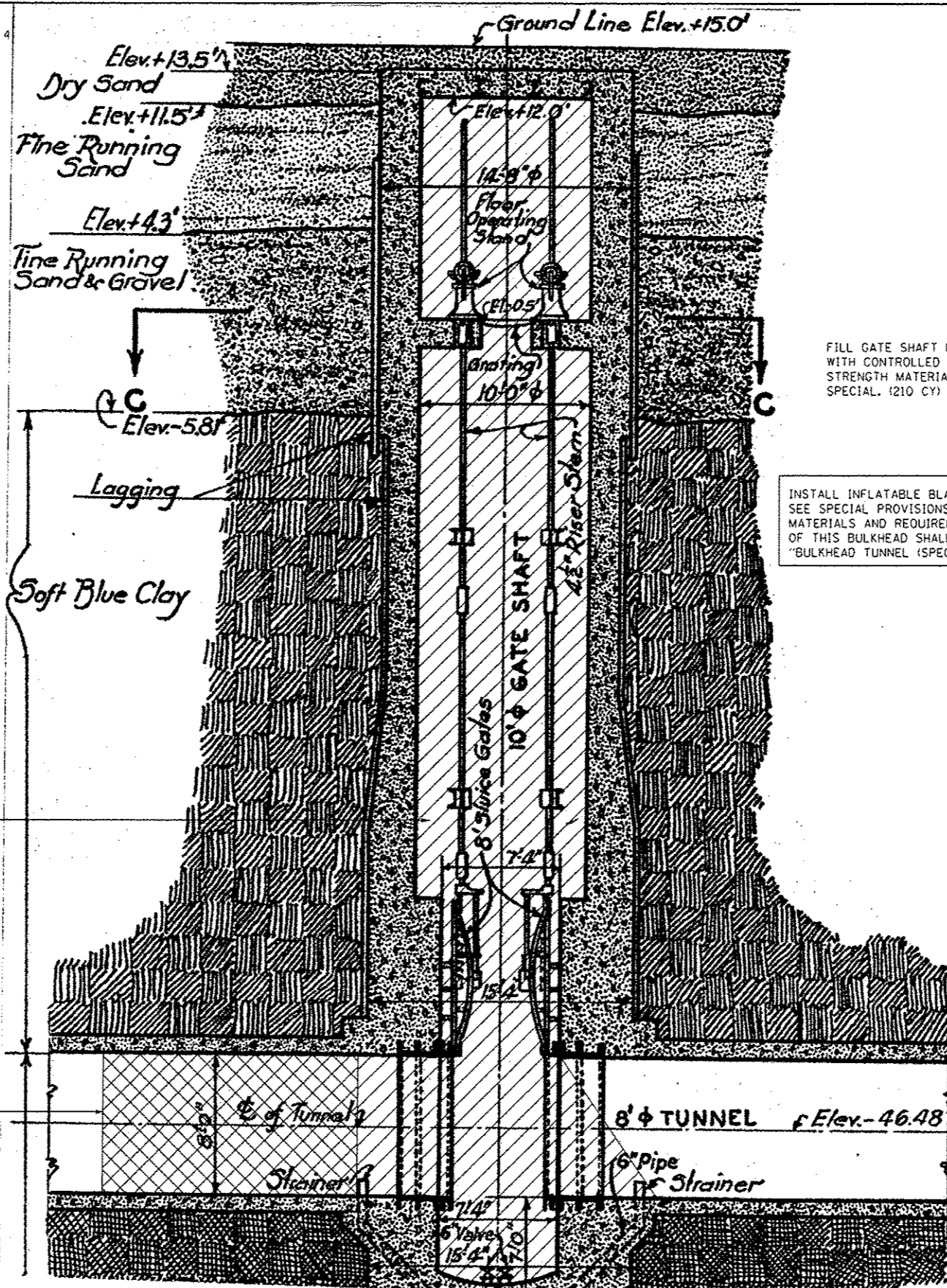
LOCATION MAP  
NTS

FILL GATE SHAFT NO. 2 WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM), SPECIAL.

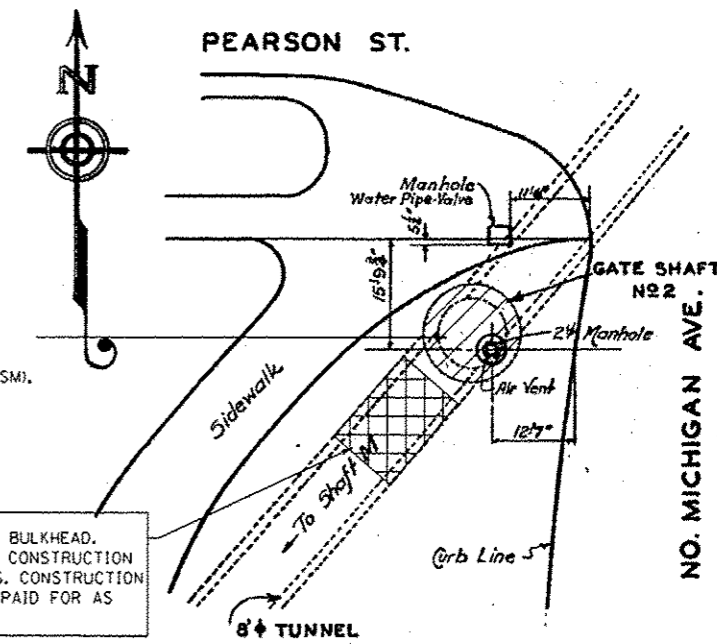
INFLATABLE BLADDER BULKHEAD.

**LEGEND**

- LOW STRENGTH MATERIAL (CLSM), SPECIAL
- INFLATABLE BLADDER BULKHEAD



SECTION VIEW  
NTS



PLAN VIEW  
NTS

FILL GATE SHAFT NO. 2 WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM), SPECIAL. (210 CY)

INSTALL INFLATABLE BLADDER BULKHEAD. SEE SPECIAL PROVISIONS FOR CONSTRUCTION MATERIALS AND REQUIREMENTS. CONSTRUCTION OF THIS BULKHEAD SHALL BE PAID FOR AS "BULKHEAD TUNNEL (SPECIAL)".

- NOTES:**
- THE GATE SHAFT AND TUNNEL CONTAINS WATER TO APPROXIMATE ELEVATION +6.0.
  - TREMIE METHODS WILL BE REQUIRED FOR DEPOSITING THE CONCRETE UNDERWATER IN ACCORDANCE WITH SECTION 503.09 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.
  - INSTALL INFLATABLE BLADDER SUCH THAT THE END OF THE BLADDER IS TO THE STATION SIDE (TOWARDS SHAFT "M") OF THE EXISTING STRAINER AND SIPHON PIPE. INFLATE BULKHEAD AND FILL WITH GROUT USING PROCEDURES DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.
  - FILLING OF GATE SHAFT NO. 2 SHALL COMMENCE ONCE THE COMPRESSIVE STRENGTH OF THE BULKHEAD ACHIEVES 2,000 PSI IN 2-3 DAYS AFTER PLACEMENT. CONCRETE CYLINDERS SHALL BE CAST AND BROKEN TO VERIFY THE CONCRETE COMPRESSIVE STRENGTH. SUBMIT THE TEST RESULTS TO THE ENGINEER FOR APPROVAL.
  - THE FILLING OF THE SHAFT WITH CONTROLLED LOW STRENGTH MATERIAL WILL BE MEASURED FOR PAYMENT SEPARATELY FROM THE BULKHEAD INSTALLATION AND SHALL BE PAID FOR AS CONTROLLED LOW STRENGTH MATERIAL, SPECIAL.
  - LANE CLOSURES FOR STAGING OF CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH STD. 701601 ALONG E PEARSON ST. NO CLOSURES SHALL BE ALLOWED ON MICHIGAN AVE WITHOUT PRIOR AUTHORIZATION OF THE ENGINEER.

FILE NAME: 7-APR13

**COLLINS ENGINEERS**

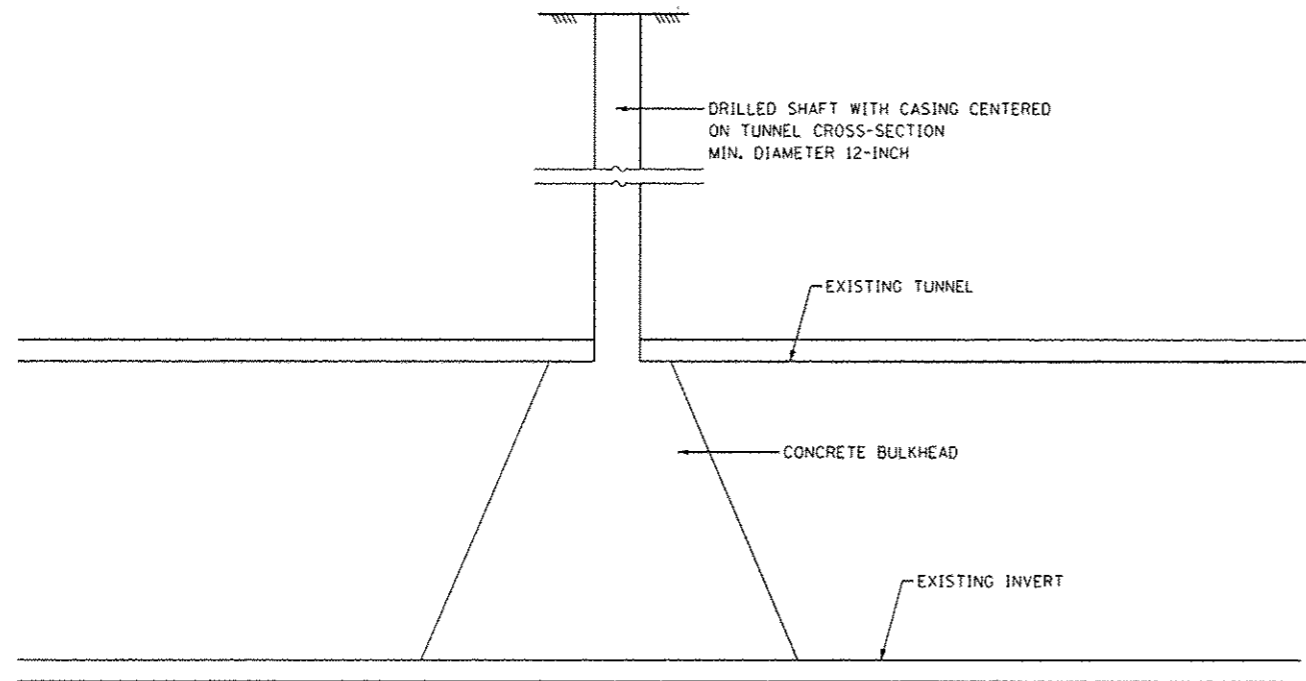
|                            |             |            |
|----------------------------|-------------|------------|
| USER NAME: mrambler        | DESIGNED: - | REVISED: - |
| PLOT SCALE: 20,000' / 1" = | DRAWN: -    | REVISED: - |
| PLOT DATE: 7/11/2013       | CHECKED: -  | REVISED: - |
| DATE: -                    | DATE: -     | REVISED: - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

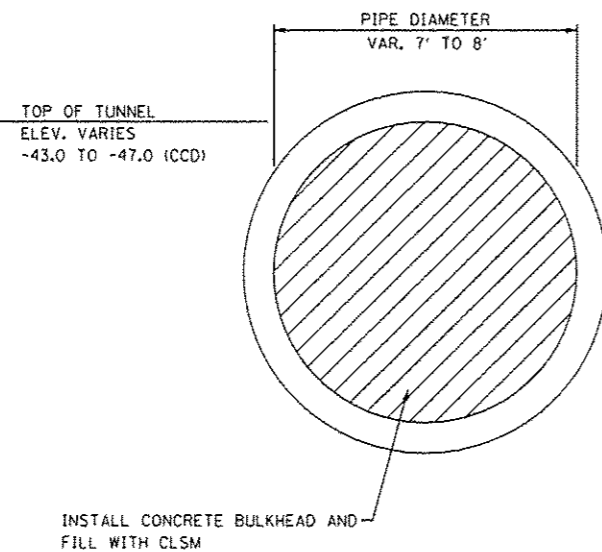
|                       |                                  |
|-----------------------|----------------------------------|
| PLAN - LOCATION NO. 4 |                                  |
| GATE SHAFT NO. 2      |                                  |
| SCALE:                | SHEET NO. OF SHEETS STA. TO STA. |

|   |                            |             |                    |               |
|---|----------------------------|-------------|--------------------|---------------|
| F.A.I. RTE. 90/94                               | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37    | SHEET NO. 11A |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                            |             | CONTRACT NO. 60W36 |               |





**TYPICAL SECTION**  
**PROPOSED BULKHEAD**  
**VAN BUREN STREET**  
**HALSTED STREET**  
**HARRISON STREET**



**TYPICAL SECTION**  
**EXISTING WATER TUNNEL**  
**VAN BUREN STREET**  
**HALSTED STREET**  
**HARRISON STREET**

**TUNNEL NOTES:**

THE WATER TUNNELS SHOWN ARE FROM CDWM RECORD DRAWINGS AND ARE INCLUDED FOR CONTRACTOR INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY LOCATE THE CROWN OF THE WATER TUNNELS USING PROBE BORINGS, PER CDWM REQUIREMENTS.

THE EXISTING WATER TUNNELS ARE ABANDONED. THE CONTRACTOR SHALL PROVIDE DEWATERING AS NEEDED IN THE EXISTING WATER TUNNELS. THE MAXIMUM DISCHARGE RATE SHALL BE 300 GPM. FOR ABANDONED AND INACCESSIBLE TUNNELS, THE CONTRACTOR SHALL TAKE INTO CONSIDERATION THAT WATER HAS INFILTRATED THE EXISTING TUNNELS AND THEY ARE FILLED TO CAPACITY WITHIN AND BEYOND THE PROJECT LIMITS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF CONTROLLED LOW STRENGTH MATERIAL (SPECIAL).

OBTAIN TWO CORE SAMPLES PER BULKHEAD, ONE (1) AT THE 10 AND ONE (1) AT THE 4 O'CLOCK POSITIONS OR ONE (1) AT THE 2 AND ONE (1) AT THE 8 O'CLOCK POSITIONS FOR COMPRESSION STRENGTH TESTING.

INSTALLATION OF GROUT OR CLSM SHALL NOT TAKE PLACE UNTIL THE CONCRETE STRENGTH OF THE BULKHEAD ACHIEVES 2,000 PSI IN 2-3 DAYS AFTER PLACEMENT. CONCRETE CYLINDERS SHALL BE CAST AND BROKEN TO VERIFY THE BULKHEAD CONCRETE COMPRESSIVE STRENGTH. SUBMIT THE TEST RESULTS TO THE ENGINEER FOR APPROVAL.

THE GROUT OR CLSM SHALL HAVE A MINIMUM SPREAD DIAMETER OF 20-INCHES USING AN INVERTED SLUMP CONE, APPROVED BY THE ENGINEER.

THE WATER TUNNEL AND SHAFT FILLING SHALL BE PERFORMED IN FOUR (4) LIFTS. THE FOURTH LIFT INTO THE DRILLED ACCESS HOLE SHALL EXTEND A MINIMUM OF 10 FEET ABOVE THE TOP OF THE EXISTING CROWN OF THE WATER TUNNEL. THE CONTRACTOR SHALL LET THE CLSM SET A MINIMUM 24-HOUR PERIOD BETWEEN LIFTS. THE MINIMUM STRENGTH OF THE CLSM SHALL NOT BE LESS THAN 125 PSI.

THE CONTRACTOR MAY INSTALL AND UTILIZE FILL/VENT PIPE(S) TO FILL THE WATER TUNNEL. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE EXISTING TUNNEL INVERTS. THE CONTRACTOR SHALL ENSURE THE FILL/VENT PIPE(S) ARE SPACED SUCH THAT THE CLSM OR GROUT IS EQUALLY DISTRIBUTED BY GRAVITY FLOW WITHIN THE WATER TUNNEL.

BACKFILL THE BALANCE OF THE DRILLED SHAFTS WITH SAND, A MINIMUM OF 72-HOURS AFTER THE PLACEMENT OF THE GROUT OR CLSM.

**SCHEDULE OF QUANTITIES**

|                               | LOCATE TUNNEL | BULKHEAD TUNNEL | BULKHEAD TUNNEL (SPECIAL) | CONTROLLED LOW STRENGTH MATERIAL (SPECIAL) |
|-------------------------------|---------------|-----------------|---------------------------|--|
|                               | L SUM         | L SUM           | L SUM                     | CU YD                                      |
| LOCATION 1 (VAN BUREN ST)     | 0.2           | 0.29            | 0                         | 994.5                                      |
| LOCATION 2 (HALSTED ST)       | 0.2           | 0.29            | 0                         | 1023.9                                     |
| LOCATION 3 (HARRISON STREET)  | 0.6           | 0.42            | 0.5                       | 1266.7                                     |
| LOCATION 4 (GATE SHAFT NO. 2) | 0             | 0               | 0.5                       | 209.9                                      |
| <b>TOTAL</b>                  | <b>1</b>      | <b>1</b>        | <b>1</b>                  | <b>3495.0</b>                              |

| HOT-MIX ASPHALT MIXTURE REQUIREMENTS MIXTURE TYPE                | AIR VOIDS @ Ndes |
|--|------------------|
| PATCHING   |                  |
| HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm) (2-1/4" MIN.) | 4% @ TO GYR.     |
|  |                  |
|  |                  |

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/50 YD / IN.

THE "AC TYPE" FOR ALL POLYMERIZED HMA MIXES, SHALL BE SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY THE DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIAL, SEE SPECIAL PROVISIONS.

REV. 7-9-2013

FILE NAME = 8FILES

**COLLINS ENGINEERS**

|                              |            |           |                  |
|------------------------------|------------|-----------|------------------|
| USER NAME = mrcpfr           | DESIGNED - | REVISED - | 5/30/2013 R.A.G. |
| PLOT SCALE = 100.0000' / in. | DRAWN -    | REVISED - |                  |
| PLOT DATE = 7/18/2013        | CHECKED -  | REVISED - |                  |
|                              | DATE -     | REVISED - |                  |

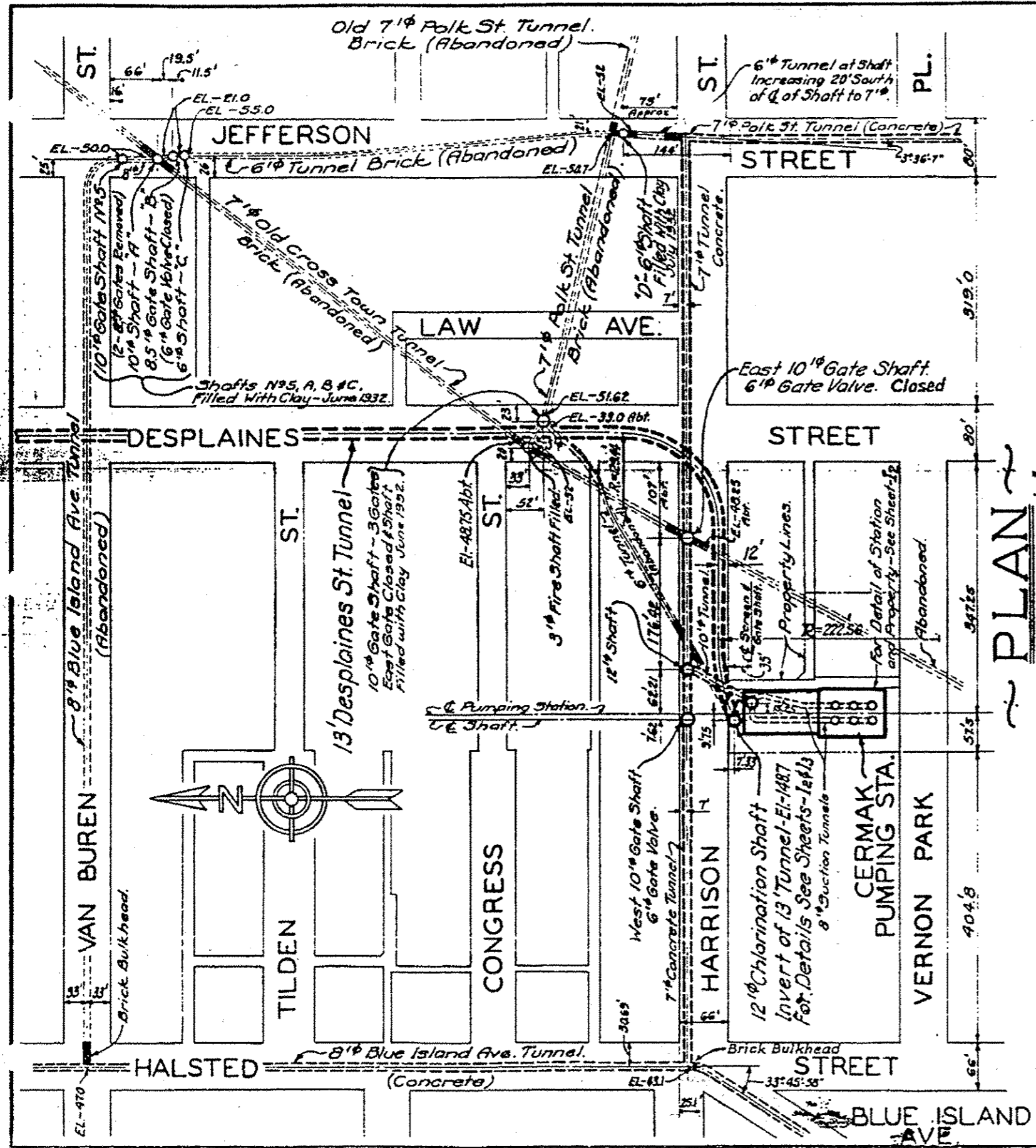
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TUNNEL DETAILS AND NOTES**

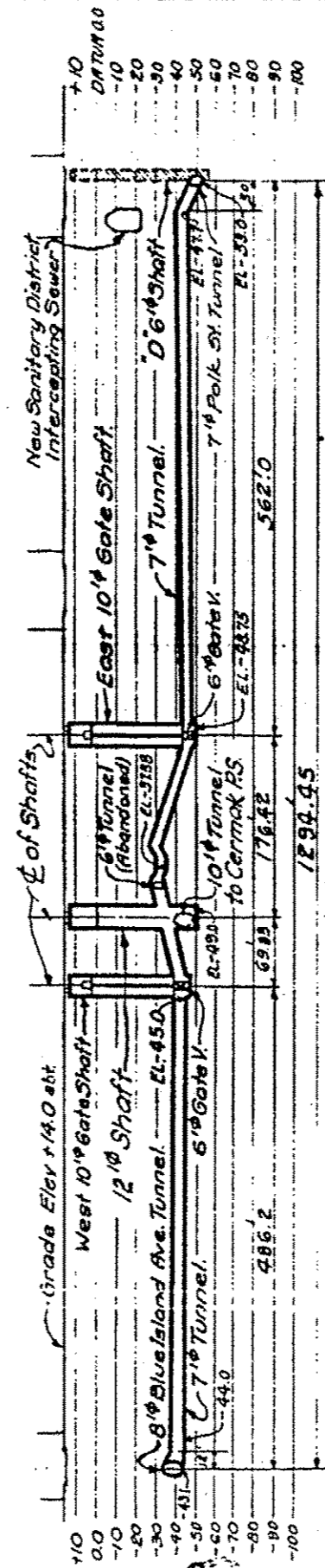
SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |                    |        |                    |           |
|---|--------------------|--------|--------------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 12        |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |

I<sub>1</sub>



PLAN  
SCALE ~ 1" = 200'-0"



PROFILE THRU 7 FT. TUNNEL IN HARRISON ST.  
SCALE ~ HOR. 1 IN = 200'-0" ~ VERT. 1 IN = 100'-0"

NOTE: ~  
Elevations are to invert of Tunnels.

FOR INFORMATION ONLY  
SUBJECT TO VERIFICATION

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DIVISION OF WATER WORKS DESIGN

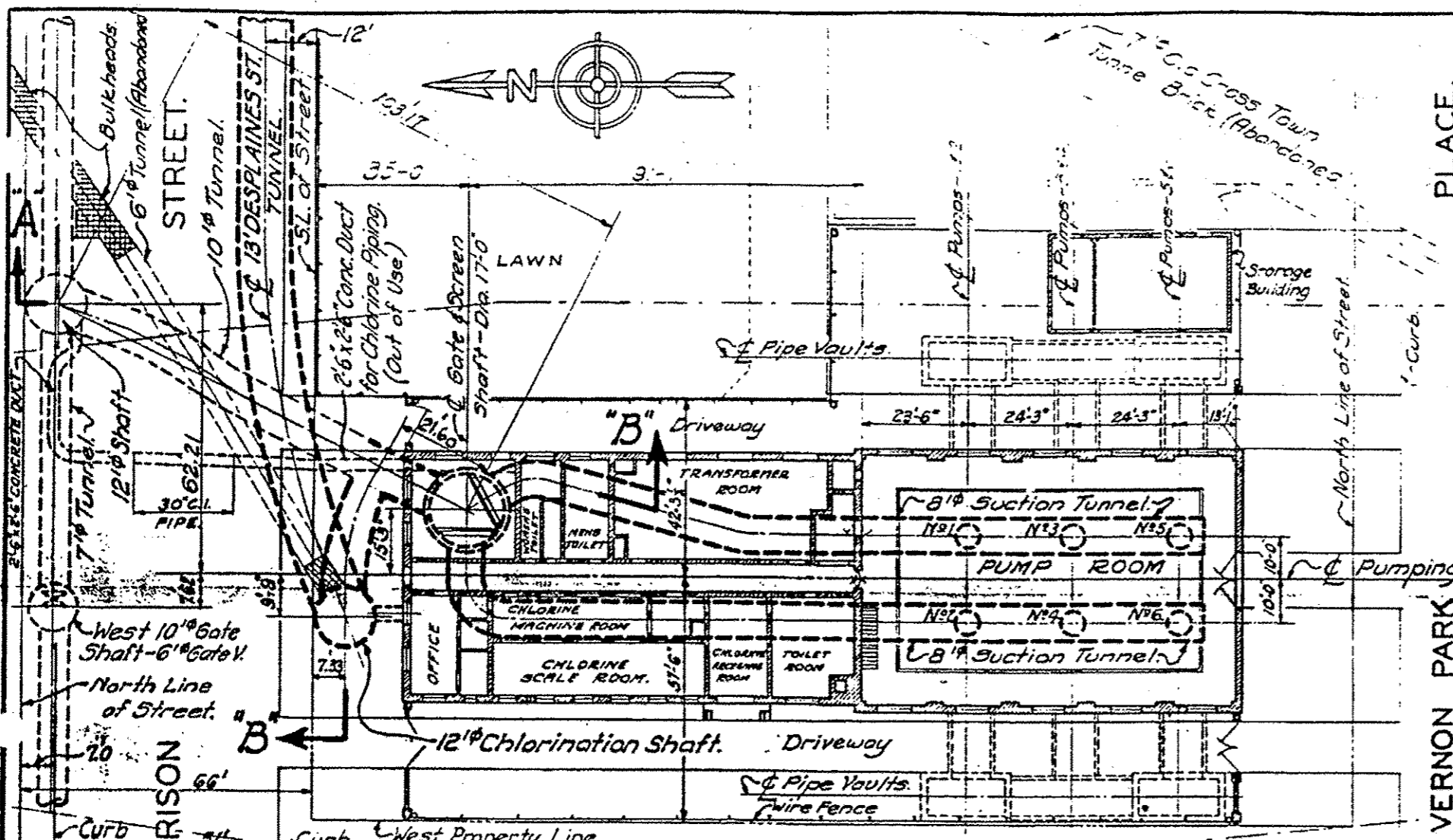
TUNNELS IN VICINITY OF  
CERMAK PUMPING STATION

SCALE: 1 in. = 200 ft.  
Revised - June 1940 - T.A.R.  
1937

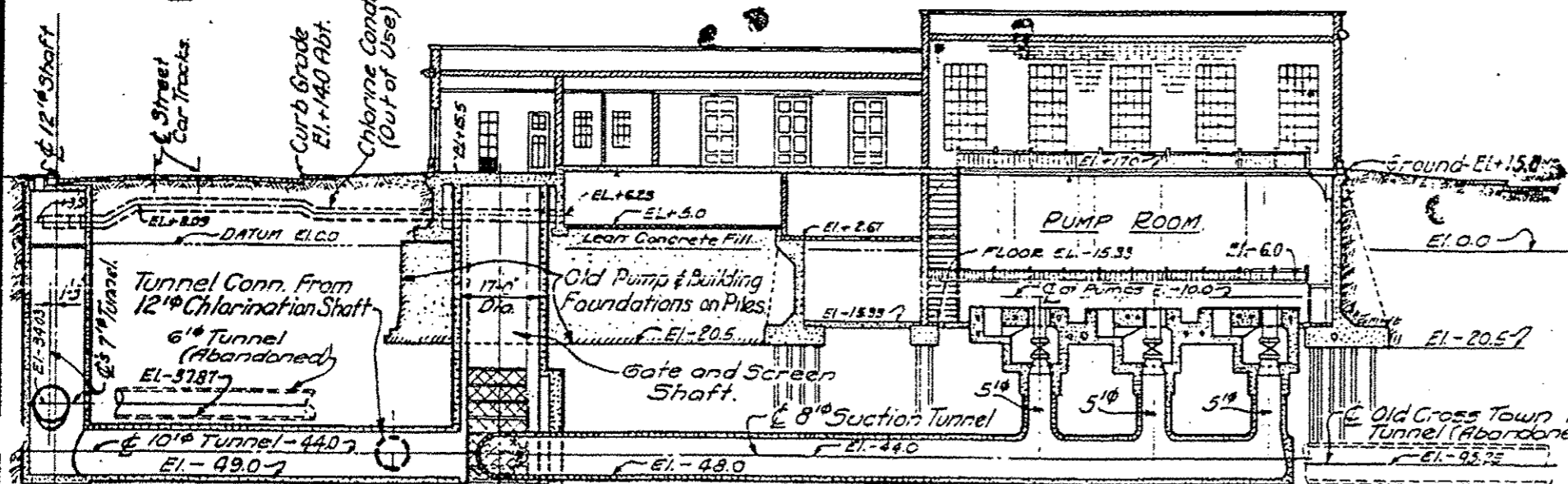
APRIL, 1937  
FILE 3-N

|                   |                             |            |           |   |                |                        |                                  |   |                    |              |
|-------------------|-----------------------------|------------|-----------|---|----------------|------------------------|----------------------------------|---|--------------------|--------------|
| COLLINS ENGINEERS | USER NAME = rgal1           | DESIGNED - | REVISED - | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | RECORD DRAWING | F.A.I. RTE. 90/94      | SECTION 0101.6-2P-1-3 (13)       | COUNTY COOK                                     | TOTAL SHEETS 37    | SHEET NO. 13 |
|                   | PLLOT SCALE = 2.0000 "/ in. | DRAWN -    | REVISED - |   |                | SCALE: 1 in. = 200 ft. | SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT | CONTRACT NO. 60W36 |              |
|                   | PLLOT DATE = 4/12/2013      | CHECKED -  | REVISED - |   |                |                        |                                  |   |                    |              |
|                   |                             | DATE -     | REVISED - |   |                |                        |                                  |   |                    |              |

