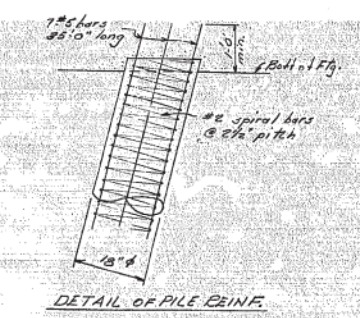
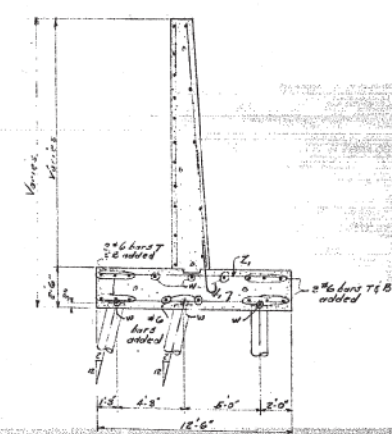
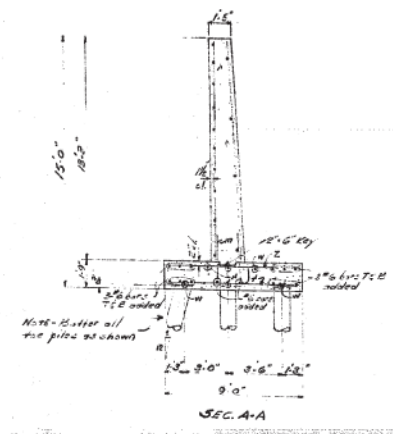
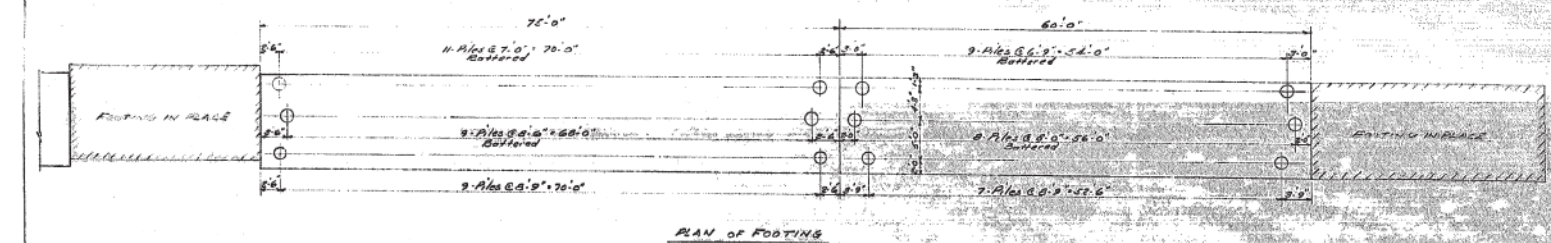
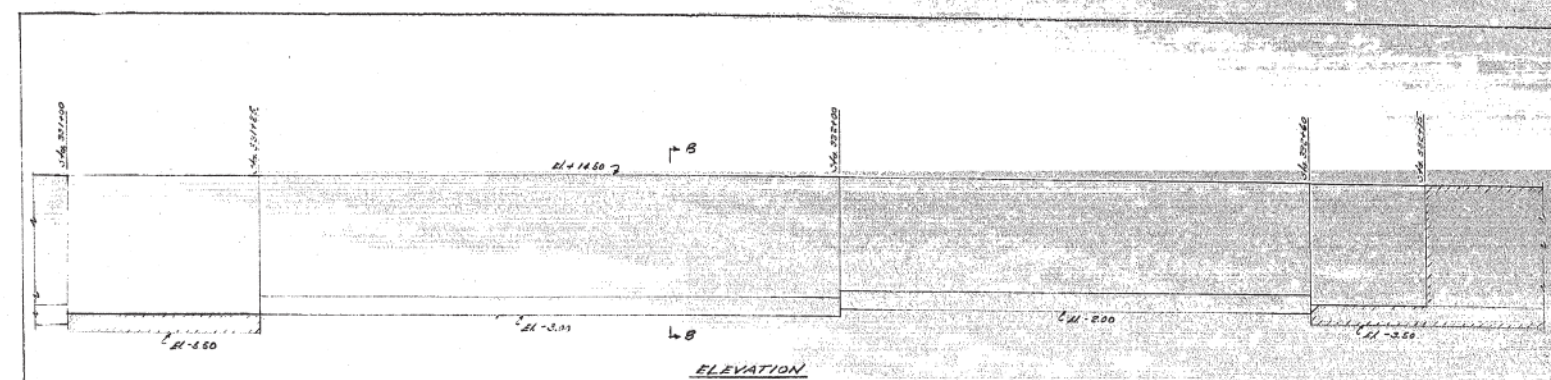


FOR INFORMATION ONLY

Sheet No. 56A

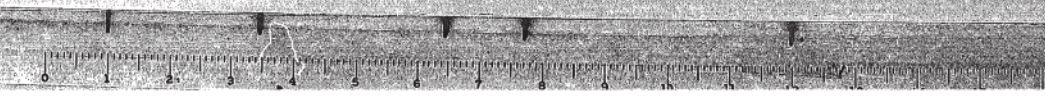


Added Quantities Sta. 326+00.79 to 330+25
Sta. 330+50 to 331+00
Sta. 331+25 to 332+60

For the 239 piling in place piles
7910 Lin. Ft. 18" Conc. Piles
85600 Lbs. reinf. bars in Piles
12800 Lbs. reinf. bars (Long. bars added in footing)

PREPARED BY: BAKKER
FA. ROUTE 151
CONGRESS ST. EXPRESSWAY
RETAINING WALL REVISION UNIT 7
SEC. 2525-103 COOK CO.

Revised 2-15-56 D.F.S.



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PLOT DATE = 5/9/2017	DRAWN - WJC	REVISED -
	CHECKED - TLR	REVISED -

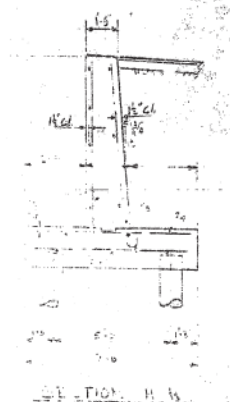
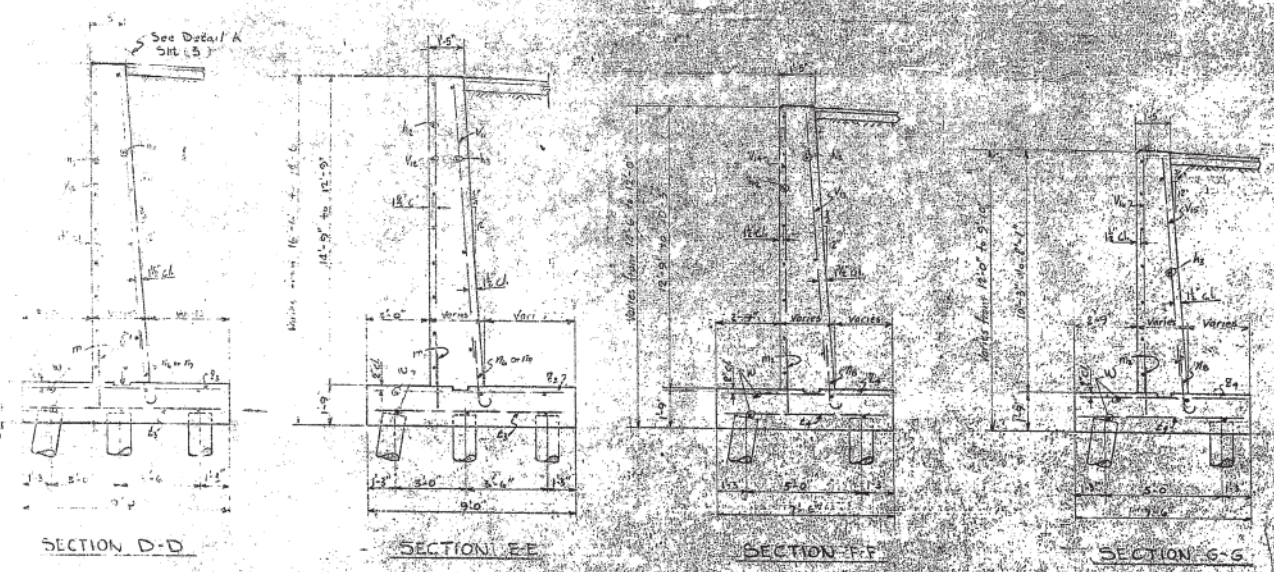
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS FOR EXISTING RETAINING WALL 9,
EXISTING RETAINING WALL 10, AND EXISTING RETAINING WALL 13

SHEET NO. AB-10 OF AB-18 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 501
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

FOR INFORMATION ONLY



BAR	Q	D
M	0-11	2-11
M	0-8	2-6
M	1-3	1-3
M	1-5	5-6
M	1-5	1-1
M	0-10	0-10
M	0-11	0-11
M	1-3	1-3

BILL OF MATERIAL - UNIT				
BAR	NO.	SIZE	LENGTH	SHAPE
A	10	2	25'-0"	
A	4	2	20'-0"	
A	24	2	25'-0"	
A	40	2	25'-0"	
V	50	2	18'-0"	
V	10	2	18'-0"	
V	150	2	18'-0"	
V	150	2	6'-0"	
V	39	2	14'-0"	
V	300	2	8'-0"	
V	75	2	16'-0"	
V	196	2	10'-0"	
V	196	2	8'-0"	
V	200	2	9'-0"	
V	152	2	18'-0"	
V	100	2	12'-0"	
V	26	2	24'-0"	
V	350	2	10'-0"	
V	13	2	15'-0"	
V	50	2	17'-0"	
V	13	2	11'-0"	
V	25	2	4'-0"	
V	7	2	2'-0"	
V	50	2	3'-0"	
V	49	2	3'-0"	
V	23	2	3'-0"	
V	216	2	7'-0"	
V	196	2	7'-0"	
V	300	2	8'-0"	
V	98	2	7'-0"	
V	100	2	7'-0"	
V	115	2	7'-0"	
V	55	2	7'-0"	
V	306	2	12'-0"	
V	240	2	12'-0"	
V	110	2	7'-0"	
V	117	2	7'-0"	
V	22	2	7'-0"	
V	200	2	12'-0"	
V	150	2	12'-0"	
V	162	2	7'-0"	
V	120	2	26'-0"	
V	179	2	3'-0"	
V	26	2	5'-0"	
V	26	2	2'-0"	
TOTAL WEIGHT REINFORCEMENT BARS 109,387				
TOTAL CONCRETE CUBIC YARDS 2,008				

ILLINOIS DIVISION OF HIGHWAYS
 DEPARTMENT OF TRANSPORTATION
 FROM PLANS AND TO BUREAU OF
 RETAINING WALL DETAILS
 11/1/11

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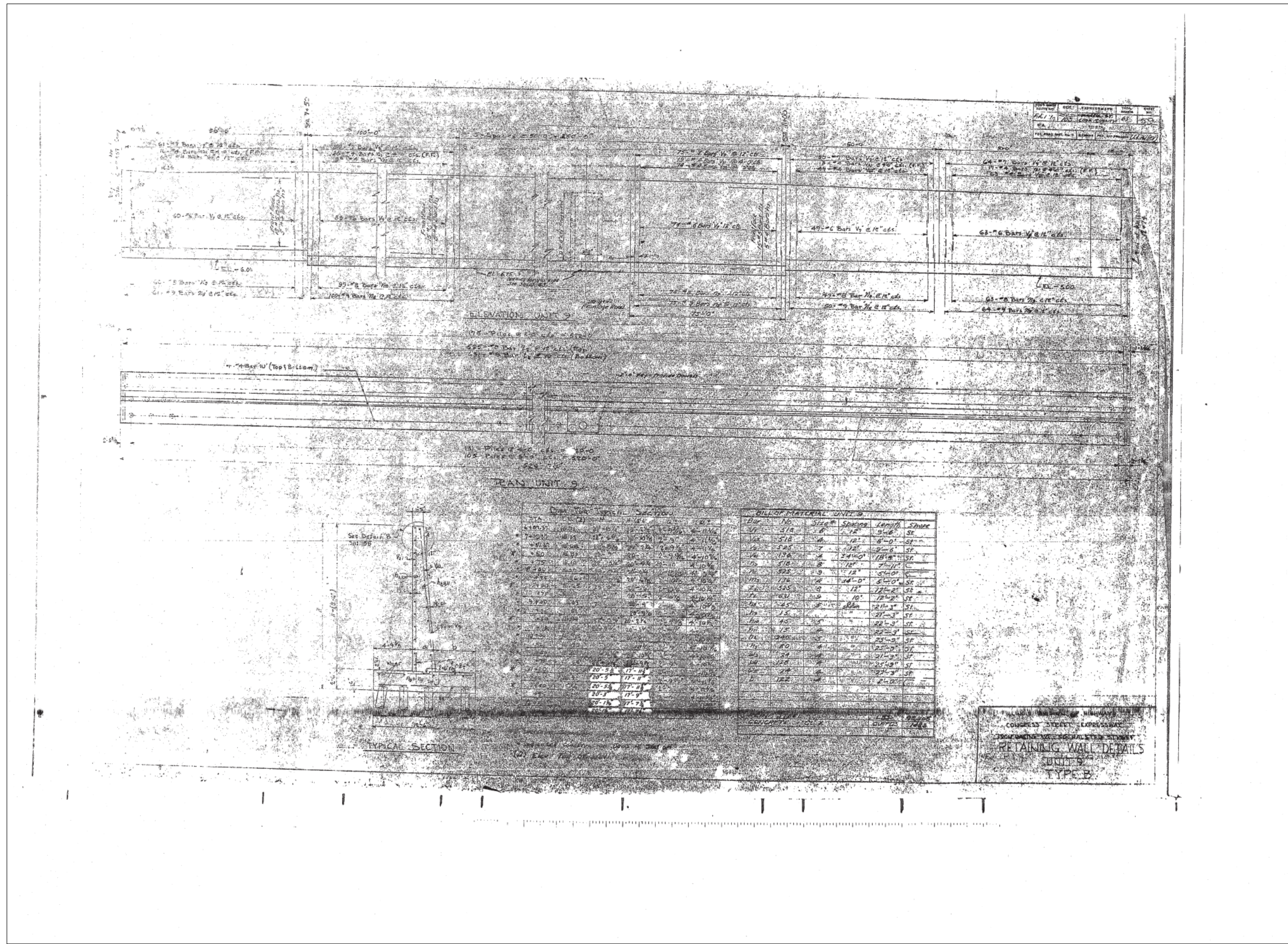
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EXISTING AS-BUILTS FOR EXISTING RETAINING WALL 9,
 EXISTING RETAINING WALL 10, AND EXISTING RETAINING WALL 13**

SHEET NO. AB-11 OF AB-18 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 502
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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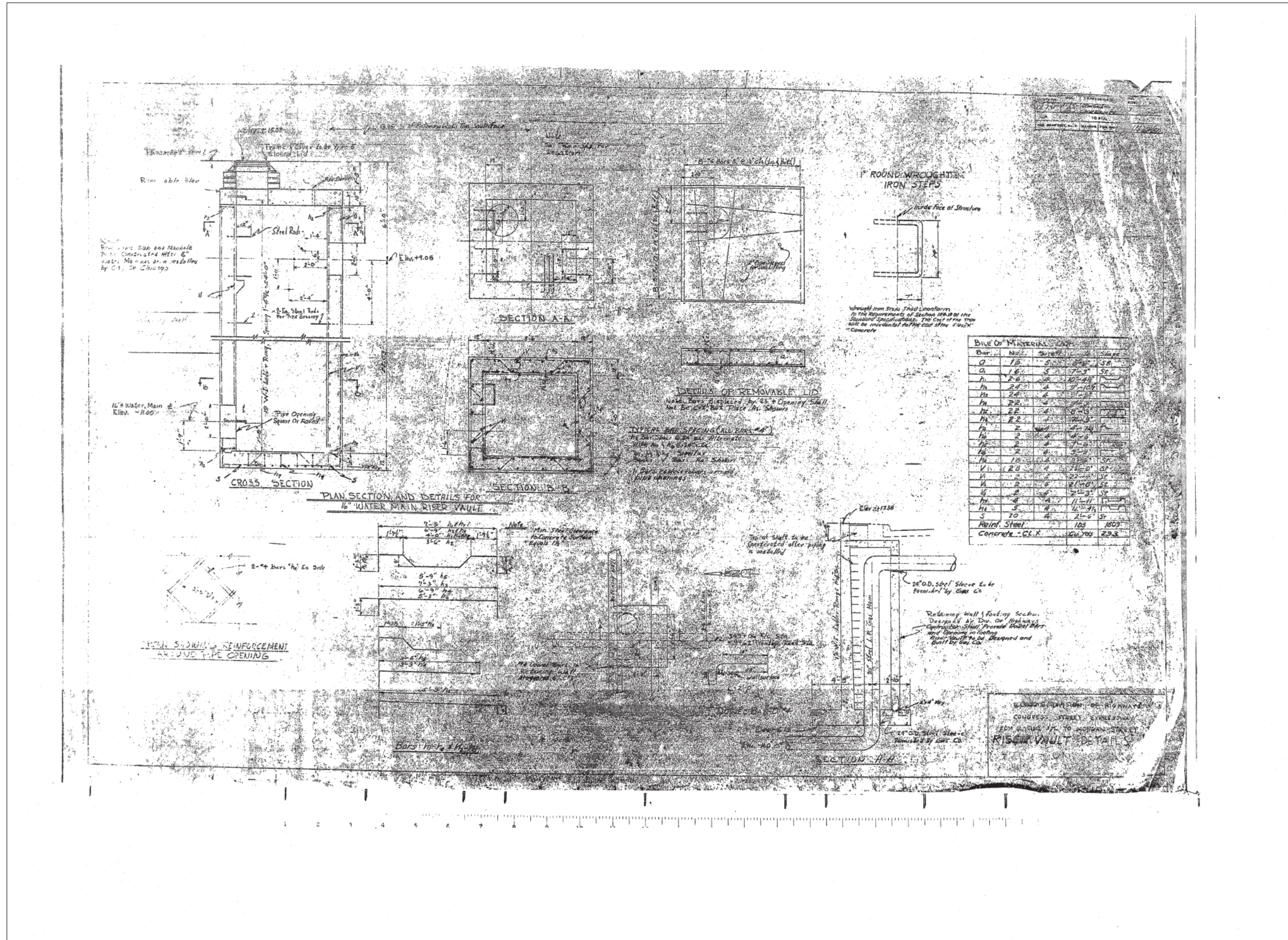
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS FOR EXISTING RETAINING WALL 9,
EXISTING RETAINING WALL 10, AND EXISTING RETAINING WALL 13

SHEET NO. AB-13 OF AB-18 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 504
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

FOR INFORMATION ONLY



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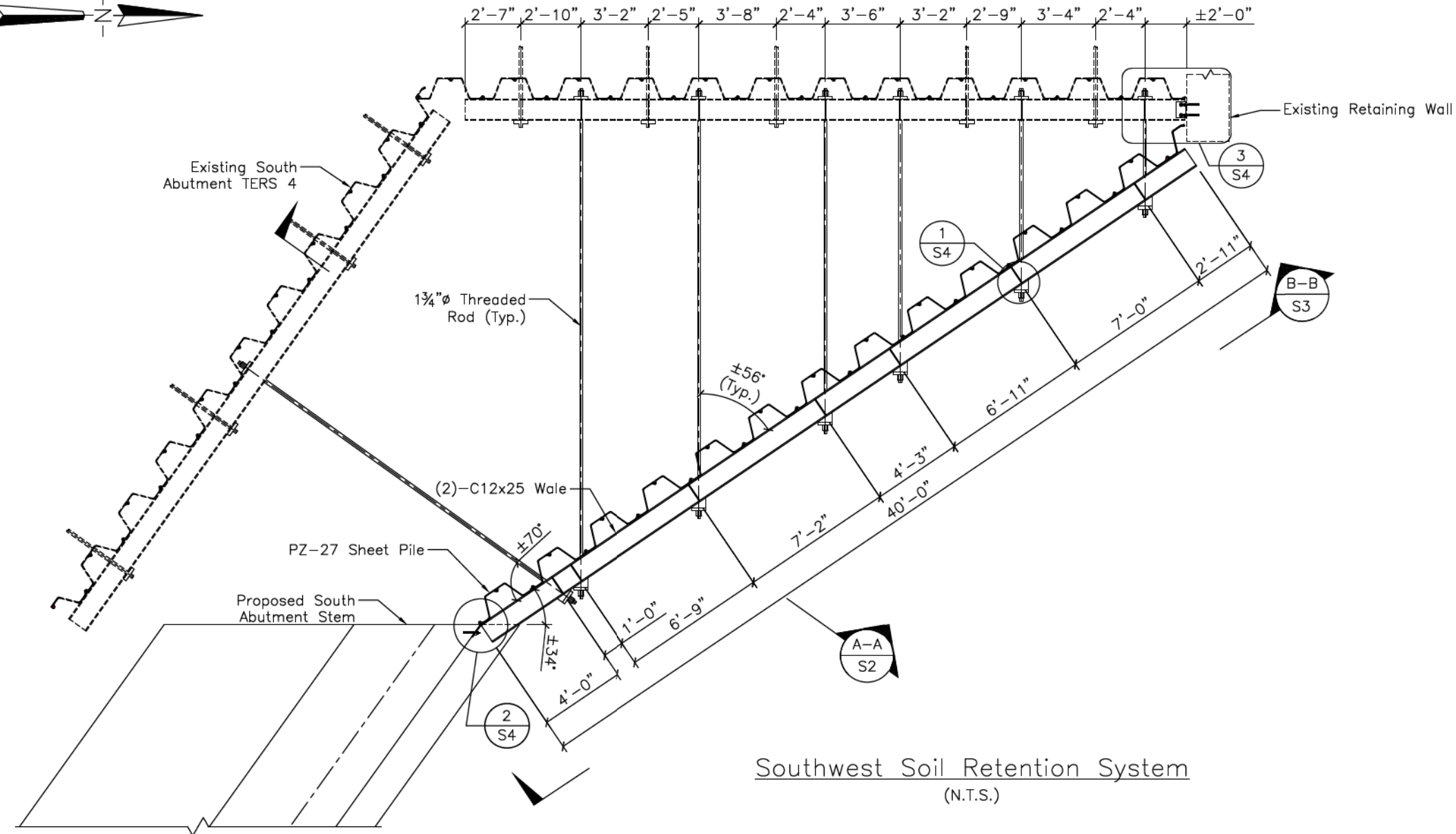
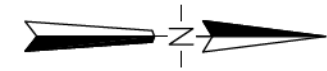
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS FOR EXISTING RETAINING WALL 9,
EXISTING RETAINING WALL 10, AND EXISTING RETAINING WALL 13

SHEET NO. AB-14 OF AB-18 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 505
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	

FOR INFORMATION ONLY



Southwest Soil Retention System
(N.T.S.)

Construction Sequence:

1. Backfill site to Min. Elevation of 572.25'.
2. Install sheets as shown on plans. Bottom of sheet pile shall be EL. 563.25 (Min).
3. Backfill behind sheets to Max. Elevation of 578.25'.
4. Install the first level of bracing at Elevation 580.25'.
5. Backfill behind sheets to Max. Elevation of 586.25'.
6. Install the second level of bracing at Elevation 588.25'.
7. Complete backfill to design grade of Elevation 596.20'.
8. Install sheeting cap.
9. Install chain link fence (by others).

General Notes:

1. All steel sheet piles and channels shall be ASTM A572 or ASTM 992, Grade 50.
2. All plates shall be ASTM A36 or greater.
3. All welding shall in accordance with AWS D1.1 using E70XX electrodes; minimum $\frac{5}{16}$ " UNO.
4. Tie-Backs shall be $1\frac{3}{4}$ " ϕ ASTM A722, Fu = 150 ksi.
5. Anchor Rods shall be $\frac{3}{4}$ " ϕ ASTM A193, Gr. B7.
6. Epoxy Adhesive shall be Hilti HIT RE 500.
7. Contractor shall verify existing conditions, dimensions, and elevations in the field prior to the fabrication and installation of materials and commencement of any work.
8. Prior to any work, Contractor shall locate existing utilities.
9. Proposed SRS is located within the existing ROW. Refer to Sheet S4 for more details.

The information depicted on this drawing was prepared for the specific loadings and conditions associated with this specific site. Any reuse of the drawings or structure, without the express written consent of Collins Engineers, Inc. will be at the sole risk of the contractor, and without liability or legal exposure to Collins Engineers, Inc.



Review Comments - Entire Page		12/2/15
REV	DESCRIPTION	DATE
REVISIONS		
WALSH The Walsh Group		
CELL DES. No. SW SRS Halsted.dwg	123 N. Wacker Dr. Suite 500 Chicago, IL 60606 Tel: (312) 704-9300 Fax: (312) 704-9300 www.collinseng.com	
JOB No. 8309	COLLINS ENGINEERS ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 104-000903	
CHANGE 01-02		
SCALE AS NOTED	CIRCLE INTERCHANGE HALSTED STREET SOUTHWEST SRS	
DRAWN BY KVH		
DATE OCTOBER 2015		
CHECKED BY JMS		
SUPERVISOR MJG		
APPROVED	DATE	REV
		SHEET S1 of S5



USER NAME = v1janachione	DESIGNED - WJC	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

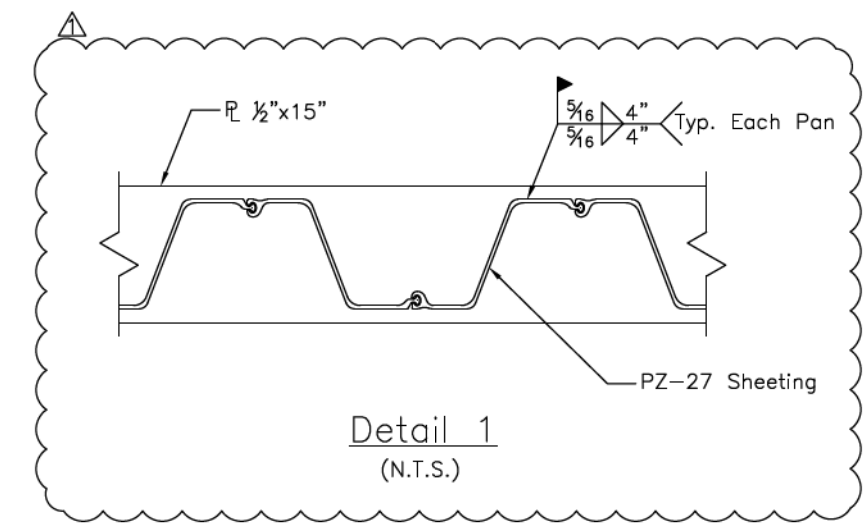
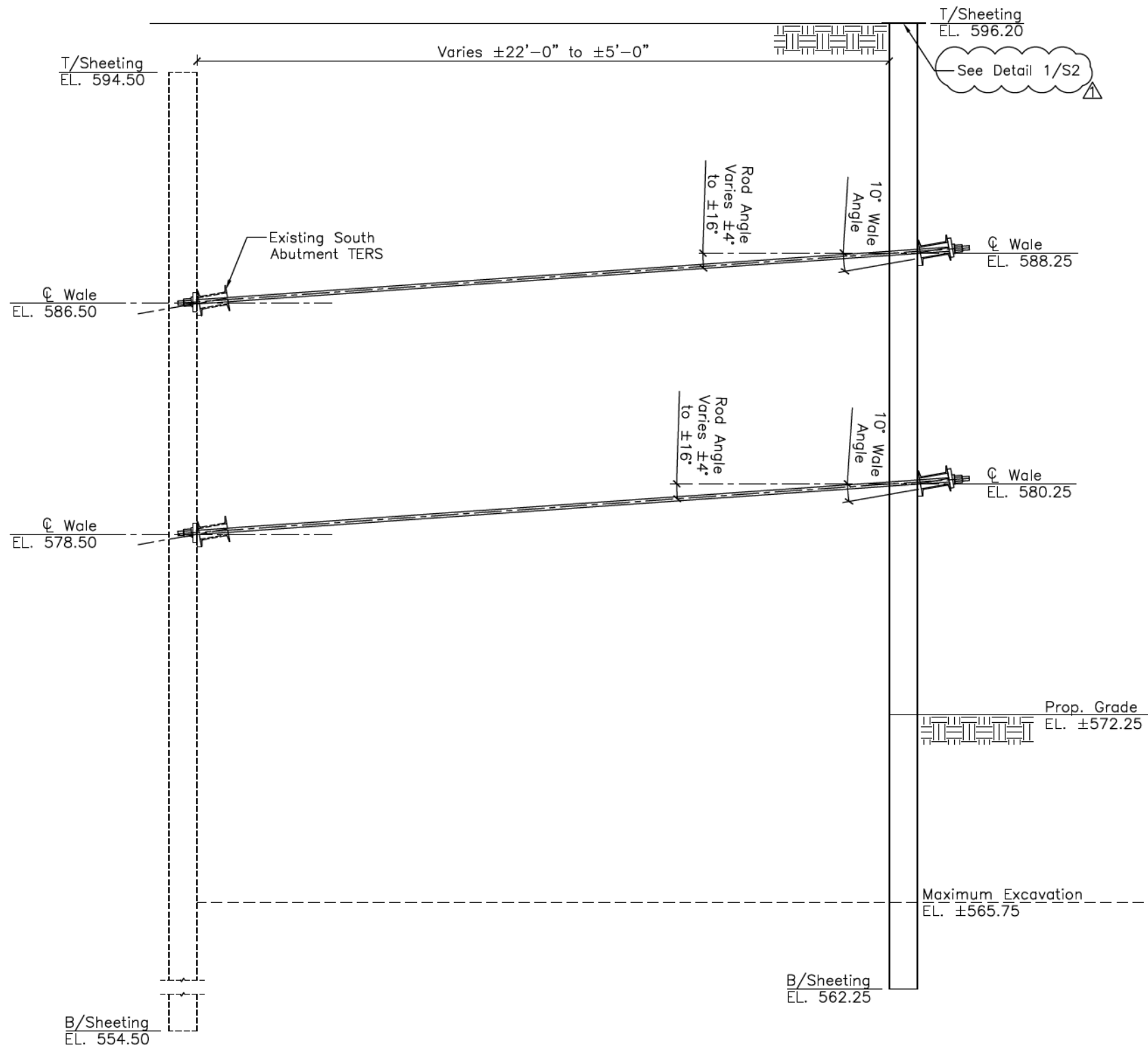
EXISTING AS-BUILTS FOR SOIL RETENTION SYSTEM AT
SOUTHWEST CORNER OF ABUTMENT FOR SN 016-1716

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 506
			CONTRACT NO. 60X76	

SHEET NO. AB-15 OF AB-18 SHEETS

ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY



Section A-A
(Looking West)

REVISIONS	REVISIONS	DATE
△	Review Comments	12/2/15
REV	DESCRIPTION	DATE
 The Walsh Group		
CELL DWG. No.	SW SRS Halsted.dwg	
JOB No.	8309	
CHANGE	01-02	
SCALE	AS NOTED	
DRAWN BY	KVH	
DATE	OCTOBER 2015	
CHECKED BY	JMS	
SUPERVISOR	MJG	
APPROVED	DATE	REV
	TYPE	SHEET S2 OF S5



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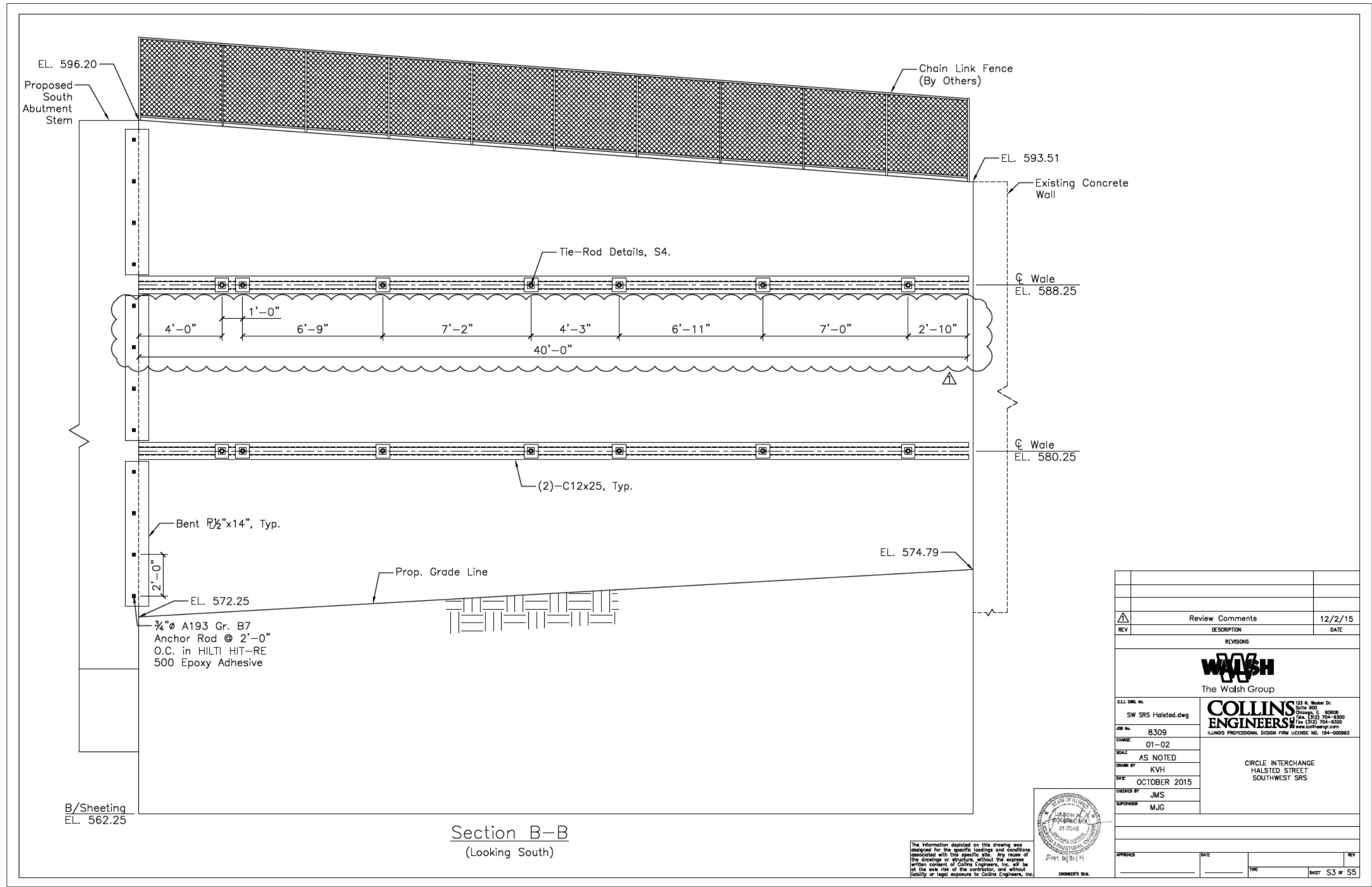
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS FOR SOIL RETENTION SYSTEM AT
 SOUTHWEST CORNER OF ABUTMENT FOR SN 016-1716

SHEET NO. AB-16 OF AB-18 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	507
CONTRACT NO.			60X76	
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY



Section B-B
(Looking South)

Review Comments		12/2/15
REV	DESCRIPTION	DATE
REVISIONS		
 The Walsh Group		
CELL DWG. No.	SW SRS Halsted.dwg	
JOB No.	8309	
CHANGE	01-02	
SCALE	AS NOTED	
DRAWN BY	KVH	
DATE	OCTOBER 2015	
CHECKED BY	JMS	
SUPERVISOR	MJG	
 COLLINS ENGINEERS 123 N. Wacker Dr. Suite 900 Chicago, IL 60606 Tel: (312) 704-3300 Fax: (312) 704-9320 www.collinseng.com ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000993		
CIRCLE INTERCHANGE HALSTED STREET SOUTHWEST SRS		
APPROVED	DATE	REV
SHEET S3 OF S5		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

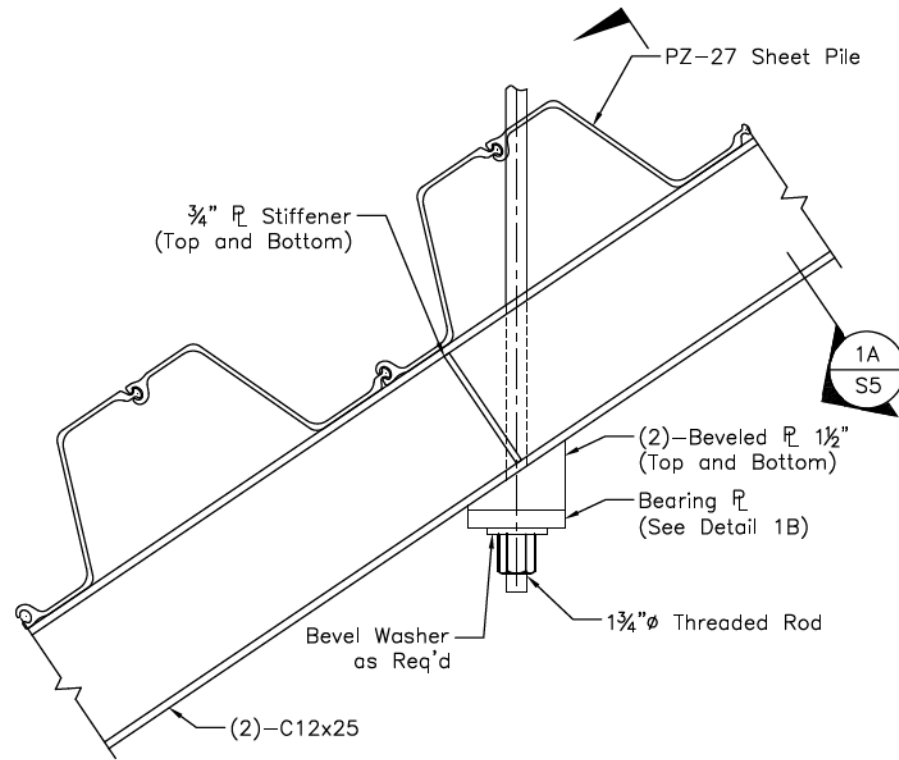
EXISTING AS-BUILTS FOR SOIL RETENTION SYSTEM AT
SOUTHWEST CORNER OF ABUTMENT FOR SN 016-1716

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	508
CONTRACT NO.			60X76	

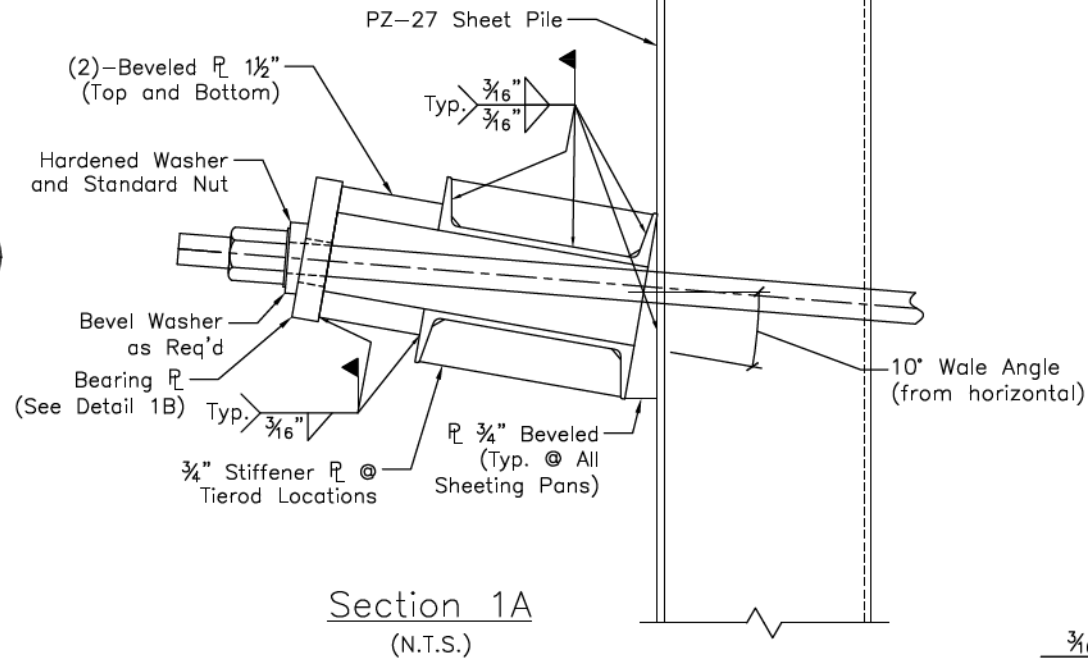
SHEET NO. AB-17 OF AB-18 SHEETS

ILLINOIS FED. AID PROJECT

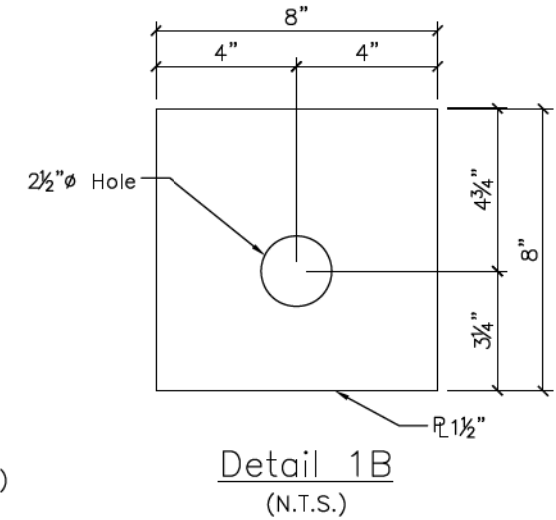
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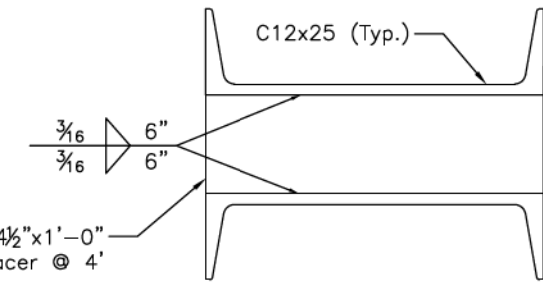
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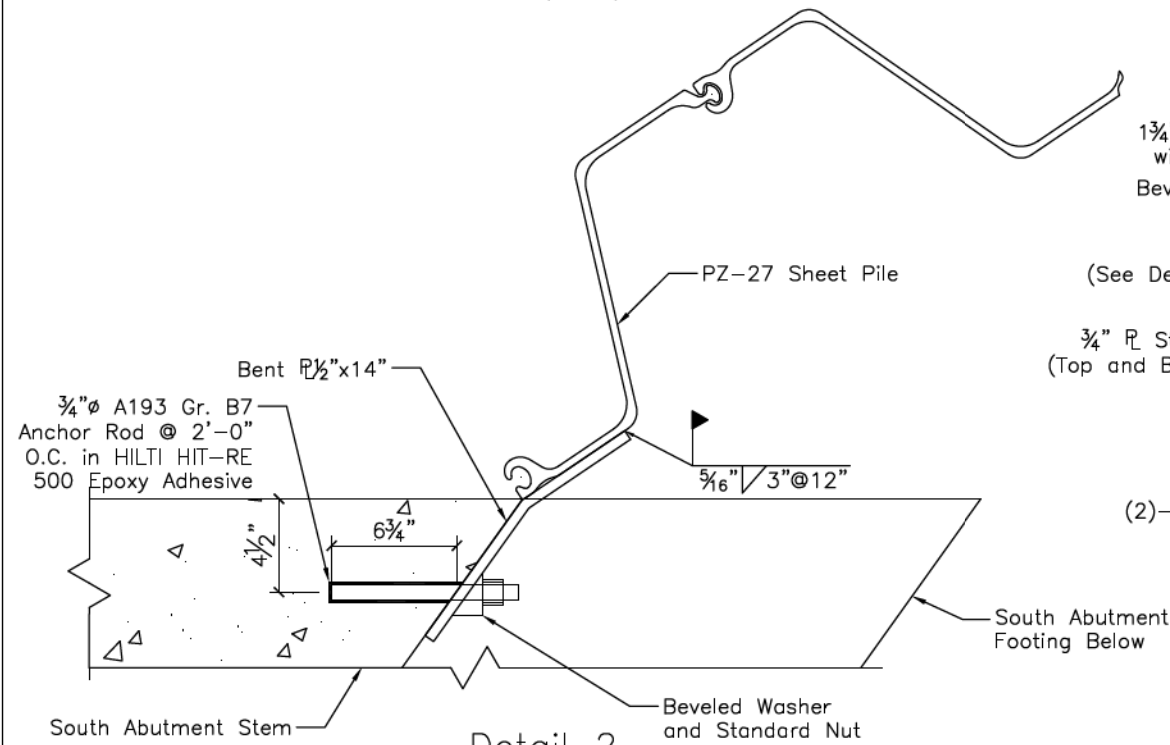
Section 1A
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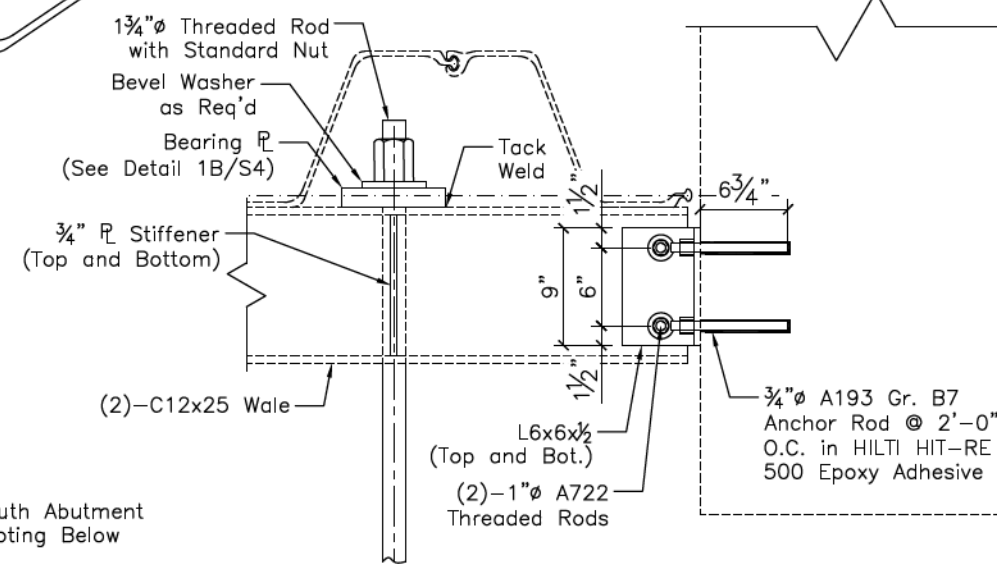
Detail 1B
(N.T.S.)



Channel Spacer
(N.T.S.)



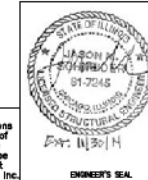
Detail 2
(N.T.S.)



Detail 3
(N.T.S.)