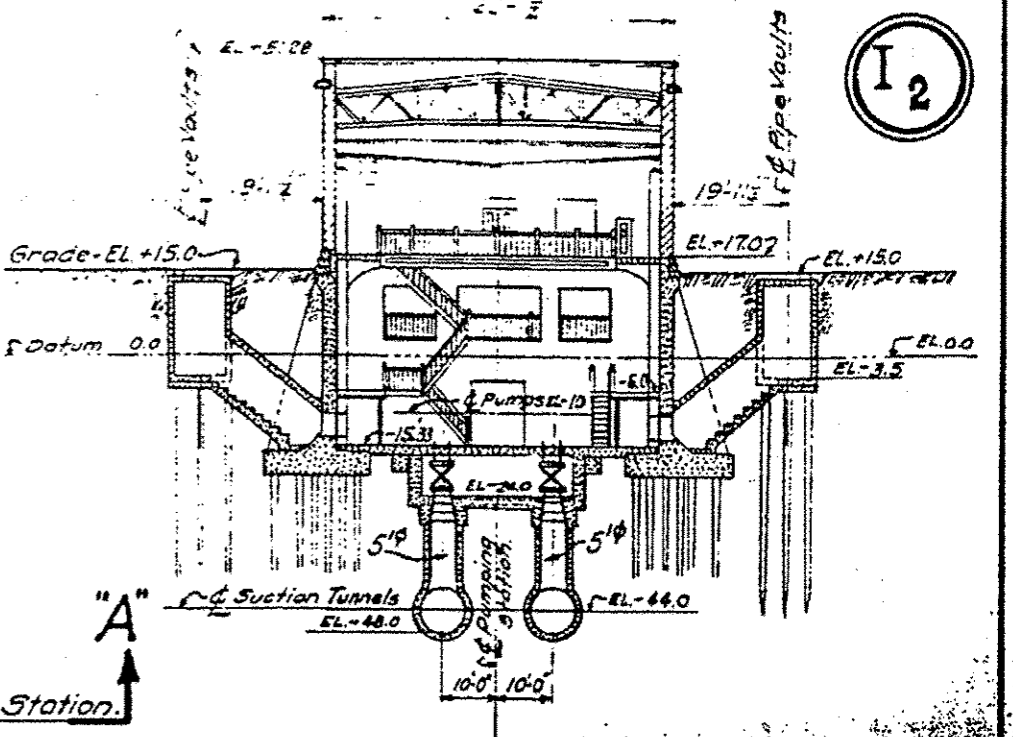




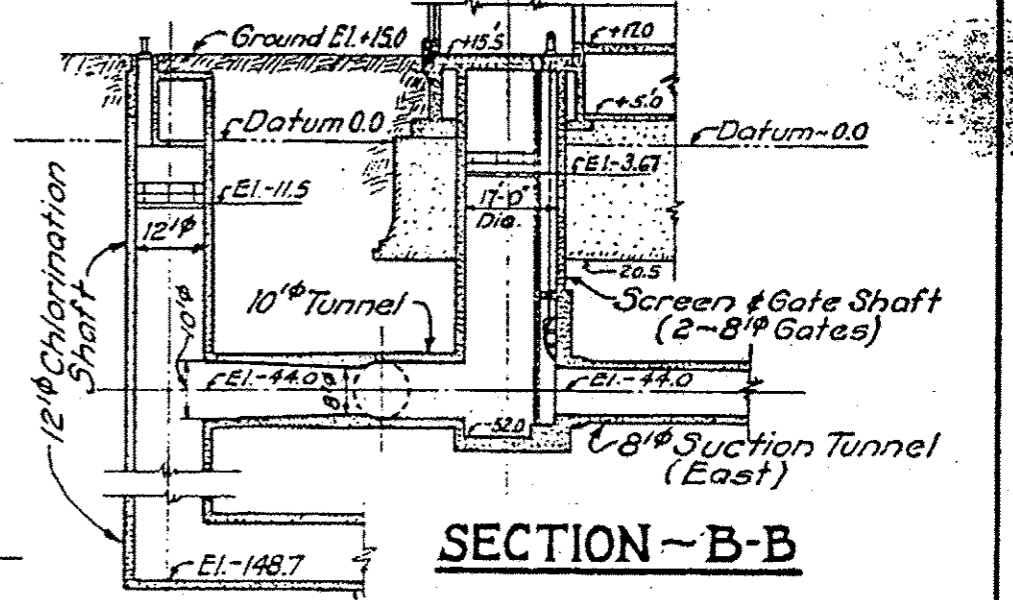
**GENERAL PLAN**



**LONGITUDINAL SECTION -A-A-**



**CROSS SECTION THROUGH PUMP ROOM**



**SECTION -B-B**

FOR INFORMATION ONLY  
SUBJECT TO VERIFICATION

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DIVISION OF WATER WORKS DESIGN

**CERMAK PUMPING STATION**

SCALE: 1 in. = 40 ft. APRIL, 1937  
Revised May 1940. T.A.R. 10,57 FILE 3-N

FILE NAME = FILES

**COLLINS ENGINEERS**

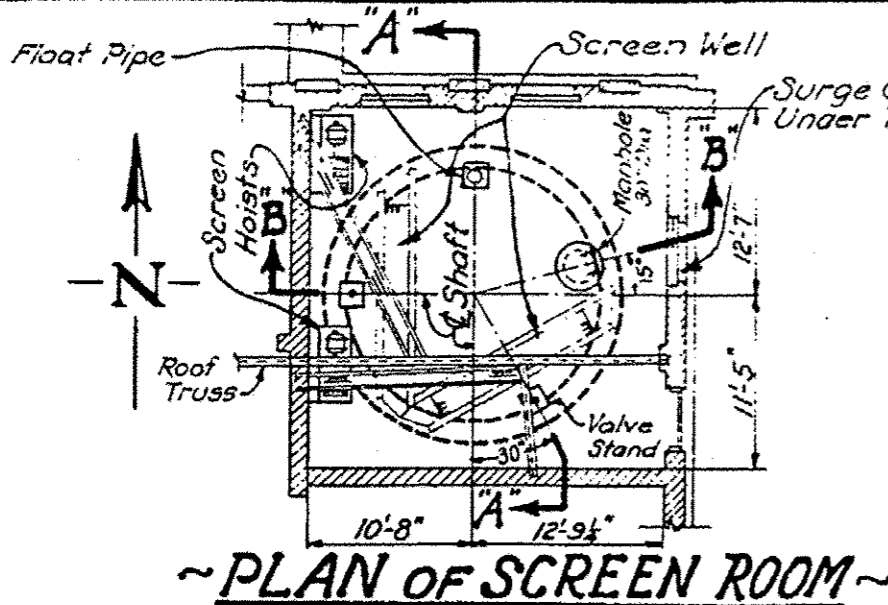
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|---------------------------|------------|-----------|
| USER NAME (rgal)          | DESIGNED - | REVISED - |
| PLOT SCALE = 2,0000 / in. | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013     | CHECKED -  | REVISED - |
|                           | DATE       | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

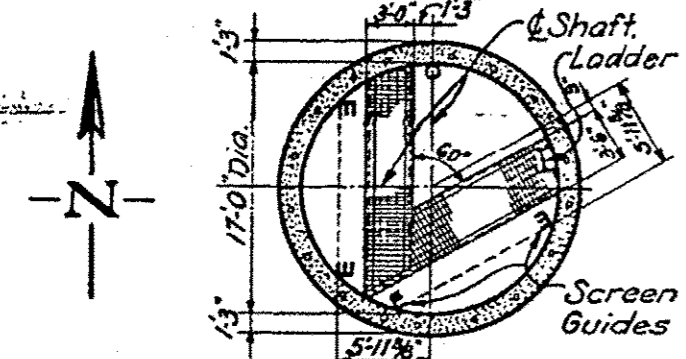
RECORD DRAWING

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

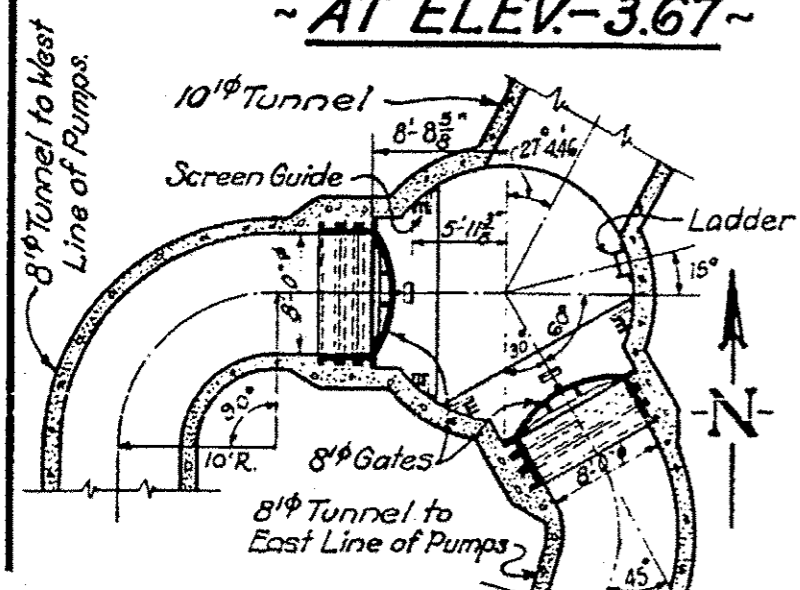
|                     |                            |             |   |              |
|---------------------|----------------------------|-------------|---|--------------|
| F.A.I. R.T.E. 90/94 | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37                                   | SHEET NO. 14 |
| CONTRACT NO. 60W36  |                            |             | FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT |              |



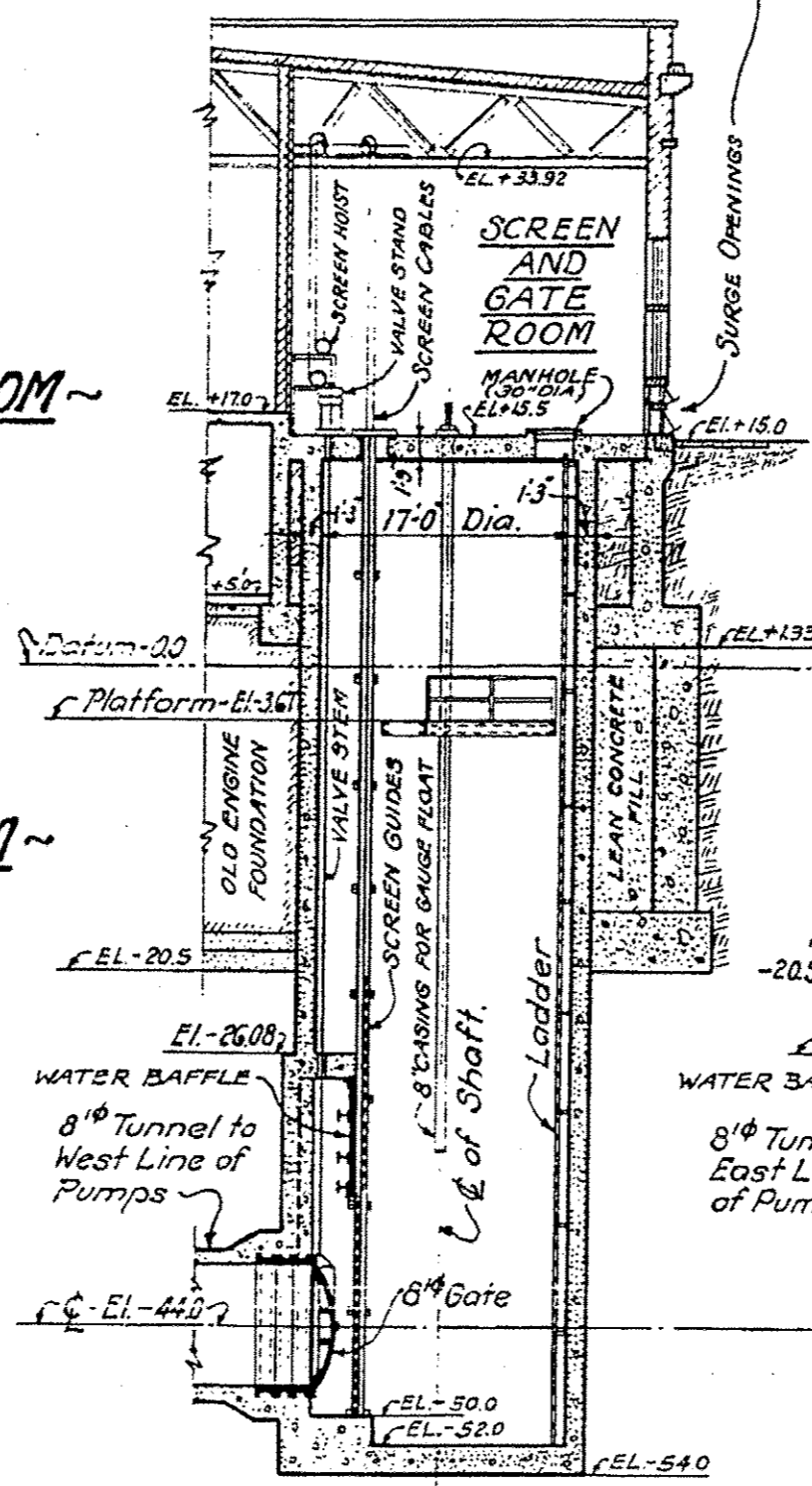
~ PLAN OF SCREEN ROOM ~



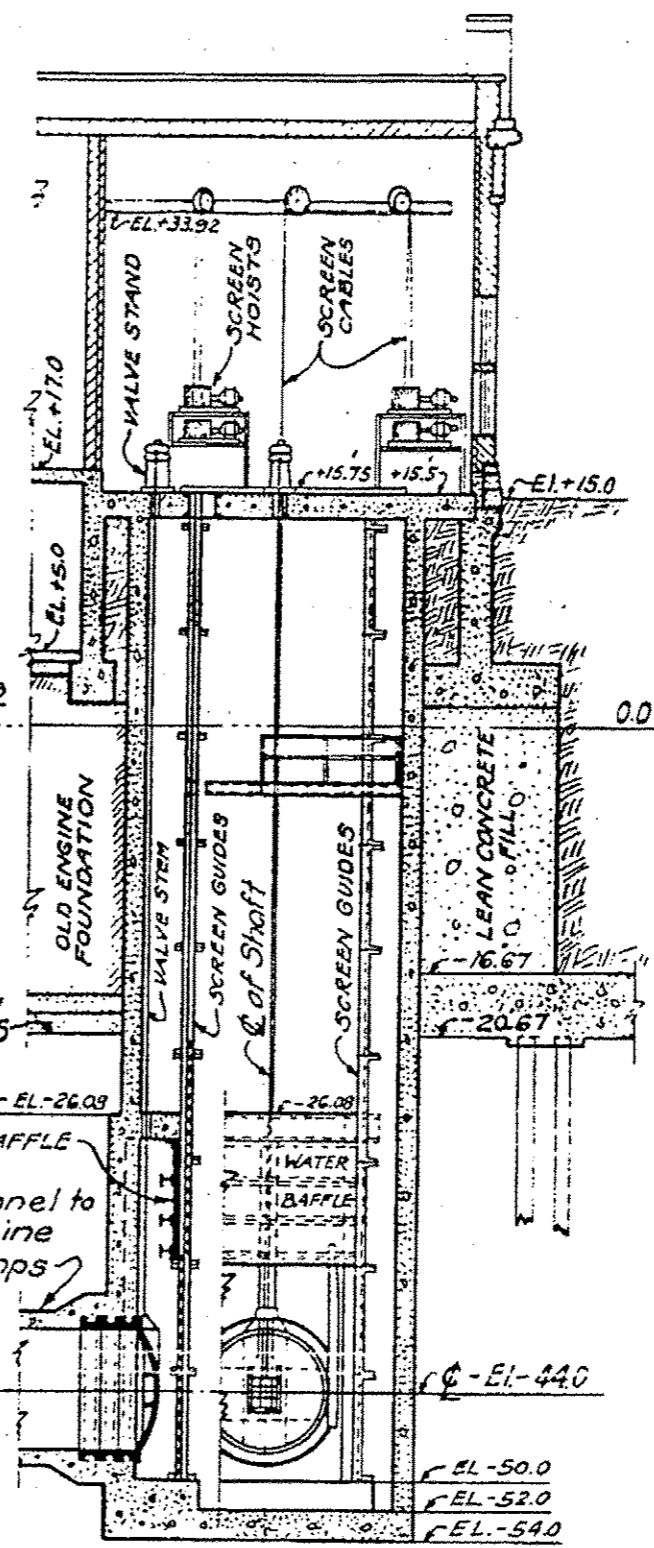
~ PLAN OF PLATFORM ~  
~ AT ELEV. -3.67 ~



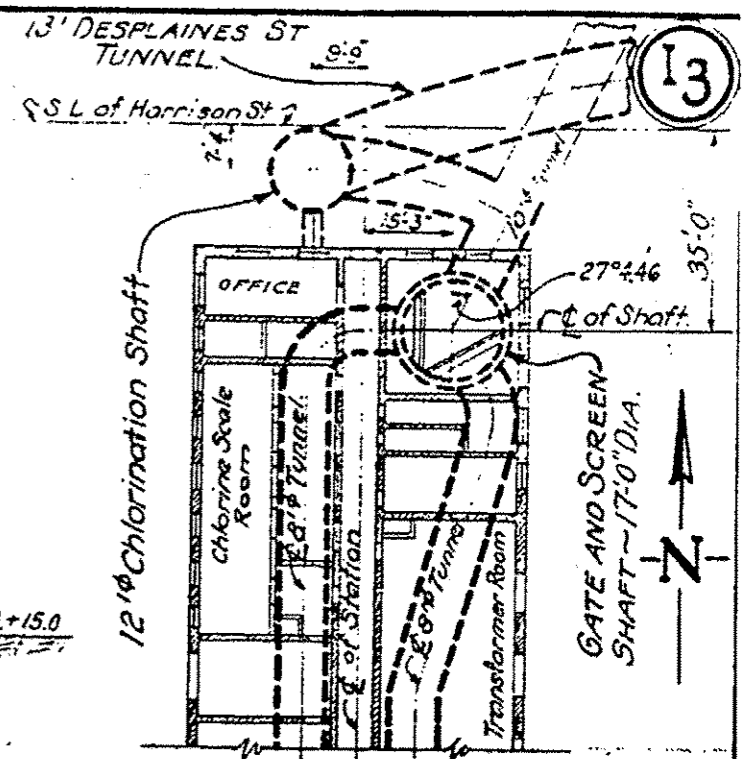
~ SECTION -C-C~



~ SECTION -B-B~



~ SECTION -A-A~



~ LOCATION PLAN ~  
Scale - 1" = 40'-0"

NOTE:-  
For General Plan of Station  
See Drawing - I-2.

FOR INFORMATION ONLY  
SUBJECT TO VERIFICATION

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DIVISION OF WATER WORKS DESIGN

**GERMAK PUMPING STATION  
SCREEN AND GATE SHAFT**

SCALE: 1 inch = 15 ft.

January 1941

FILE 3-N

FILE NAME - #FILES

**COLLINS ENGINEERS**

USER NAME = rgall  
PLOT SCALE = 2,0000 1/1 in.  
PLOT DATE = 4/12/2013

DESIGNED -  
DRAWN -  
CHECKED -  
DATE -

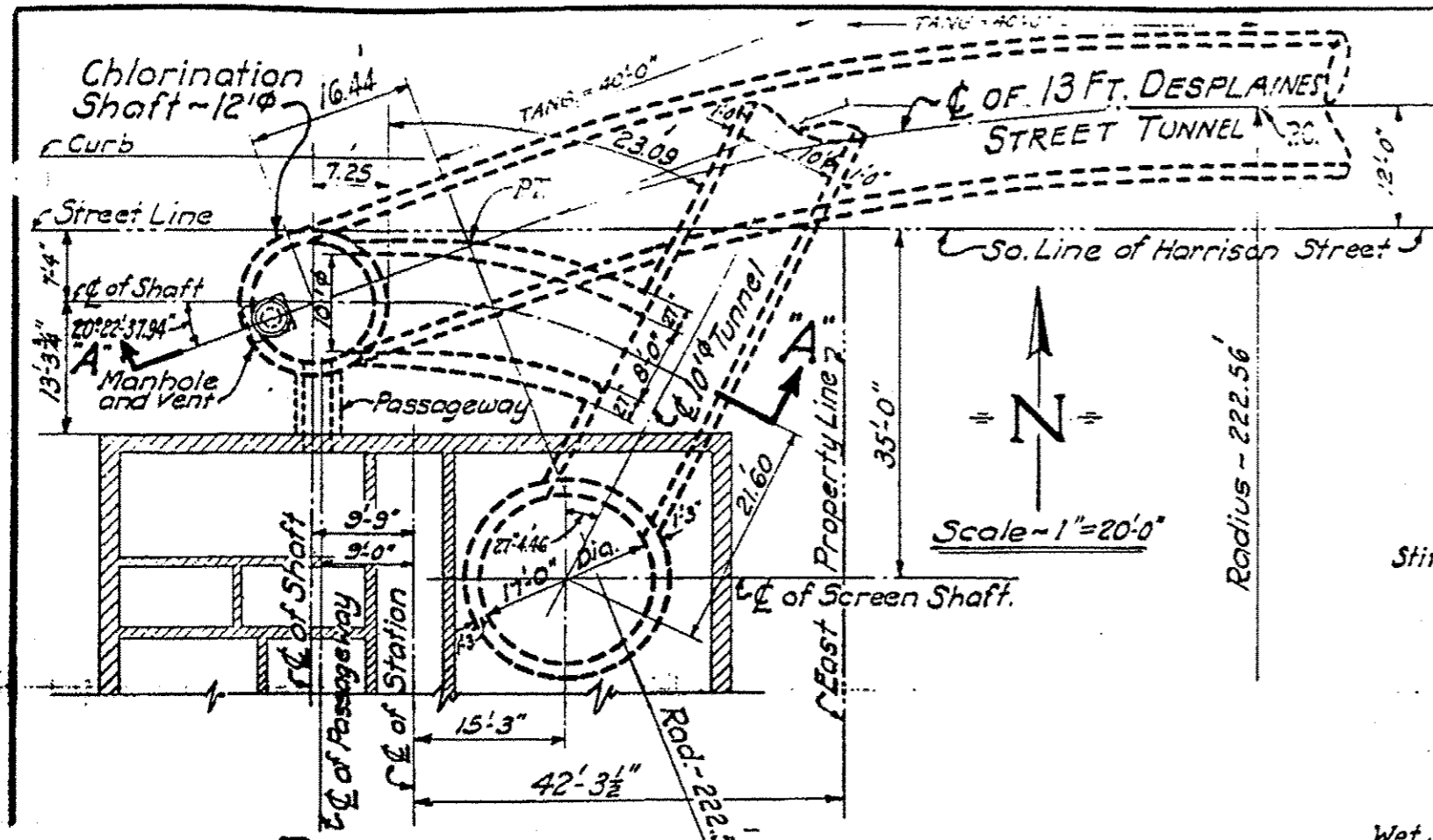
REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

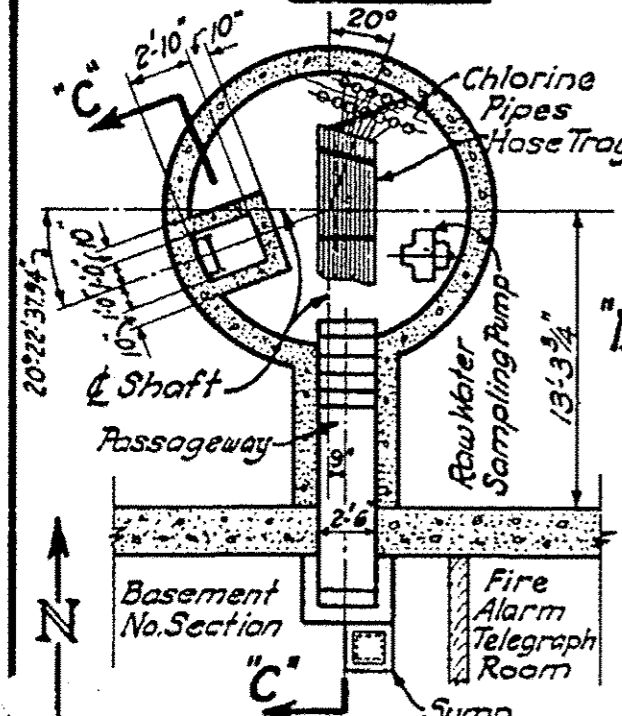
RECORD DRAWING

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

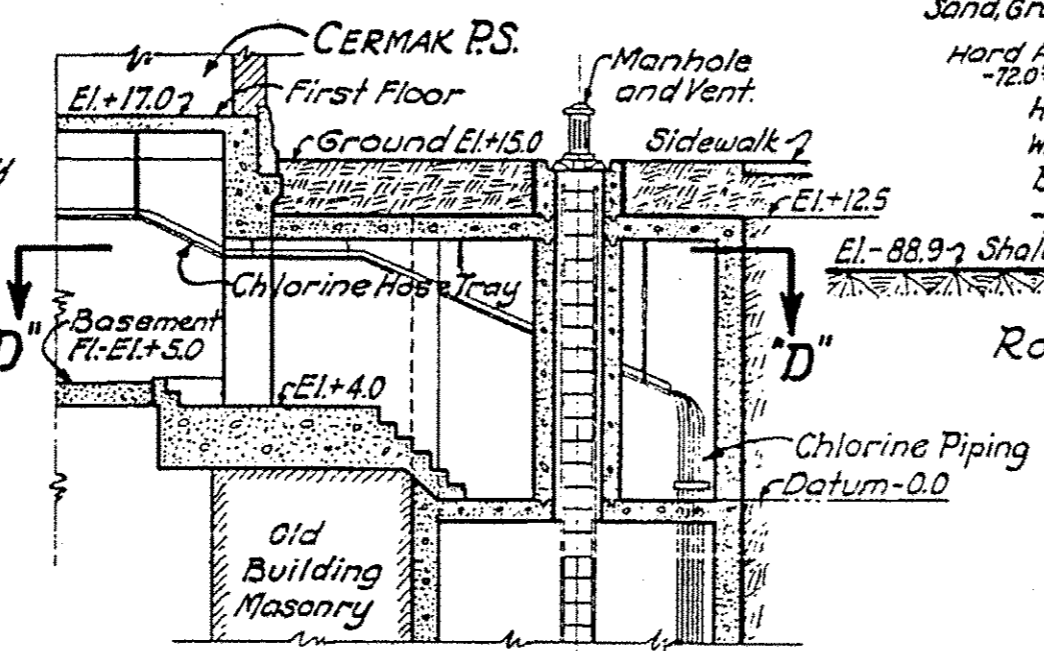
|                    |                            |             |   |              |
|--------------------|----------------------------|-------------|---|--------------|
| F.A.I. RTE. 90/94  | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37                                 | SHEET NO. 15 |
| CONTRACT NO. 60W36 |                            |             | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |              |