Review Comments - Entire Page		12/2/15
REV	DESCRIPTION	DATE
REVISIONS		
WALSH The Walsh Group		
C.E.L. DWG. No. SW SRS Halsted.dwg	123 N. Wacker Dr. Suite 900 Chicago, IL 60606 Tel: (312) 704-8300 Fax: (312) 704-8320 www.collinseng.com	
JOB No. 8309	COLLINS ENGINEERS ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000993	
CHANGE 01-02	CIRCLE INTERCHANGE HALSTED STREET SOUTHWEST SRS DETAILS	
SCALE AS NOTED		
DRAWN BY KVH		
DATE OCTOBER 2015		
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SUPERVISOR MJG		
APPROVED	DATE	REV
	TITLE	SHEET S4 of S5

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	CHECKED - TLR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AS-BUILTS FOR SOIL RETENTION SYSTEM AT
SOUTHWEST CORNER OF ABUTMENT FOR SN 016-1716

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	509
CONTRACT NO.			60X76	
ILLINOIS FED. AID PROJECT				

SHEET NO. AB-18 OF AB-18 SHEETS

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SHEET INTENTIONALLY BLANK



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=20' SHEET 1 OF 6 SHEETS STA. 8111+00 TO STA. 8117+50

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 510
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	511
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=20' SHEET 3 OF 6 SHEETS STA. 8111+00 TO STA. 8117+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	512
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

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PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: NONE SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	513
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

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PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: NONE SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	514
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

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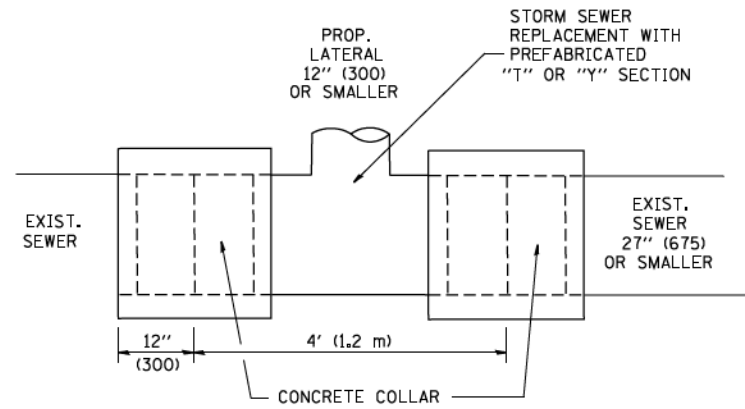


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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

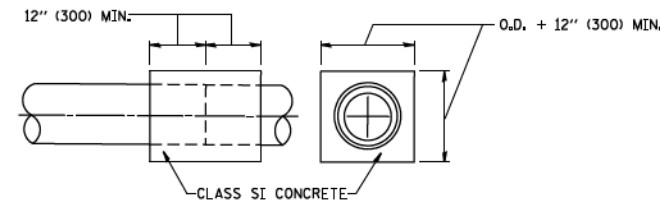
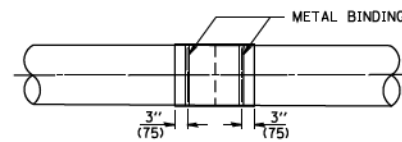
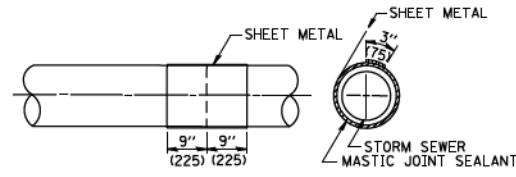
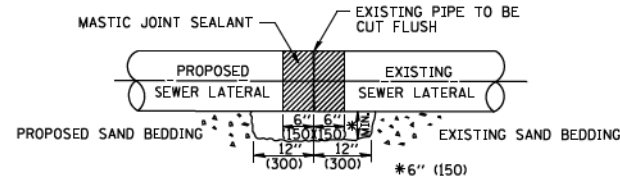
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	515
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

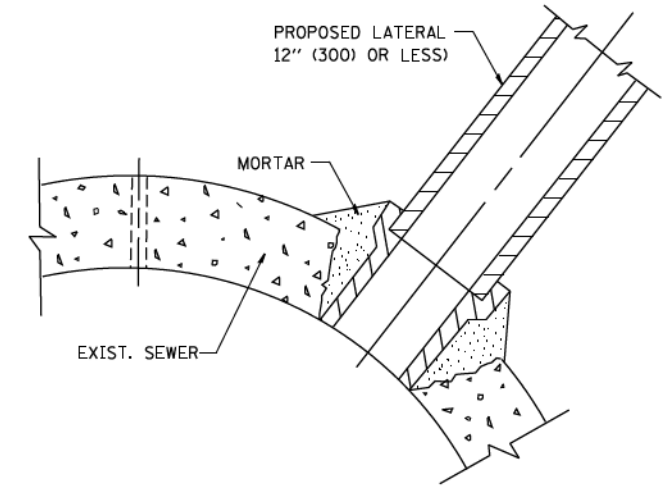


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

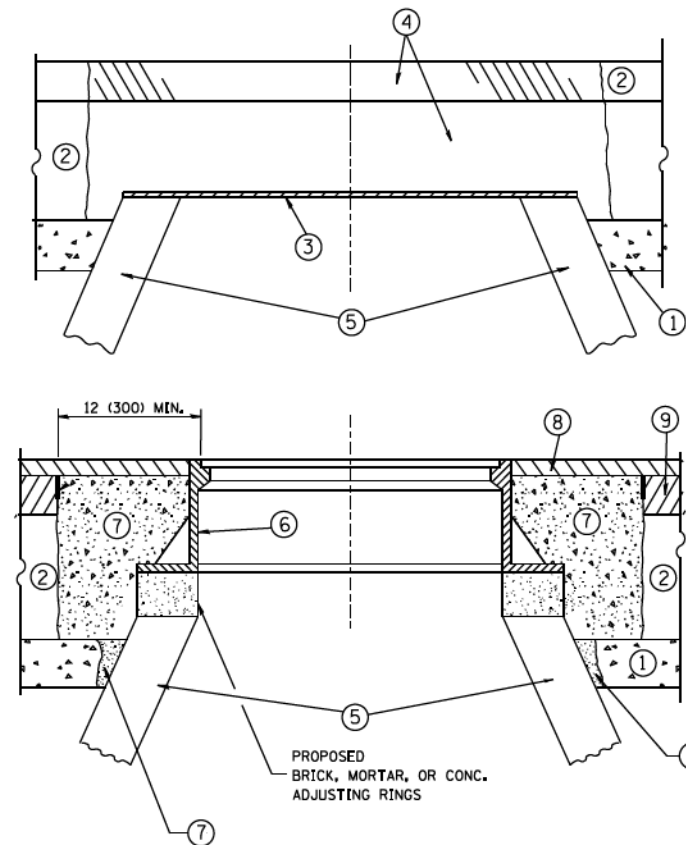
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	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER**

SCALE: NONE SHEET NO. 1 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS 814	SHEET NO. 516
BD500-01 (BD-7)		CONTRACT NO. 60X76		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

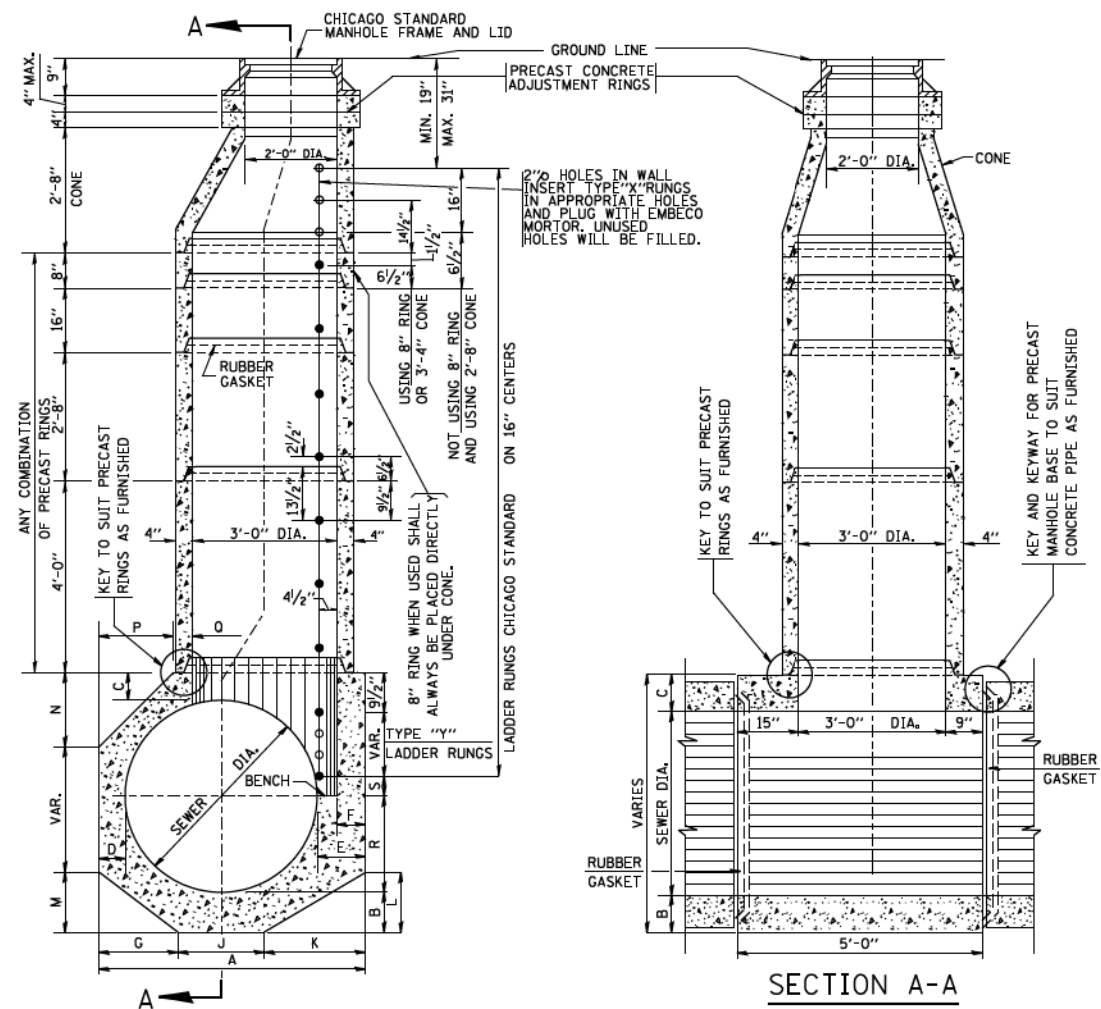
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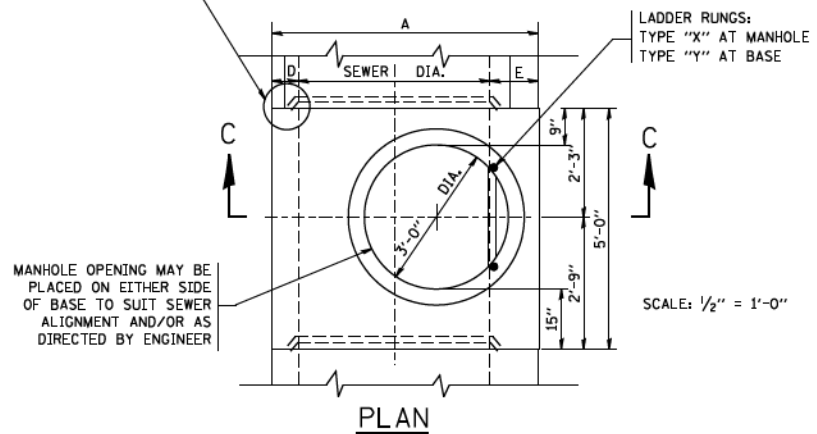
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING			
SCALE: NONE	SHEET NO. 2 OF 41 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BD600-03 (BD-8)		CONTRACT NO.	60X76	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

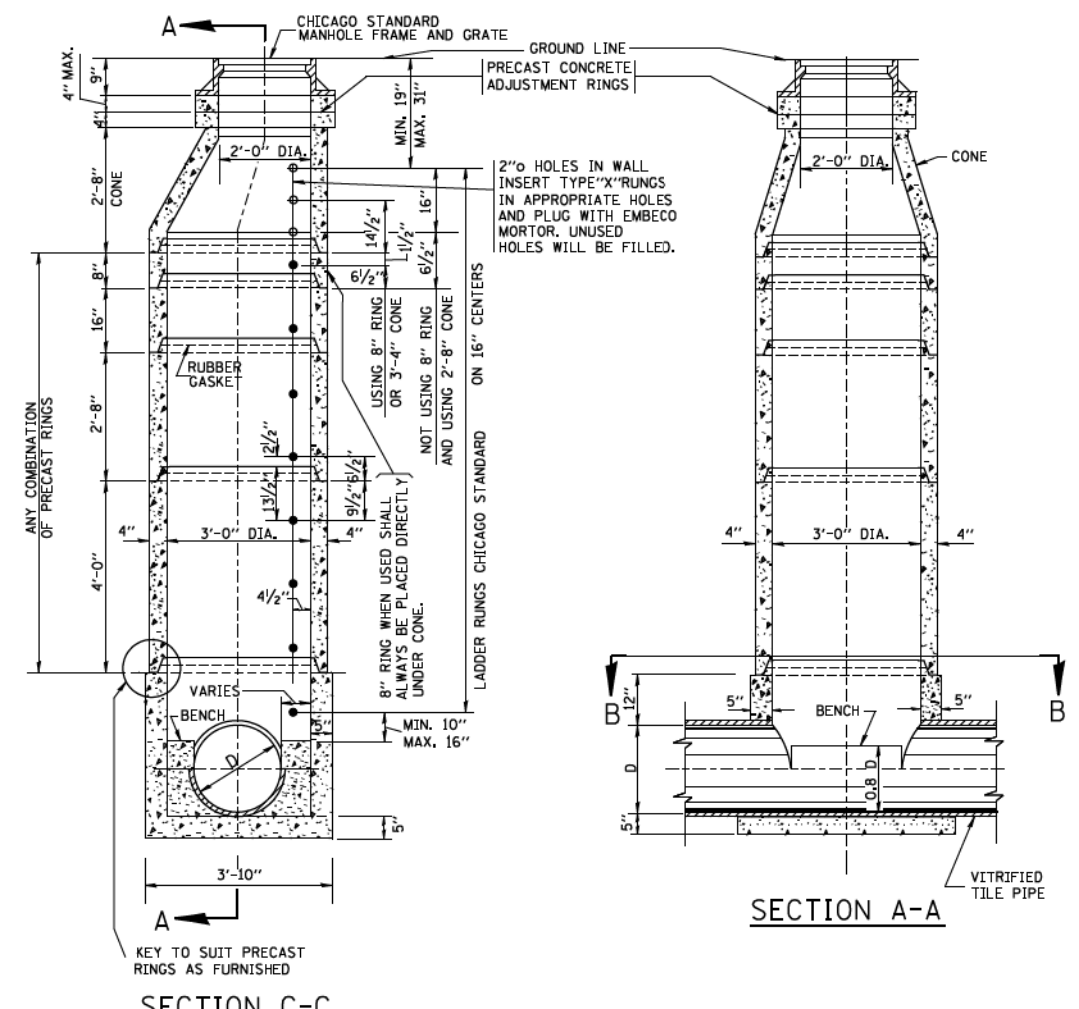


SECTION C-C



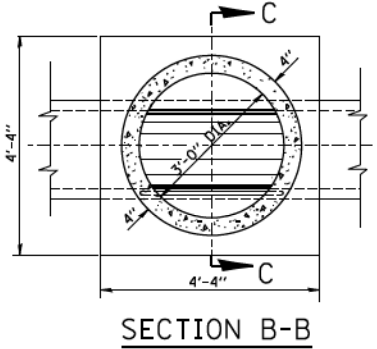
PLAN

TYPE "A" MANHOLE
FOR SEWERS
24" TO 120" DIAMETER
PRECAST BASES AND RINGS



SECTION C-C

TYPE "A" MANHOLE
FOR SEWERS
21" DIAMETER AND SMALLER
PRECAST BASES AND RINGS



SECTION B-B

SCALE: 1/2" = 1'-0"

SEWER DIA.	PART OF ITEM	DIMENSIONS OF PRECAST MANHOLE BASE																NO. "Y" RINGS
		A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R		
120"	---	12'-4 1/2"	12"	12"	12"	16 1/2"	12"	4'-0"	4'-0"	4'-4 1/2"	2'-7 1/2"	2'-5"	3'-7"	3'-7"	4'-8 1/2"	2'-0"	2 1/2"	7
108"	---	11'-4 1/2"	12"	12"	12"	16 1/2"	12"	3'-8"	3'-8"	4'-0 1/2"	2'-5"	2'-2"	3'-4"	3'-4"	4'-0 1/2"	2'-0"	6 1/2"	6
102"	---	10'-10 1/2"	12"	12"	12"	16 1/2"	12"	3'-6"	3'-6"	3'-10 1/2"	2'-4"	2'-1"	3'-2"	3'-2"	3'-8 1/2"	2'-0"	16 1/2"	5
96"	10-A	10'-2 1/2"	11"	11"	11"	15 1/2"	11"	3'-3"	3'-3"	3'-8 1/2"	2'-3"	23"	2'-11"	2'-11"	3'-4 1/2"	2'-0"	9 1/2"	5
90"	10-B	9'-8 1/2"	11"	11"	11"	15 1/2"	11"	3'-1"	3'-1"	3'-6 1/2"	2'-1 1/2"	22"	2'-10"	2'-10"	2'-11 1/2"	2'-0"	3 1/2"	5
84"	10-C	9'-0 1/2"	10"	10"	10"	14 1/2"	10"	2'-11"	2'-11"	3'-2 1/2"	23"	21"	2'-7"	2'-7"	2'-7 1/2"	2'-0"	12 1/2"	4
78"	10-D	8'-6 1/2"	10"	10"	10"	14 1/2"	10"	2'-9"	2'-9"	3'-0 1/2"	22"	20"	2'-6"	2'-6"	2'-2 1/2"	2'-0"	6 1/2"	4
72"	10	7'-10 1/2"	9"	9"	9"	13 1/2"	9"	2'-6"	2'-6"	2'-10 1/2"	21"	18"	2'-3"	2'-3"	22 1/2"	2'-0"	15 1/2"	3
66"	11	7'-4 1/2"	9"	9"	9"	13 1/2"	9"	2'-4"	2'-4"	2'-8 1/2"	19 1/2"	17"	2'-1"	2'-1"	18 1/2"	2'-0"	9 1/2"	3
60"	12	6'-8 1/2"	8"	8"	8"	12 1/2"	8"	2'-1 1/2"	2'-1 1/2"	2'-6"	18"	15"	23"	23"	13 1/2"	2'-0"	2 1/2"	3
54"	13	6'-2 1/2"	8"	8"	8"	12 1/2"	8"	23 1/2"	23"	2'-4"	17"	14"	21"	21"	9 1/2"	2'-0"	12 1/2"	2
48"	14	5'-6 1/2"	7"	7"	7"	11 1/2"	7"	20 1/2"	21"	2'-1"	15"	12 1/2"	18 1/2"	18 1/2"	5"	2'-0"	5 1/2"	2
42"	15	5'-0 1/2"	7"	7"	7"	11 1/2"	7"	18 1/2"	19"	23"	14"	11"	---	---	17 1/2"	21"	2 1/2"	2
36"	16	4'-4 1/2"	6"	6"	6"	10 1/2"	6"	16"	16"	20 1/2"	12 1/2"	9 1/2"	---	---	10 1/2"	18"	14 1/2"	1
30"	17	4'-0"	6"	6"	6"	12"	6"	14"	14"	20"	12"	8 1/2"	---	---	6"	15"	11 1/2"	1
24"	18	4'-0"	6"	6"	12"	12"	6"	16"	16"	16"	9 1/2"	9 1/2"	---	---	6"	12"	8 1/2"	1

FOR STATE CONTRACT
ALL DIMENSIONS SHOULD
BE PREPARED IN METRIC
UNITS SOFT CONVERSION
METHOD SHOULD BE USED.

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REVISED - 09-22-90
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
DRAINAGE DETAILS

SCALE: NONE SHEET NO. 3 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	518
BD600-12 (BD-9)			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT				

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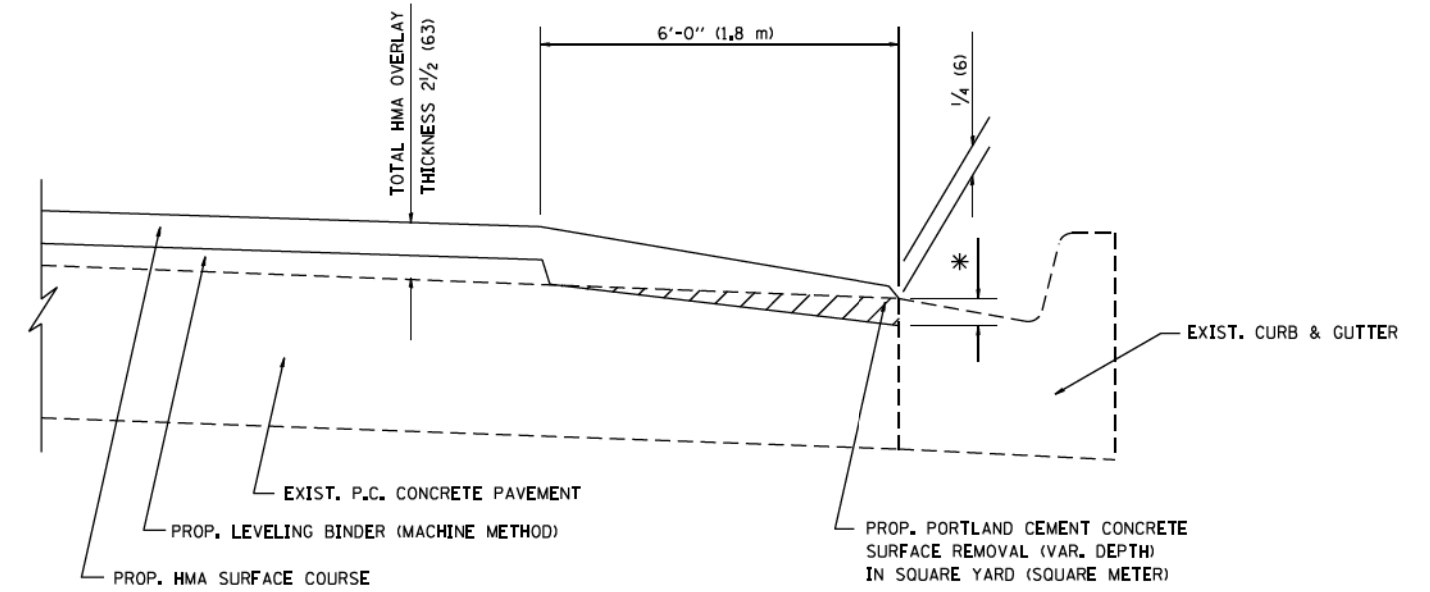


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PLOT DATE = 5/10/2017	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET 4 OF 41 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	519
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



HMA TAPER AT
EDGE OF P.C.C. PAVEMENT

HMA SURFACE		LEVELING BINDER	
MIX	THICKNESS	THICKNESS	* MILLING AT GUTTER FLAG
C OR D	1 1/2 (38)	1 (25)	1/4 (33)
E	1 3/4 (44)	3/4 (19)	1/2 (38)

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

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			REVISED - JP CHANG 07-08-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HMA TAPER AT
EDGE OF P.C.C. PAVEMENT**

SCALE: NONE SHEET 5 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BD400-06 (BD33)		814	520
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	

GENERAL NOTES

ALTERNATE MATERIAL FOR THE WALLS MAY BE CONCRETE MASONRY UNITS, PRECAST REINFORCED CONCRETE SECTIONS OR CAST-IN-PLACE CONCRETE. THE CAST IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN MAY BE USED WHEN APPROVED BY THE ENGINEER.

CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 1006.14 OF THE STANDARD SPECIFICATIONS.

STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF THREE (3) INCHES. STEPS SHALL NOT BE EXTENDED ON THE OUTSIDE.

STEPS SHALL BE OMITTED FOR WORK IN COOK COUNTY WHEN THE DEPTH OF THE MANHOLE IS TEN (10') OR LESS.

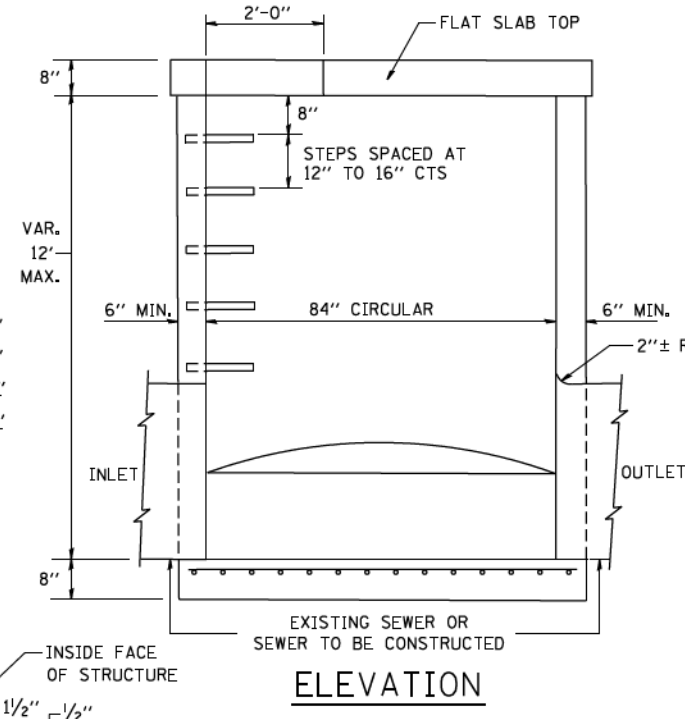
IN ADDITION TO THE REQUIREMENTS OF ARTICLE 612.13 OF THE STANDARD SPECIFICATIONS, THE CONTRACT UNIT PRICE FOR MANHOLES, TYPE A, 7'-DIAMETER SHALL INCLUDE THE SAND CUSHION WHEN REQUIRED, FURNISHING AND INSTALLING STEPS WHEN REQUIRED, FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL, AND FURNISHING AND INSTALLING FLAT SLAB TOP.

PRECAST FLAT SLAB TOP SHALL CONFORM TO ARTICLES 505.01 THRU 505.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS. REINFORCEMENT BARS AND WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 1006.10. ONLY GRADE 60 REINFORCEMENT BARS WILL BE PERMITTED.

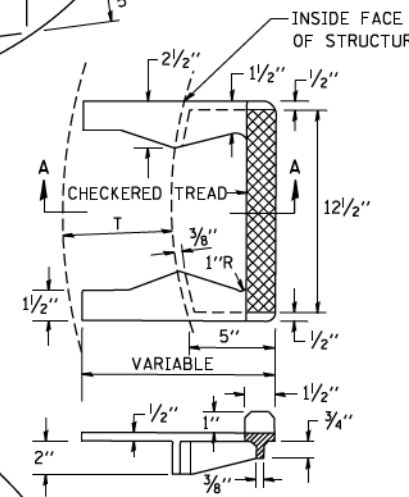
BOTTOM SLAB SHALL BE REINFORCED BY EITHER REINFORCEMENT BARS OR WELDED WIRE FABRIC. THE MINIMUM REINFORCEMENT SHALL BE 0.46 SQUARE INCH PER LINEAR FOOT IN BOTH DIRECTIONS.

JOINT CONFIGURATION AND DIMENSIONS OF FLAT SLAB TOP SHALL MATCH AND FIT THE RISER JOINT DETAIL.

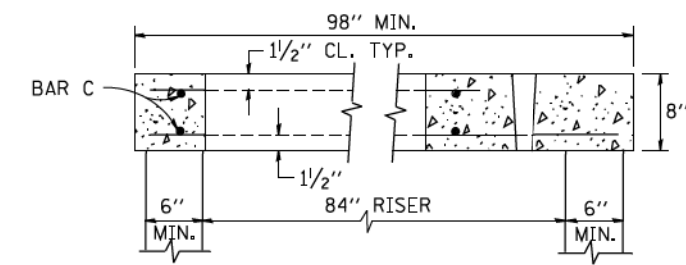
LIFTING DEVICES SHALL BE APPROVED BY THE ENGINEER.



ELEVATION

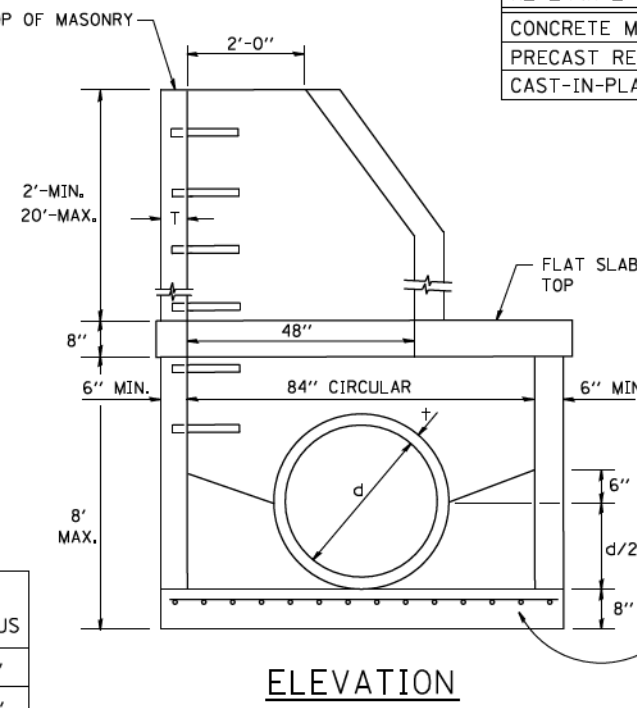


**SEC. A-A
CAST IRON STEPS**

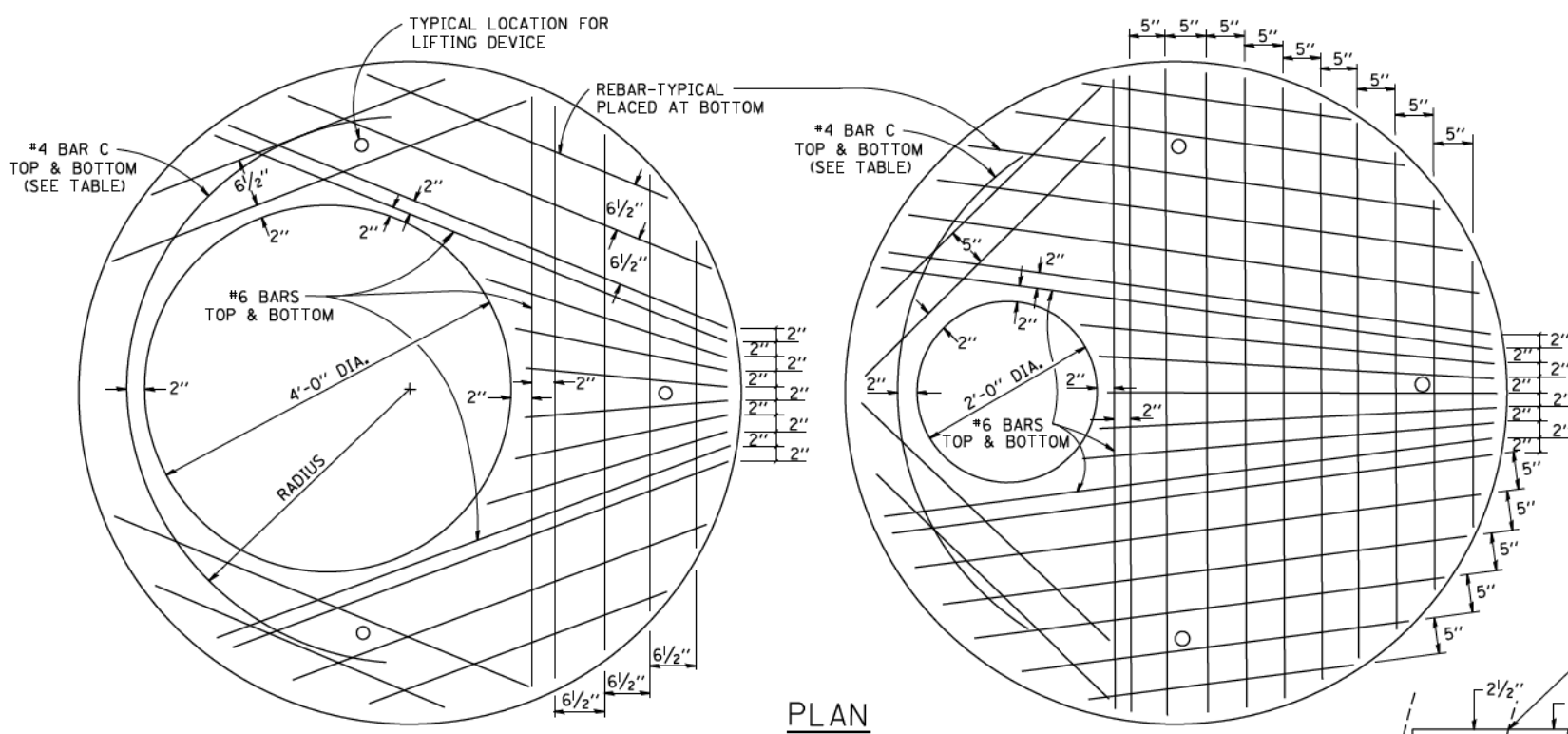


SECTION B-B

ALTERNATE MATERIALS FOR RISERS	T (MIN.)
CONCRETE MASONRY UNITS	5"
PRECAST REINFORCED CONCRETE SECTIONS	4"
CAST-IN-PLACE CONCRETE	6"

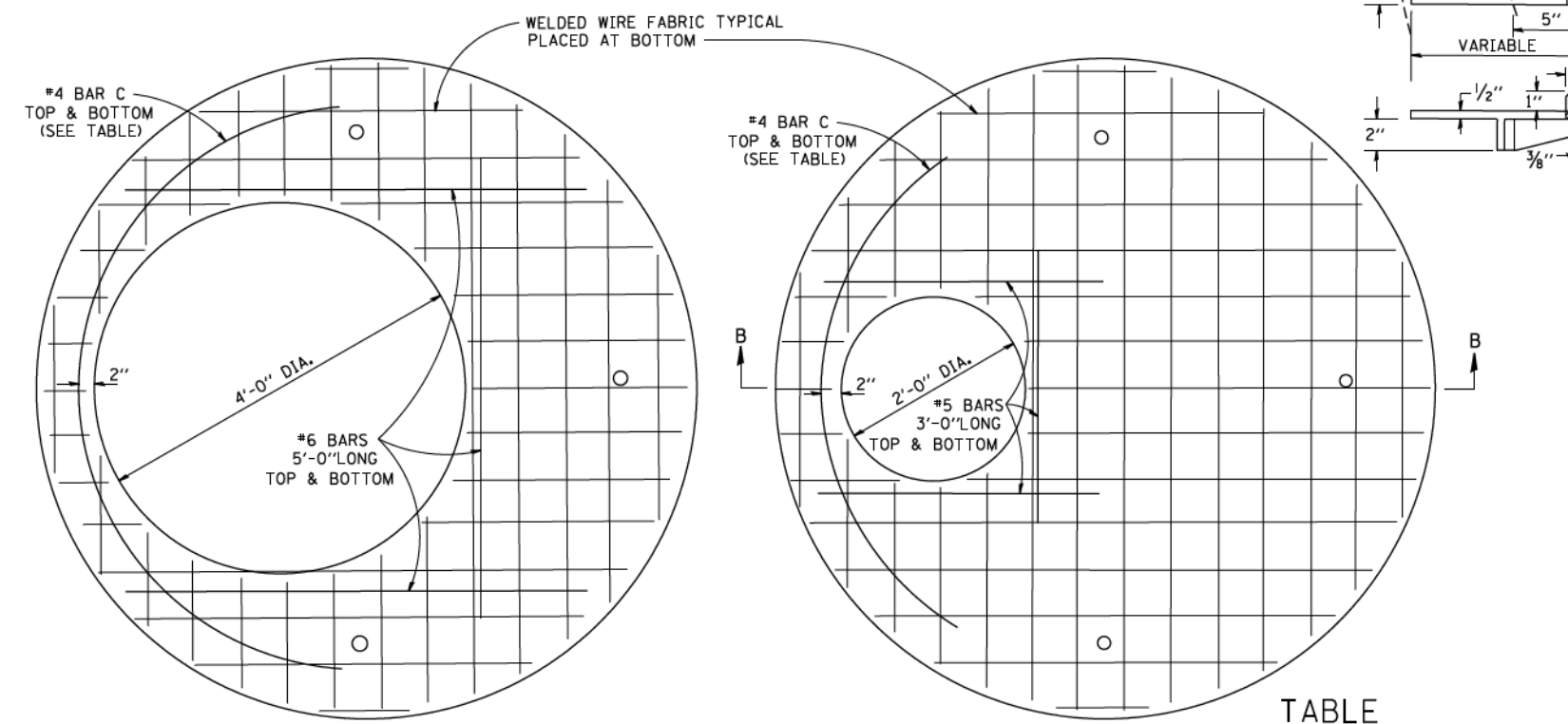


ELEVATION



PLAN

SHOWING REBAR REINFORCEMENT



PLAN

SHOWING WELDED WIRE FABRIC REINFORCEMENT

NOTE: THIS STRUCTURE SHOULD BE USED WITH PIPES SIZE 54" DIA. OR SMALLER.

DIAMETER OF OPENING	REINFORCEMENT "A _c " WWF OR BAR SIZE EACH DIRECTION	BAR SIZE	BAR C		
			SIZE	LENGTH	RADIUS
2'-0"	1.06 SQ.IN./LIN.FT.	#6	#4	6'-0"	38"
4'-0"	0.82 SQ.IN./LIN.FT.	#6	#4	9'-0"	38"

TABLE

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USER NAME = geglanoht

DESIGNED -
DRAWN -
CHECKED -
DATE - 10-18-02

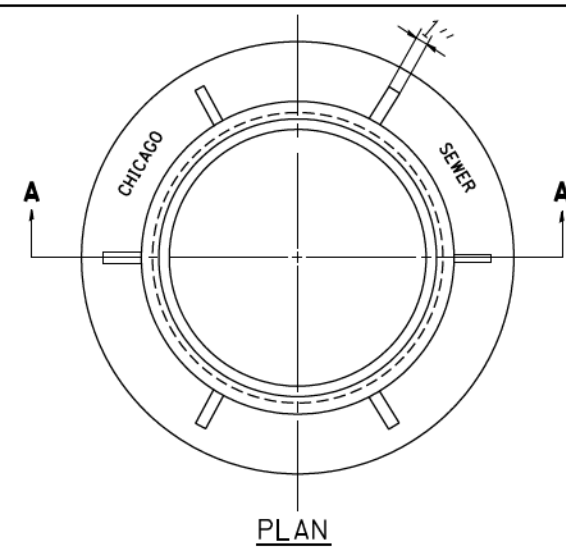
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

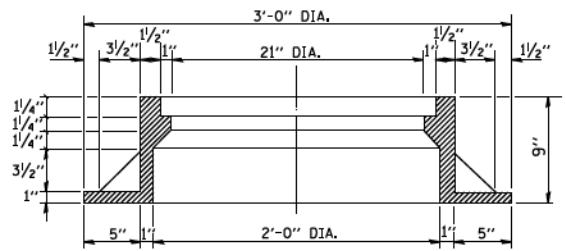
**MANHOLE TYPE A
7 FOOT DIAMETER**

SCALE: NONE SHEET NO. 6 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BD600-11 (BD-37)		814	521
FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	



PLAN

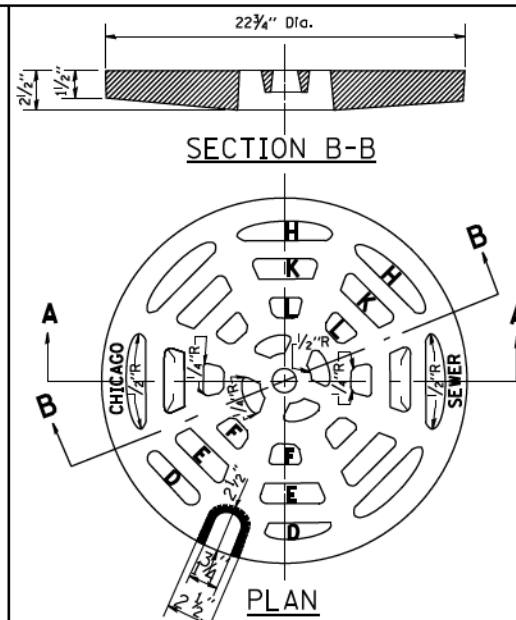


SECTION A-A

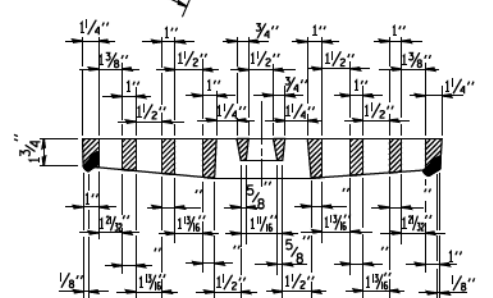
NOTE: METAL PLATES MUST BE FURNISHED FOR PERFORATED LIDS ON MANHOLES

CHICAGO STANDARD MANHOLE FRAME

SCALE: 1/2"=1'-0"
MATERIAL: CAST IRON



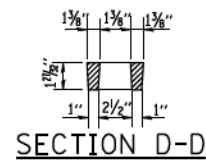
SECTION B-B



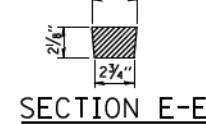
SECTION A-A

PERFORATED LID FOR CATCH BASINS & MANHOLES

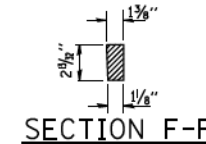
SCALE: 2"=1'-0"
MATERIAL: CAST IRON



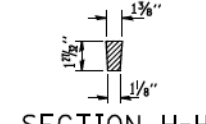
SECTION D-D



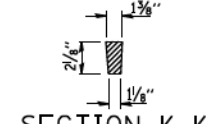
SECTION E-E



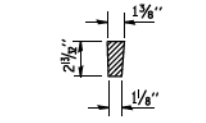
SECTION F-F



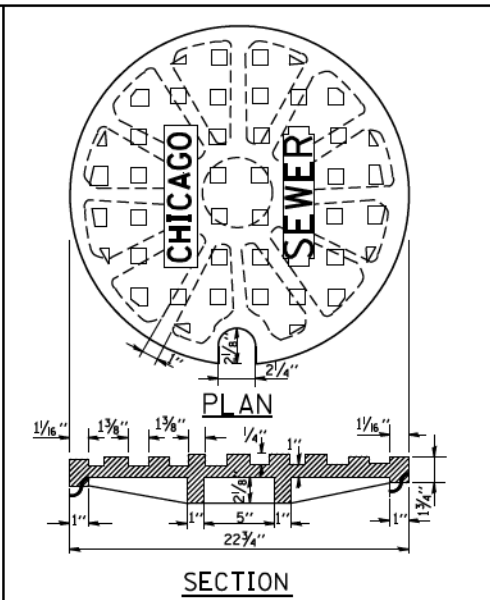
SECTION H-H



SECTION K-K



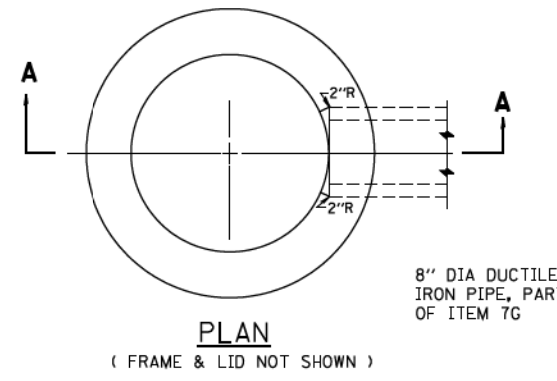
SECTION L-L



SECTION

SOLID LID FOR MANHOLES

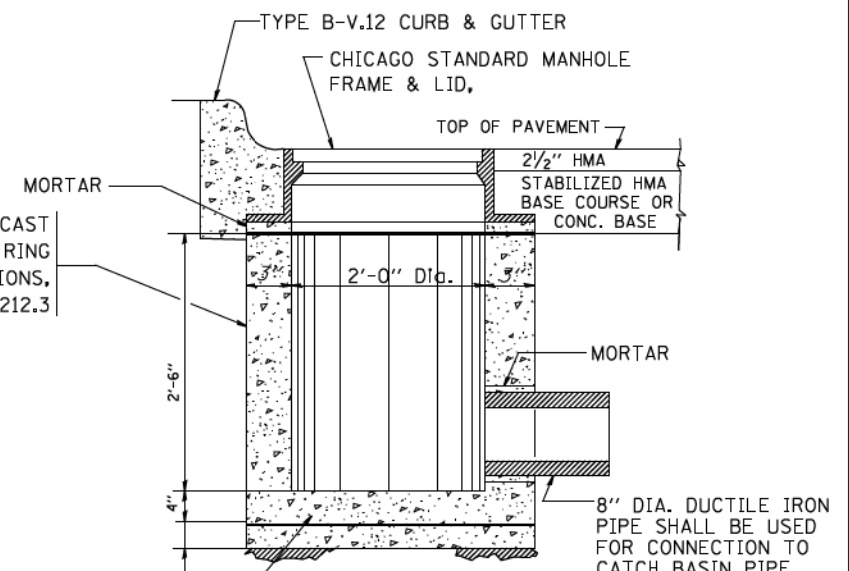
SCALE: NONE
MATERIAL: CAST IRON



PLAN

(FRAME & LID NOT SHOWN)

8" DIA DUCTILE IRON PIPE, PART OF ITEM 7G



SECTION A-A

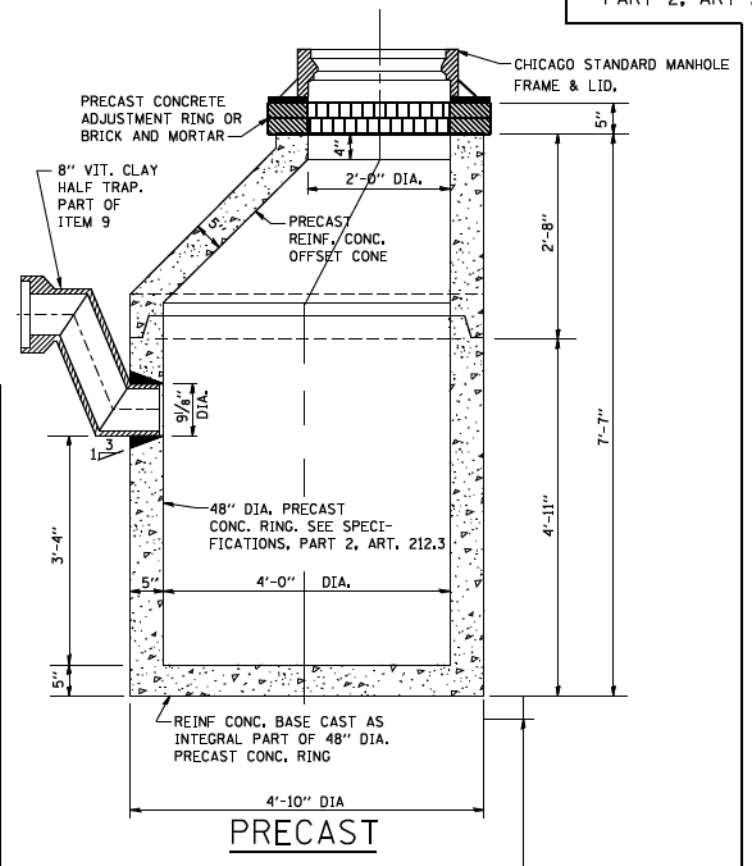
REINF. CONC. BASE CAST AS INTEGRAL PART OF 24" DIA. PRECAST CONC. RING
6" MINIMUM GRANULAR EMBEDMENT UNDER ALL INLETS. FURNISHING AND INSTALLING GRANULAR EMBEDMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 12

STANDARD INLETS

SCALE 1"=1'-0"
ITEM 12

THIS INLET DETAIL IS SOMETIMES REFERRED TO AS "CHICAGO STANDARD INLET, TYPE A"

NOTE: INLETS SHALL NOT BE CONSTRUCTED UNLESS IT IS IMPOSSIBLE TO CONSTRUCT A CATCH BASIN. THE CONTRACTOR SHALL HAVE THE DEPARTMENT OF SEWERS APPROVAL BEFORE CONSTRUCTING INLETS.

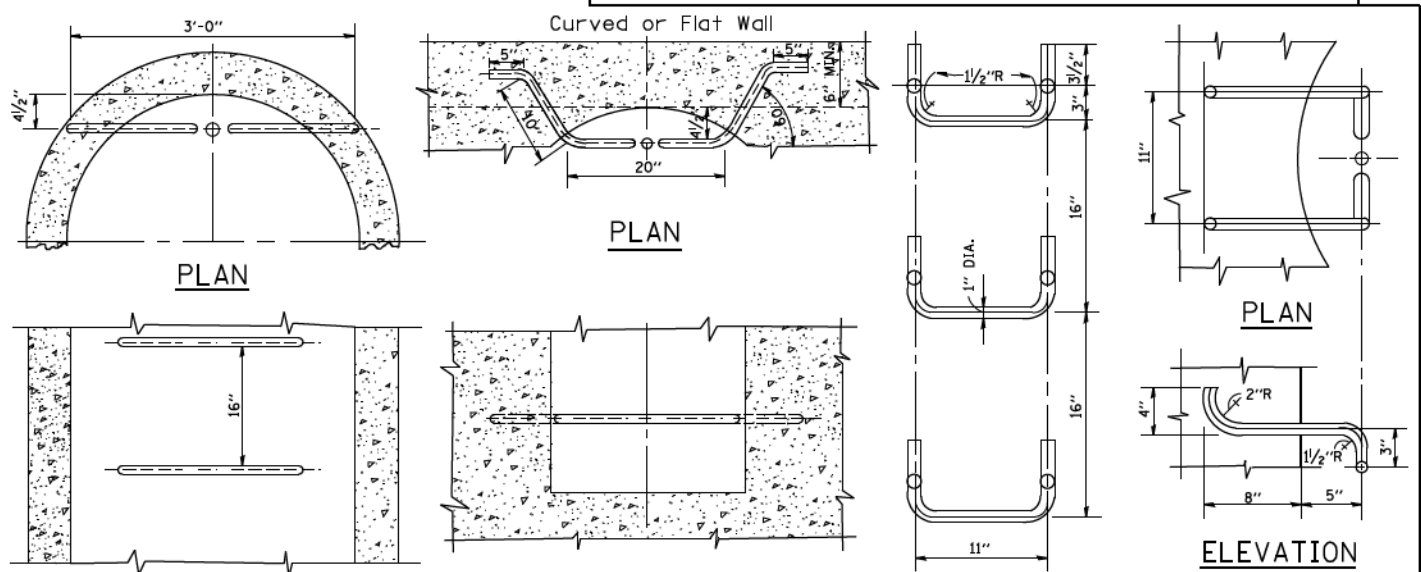


PRECAST

NOTE: 6" MINIMUM GRANULAR EMBEDMENT UNDER ALL CATCH BASINS

STANDARD CATCH BASINS

SCALE: 3/4"=1'-0"
ITEM 9



ELEVATION TYPE X

SCALE: 1"=1'-0"

ELEVATION TYPE Y

SCALE: 1"=1'-0"

SPACING HANDHOLD-TYPE Z RUNG

Scale: 1/2"=1'-0"

STANDARD LADDER RUNGS

ALL LADDER RUNGS SHALL BE ALUMINUM OR GALVANIZED WROUGHT IRON AS SPECIFIED IN THE SPECIFICATIONS, PART 2, ARTICLE 214.2. RUNGS SHALL BE 1" DIAMETER OR OF A SHAPE HAVING AN EQUIVALENT CROSS-SECTIONAL AREA.

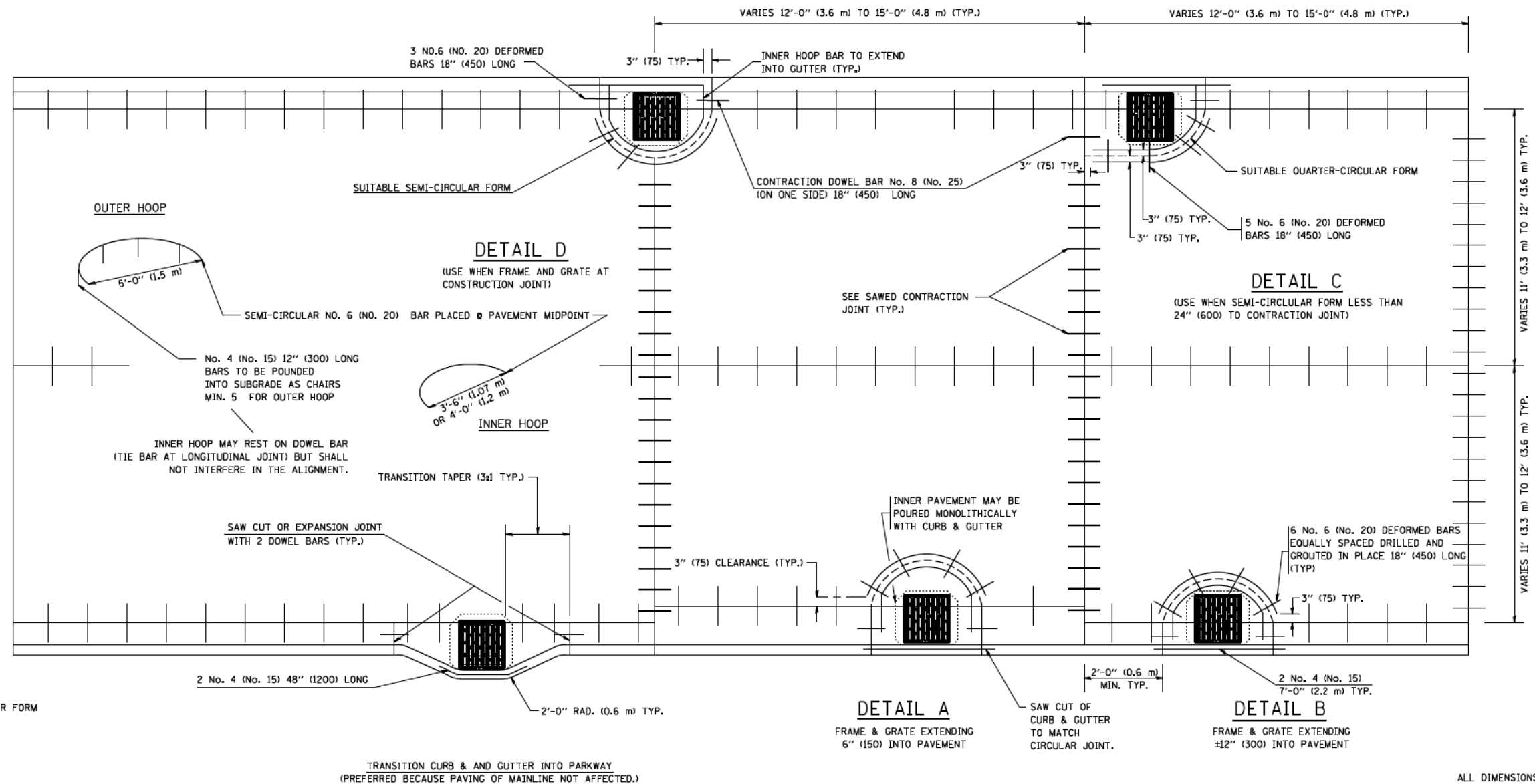
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PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISOR -	814			522					
PLOT DATE = 1/4/2008	DATE - 01-25-01	REVISOR -	CONTRACT NO. 60X76								
						SCALE: NONE	SHEET NO. 7 OF 41 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

FRAME EXTENSION INTO PAVEMENT	INNER HOOP REINFORCEMENT DIAMETER	SEMI CIRCULAR FORM DIAMETER	OUTER HOOP REINFORCEMENT DIAMETER
UP TO 8" (200)	3'-6" (1.1 m)	4'-0" (1.2 m)	5'-0" (1.5 m)
> 8" (200) TO 14" (360)	4'-0" (1.2 m)	4'-6" (1.4 m)	5'-0" (1.5 m)

DESIGNER NOTE:
THIS DETAIL IS TO BE USED
WHEN THE GUTTER FLAG IS
LESS THAN 24"

NOTES :

1. THE ROUNDOUT AND ADDED REINFORCEMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PAVEMENT.
2. TRANSVERSE JOINTS MAY BE MOVED TO ACCOMMODATE ROUNDOUT, EDGE OF CIRCULAR JOINT SHALL BE MINIMUM 12" (300) FROM TRANSVERSE JOINT. RELOCATED TRANSVERSE JOINT SHALL BE CONTINUOUS FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
3. SEMI-CIRCULAR FORM SHALL BE REMOVED PRIOR TO DRILL AND GROUT OF TIE BARS.
4. ALL REINFORCED BARS SHALL BE EPOXY COATED.
5. DRILL AND GROUT IS PREFERRED, HOWEVER TIE BARS CAN BE POURED IN PLACE IF CLEARANCE IS PROVIDED TO OUTER EDGE OF FRAME. MINIMUM 2" (50) CLEARANCE.
6. WOOD SHIMS SHALL BE USED TO ADJUST ALL FRAMES. AFTER ADJUSTING MORTAR HAS CURED, THE WOOD SHIMS SHALL BE REMOVED AND THE VOIDS UNDER THE FRAMES FILLED WITH NON SHRINK GROUT.
7. HOOP REINFORCEMENT SHALL BE ONE PIECE CONSTRUCTION.
8. CIRCULAR FRAMES AND GRATES MAY BE SUBSTITUTED.
9. CURB DOWELS MUST BE PLACED LEVEL & TRUE TO ALLOW CONTRACTION MOVEMENT.



LEGEND:

- CASTING
- SUITABLE SEMI-CIRCULAR FORM

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS) UNLESS OTHERWISE NOTED

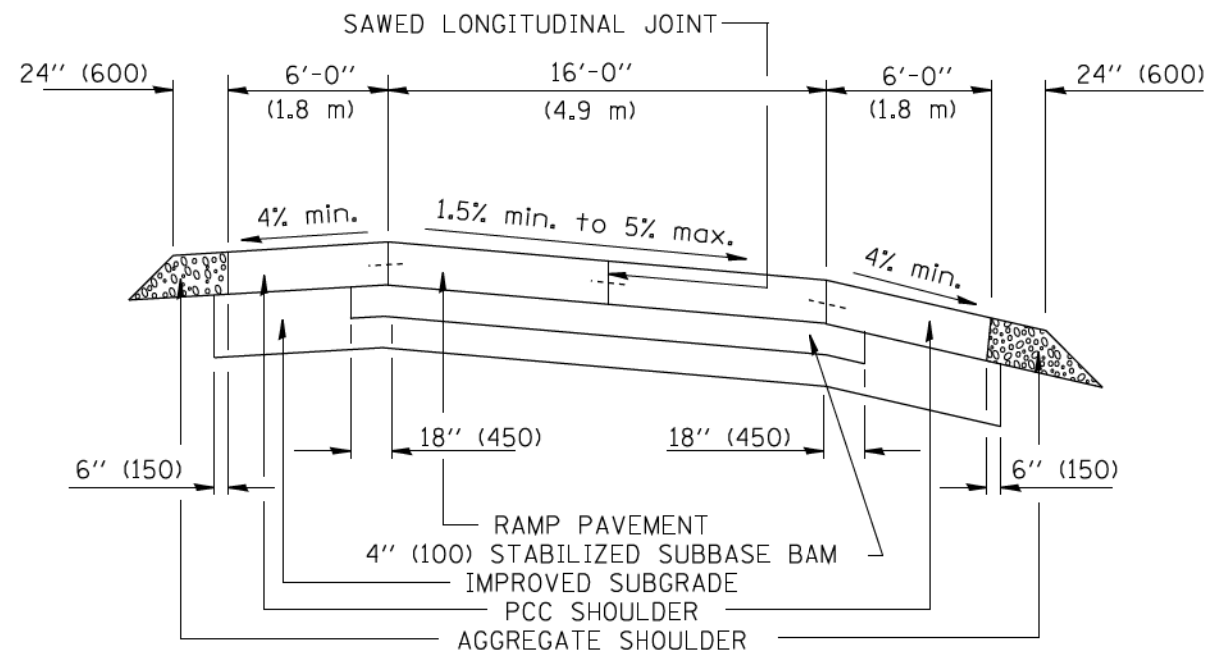
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		DRAWN - TOM MATOUSEK	REVISED - T. MATOUSEK 10-02-00
		CHECKED - A. ABBAS	REVISED - T. MATOUSEK 04-25-02
		DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PCC PAVEMENT ROUNDOUTS AT
CURB AND GUTTER

SCALE: NONE SHEET NO. 8 OF 41 SHEETS STA. TO STA.