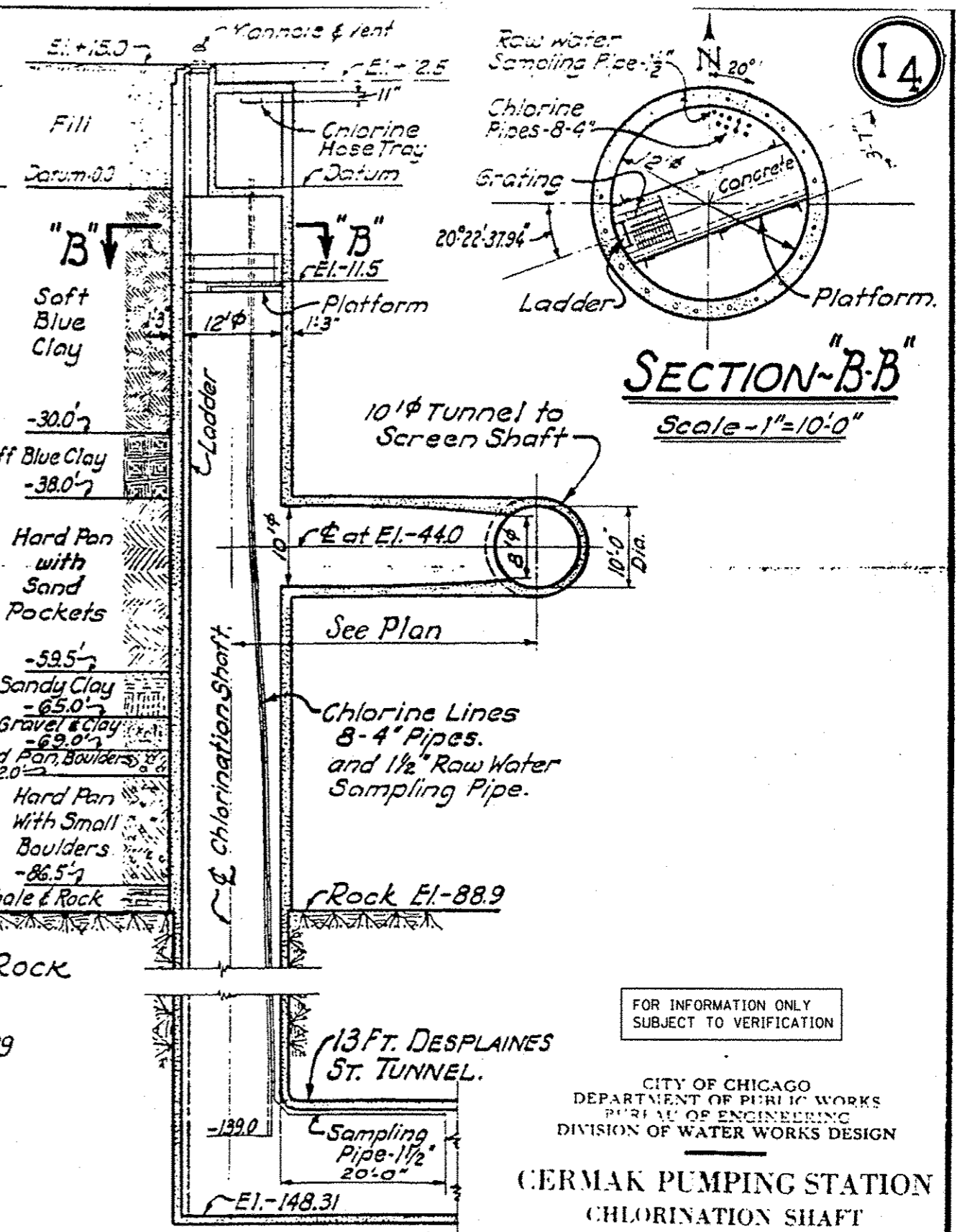
**PLAN**



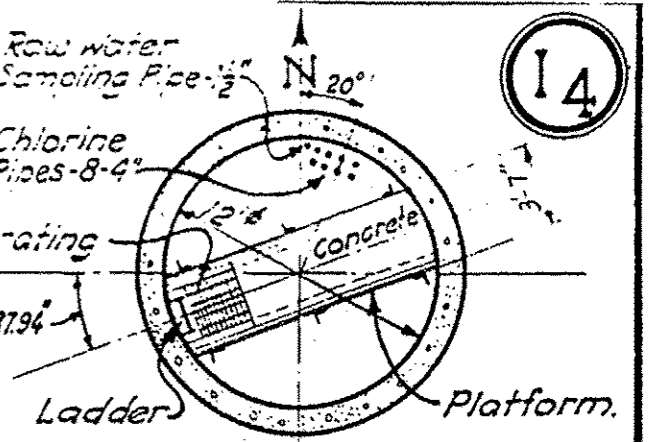
**SECTION-D-D**



**SECTION-C-C**  
Scale - 1" = 10'-0"



**SECTION-A-A**



**SECTION-B-B**  
Scale - 1" = 10'-0"

FOR INFORMATION ONLY  
SUBJECT TO VERIFICATION

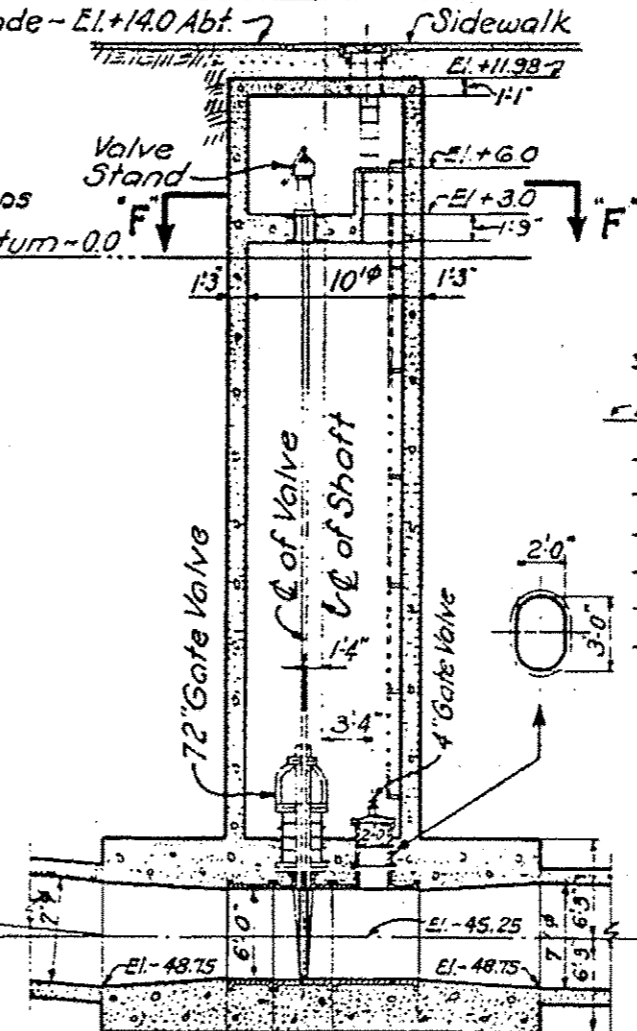
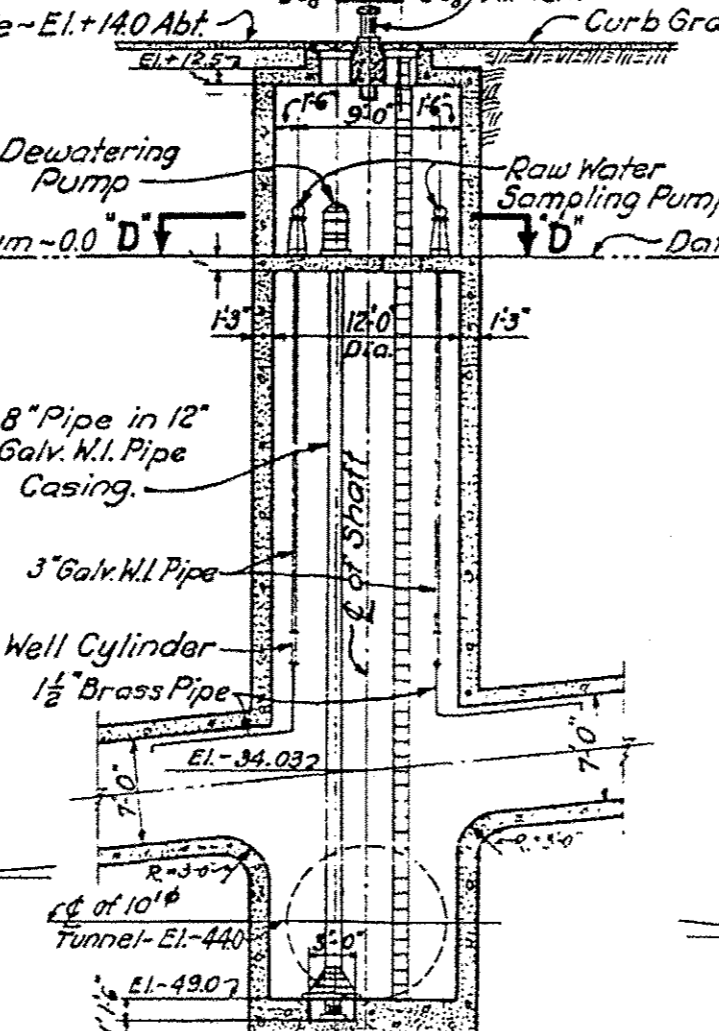
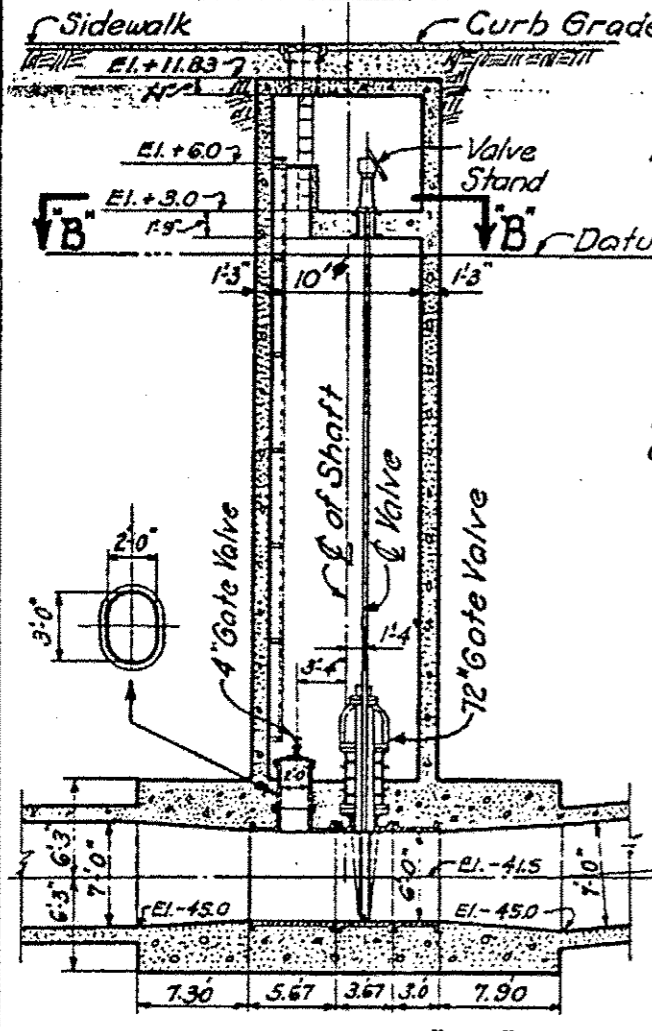
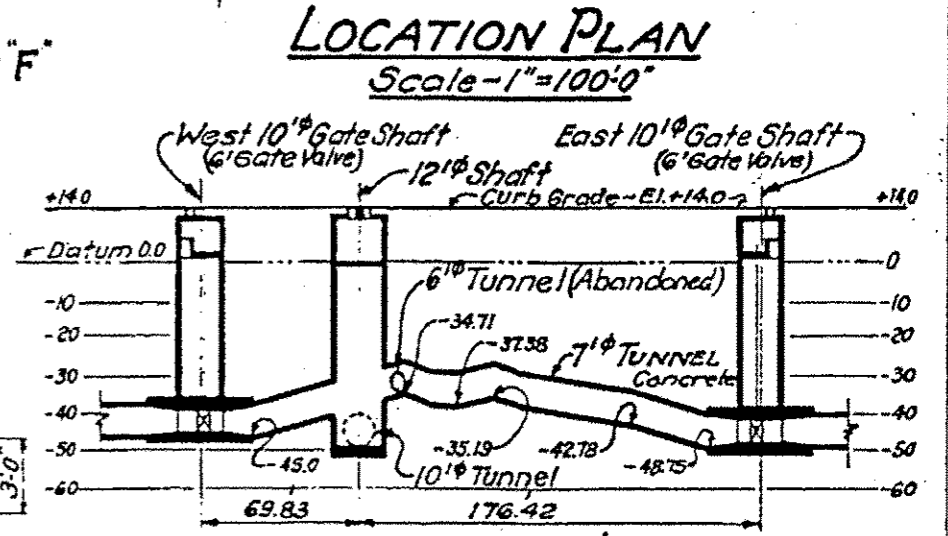
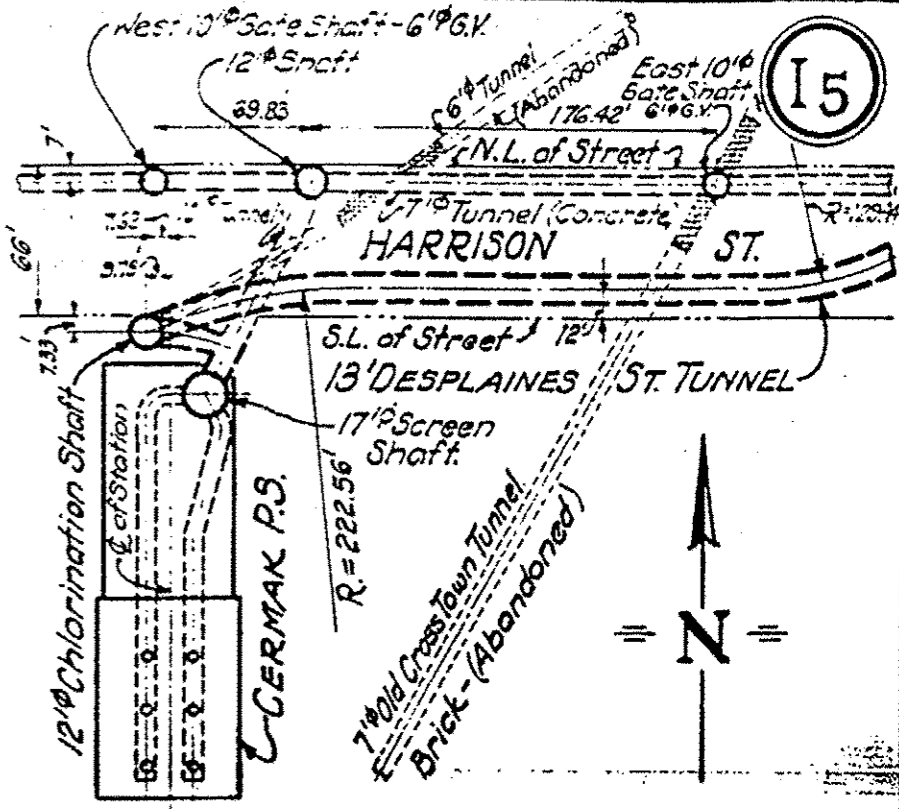
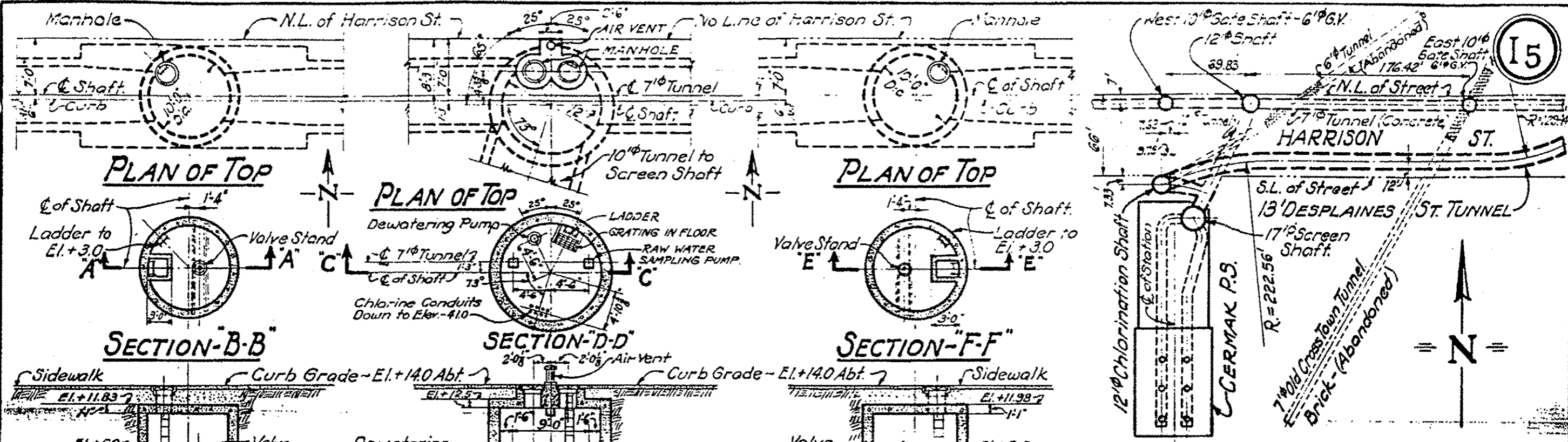
CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DIVISION OF WATER WORKS DESIGN

**CERMAK PUMPING STATION  
CHLORINATION SHAFT**

SCALE: 1 inch = 10 and 20 ft. January 1941  
FILE 3-N

|  |  |  |   |                |   |
|--|--|--|---|----------------|---|
| <b>COLLINS ENGINEERS</b><br>USER NAME = rgal<br>PLOT SCALE = 2,0000 / 1 in.<br>PLOT DATE = 4/12/2012 | DESIGNED -<br>DRAWN -<br>CHECKED -<br>DATE - | REVISED -<br>REVISED -<br>REVISED -<br>REVISED - | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | RECORD DRAWING | F.A.I. RTE. 90794<br>SECTION 0101.6-2P-1-3 (13)<br>COUNTY COOK<br>SHEET NO. 37<br>TOTAL SHEETS 16<br>CONTRACT NO. 60W36 |
|  | SCALE: SHEET NO. OF SHEETS STA. TO STA.      |  |   |                |   |





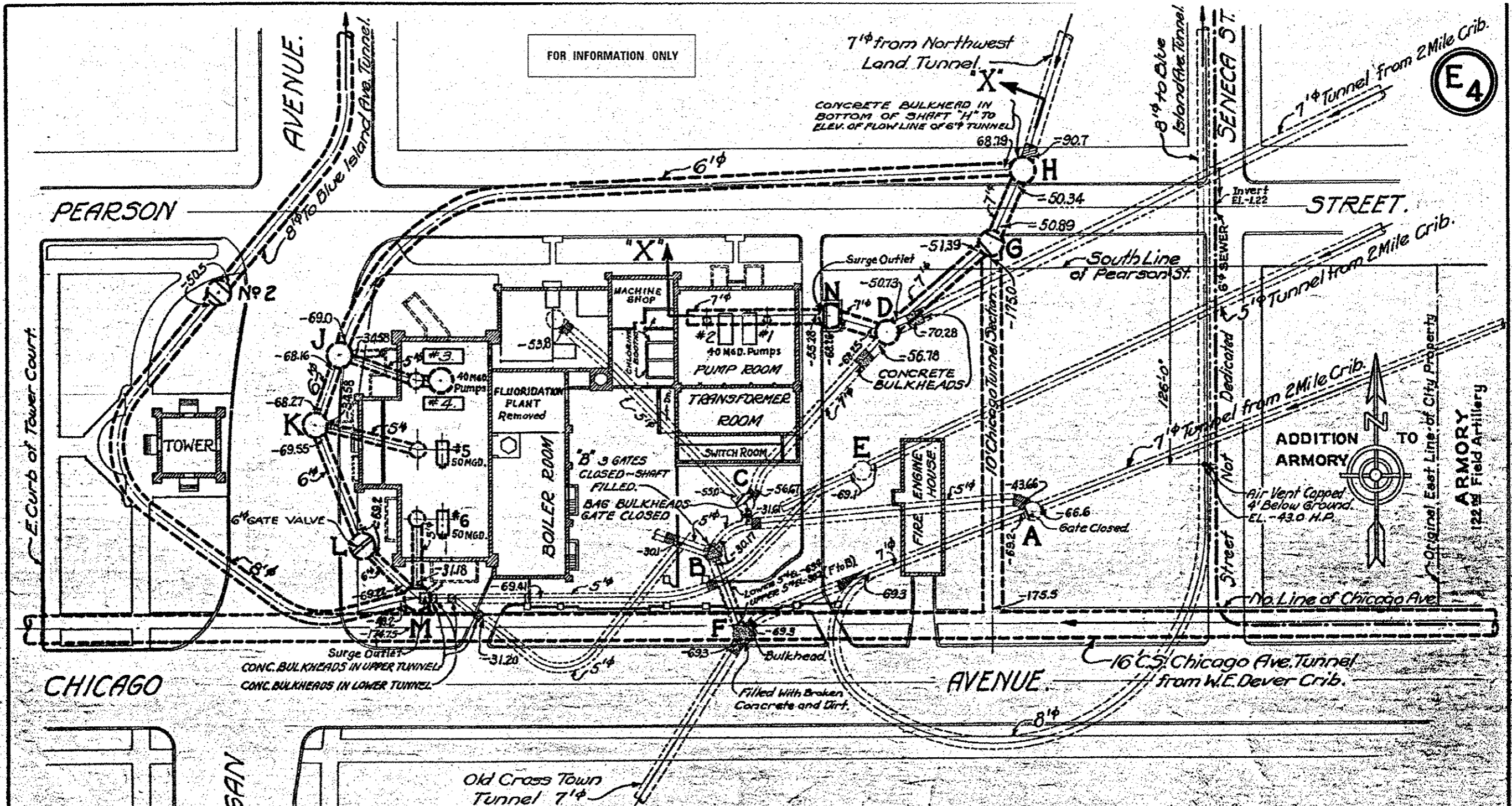
CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DIVISION OF WATER WORKS DESIGN

**CERMAK PUMPING STATION**  
 SHAFTS IN HARRISON STREET

SCALE: 1 inch = 15 ft.      January 1941  
 FILE 3-N

FOR INFORMATION ONLY  
 SUBJECT TO VERIFICATION

|   |   |  |  |   |   |   |
|---|---|--|--|---|---|---|
| <b>COLLINS ENGINEERS</b><br><small>FILE NO. 100-100-100</small> | USER NAME = rgal1<br>PLOT SCALE = 2,000B 1/4 in.<br>PLOT DATE = 4/12/2013 | DESIGNED -<br>DRAWN -<br>CHECKED -<br>DATE - | REVISED -<br>REVISED -<br>REVISED -<br>REVISED - | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | RECORD DRAWING                                    | F.A.I. RTE. 90/94<br>SECTION 0101.6-2P-1-3 (13)<br>COUNTY COOK<br>TOTAL SHEETS 37<br>SHEET NO. 17<br>CONTRACT NO. 60W36 |
|   | SCALE: SHEET NO. OF SHEETS STA. TO STA.                                   |  |  |   | FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT |   |



**NOTES**

All Elevations Are to Invert of Tunnel.  
 Abandoned Tunnels Indicated by Light Dotted Lines.  
 Pumps No. 1, 2, 3, & 4 Are 40 M.G.D. DeLaval Motor  
 Driven Centrifugal Pumps.  
 Pumps No. 5 & 6 Are 50 M.G.D.  
 For Section "X-X" - See Drwg. E-5

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DIVISION OF WATER WORKS DESIGN

**CHICAGO AVE. PUMPING STA.**

SCALE: 1 in. = 80 ft. APRIL, 1937  
 Revised Jan. 1939  
 Feb. 1939  
 Nov. 1939

FILE 3-N

COLLINS ENGINEERS

|                             |            |           |
|-----------------------------|------------|-----------|
| USER NAME: sramplar         | DESIGNED - | REVISED - |
| PLOT SCALE: 20.0000 1/2 in. | DRAWN -    | REVISED - |
| PLOT DATE: 7/11/2013        | CHECKED -  | REVISED - |
|                             | DATE -     | REVISED - |

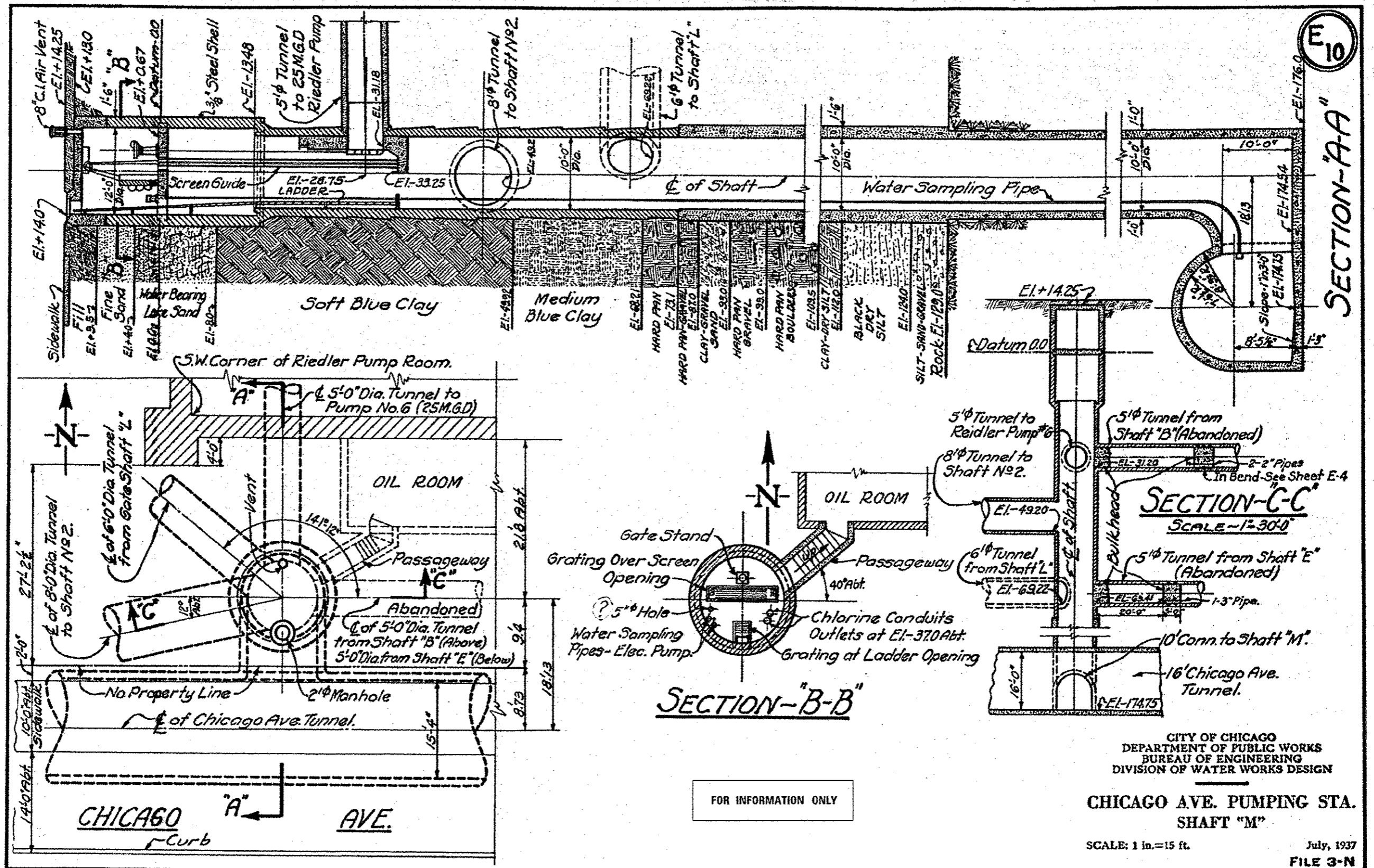
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|                |                                  |
|----------------|----------------------------------|
| RECORD DRAWING |                                  |
| SCALE:         | SHEET NO. OF SHEETS STA. TO STA. |

|   |                            |             |                    |               |
|---|----------------------------|-------------|--------------------|---------------|
| F.A.I. RTE. 90/94                               | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37    | SHEET NO. 17A |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                            |             | CONTRACT NO. 60W36 |               |







FOR INFORMATION ONLY

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DIVISION OF WATER WORKS DESIGN

**CHICAGO AVE. PUMPING STA.  
 SHAFT "M"**

SCALE: 1 in. = 15 ft. July, 1937  
 FILE 3-N

FILE NO. 1 - 87154

**COLLINS ENGINEERS**

USER NAME: mcranfar  
 PLOT SCALE: 20,0000 / 1 in.  
 PLOT DATE: 7/11/2013

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

RECORD DRAWING

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

| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|--------------------|--------|--------------------|-----------|
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37                 | 17C       |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        | CONTRACT NO. 60W36 |           |



**BORING LOG 1087-B-01**

Page 1 of 3

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 594.63 ft  
North: 1897505.91 ft  
East: 1171279.56 ft  
Station: 7807+80.07  
Offset: 34.23 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION   | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|---|------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|------------|-----------------------|----------|----------------------|
| 593.6                  | 12-inch thick, black SILTY CLAY -TOPSOIL-   |            |            |                       |          |                      |                        |                           |            |            |                       |          |                      |
|                        | Very stiff to hard, dark brown to brown SILTY CLAY, trace gravel, concrete and brick fragments -FILL- | 1          | 4          | 17                    | 4.50     | P                    |                        |                           | 9          | 0          | 1                     | 0.50     | P                    |
|                        |   | 2          | 3          | 4                     | 3.75     | P                    |                        |                           | 10         | 0          | 3                     | 0.41     | B                    |
| 589.1                  | Very loose to medium dense, brown, fine SAND, trace concrete, clay, and rock fragments -FILL-         | 3          | 2          | 1                     | NP       |                      |                        |                           | 11         | 0          | 2                     | 0.33     | B                    |
|                        |   | 4          | 10         | 4                     | NP       |                      |                        |                           | 12         | 0          | 0                     | 0.16     | B                    |
| 584.1                  | Very stiff, gray SILTY CLAY, trace gravel   | 5          | 3          | 5                     | 2.38     | B                    |                        |                           | 13         | 0          | 2                     | 0.16     | B                    |
| 581.6                  | Very soft to medium stiff, gray CLAY, trace gravel  | 6          | 2          | 2                     | 0.66     | B                    |                        |                           | 14         | 0          | 2                     | 0.16     | B                    |
|                        |   | 7          | 0          | 0                     | 0.33     | B                    |                        |                           | 15         | 0          | 0                     | 0.16     | B                    |
|                        |   | 8          | 0          | 0                     | 0.41     | B                    |                        |                           | 16         | 0          | 2                     | 0.16     | B                    |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |           |  |  |
|---------------------|---|-------------------|-------------|---|-----------|--|--|
| Begin Drilling      | 03-03-2013                              | Complete Drilling | 03-04-2013  | While Drilling  | 10.50 ft  |  |  |
| Drilling Contractor | Wang Testing Services                   | Drill Rig         | B-57 TMR    | At Completion of Drilling   | MUD (10') |  |  |
| Driller             | R&J                                     | Logger            | D. Kolpacki | Time After Drilling   | NA        |  |  |
| Checked by          | C. Marin                                | Depth to Water    | NA          |   |           |  |  |
| Drilling Method     | 2.25" SSA to 15', Mud Rotary 15' to 80' |                   |             | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |           |  |  |

**BORING LOG 1087-B-01**

Page 2 of 3

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 594.63 ft  
North: 1897505.91 ft  
East: 1171279.56 ft  
Station: 7807+80.07  
Offset: 34.23 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|------------|-----------------------|----------|----------------------|
|                        |  |            |            |                       |          |                      |                        |                           |            |            |                       |          |                      |
|                        |  | 15         | 0          | 2                     | 0.41     | B                    |                        |                           | 19         | 10         | 24                    | NP       | 17                   |
|                        |  | 45         | 0          | 2                     | 0.41     | B                    |                        |                           | 20         | 6          | 12                    | 3.44     | B                    |
|                        |  | 50         | 1          | 2                     | 0.41     | B                    |                        |                           | 21         | 0          | 3                     | 0.66     | B                    |
| 542.8                  | Stiff, gray SILTY CLAY, trace gravel                                   | 55         | 0          | 4                     | 1.23     | B                    |                        |                           | 22         | 4          | 11                    | NP       | 27                   |
| 537.5                  | Dense, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel and sand seams | 60         | 16         | 19                    | NP       |                      |                        |                           | 23         | 15         | 15                    | NP       | 27                   |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |           |  |  |
|---------------------|---|-------------------|-------------|---|-----------|--|--|
| Begin Drilling      | 03-03-2013                              | Complete Drilling | 03-04-2013  | While Drilling  | 10.50 ft  |  |  |
| Drilling Contractor | Wang Testing Services                   | Drill Rig         | B-57 TMR    | At Completion of Drilling   | MUD (10') |  |  |
| Driller             | R&J                                     | Logger            | D. Kolpacki | Time After Drilling   | NA        |  |  |
| Checked by          | C. Marin                                | Depth to Water    | NA          |   |           |  |  |
| Drilling Method     | 2.25" SSA to 15', Mud Rotary 15' to 80' |                   |             | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |           |  |  |

**BORING LOG 1087-B-01**

Page 3 of 3

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 594.63 ft  
North: 1897505.91 ft  
East: 1171279.56 ft  
Station: 7807+80.07  
Offset: 34.23 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                                      | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|------------|-----------------------|----------|----------------------|
|                        |  |            |            |                       |          |                      |                        |                           |            |            |                       |          |                      |
|                        |  | 66         | 6          | 15                    | 5.74     | B                    |                        |                           | 24         | 11         | 14                    | 4.67     | B                    |
|                        |  | 86         | 0          | 0                     | NP       |                      |                        |                           | 25         | 0          | 0                     | NP       |                      |
| 502.8                  | Very dense, gray GRAVELLY SANDY LOAM, some dolostone fragments | 95         | 0          | 0                     | NP       |                      |                        |                           | 26         | 0          | 0                     | NP       |                      |
| 495.8                  | Boring terminated at 99.00 ft                                  | 100        |            |                       |          |                      |                        |                           |            |            |                       |          |                      |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |           |  |  |
|---------------------|---|-------------------|-------------|---|-----------|--|--|
| Begin Drilling      | 03-03-2013                              | Complete Drilling | 03-04-2013  | While Drilling  | 10.50 ft  |  |  |
| Drilling Contractor | Wang Testing Services                   | Drill Rig         | B-57 TMR    | At Completion of Drilling   | MUD (10') |  |  |
| Driller             | R&J                                     | Logger            | D. Kolpacki | Time After Drilling   | NA        |  |  |
| Checked by          | C. Marin                                | Depth to Water    | NA          |   |           |  |  |
| Drilling Method     | 2.25" SSA to 15', Mud Rotary 15' to 80' |                   |             | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |           |  |  |

FILE NAME: D:\2281\7298.21 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\7298.21 - 3rd PM\Boring Log.dwg



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PLOT SCALE = 2:8.0000 1" = 10'  
PLOT DATE = 4/12/2013

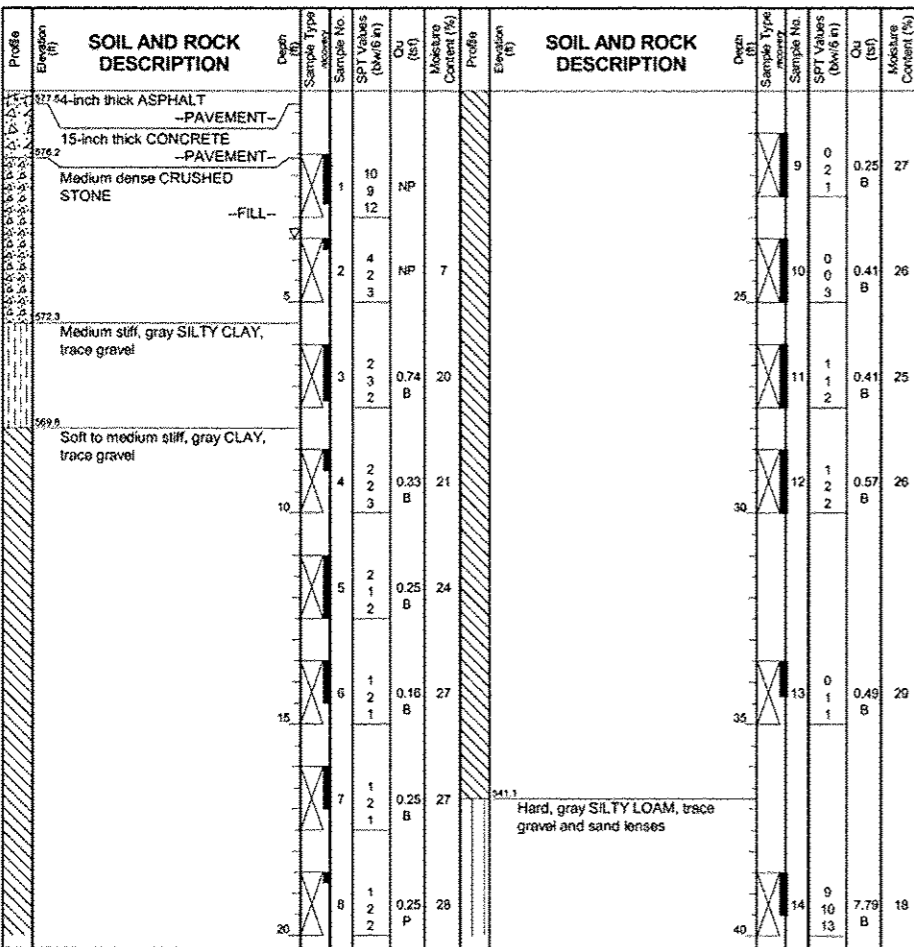
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DRAWN -  
CHECKED -  
DATE -

REVISED -  
REVISED -  
REVISED -  
REVISED -

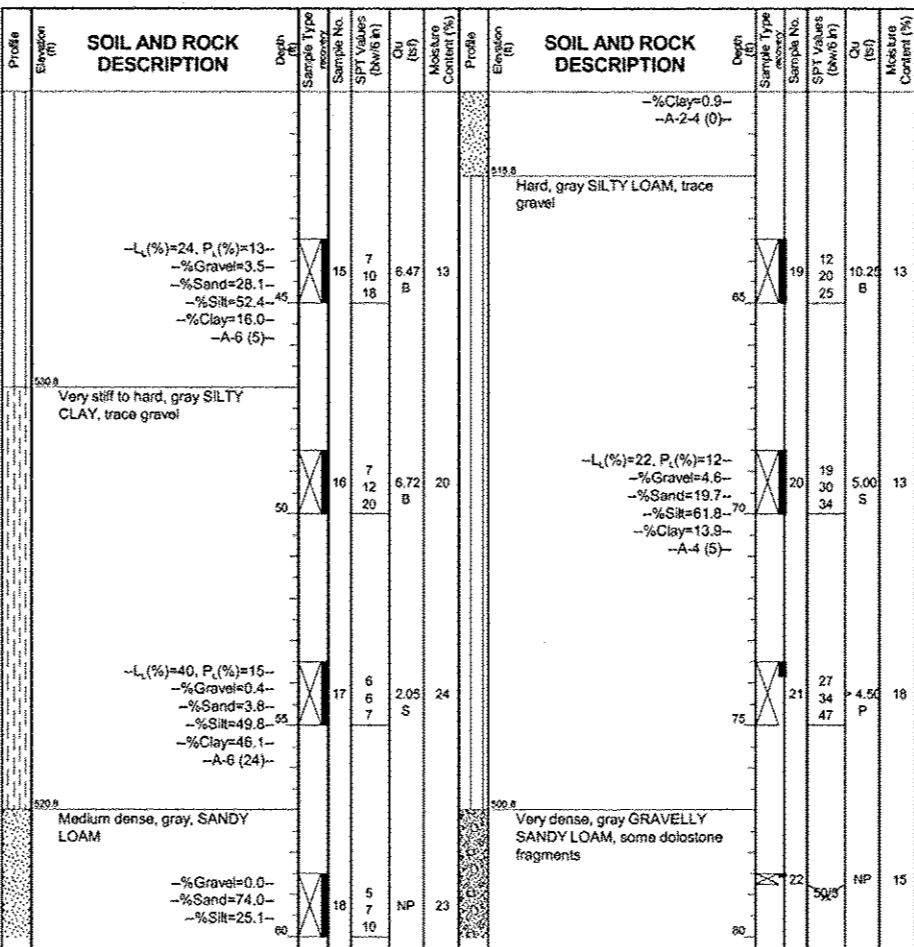
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

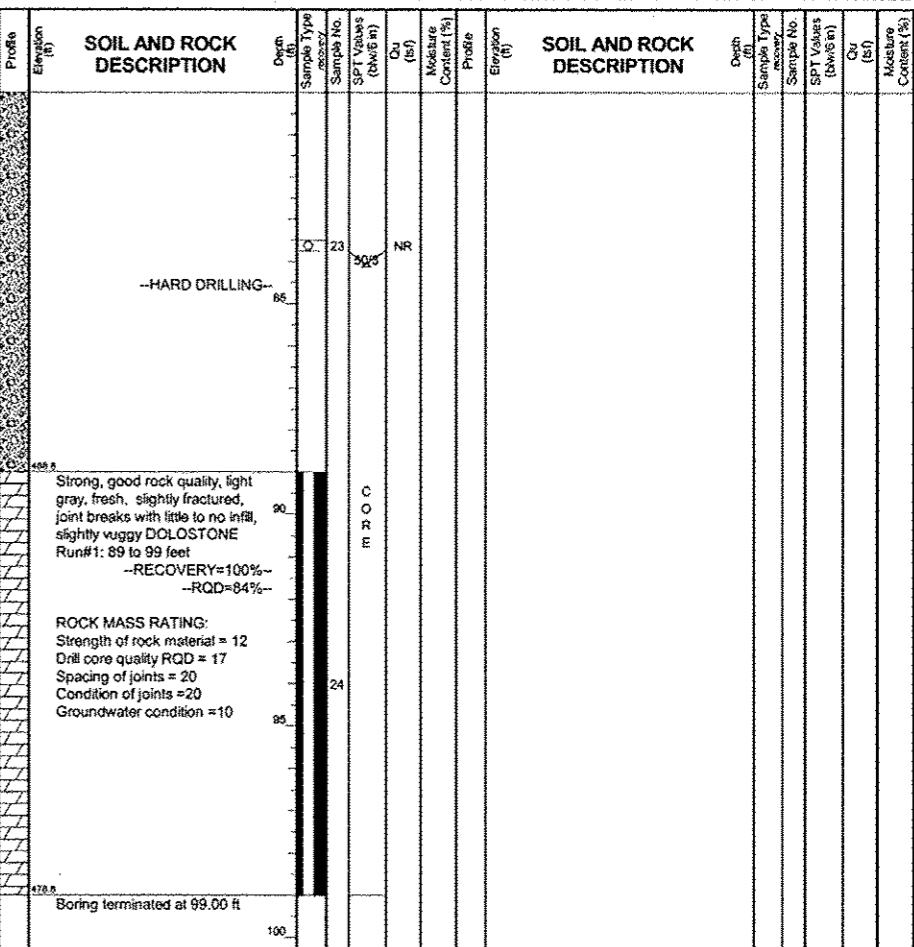
|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                       | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 18        |
| CONTRACT NO. 60W36                                |                    |        |              |           |
| FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT |                    |        |              |           |



| GENERAL NOTES       |   | WATER LEVEL DATA          |   |
|---------------------|---|---------------------------|---|
| Begin Drilling      | 03-06-2013                                  | Complete Drilling         | 03-14-2013                                  |
| Drilling Contractor | Wang Testing Services                       | Drill Rig                 | B-57 TMR                                    |
| Driller             | R&J   | Logger                    | D. Kolpacki                                 |
| Checked by          | C. Marin                                    | Drilling Method           | 2.25" SSA to 20', Mud Rotary 20' thereafter |
| Drilling Method     | 2.25" SSA to 20', Mud Rotary 20' thereafter | White Drilling            | 3.50 ft                                     |
|                     |   | At Completion of Drilling | MUD (20')                                   |
|                     |   | Time After Drilling       | NA  |
|                     |   | Depth to Water            | NA  |



| GENERAL NOTES       |   | WATER LEVEL DATA          |   |
|---------------------|---|---------------------------|---|
| Begin Drilling      | 03-06-2013                                  | Complete Drilling         | 03-14-2013                                  |
| Drilling Contractor | Wang Testing Services                       | Drill Rig                 | B-57 TMR                                    |
| Driller             | R&J   | Logger                    | D. Kolpacki                                 |
| Checked by          | C. Marin                                    | Drilling Method           | 2.25" SSA to 20', Mud Rotary 20' thereafter |
| Drilling Method     | 2.25" SSA to 20', Mud Rotary 20' thereafter | White Drilling            | 3.50 ft                                     |
|                     |   | At Completion of Drilling | MUD (20')                                   |
|                     |   | Time After Drilling       | NA  |
|                     |   | Depth to Water            | NA  |



| GENERAL NOTES       |   | WATER LEVEL DATA          |   |
|---------------------|---|---------------------------|---|
| Begin Drilling      | 03-06-2013                                  | Complete Drilling         | 03-14-2013                                  |
| Drilling Contractor | Wang Testing Services                       | Drill Rig                 | B-57 TMR                                    |
| Driller             | R&J   | Logger                    | D. Kolpacki                                 |
| Checked by          | C. Marin                                    | Drilling Method           | 2.25" SSA to 20', Mud Rotary 20' thereafter |
| Drilling Method     | 2.25" SSA to 20', Mud Rotary 20' thereafter | White Drilling            | 3.50 ft                                     |
|                     |   | At Completion of Drilling | MUD (20')                                   |
|                     |   | Time After Drilling       | NA  |
|                     |   | Depth to Water            | NA  |

FILE NAME: I:\7298\29821 - Circle Interchange Tunnel Bulkheading\CA00\CA00 SHEETS\29821-3 (13) borings\B-02.dwg



|                                  |            |           |
|----------------------------------|------------|-----------|
| USER NAME = rge11                | DESIGNED - | REVISED - |
| PLLOT SCALE = 2:0.0000 1' = 1/8" | DRAWN -    | REVISED - |
| PLLOT DATE = 4/12/2013           | CHECKED -  | REVISED - |
|                                  | DATE -     | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|        |                     |              |
|--------|---------------------|--------------|
| SCALE: | SHEET NO. OF SHEETS | STA. TO STA. |
|--------|---------------------|--------------|

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 19        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |

**BORING LOG 1087-B-03**

WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Date: NAVD 88  
 Elevation: 596.41 ft  
 North: 1897526.93 ft  
 East: 1171579.56 ft  
 Station: 7811+18.84  
 Offset: 5.33 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION   | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                                   | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|------------|-----------------------|----------|----------------------|------------------------|---|------------|------------|-----------------------|----------|----------------------|
| 595.8                  | 10.25-inch thick CONCRETE -PAVEMENT-  |            |            |                       |          |                      |                        |   |            |            |                       |          |                      |
|                        | Gray CRUSHED STONE -BASE COURSE-  | 1          | 1          | 10                    | 0.90     | 26                   | 593.4                  | Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel | 11         | 11         | 2                     | 0.67     | N/S                  |
|                        | Medium dense, brown and gray, fine SAND to SANDY LOAM, little gravel and brick fragments -FILL- | 2          | 2          | 3                     |          |                      |                        |   | 12         | 12         | 2                     | 0.41     | B                    |
|                        |   | 3          | 3          | 2                     |          |                      |                        |   | 15         | 15         | 2                     | 0.41     | B                    |
|                        |   | 4          | 4          | 2                     |          |                      |                        |   | 11         | 11         | 1                     | 0.41     | B                    |
|                        |   | 5          | 5          | 2                     |          |                      |                        |   | 14         | 14         | 2                     | 0.41     | B                    |
|                        |   | 6          | 6          | 2                     |          |                      |                        |   | 22         | 22         | 3                     | 0.25     | B                    |
|                        | Medium stiff to very stiff, gray SILTY CLAY, trace gravel                                       | 7          | 7          | 4                     | 3.03     | 25                   |                        |   | 35         | 35         | 0                     | 0.25     | B                    |
|                        |   | 8          | 8          | 2                     | 2.05     | 24                   |                        |   | 40         | 40         | 1                     | 0.25     | B                    |
|                        |   | 9          | 9          | 3                     | 0.90     | 28                   |                        |   | 15         | 15         | 7                     | 3.69     | 14                   |
|                        |   | 10         | 10         | 3                     |          |                      |                        |   | 19         | 19         | 10                    |          |                      |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |          |  |  |
|---------------------|---|-------------------|-------------|---|----------|--|--|
| Begin Drilling      | 03-21-2013  | Complete Drilling | 03-22-2013  | While Drilling  | DRY      |  |  |
| Drilling Contractor | Wang Testing Services   | Drill Rig         | D-50 TMR    | At Completion of Drilling   | DRY      |  |  |
| Driller             | R&T   | Logger            | D. Kolpacki | Checked by  | C. Marin |  |  |
| Drilling Method     | 1.0" IDA Geoprobe to 11', 2.25" SSA 11' to 20', Mud Rotary 20' thereafter | Depth to Water    | NA          | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |          |  |  |

**BORING LOG 1087-B-03**

WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Date: NAVD 88  
 Elevation: 596.41 ft  
 North: 1897526.93 ft  
 East: 1171579.56 ft  
 Station: 7811+18.84  
 Offset: 5.33 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION   | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION   | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|------------|-----------------------|----------|----------------------|------------------------|---|------------|------------|-----------------------|----------|----------------------|
|                        |   | 16         | 16         | 0                     | 0.41     | 27                   |                        |   | 65         | 20         | 9                     | 5.56     | 17                   |
|                        |   | 17         | 17         | 1                     | 0.57     | 27                   | 529.7                  | Medium stiff to hard, gray CLAY to SILTY CLAY, trace gravel and seams of sand | 70         | 21         | 8                     | 4.67     | 21                   |
|                        |   | 18         | 18         | 0                     | 0.33     | 24                   |                        |   | 75         | 22         | 3                     | 1.56     | 25                   |
|                        |   | 19         | 19         | 7                     | 3.69     | 14                   |                        |   | 80         | 23         | 4                     | 0.66     | 39                   |
|                        | Very stiff to hard, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel and sand seams | 20         | 20         | 11                    |          |                      |                        |   | 85         | 24         | 5                     |          |                      |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |          |  |  |
|---------------------|---|-------------------|-------------|---|----------|--|--|
| Begin Drilling      | 03-21-2013  | Complete Drilling | 03-22-2013  | While Drilling  | DRY      |  |  |
| Drilling Contractor | Wang Testing Services   | Drill Rig         | D-50 TMR    | At Completion of Drilling   | DRY      |  |  |
| Driller             | R&T   | Logger            | D. Kolpacki | Checked by  | C. Marin |  |  |
| Drilling Method     | 1.0" IDA Geoprobe to 11', 2.25" SSA 11' to 20', Mud Rotary 20' thereafter | Depth to Water    | NA          | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |          |  |  |

**BORING LOG 1087-B-03**

WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Date: NAVD 88  
 Elevation: 596.41 ft  
 North: 1897526.93 ft  
 East: 1171579.56 ft  
 Station: 7811+18.84  
 Offset: 5.33 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/ft) | Qu (tsf) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|---------------------------|------------|------------|-----------------------|----------|----------------------|
|                        |  | 24         | 24         | 16                    | NP       | 17                   |                        |                           | 85         | 25         | 33                    | 8.61     | 12                   |
|                        | Very dense, gray SANDY LOAM, some gravel | 25         | 25         | 46                    | S        |                      |                        |                           | 90         | 26         | 19                    | 7.38     | 15                   |
|                        |  | 26         | 26         | 20                    | S        |                      |                        |                           | 95         | 27         | 5                     | 4.50     | 13                   |
|                        | Hard, gray SILTY LOAM, trace gravel      | 27         | 27         | 5                     | P        |                      |                        |                           | 100        | 28         | 5                     |          |                      |

| GENERAL NOTES       |   |                   |             | WATER LEVEL DATA  |          |  |  |
|---------------------|---|-------------------|-------------|---|----------|--|--|
| Begin Drilling      | 03-21-2013  | Complete Drilling | 03-22-2013  | While Drilling  | DRY      |  |  |
| Drilling Contractor | Wang Testing Services   | Drill Rig         | D-50 TMR    | At Completion of Drilling   | DRY      |  |  |
| Driller             | R&T   | Logger            | D. Kolpacki | Checked by  | C. Marin |  |  |
| Drilling Method     | 1.0" IDA Geoprobe to 11', 2.25" SSA 11' to 20', Mud Rotary 20' thereafter | Depth to Water    | NA          | The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |          |  |  |

FILE NAME = I:\7298\21 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\220126-001\bor-log1.dgn

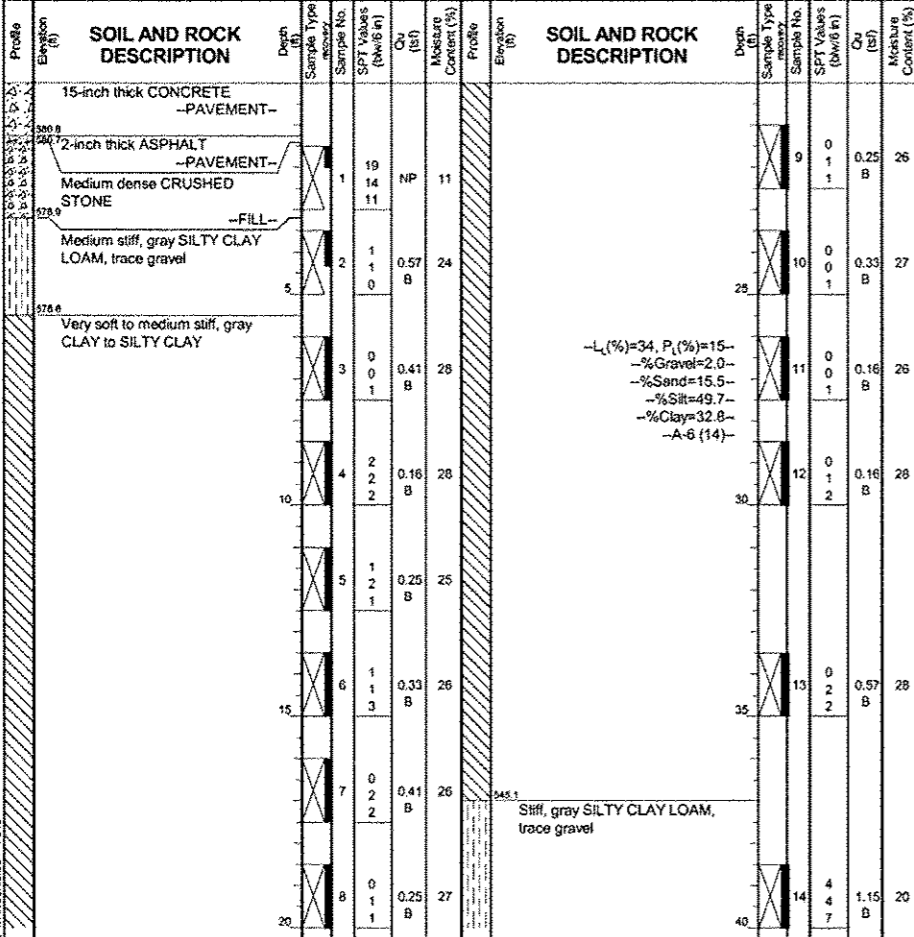


|                                |            |           |
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| USER NAME = r-gall             | DESIGNED - | REVISED - |
| PLOT SCALE = 2:0.0000 '1' / 1" | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013          | CHECKED -  | REVISED - |
|                                | DATE -     | REVISED - |

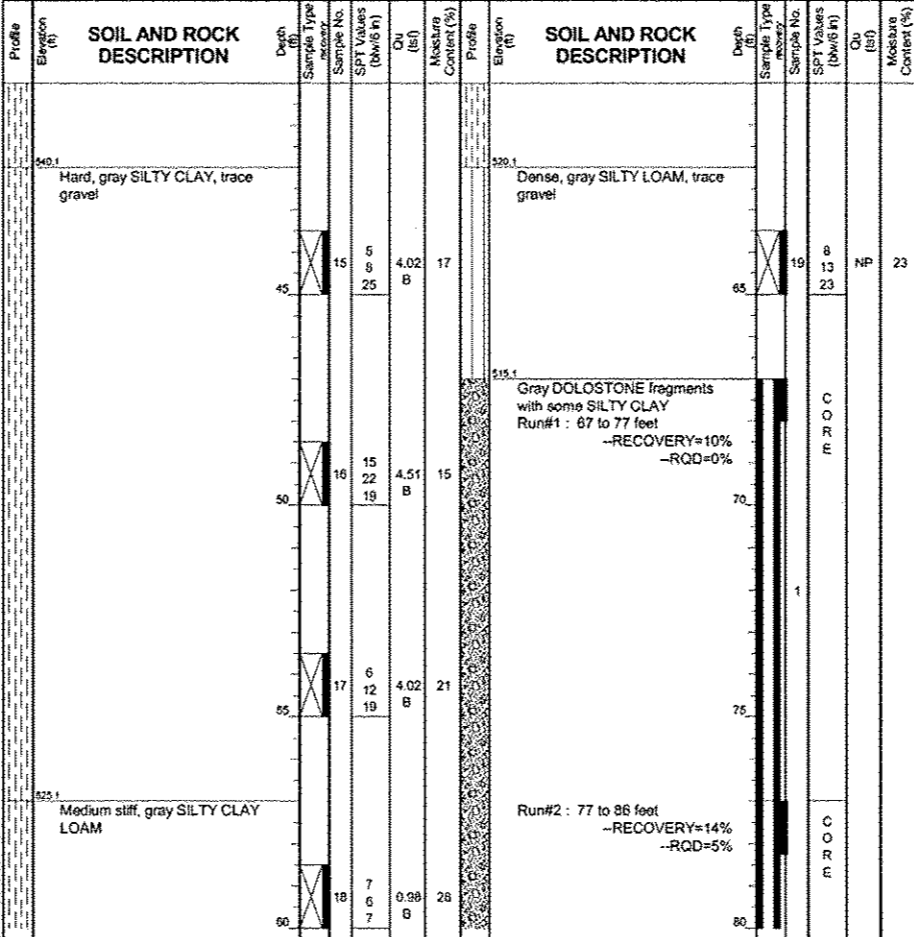
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|        |           |           |      |         |
|--------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |
|--------|-----------|-----------|------|---------|

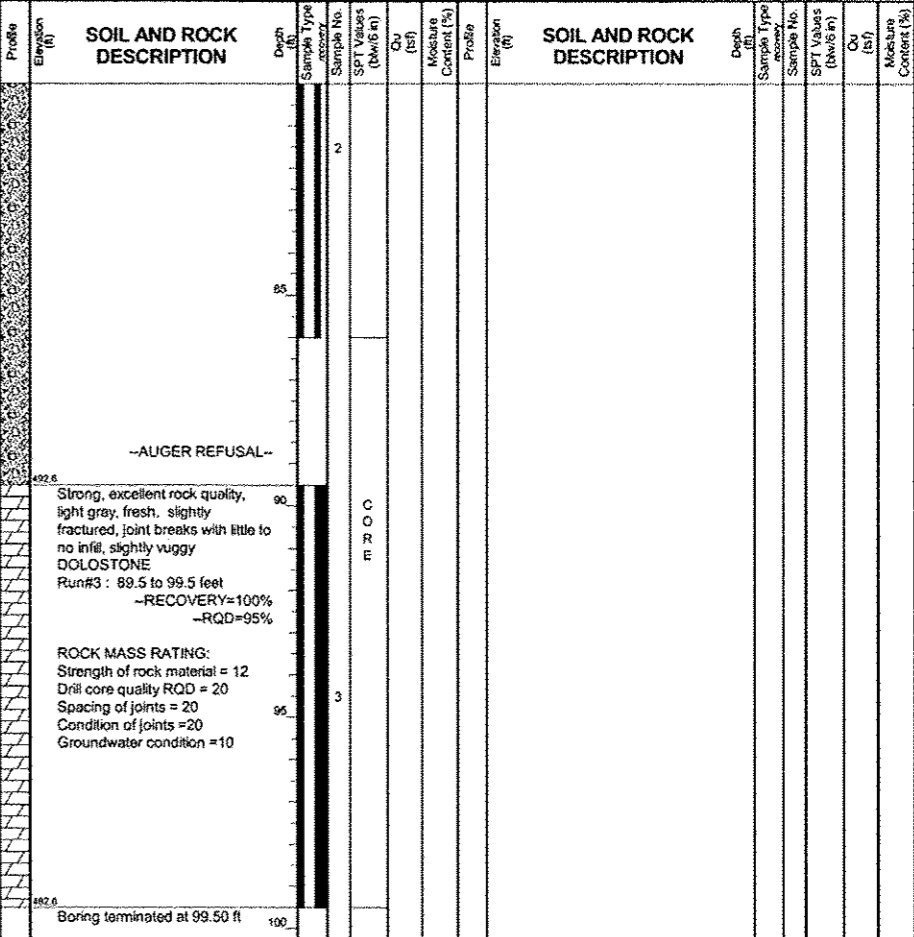
|   |                            |             |                 |              |
|---|----------------------------|-------------|-----------------|--------------|
| F.A.I. R.T.C. 90/94                             | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK | TOTAL SHEETS 37 | SHEET NO. 20 |
| CONTRACT NO. 60W36                              |                            |             |                 |              |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                            |             |                 |              |



| GENERAL NOTES       |   | WATER LEVEL DATA          |            |
|---------------------|---|---------------------------|------------|
| Begin Drilling      | 03-06-2013  | Complete Drilling         | 03-07-2013 |
| Drilling Contractor | Wang Testing Services                               | Drill Rig                 | D-50 TMR   |
| Driller             | R&N   | Logger                    | A. Happel  |
| Checked by          | C. Marin  | Depth to Water            | NA         |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring | At Completion of Drilling | DRY        |
|                     | backfilled upon completion                          | Time After Drilling       | MUD (10')  |
|                     |   |                           | NA         |



| GENERAL NOTES       |   | WATER LEVEL DATA          |            |
|---------------------|---|---------------------------|------------|
| Begin Drilling      | 03-06-2013  | Complete Drilling         | 03-07-2013 |
| Drilling Contractor | Wang Testing Services                               | Drill Rig                 | D-50 TMR   |
| Driller             | R&N   | Logger                    | A. Happel  |
| Checked by          | C. Marin  | Depth to Water            | NA         |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring | At Completion of Drilling | DRY        |
|                     | backfilled upon completion                          | Time After Drilling       | MUD (10')  |
|                     |   |                           | NA         |



| GENERAL NOTES       |   | WATER LEVEL DATA          |            |
|---------------------|---|---------------------------|------------|
| Begin Drilling      | 03-06-2013  | Complete Drilling         | 03-07-2013 |
| Drilling Contractor | Wang Testing Services                               | Drill Rig                 | D-50 TMR   |
| Driller             | R&N   | Logger                    | A. Happel  |
| Checked by          | C. Marin  | Depth to Water            | NA         |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring | At Completion of Drilling | DRY        |
|                     | backfilled upon completion                          | Time After Drilling       | MUD (10')  |
|                     |   |                           | NA         |