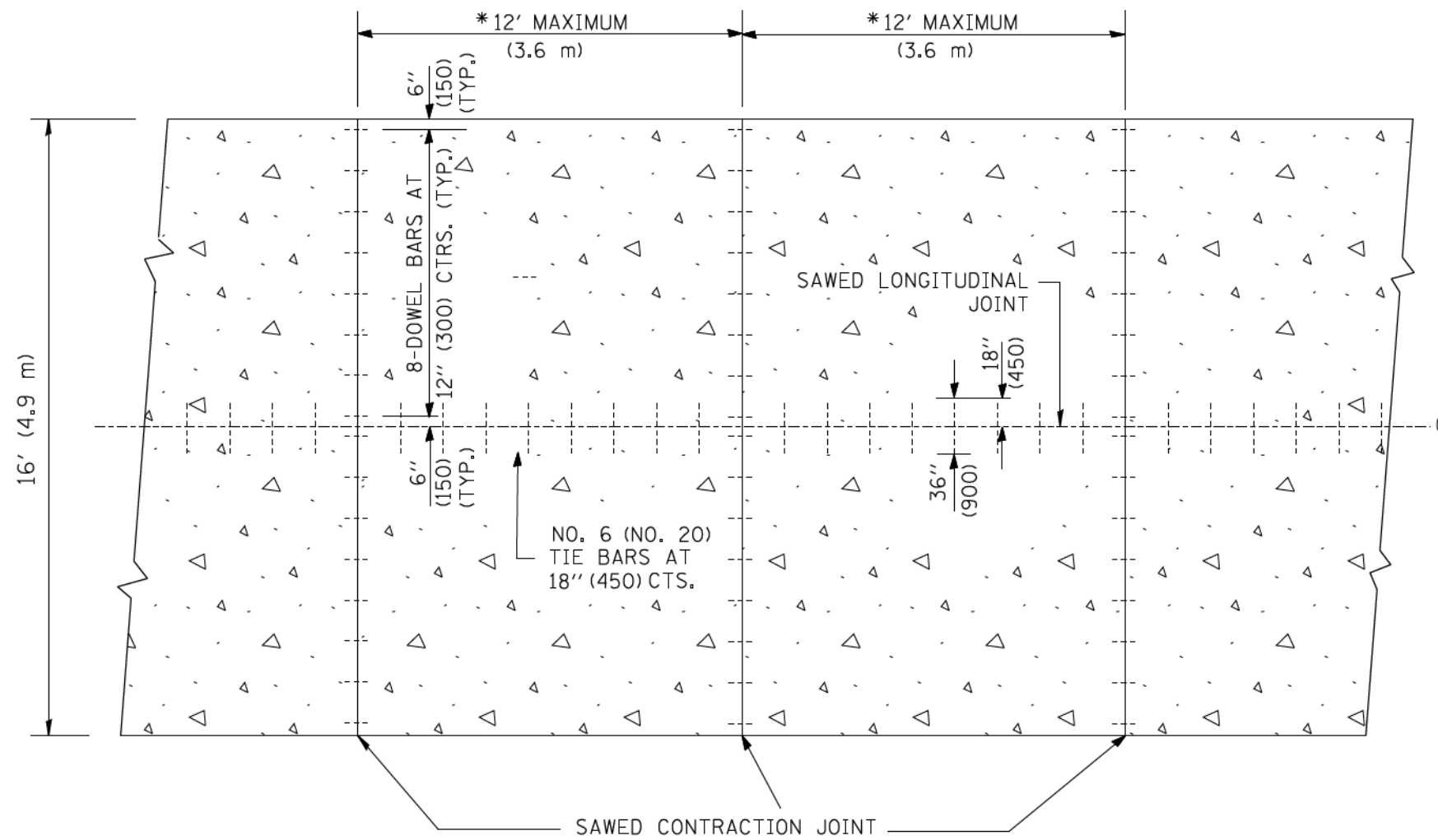
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BD-48			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



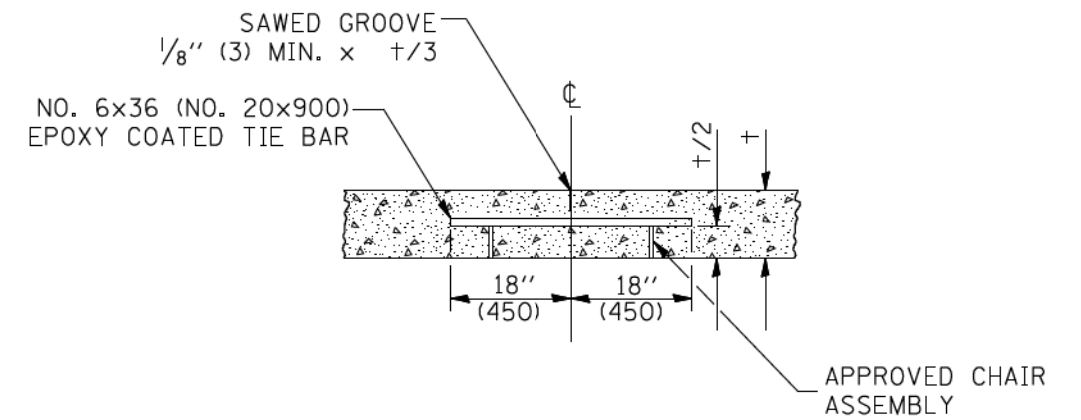
SECTION

NOTES:

1. CENTERLINE JOINT REMAINS IN THE CENTER WHEN RAMP TRANSITIONS TO TWO (2) RAMPS AT 12' (3.6 m).
2. ALL BARS TO BE EPOXY COATED.



PLAN



SAWED LONGITUDINAL JOINT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

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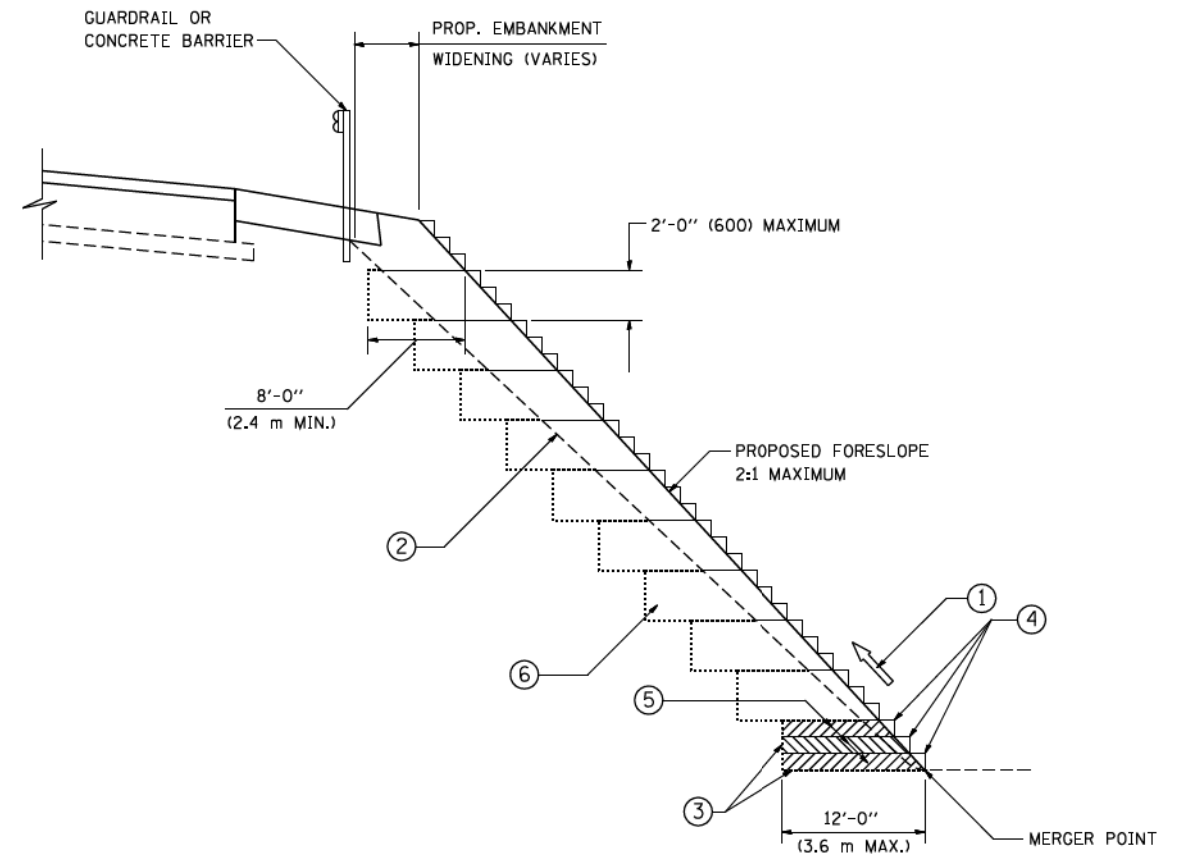
DESIGNED -
 DRAWN - TOM MATOUSEK
 CHECKED - A. ABBAS
 DATE - 10-18-02

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DETAIL FOR CENTERLINE SAW CUT 16' (4.9 m) AND
 VARIABLE JOINTED PCC PAVEMENT FOR RAMPS**
 SCALE: NONE SHEET NO. 9 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	524
BD49		CONTRACT NO. 60X76		
FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT				



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

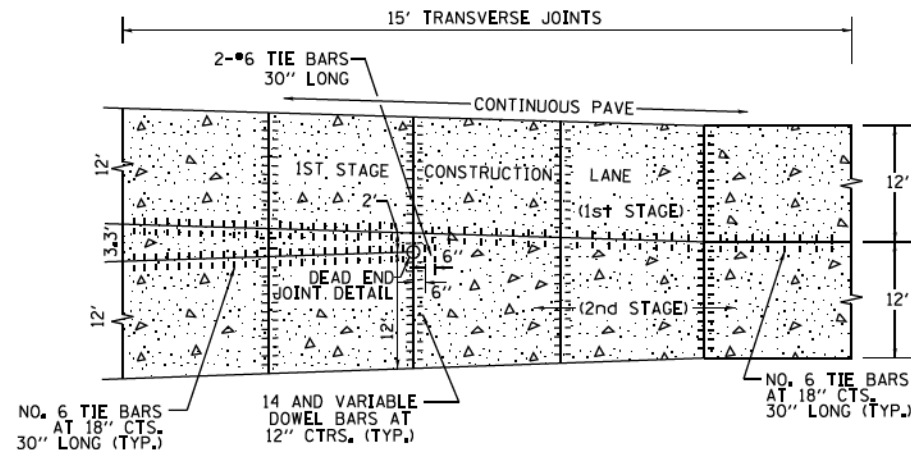
NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

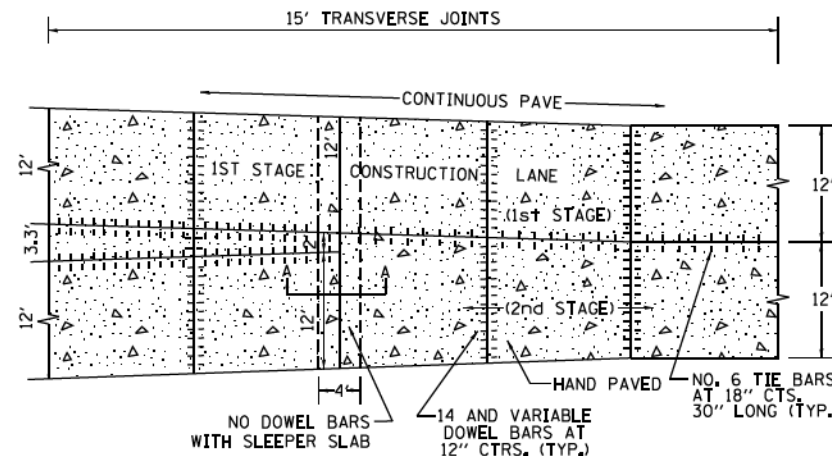
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

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		DATE - 06-16-04	REVISED -									
							BD-51		CONTRACT NO. 60X76			
							FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT					

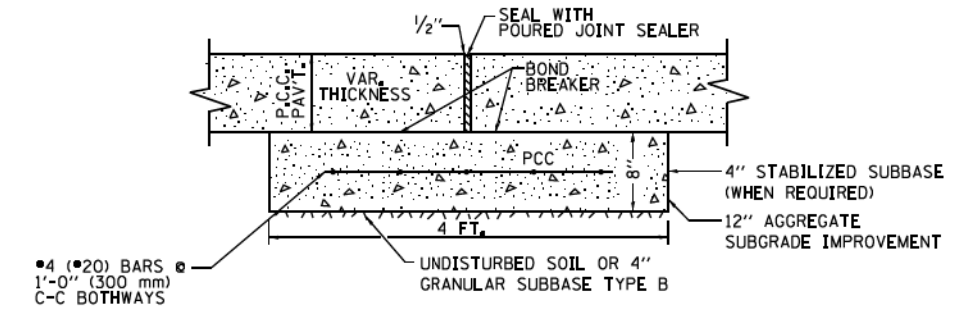
LANE REDUCTION WITH A CONTINUOUS PAVEMENT FOR 1ST STAGE WITH DEAD END JOINT OR SLEEPER SLAB



PLAN



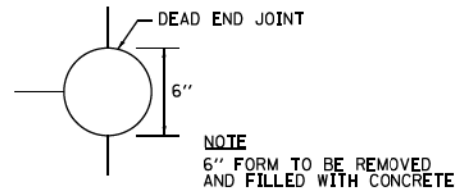
PLAN



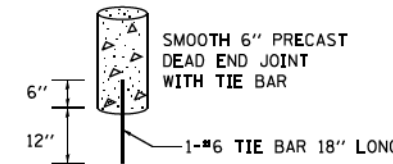
PROPOSED SECTION A-A OF SLEEPER SLAB



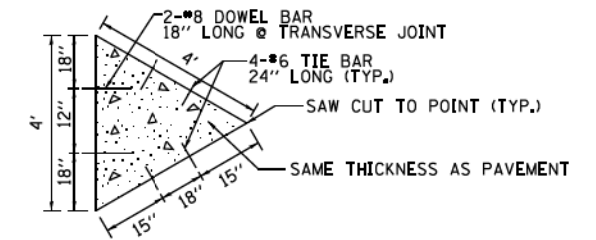
**DEAD END JOINT DETAIL
SIDE VIEW**



**DEAD END JOINT DETAIL
TOP VIEW**

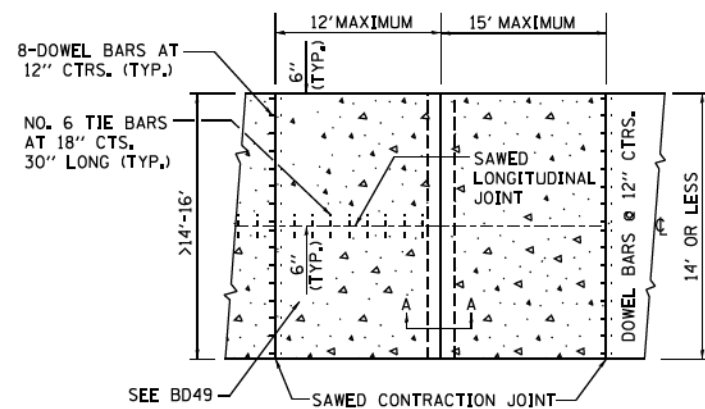


DEAD END JOINT PRECAST DETAIL

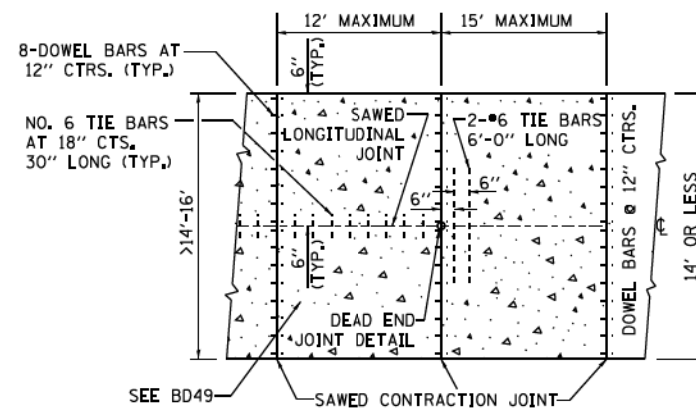


SAW-CUT MERGE DETAIL

TRANSITION DETAILS FOR CENTERLINE SAW CUT FOR DEAD END JOINT OR SLEEPER SLAB FOR VARIABLE JOINTED PCC PAVEMENT FOR LANES OVER 14'

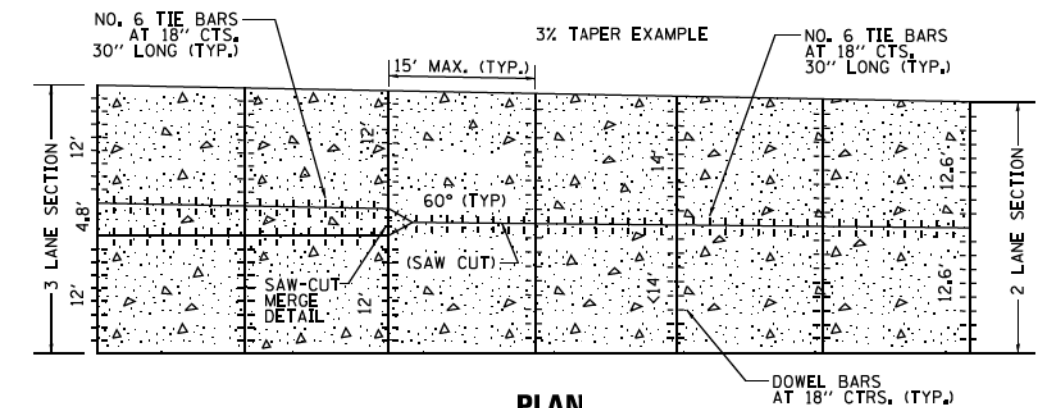


PLAN USING SLEEPER SLAB



PLAN USING DEAD END JOINT

INTERIOR LANE REDUCTION FOR THREE LANE SECTION IN PCC PAVEMENT



PLAN

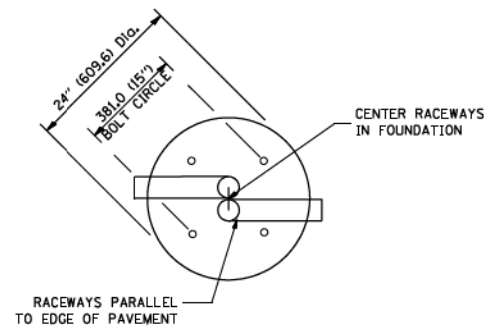
NOTES:

1. SAW-CUT MERGE DETAIL: THE 4' TRIANGLE SECTION COULD BE PRECAST OR CAST IN PLACE AND PROPERLY PLACED WITH TIE BARS AND PROPERLY ALIGNED DOWEL BARS.
2. TRANSVERSE JOINT SPACING MAY DECREASE DEPENDING ON PAVEMENT THICKNESS BELOW 9.5', USE FORMULA JOINT SPACING IN (FT) = 2 X PAVEMENT THICKNESS IN (IN)-4.
3. USE SAW-CUT MERGE DETAIL IN SITUATIONS WHERE THERE IS NO STAGING.
4. PRECAST DEAD END JOINT SET IN PLACE WITH DRILLED HOLE INTO SUBBASE/SUBGRADE FOR #6 TIE BAR.
5. DEAD END JOINTS WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PCC PAVEMENT.
6. SLEEPER SLAB WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR SLEEPER SLAB.

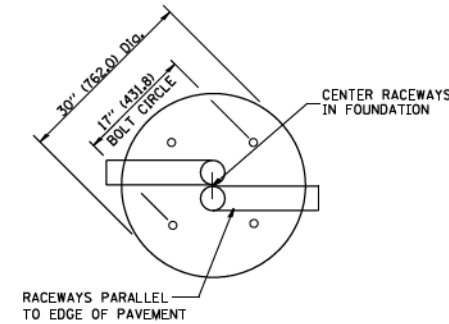
FILE NAME =	USER NAME = drvakosgn	DESIGNED - TGM, EAJ	REVISED - CADD 05-02-12	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF VARIOUS TYPES OF LANE REDUCTION FOR PCC PAVEMENT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw\11084EBID\INTEG\Illinois.gov\FWIDOT Documents\DOT Offices\District 1\Projects\Dist 1\022111\CADD\Detail\Sheets\bd53.dgn		022111\CADD\Detail\Sheets\bd53.dgn	REVISED - CADD 11-02-15		SCALE: NONE	SHEET 11	OF 41	SHEETS STA.	TO STA.	BD53	ILLINOIS	814	526
Default	PLOT SCALE = 50.0000 / 1 in.	CHECKED - JD	REVISED -							CONTRACT NO. 60X76	FED. AID PROJECT		

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

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.99 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	(2.74 m)



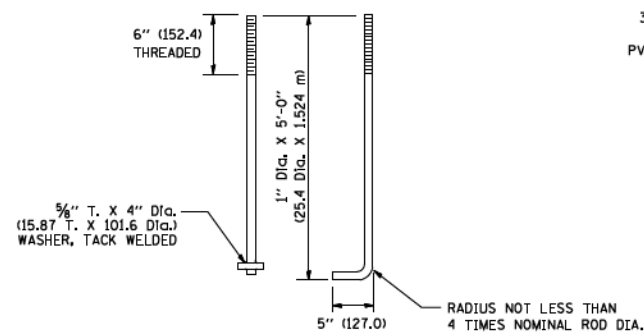
TOP VIEW



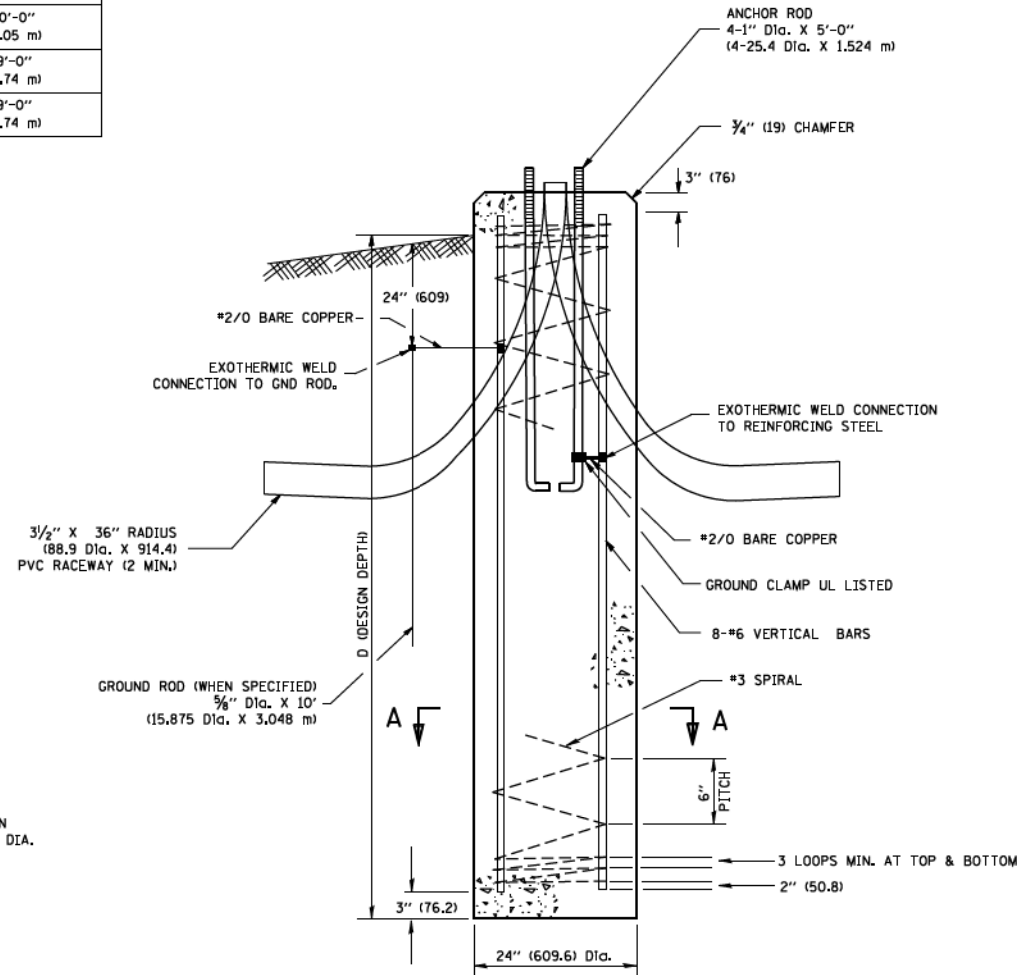
TOP VIEW

NOTES

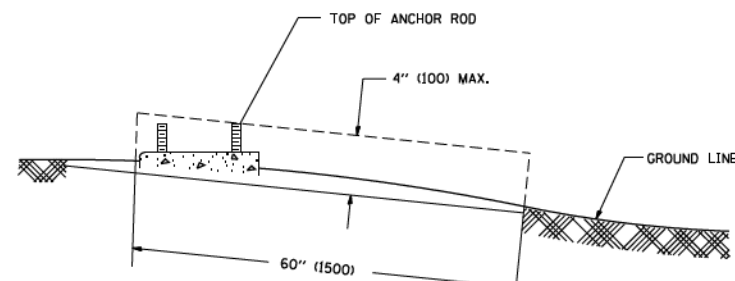
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION,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



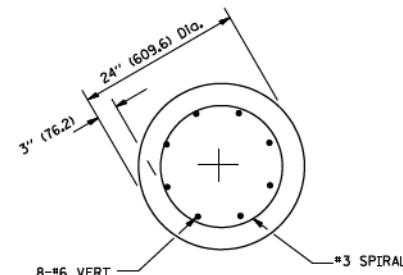
ANCHOR ROD DETAIL



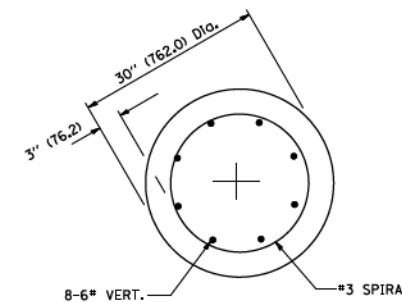
FOUNDATION DETAIL



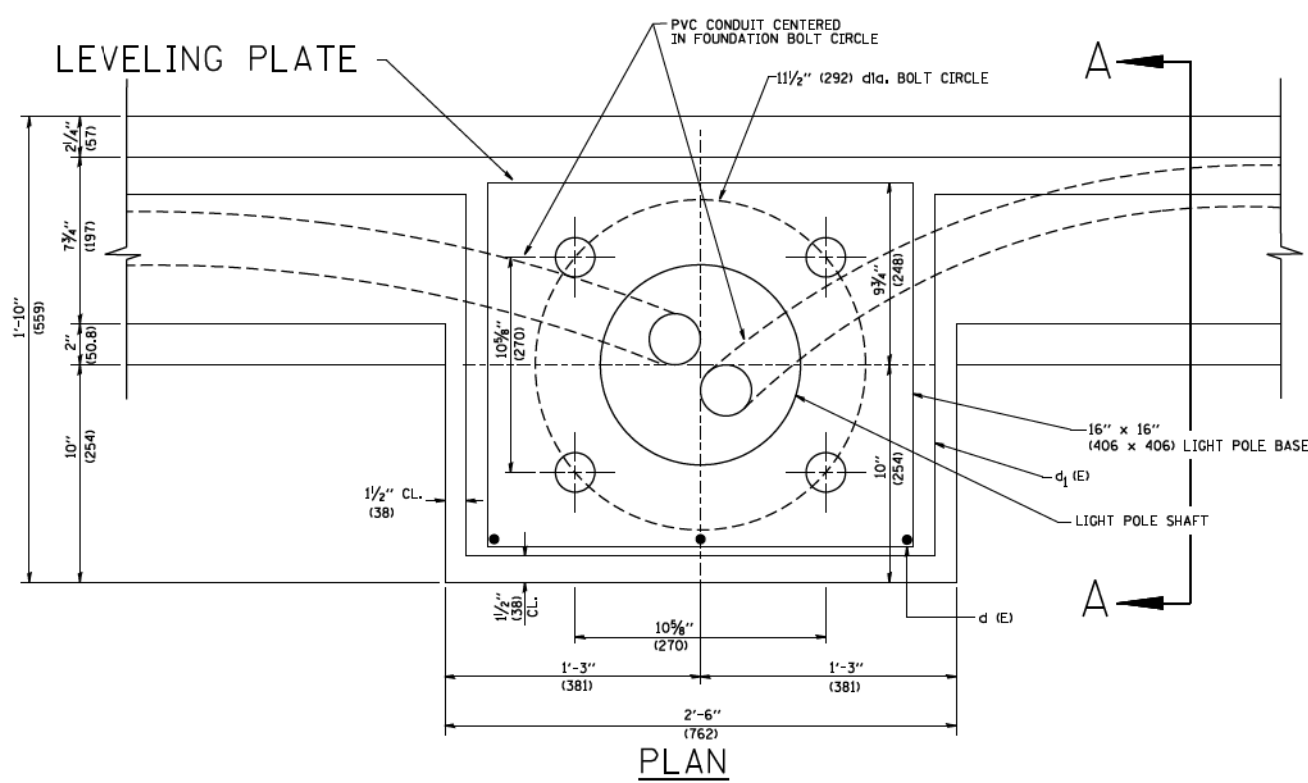
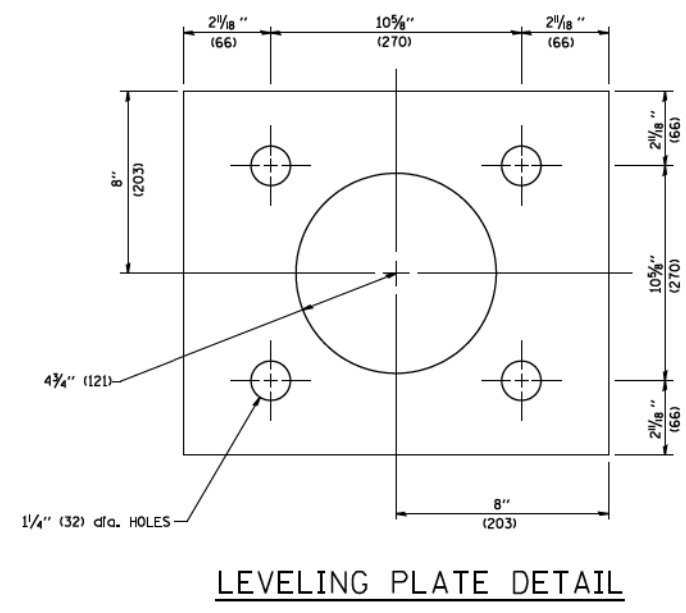
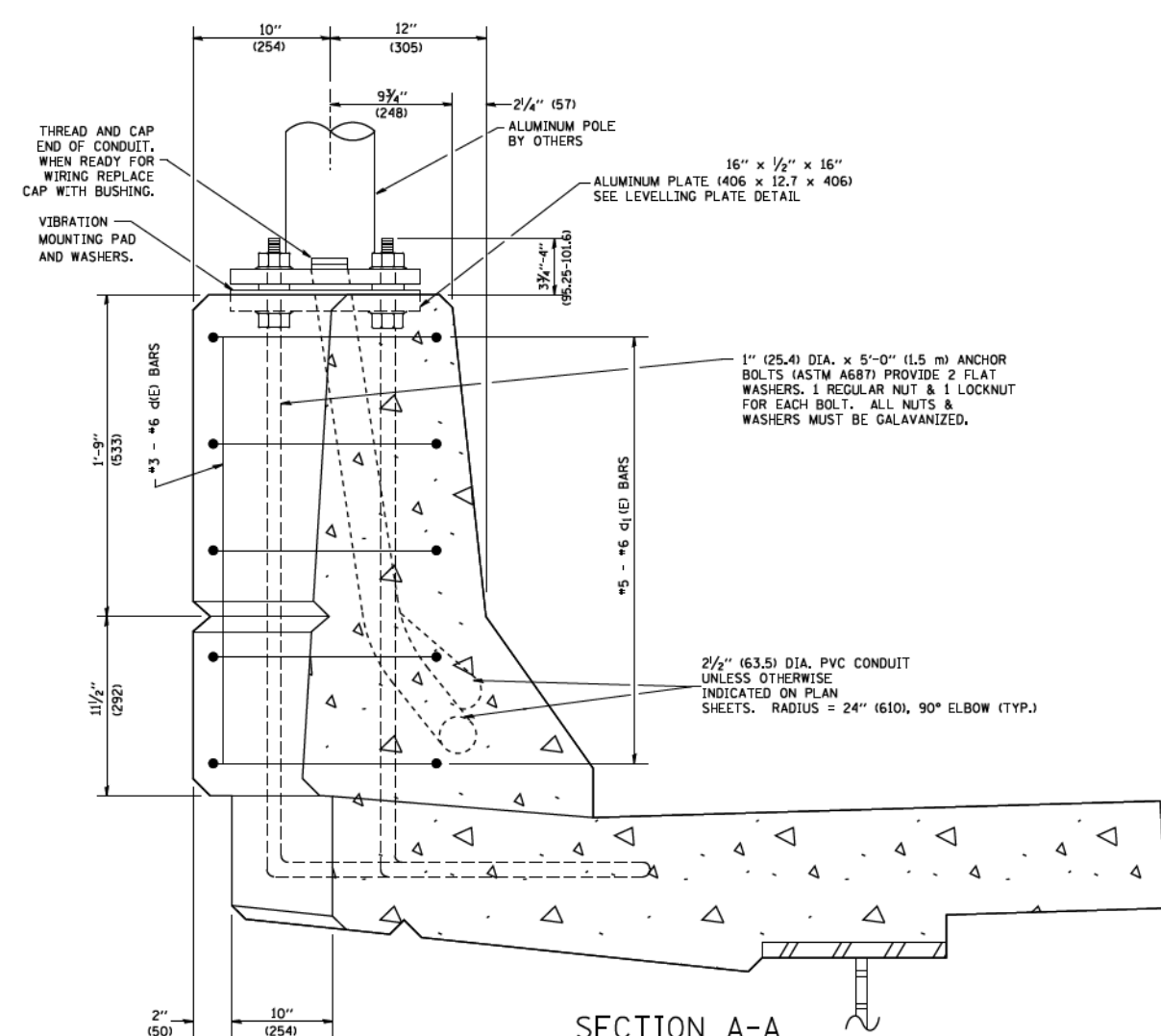
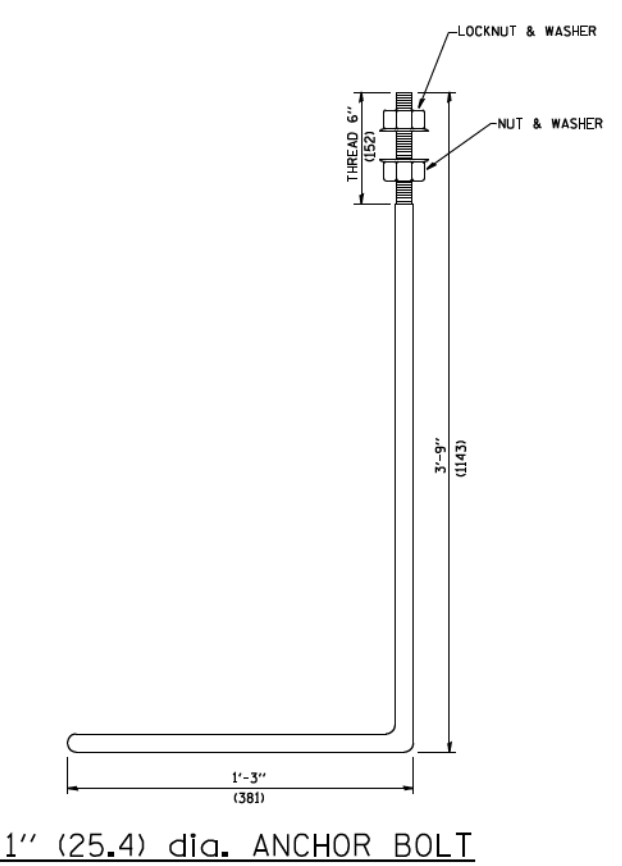
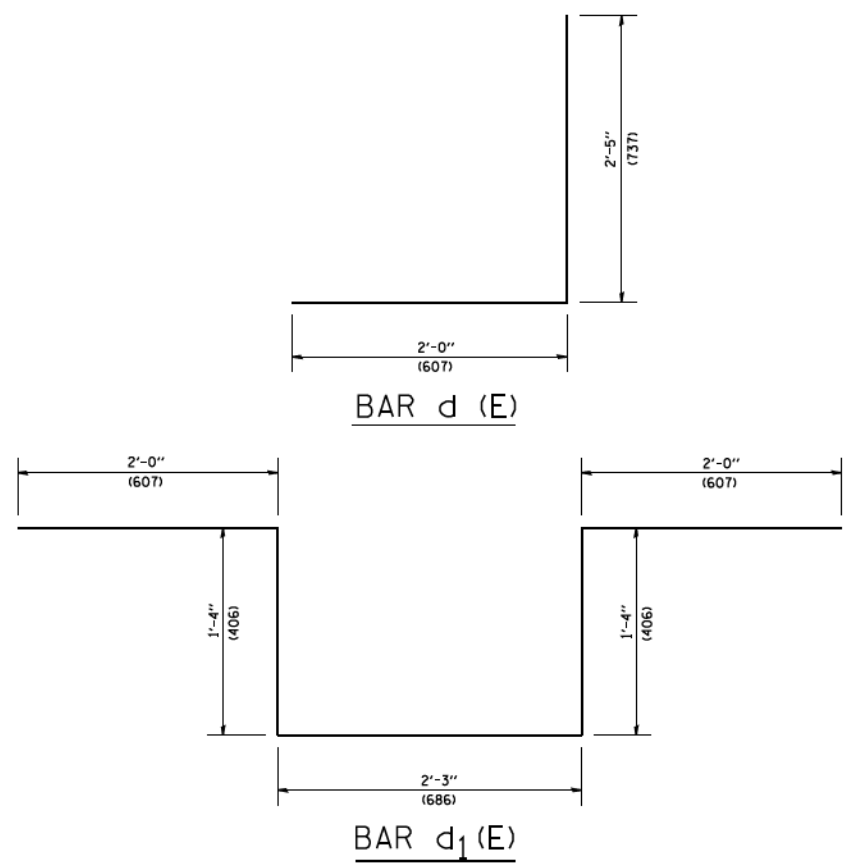
FOUNDATION EXTENSION DETAIL



SECTION A-A

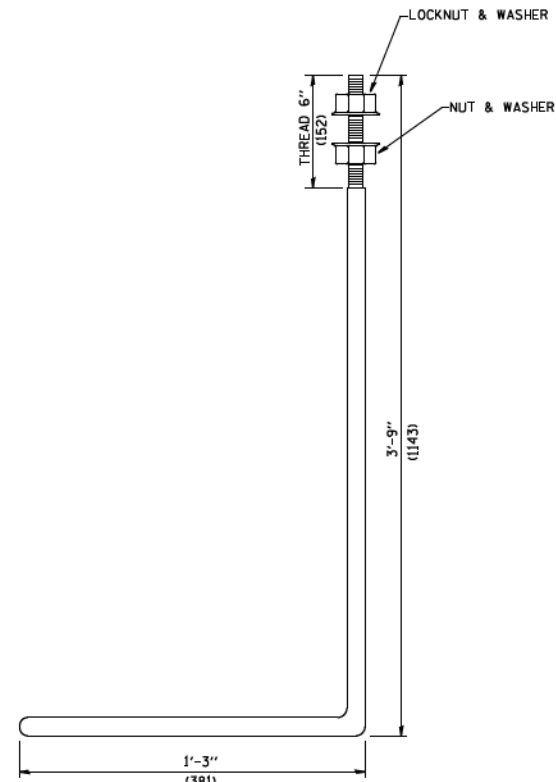
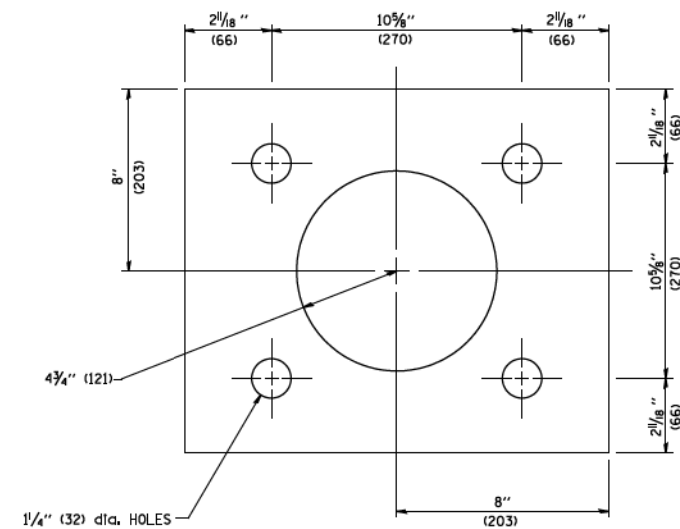
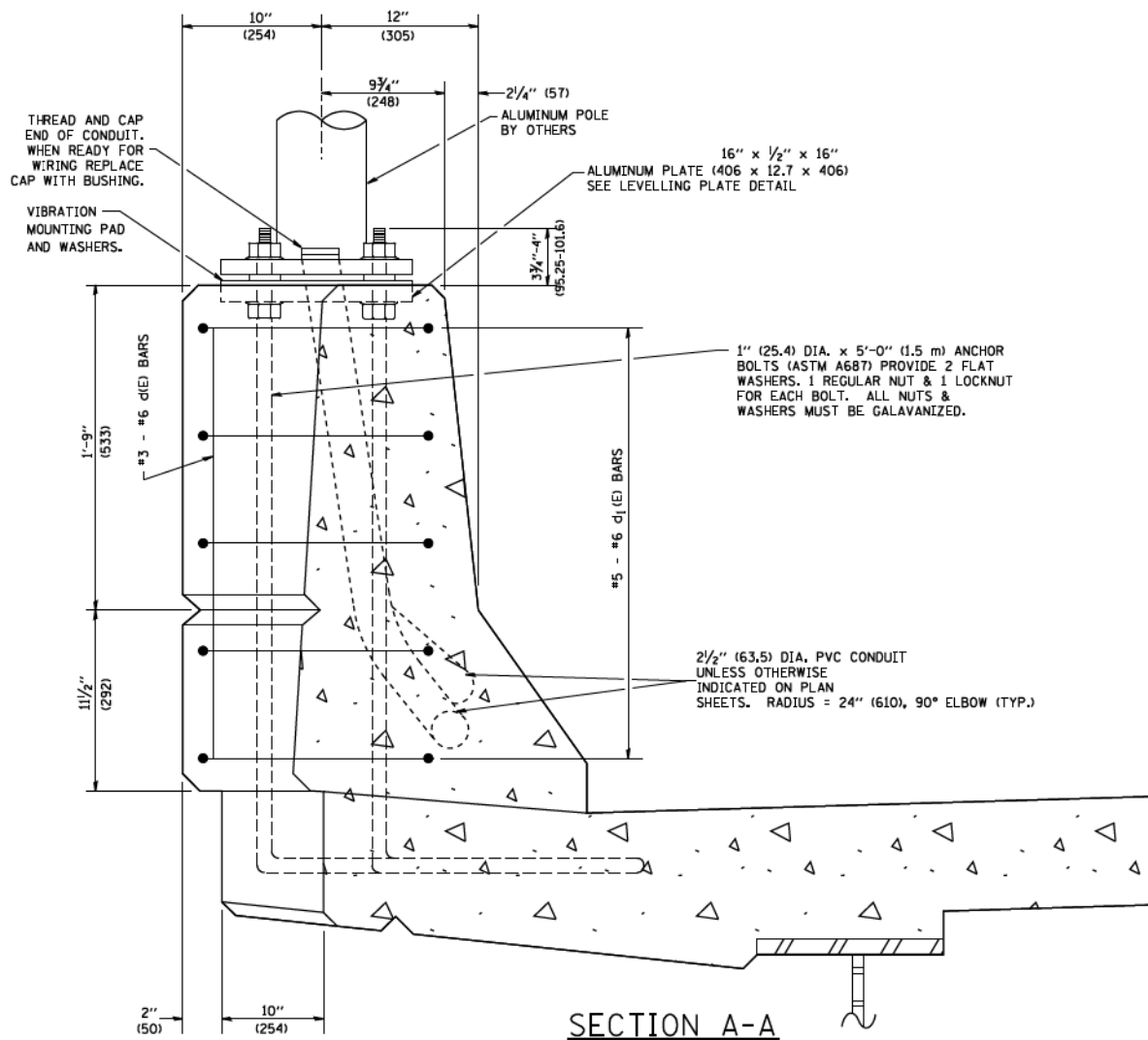
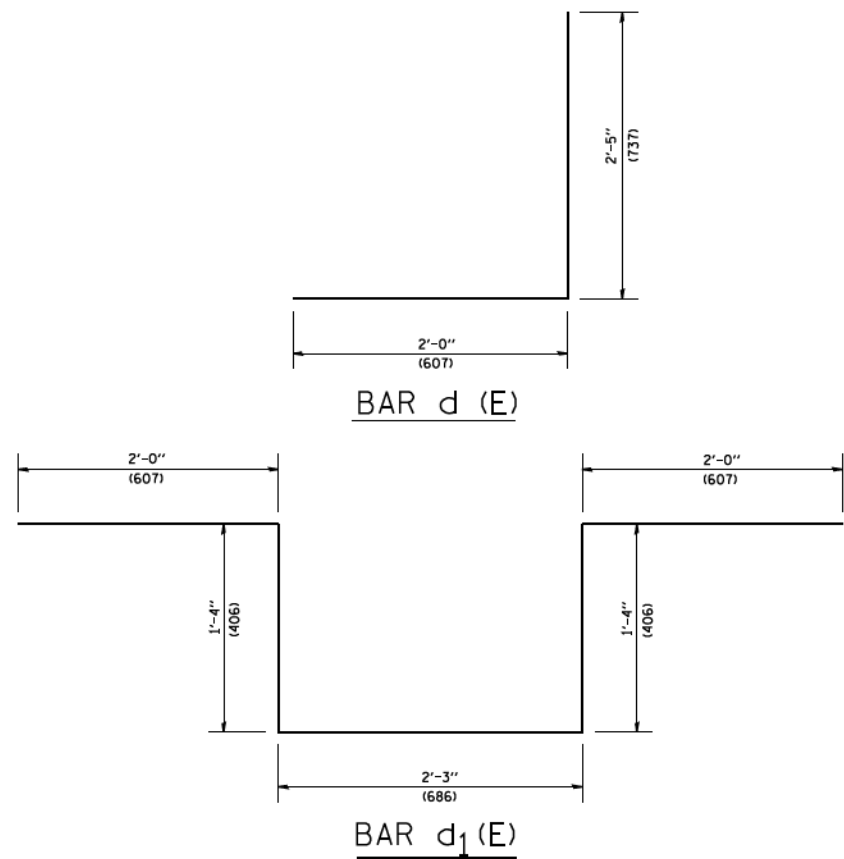


SECTION A-A

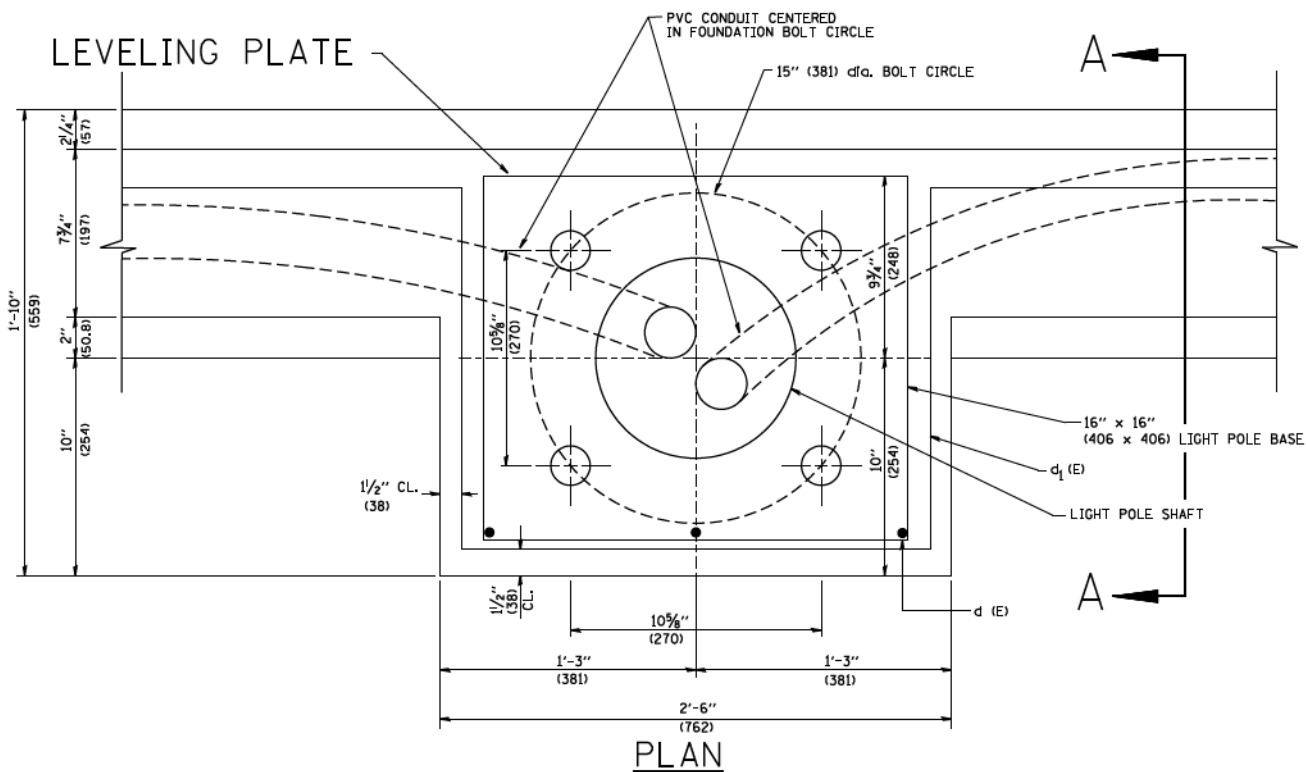


- NOTES**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. LEVEL LIGHT POLE PLATES, USING THE FLANGE NUTS, PRIOR TO POURING THE PARAPET WALL. THE TOP OF THE PLATE SHALL BE AT THE SAME ELEVATION AS THE FINISHED CONCRETE PARAPET.
 3. THE COST OF ANCHOR BOLTS, CONDUIT, LEVELLING PLATE AND FOUNDATION IS INCLUDED IN THE COST OF THE BRIDGE STRUCTURE.

FILE NAME = W:\dststd\22x34\be329.dgn	USER NAME = geglanoht	DESIGNED - DRAWN -	REVISED - 06-28-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHT POLE MOUNTED ON CONCRETE PARAPET WALL 11 1/2" (292 mm) BOLT CIRCLE		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS 814	SHEET NO. 528
PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISOR -	SCALE: NONE		SHEET NO. 13 OF 41 SHEETS	STA.	TO STA.	BE-329		CONTRACT NO. 60X76	
PLOT DATE = 1/4/2008	DATE -	REVISOR -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								

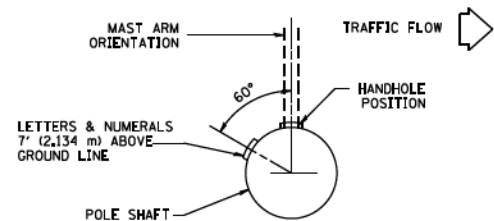


1" (25.4) dia. ANCHOR BOLT

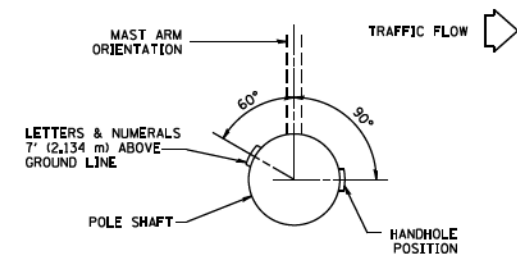


- NOTES**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. LEVEL LIGHT POLE PLATES, USING THE FLANGE NUTS, PRIOR TO POURING THE PARAPET WALL. THE TOP OF THE PLATE SHALL BE AT THE SAME ELEVATION AS THE FINISHED CONCRETE PARAPET.
 3. THE COST OF ANCHOR BOLTS, CONDUIT, LEVELLING PLATE AND FOUNDATION IS INCLUDED IN THE COST OF THE BRIDGE STRUCTURE.