FILE NAME : I:\V298\7298.Z1 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\7298.Z1-28-salboring.dwg



|            |                   |          |   |         |   |
|------------|-------------------|----------|---|---------|---|
| USER NAME  | rgel              | DESIGNED | - | REVISED | - |
| PLOT SCALE | 2:8.0000 1' = 10' | DRAWN    | - | REVISED | - |
| PLOT DATE  | 4/12/2013         | CHECKED  | - | REVISED | - |
|            |                   | DATE     | - | REVISED | - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|        |           |    |        |      |    |      |
|--------|-----------|----|--------|------|----|------|
| SCALE: | SHEET NO. | OF | SHEETS | STA. | TO | STA. |
|--------|-----------|----|--------|------|----|------|

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 21        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|
| 99.1                   | 10-inch thick, CONCRETE PAVEMENT - DRILL WITHOUT SAMPLING FROM 0 to 5' - | 0          |            |                       |          |                      |
| 5                      |  | 5          |            |                       |          |                      |
| 10                     |  | 10         |            |                       |          |                      |
| 15                     |  | 15         |            |                       |          |                      |
| 20                     |  | 20         |            |                       |          |                      |

| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 03-16-2013            | Complete Drilling         | 03-16-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | CME-55 TMR   |
| Driller             | P&N                   | Logger                    | F. Bozga   |
| Checked by          | C. Marin              | Drilling Method           | 2.25" SSA to 15', Mud Rotary 15' thereafter, boring backfilled upon completion |
| While Drilling      | DRY                   | At Completion of Drilling | MUD (15')  |
| Time After Drilling | NA                    | Depth to Water            | NA   |

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|
| 544.0                  | Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel          | 26         | 1          | 2                     | 0.41     | 26                   |
| 540.4                  | Soft to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel       | 27         | 2          | 2                     | 0.57     | 27                   |
| 538.6                  | Medium dense to very dense, gray SILTY LOAM, trace gravel            | 18         | 3          | 3                     | 0.41     | 18                   |
| 527.9                  | Gray GRAVELLY SAND   | 19         | 4          | 9                     | 4.43     | 19                   |
| 526.8                  | Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel | 14         | 5          | 10                    | 15       | 14                   |
| 523.0                  |  | 13         | 6          | 12                    | 23       | 13                   |
| 518.6                  |  | 12         | 7          | 16                    | 23       | 12                   |
| 515.0                  |  | 11         | 8          | 15                    | 15       | 11                   |
| 510.0                  |  | 10         | 9          | 16                    | 23       | 10                   |
| 505.0                  |  | 9          | 10         | 16                    | 23       | 9                    |
| 500.0                  |  | 8          | 11         | 15                    | 15       | 8                    |

| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 03-16-2013            | Complete Drilling         | 03-16-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | CME-55 TMR   |
| Driller             | P&N                   | Logger                    | F. Bozga   |
| Checked by          | C. Marin              | Drilling Method           | 2.25" SSA to 15', Mud Rotary 15' thereafter, boring backfilled upon completion |
| While Drilling      | DRY                   | At Completion of Drilling | MUD (15')  |
| Time After Drilling | NA                    | Depth to Water            | NA   |

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION      | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--------------------------------|------------|------------|-----------------------|----------|----------------------|
| 295.4                  | Boring terminated at 100.50 ft | 100.50     |            |                       |          |                      |
| 295.4                  |                                | 100        |            |                       |          |                      |
| 295.4                  |                                | 95         |            |                       |          |                      |
| 295.4                  |                                | 90         |            |                       |          |                      |
| 295.4                  |                                | 85         |            |                       |          |                      |
| 295.4                  |                                | 80         |            |                       |          |                      |
| 295.4                  |                                | 75         |            |                       |          |                      |
| 295.4                  |                                | 70         |            |                       |          |                      |
| 295.4                  |                                | 65         |            |                       |          |                      |
| 295.4                  |                                | 60         |            |                       |          |                      |
| 295.4                  |                                | 55         |            |                       |          |                      |
| 295.4                  |                                | 50         |            |                       |          |                      |
| 295.4                  |                                | 45         |            |                       |          |                      |
| 295.4                  |                                | 40         |            |                       |          |                      |
| 295.4                  |                                | 35         |            |                       |          |                      |
| 295.4                  |                                | 30         |            |                       |          |                      |
| 295.4                  |                                | 25         |            |                       |          |                      |
| 295.4                  |                                | 20         |            |                       |          |                      |
| 295.4                  |                                | 15         |            |                       |          |                      |
| 295.4                  |                                | 10         |            |                       |          |                      |
| 295.4                  |                                | 5          |            |                       |          |                      |
| 295.4                  |                                | 0          |            |                       |          |                      |

| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 03-16-2013            | Complete Drilling         | 03-16-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | CME-55 TMR   |
| Driller             | P&N                   | Logger                    | F. Bozga   |
| Checked by          | C. Marin              | Drilling Method           | 2.25" SSA to 15', Mud Rotary 15' thereafter, boring backfilled upon completion |
| While Drilling      | DRY                   | At Completion of Drilling | MUD (15')  |
| Time After Drilling | NA                    | Depth to Water            | NA   |

FILE NAME: I:\7298\7298.21 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\7298.128 - wellboring.dwg



|                                |            |           |
|--------------------------------|------------|-----------|
| USER NAME = rgal               | DESIGNED - | REVISED - |
| PLOT SCALE = 2:0.0000 1" = 10' | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013          | CHECKED -  | REVISED - |
|                                | DATE -     | REVISED - |

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

|        |           |           |      |         |
|--------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |
|--------|-----------|-----------|------|---------|

|                    |                    |        |   |           |
|--------------------|--------------------|--------|---|-----------|
| F.A.I. RTE.        | SECTION            | COUNTY | TOTAL SHEETS                                    | SHEET NO. |
| 90/94              | 0101.6-2P-1-3 (13) | COOK   | 37  | 22        |
| CONTRACT NO. 60W36 |                    |        | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |           |



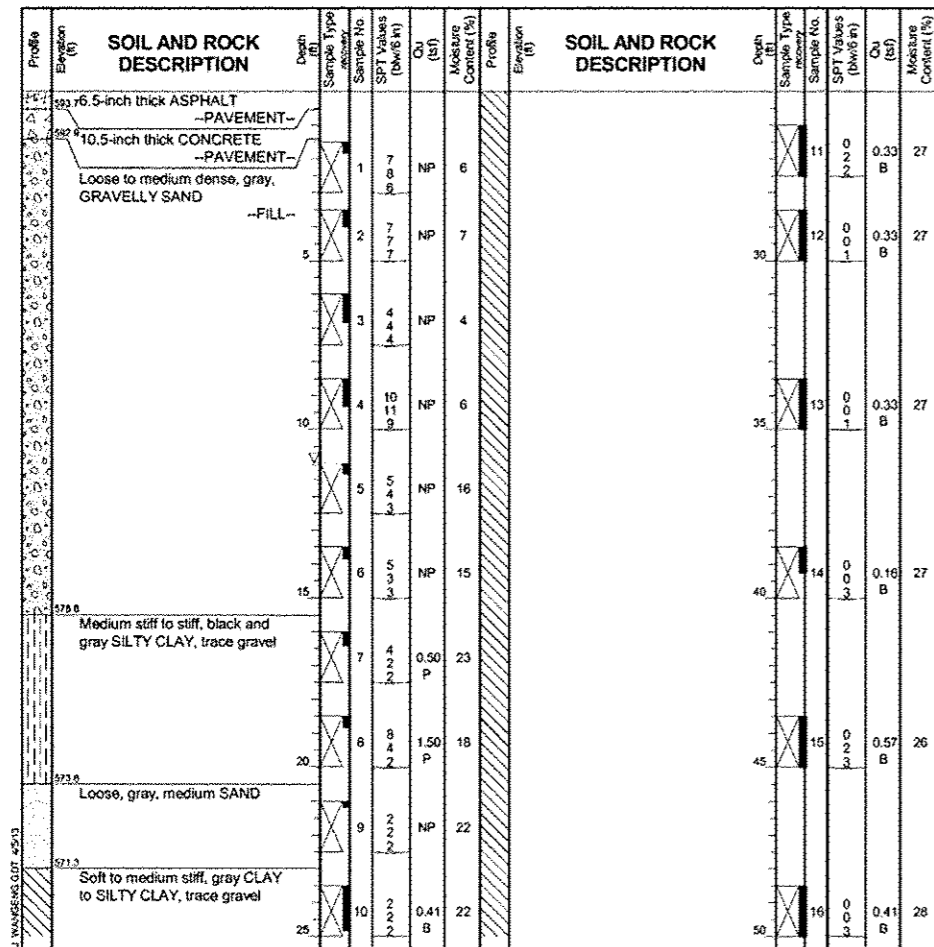
**BORING LOG 2081-B-01**

Page 1 of 2

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 594.27 ft  
North: 1898215.40 ft  
East: 1171096.56 ft  
Station: 3837+74.38  
Offset: 16.23 LT



| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 04-02-2013            | Complete Drilling         | 04-02-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | B-57 TMR   |
| Driller             | R&T                   | Logger                    | D. Wind  |
| Checked by          | C. Marin              | Drilling Method           | 3.25" HSA to 11', Mud Rotary 11' thereafter, boring backfilled upon completion |
| While Drilling      | 11.00 ft              | At Completion of Drilling | NA   |
| Time After Drilling | NA                    | Depth to Water            | NA   |

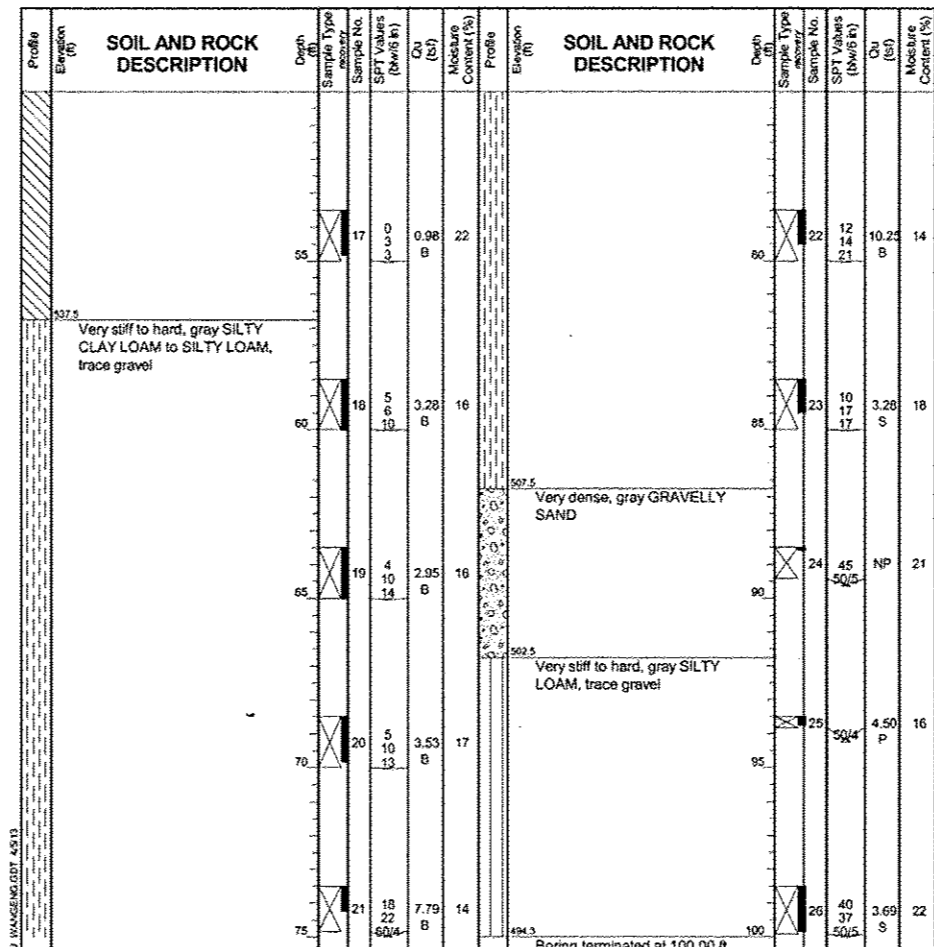
**BORING LOG 2081-B-01**

Page 2 of 2

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 594.27 ft  
North: 1898215.40 ft  
East: 1171096.56 ft  
Station: 3837+74.38  
Offset: 16.23 LT



| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 04-02-2013            | Complete Drilling         | 04-02-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | B-57 TMR   |
| Driller             | R&T                   | Logger                    | D. Wind  |
| Checked by          | C. Marin              | Drilling Method           | 3.25" HSA to 11', Mud Rotary 11' thereafter, boring backfilled upon completion |
| While Drilling      | 11.00 ft              | At Completion of Drilling | NA   |
| Time After Drilling | NA                    | Depth to Water            | NA   |

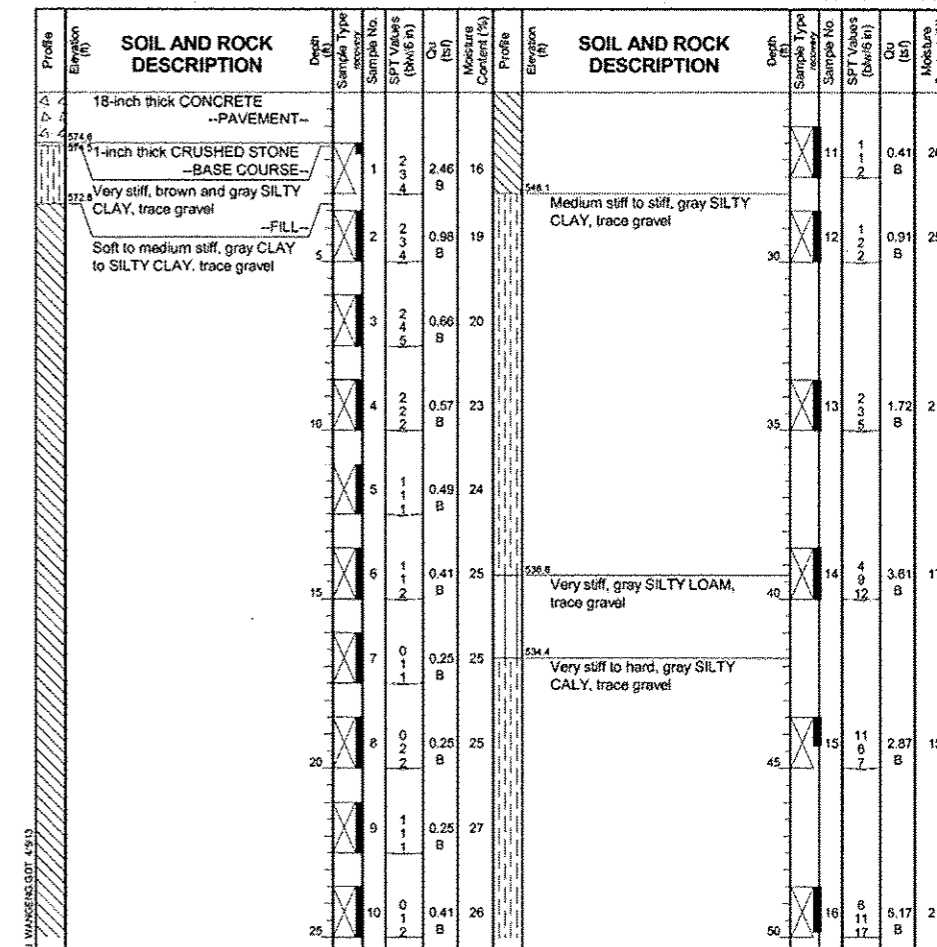
**BORING LOG 2081-B-02**

Page 1 of 2

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 576.15 ft  
North: 1898095.00 ft  
East: 1171065.77 ft  
Station: 3836+54.98  
Offset: 52.71 LT



| GENERAL NOTES       |                       | WATER LEVEL DATA          |  |
|---------------------|-----------------------|---------------------------|--|
| Begin Drilling      | 04-01-2013            | Complete Drilling         | 04-01-2013   |
| Drilling Contractor | Wang Testing Services | Drill Rig                 | CME-55 TMR   |
| Driller             | P&N                   | Logger                    | D. Wind  |
| Checked by          | C. Marin              | Drilling Method           | 3.25" HSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion |
| While Drilling      | NA                    | At Completion of Drilling | NA   |
| Time After Drilling | NA                    | Depth to Water            | NA   |

FILE NAME: I:\7298\21 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\7298\21 - borings\B-01.dwg



USER NAME = rgal  
PLOT SCALE = 2:0.0000 1" = 10'  
PLOT DATE = 4/12/2013

DESIGNED -  
DRAWN -  
CHECKED -  
DATE -

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOIL BORING

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

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 23        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |

**BORING LOG 2081-B-02**

Page 2 of 2

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 576.15 ft  
North: 1898095.00 ft  
East: 1171065.77 ft  
Station: 3836+54.98  
Offset: 52.71 LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                                    | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION            | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|--------------------------------------|------------|------------|-----------------------|----------|----------------------|
| 599.4                  | Very dense, gray SILT --WET--                                | 55         | 17         | 5<br>8<br>14          | 2.46     | 16                   | 599.4                  | Very dense, gray GRAVELLY SANDY LOAM | 80         | 22         | 27<br>48<br>48        | 1.97     | 20                   |
| 519.4                  | Dense to very dense, gray SILTY LOAM, trace to little gravel | 60         | 18         | 19<br>23<br>32        | 1.80     | 12                   | 494.4                  | Very dense, gray GRAVELLY SANDY LOAM | 85         | 23         | 50/5                  | NP       | 12                   |
|                        |  | 65         | 19         | 11<br>18<br>25        | 7.95     | 14                   | 491.1                  | Boring terminated at 85.00 ft        | 90         |            |                       |          |                      |
|                        |  | 70         | 20         | 12<br>14<br>50/5      | 7.65     | 9                    |                        |                                      | 95         |            |                       |          |                      |
|                        |  | 75         | 21         | 4<br>50/1             | 4.50     | 17                   |                        |                                      | 100        |            |                       |          |                      |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |          |    |  |
|---------------------|--|-------------------|------------|---------------------------|----------|----|--|
| Begin Drilling      | 04-01-2013   | Complete Drilling | 04-01-2013 | While Drilling            | ✓        | NA |  |
| Drilling Contractor | Wang Testing Services  | Drill Rig         | CME-55 TMR | At Completion of Drilling | ✓        | NA |  |
| Driller             | P&N  | Logger            | D. Wind    | Checked by                | C. Marin | NA |  |
| Drilling Method     | 3.25" HSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion |                   |            | Depth to Water            | ✓        | NA |  |

**BORING LOG 2081-B-03**

Page 1 of 3

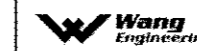
wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 581.38 ft  
North: 1898040.36 ft  
East: 1171151.03 ft  
Station: 3835+97.75  
Offset: 30.83 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                          | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                            | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|--|------------|------------|-----------------------|----------|----------------------|
| 581.14                 | 11-inch thick ASPHALT --PAVEMENT--                 |            |            |                       |          |                      | 581.14                 | 11-inch thick CONCRETE --PAVEMENT--                  |            |            |                       |          |                      |
| 580                    | Loose to medium dense, gray CRUSHED STONE --FILL-- | 5          | 1          | 2<br>3<br>5           | 2.50     | 14                   | 575.9                  | Medium stiff to stiff, gray SILTY CLAY, trace gravel | 30         | 12         | 0<br>1<br>2           | 0.49     | 26                   |
|                        |  | 10         | 2          | 7<br>18<br>12         | NP       | 5                    | 544.6                  | Stiff to hard, gray SILTY CLAY, trace gravel         | 35         | 13         | 0<br>1<br>2           | 0.41     | 29                   |
|                        |  | 15         | 3          | 5<br>8<br>8           | 1.97     | 19                   | 668.4                  | Soft to medium stiff, gray CLAY                      | 40         | 14         | 1<br>4<br>4           | 1.23     | 23                   |
|                        |  | 20         | 4          | 2<br>2<br>3           | 1.15     | 19                   |                        |  | 45         | 15         | 7<br>8<br>12          | 5.99     | 13                   |
|                        |  | 25         | 5          | 2<br>3<br>3           | 0.82     | 23                   |                        |  | 50         | 16         | 5<br>10               | 3.28     | 21                   |
|                        |  | 30         | 6          | 2<br>3<br>3           | 0.57     | 25                   |                        |  |            |            |                       |          |                      |
|                        |  | 35         | 7          | 0<br>3<br>2           | 0.57     | 20                   |                        |  |            |            |                       |          |                      |
|                        |  | 40         | 8          | 0<br>2<br>3           | 0.57     | 26                   |                        |  |            |            |                       |          |                      |
|                        |  | 45         | 9          | 0<br>0<br>1           | 0.33     | 25                   |                        |  |            |            |                       |          |                      |
|                        |  | 50         | 10         | 0<br>1<br>2           | 0.33     | 27                   |                        |  |            |            |                       |          |                      |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |          |    |  |
|---------------------|--|-------------------|------------|---------------------------|----------|----|--|
| Begin Drilling      | 03-28-2013   | Complete Drilling | 03-29-2013 | While Drilling            | ✓        | NA |  |
| Drilling Contractor | Wang Testing Services  | Drill Rig         | B-57 TMR   | At Completion of Drilling | ✓        | NA |  |
| Driller             | P&N  | Logger            | D. Wind    | Checked by                | C. Marin | NA |  |
| Drilling Method     | 3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion |                   |            | Depth to Water            | ✓        | NA |  |

**BORING LOG 2081-B-03**

Page 2 of 3

wangeng@wangeng.com  
1145 N Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

WEI Job No.: 1100-04-01  
Client: **AECOM**  
Project: **Circle Interchange Reconstruction**  
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88  
Elevation: 581.38 ft  
North: 1898040.36 ft  
East: 1171151.03 ft  
Station: 3835+97.75  
Offset: 30.83 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION                              | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION  | Depth (ft) | Sample No. | SPT Values (blows/ft) | Cu (ksi) | Moisture Content (%) |
|------------------------|--|------------|------------|-----------------------|----------|----------------------|------------------------|--|------------|------------|-----------------------|----------|----------------------|
| 584.6                  | Very dense, gray GRAVELLY SANDY LOAM                   | 80         | 22         | 60/5                  | NP       | 12                   | 584.6                  | Very dense, gray GRAVELLY SANDY LOAM   | 80         | 24         | 50/5                  | NP       | 11                   |
| 524.6                  | Medium dense, gray SILT                                | 55         | 17         | 4<br>9<br>13          | 4.51     | 18                   | 499.6                  | Very dense, gray SILT --MOIST--  | 85         | 23         | 39<br>49<br>50        | NP       | 20                   |
| 519.6                  | Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel | 65         | 19         | 18<br>24<br>32        | 7.95     | 12                   | 494.6                  | Very dense, gray GRAVELLY SANDY LOAM   | 90         | 24         | 50/5                  | NP       | 11                   |
|                        |  | 70         | 20         | 16<br>32<br>50        | 9.84     | 12                   | 489.4                  | Strong, very poor rock quality 92'-94', light gray, highly fractured, slightly vuggy DOLOSTONE   | 95         |            |                       |          |                      |
|                        |  | 75         | 21         | 5<br>50/6             | 6.23     | 10                   |                        | Run 1 = 92' to 102'  |            |            |                       |          |                      |
|                        |  |            |            |                       |          |                      |                        | --RECOVERY=100%<br>--RQD=72%   |            |            |                       |          |                      |
|                        |  |            |            |                       |          |                      |                        | Strong, good rock quality 94'-102', light gray, fresh, slightly fractured, joint breaks with little to no infill, slightly vuggy DOLOSTONE |            |            |                       |          |                      |

| GENERAL NOTES       |  |                   |            | WATER LEVEL DATA          |          |    |  |
|---------------------|--|-------------------|------------|---------------------------|----------|----|--|
| Begin Drilling      | 03-28-2013   | Complete Drilling | 03-29-2013 | While Drilling            | ✓        | NA |  |
| Drilling Contractor | Wang Testing Services  | Drill Rig         | B-57 TMR   | At Completion of Drilling | ✓        | NA |  |
| Driller             | P&N  | Logger            | D. Wind    | Checked by                | C. Marin | NA |  |
| Drilling Method     | 3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion |                   |            | Depth to Water            | ✓        | NA |  |

FILE NAME: I:\7281\7281-1 - Circle Interchange Tunnel Bulkheading\CAD\CAD SHEETS\7281-1-3 - soil borings.dwg



USER NAME = rgal1  
PLOT SCALE = 2x0.0000 1" = 10'  
PLOT DATE = 4/12/2013

DESIGNED -  
DRAWN -  
CHECKED -  
DATE -

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

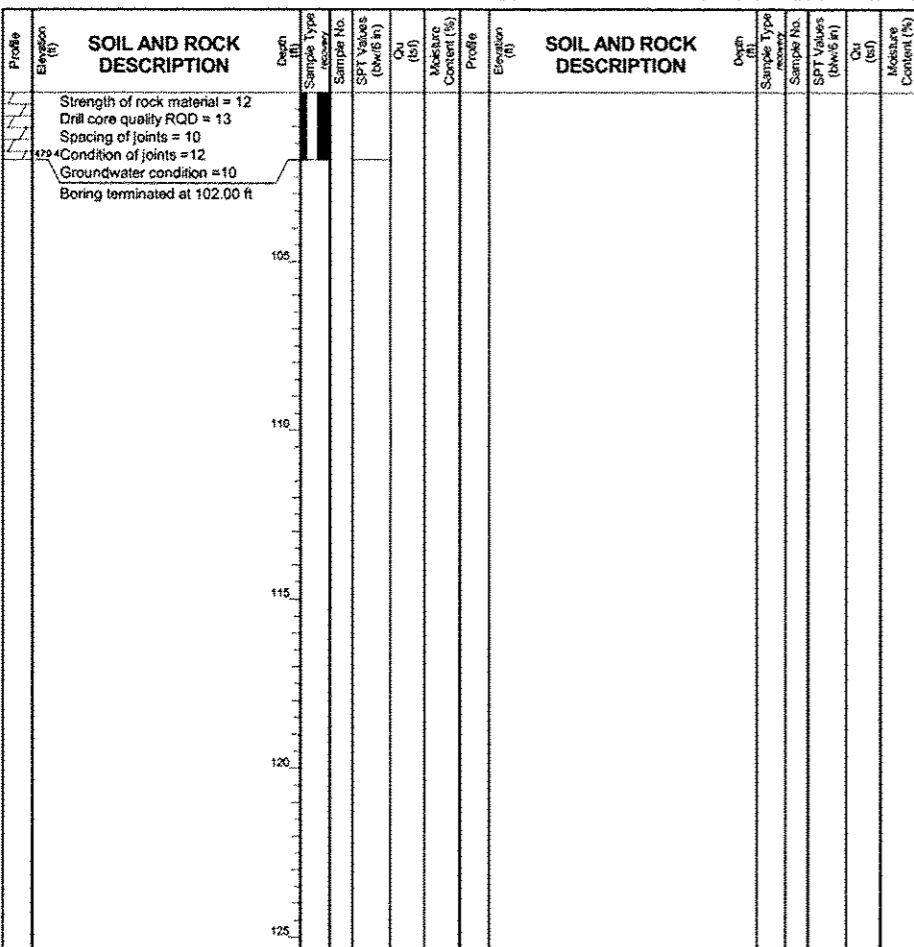
SOIL BORING

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

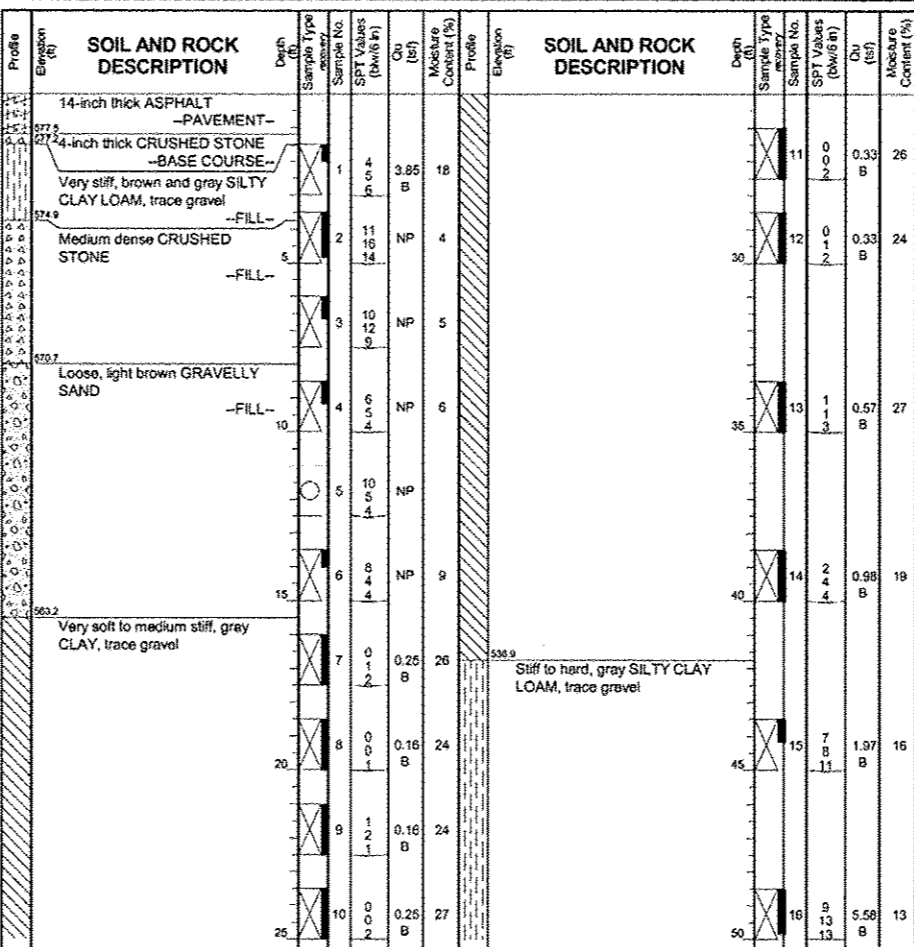
|                    |                     |        |              |           |
|--------------------|---------------------|--------|--------------|-----------|
| F.A.T. RTE.        | SECTION             | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94              | -0101.6-2P-1-3 (13) | COOK   | 37           | 24        |
| CONTRACT NO. 60W36 |                     |        |              |           |

FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT

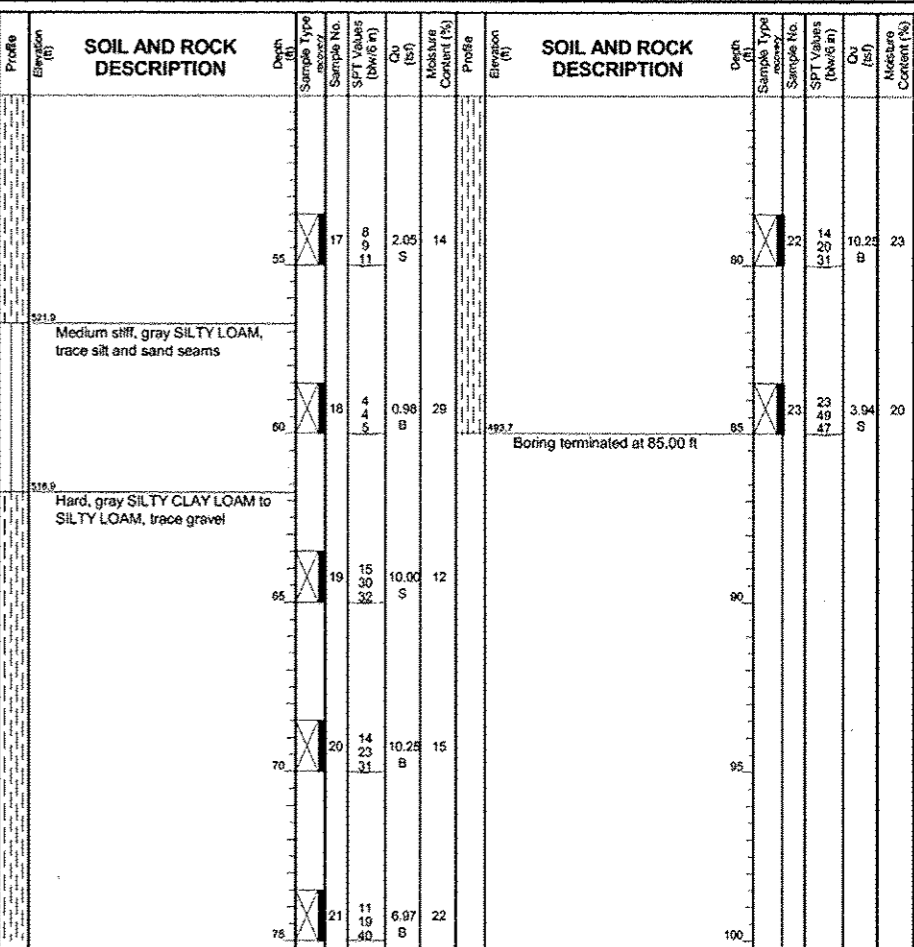




| GENERAL NOTES       |  | WATER LEVEL DATA          |            |
|---------------------|--|---------------------------|------------|
| Begin Drilling      | 03-28-2013   | Complete Drilling         | 03-29-2013 |
| Drilling Contractor | Wang Testing Services  | Drill Rig                 | B-57 TMR   |
| Driller             | P& Logger D. Wind  | Checked by                | C. Marin   |
| Drilling Method     | 3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion |                           |            |
| While Drilling      | NA   | At Completion of Drilling | NA         |
| Time After Drilling | NA   | Depth to Water            | NA         |



| GENERAL NOTES       |   | WATER LEVEL DATA          |            |
|---------------------|---|---------------------------|------------|
| Begin Drilling      | 04-01-2013                                  | Complete Drilling         | 04-01-2013 |
| Drilling Contractor | Wang  | Drill Rig                 | D-50 TMR   |
| Driller             | R&N Logger D. Kolpacki                      | Checked by                | C. Marin   |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter |                           |            |
| While Drilling      | DRY   | At Completion of Drilling | NA         |
| Time After Drilling | NA  | Depth to Water            | NA         |



| GENERAL NOTES       |   | WATER LEVEL DATA          |            |
|---------------------|---|---------------------------|------------|
| Begin Drilling      | 04-01-2013                                  | Complete Drilling         | 04-01-2013 |
| Drilling Contractor | Wang  | Drill Rig                 | D-50 TMR   |
| Driller             | R&N Logger D. Kolpacki                      | Checked by                | C. Marin   |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter |                           |            |
| While Drilling      | DRY   | At Completion of Drilling | NA         |
| Time After Drilling | NA  | Depth to Water            | NA         |

FILE NAME: I:\V789\729821 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\2081-B-03-2081-B-04\2081-B-03-2081-B-04.dgn



|                               |            |           |
|-------------------------------|------------|-----------|
| USER NAME = rge11             | DESIGNED - | REVISED - |
| PLOT SCALE = 2.00000 1' / in. | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013         | CHECKED -  | REVISED - |
|                               | DATE -     | REVISED - |

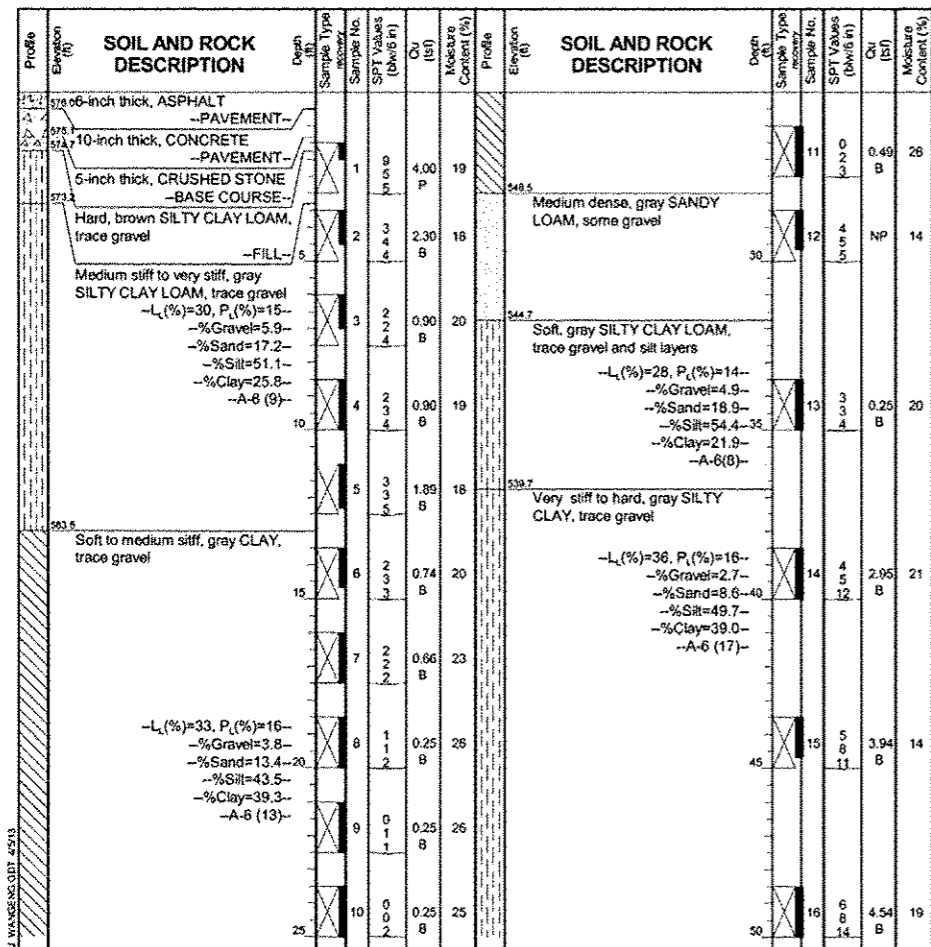
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

|               |  |                  |                  |             |                |
|---------------|--|------------------|------------------|-------------|----------------|
| <b>SCALE:</b> |  | <b>SHEET NO.</b> | <b>OF SHEETS</b> | <b>STA.</b> | <b>TO STA.</b> |
|---------------|--|------------------|------------------|-------------|----------------|

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.T. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 25        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |

**BORING LOG 2081-B-05**

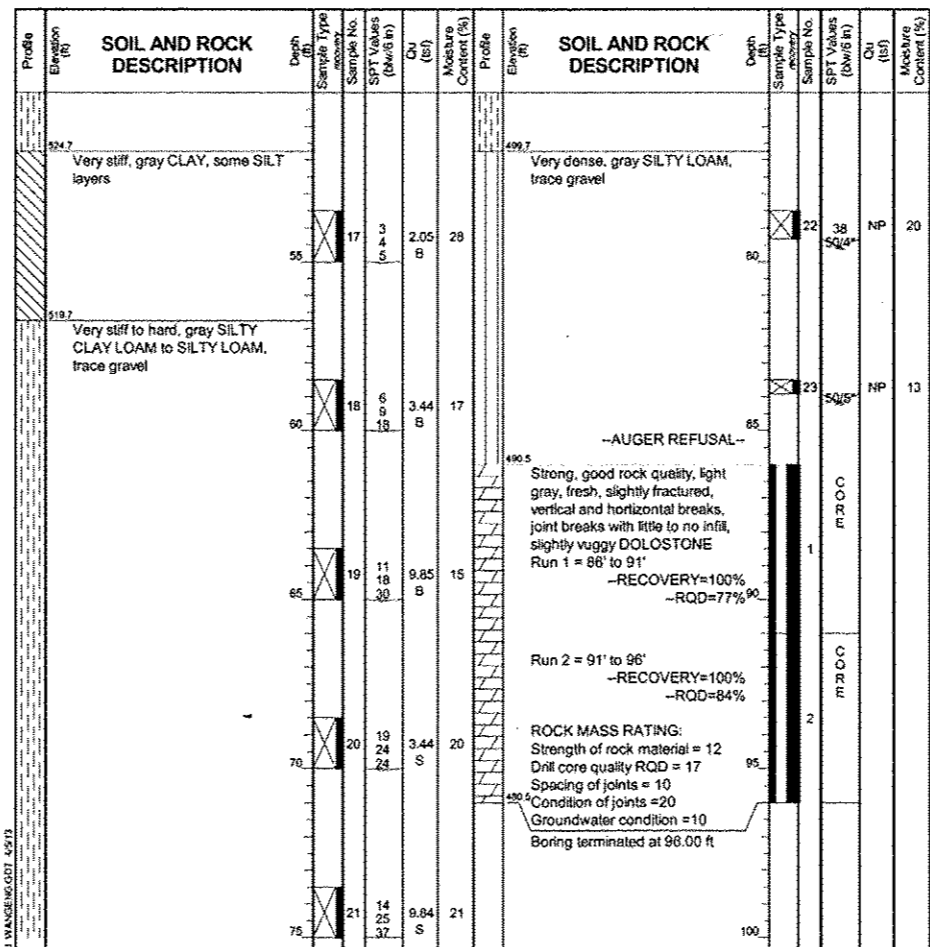
WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**  
 Datum: NAVD 88  
 Elevation: 576.47 ft  
 North: 1897894.07 ft  
 East: 1171080.41 ft  
 Station: 3834+53.70  
 Offset: 44.26 LT



| GENERAL NOTES   |  | WATER LEVEL DATA          |          |
|---|--|---------------------------|----------|
| Begin Drilling  | 03-26-2013   | While Drilling            | DRY      |
| Complete Drilling   | 03-26-2013   | At Completion of Drilling | DRY      |
| Drilling Contractor   | Wang Testing Services Drill Rig D-50 TMR                                       | Driller                   | R&T      |
| Logger  | D. Kolpacki  | Checked by                | C. Marin |
| Drilling Method   | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion | Depth to Water            | NA       |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                           |          |

**BORING LOG 2081-B-05**

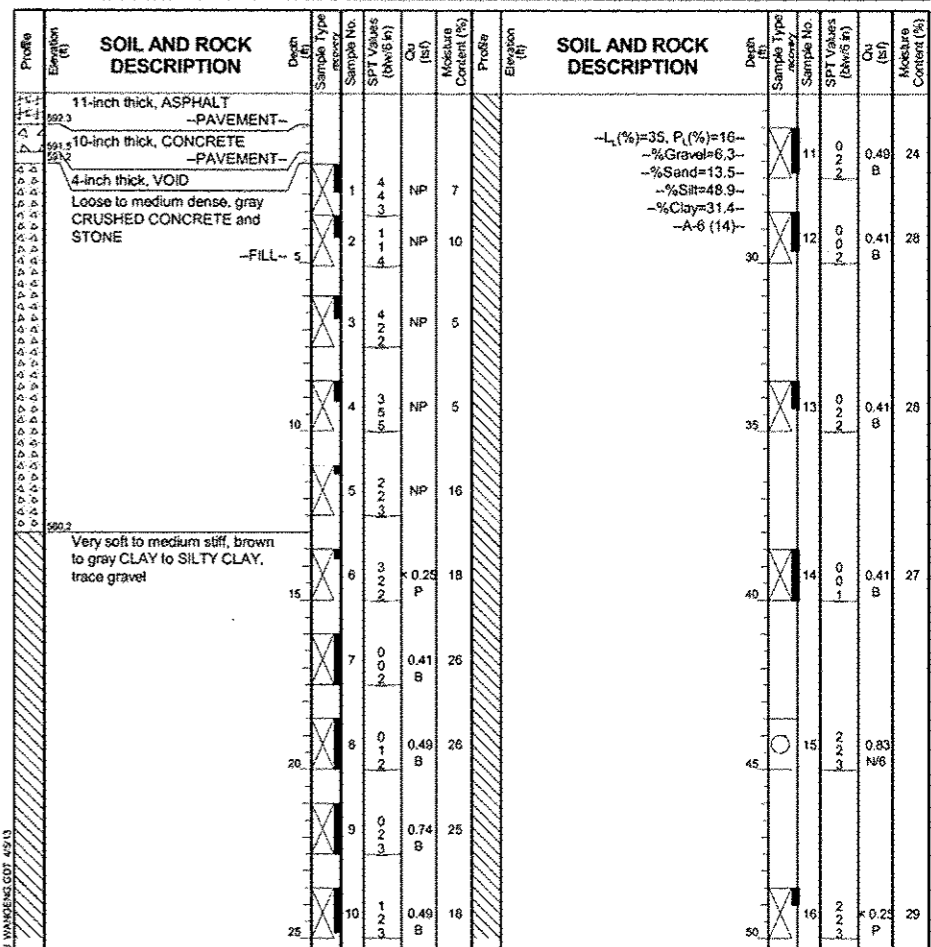
WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**  
 Datum: NAVD 88  
 Elevation: 576.47 ft  
 North: 1897894.07 ft  
 East: 1171080.41 ft  
 Station: 3834+53.70  
 Offset: 44.26 LT



| GENERAL NOTES   |  | WATER LEVEL DATA          |          |
|---|--|---------------------------|----------|
| Begin Drilling  | 03-26-2013   | While Drilling            | DRY      |
| Complete Drilling   | 03-26-2013   | At Completion of Drilling | DRY      |
| Drilling Contractor   | Wang Testing Services Drill Rig D-50 TMR                                       | Driller                   | R&T      |
| Logger  | D. Kolpacki  | Checked by                | C. Marin |
| Drilling Method   | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion | Depth to Water            | NA       |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                           |          |

**BORING LOG 2081-B-06**

WEI Job No.: 1100-04-01  
 Client: **AECOM**  
 Project: **Circle Interchange Reconstruction**  
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**  
 Datum: NAVD 88  
 Elevation: 593.23 ft  
 North: 1897774.57 ft  
 East: 1171111.06 ft  
 Station: 3833+33.31  
 Offset: 17.30 LT



| GENERAL NOTES   |  | WATER LEVEL DATA          |          |
|---|--|---------------------------|----------|
| Begin Drilling  | 03-16-2013   | While Drilling            | NA       |
| Complete Drilling   | 03-16-2013   | At Completion of Drilling | NA       |
| Drilling Contractor   | Wang Testing Services Drill Rig D-50 TMR                                       | Driller                   | R&T      |
| Logger  | A. Mohammed  | Checked by                | C. Marin |
| Drilling Method   | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion | Depth to Water            | NA       |
| The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual. |  |                           |          |

FILE NAME: I:\7298\729821 - Circle Interchange Tunnel Bulkhead\mg\CA00\CA00 SHEETS\729821\2013\borings\bl\_0513

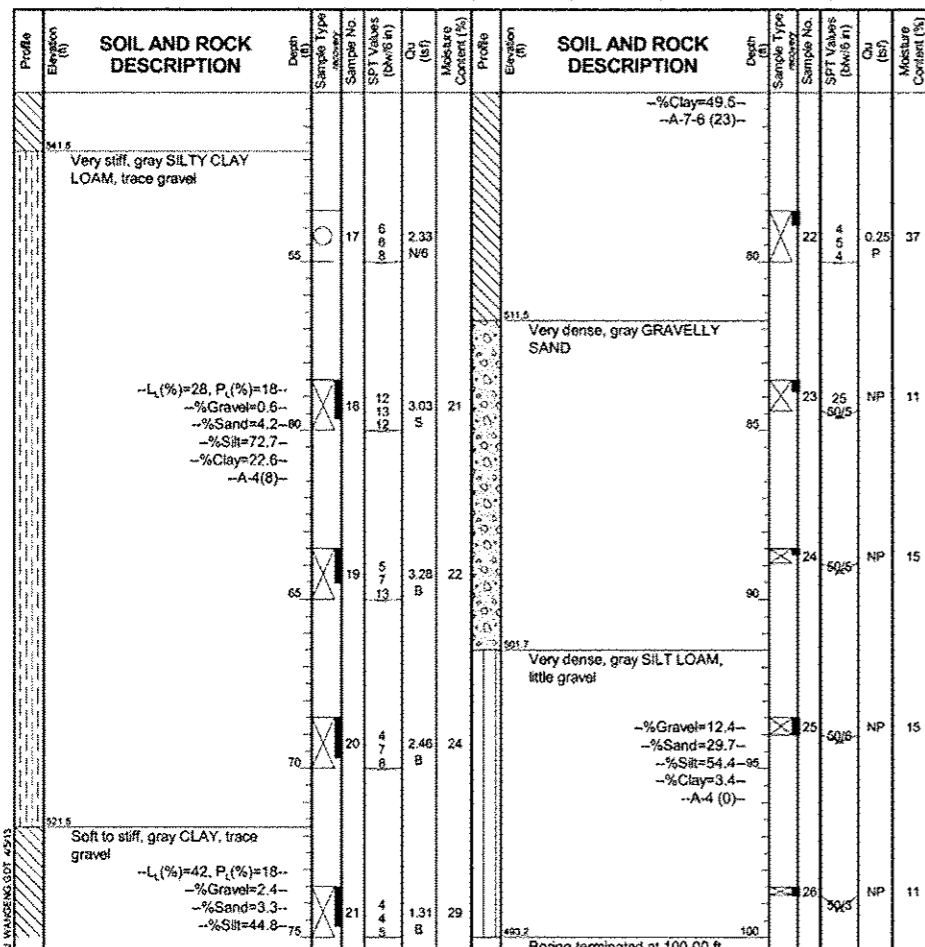


|                                |            |           |
|--------------------------------|------------|-----------|
| USER NAME = rgal1              | DESIGNED - | REVISED - |
| PLOT SCALE = 2:0.0000 1" = 10' | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013          | CHECKED -  | REVISED - |
|                                | DATE -     | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|        |           |           |      |         |
|--------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |
|--------|-----------|-----------|------|---------|

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 26        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |



| GENERAL NOTES       |  | WATER LEVEL DATA    |             |
|---------------------|--|---------------------|-------------|
| Begin Drilling      | 03-16-2013   | Complete Drilling   | 03-16-2013  |
| Drilling Contractor | Wang Testing Services  | Drill Rig           | D-50 TMR    |
| Driller             | R&T  | Logger              | A. Mohammed |
| Checked by          | C. Marin   | Time After Drilling | NA          |
| Drilling Method     | 2.25" SSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion | Depth to Water      | NA          |

FILE NAME = I:\V28\9\7298.21 - Circle Interchange Tunnel Bulkheading\CADD\CADD SHEETS\2298.28 - soilborings.dgn

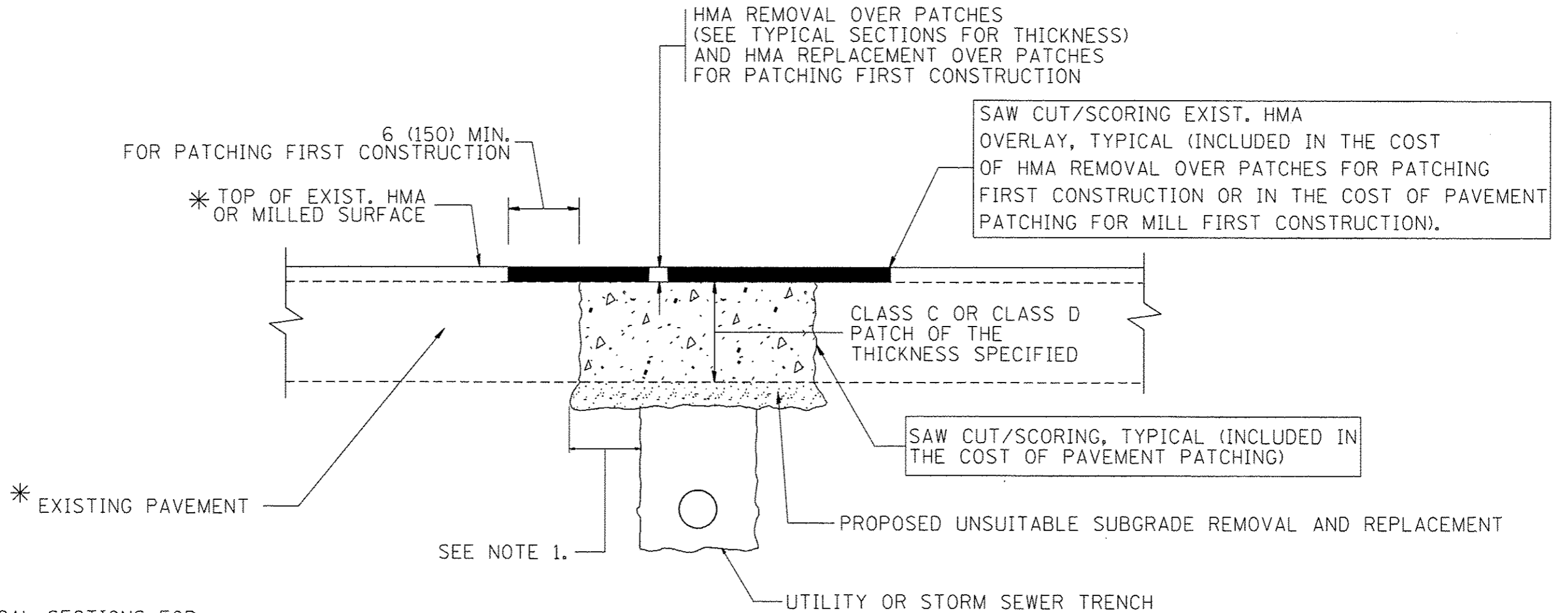


|                               |            |           |
|-------------------------------|------------|-----------|
| USER NAME = r.gall            | DESIGNED - | REVISED - |
| PLOT SCALE = 2:0.0000 1' / 1" | DRAWN -    | REVISED - |
| PLOT DATE = 4/12/2013         | CHECKED -  | REVISED - |
|                               | DATE -     | REVISED - |

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

|                    |           |           |              |
|--------------------|-----------|-----------|--------------|
| <b>SOIL BORING</b> |           |           |              |
| SCALE:             | SHEET NO. | OF SHEETS | STA. TO STA. |

|   |                    |        |              |           |
|---|--------------------|--------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION            | COUNTY | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK   | 37           | 27        |
| CONTRACT NO. 60W36                              |                    |        |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |        |              |           |



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

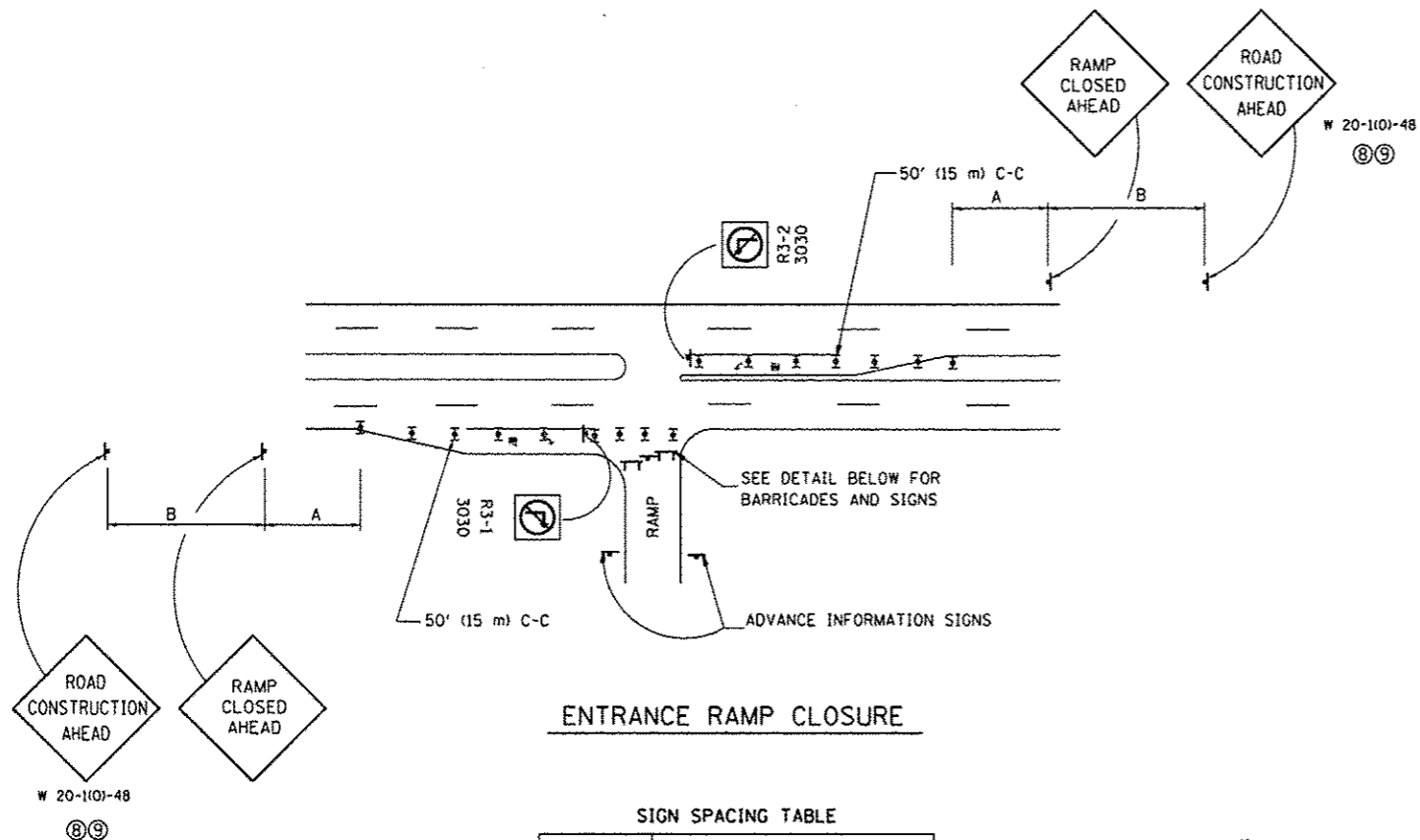
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

|             |                   |                    |                             |   |  |                         |      |                    |   |        |              |           |
|-------------|-------------------|--------------------|-----------------------------|---|--|-------------------------|------|--------------------|---|--------|--------------|-----------|
| FILE NAME : | USER NAME = rgall | DESIGNED - R. SHAH | REVISED - A. ABBAS 04-27-98 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>PAVEMENT PATCHING FOR<br/>HMA SURFACED PAVEMENT</b> |                         |      | F.A. RTE.          | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO. |
|             |                   | DRAWN -            | REVISED - R. BORO 01-01-07  |   |  |                         |      | 90/94              | 0101.6-2P-1-3 (13)                              | COOK   | 37           | 28        |
|             |                   | CHECKED -          | REVISED - R. BORO 09-04-07  |   | BD400-04 (BD-22)                                       |                         |      | CONTRACT NO. 60W36 |   |        |              |           |
|             |                   | DATE - 10-25-94    | REVISED - K. ENG 10-27-08   |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.            | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |        |              |           |