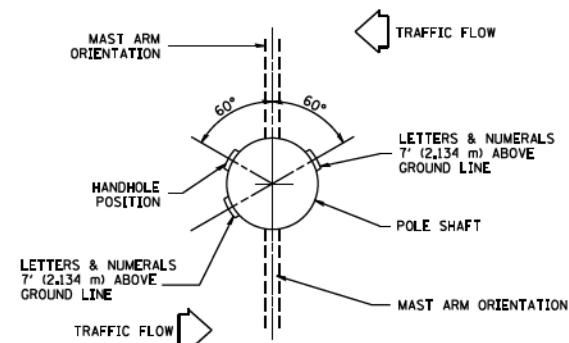
FILE NAME = W:\diststd\22x34\be338.dgn	USER NAME = geglanoht	DESIGNED - DRAWN -	REVISED - 04-22-02	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHT POLE MOUNTED ON CONCRETE PARAPET WALL 15" (381 mm) BOLT CIRCLE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED -	SCALE: NONE		SHEET NO. 14 OF 41 SHEETS	STA.	TO STA.	BE-330	CONTRACT NO. 60X76	814	529	
PLOT DATE = 1/4/2008	DATE -	REVISED -					FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT					



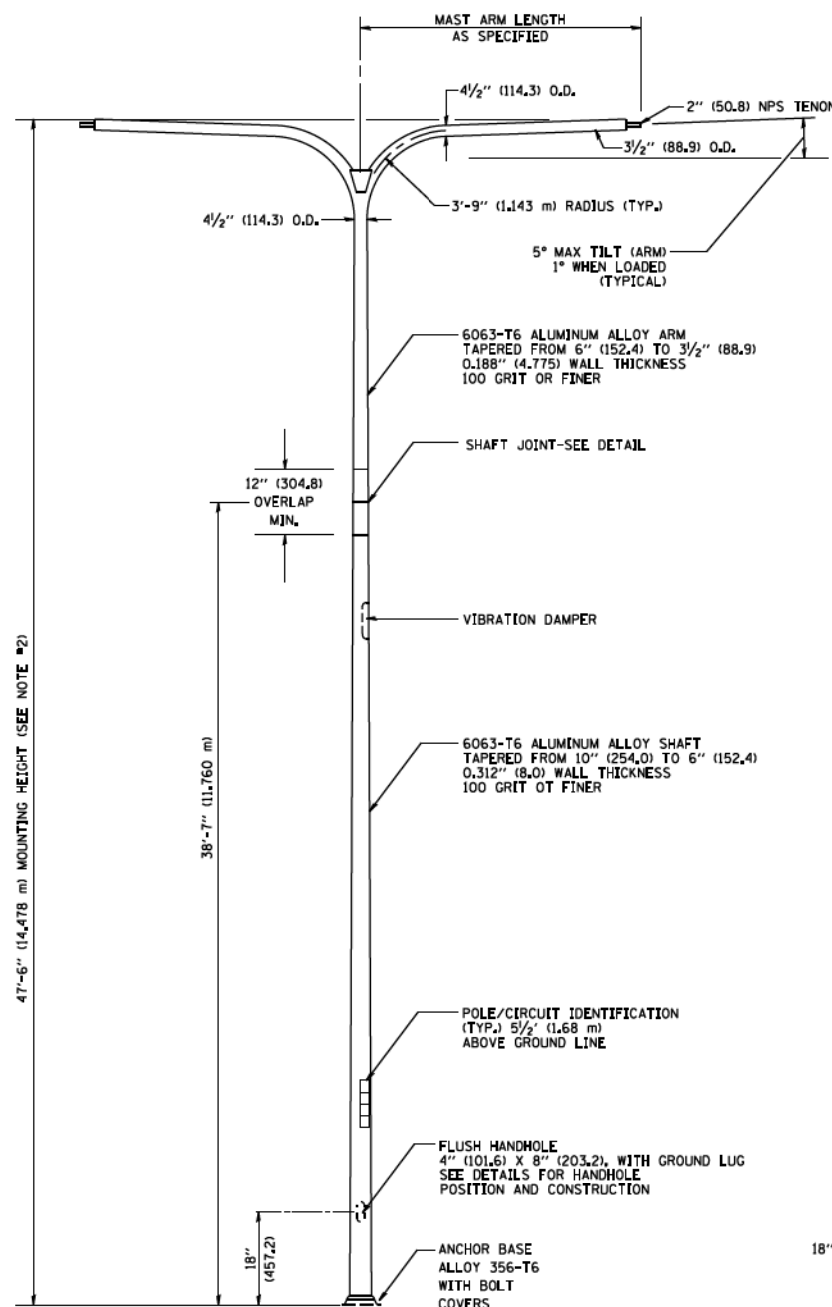
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



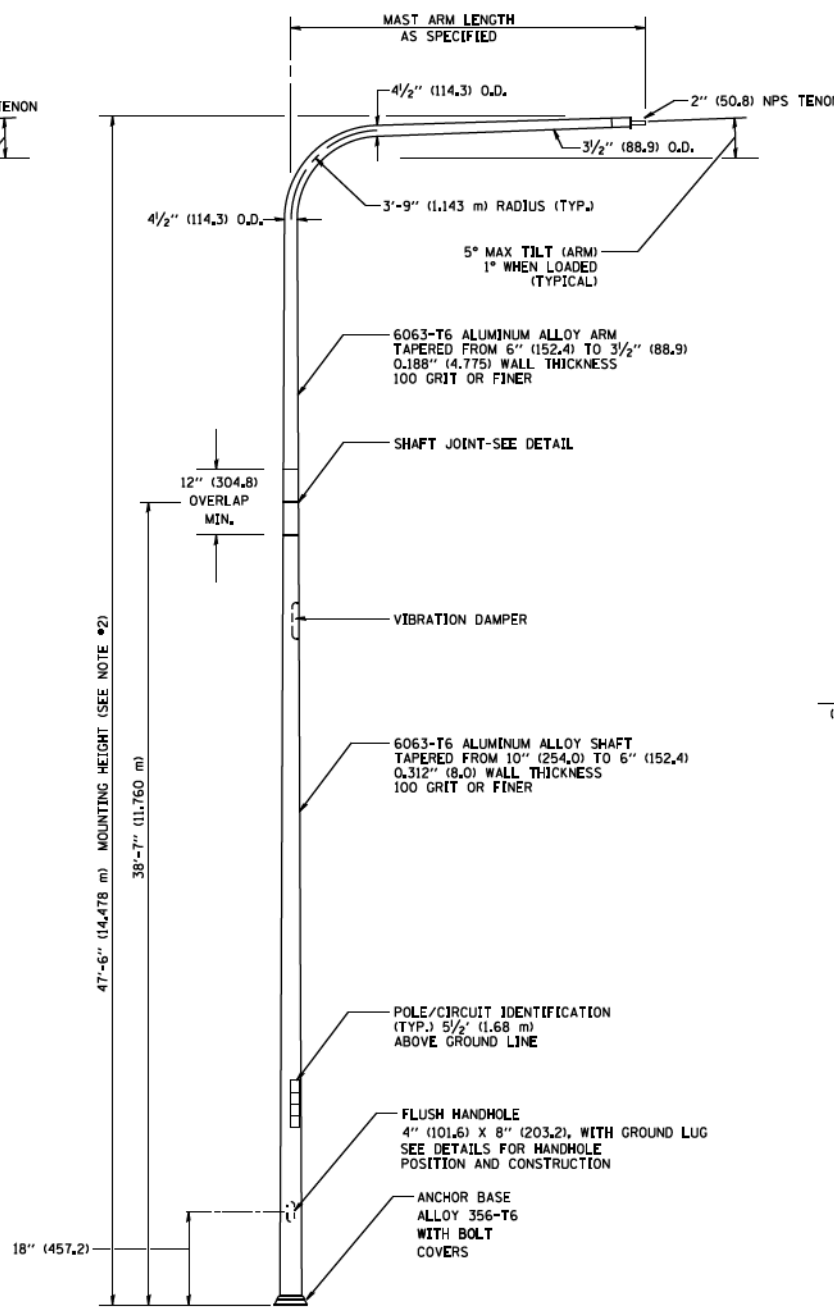
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

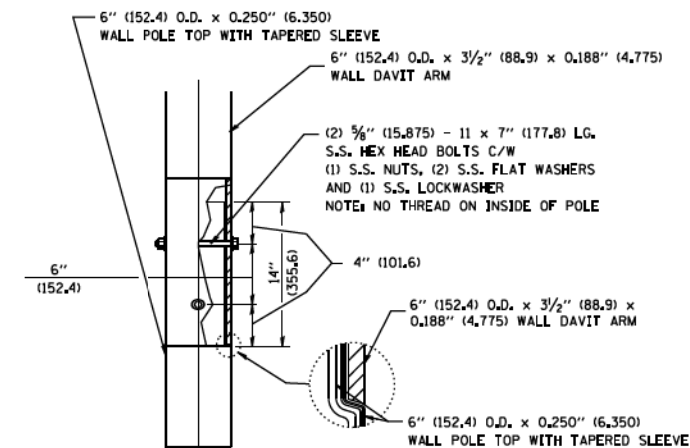


TWIN ARM POLE

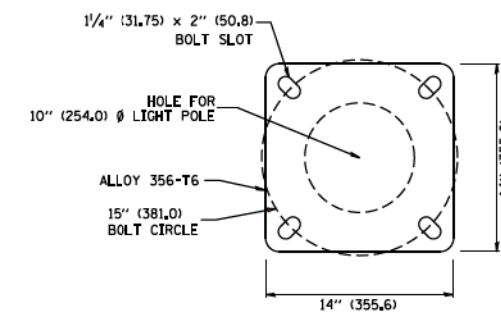


SINGLE ARM POLE

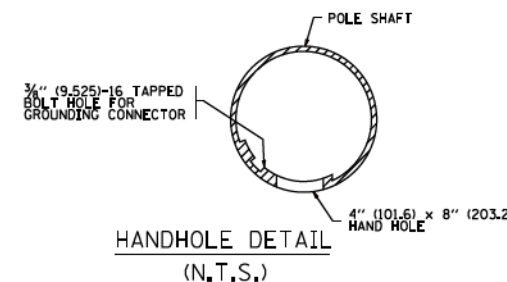
- NOTES:**
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 - MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 - TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 - THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 - THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
 - LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 - LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 - LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



DAVIT ARM CONNECTION
[14" (355.6) OVERLAP SHOWN]



LIGHT POLE BASE PLATE DETAIL
(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)



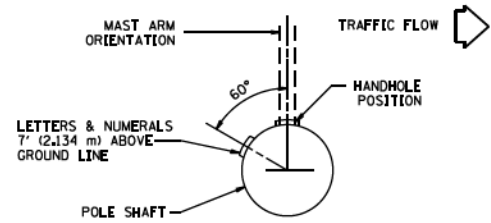
HANDHOLE DETAIL
(N.T.S.)

FILE NAME =	USER NAME = lejye	DESIGNED -	REVISED - D. DREW 05-07-92
ca:\pw_work\p\dot\lejye\d0108315\be410.dgn		DRAWN - LEY	REVISED - R. TOMSONS 09-06-00
	PLOT SCALE = 50.0000 / 1 in.	CHECKED -	REVISED - R. TOMSONS 09-02-03
	PLOT DATE = 4/4/2013	DATE -	REVISED - R. TOMSONS 01-18-13

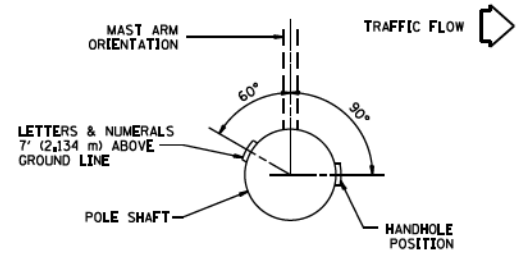
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DAVIT LIGHT POLE			
47'-6" (14.478 m) MOUNTING HEIGHT			
SCALE: NONE	SHEET NO. 15 OF 41 SHEETS	STA.	TO STA.

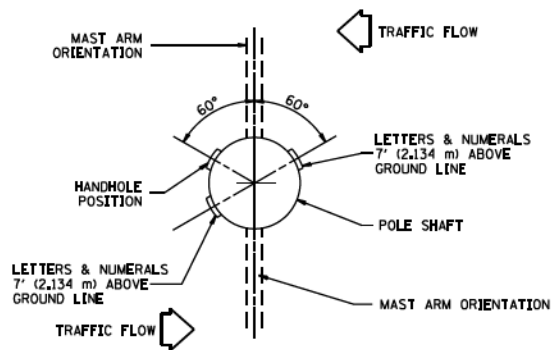
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-410		814	530
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	



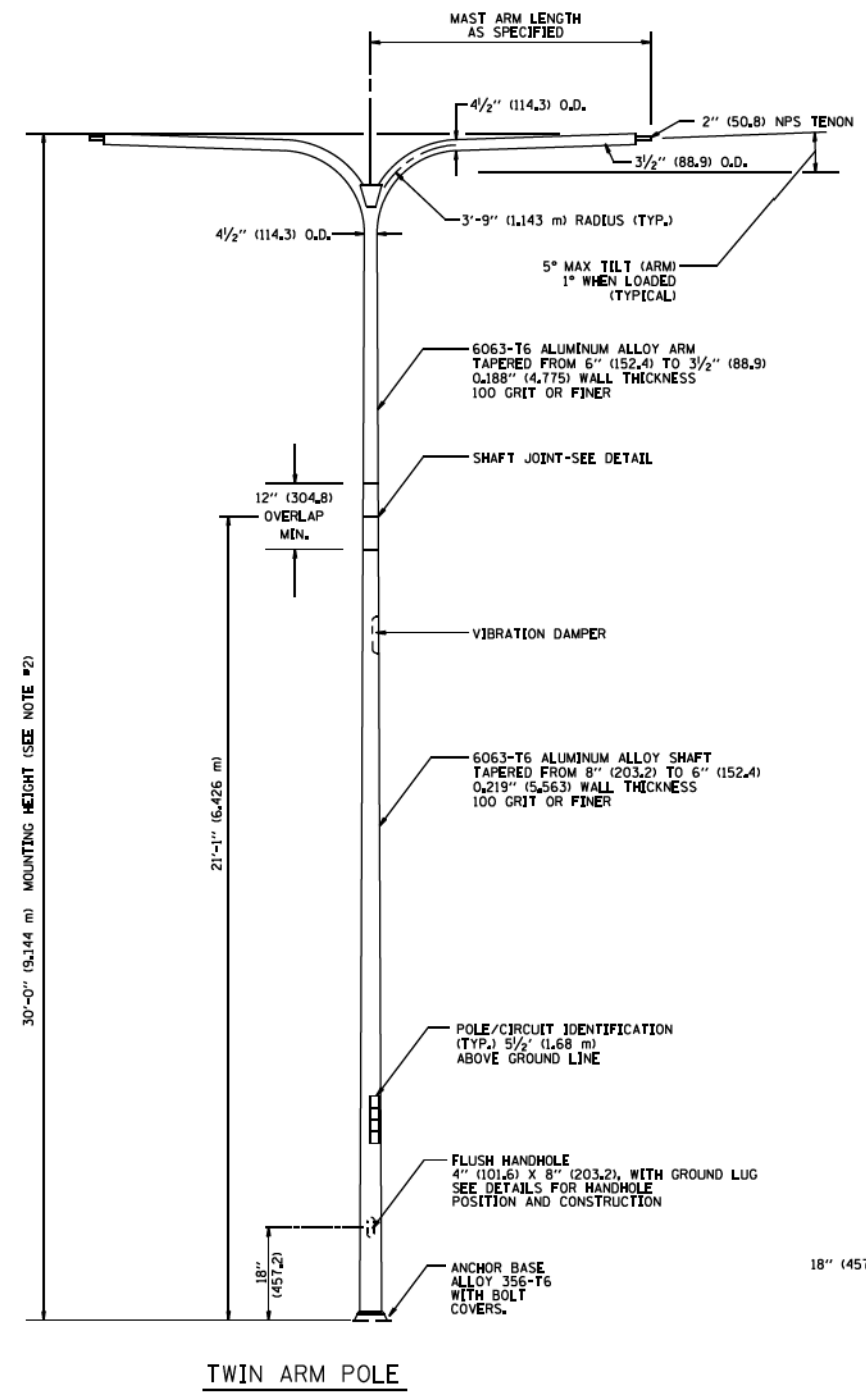
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



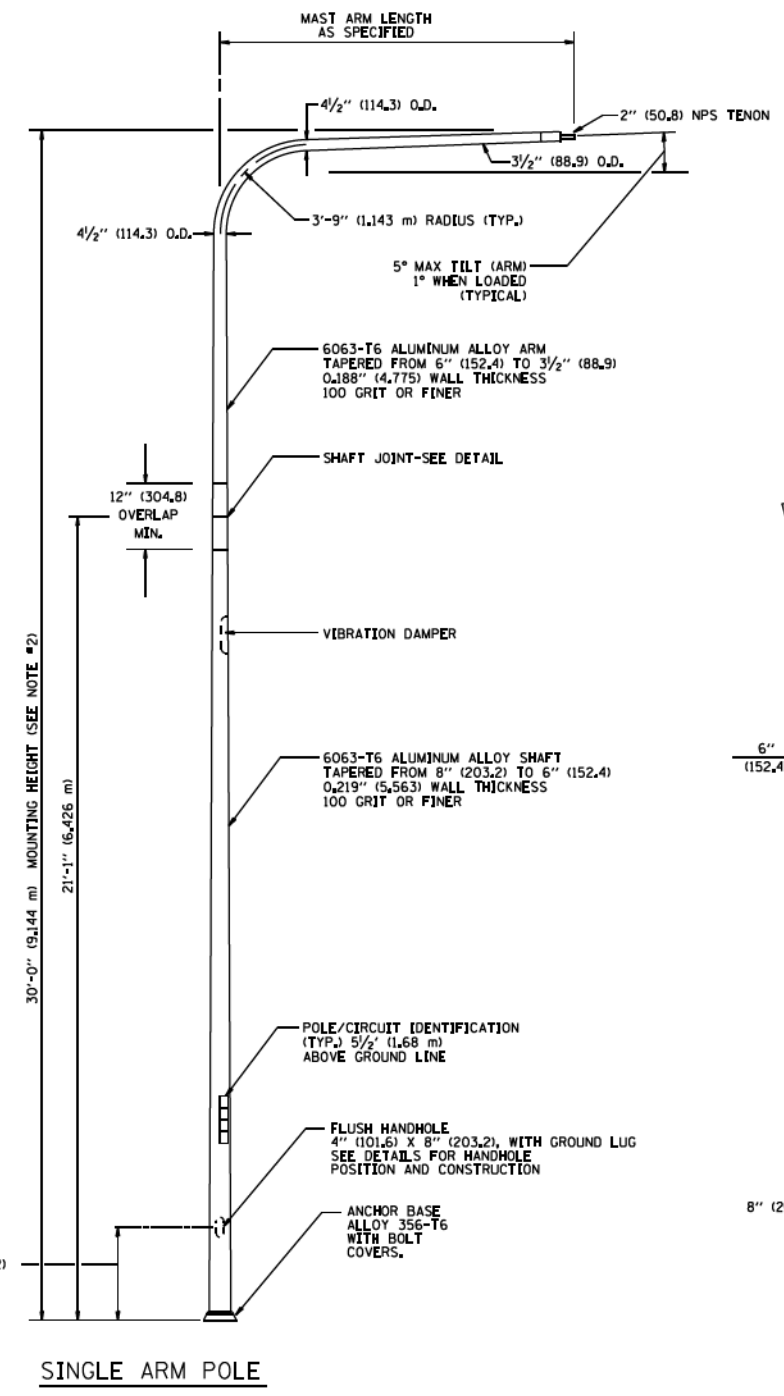
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

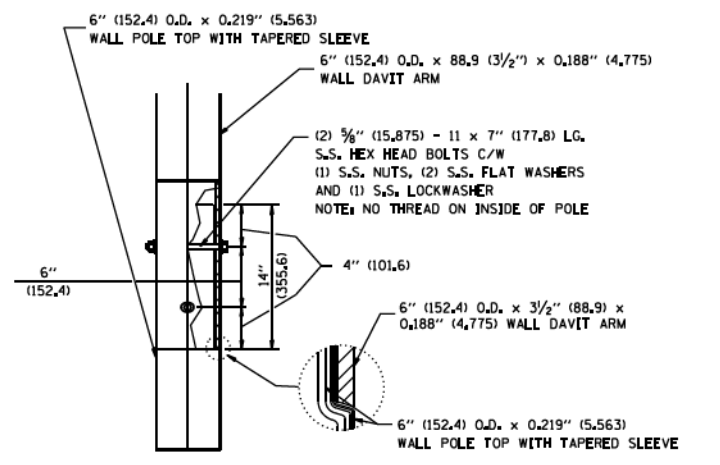


TWIN ARM POLE

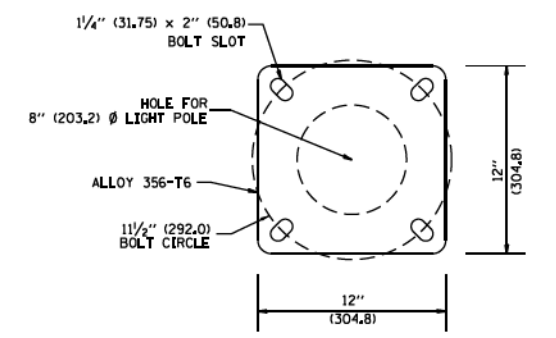


SINGLE ARM POLE

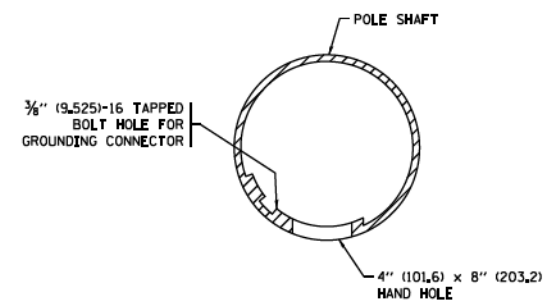
- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP40L OR APPROVED EQUAL.
 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



DAVIT ARM CONNECTION
[14" (355.6) OVERLAP SHOWN]



LIGHT POLE BASE PLATE DETAIL
1 1/2" (292.0) BOLT CIRCLE



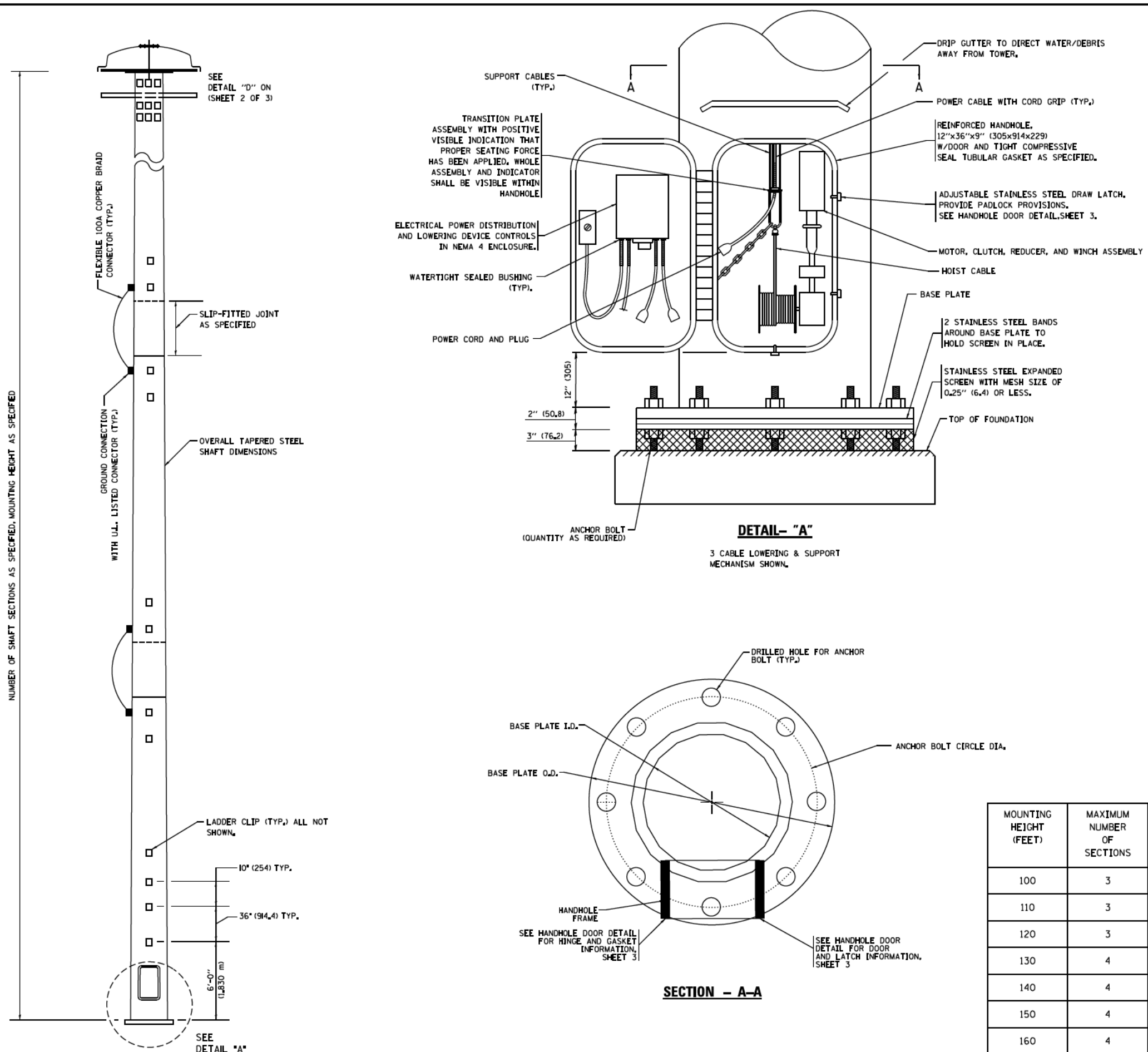
HANDHOLE DETAIL
(N.T.S.)

FILE NAME = W:\dsetd\22x34\be413.dgn	USER NAME = luyao	DESIGNED - DRAWN - RL	REVISED - D. DREW 04-02-92 REVISED - D. DREW 05-07-92 REVISED - R. TOMSONS 09-06-00 REVISED - R. TOMSONS 09-02-03
PLOT SCALE = 100.0000 / 1"	CHECKED -	DATE -	
PLOT DATE = 1/6/2016			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DAVIT LIGHT POLE 30'-0" (9.144 m) MOUNTING HEIGHT	
SCALE: NONE	SHEET NO. 19 OF 41 SHEETS
STA.	TO STA.

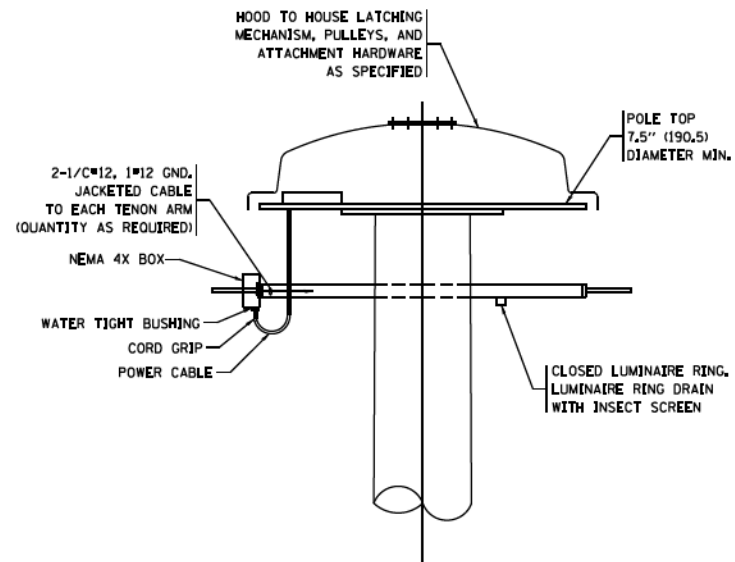
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-413		814	531
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO.	60X76



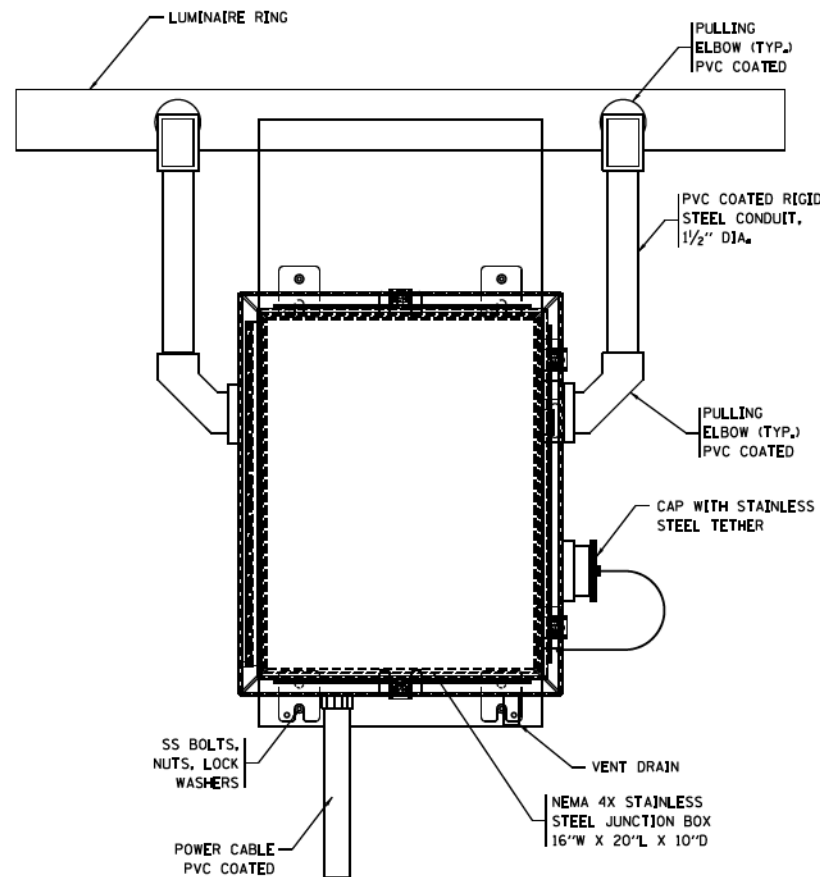
- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. THE DESIGN SHALL BE BASED UPON AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" IN EFFECT ON THE DATE OF INVITATION FOR BIDS, HOWEVER THE WIDTH OF REINFORCED OPENING REQUIREMENT IN CHAPTER 5, SECTION 5.6.6.1 SHALL NOT APPLY. LIGHT TOWERS SHALL BE DESIGNED FOR ADT > 10,000, RISK CATEGORY TYPICAL, AND FATIGUE IMPORTANCE CATEGORY I. A MINIMUM TOTAL COMBINED LUMINAIRE WEIGHT OF 600 LB (272 KG) SHALL BE USED PLUS A COMBINED HOOD AREA AND LOWERING RING WEIGHT OF 400 LB (181 KG). THE ASSOCIATED TOTAL PROJECTED AREA SHALL BE 24 SQ FT (2.23 SQ M) AND 10 SQ FT (0.93 SQ M) RESPECTIVELY.
 3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI (345 K PA) ACCORDING TO AASHTO M 270 (ASTM A 572 GR50).
 4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.
 5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS, CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 36 INCH (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG. THE TOP INSIDE EDGE SHALL BE CHAMFERED.
 6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.
 7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
 8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123). THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED OR BE STAINLESS STEEL.
 9. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.
 10. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED 1/8 IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.
 11. PVC CONDUIT WILL NOT BE ALLOWED FOR ANY LIGHT TOWER COMPONENT.
 12. COUNTER WEIGHTS TO BE INCLUDED AS A PART OF THE LIGHT TOWER PAY ITEM.

LIGHT TOWER DIMENSIONS

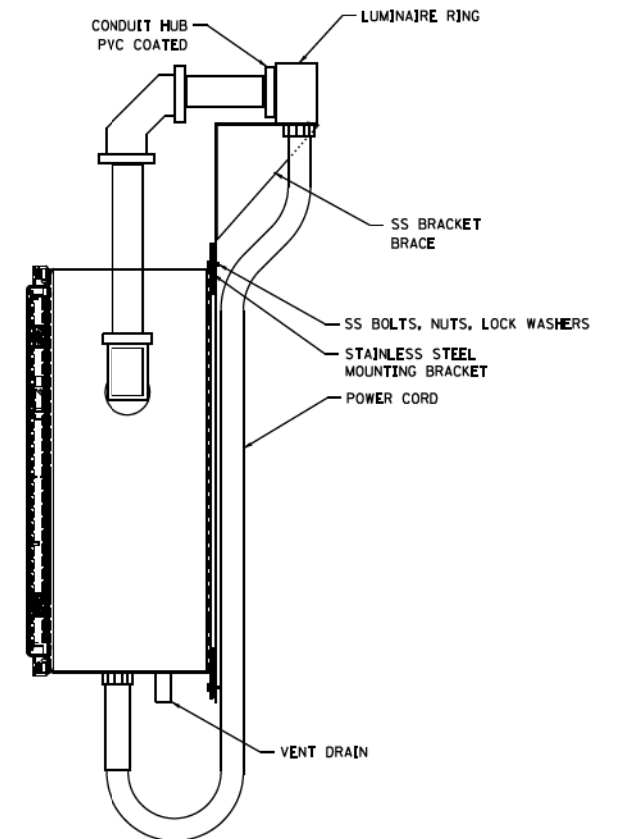
MOUNTING HEIGHT (FEET)	MAXIMUM NUMBER OF SECTIONS	MINIMUM NUMBER OF ANCHOR RODS	MINIMUM TOWER TOP DIAMETER (INCHES)	MINIMUM TOWER BOTTOM DIAMETER (INCHES)	MINIMUM ROD DIAMETER (INCHES)	MINIMUM ANCHOR ROD CIRCLE (INCHES)
100	3	8	7.5	24	1.5	30
110	3	8	7.5	24	1.5	30
120	3	8	7.5	26	1.75	36
130	4	8	7.5	28	1.75	36
140	4	8	7.5	28	1.75	36
150	4	8	7.5	30	2.25	38
160	4	8	7.5	32	2.25	38



DETAIL-D

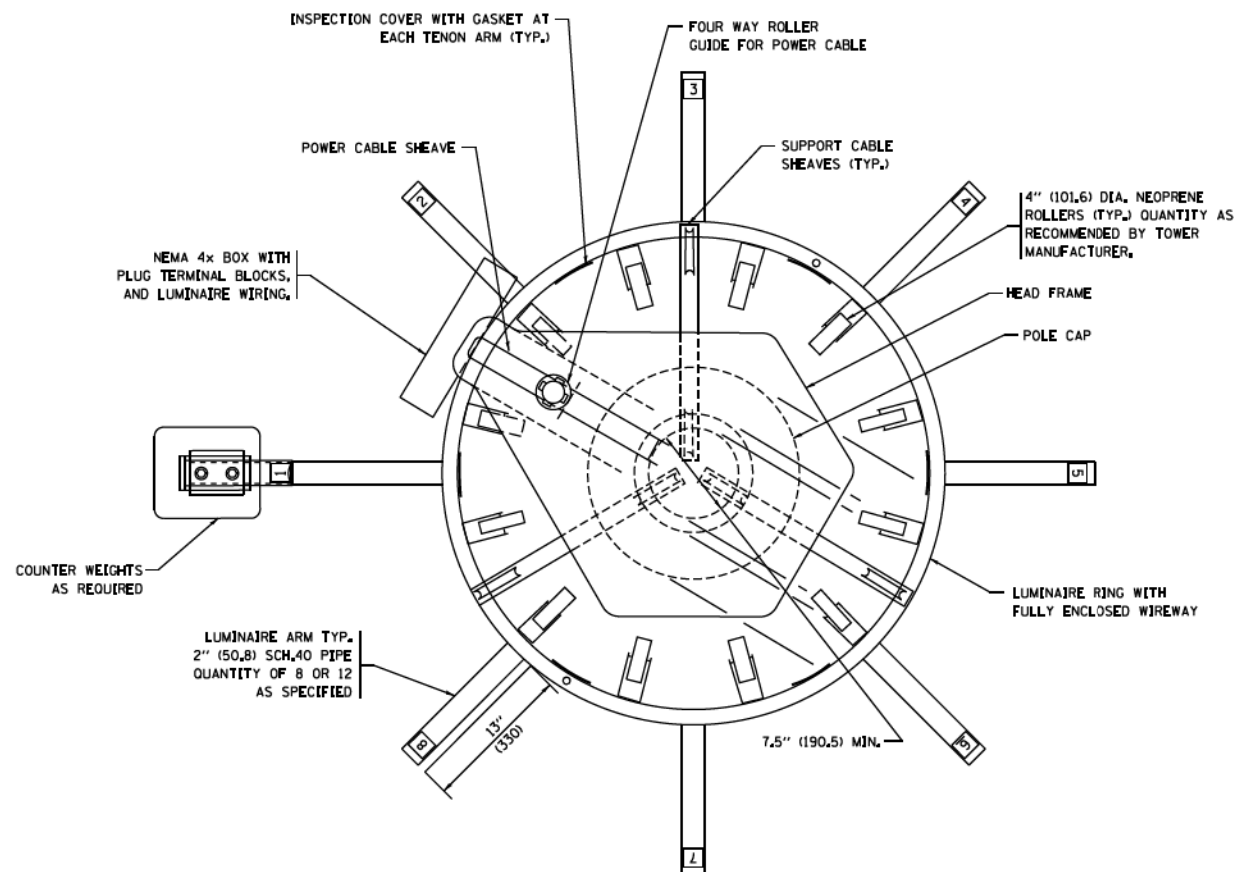


**FRONT VIEW
N.T.S.**



**SIDE VIEW
N.T.S.**

LUMINAIRE RING TERMINAL BOX



NOTES:

- LUMINAIRE WIRES SHALL EXTEND 24 INCHES (609mm) LONGER THAN THE RESPECTIVE TENON ARM AND SHALL BE TRAINED BACK INTO THE ARM WHICH SHALL THEN BE CLOSED WITH A CAP AS SPECIFIED. ALL WIRES SHALL BE CAPPED WITH HEAT SHRINK INSULATING BOOTS, CRIMP CAPS ARE UNACCEPTABLE. ALL RING WIRES SHALL BE TAGGED WITH WIRE MARKERS AT BOTH ENDS. THE TENON ARMS SHALL ALSO BE TAGGED CORRESPONDING TO THE WIRING CONTAINED WITHIN.
- SPLICING WILL NOT BE ALLOWED WITHIN THE LUMINAIRE RING.
- ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
- ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.

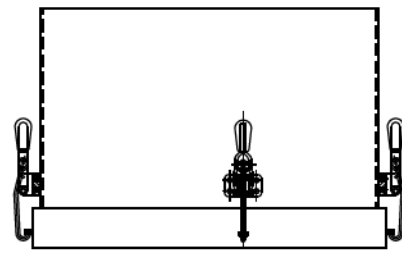
FILE NAME :	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 09-02-10
pw\11.084EBID\INTEG\Illinois.gov\FWDDT\Documents\DOT Offices\District 1\Projects\Dist 1\022111\CADData\CADsheets\be500.dgn		CHECKED -	REVISED - R. TOMSONS 02-27-13
		DATE -	REVISED - R. TOMSONS 04-29-16
			REVISED - R. TOMSONS 07-26-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

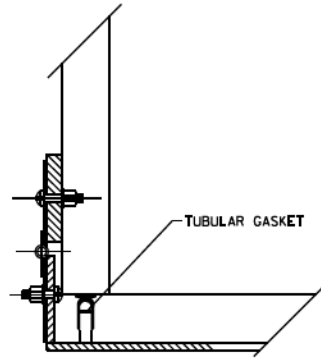
**HIGH MAST LIGHT TOWER
100 FT TO 160 FT (30 m TO 49 m)**

SCALE: SHEET 18 OF 41 SHEETS STA. TO STA.

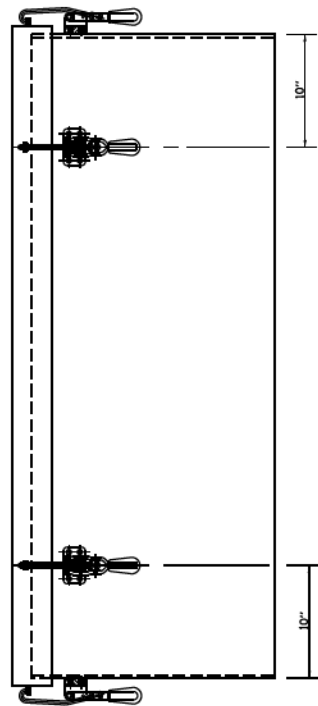
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-500		814	533
		CONTRACT NO.	60X76	
ILLINOIS FED. AID PROJECT				



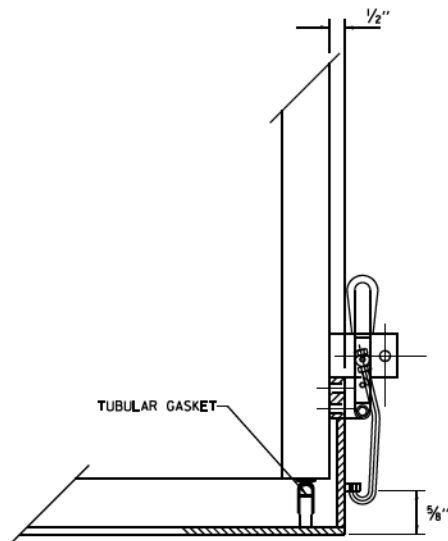
TOP VIEW



HINGE DETAIL

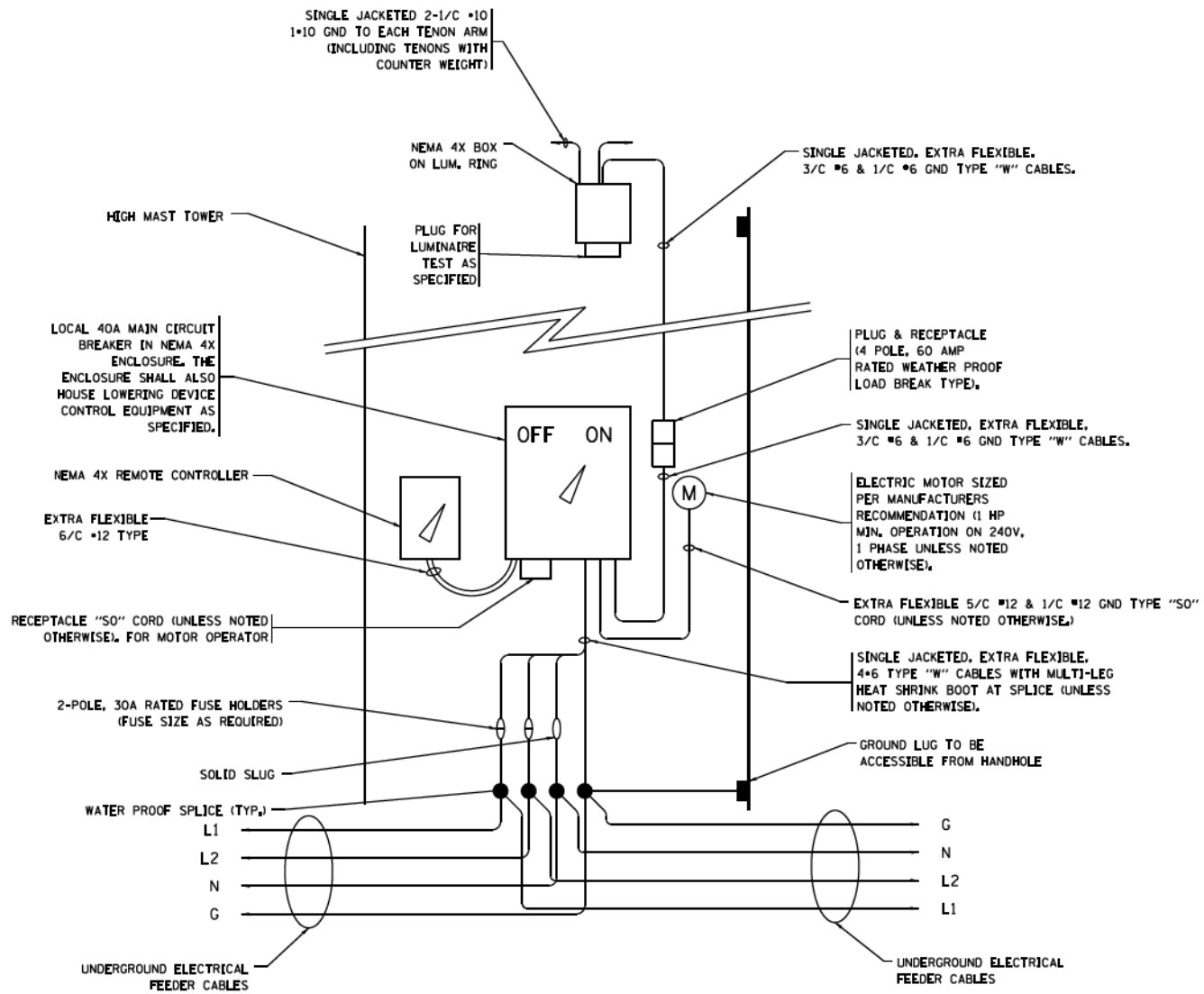


SIDE VIEW

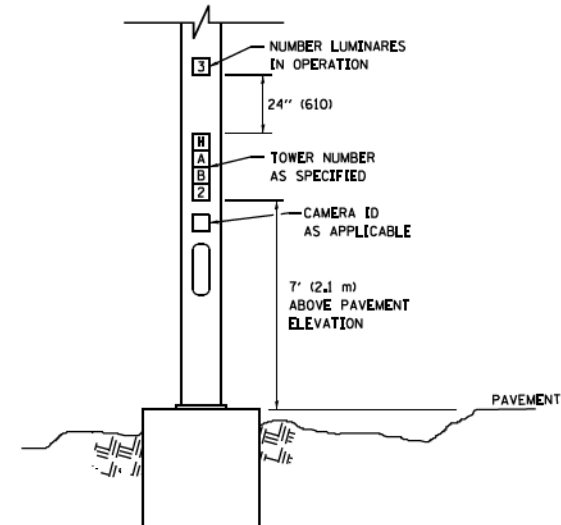


LATCH DETAIL

HANDHOLE DOOR DETAILS



HIGH MAST POLE WIRING DIAGRAM



LIGHT TOWER NUMBERING DETAIL

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 09-02-10
pw\11884EBID\INTEG\Illinois.gov\FWDDT\Documents\DOT Offices\District 1\Projects\Dist 1\B2M\CAD\Detail\CAD\Sheets\be500.dgn		DESIGNED - R. TOMSONS 02-27-13	REVISED - R. TOMSONS 02-27-13
		CHECKED -	REVISED - R. TOMSONS 04-29-16
Default	PLOT DATE = 7/27/2016	DATE -	REVISED - R. TOMSONS 07-26-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER
100 FT TO 160 FT (30 m TO 49 m)

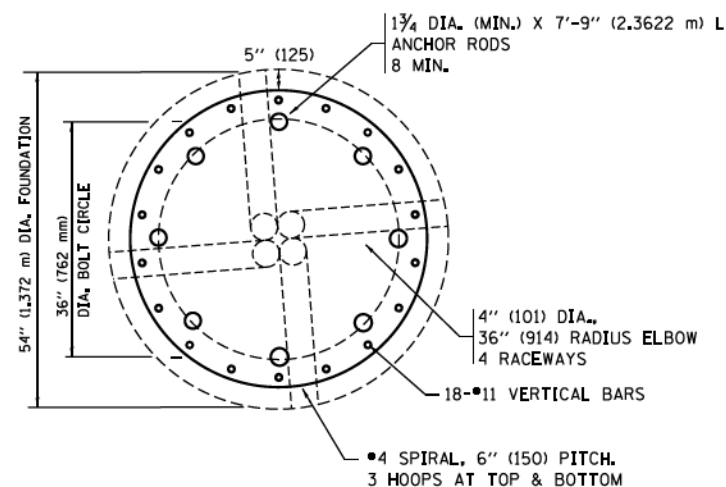
SCALE: SHEET 19 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-500		814	534
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	

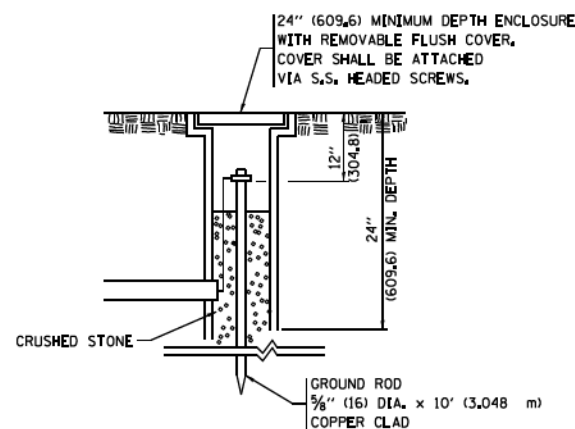
DESIGN NOTES

- ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
- THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.
- THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.
- THE TOP OF THE FOUNDATION TO 18" (457) BELOW GRADE SHALL BE FORMED.
- SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.
- THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.
- ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.9.
- ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED FOR APPROVAL WITH TOWER MANUFACTURER REQUIREMENTS.
- REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10
- TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.
- A MINIMUM OF THREE FULL THREADS SHALL REMAIN EXPOSED AFTER LIGHT TOWER IS INSTALLED.
- ALL GROUNDING INDICATED IN THE PLANS SHALL BE INCLUDED IN THE COST OF THE LIGHT TOWER FOUNDATION AND SHALL NOT BE PAID FOR SEPARATELY.
- CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
- ANCHOR ROD QUANTITY, DIAMETER, AND LENGTH SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.
- COORDINATE THE ROD CIRCLE DIAMETER OF THE TOWER WITH THE DIAMETER OF THE ANCHOR ROD CAGE.
- THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.

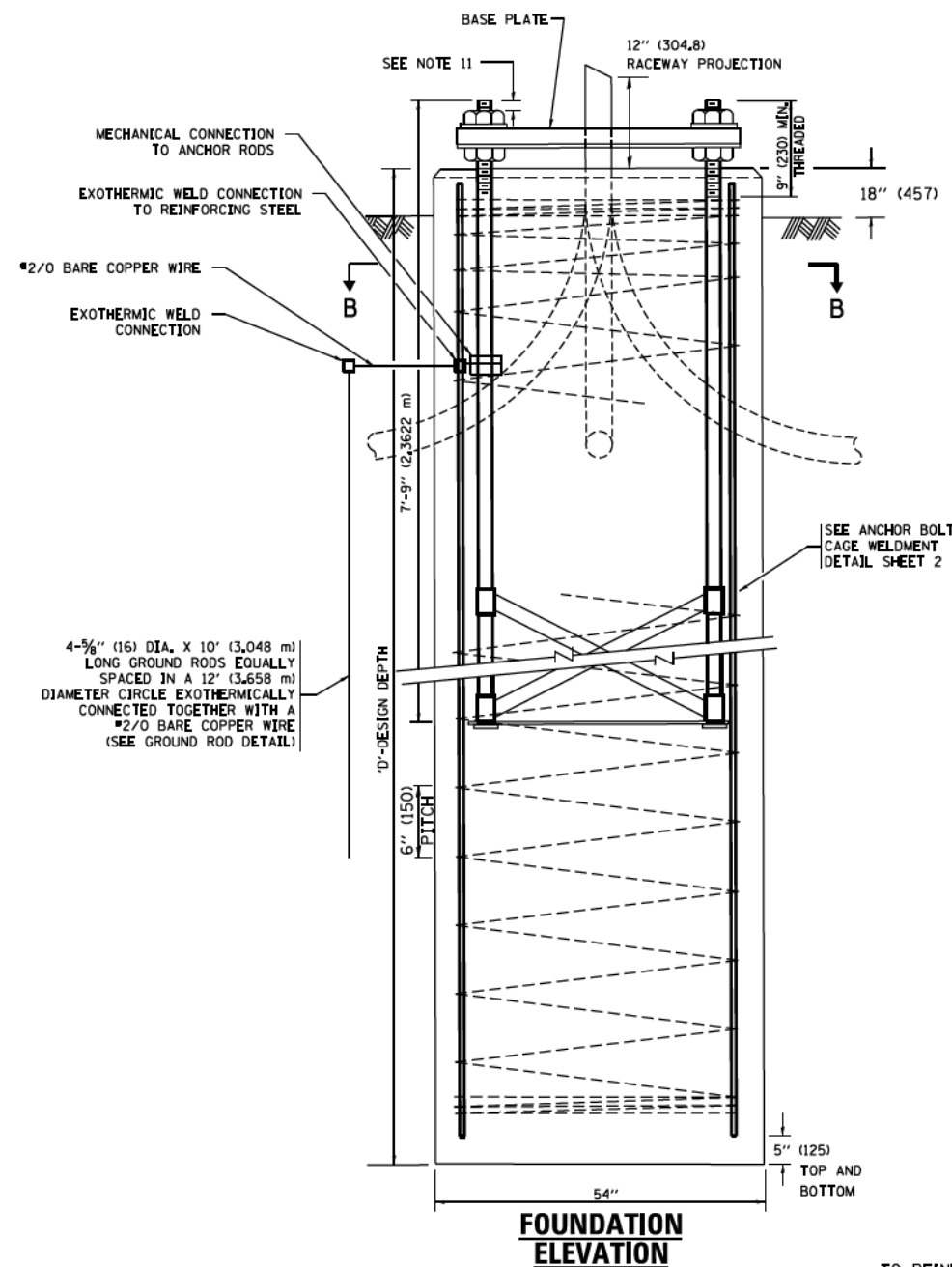
SOIL CONSISTENCY		SHAFT LENGTH (D) TABLE			
		AVERAGE STRENGTH (Q_u In tsf (Q_u In kPa)	LIGHT TOWER MOUNTING HEIGHT		
			120 FT. (37 m)	130 FT. (40 m)	140 FT. (43 m)
SOFT		<0.5 (<50)	25'-0" (7.6 m)	26'-6" (8.0 m)	27'-6" (8.3 m)
		0.5 TO 1 (50 TO 100)	20'-6" (6.2 m)	21'-6" (6.4 m)	22'-0" (6.7 m)
COHESIVE	STIFF	1 TO 2 (100 TO 200)	17'-6" (5.2 m)	18'-0" (5.4 m)	18'-6" (5.5 m)
	VERY STIFF	2 TO 4 (200 TO 400)	15'-0" (4.5 m)	15'-6" (4.6 m)	16'-0" (4.7 m)
HARD		>4 (>400)	13'-6" (4.0 m)	13'-6" (4.1 m)	14'-0" (4.2 m)
		N In BLOWS/FT. (N In BLOWS/0.3m)			
VERY LOOSE		<5 (<5)	19'-0" (6.3 m)	20'-0" (6.0 m)	20'-6" (6.2 m)
		5 TO 10 (5 TO 10)	17'-6" (5.7 m)	18'-0" (5.5 m)	18'-6" (5.6 m)
LOOSE		10 TO 25 (10 TO 25)	16'-6" (5.5 m)	17'-0" (5.2 m)	17'-6" (5.3 m)
		25 TO 50 (25 TO 50)	15'-6" (5.2 m)	16'-6" (4.9 m)	16'-6" (5.0 m)
DENSE		>50 (>50)	15'-0" (4.5 m)	15'-6" (4.7 m)	16'-0" (4.8 m)
VERY DENSE					



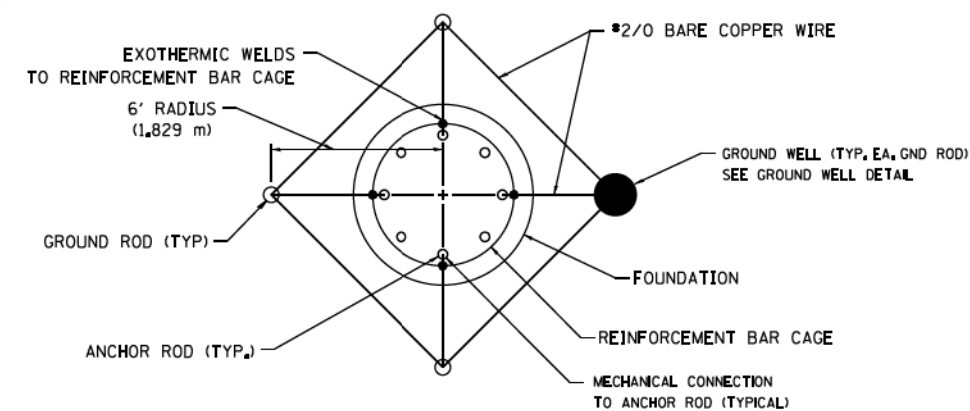
SECTION-B-B



GROUND WELL DETAIL



FOUNDATION ELEVATION



GROUND ROD DETAIL

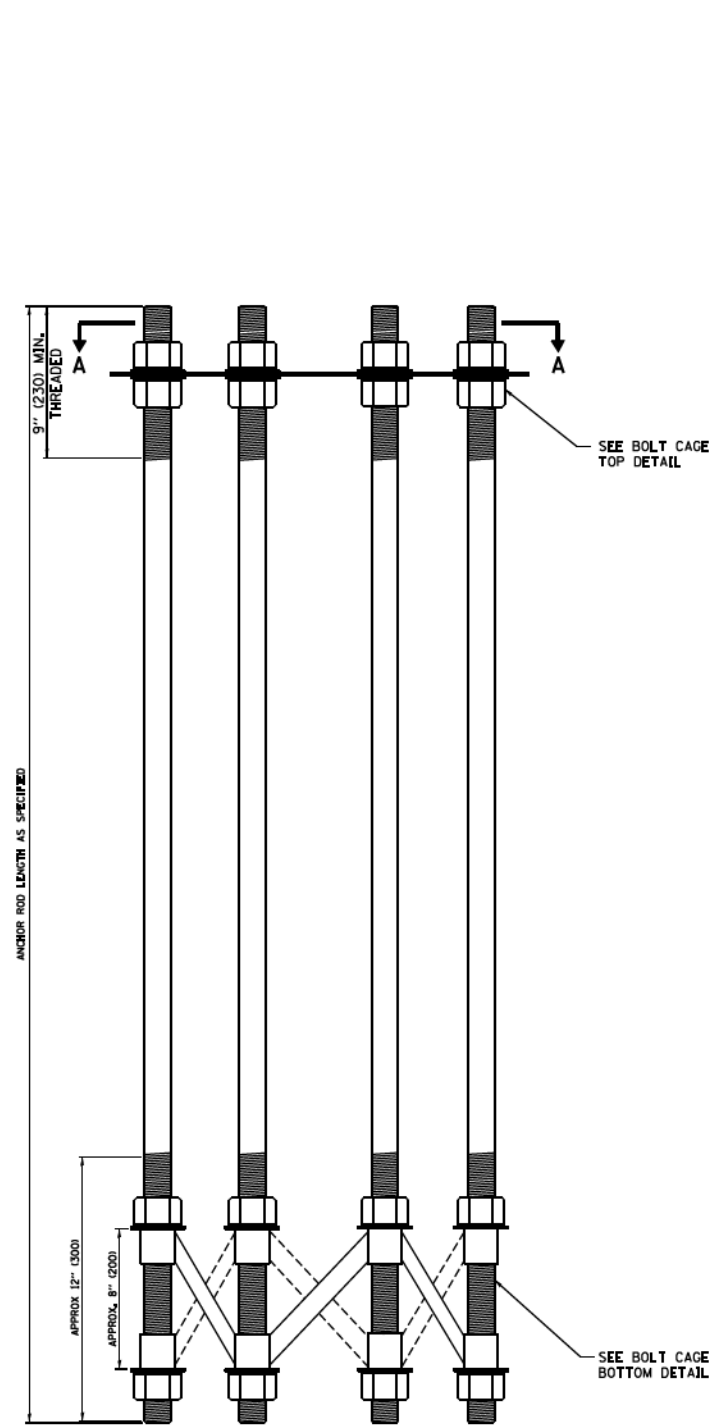
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		DATE - 03-12-10	REVISED - R. TOMSONS 04-29-16
			REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

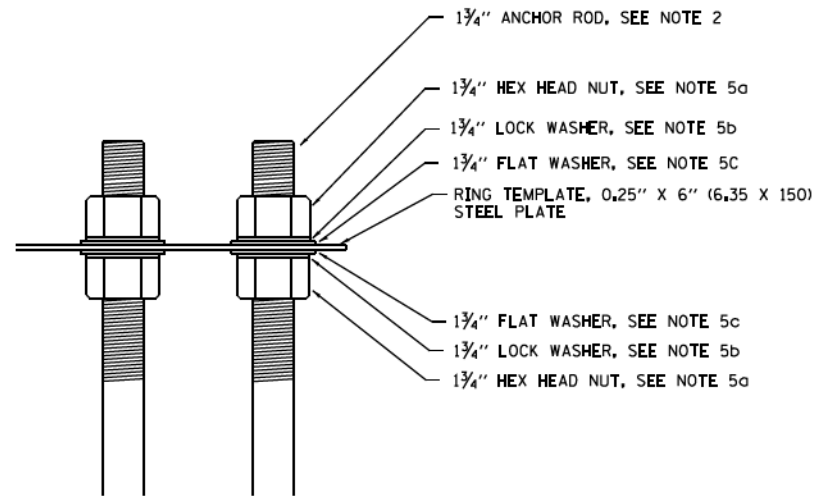
HIGH MAST LIGHT TOWER
120 FT TO 140 FT FOUNDATION DETAIL

SCALE: SHEET 20 OF 41 SHEETS STA. TO STA.