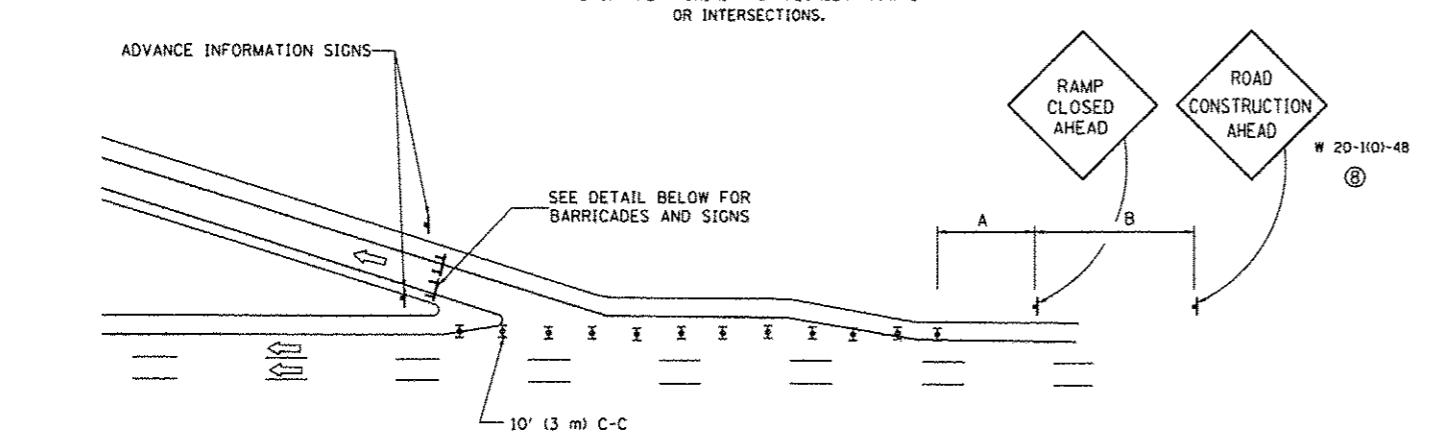


**ENTRANCE RAMP CLOSURE**

**SIGN SPACING TABLE**

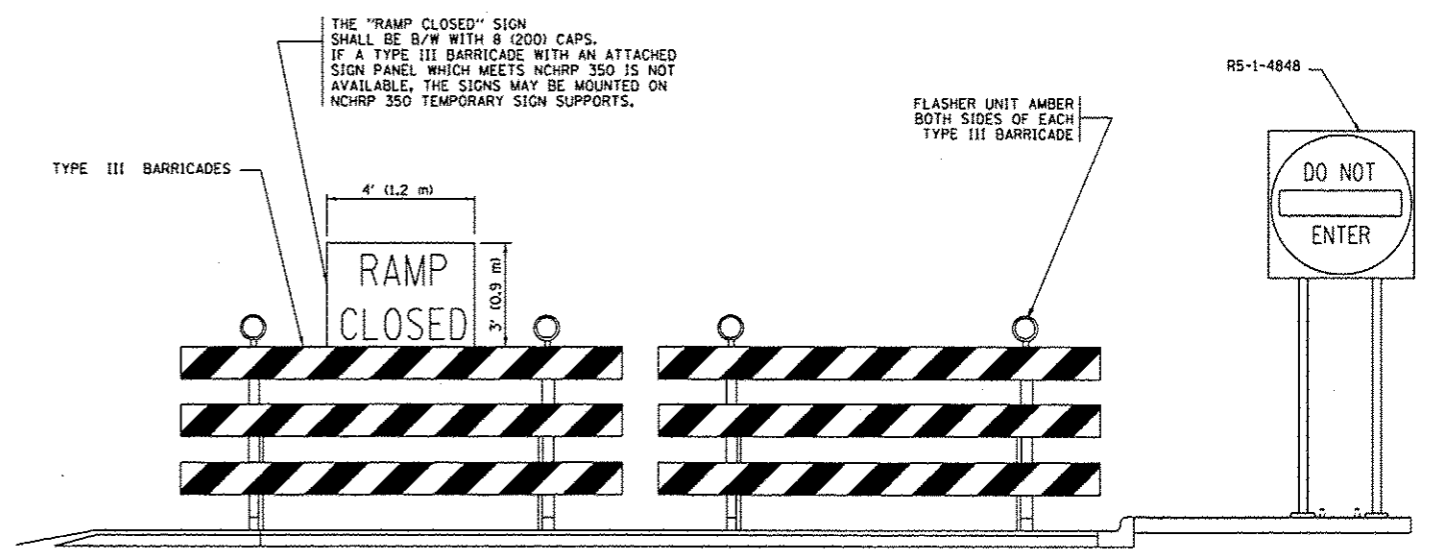
| FACILITY             | DISTANCE BETWEEN SIGNS |                  |
|----------------------|------------------------|------------------|
|                      | A                      | B                |
| EXPRESSWAY >24 HOURS | 1000'<br>(300 m)       | 1500'<br>(450 m) |
| EXPRESSWAY ≤24 HOURS | 500'<br>(150 m)        | 500'<br>(150 m)  |
| ARTERIAL >45 MPH     | 350'<br>(100 m)        | 350'<br>(100 m)  |
| ARTERIAL <45 MPH     | 150'<br>(45 m)         | 150'<br>(45 m)   |

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

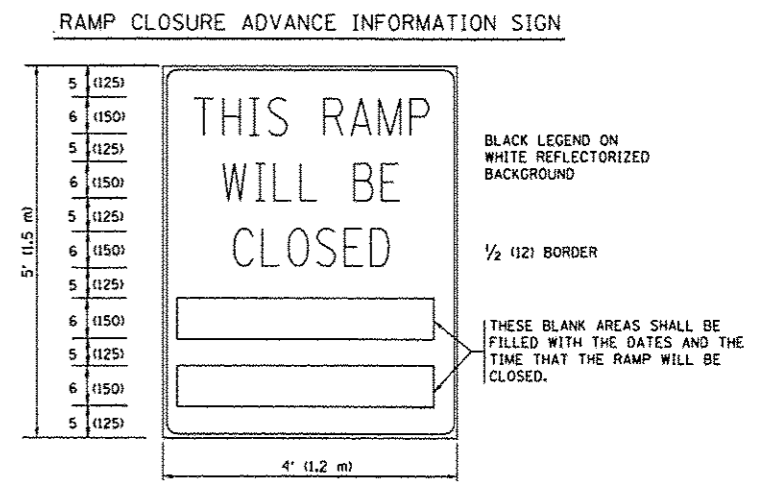
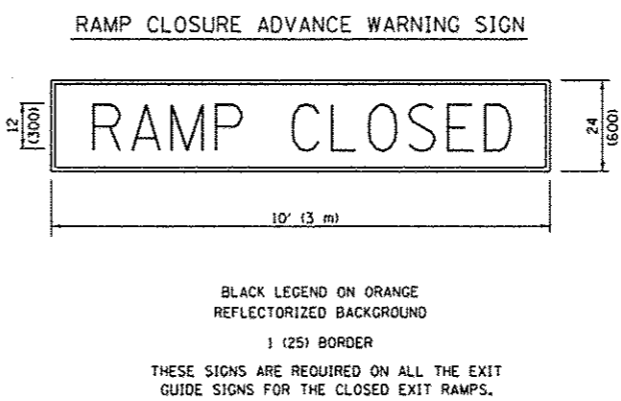


**EXIT RAMP CLOSURE**

- SYMBOLS**
- ☐ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
  - ☐ TYPE III BARRICADE WITH FLASHING LIGHT



**DETAIL FOR REQUIRED BARRICADES & SIGNS**



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

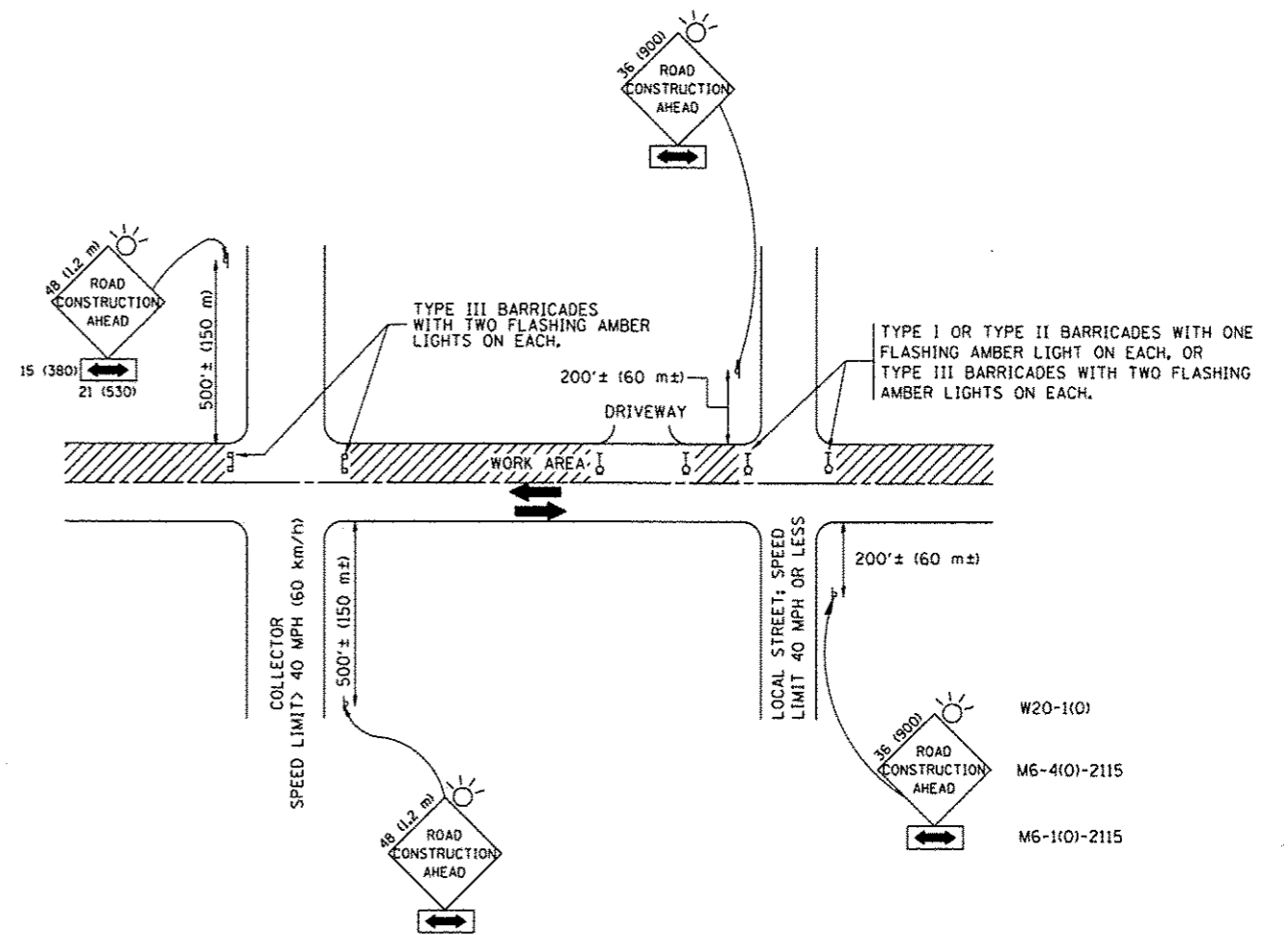
**GENERAL NOTES:**

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

|             |                   |                                   |                         |   |   |                         |      |            |  |                    |                           |           |    |
|-------------|-------------------|-----------------------------------|-------------------------|---|---|-------------------------|------|------------|--|--------------------|---------------------------|-----------|----|
| FILE NAME : | USER NAME : rgall | DESIGNED - DWS                    | REVISED - DWS/JAF 12-02 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>FREEWAY ENTRANCE AND EXIT RAMP<br/>CLOSURE DETAILS</b> |                         |      | F.A. RTE.: | SECTION  | COUNTY             | TOTAL SHEETS              | SHEET NO. |    |
|             |                   | DRAWN -                           | REVISED - JAF 02-06     |   | SCALE: NONE   | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.    | 90/94  | 0101.6-2P-1-3 (13) | COOK                      | 37        | 29 |
|             |                   | PLOT SCALE = 1/8" = 100.000' / 1" | REVISOR - SPB 01-07     |   |   |                         |      |            | <b>TC-08</b>   |                    | <b>CONTRACT NO. 60W36</b> |           |    |
|             |                   | PLOT DATE = 4/12/2013             | DATE - 02-83            |   | REVISED - SPB 12-09                                       |                         |      |            | <small>FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT</small> |                    |                           |           |    |





TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
  1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

|             |                   |                |                                 |
|-------------|-------------------|----------------|---------------------------------|
| FILE NAME : | USER NAME = rgall | DESIGNED - LHA | REVISED - J. OBERLE 10-18-95    |
|             |                   | DRAWN -        | REVISED - A. HOUSEH 03-06-96    |
|             |                   | CHECKED -      | REVISED - A. HOUSEH 10-15-96    |
|             |                   | DATE - 06-89   | REVISED - T. RAMMACHER 01-06-00 |

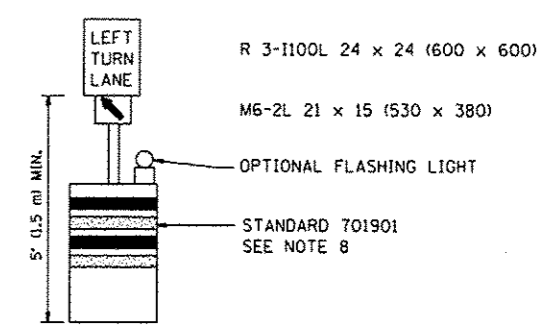
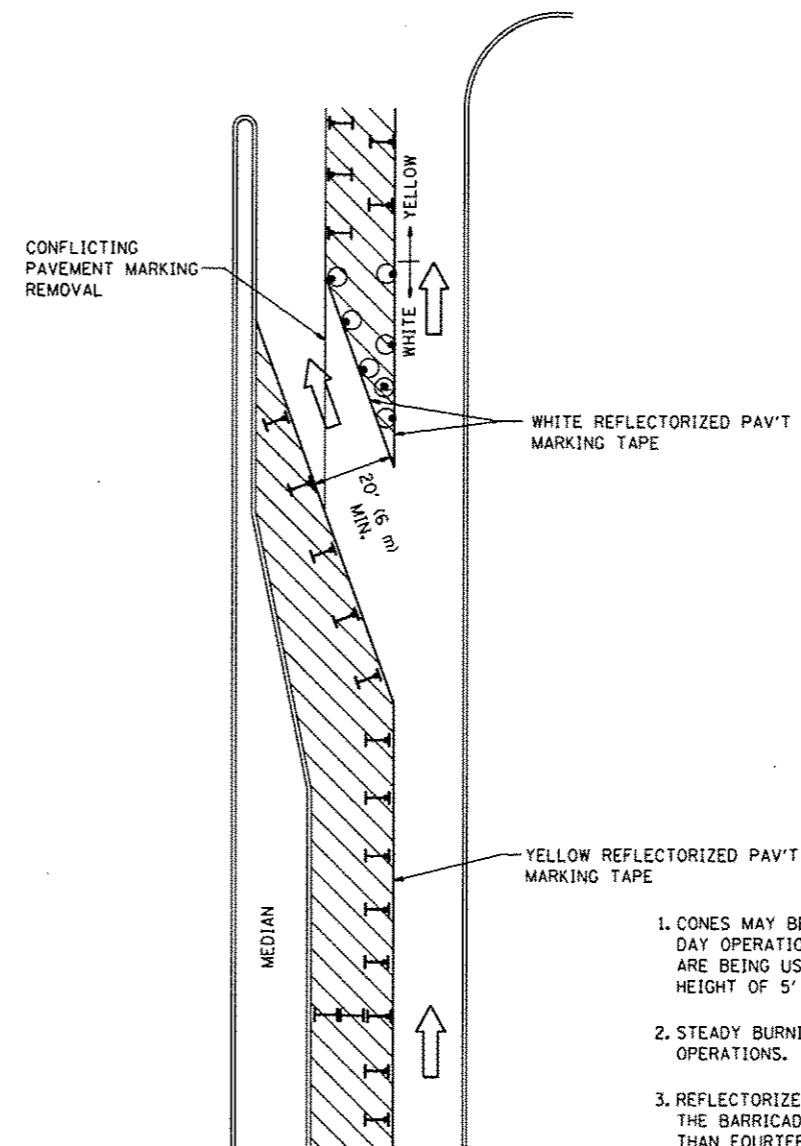
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR  
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |                    |                    |              |           |
|---|--------------------|--------------------|--------------|-----------|
| F.A. RTE.   | SECTION            | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK               | 37           | 31        |
| TC-10   |                    | CONTRACT NO. 60W36 |              |           |
| FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT |                    |                    |              |           |





**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT, WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

**LEGEND**

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

|             |                             |                                |                            |
|-------------|-----------------------------|--------------------------------|----------------------------|
| FILE NAME : | USER NAME = rgell           | REVISED -T. RAMMACHER 09-08-94 | REVISED - R. BORO 09-14-09 |
|             |                             | REVISED - A. HOUSEH 11-07-95   | REVISED -                  |
|             | PLOT SCALE = 99,9998 "/ in. | REVISED - A. HOUSEH 10-12-96   | REVISED -                  |
|             | PLOT DATE = 4/12/2013       | REVISED -T. RAMMACHER 01-06-00 | REVISED -                  |

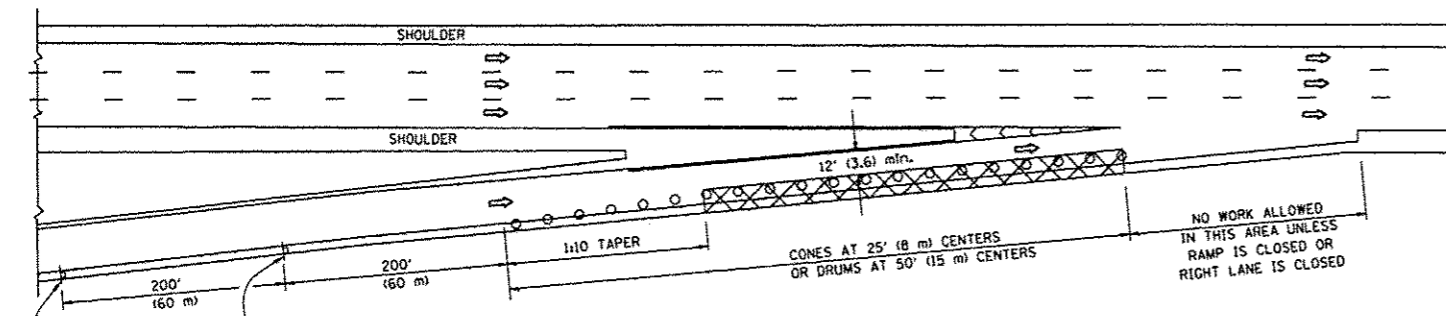
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

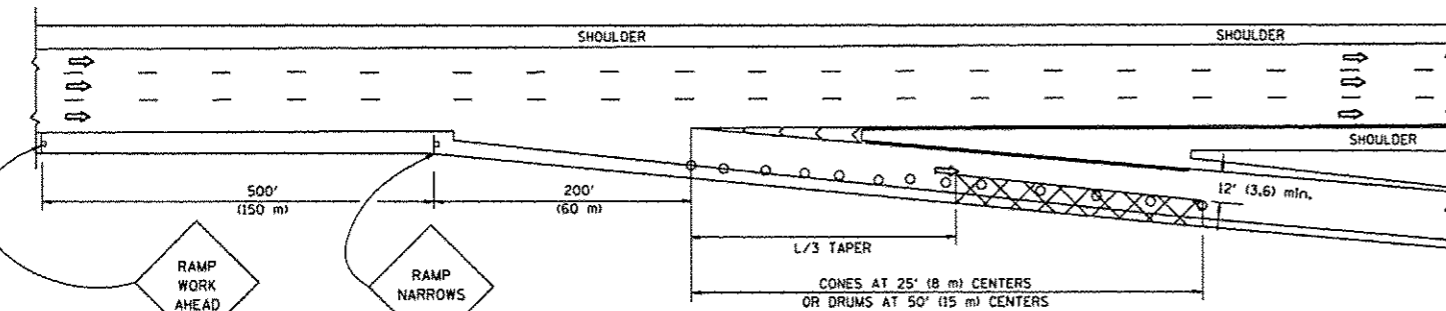
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |                    |                    |              |           |
|---|--------------------|--------------------|--------------|-----------|
| F.A. RTE.                                       | SECTION            | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK               | 37           | 32        |
| TC-14   |                    | CONTRACT NO. 60W36 |              |           |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |                    |              |           |

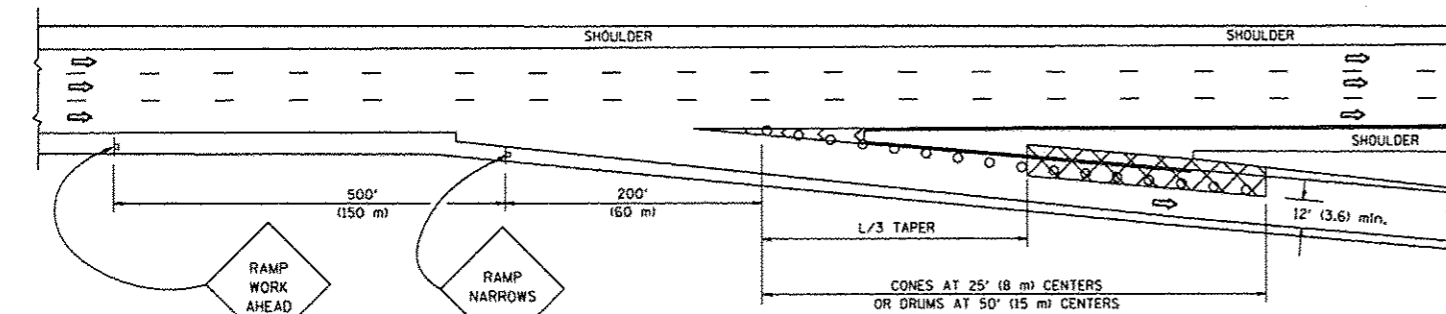
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

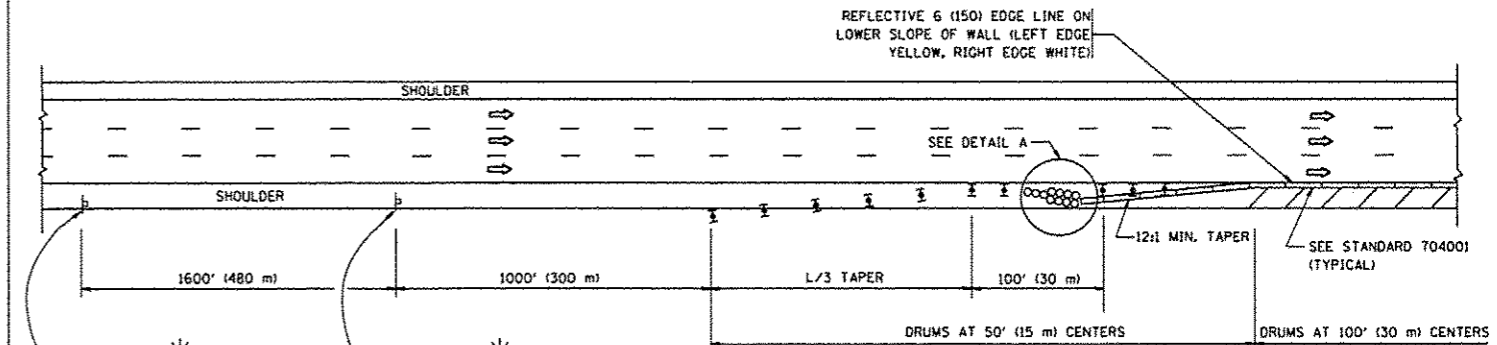
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:
 

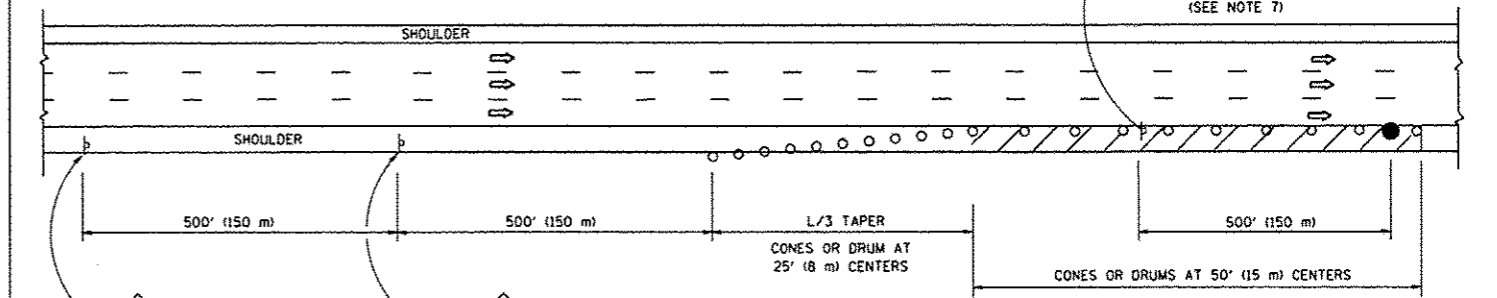
|                              |                             |
|------------------------------|-----------------------------|
| SPEED LIMIT                  | FORMULAS                    |
| 45 mph (80 km/h) OR GREATER: | METRIC ENGLISH              |
|                              | $L = 0.65(W/S)$ $L = (W/S)$ |

W = WIDTH OF OFFSET IN FEET (METERS)  
S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

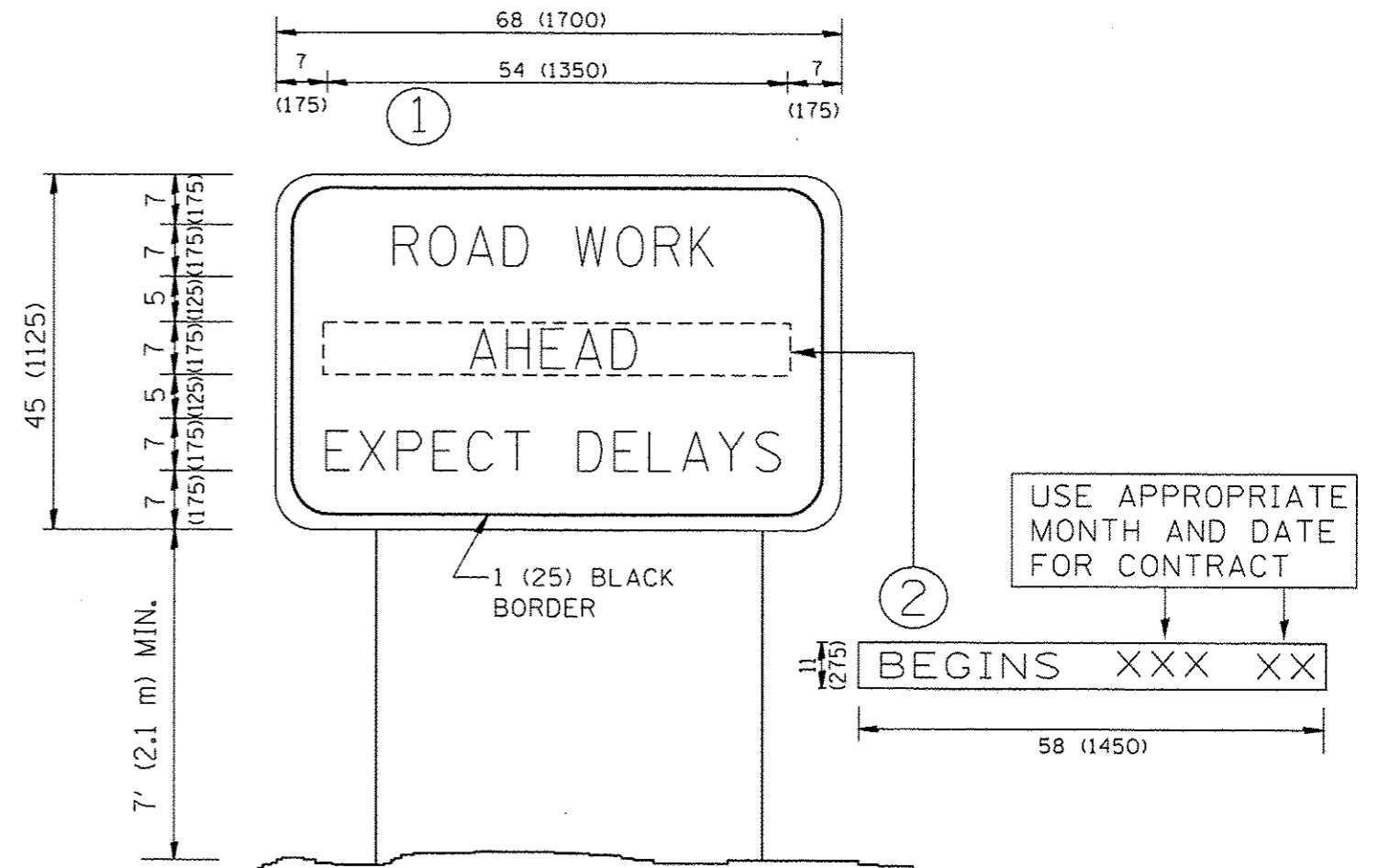
ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT.

DETAIL "A"  
IMPACT ATTENUATOR, TEMPORARY  
(SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

|             |                             |                |                        |   |  |                         |         |                    |              |           |   |
|-------------|-----------------------------|----------------|------------------------|---|--|-------------------------|---------|--------------------|--------------|-----------|---|
| FILE NAME : | USER NAME : rgo11           | DESIGNED -     | REVISED - 04-03        | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>TRAFFIC CONTROL DETAILS FOR FREEWAY<br/>SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b> | F.A. RTE.               | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |   |
|             |                             | DRAWN - D.W.S. | REVISED - J.A.F. 12-06 |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | 90/94   | 0101.6-2P-1-3 (13) | COOK         | 37        | 33  |
|             | PLOT SCALE = 100.0000' / 1" | CHECKED -      | REVISED - S.P.B. 01-07 |   |  | STA. TO STA.            |         | TC-17              |              |           |   |
|             | PLOT DATE = 4/12/2013       | DATE - 11-96   | REVISED - S.P.B. 12-09 |   |  |                         |         |                    |              |           | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |
|             |                             |                |                        |   |  | CONTRACT NO. 60W36      |         |                    |              |           |   |

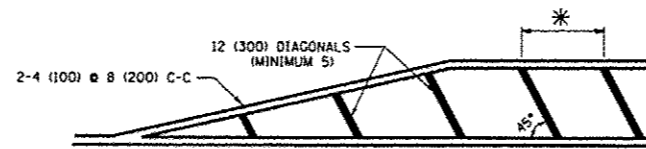
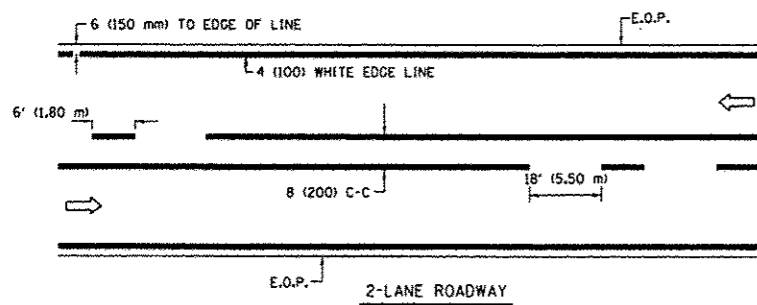


**NOTES:**

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

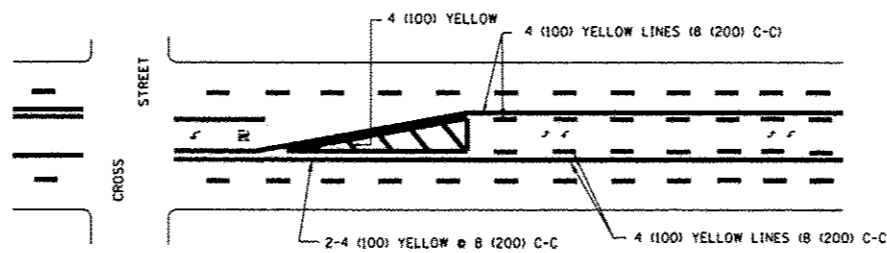
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

|             |                   |            |                                 |   |   |             |                         |                    |              |           |   |
|-------------|-------------------|------------|---------------------------------|---|---|-------------|-------------------------|--------------------|--------------|-----------|---|
| FILE NAME : | USER NAME = rge11 | DESIGNED - | REVISED - R. MIRS 09-15-97      | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>ARTERIAL ROAD<br/>INFORMATION SIGN</b> | F.A. RTE.   | SECTION                 | COUNTY             | TOTAL SHEETS | SHEET NO. |   |
|             |                   | DRAWN -    | REVISED - R. MIRS 12-11-97      |   |   | 90/94       | 0101.6-2P-1-3 (13)      | COOK               | 37           | 34        |   |
|             |                   | CHECKED -  | REVISED - T. RAMMACHER 02-02-99 |   |   | TC-22       |                         | CONTRACT NO. 60W36 |              |           |   |
|             |                   | DATE -     | REVISED - C. JUCIUS 01-31-07    |   |   | SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA.               | TO STA.      |           | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |

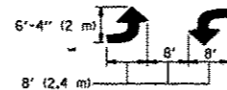


- FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
- DIAGONAL LINE SPACING: 20' (6.1 m) C-C

PAINTED MEDIANS

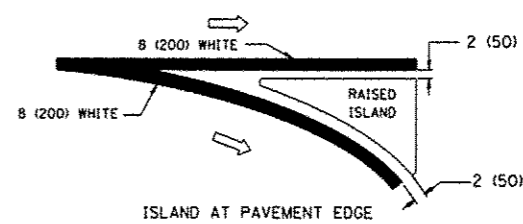
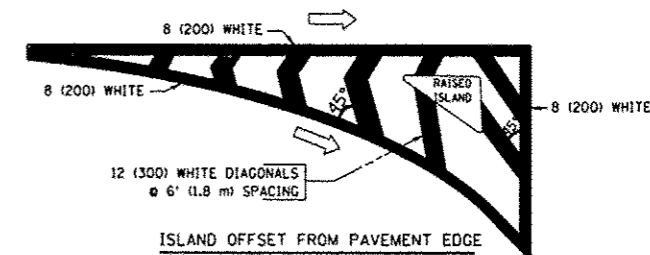


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

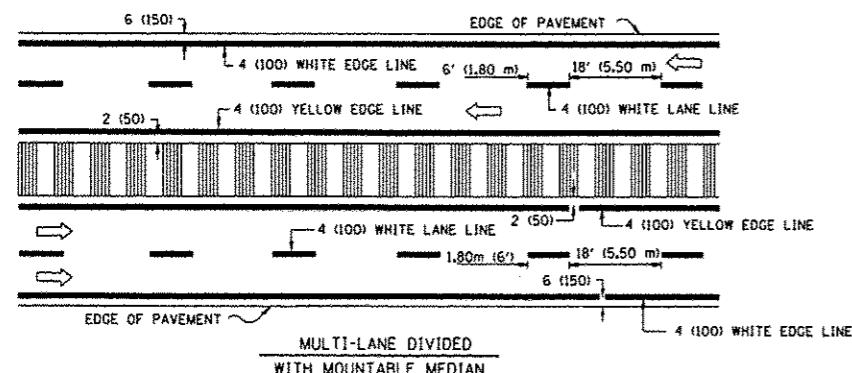
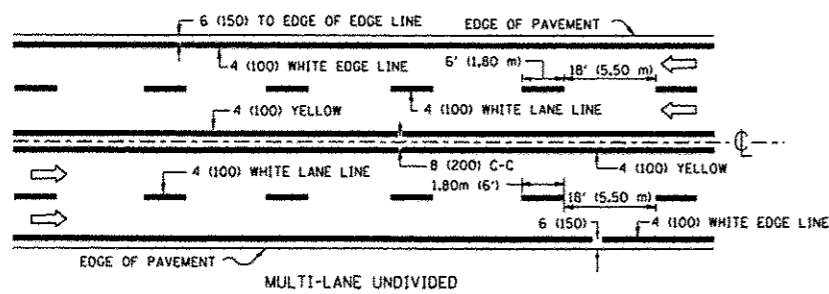


TYPICAL ISLAND MARKING

| TYPE OF MARKING   | WIDTH OF LINE  | PATTERN                         | COLOR   | SPACING / REMARKS  |
|---|--|---------------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT   | 4 (100)  | SKIP-DASH                       | YELLOW  | 6' (1.80 m) LINE WITH 18' (5.50 m) SPACE   |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT   | 2 @ 4 (100)  | SOLID                           | YELLOW  | 8 (200) C-C  |
| NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS                                      | 4 (100)<br>2 @ 4 (100)   | SOLID<br>SOLID                  | YELLOW<br>YELLOW                                  | 8 (200) C-C  |
| LANE LINES  | 4 (100)<br>5 (125) ON FREEWAYS   | SKIP-DASH<br>SKIP-DASH          | WHITE<br>WHITE                                    | 6' (1.80 m) LINE WITH 18' (5.50 m) SPACE   |
| DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)                                   | SAME AS LINE BEING EXTENDED  | SKIP-DASH                       | SAME AS LINE BEING EXTENDED                       | 2' (600) LINE WITH 6' (1.8) SPACE  |
| EDGE LINES  | 4 (100)  | SOLID                           | YELLOW-LEFT<br>WHITE-RIGHT                        | OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB  |
| TURN LANE MARKINGS  | 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))                       | SOLID                           | WHITE   | SEE TYPICAL TURN LANE MARKING DETAIL   |
| TWO WAY LEFT TURN MARKING   | 2 @ 4 (100) EACH DIRECTION<br>8' (2.4 m) LEFT ARROW                          | SKIP-DASH AND SOLID<br>IN PAIRS | YELLOW<br>WHITE                                   | 6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE<br>SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL           |
| CROSSWALK LINES<br>A. DIAGONALS (BIKE & EQUESTRIAN)<br>B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN) | 12 (300) @ 45°<br>24 (600) @ 90°   | SOLID<br>SOLID                  | WHITE<br>WHITE                                    | 2' (600) APART<br>2' (600) APART<br>SEE TYPICAL CROSSWALK MARKING DETAILS.   |
| STOP LINES  | 24 (600)   | SOLID                           | WHITE   | PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS   | 2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°                                    | SOLID                           | YELLOW; TWO WAY TRAFFIC<br>WHITE; ONE WAY TRAFFIC | 8 (200) C-C FOR THE DOUBLE LINE<br>SEE TYPICAL PAINTED MEDIAN MARKING.   |
| CORE MARKING AND CHANNELIZING LINES   | 8 (200) WITH 12 (300) DIAGONALS @ 45°  | SOLID                           | WHITE   | DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h))  |
| RAILROAD CROSSING   | 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" | SOLID                           | WHITE   | SEE STATE STANDARD T80001<br>AREA OF "R": 3.6 SQ. FT. (0.33m <sup>2</sup> ) EACH<br>"X": 54.0 SQ. FT. (5.0 m <sup>2</sup> )  |

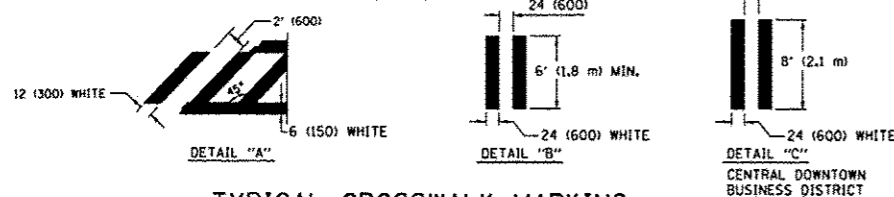
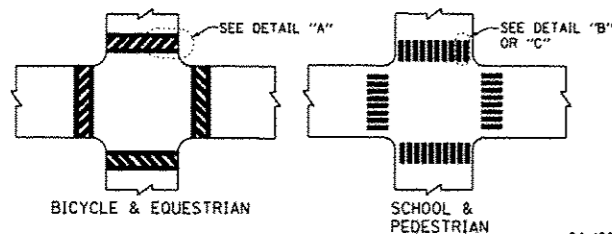
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

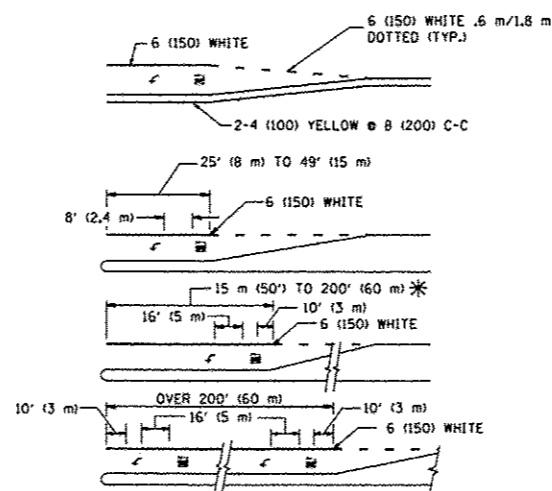


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 AREA = 15.8 SQ. FT. (1.47 m<sup>2</sup>)  
 AREA = 22.9 SQ. FT. (2.13 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

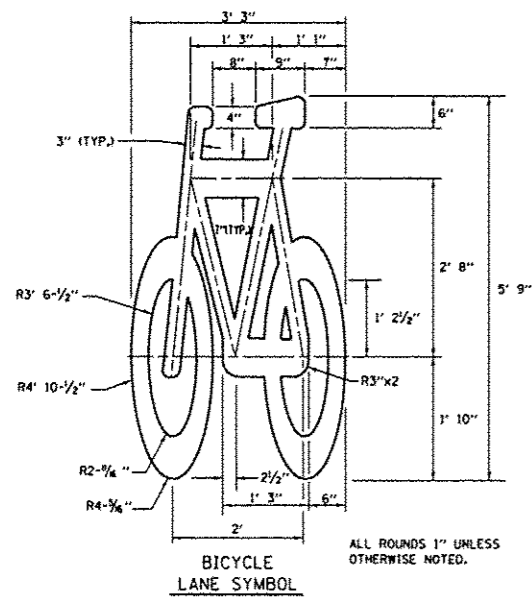
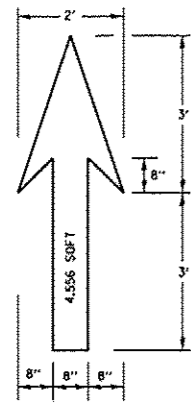
TYPICAL TURN LANE MARKING

|             |                           |            |                                 |
|-------------|---------------------------|------------|---------------------------------|
| FILE NAME : | USER NAME = rgal1         | DESIGNED - | REVISED - T. RAMMACHER 12-07-00 |
|             |                           | DRAWN -    | REVISED - K. ENG 02-28-12       |
|             | PLOT SCALE = 1/8" = 1'-0" | CHECKED -  | REVISED -                       |
|             | PLOT DATE = 4/12/2013     | DATE -     | REVISED -                       |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

|                           |                         |      |         |
|---------------------------|-------------------------|------|---------|
| CITY OF CHICAGO           |                         |      |         |
| TYPICAL PAVEMENT MARKINGS |                         |      |         |
| SCALE: NONE               | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA. |

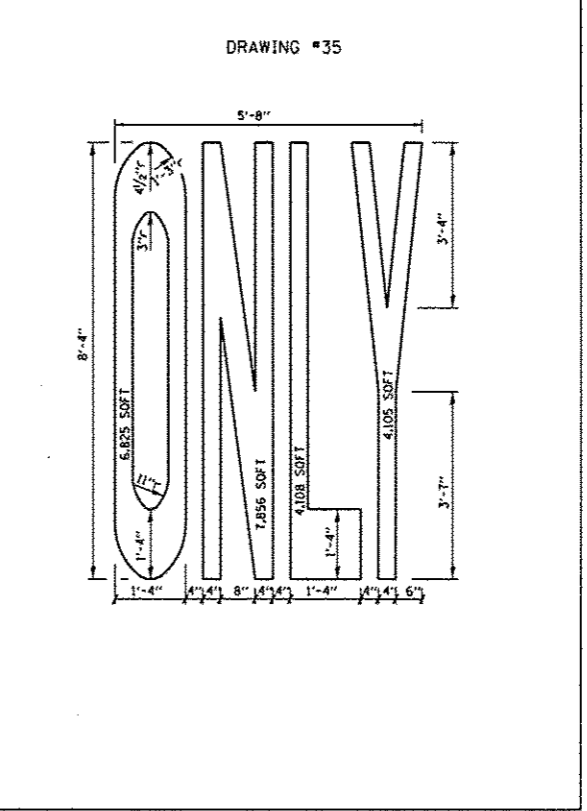
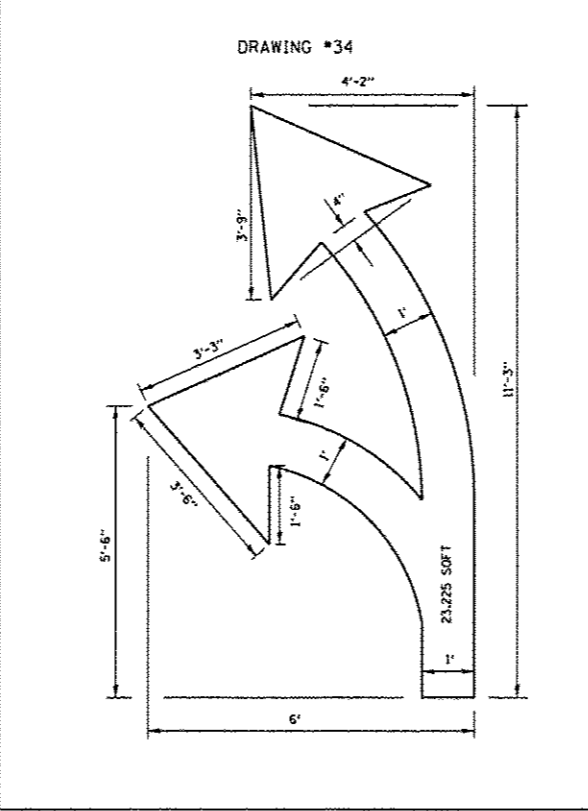
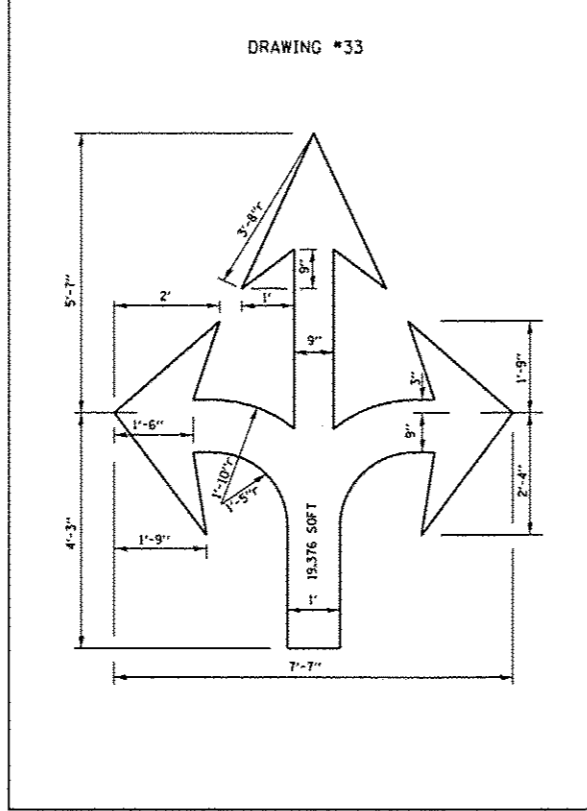
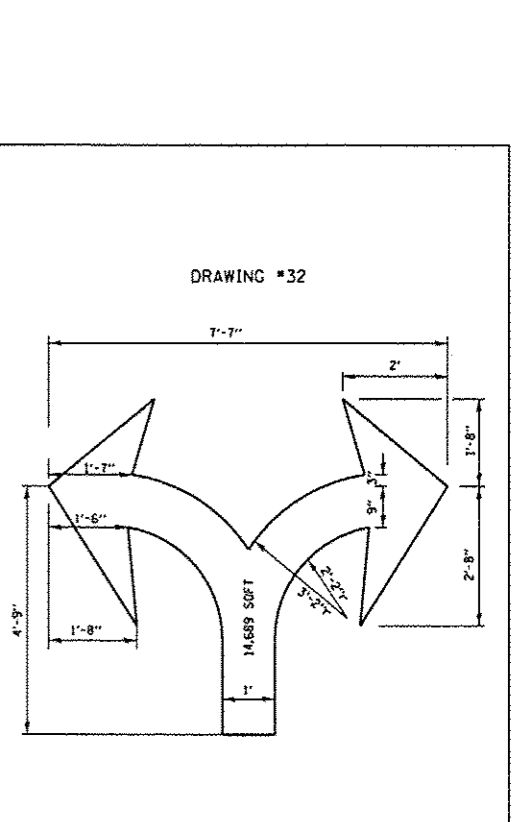
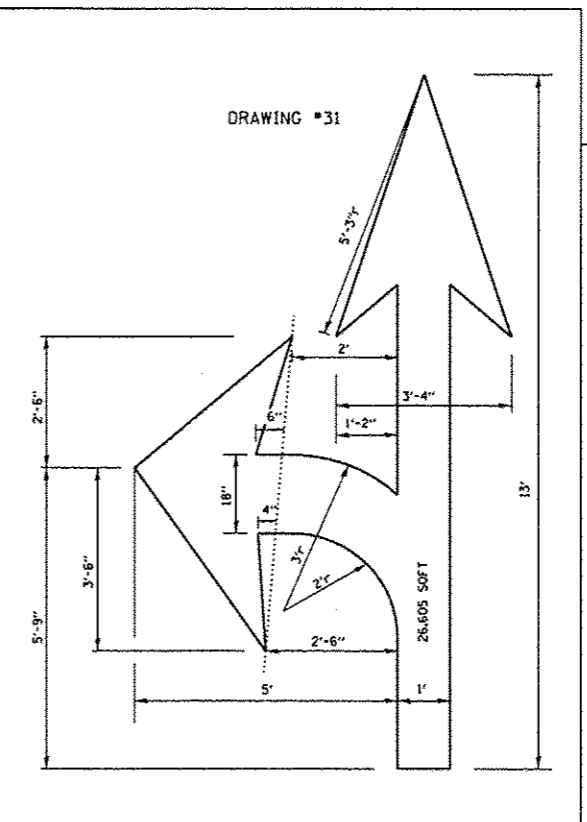
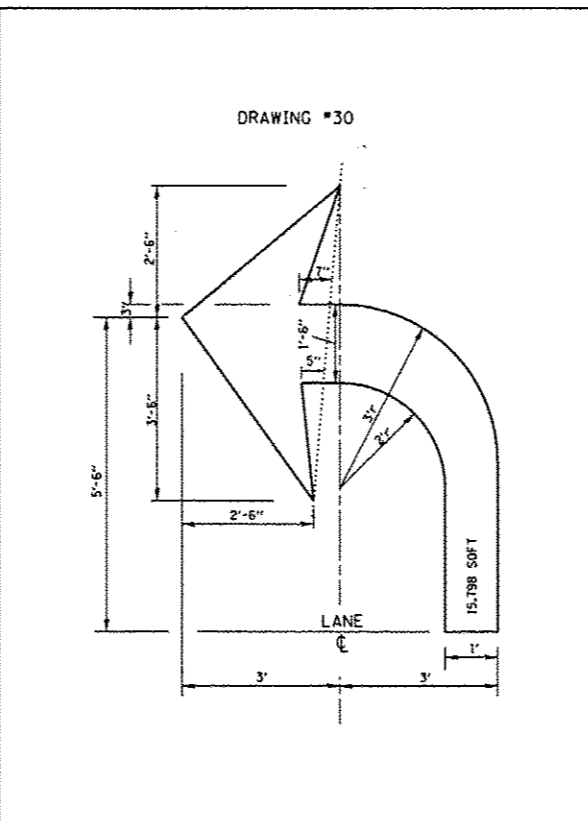
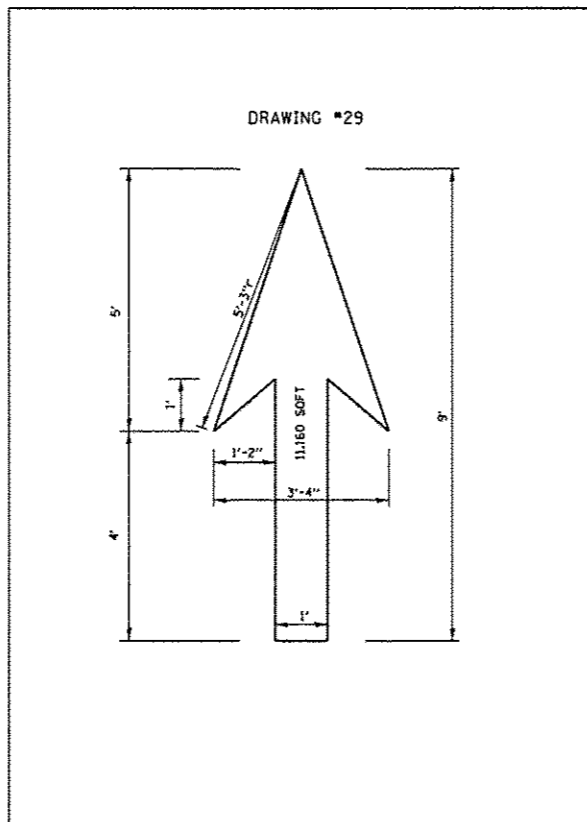
|   |                    |                    |              |           |
|---|--------------------|--------------------|--------------|-----------|
| F.A. RTE.   | SECTION            | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 90/94   | 0101.6-2P-1-3 (13) | COOK               | 37           | 35        |
| TC-24   |                    | CONTRACT NO. 60W36 |              |           |
| FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT |                    |                    |              |           |



**NOTE:**

- 1.) FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.
- 2.) THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

**TYPICAL BIKE LANE SYMBOLS**  
DRAWING #28



**NOTE:**  
ALL MARKINGS SHALL BE SOLID WHITE UNLESS OTHERWISE NOTED IN THE PLANS

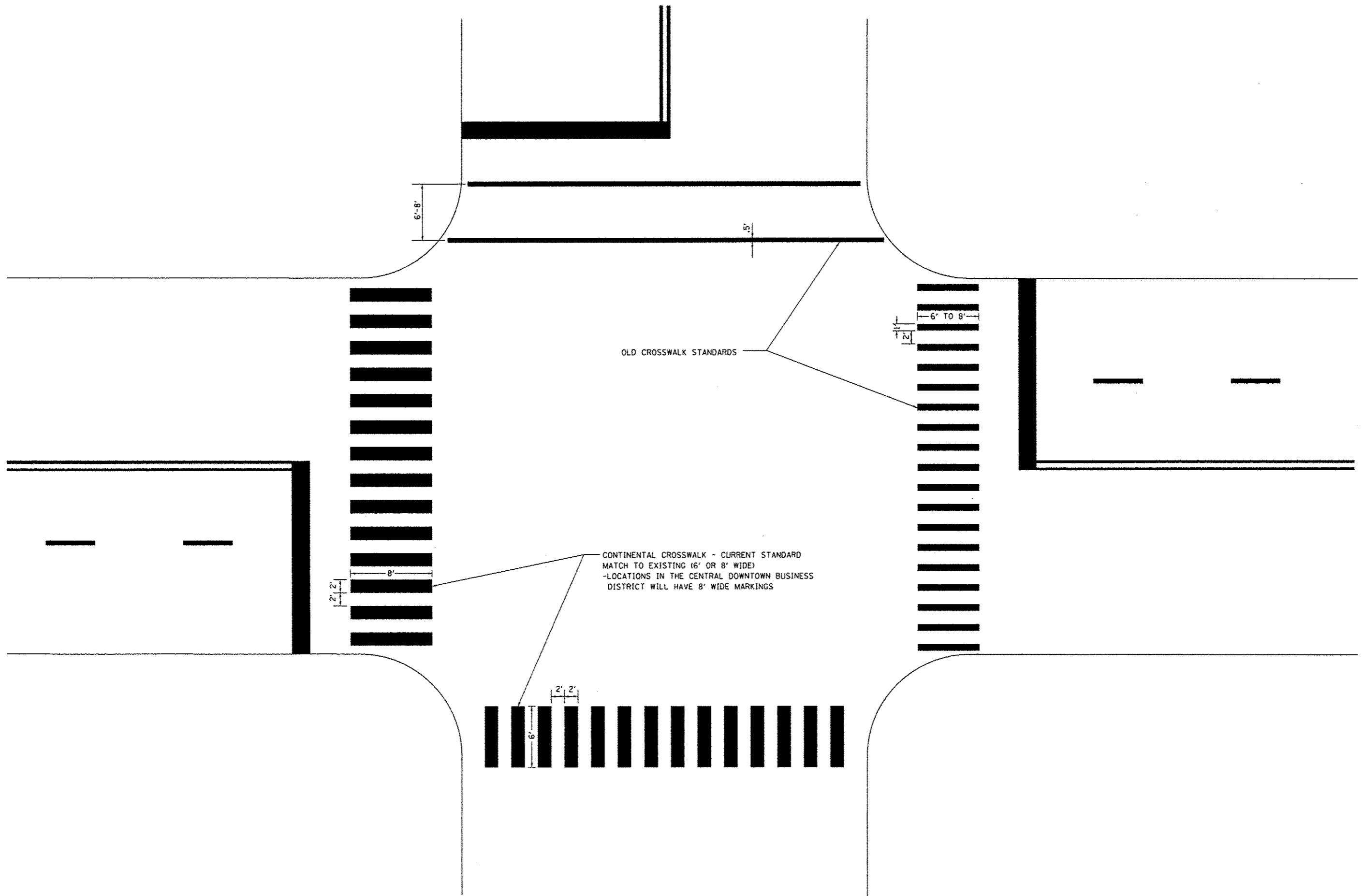
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|-------------|---------------------------|------------|---------------------------------|
| FILE NAME = | USER NAME = rgall         | DESIGNED - | REVISED - T, RAMMACHER 12-07-00 |
|             |                           | DRAWN -    | REVISED - K, ENG 01-12-12       |
|             | PLOT SCALE = 1/8" = 1'-0" | CHECKED -  | REVISED -                       |
|             | PLOT DATE = 4/12/2013     | DATE -     | REVISED -                       |

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

|                                  |                                      |
|----------------------------------|--------------------------------------|
| <b>CITY OF CHICAGO</b>           |                                      |
| <b>TYPICAL PAVEMENT MARKINGS</b> |                                      |
| SCALE: NONE                      | SHEET NO. 2 OF 3 SHEETS STA. TO STA. |

|   |                            |                    |                 |              |
|---|----------------------------|--------------------|-----------------|--------------|
| F.A. RTE. 90/94                                 | SECTION 0101.6-2P-1-3 (13) | COUNTY COOK        | TOTAL SHEETS 37 | SHEET NO. 36 |
| TC-24   |                            | CONTRACT NO. 60W36 |                 |              |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                            |                    |                 |              |





|             |                              |            |                                 |
|-------------|------------------------------|------------|---------------------------------|
| FILE NAME : | USER NAME : rgal1            | DESIGNED - | REVISED - T. RAMMACHER 12-07-00 |
|             |                              | DRAWN -    | REVISED - K. ENG 01-12-12       |
|             | PLOT SCALE = 100.000' / 1" = | CHECKED -  | REVISED -                       |
|             | PLOT DATE = 4/12/2013        | DATE -     | REVISED -                       |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO  
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 3 OF 3 SHEETS STA. TO STA.

|   |                    |                    |               |            |
|---|--------------------|--------------------|---------------|------------|
| F.A. RTE.:                                      | SECTION            | COUNTY             | TOTAL SHEETS: | SHEET NO.: |
| 90/94   | 0101.6-2P-1+3 (13) | COOK               | 37            | 37         |
| TC-24   |                    | CONTRACT NO. 60W36 |               |            |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |                    |                    |               |            |