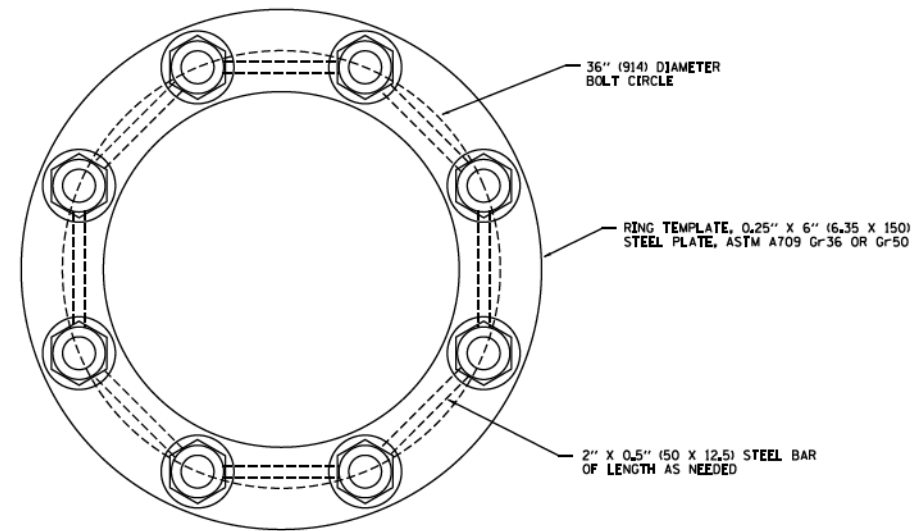
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-506		814	535
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	



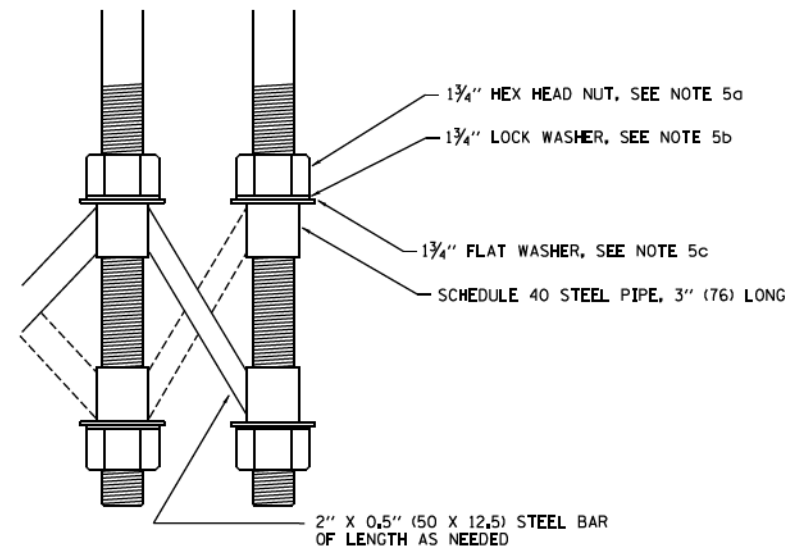
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A-A



BOLT CAGE BOTTOM

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.09.
3. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED WITH TOWER MANUFACTURERS REQUIREMENTS
4. CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
5. ANCHOR ROD CAGE HARDWARE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - a) 1.5 (38) HEX HEAD NUTS
AASHTO M291, GRADE C, C3, D, DH OR DH3
HOT DIPPED GALVANIZED AASHTO M 232
 - b) 1.5 (38) HELICAL LOCK WASHERS
ANSI/ASME B18.21.1
I.D. 1.504 - 1.524
O.D. 2.159 MAX.
WIDTH 0.292 MIN.
THICKNESS 0.375 MIN.
HARDNESS 26-45 ROCKWELL C
HOT DIPPED GALVANIZED AASHTO M232
 - c) 1.5 (38) FLAT WASHERS
AASHTO M293
O.D. 2.75
I.D. 1.56
THICKNESS 0.16 - 0.25
HARDNESS 26-45 ROCKWELL C.
HOT DIPPED GALVANIZED AASHTO M232
6. THE SHAFT LENGTHS SHALL BE BASED ON SOIL BORINGS IN THE PLANS AND OR A DETERMINATION OF SOIL CONDITIONS BY THE ENGINEER.
7. ALL FOUNDATION REINFORCEMENT STEEL SHALL BE EPOXY COATED.
8. THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.
9. ANCHOR RODS AND ALL ASSOCIATED HARDWARE ARE SHOWN AS MINIMUMS. SIZING SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.

FILE NAME =	USER NAME = footemj	DESIGNED - R. TOMSONS 09-02-10	REVISED - R. TOMSONS 02-27-13
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Default	PLOT DATE = 4/29/2016	DATE -	REVISED -

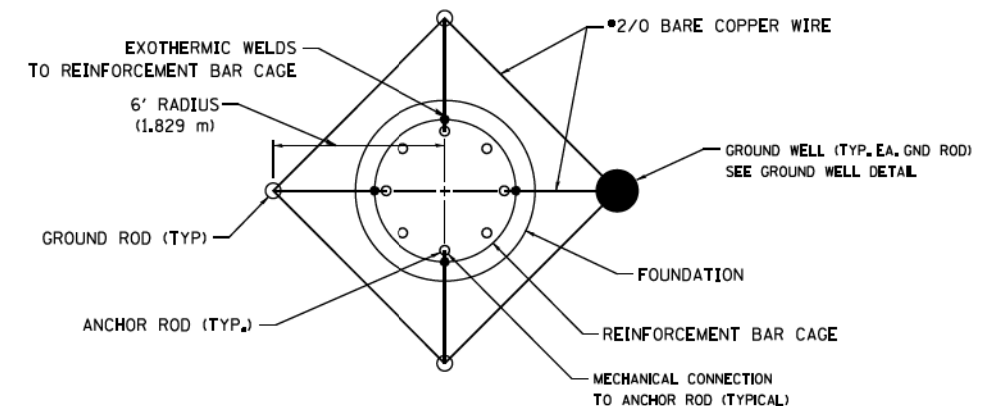
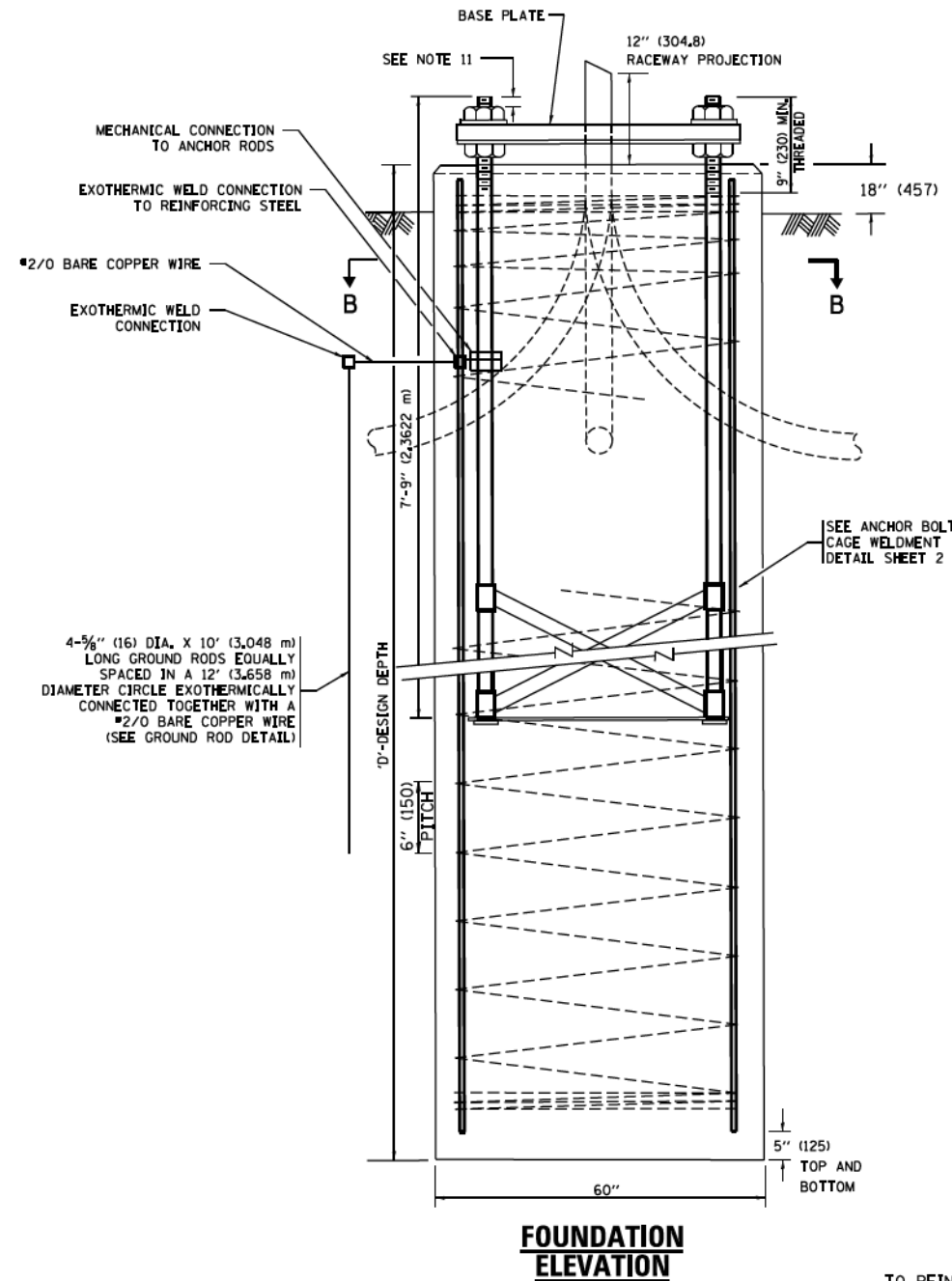
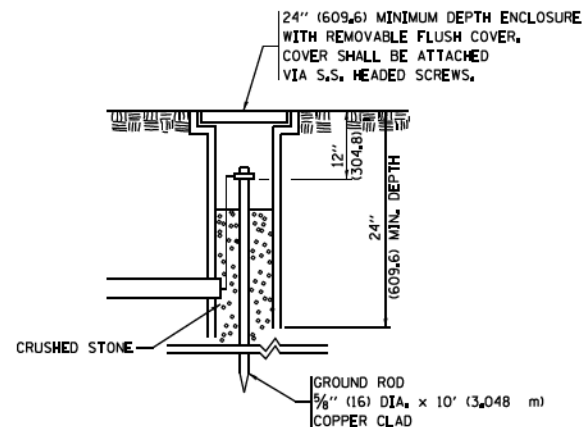
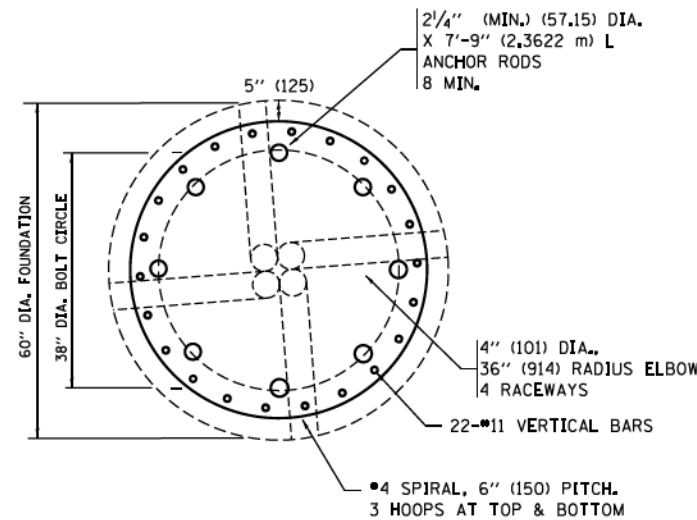
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER
120 FT TO 140 FT FOUNDATION DETAIL

SCALE: SHEET 21 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-506		814	536
			CONTRACT NO.	60X76
ILLINOIS FED. AID PROJECT				

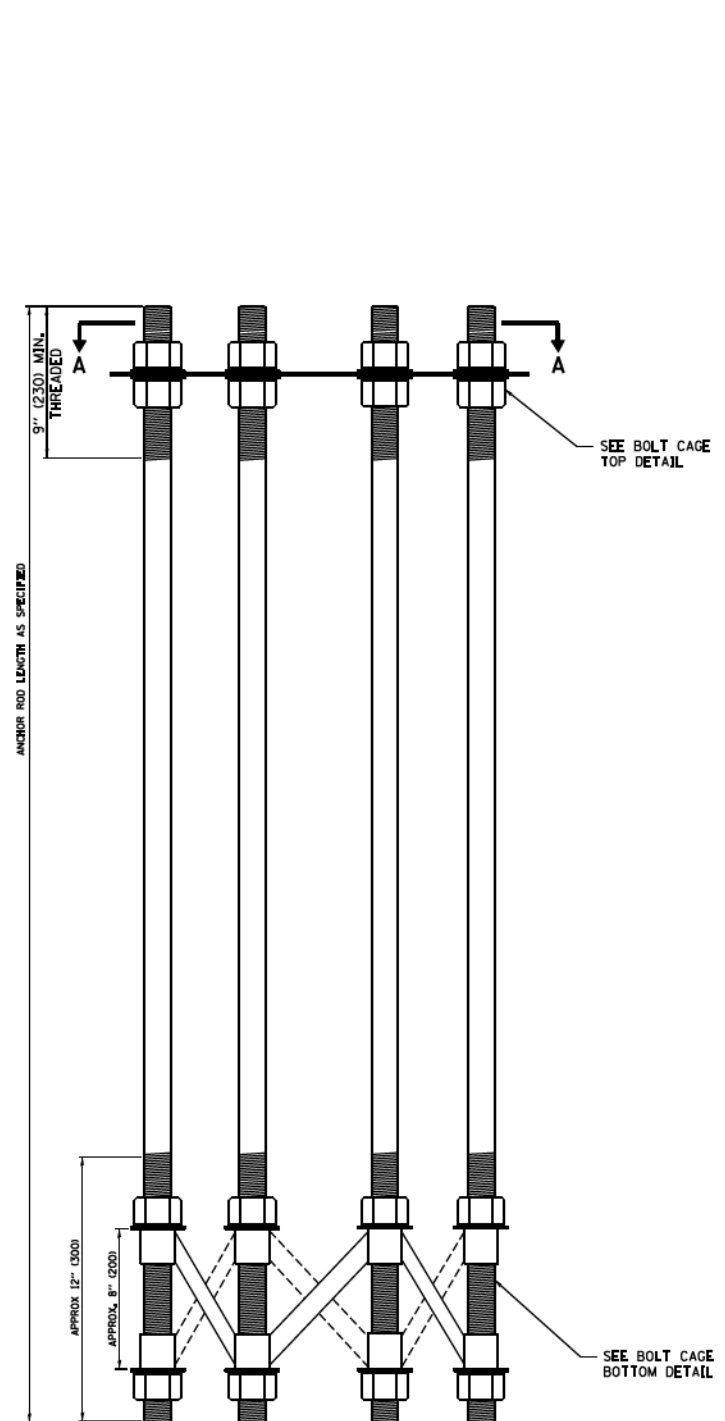
SHAFT LENGTH (D) TABLE				
SOIL CONSISTENCY		AVERAGE STRENGTH	LIGHT TOWER MOUNTING HEIGHT	
		Qu In tsf (Qu In kPa)	150 FT. (46 m)	160 FT. (48.8 m)
COHESIVE	SOFT	<0.5 (<50)	28'-6" (8.7 m)	30'-0" (9.1 m)
	MEDIUM	0.5 TO 1 (50 TO 100)	23'-6" (7.0 m)	24'-0" (7.3 m)
COHESIVE	STIFF	1 TO 2 (100 TO 200)	19'-6" (5.9 m)	20'-0" (6.1 m)
	VERY STIFF	2 TO 4 (200 TO 400)	17'-0" (5.1 m)	17'-6" (5.2 m)
	HARD	>4 (>400)	15'-6" (4.5 m)	15'-6" (4.5 m)
		N In BLOWS/FT. (N In BLOWS/0.3m)		
GRANULAR	VERY LOOSE	<5 (<5)	21'-0" (6.3 m)	21'-6" (6.5 m)
	LOOSE	5 TO 10 (5 TO 10)	19'-0" (5.7 m)	19'-6" (5.9 m)
GRANULAR	MEDIUM	10 TO 25 (10 TO 25)	18'-0" (5.5 m)	18'-6" (5.6 m)
	DENSE	25 TO 50 (25 TO 50)	17'-0" (5.2 m)	17'-6" (5.3 m)
	VERY DENSE	>50 (>50)	16'-6" (4.9 m)	17'-0" (5.1 m)



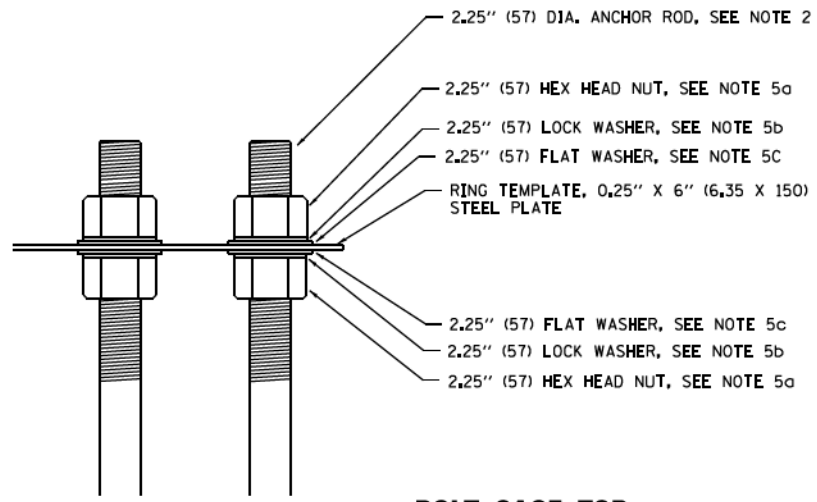
DESIGN NOTES

- ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
- THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.
- THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.
- THE TOP OF THE FOUNDATION TO 18" (450) BELOW GRADE SHALL BE FORMED.
- SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.
- THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.
- ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.9.
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- REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10
- TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.
- A MINIMUM OF THREE FULL THREADS SHALL REMAIN EXPOSED AFTER LIGHT TOWER IS INSTALLED.
- ALL GROUNDING INDICATED IN THE PLANS SHALL BE INCLUDED IN THE COST OF THE LIGHT TOWER FOUNDATION AND SHALL NOT BE PAID FOR SEPARATELY.
- CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
- ANCHOR ROD QUANTITY, DIAMETER, AND LENGTH SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.
- COORDINATE THE ROD CIRCLE DIAMETER OF THE TOWER WITH THE DIAMETER OF THE ANCHOR ROD CAGE.
- THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.

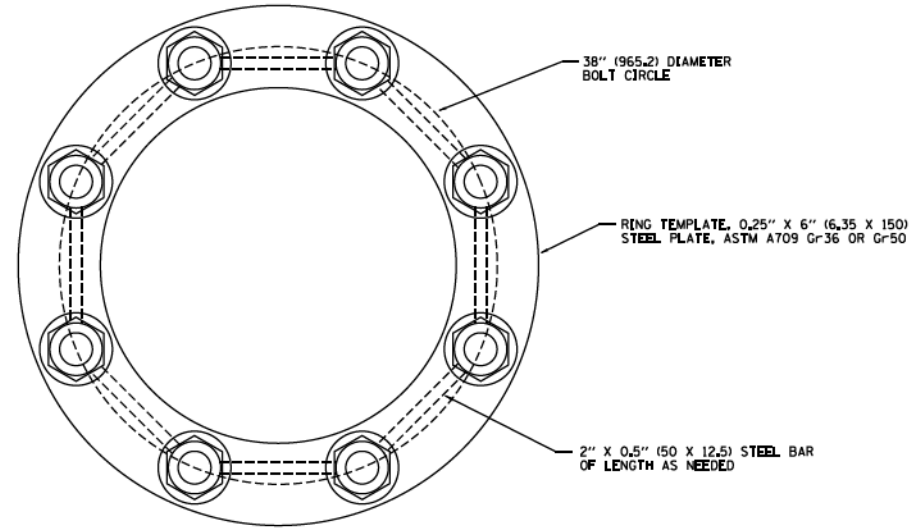
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PLOT SCALE = 50.000' / in.	CHECKED -	REVISED -	SCALE			SHEET 22 OF 41 SHEETS	STA. TO STA.	BE-511	CONTRACT NO. 60X76	814	537
PLOT DATE = 4/29/2016	DATE - 09-02-10	REVISED -	ILLINOIS FED. AID PROJECT								



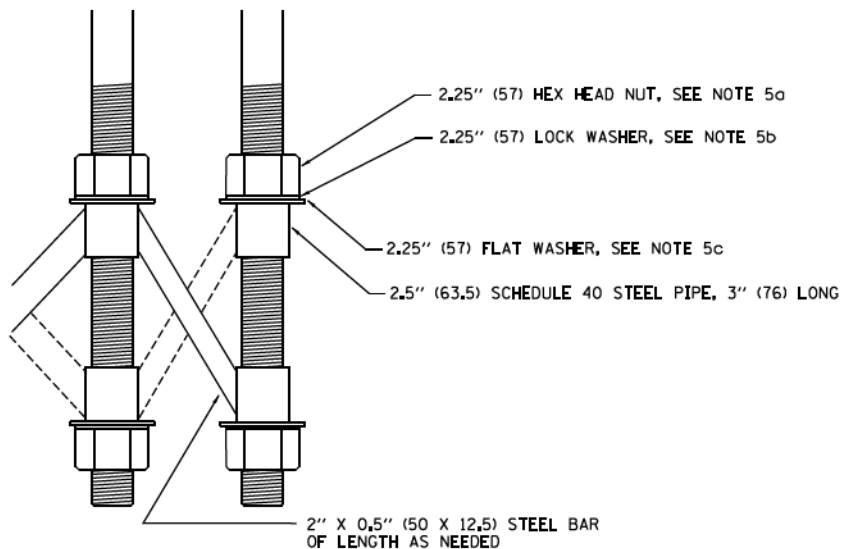
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A-A

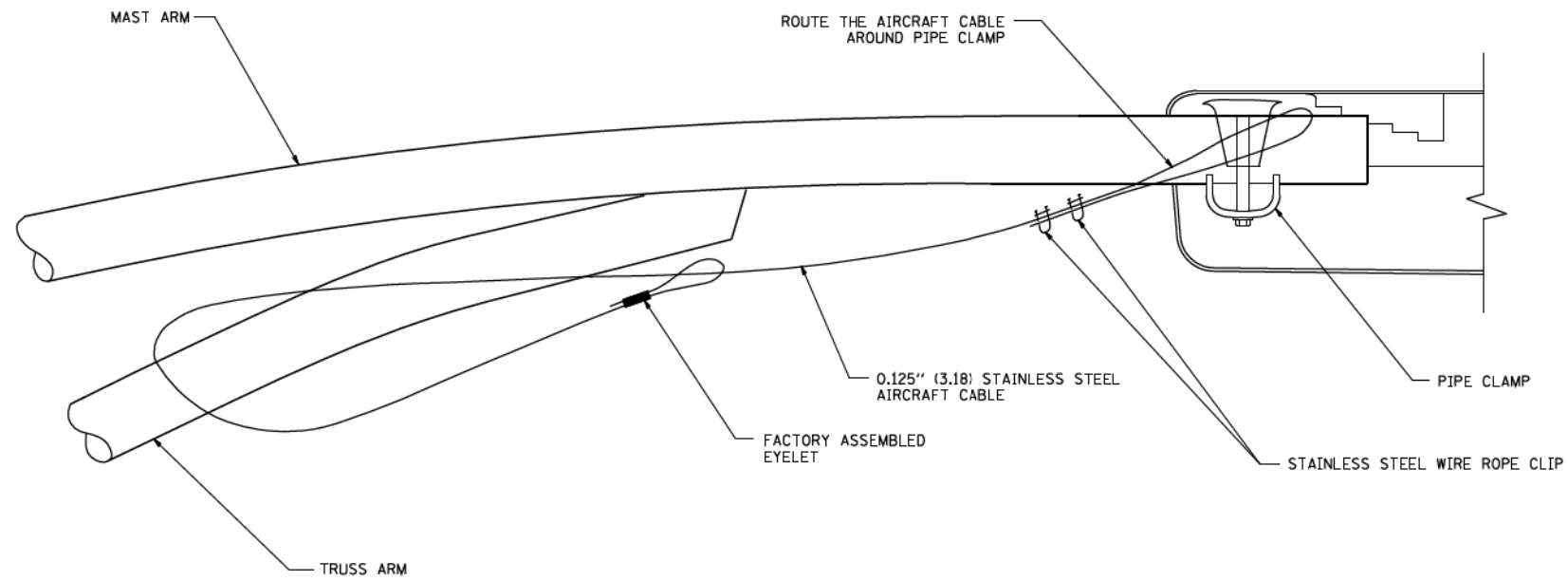


BOLT CAGE BOTTOM

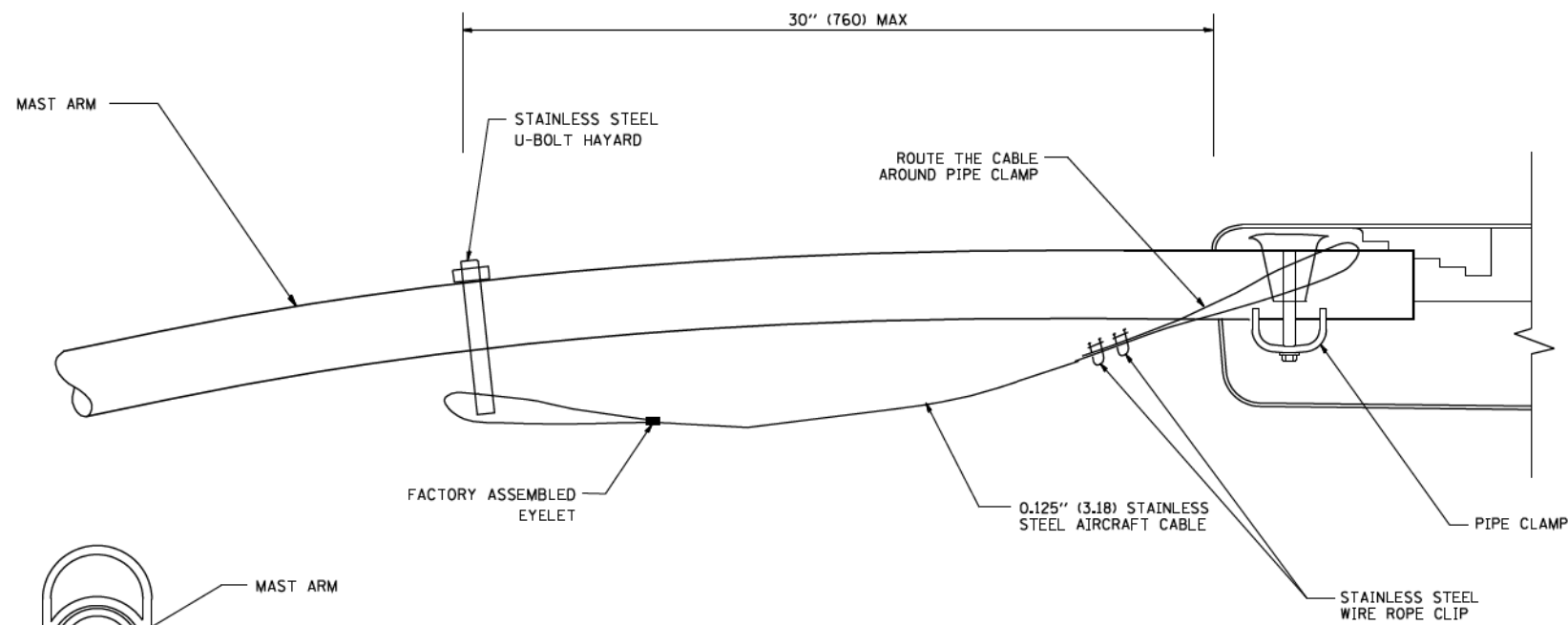
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.09.
3. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED WITH TOWER MANUFACTURERS REQUIREMENTS
4. CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
5. ANCHOR ROD CAGE HARDWARE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - a) 1.5 (38) HEX HEAD NUTS
AASHTO M291, GRADE C, C3, D, DH OR DH3
HOT DIPPED GALVANIZED AASHTO M 232
 - b) 1.5 (38) HELICAL LOCK WASHERS
ANSI/ASME B18.21.1
I.D. 1.504 - 1.524
O.D. 2.159 MAX.
WIDTH 0.292 MIN.
THICKNESS 0.375 MIN.
HARDNESS 26-45 ROCKWELL C
HOT DIPPED GALVANIZED AASHTO M232
 - c) 1.5 (38) FLAT WASHERS
AASHTO M293
O.D. 2.75
I.D. 1.56
THICKNESS 0.16 - 0.25
HARDNESS 26-45 ROCKWELL C
HOT DIPPED GALVANIZED AASHTO M232
6. THE SHAFT LENGTHS SHALL BE BASED ON SOIL BORINGS IN THE PLANS AND OR A DETERMINATION OF SOIL CONDITIONS BY THE ENGINEER.
7. ALL FOUNDATION REINFORCEMENT STEEL SHALL BE EPOXY COATED.
8. THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.
9. ANCHOR RODS AND ALL ASSOCIATED HARDWARE ARE SHOWN AS MINIMUMS. SIZING SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.

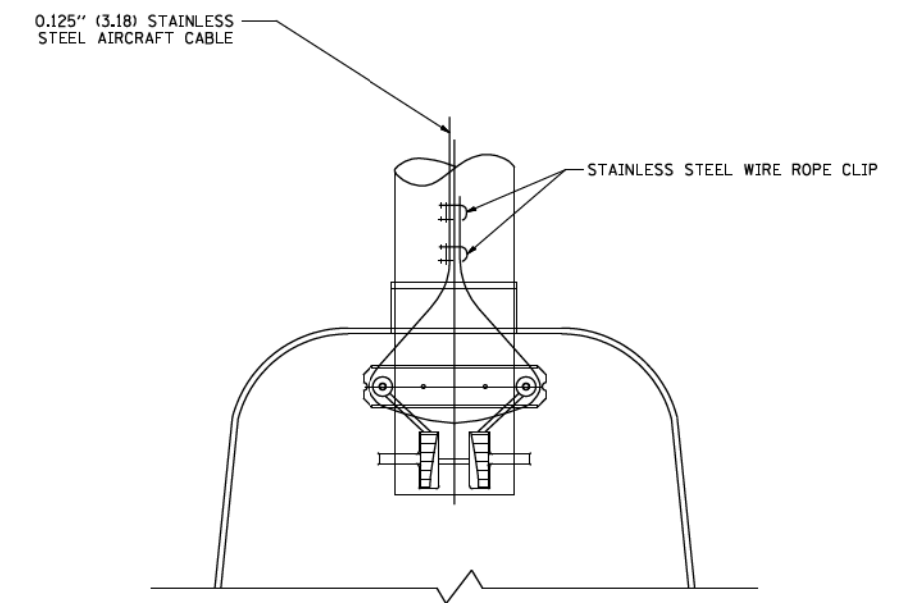
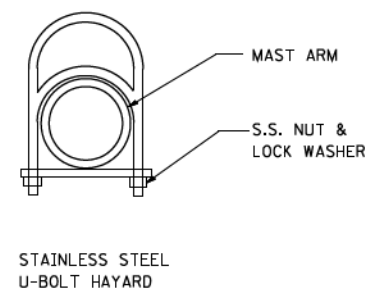
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Default	Documents\DOT Offices\District 1\Projects\Dist 1\022111\CADDeta\CADsheets\be511.dgn	CHECKED -	REVISED - R. TOMSONS 04-29-16		SCALE:	SHEET 23	OF 41	SHEETS	STA.	TO STA.	BE-511	CONTRACT NO. 60X76	814	538
	PLOT SCALE = 50.000' / in.	DATE - 09-02-10	REVISED -		ILLINOIS FED. AID PROJECT									



SIDE VIEW (TRUSS ARM)
N.T.S.



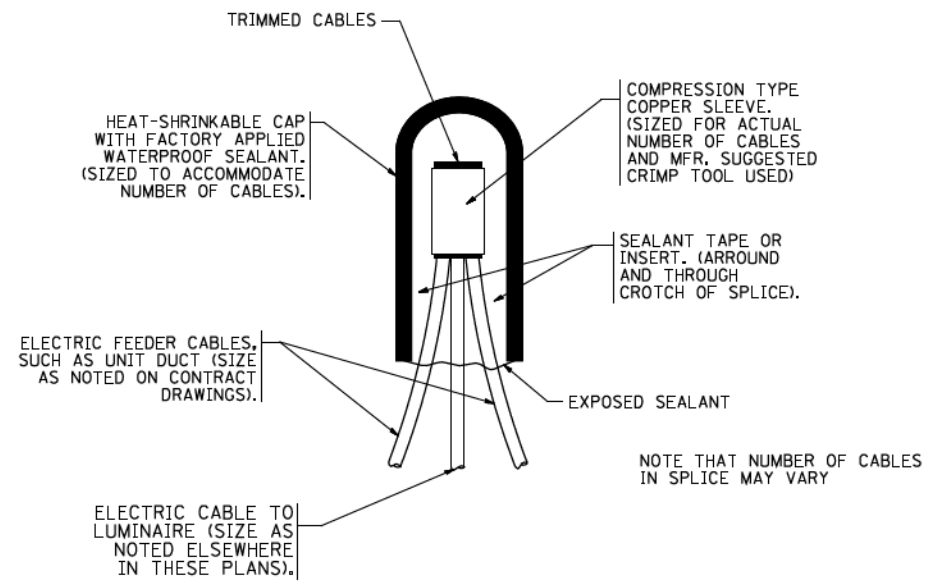
SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



BOTTOM VIEW
N.T.S.

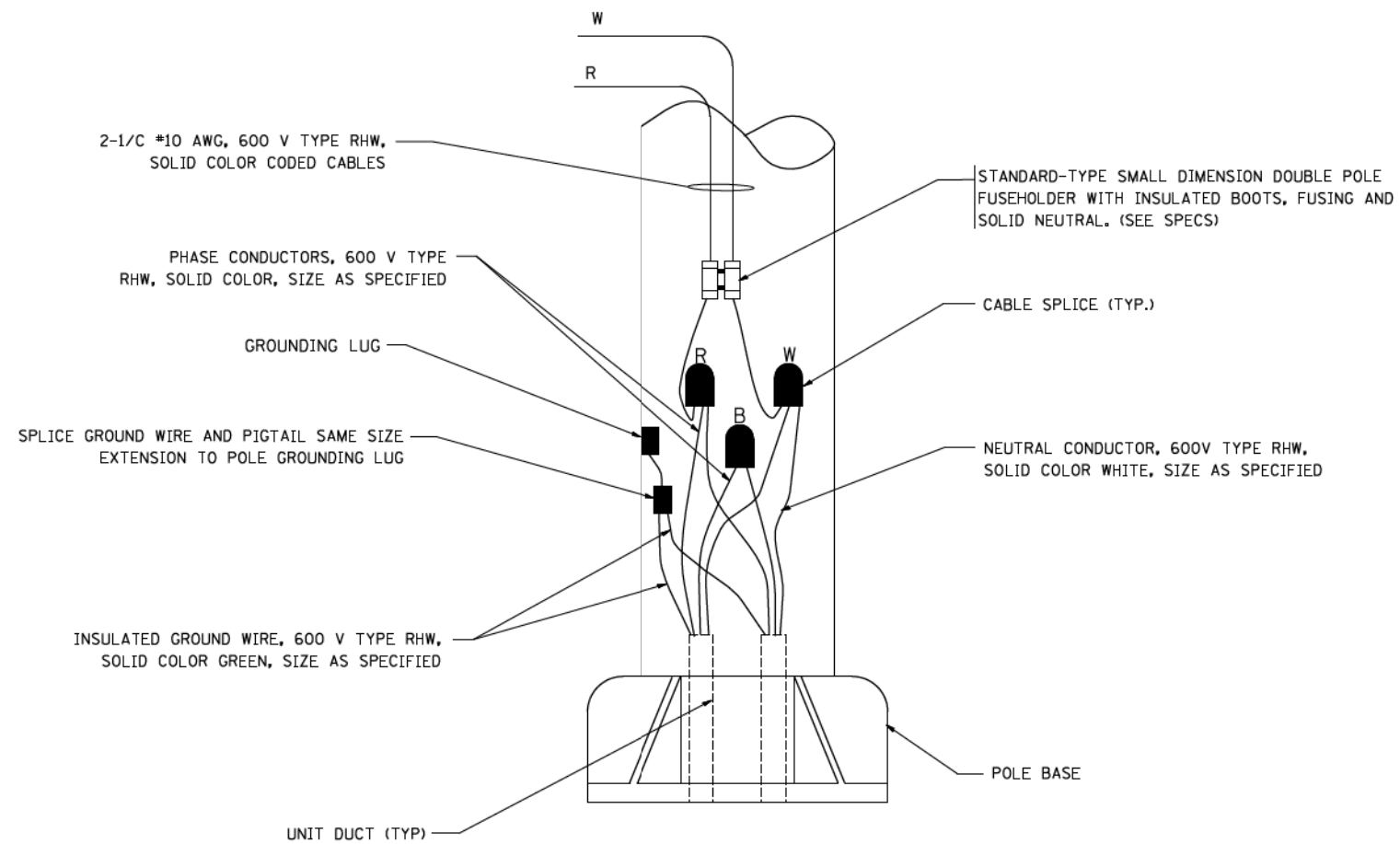
- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
 3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\diststd\22x34\be701.dgn	USER NAME = geglano	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000' / IN.	DRAWN -	REVISED -								814	539
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -			SCALE: NONE	SHEET NO. 24 OF 41 SHEETS	STA.	TO STA.	CONTRACT NO. 60X76		FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT



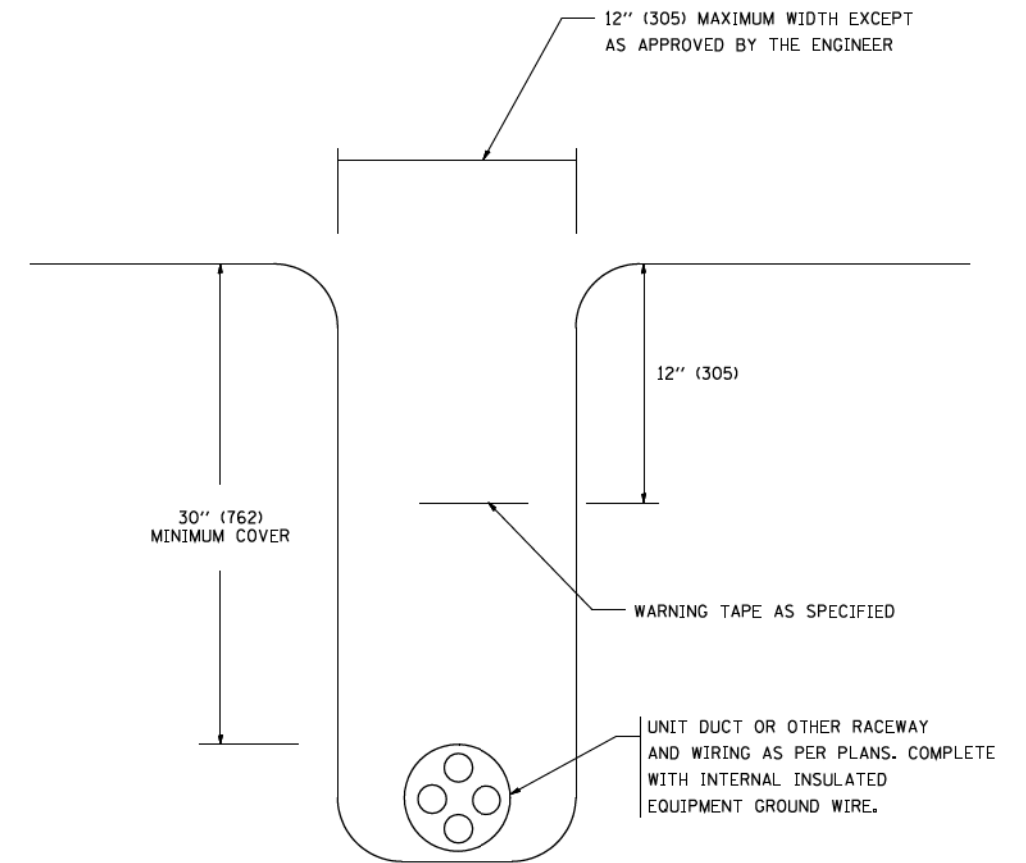
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

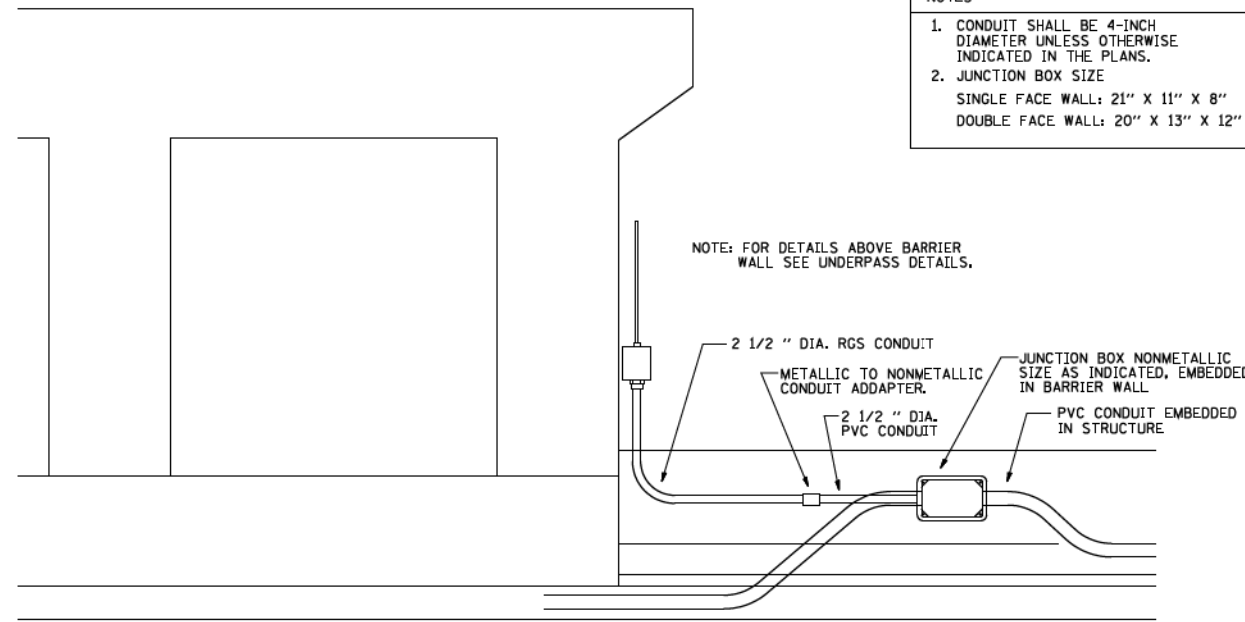
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PLOT DATE = 1/4/2008	

DESIGNED -	REVISD - 08-08-03
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS	
SHEET A	
SCALE: NONE	SHEET NO. 25 OF 41 SHEETS
STA.	TO STA.

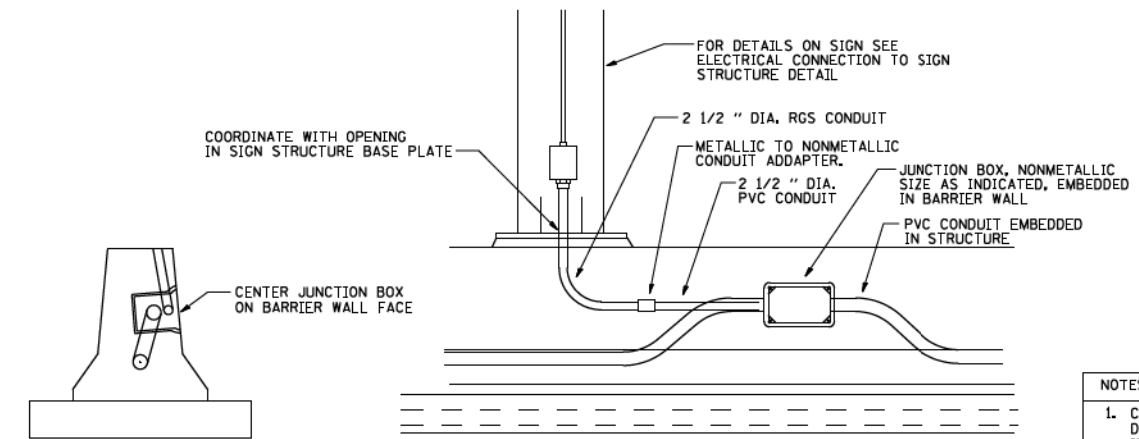
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	540
BE-702			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT				



- NOTES
1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
 2. JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

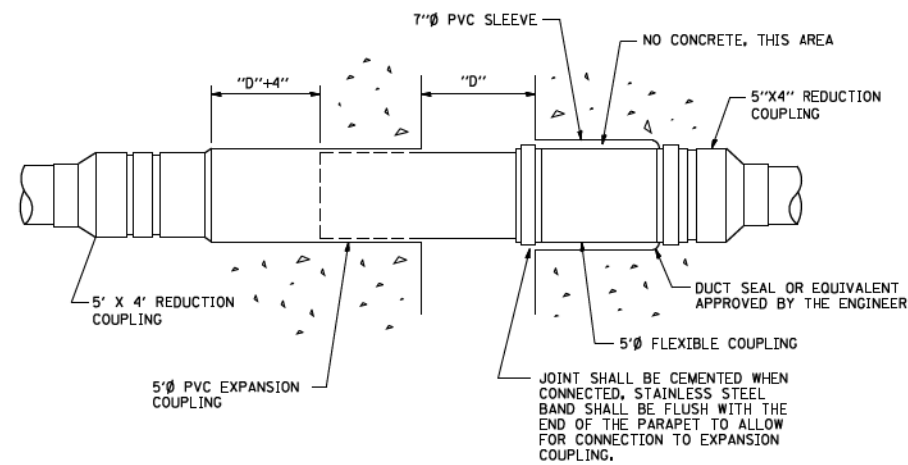
NOTE: FOR DETAILS ABOVE BARRIER WALL SEE UNDERPASS DETAILS.

ED - BWD
ELECTRIC CONNECTION TO UNDERPASS LIGHTING

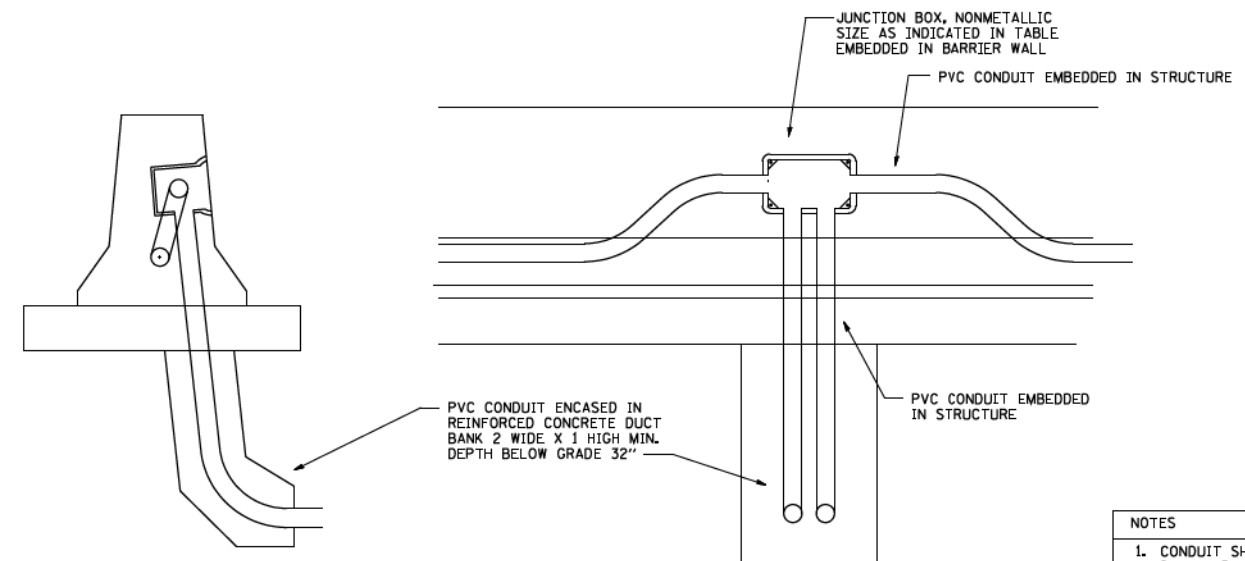


- NOTES
1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
 2. JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

ED - SGN
JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING

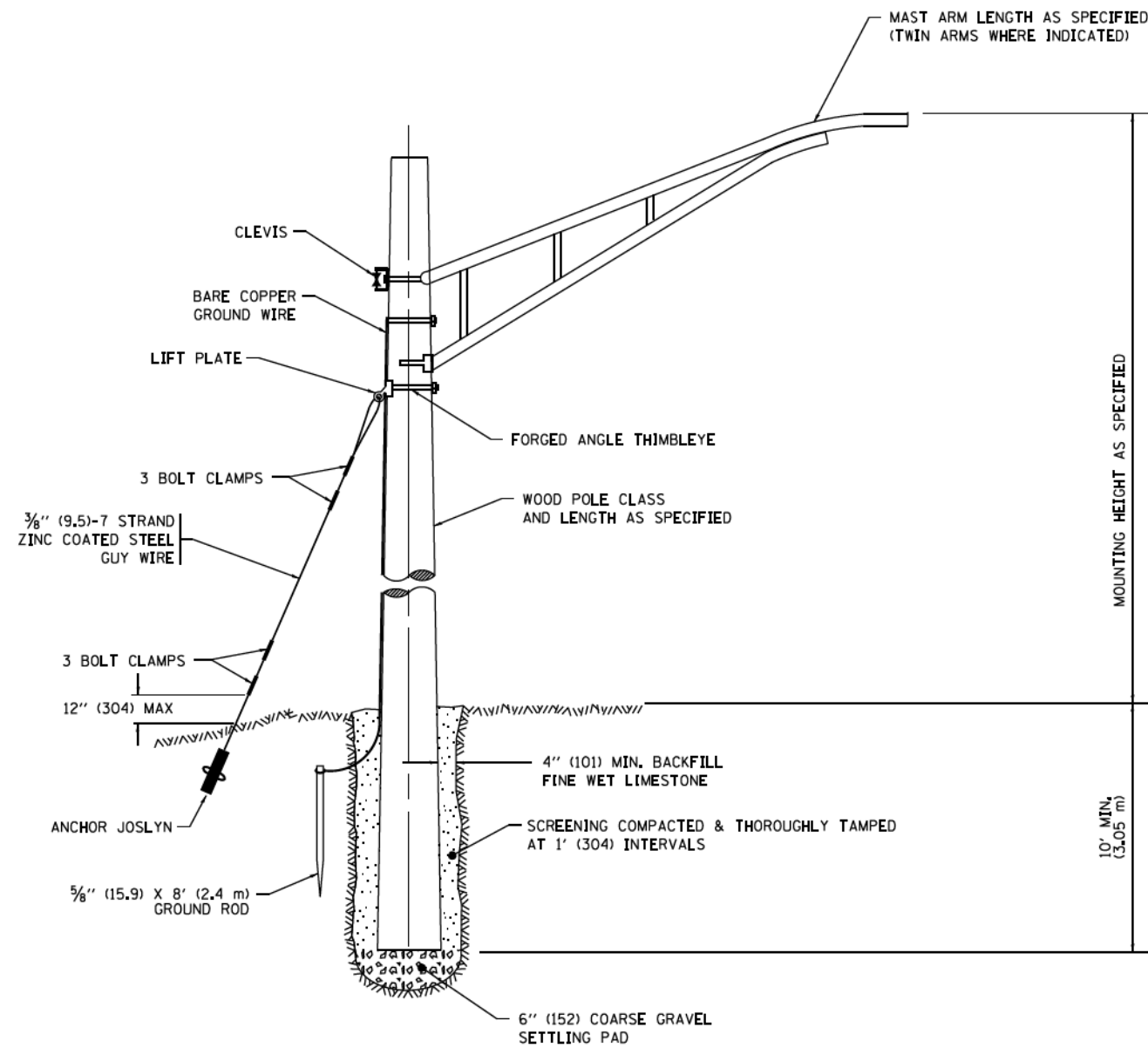


INSTALLATION OF CONDUIT
IN BRIDGE PARAPET EXPANSION JOINT
(N.T.S.)

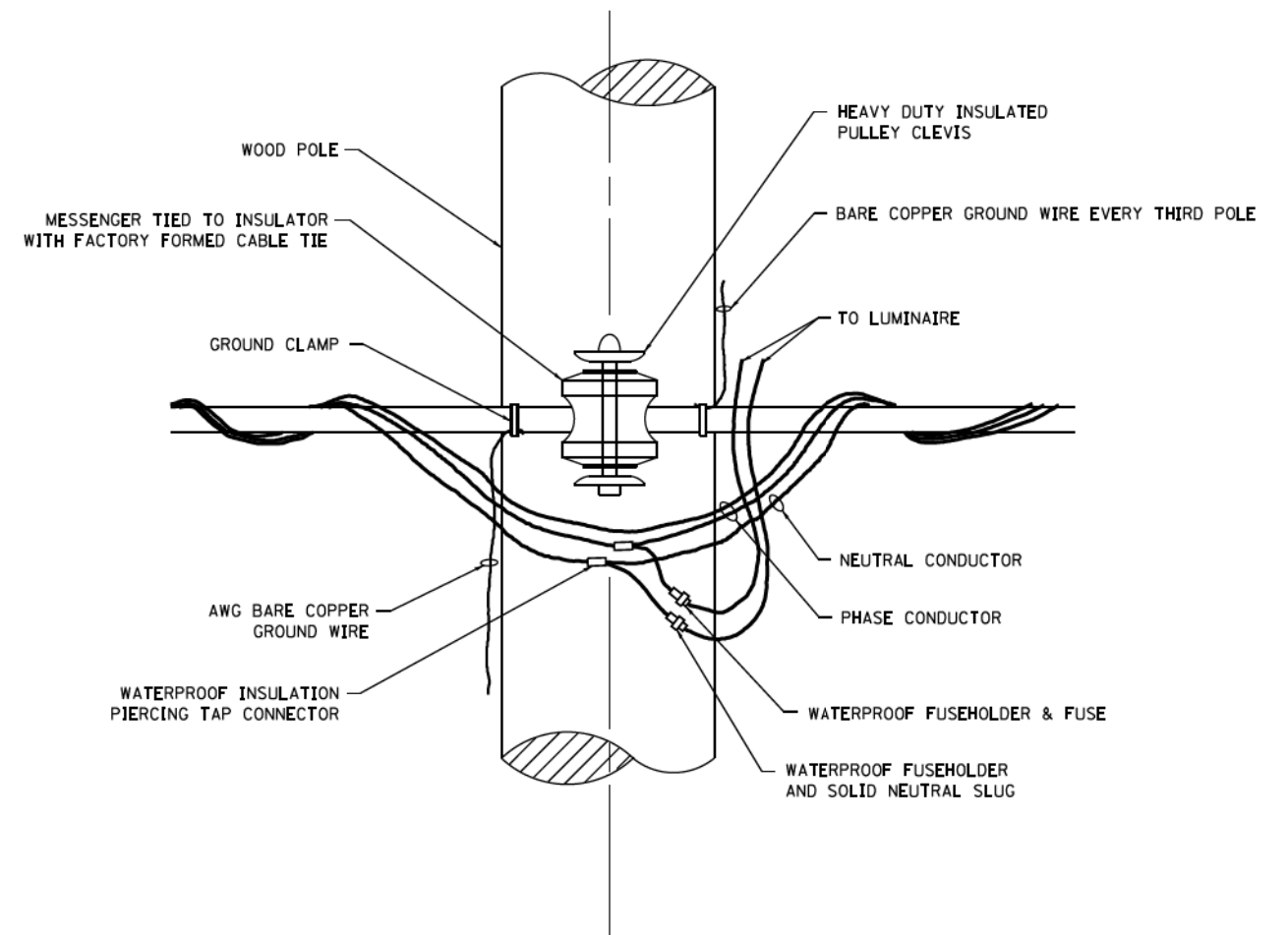


- NOTES
1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
 2. JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

ED - BW
JUNCTION BOX EMBEDDED IN BARRIER WALL



TEMPORARY LIGHT POLE DETAIL

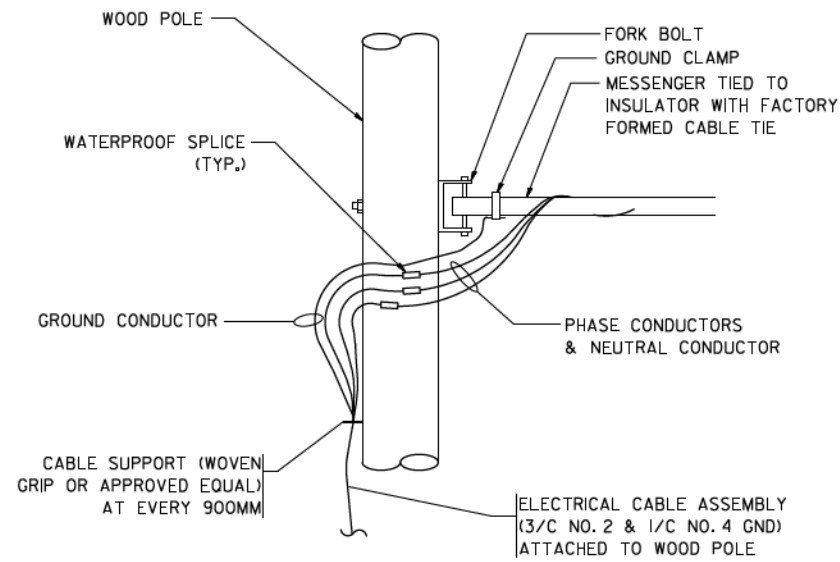


TEMPORARY LIGHT POLE ATTACHMENT DETAIL

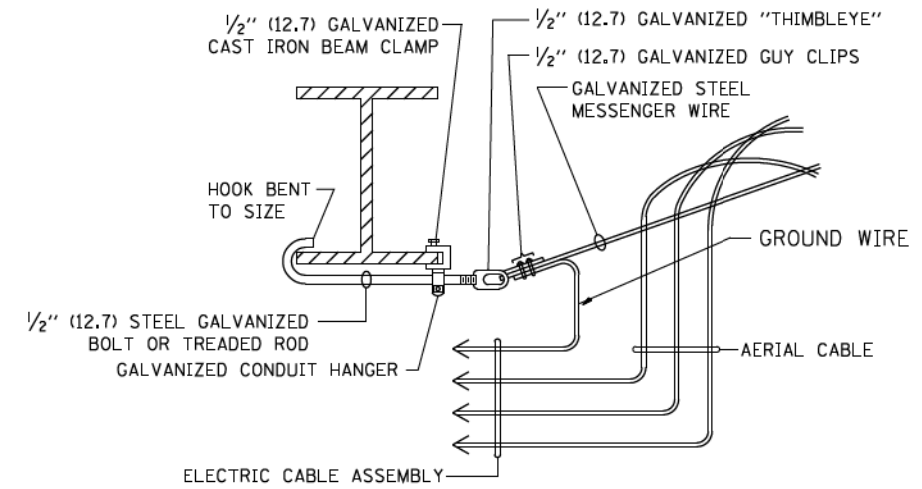
NOTE:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. MAST ARM SHALL BE RATED FOR THE SPECIFIED MOUNTING HEIGHT.

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY LIGHT POLE DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw\11084EBID\INTEG\Illinois.gov\FWDDT\Documents\DOT Offices\District 1\Projects\Dist 1\082716\CAD\Detail\CADsheets\be800.dgn	082716	REVISOR - R.T. 07-26-16	REVISED -								814	542
Default	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED -		BE-800			CONTRACT NO. 60X76				
	PLOT DATE = 9/1/2016	DATE -	REVISED -		SCALE: NONE	SHEET 27	OF 41 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			



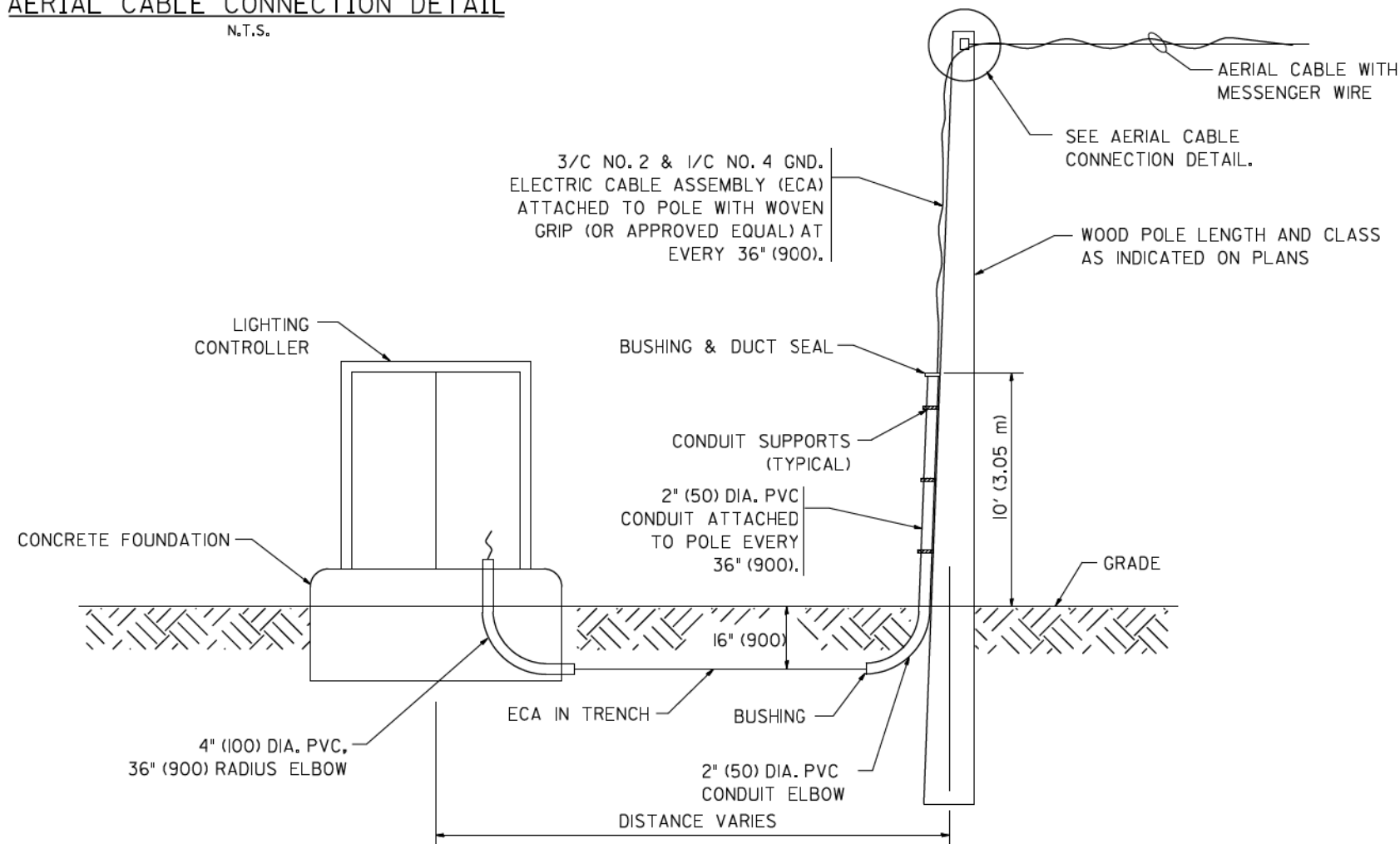
AERIAL CABLE CONNECTION DETAIL
N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.



WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL
N.T.S.

FILE NAME =
W:\diststd\22x34\be901.dgn

USER NAME = geglanoht
PLOT SCALE = 50.000' / IN.
PLOT DATE = 1/4/2008

DESIGNED -
DRAWN -
CHECKED -
DATE -

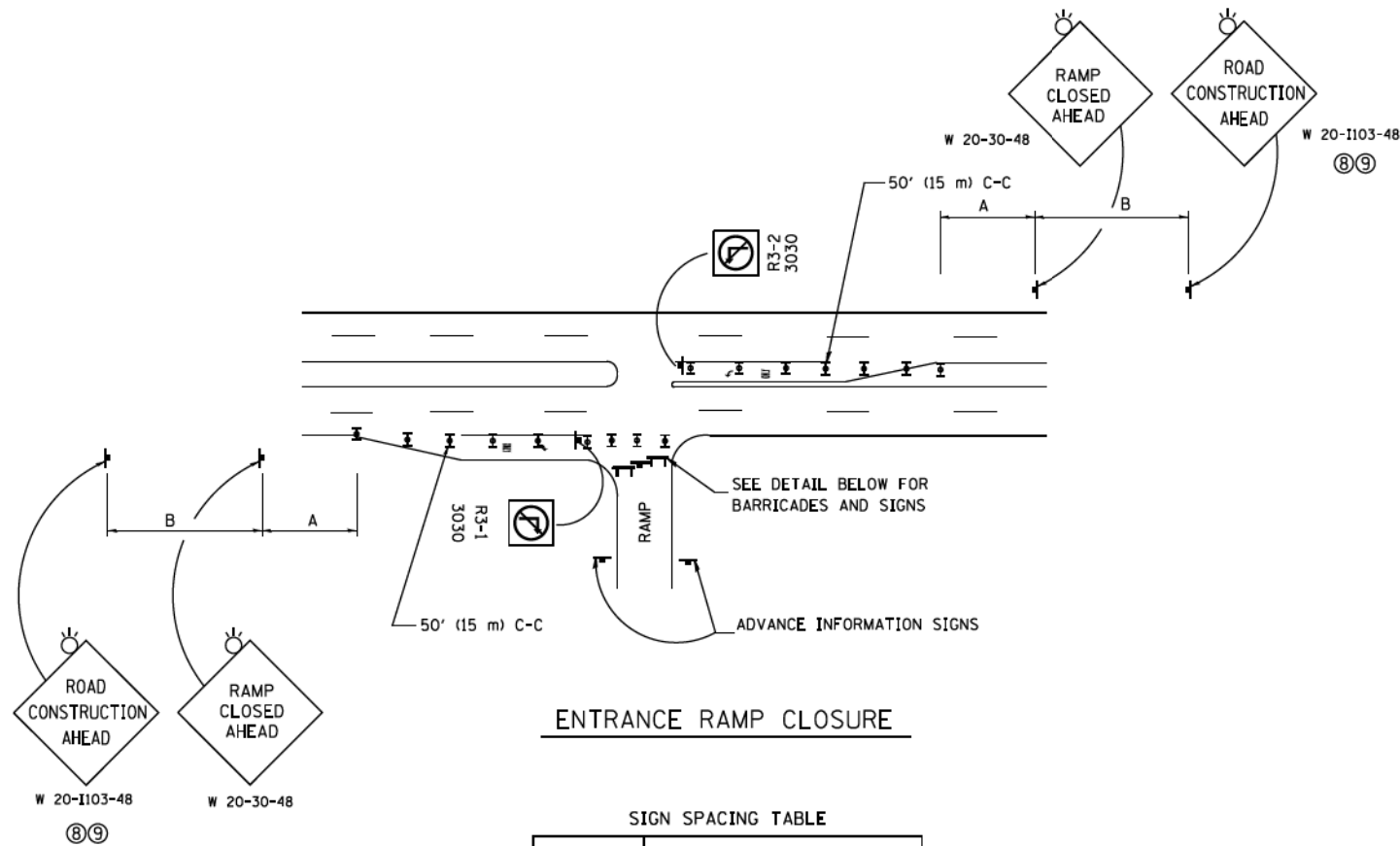
REVISED - 08-08-03
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY AERIAL CABLE INSTALLATION

SCALE: NONE SHEET NO. 28 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	543
BE-801			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. J ILLINOIS FED. AID PROJECT				

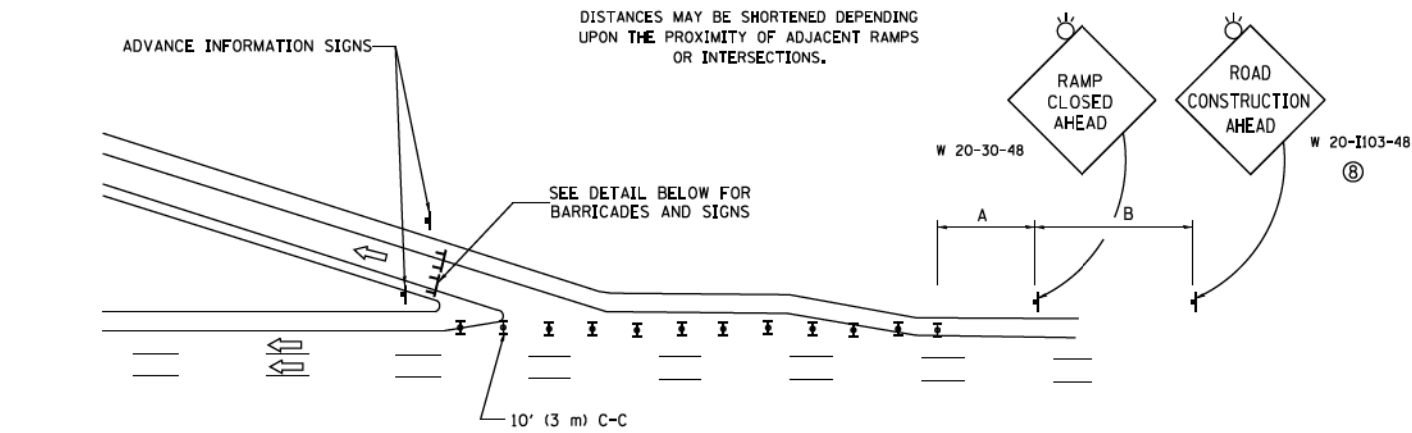


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

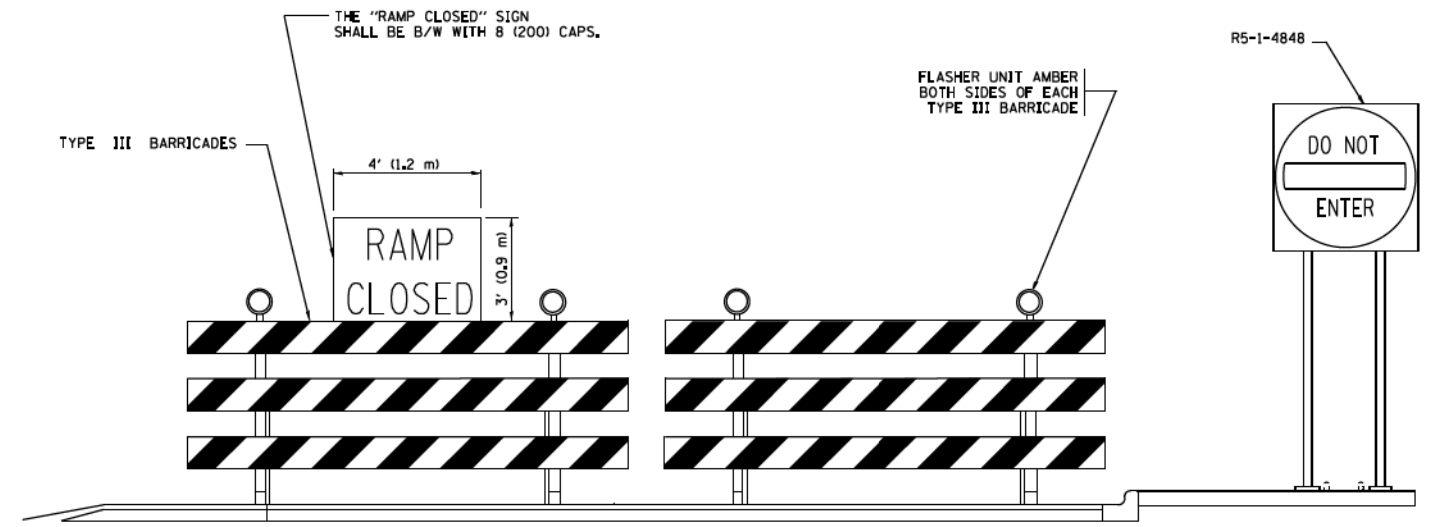
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

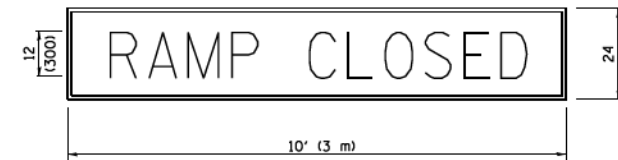
SYMBOLS

- ▬ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ▬ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

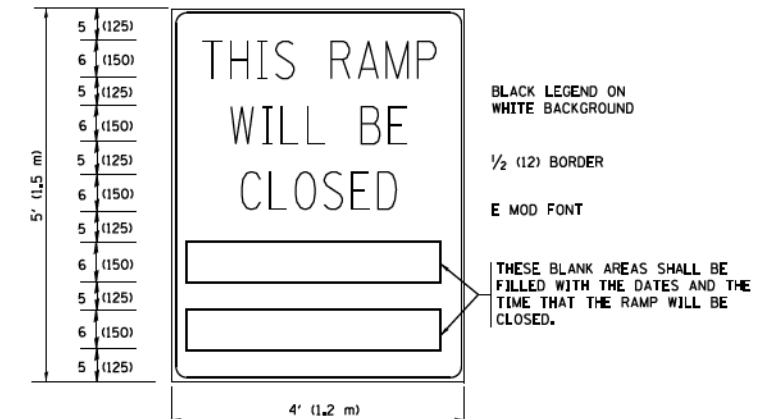
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

1/2 (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

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

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

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, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- 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 FOUR (4) DAYS 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 SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

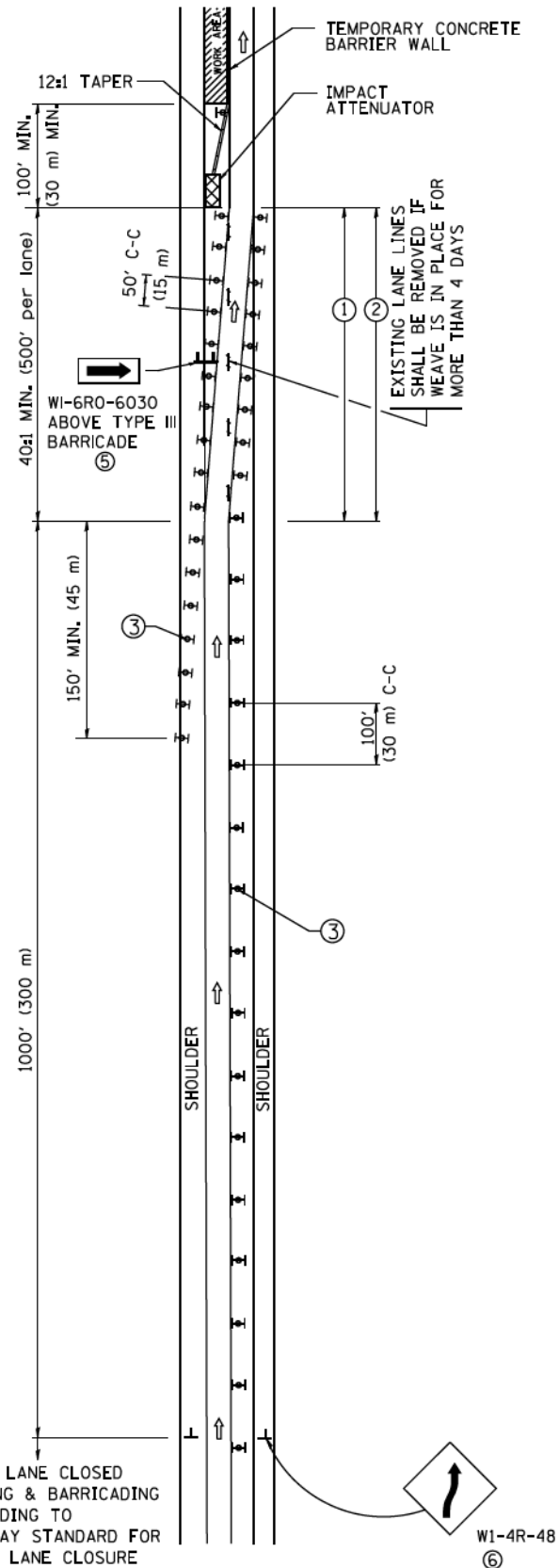
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = footemj	DESIGNED - DWS	REVISED - JAF 02-06
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	PLOT DATE = 7/8/2013	DATE - 02-83	REVISED - MD 06-13

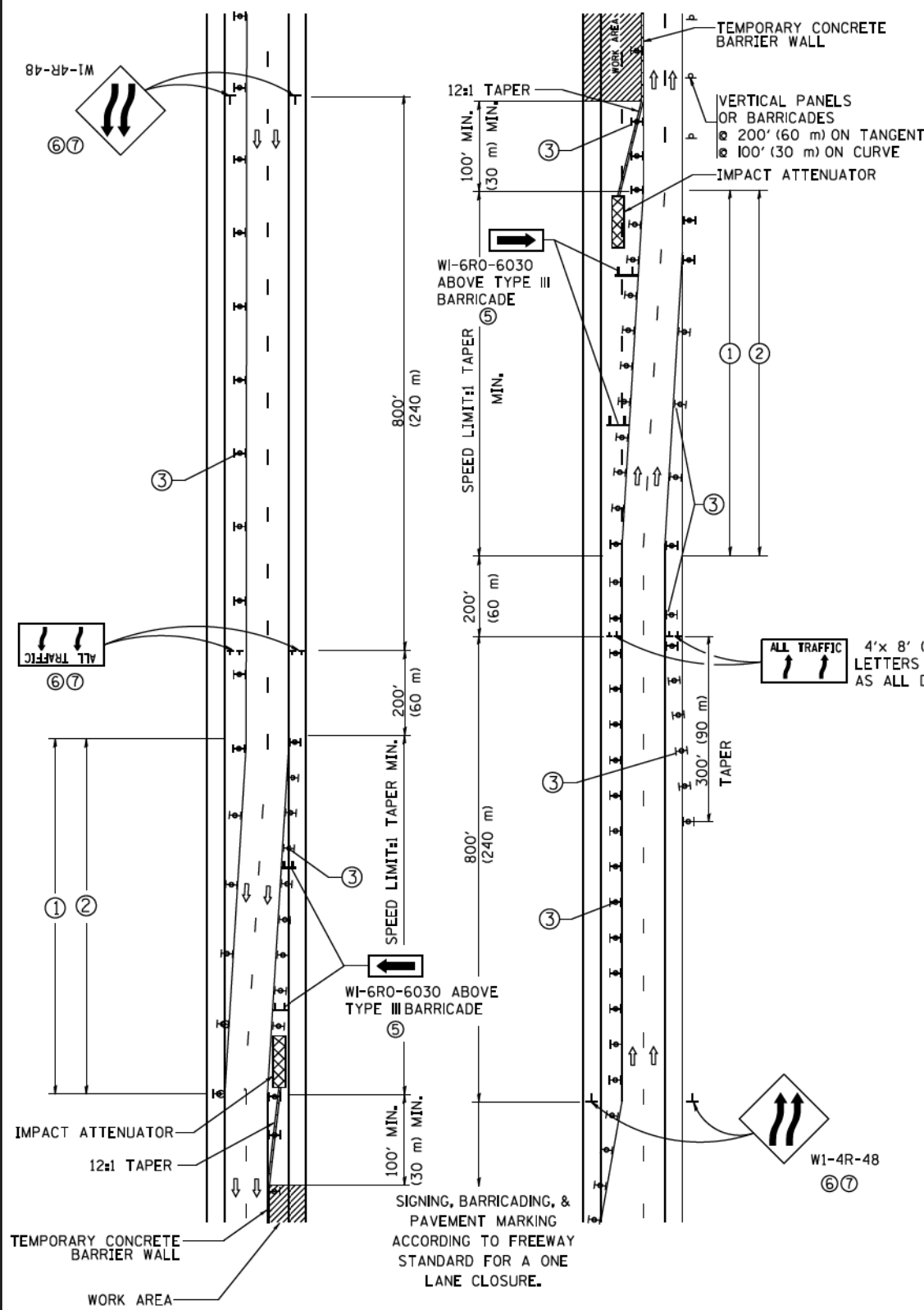
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ENTRANCE AND EXIT RAMP CLOSURE DETAILS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NONE	SHEET NO. 29 OF 41 SHEETS	STA.	TO STA.		814	544
				TC-08	CONTRACT NO. 60X76	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

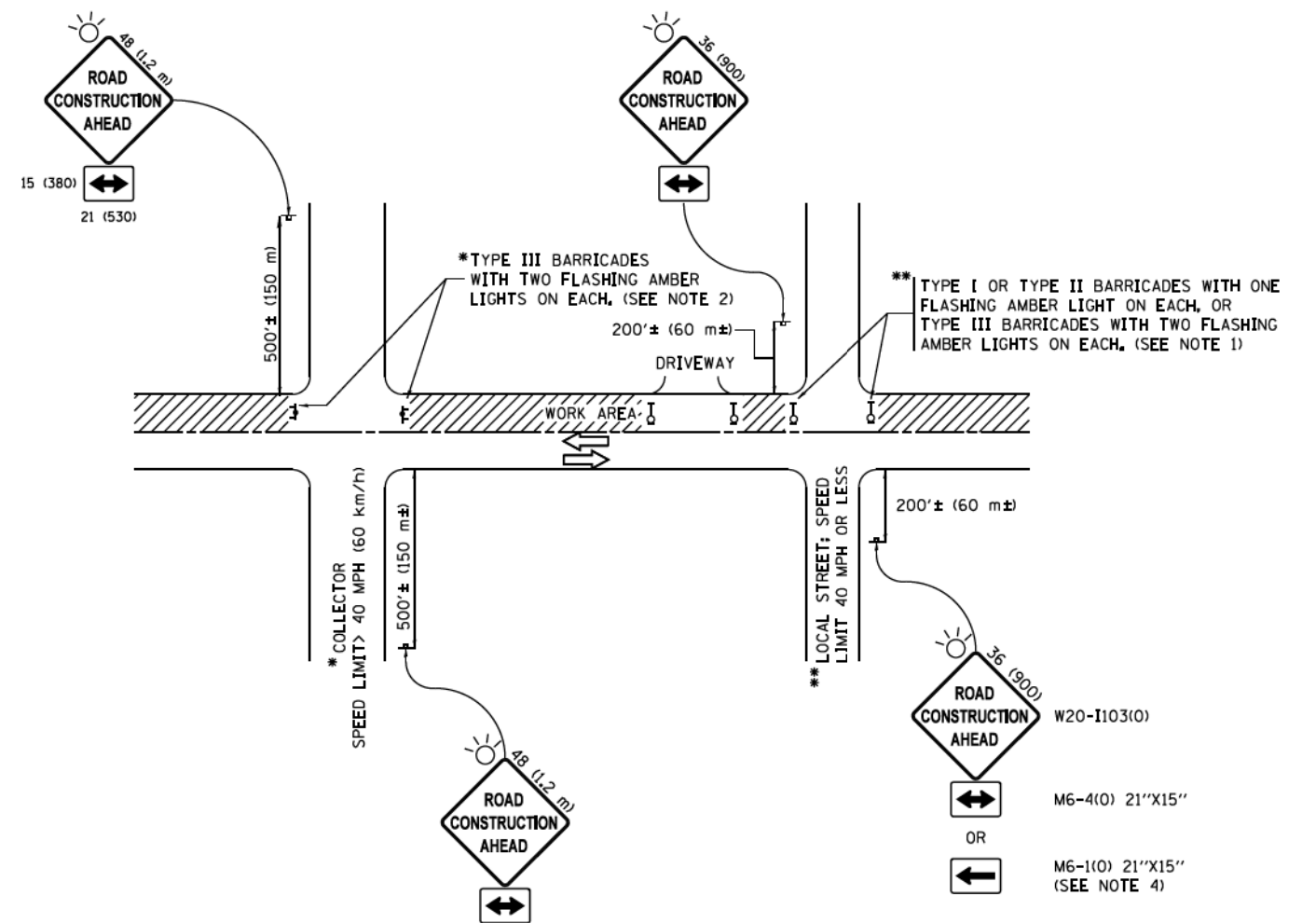
- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ┌ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ⊞ TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- ⊞ IMPACT ATTENUATOR
- W1-4R-48
- W24-1-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = footemj	DESIGNED - DWS	REVISED - JAF 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pw\work\p\dot\footemj\d0108315\td09.dgn		DRAWN -	REVISED - SPB 01-07		SCALE: NONE	SHEET NO. 30 OF 41 SHEETS	STA.	TO STA.	TC-09		814	545
		CHECKED -	REVISED - SPB 12-09									
		DATE - 02-87	REVISED - MD 06-13									
								CONTRACT NO. 60X76				
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES:

- 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:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - 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.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - 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.
 - 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.
- 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 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).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

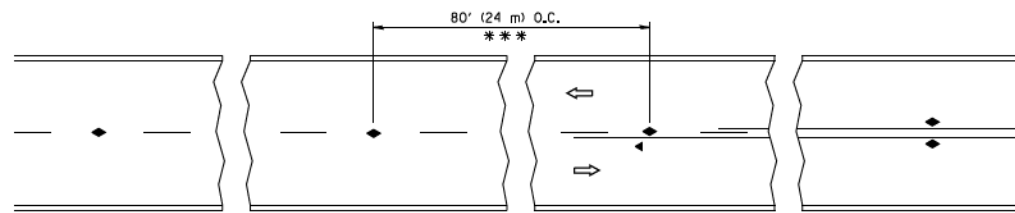
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Default	PLOT SCALE = 50.000' / in.	DATE - 06-89	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016		REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

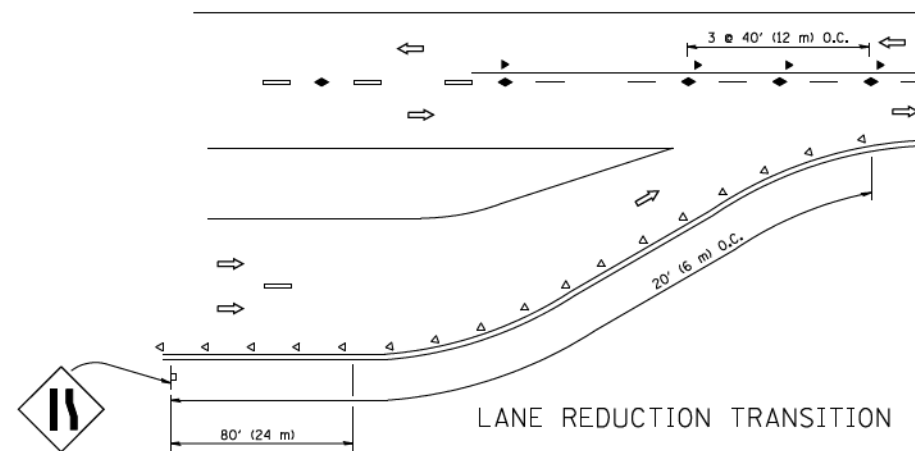
SCALE: NONE SHEET 31 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	546
TC-10			CONTRACT NO. 60X76	
ILLINOIS FED. AID PROJECT				

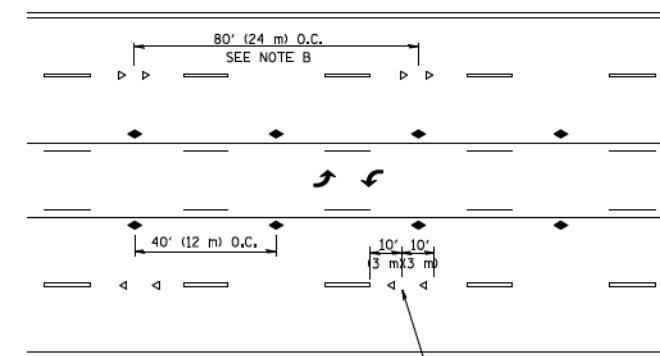


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

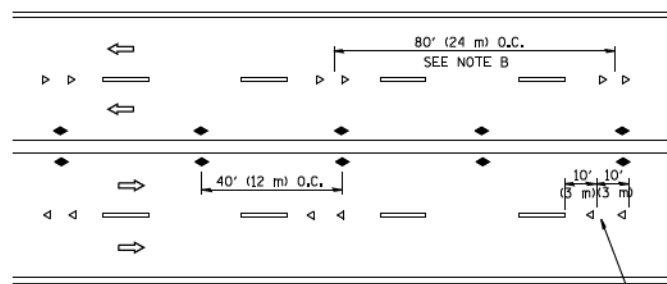
TWO-LANE/TWO-WAY



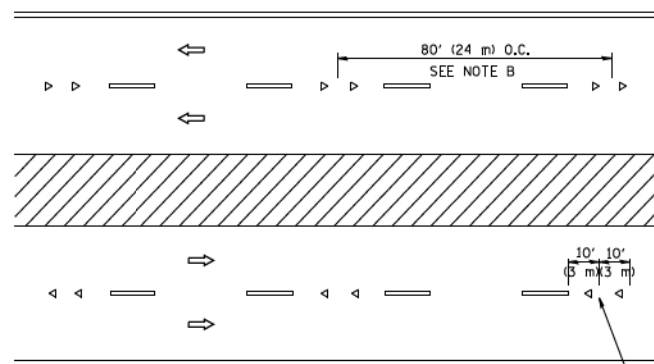
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

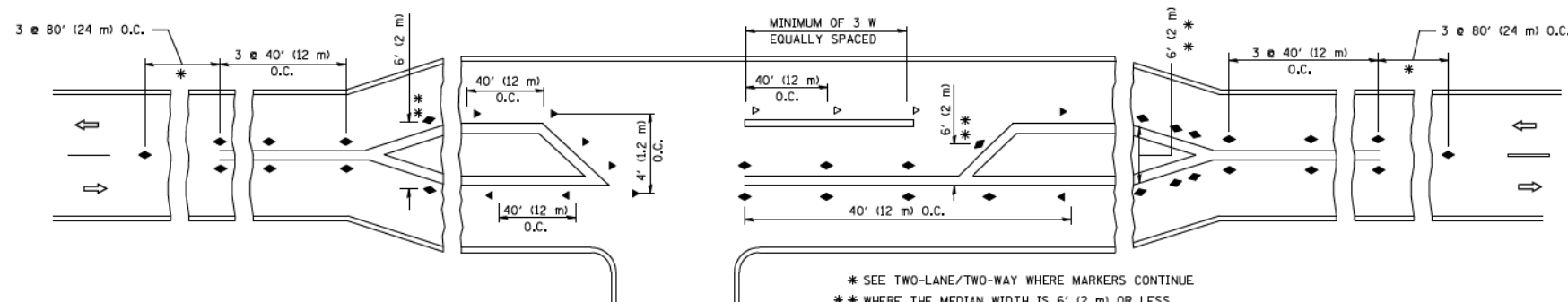
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

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

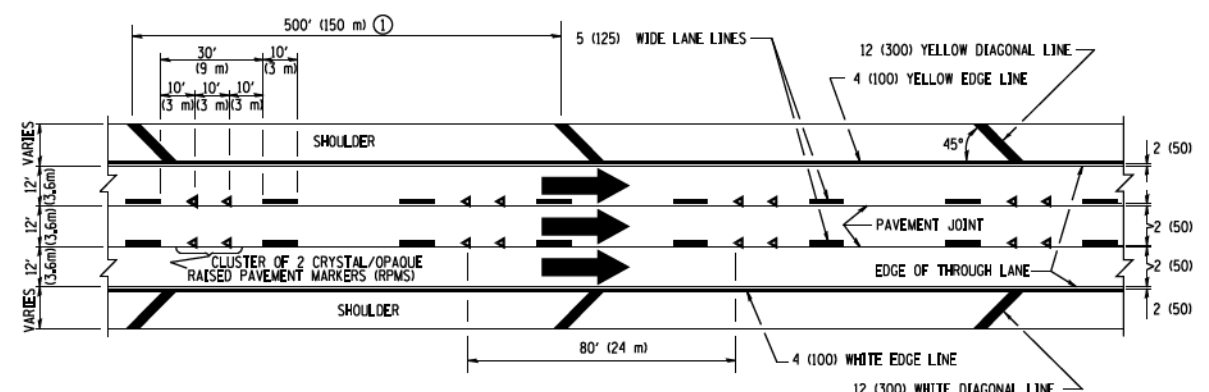
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

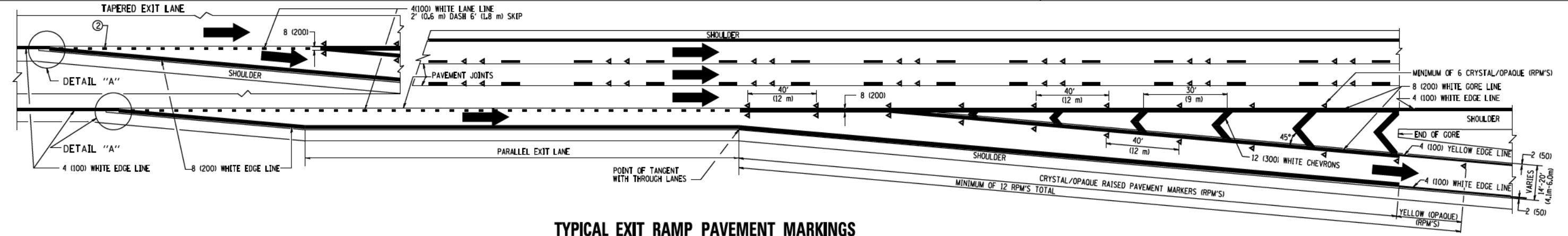
SCALE: NONE SHEET NO. 32 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	547
TC-11			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

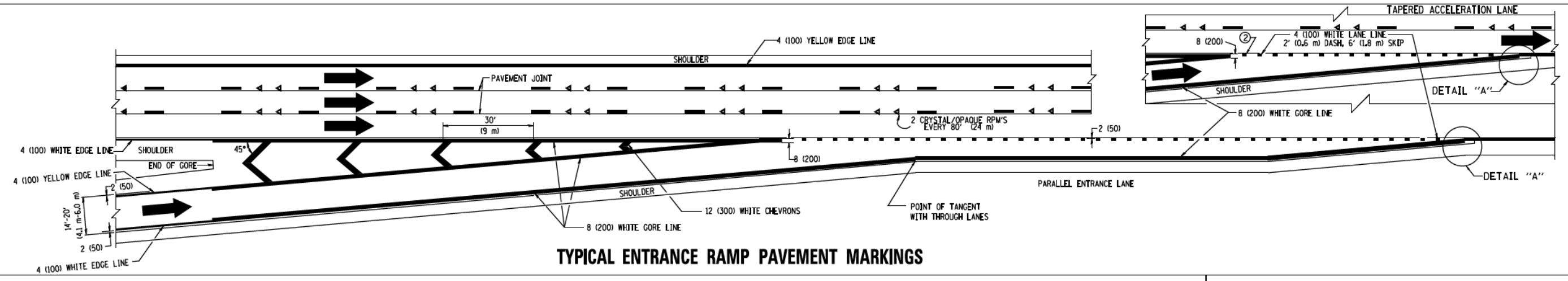


TYPICAL EDGE LINES & LANE LINES

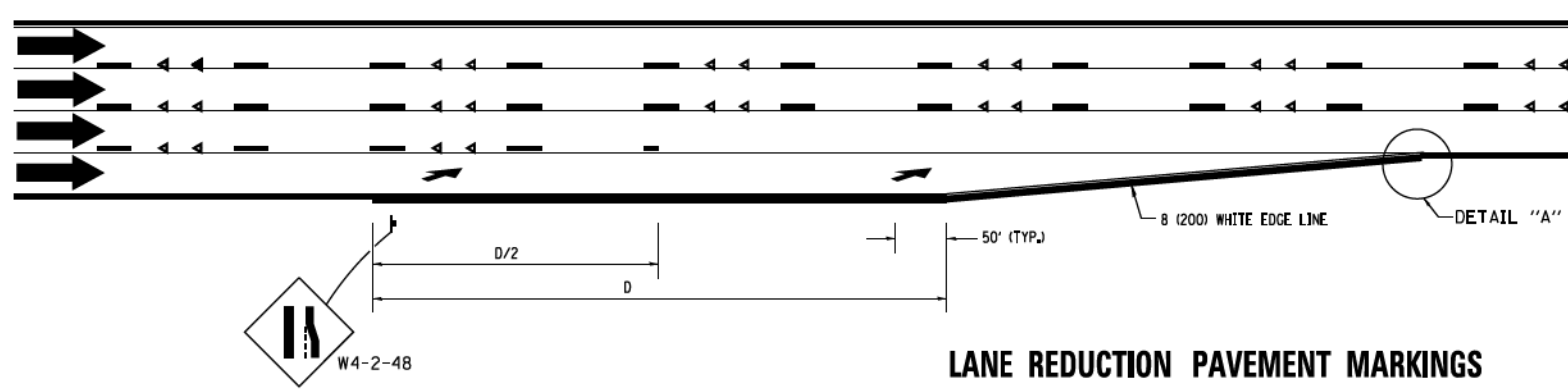
- PAVEMENT MARKING MATERIALS**
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
 2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE; INLAID OR GROOVED IN SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENT PROJECTS.
 3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC PROJECTS.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

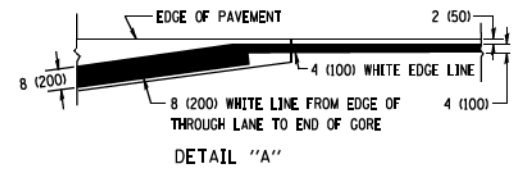


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

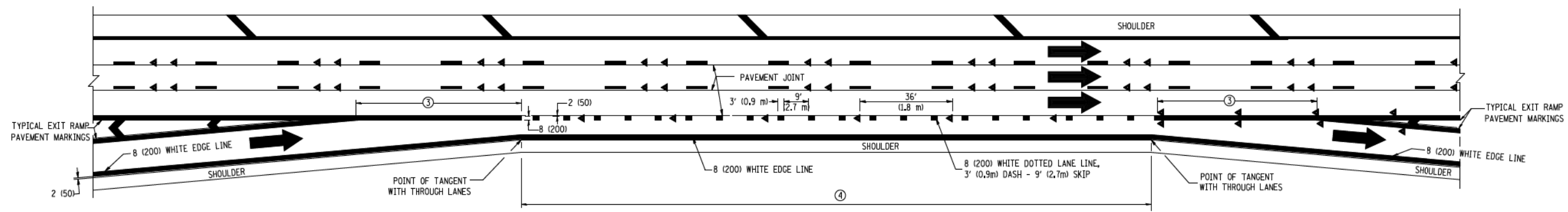


LANE REDUCTION PAVEMENT MARKINGS

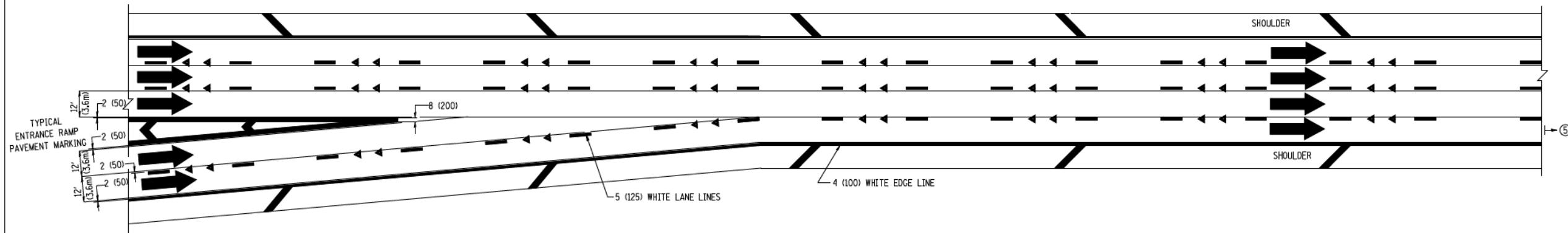
POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



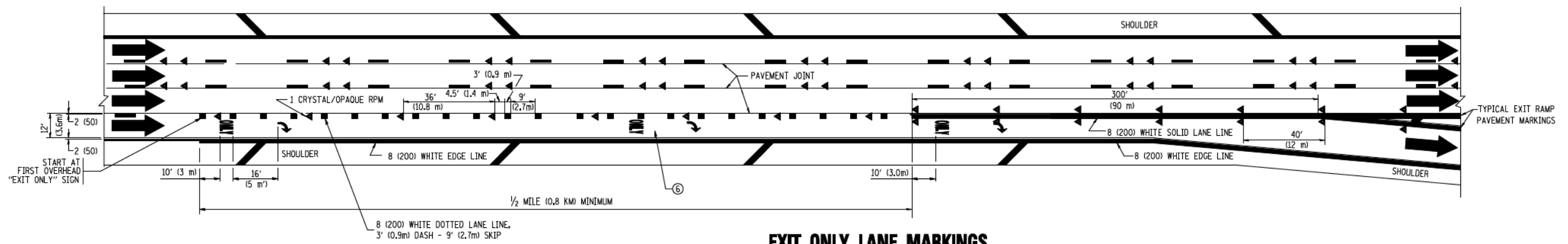
- NOTES:**
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.



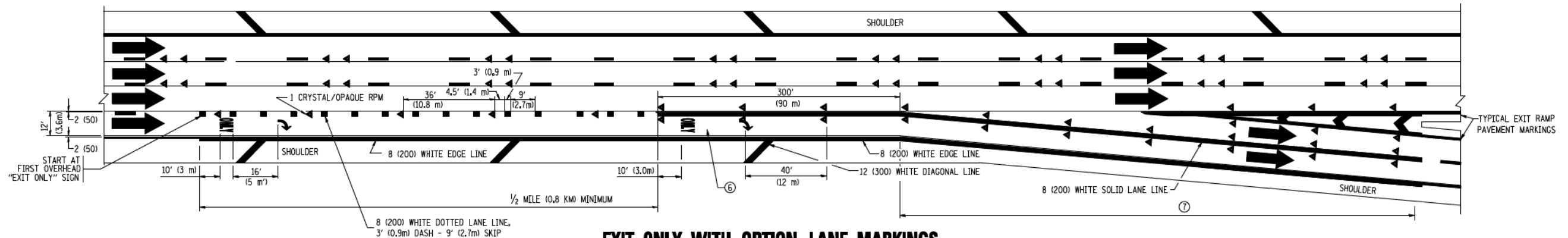
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED CORE.

FILE NAME =
ca\pwork\PI\DOT\LEYS\A\0108315\to12.dwg

USER NAME = luyao
PLOT SCALE = 50.000' / IN.
PLOT DATE = 1/22/2010

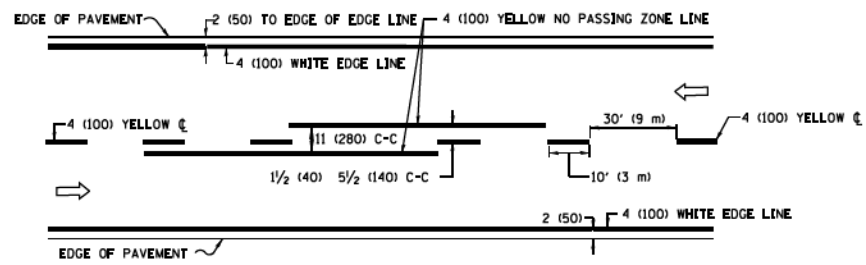
DESIGNED - D.W.S.
DRAWN -
CHECKED -
DATE - 01-90

REVISED - D.W.S. 07-96
REVISED - J.A.F. 02-06
REVISED - S.P.B. 01-07
REVISED - S.P.B. 01-10

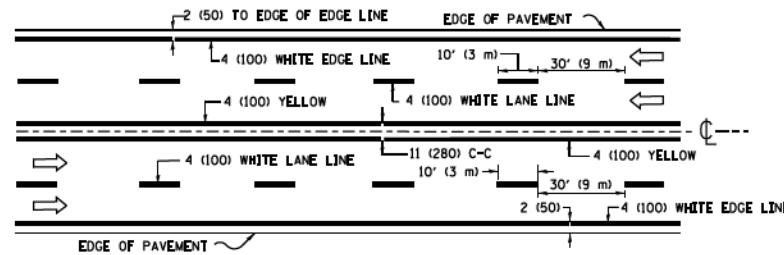
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS**
SCALE: NONE SHEET NO. 34 OF 41 SHEETS STA. TO STA.

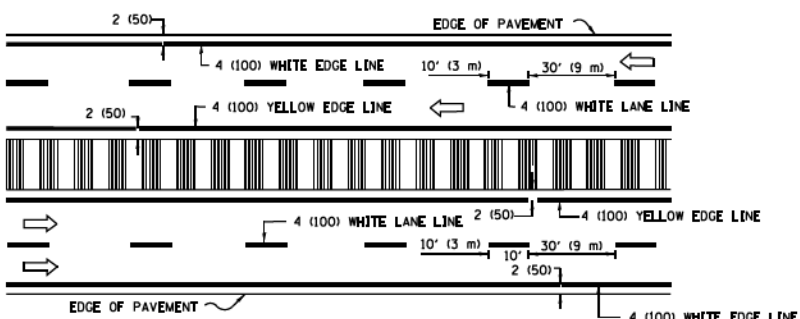
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	549
TC-12			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY

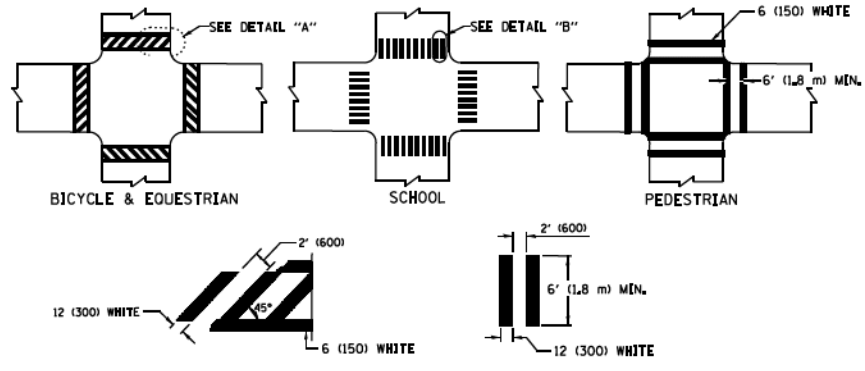


MULTI-LANE UNDIVIDED



MULTI-LANE DIVIDED WITH MEDIAN

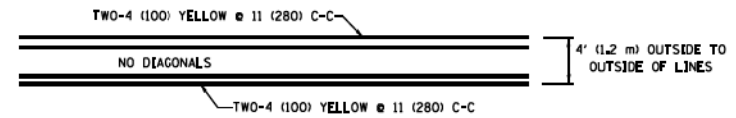
TYPICAL LANE AND EDGE LINE MARKING



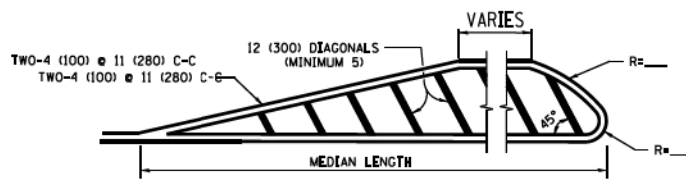
DETAIL "A" DETAIL "B"

TYPICAL CROSSWALK MARKING

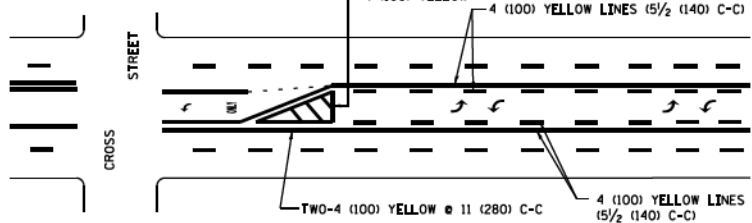
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



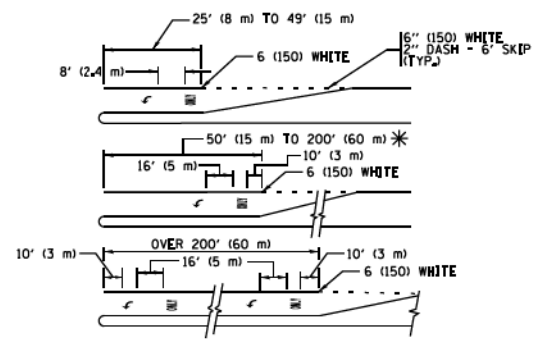
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE

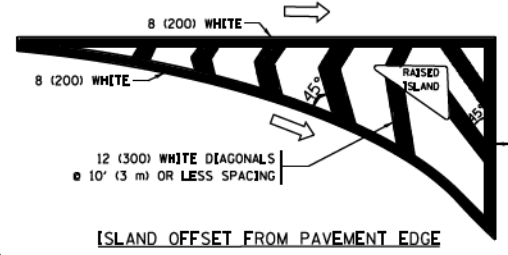


**MEDIAN WITH TWO-WAY LEFT TURN LANE
TYPICAL PAINTED MEDIAN MARKING**

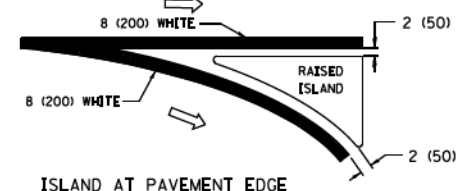


TYPICAL LEFT (OR RIGHT) TURN LANE MARKING

TYPICAL TURN LANE MARKING

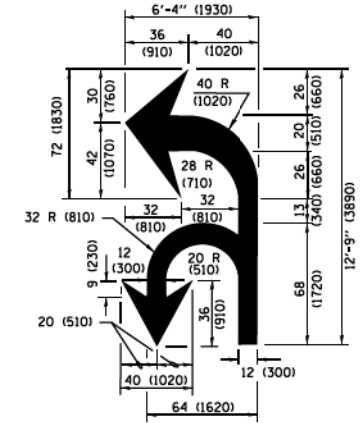


ISLAND OFFSET FROM PAVEMENT EDGE

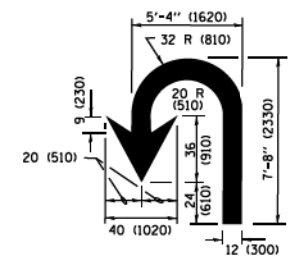


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 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 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 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° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW WHITE	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" 15' 6" (4.8 m) LETTERS: 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF "X" = 3.6 SQ. FT. (0.33 m²) EACH "X" = 54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

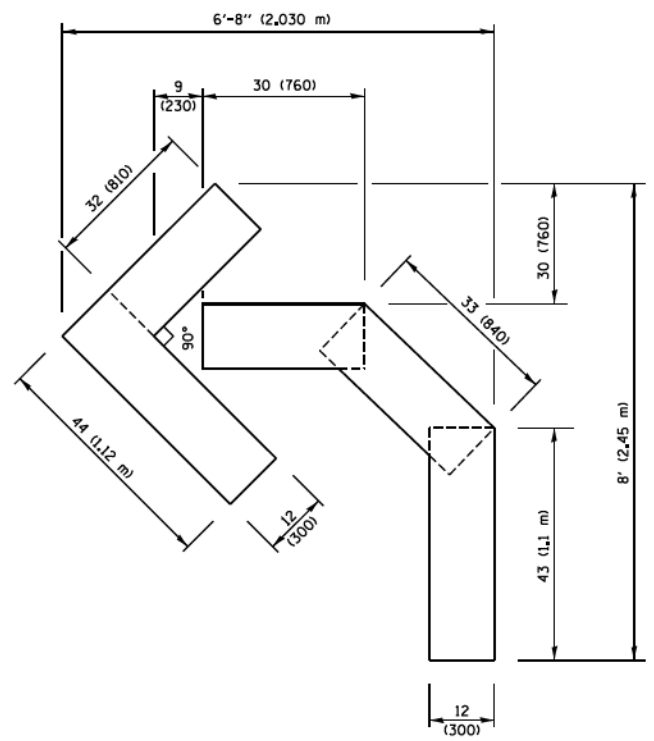
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME : pw\11084EBID\INTEG\Illinois.gov\FWDDT Documents\DOT Offices\District 1\Projects\Dist 1\022016\CADData\CADsheets\tol3.dgn	USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
PLOT SCALE = 58.8008' / in.	CHECKED -	REVISOR - C. JUCIUS 07-01-13	REVISED - C. JUCIUS 12-21-15
PLOT DATE = 4/13/2016	DATE - 03-19-90	REVISOR - C. JUCIUS 04-12-16	REVISED - C. JUCIUS 04-12-16

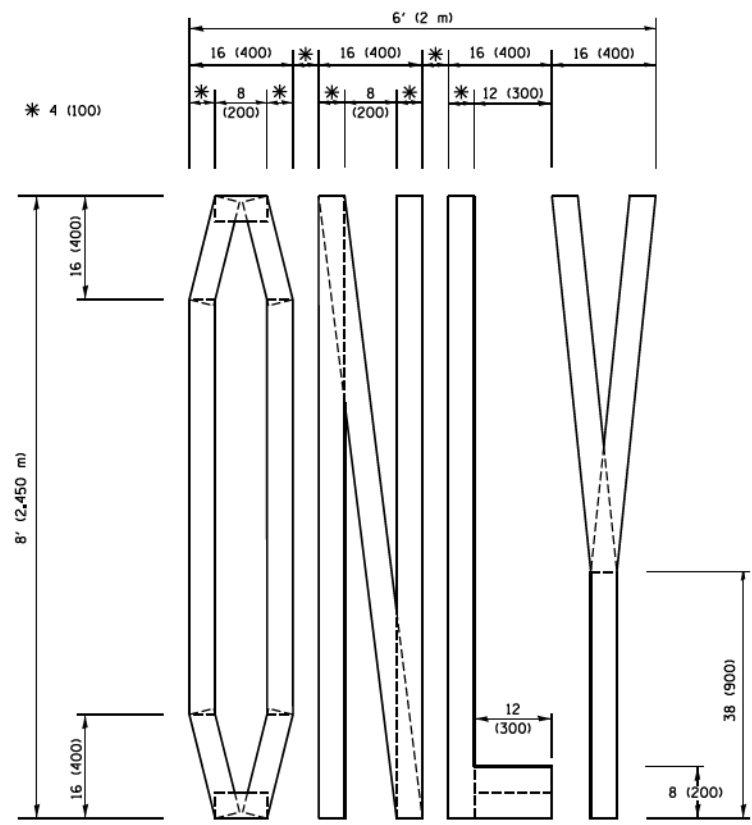
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL PAVEMENT MARKINGS			TC-13		814	550
SCALE: NONE	SHEET 35 OF 41 SHEETS	STA.	TO STA.		CONTRACT NO. 60X76	

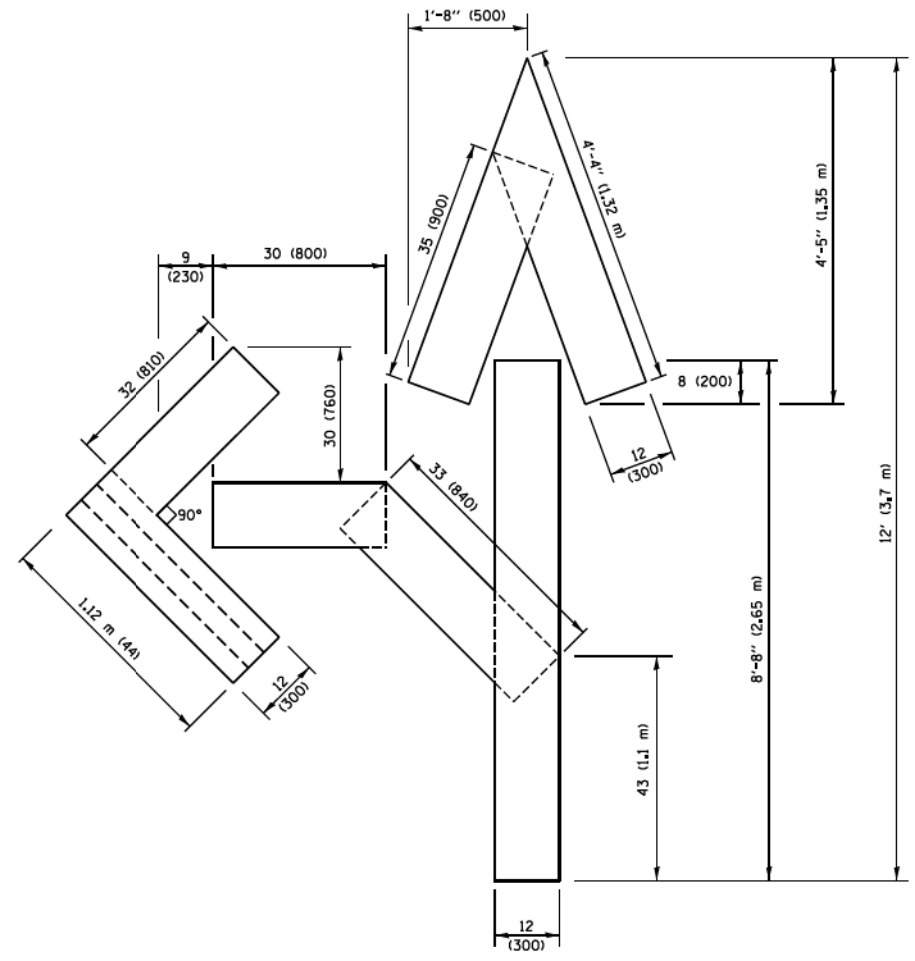
ILLINOIS FED. AID PROJECT	
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QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.41 sq. m)

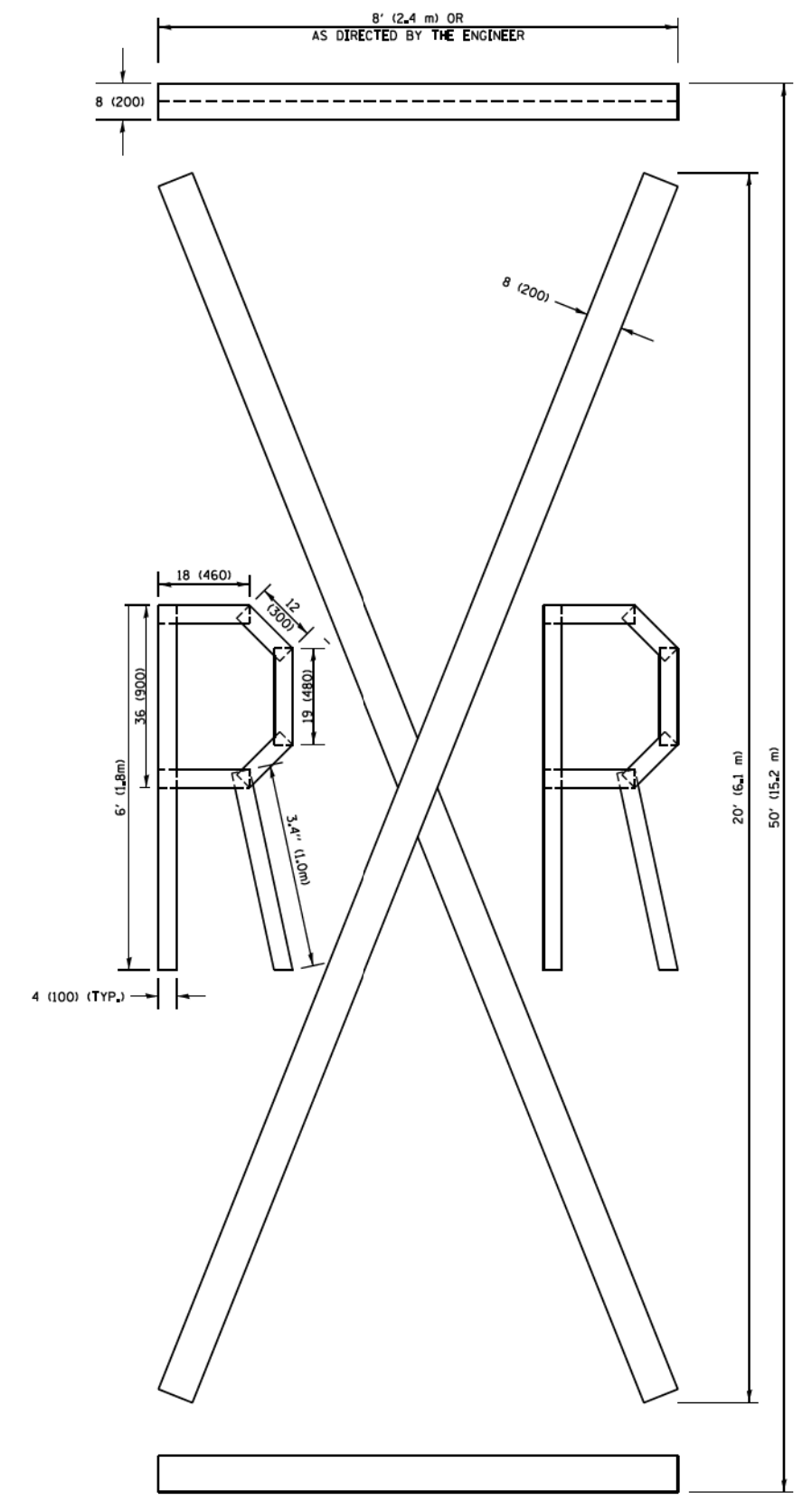


QUANTITY
 4 (100) LINE = 64.1 ft. (19.5 m)
 21.4 sq. ft. (1.99 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.1 m)
 27.5 sq. ft. (2.53 sq. m)

NOTE:
 ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY
 4 (100) LINE = 225.9 ft. (68.9 m)
 75.3 sq. ft. (6.99 sq. m)

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

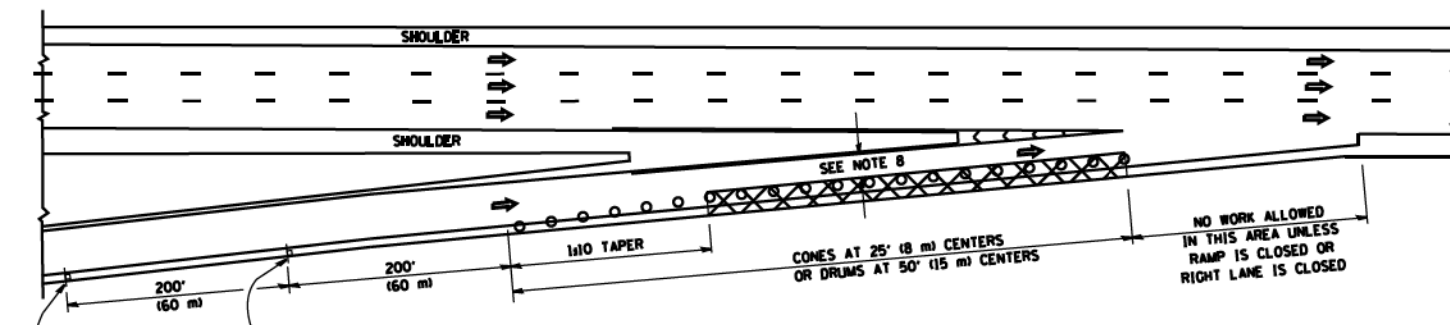
FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED -T. RAMMACHER 03-02-98
pw\l\884EBID\INTEG\Illinois.gov\FWDDT\Documents\DOT Offices\District 1\Projects\Dist 1\0822\DWG\CADData\CA0\sheet16.dgn			REVISED -E. GOMEZ 08-28-00
		CHECKED -	REVISED -E. GOMEZ 08-28-00
PLOT SCALE = 58.0000 / 1 in.		DATE - 09-18-94	REVISED -A. SCHUETZE 09-15-16
PLOT DATE = 9/15/2016			

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

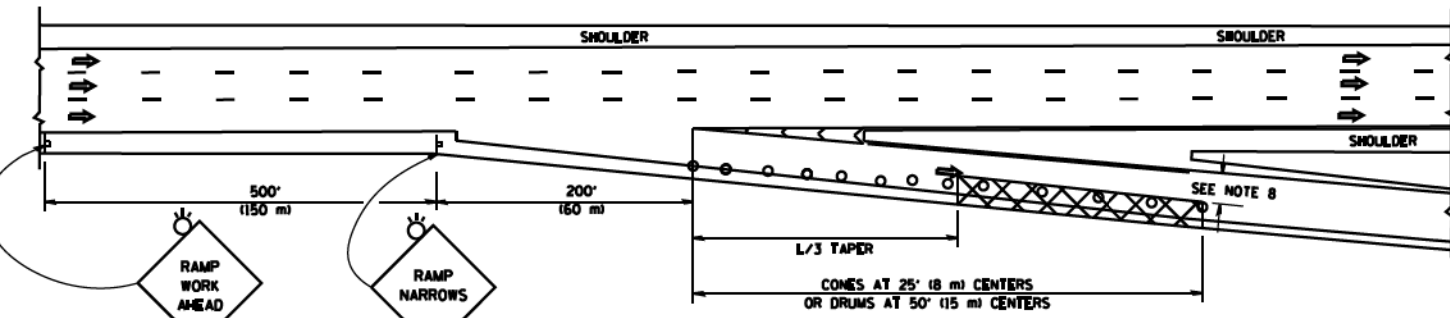
SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS			
SCALE: NONE	SHEET NO. 36 OF 41 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-16		814	551
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		CONTRACT NO. 60X76		

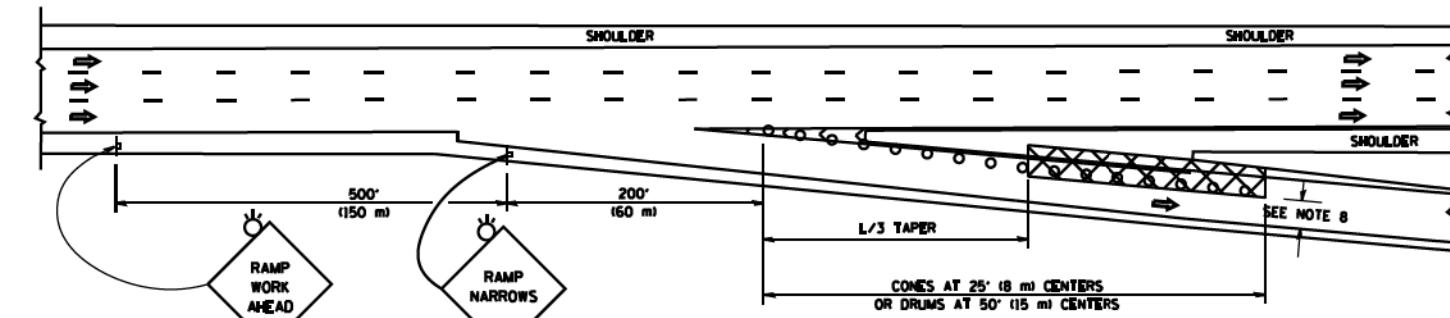
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

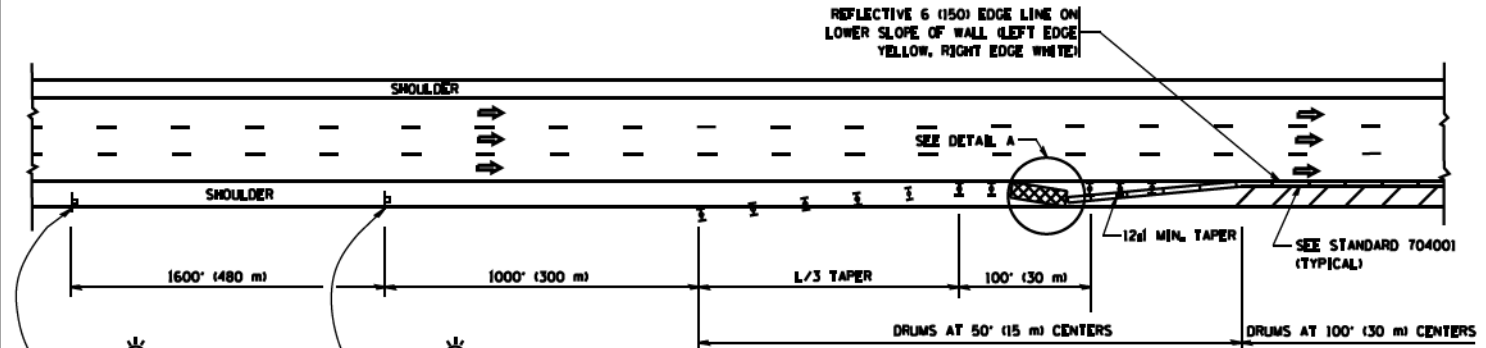
SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

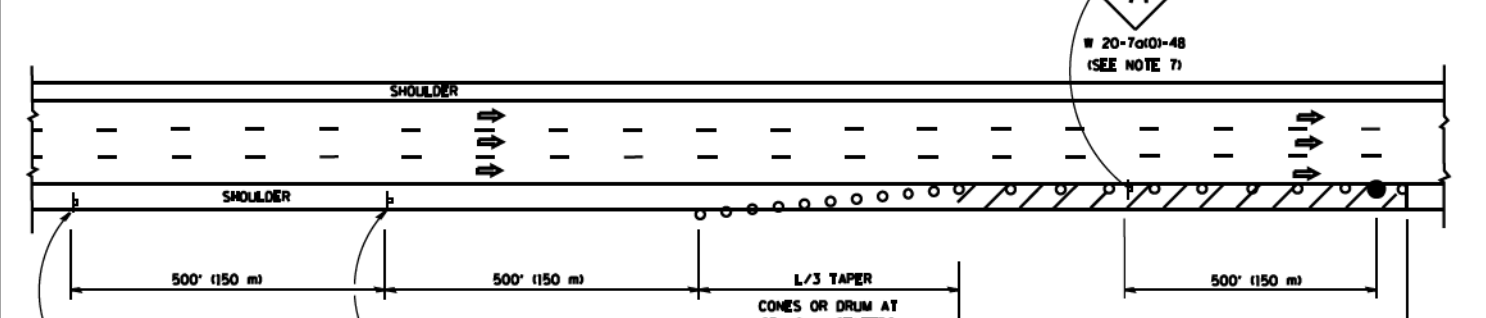
GENERAL NOTES

1. THE "L" DISTANCE EQUALS $S^2 / (2V)$ WHERE:
 SPEED LIMIT FORMULAS
 45 mph (80 km/h) OR GREATER: $L = 0.65(WNS)$ L (M)
 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.

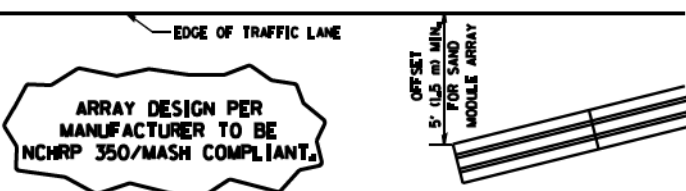
SHOULDER CLOSURE DETAILS



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE



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

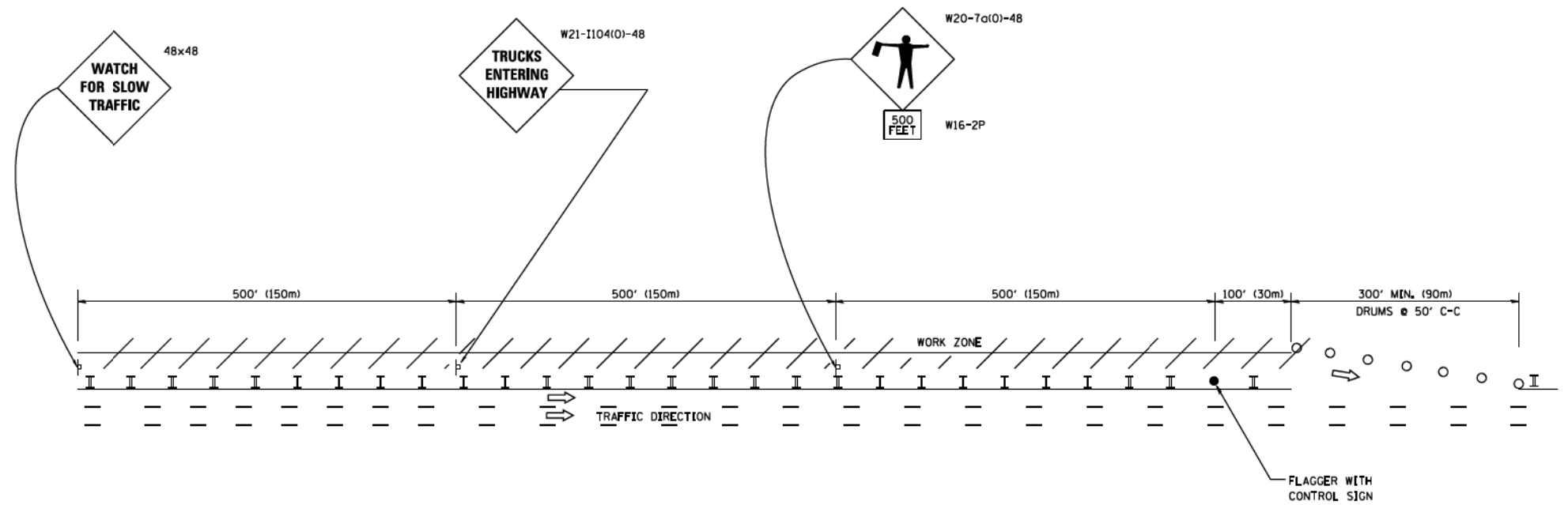
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL 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 ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
16' MIN. WIDTH CURVE SECTION.

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

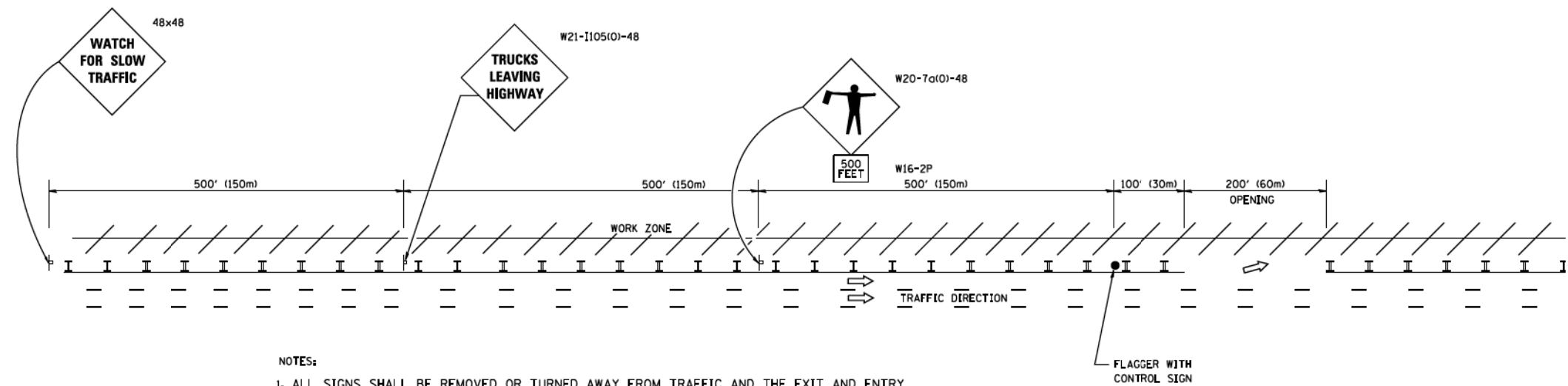
FILE NAME * ca\p-work\pstdot\l\eyso\08108315\17.dwg	USER NAME * l\eyso	DESIGNED - D.J.W.S.	REVISED - J.A.F. 12-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES		F.A. RTL	SECTION TC-17	COUNTY	TOTAL SHEETS 814	SHEET NO. 552
PLOT SCALE * 100.0000' / 1" =	CHECKED -	REVISOR - S.P.B. 01-07	REVISOR - S.P.B. 12-09		SCALE * NONE	SHEET 37	OF 41	SHEETS	STA. TO STA.	CONTRACT NO. 60X76	
PLOT DATE * 4/17/2014	DATE - 11-96	REVISOR - M.D. 06-13									
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT											

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



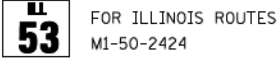
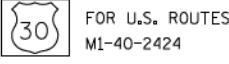
NOTES:

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMP.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

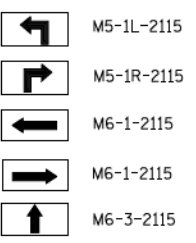
FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - J.A.F. 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\footemj\d0108315\to18.dgn		DRAWN -	REVISED - S.P.B. 01-07								814	553
		CHECKED -	REVISED - S.P.B. 12-09		SCALE: NONE	SHEET NO. 38 OF 41 SHEETS	STA. TO STA.	TC-18		CONTRACT NO. 60X76		
		DATE -	REVISED - M.D. 06-13					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

ROUTE MARKERS

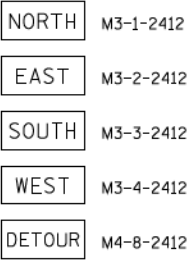


R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

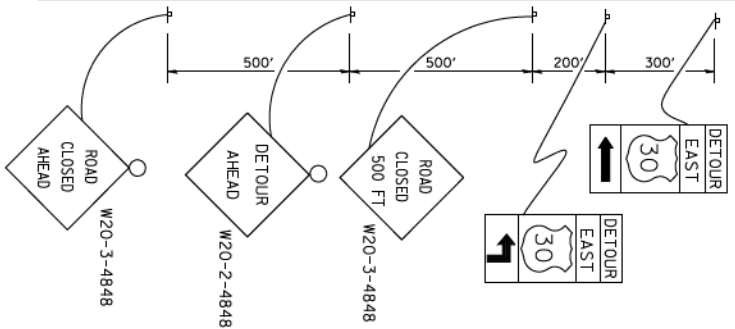
ARROWS SIGNS



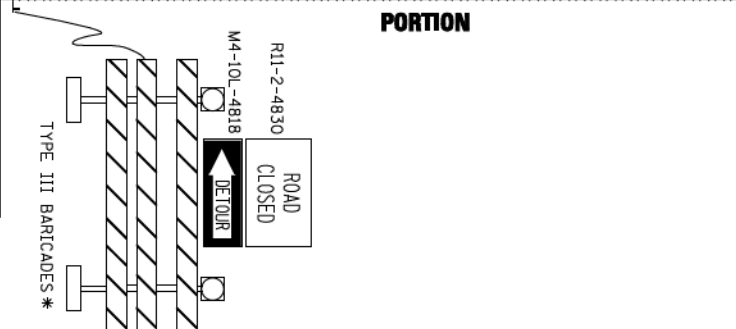
CARDINAL DIRECTION & DETOUR SIGNS



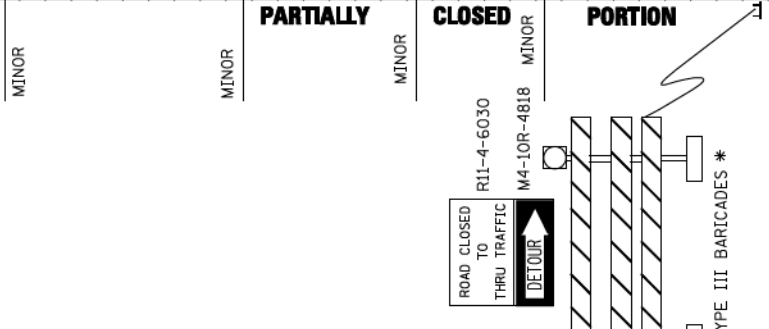
STATE ROUTE



COMPLETELY CLOSED PORTION



PARTIALLY CLOSED PORTION



STATE ROUTE



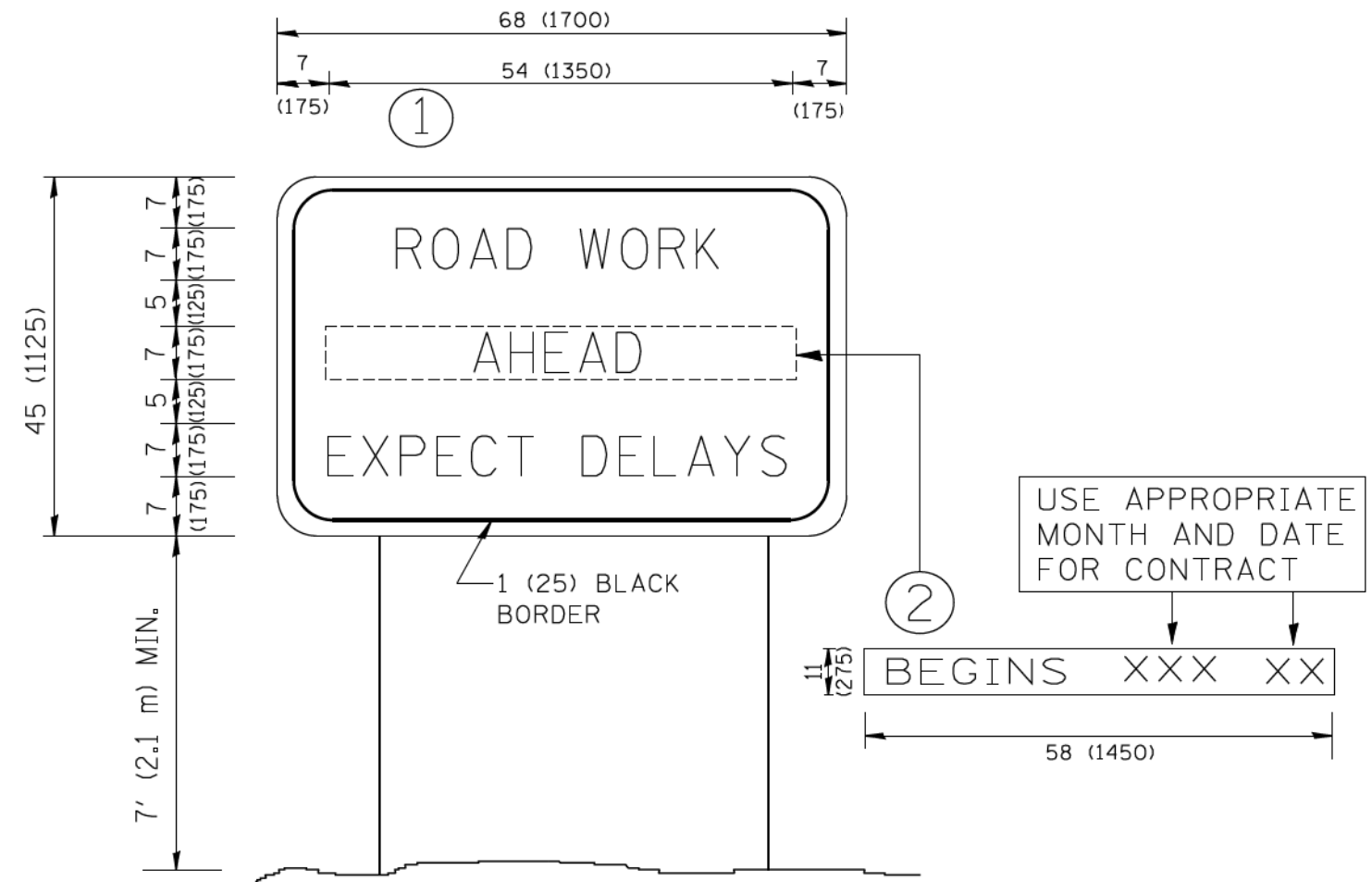
* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - 10-18-02
ca\pwork\p\IDOT\DRIVAKOSGN\d108315\td21.dgn		DRAWN -	REVISED - R. BORO 09-14-09
	PLOT SCALE = 49.9999 / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/14/2009	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS	
SCALE: NONE	SHEET NO. 39 OF 41 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	554
TC-21			CONTRACT NO. 60X76	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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 = W:\diststd\22x34\to22.dgn	USER NAME = geglanoht	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

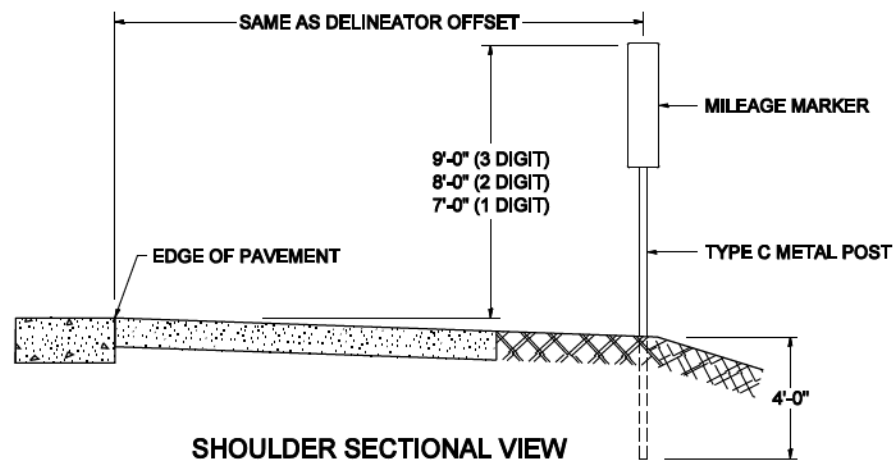
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

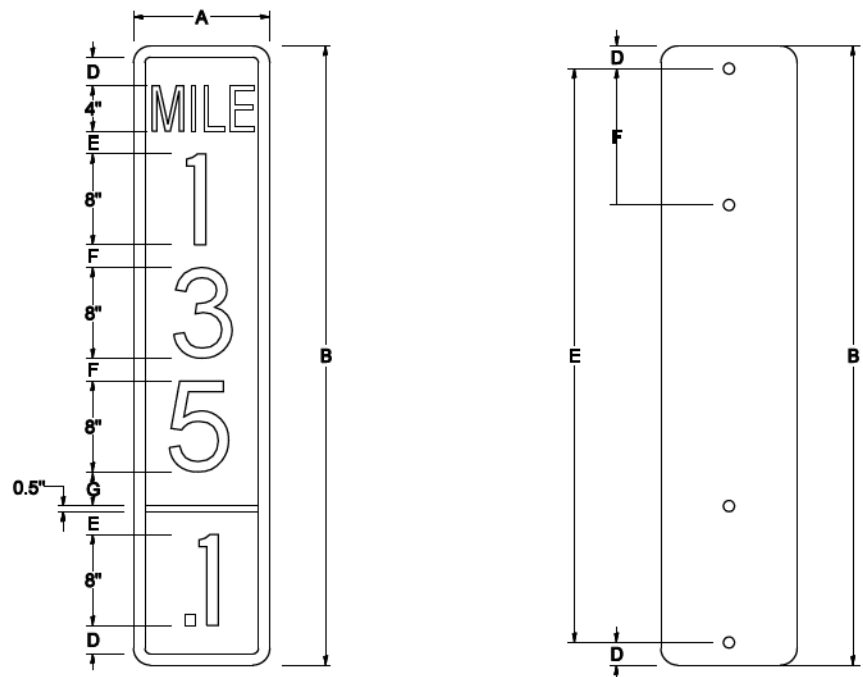
SCALE: NONE SHEET NO. 40 OF 41 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			814	555
TC-22		CONTRACT NO. 60X76		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STANDARD DESIGN FOR MILE POST



SHOULDER SECTIONAL VIEW

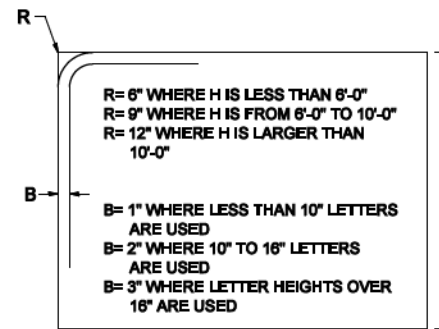


SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	DIGIT
12 x 24	12.0	24.0	1.5	1.5	1.5	N/A	1.5	1
12 x 36	12.0	36.0	1.5	2.0	2.0	2.0	1.5	2
12 x 48	12.0	48.0	1.5	2.5	2.0	2.0	2.5	3

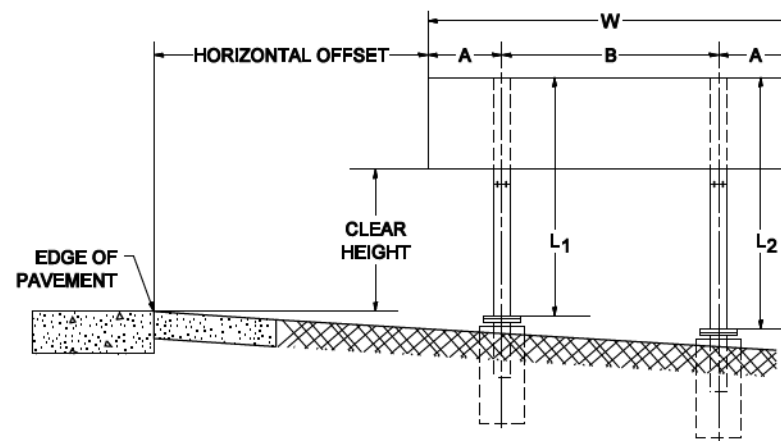
BLANK	A	B	C	D	E	F
B9-1224	12.0	24.0	1.5	2.0	20.0	N/A
B9-1236	12.0	36.0	1.5	2.0	32.0	12.0
B9-1248	12.0	48.0	1.5	2.0	44.0	12.0

SIGN SIZE	SERIES					BORDER	BLANK STD.
	LINES						
	1	2	3	4	5		
12 x 24	4C	8D	4C	N/A	N/A	0.5	B9-1224
12 x 36	4C	8D	8D	4C	N/A	0.5	B9-1236
12 x 48	4C	8D	8D	8D	4C	0.5	B9-1248

BORDER AND RADIUS LAYOUT



MAJOR GUIDE SIGN LAYOUT

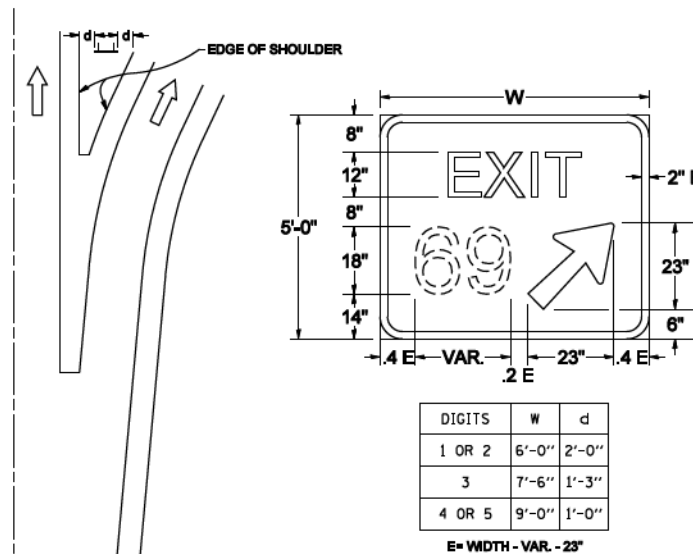


NUMBER OF STEEL SUPPORTS	A	B
2	.2 W	.6 W
3	.15 W	.35 W
4	.125 W	.25 W
5	.1 W	.2 W

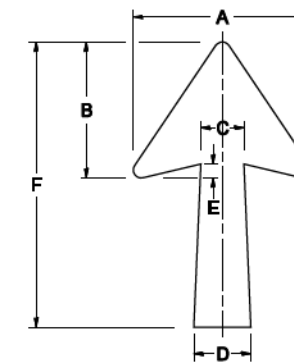
L₁ IS THE LENGTH OF SUPPORT, NOT INCLUDING THE STUB PROJECTION, CLOSEST TO THE EDGE OF THE PAVEMENT.

A IS THE DISTANCE FROM THE SIGN EDGE TO THE CENTERLINE OF THE NEAREST SUPPORT. *B* IS THE DISTANCE BETWEEN CENTERLINES OF SUPPORTS.

GORE SIGNS

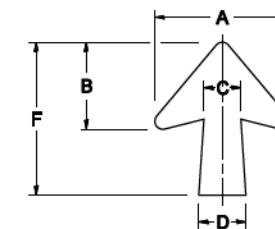


STANDARD ARROWS FOR INTERSTATE GUIDE SIGNS



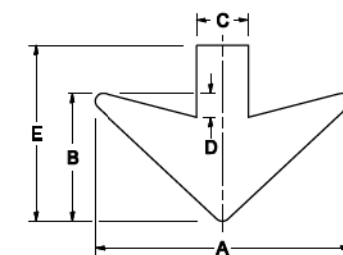
ARROW SYMBOL	A	B	C	D	E	F	R
24 1/4 x 15 1/8	15 1/8	11 3/8	3 3/4	5	1 1/2	24 1/4	1 1/8
29 1/4 x 18 1/4	18 1/4	14	4 1/2	6	1 1/2	29 1/4	3/4
35 5/8 x 22 1/4	22 1/4	17	5 3/8	7 1/8	1 3/4	35 5/8	1
18 1/4 x 11 1/4	11 1/4	8 3/4	3 1/8	3 3/8		18 1/4	

NOTE: D & F ARE RECOMMENDED DIMENSIONS. TAPER SHOULD BE HELD CONSTANT FOR LONGER OR SHORTER SHAFT LENGTHS

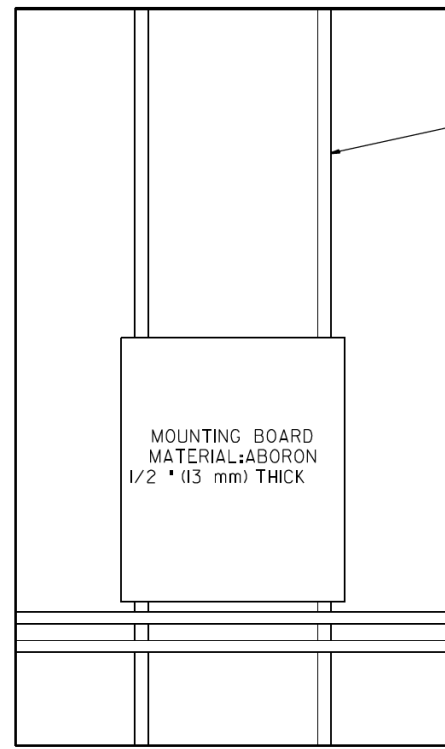


ARROW SYMBOL	A	B	C	D	E	F	R
17 1/4 x 14 1/4	14 1/4	9 1/8	3 3/8	4 1/2	5/8	17 1/4	3/4
20 1/4 x 17 1/4	17 1/4	11 3/4	4 3/8	5 5/8	1 1/2	20 1/4	
25 x 21 1/8	21 1/8	14 1/4	5	6 3/4	1 3/4	25	1
9 3/8 x 8 1/8	8 1/8	5 3/8	2 3/8	2 3/8		9 3/8	1/2

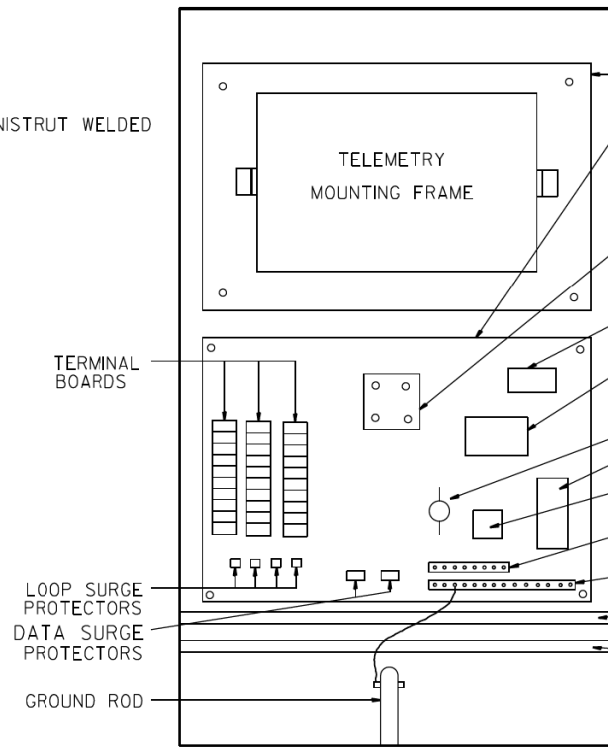
DOWN ARROWS



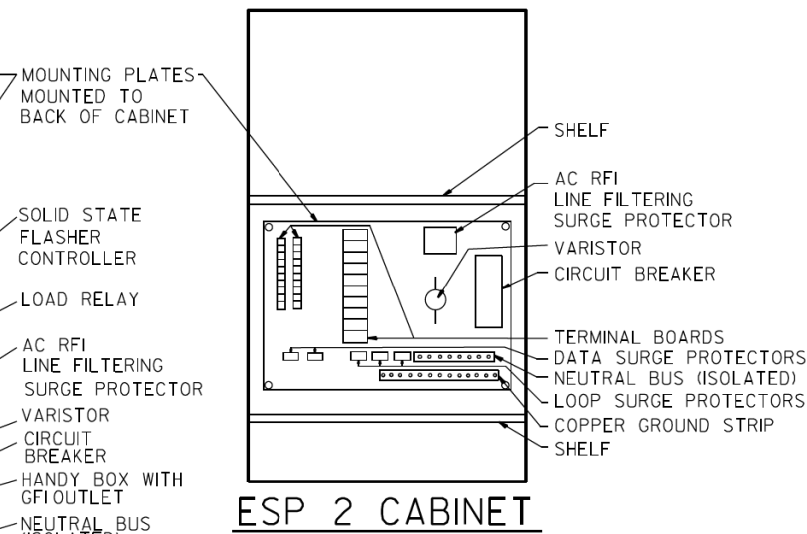
ARROW SYMBOL	A	B	C	D	E	R
16 1/2 x 24	24	12	5	1 1/2	16 1/2	3/4
22 x 32	32	16	6 1/2	3	22	1



SIDE VIEW ESP 3 & 4 CABINET



ESP 3 CABINET



ESP 2 CABINET

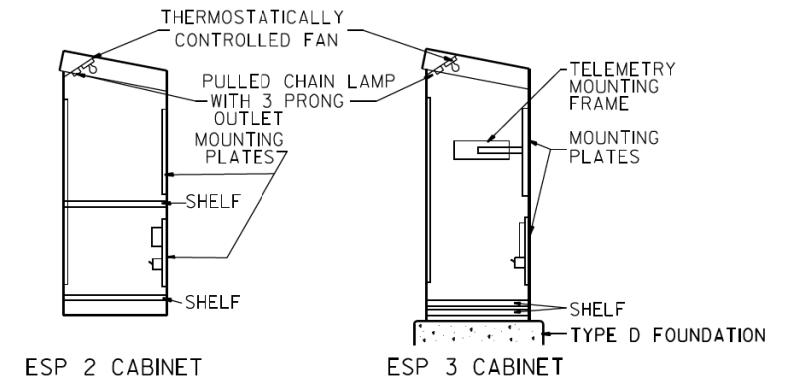
TYPICAL CABINET INTERIORS
STANDARD TRAFFIC SYSTEMS CENTER CABINETS

MINIMUM DIMENSIONS INSIDE

TYPE	HEIGHT (IN-mm)	WIDTH (IN-mm)	DEPTH (IN-mm)	THICKNESS (IN-mm)	MATERIAL
ESP1	22.5" (571.5 mm)	14.25" (361.95mm)	9.75" (247.65mm)	3/16" (4.76mm)	FABRICATED ALUMINUM
ESP2	36" (914.4mm)	20" (508.0mm)	15" (381.0mm)	7/32" (4.76mm)	FABRICATED ALUMINUM
ESP3	49.5" (1,260 mm)	30" (762.0mm)	17" (431.8mm)	3/16" (4.76mm)	FABRICATED ALUMINUM
ESP4	55" (1,400 mm)	44" (1,120 mm)	26" (660.4mm)	3/16" (4.76mm)	FABRICATED ALUMINUM

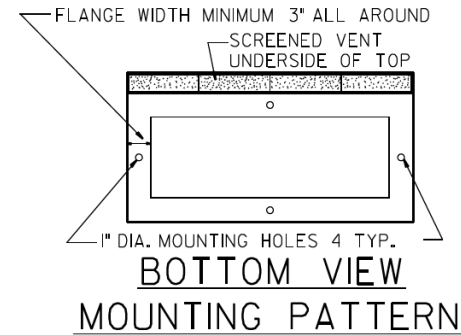
NOTES:

- CABINETS, CABINET POSTS AND CABINET PEDESTALS SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH SECTION T637 OF THE 'STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS'. THE FINAL COAT SHALL BE (X) IN COLOR. THE INTERIOR SHALL BE PAINTED WHITE. SIGNAL POSTS AND HEADS TO BE FEDERAL YELLOW 89-19(MAUTZ).
- CABINETS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION T400 OF THE 'STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS'.
- ALL CABINETS WHICH ARE SERVICED BY 117 VOLTS A.C. POWER SHALL BE EQUIPPED WITH A 10 AMP CIRCUIT BREAKER, A.C.R.F.I. LINE FILTERING SURGE PROTECTOR, VARIATOR, DATA SURGE AND LOOP SURGE PROTECTORS AS INCIDENTAL TO THE COST OF THE CABINET. CMS CABINETS TYPE IV SHALL HAVE A 60 AMP. CIRCUIT BREAKER MINIMUM.
- ESP 2/3/4 CABINETS SHALL BE FITTED WITH A THERMOSTATICALLY CONTROLLED FAN. IT SHALL BE MOUNTED AT THE TOP OF THE CABINET. THE FAN SHALL BE CAPABLE OF OPERATING AT 130 CPM AT 160' (48.8 m) OF STATIC WATER PRESSURE. A PORCELAIN BASED PULL CHAIN FIXTURE WITH 3 PRONG OUTLET SHALL ALSO BE PROVIDED.
- RAMP METERING ESP 3 TYPE CABINETS SHALL ALSO BE EQUIPPED WITH A LOAD RELAY AND 2 CIRCUIT FLASHER. LAMPS, FAN, LOAD RELAY, AND 2 CIRCUIT FLASHER SHALL BE INCIDENTAL TO THE COST OF THE CABINET
- INCIDENTAL TO THE COST OF EACH CABINET THE CONTRACTOR SHALL CONSTRUCT A 5 INCH (130mm) PCC SIDEWALK OF A RECTANGULAR AREA 3 FEET (915 mm) BY 4 FEET (1,250 mm) IMMEDIATELY ADJACENT TO THE CABINET FOUNDATION ON THE SAME SIDE OF THE FOUNDATION AS THE CABINET DOOR TO PROVIDE FOOTING DURING INSTALLATION AND MAINTENANCE.
- ANCHOR BOLTS FOR PEDESTAL AND BASE MOUNTED CABINETS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
- ALL CABINETS SHALL HAVE TERMINAL BLOCKS AND SHELVES AS SHOWN. THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
- THE CABINET DOOR SHALL BE HINGED ON THE RIGHT SIDE WHEN FACING THE CABINET. THE DOOR SHALL BE FURNISHED WITH A GASKET THAT SHALL FORM A WEATHER TIGHT SEAL BETWEEN THE CABINET AND DOOR. THE HINGES SHALL BE CONTINUOUS AND BOLTED TO THE CABINET AND DOOR UTILIZING 1/4-20 STAINLESS STEEL CARRIAGE BOLTS AND NY-LOCK NUTS. THE HINGES WILL BE MADE OF STAINLESS STEEL WITH A 0.25 INCH (6.35 mm) DIAMETER STAINLESS STEEL HINGE PIN. THE HINGE PIN SHALL BE CAPPED TOP AND BOTTOM BY WELD TO RENDER IT TAMPER PROOF.
- THE LATCHING MECHANISM SHALL BE A 3 POINT DRAW ROLLER TYPE. THE CENTER CATCH AND PUSHRODS SHALL BE EITHER CADMIUM OR ZINC PLATED, TYPE II CLASS I. PUSHRODS WILL BE TURNED EDGEWISE AT THE OUTWARD SUPPORTS AND SHALL BE 0.25 INCH (6.35 mm) BY 0.75 INCH (19.05 mm), MINIMUM. ROLLERS SHALL HAVE A MINIMUM DIAMETER OF 0.875 INCH (22.22 mm) AND WILL BE MADE OF NYLON. THE CENTER CATCH SHALL BE FABRICATED FROM 0.14 INCH (3.55 mm) STEEL, MINIMUM. WHEN THE DOOR IS CLOSED AND LATCHED, IT WILL BE LOCKED. THE LATCHING HANDLE SHALL HAVE A PROVISION FOR PADLOCKING IN THE CLOSED POSITION. AN OPERATING HANDLE SHALL BE FURNISHED WITH EACH LOCK. THE HANDLE WILL BE STAINLESS STEEL WITH A 0.75 INCH (19.05 mm) DIAMETER SHANK.
- THE ENCLOSURE SHALL BE EQUIPPED WITH TWO ADJUSTABLE 'C' MOUNTING CHANNELS WELDED ON BOTH SIDE WALLS AND BACK WALL OF THE ENCLOSURE, ALLOWING VERSATILE POSITIONING OF SHELVES OR PANELS. MOUNTING CHANNELS SHALL BE FACTORY PAINTED SAME COLOR AS INTERIOR OF CABINET.
- CABINET DOOR SHALL NOT HAVE COMPARTMENT DOORS OR LOUVERS.
- ALL FIELD CABINETS SHALL BE FITTED WITH BRASS LOCKS.
- ESP TYPE 2 & 3 CABINETS FITTED WITH TWO SHELVES AS SHOWN.
- POST TOP MOUNTED CABINETS, SHALL HAVE A 0.25 INCH (6.3 mm) BOTTOM OF CABINET WELDED.
- THE CONTROL CABINET SHALL BE SET PLUMB ON THE FOUNDATION AND FASTENED TO THE ANCHOR BOLTS WITH NUTS AND WASHERS. FLAT WASHERS SHALL BE INSTALLED BELOW AND ABOVE THE BASE PLATE OF THE CONTROL CABINET. LOCKWASHERS SHALL BE INSTALLED ON TOP OF THE TOP FLAT WASHER.



PROFILE VIEWS

NOTE: MOUNTING PLATES TO BE MOUNTED TO BACK PANEL OF CABINET

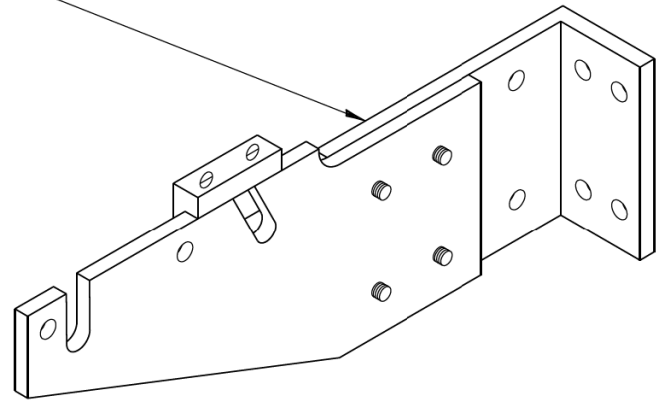


(X)

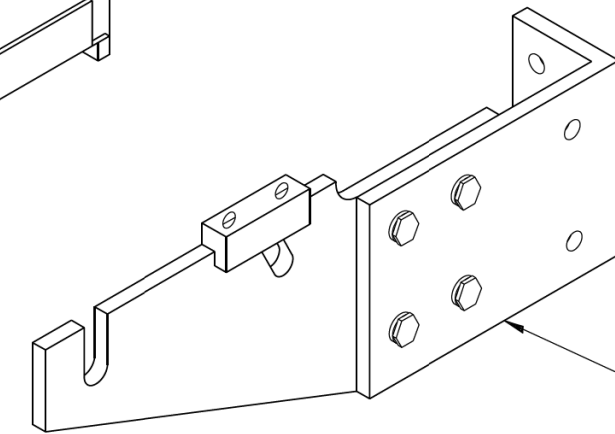
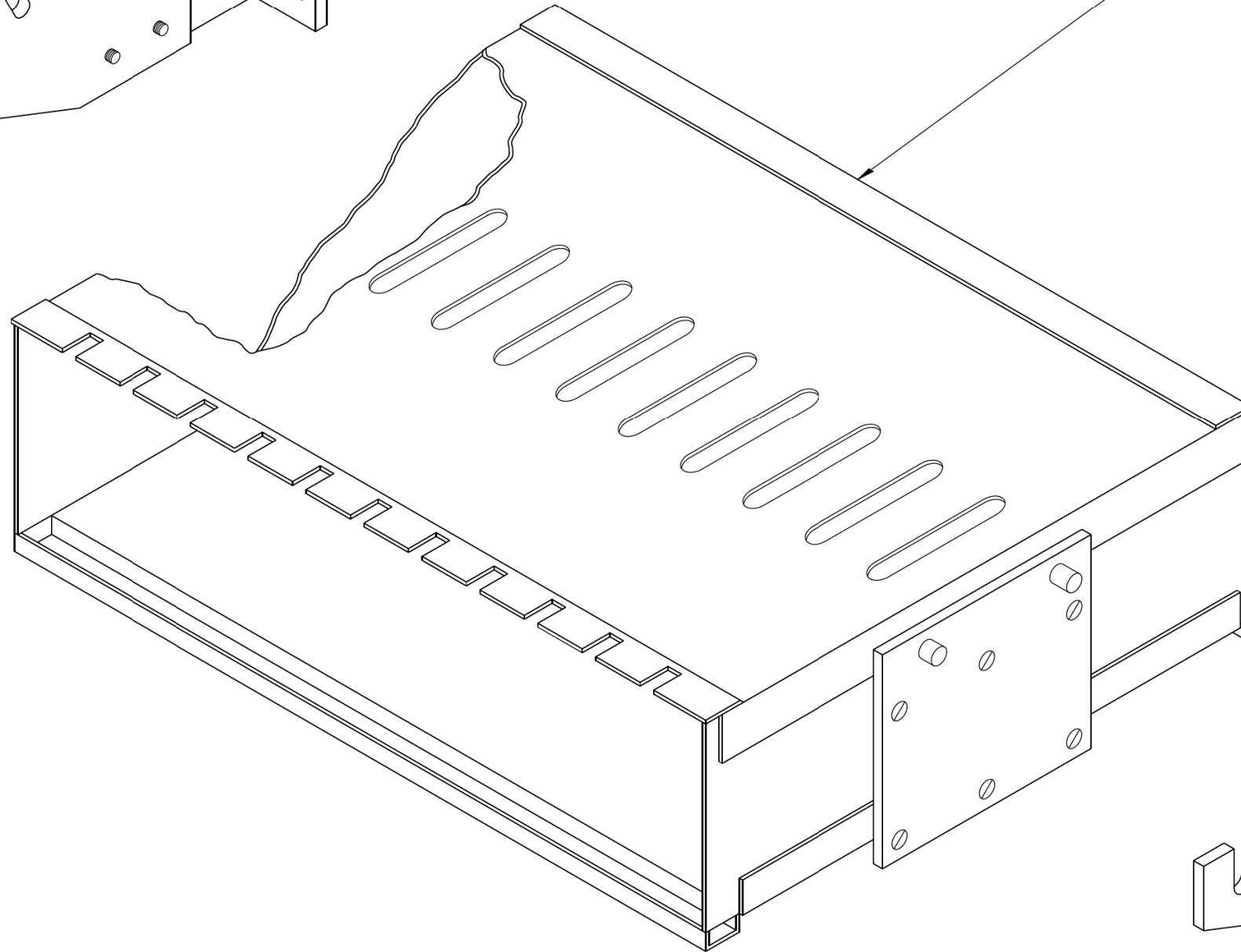
- | | |
|------------------|---------------------|
| EDENS | WALNUT * |
| KENNEDY | BLUE STREAK ** |
| EISENHOWER | CARIBBEAN BLUE * |
| I-290/IL53/I-355 | POST OFFICE BLUE ** |
| RYAN | YELLOW STONE II ** |
| I-55 | MEDIUM BRONZE * |
| I-57 | RED BARON ** |
| CAL-KING | BLUE STREAK ** |
| LAKE SHORE DR. | GREEN * |
| I-80 | STATUARY BRONZE ** |
- ALL RAMP METERING CABINETS LIME GREEN ***. ALL POSTS, T.S. HEADS AND SERVICES WILL BE PAINTED FEDERAL YELLOW.
- * MORTON POWDER PAINT COLOR OR EQUIVALENT.
** O'BRIEN POWDER PAINT COLOR OR EQUIVALENT.
*** BENJAMIN MOORE ENAMEL COLOR OR EQUIVALENT.

NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONFORMING TO COLOR REQUIREMENTS

CRADLE



II MODULE MOUNTING FRAME
(FOR II TYPE "A" PLUG-IN TYPE TONE MODULES)

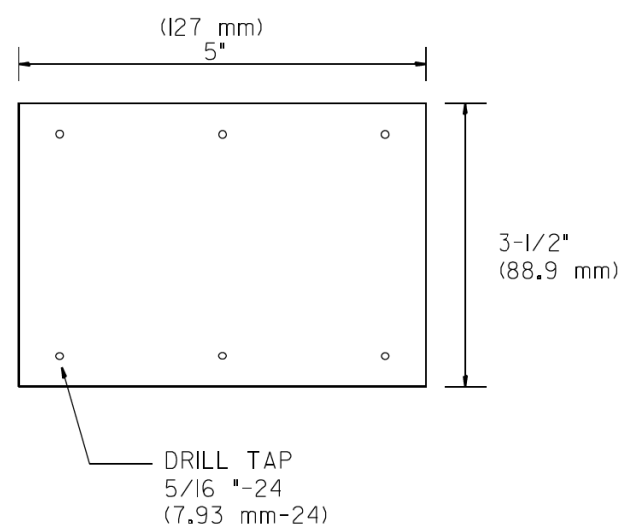
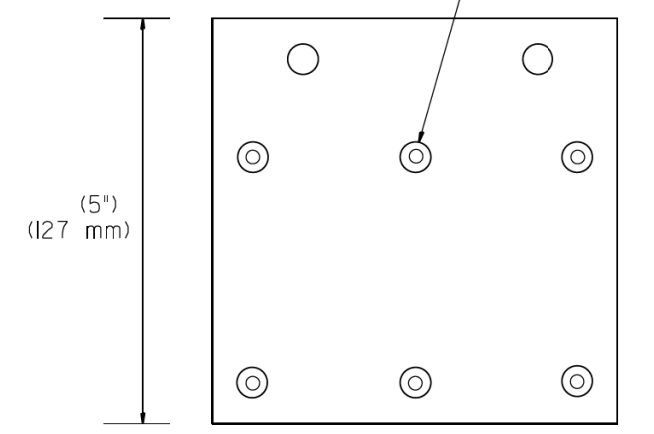
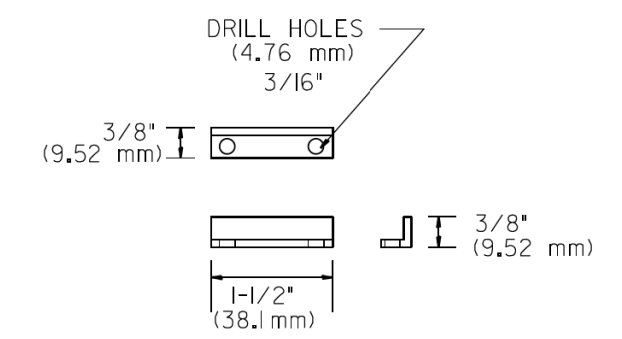
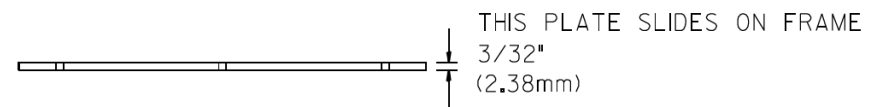
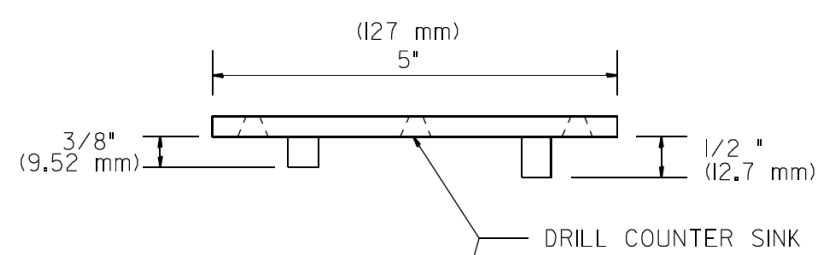
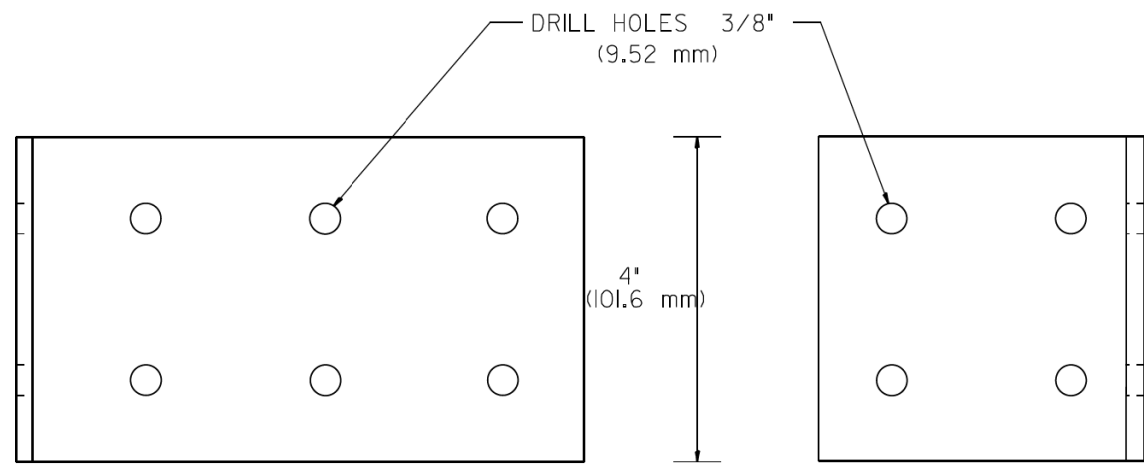
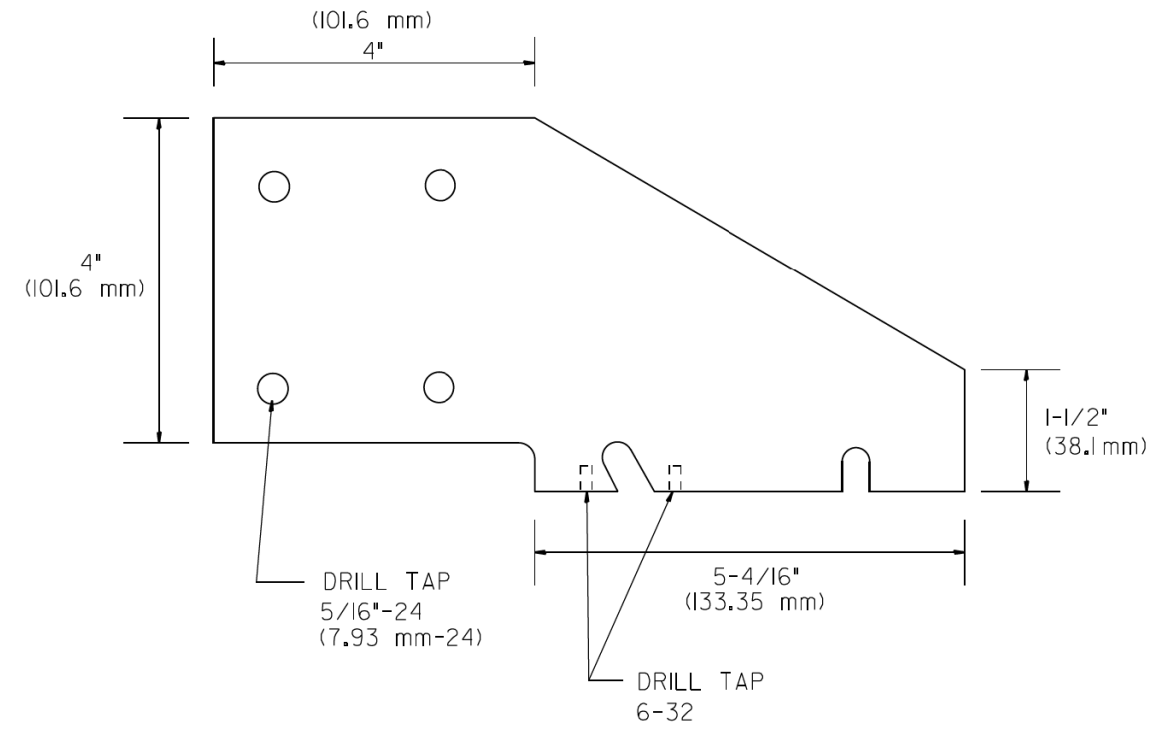
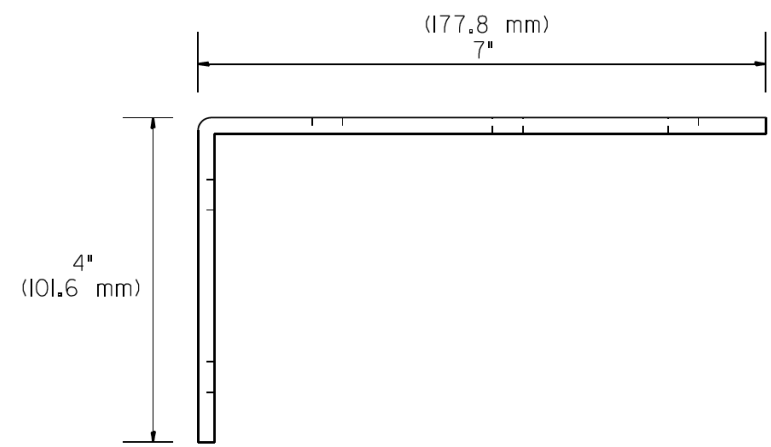


CRADLE

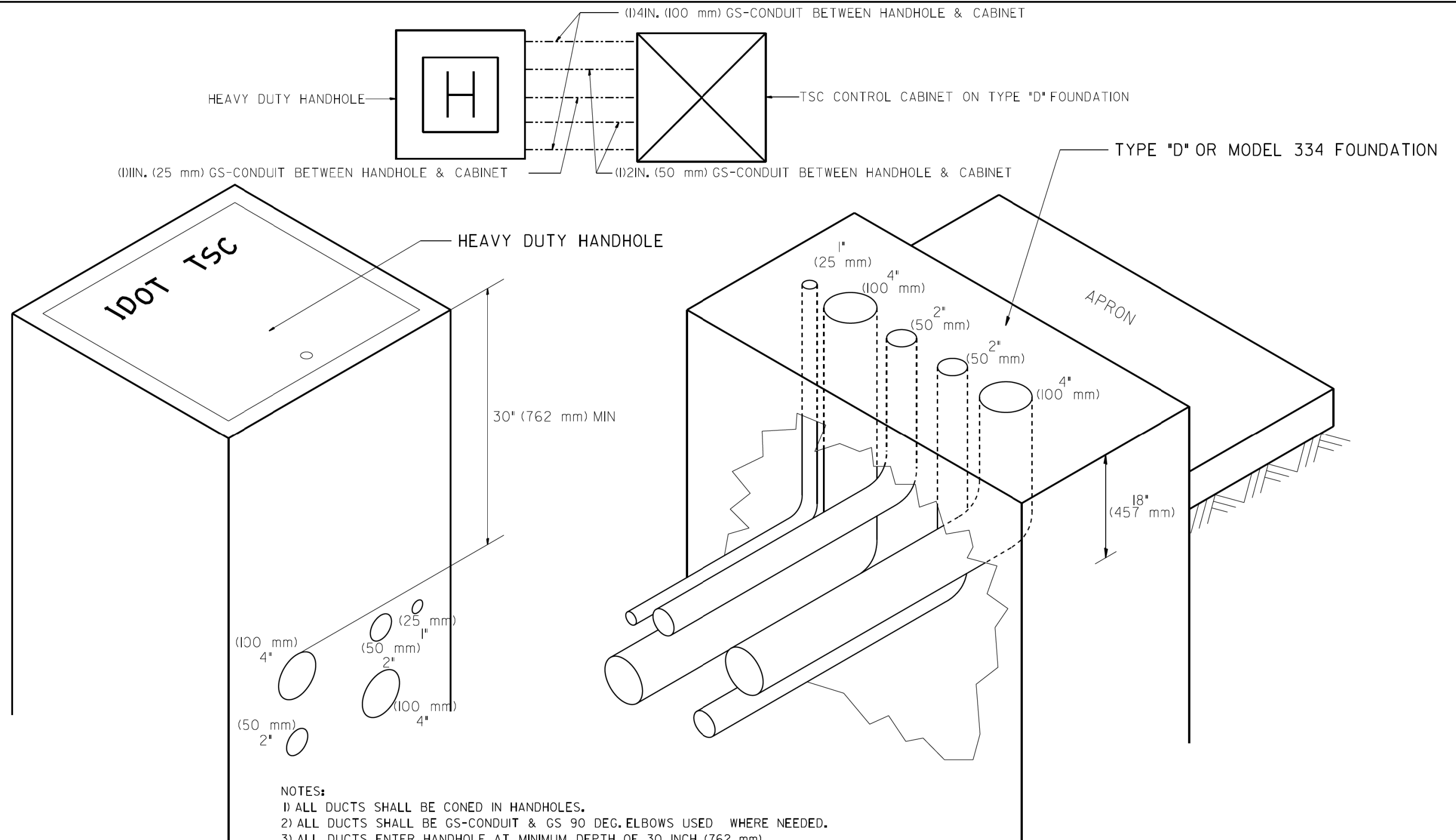
NOTE:

TYPE "A" TONE MODULES ARE PLUG
IN UNIT MEASURING 5-7/32" (132.55 mm) X 1.5" (38.1mm) X 13-3/4" (349.25 mm)

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	FIELD MOUNTING FRAME WITH CRADLE ASSEMBLY			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - G.M.	REVISED - 09/96					01/94/290	2014-002R&B	COOK	814	558	
#MODELNAME#		CHECKED - R.L.	REVISED -		SCALE: NONE	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 60X76	
		DATE - 06/21/94	REVISED -									ILLINOIS FED. AID PROJECT	



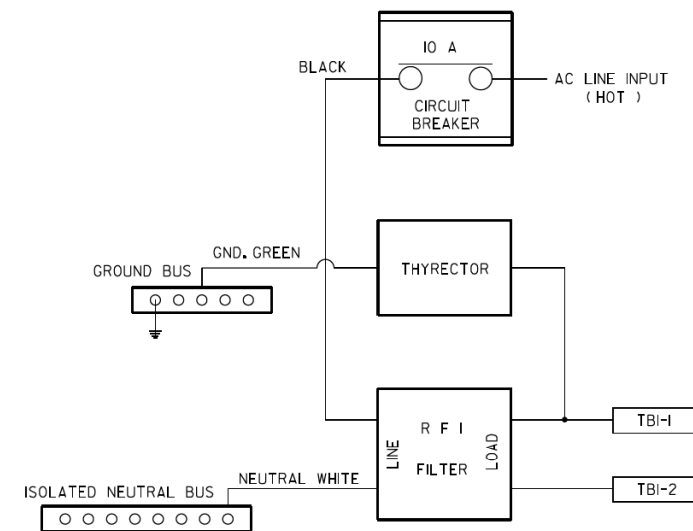
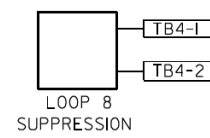
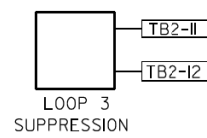
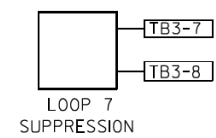
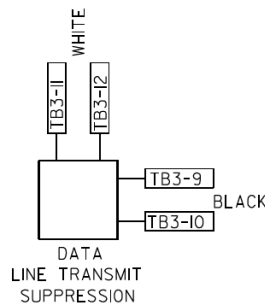
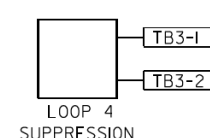
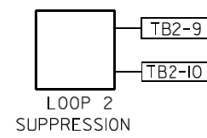
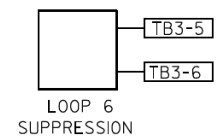
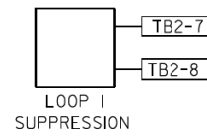
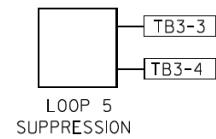
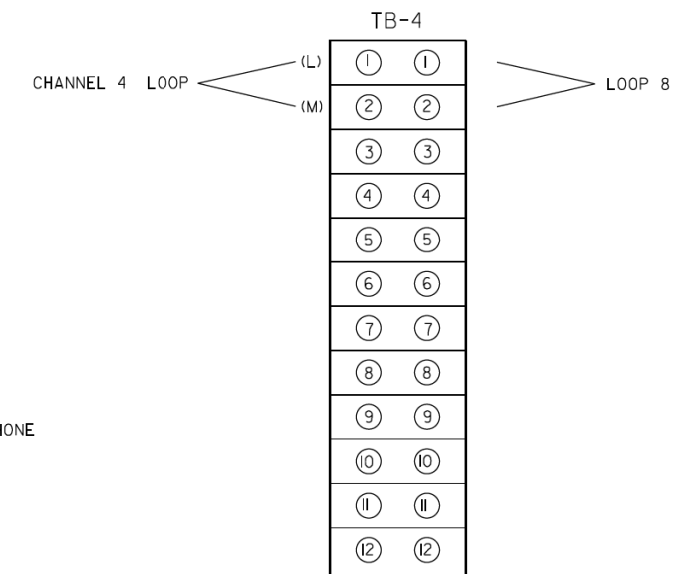
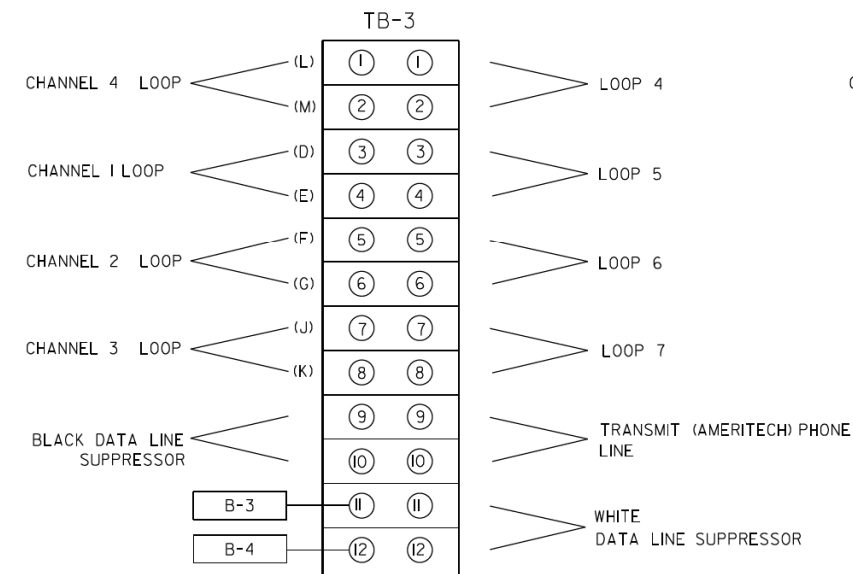
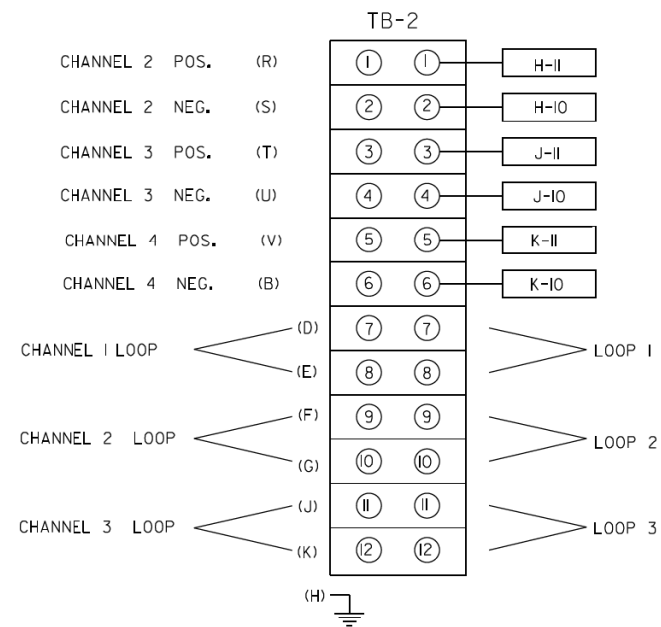
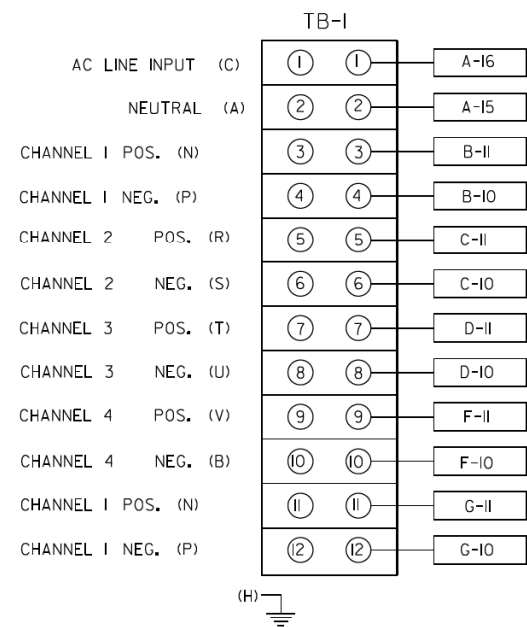
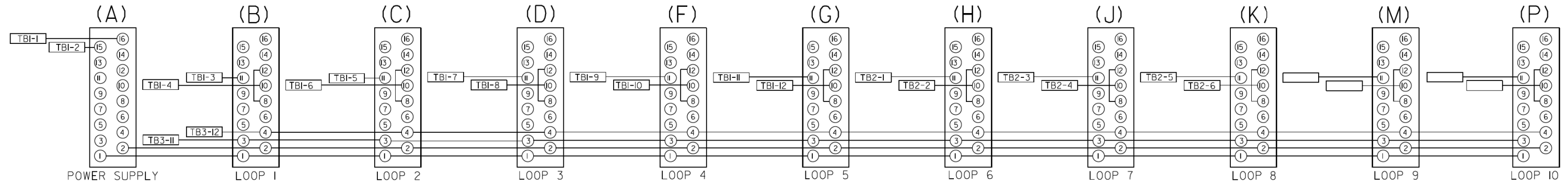
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#MODELNAME#		CHECKED - R.L.	REVISED -		CONTRACT NO. 60X76								
		DATE - 06/21/94	REVISED -		ILLINOIS FED. AID PROJECT								

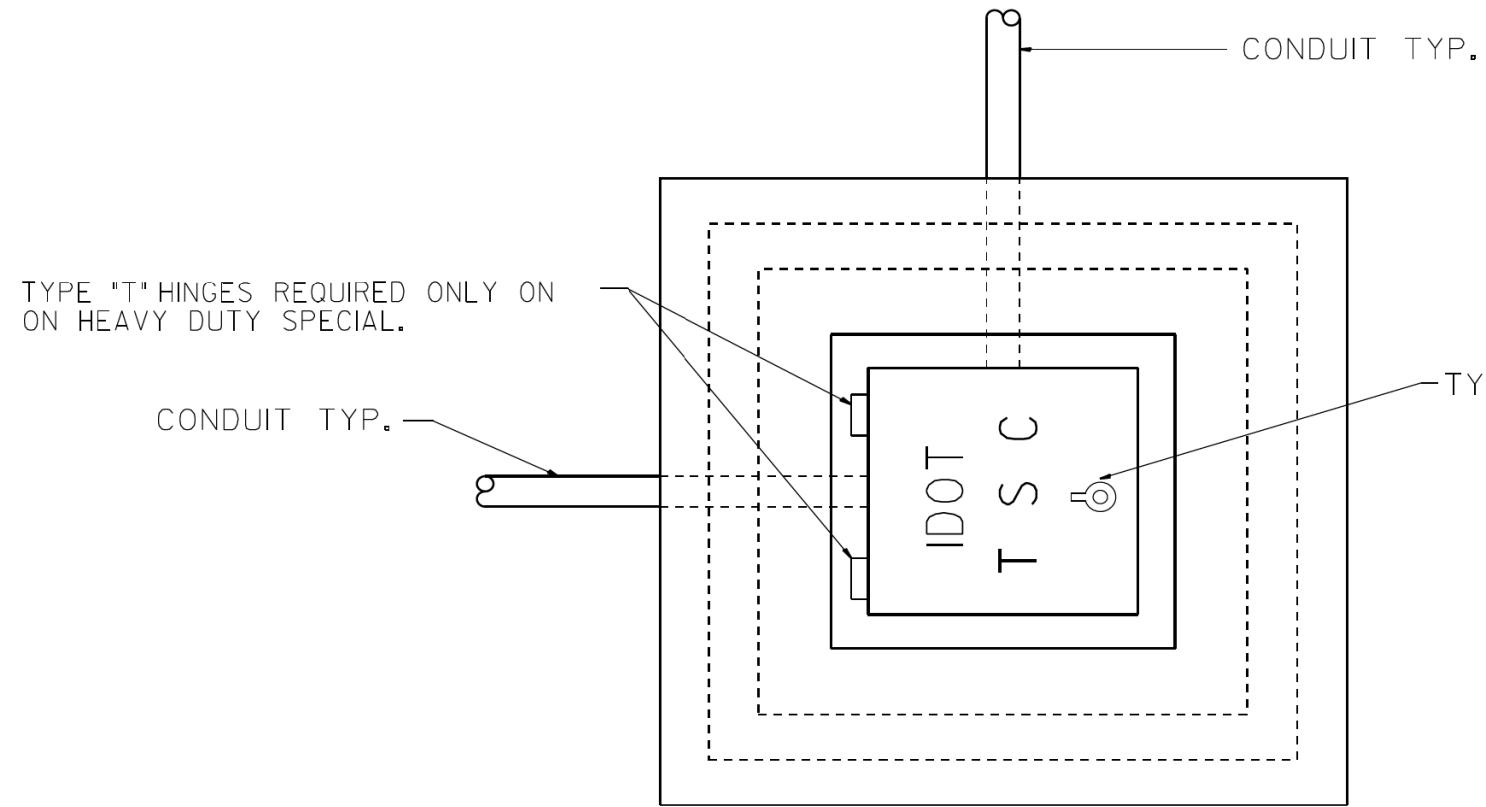


- NOTES:**
- 1) ALL DUCTS SHALL BE CONED IN HANDHOLES.
 - 2) ALL DUCTS SHALL BE GS-CONDUIT & GS 90 DEG. ELBOWS USED WHERE NEEDED.
 - 3) ALL DUCTS ENTER HANDHOLE AT MINIMUM DEPTH OF 30 INCH (762 mm)
 - 4) ALL HANDHOLE COVERS SHALL READ "IDOT TSC".
 - 5) ALL CABINET HANDHOLES SHALL BE HEAVY DUTY.
 - 6) DUCTS SHALL BE CENTERED IN CABINET FOUNDATION/HANDHOLE AS SHOWN.
 - 7) CONDUITS SHALL BE SPACED 305 mm (1FOOT) CENTER TO CENTER IN HEAVY DUTY HANDHOLE.
 - 8) INSTALL 3/4" X 10' (20 mm X 3 m) COPPER CLAD STEEL GROUND ROD IN HDHH PROVIDED AS CABINET PAD. EXOTHERMIC WELD CONNECTION FROM GROUND ROD TO #6 GROUND WIRE INSULATED (GREEN).
 - 9) BOND ALL GSC CONDUITS IN CABINET FOUNDATION.
 - 10) INSTALL #6 GROUND WIRE IN 1IN. (25 mm) GSC FROM HANDHOLE TO CABINET.
 - 11) TYPE "D" FOUNDATION SHALL BE 18" FROM TOP OF FOUNDATION TO FINISHED GRADE.

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 09/96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	CABINET - HANDHOLE CONDUIT DETAIL		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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		DATE - 06/05/95	REVISED - 07/2010				ILLINOIS	FED. AID PROJECT					

BACK VIEW OF TONE RACK



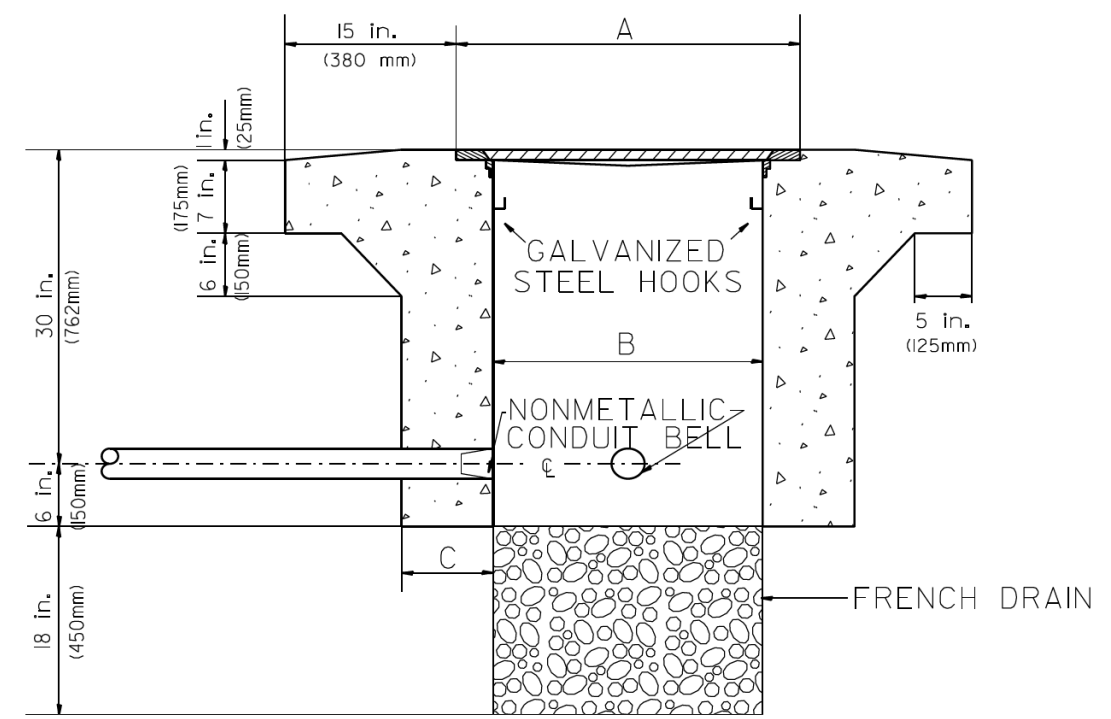


PLAN

HEAVY DUTY HANDHOLE MINIMUM DIMENSIONS (UNHINGED)

A	28" (711 mm)
B	22" (559 mm)
C	8" (200 mm)

(FRAME AND COVER 260 LBS. (118 Kg.) MIN.)



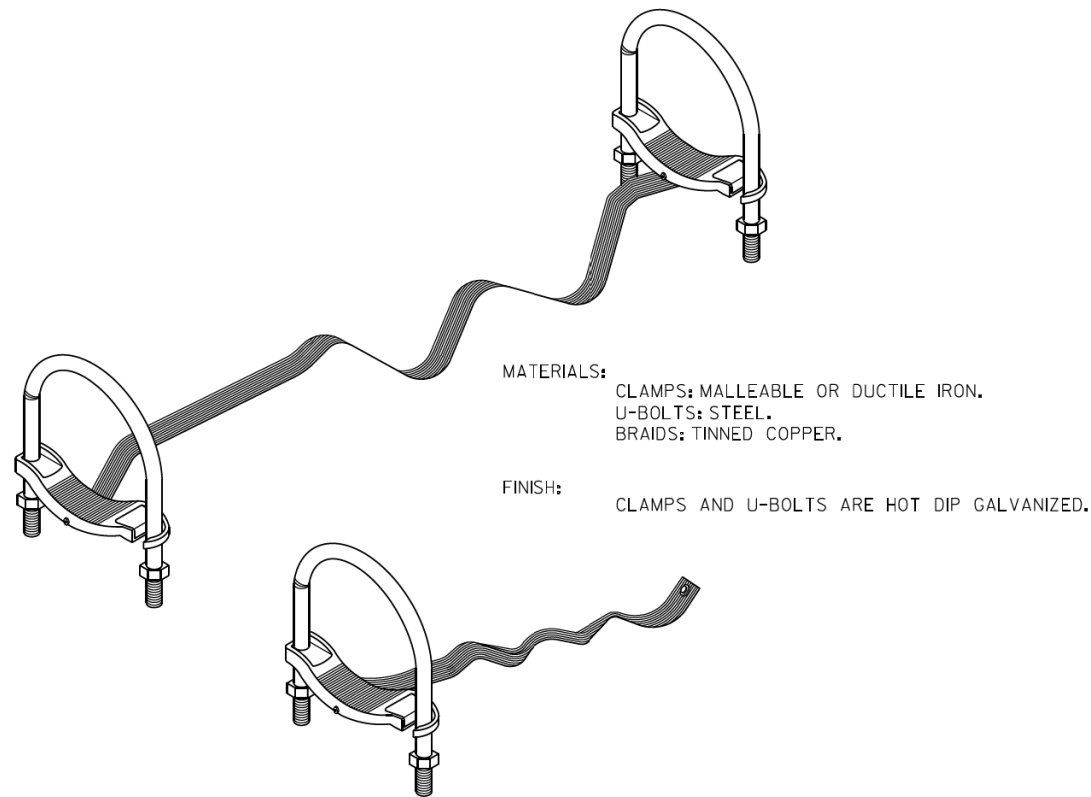
ELEVATION

HEAVY DUTY HANDHOLE SPECIAL MINIMUM DIMENSIONS

A	31.5" (800 mm)
B	30.0" (762 mm)
C	10.0" (250 mm)

(FRAME AND COVER 405 LBS. (184 Kg. (405))

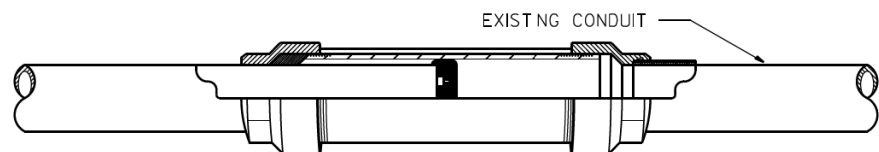
PC CONCRETE - HEAVY DUTY HAND HOLE



MATERIALS:
 CLAMPS: MALLEABLE OR DUCTILE IRON.
 U-BOLTS: STEEL.
 BRAIDS: TINNED COPPER.

FINISH:
 CLAMPS AND U-BOLTS ARE HOT DIP GALVANIZED.

GROUNDING & BONDING JUMPERS FOR RIGID STEEL, IMC & EMT



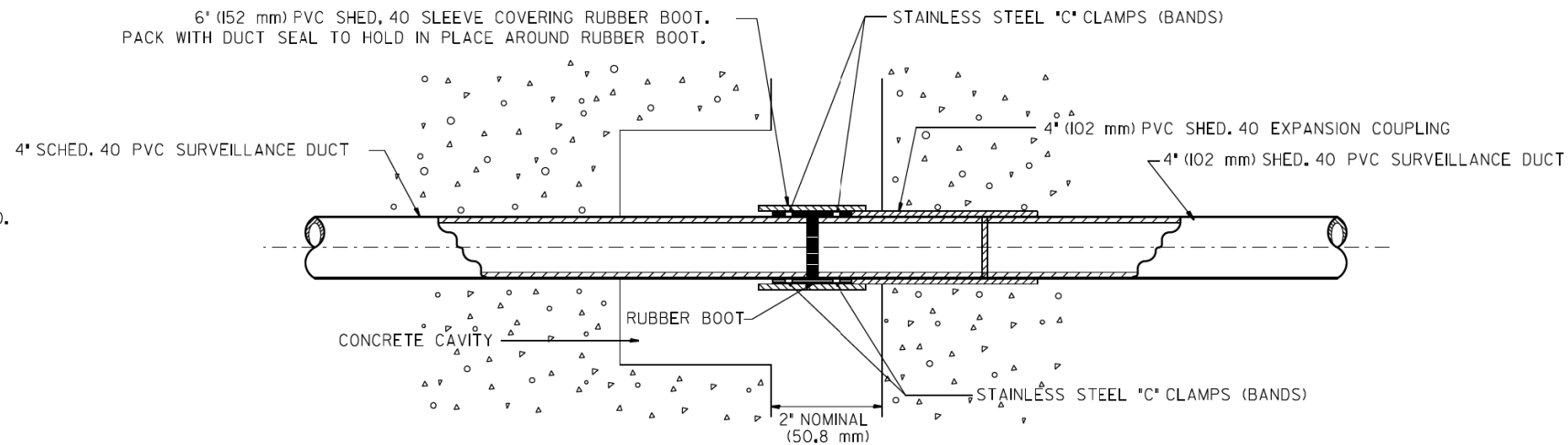
CROSS SECTION



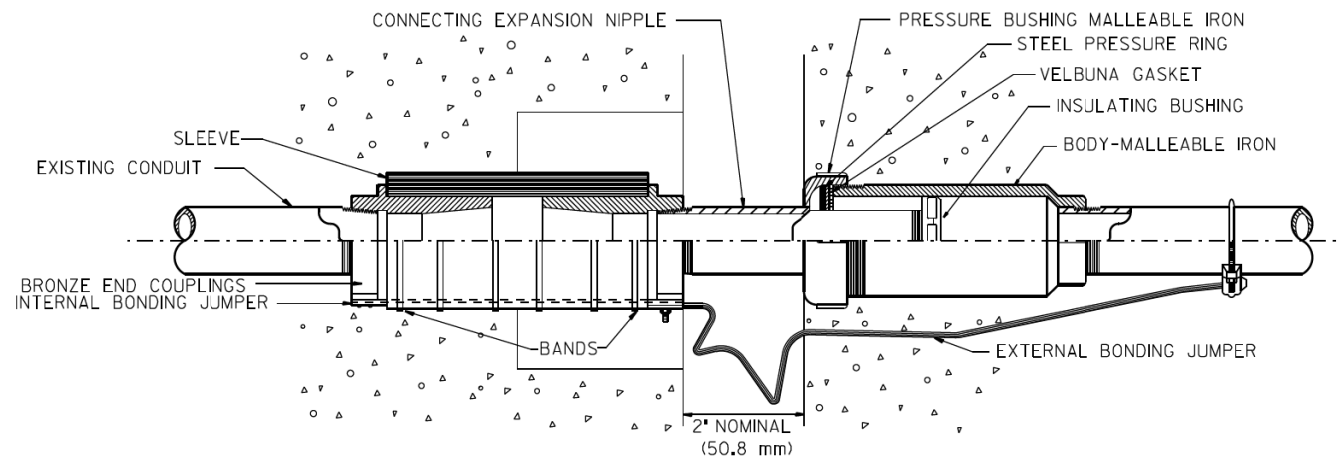
BONDING EXPANSION FITTINGS

MATERIALS:
 HEAD: MALLEABLE OR DUCTILE IRON.
 SLEEVE: STEEL.
 INSULATING BUSHING: PHENOLIC.

FINISH:
 HOT DIP GALVANIZED.



EXPANSION/DEFLECTION FITTING



COMBINATION DEFLECTION/EXPANSION FITTINGS FOR RIGID METAL CONDUIT & IMC

FITTING CAN BE USED EXPOSED OR EMBEDDED IN CONCRETE.

MATERIALS:
 SLEEVE: NEOPRENE.
 END COUPLINGS: BRONZE.
 BONDING JUMPER: TINNED COPPER BRAIDS.
 BANDS: STAINLESS STEEL.

FINISH:
 ALL MALLEABLE, DUCTILE IRON OR STEEL PARTS
 ARE HOT DIP GALVANIZED.

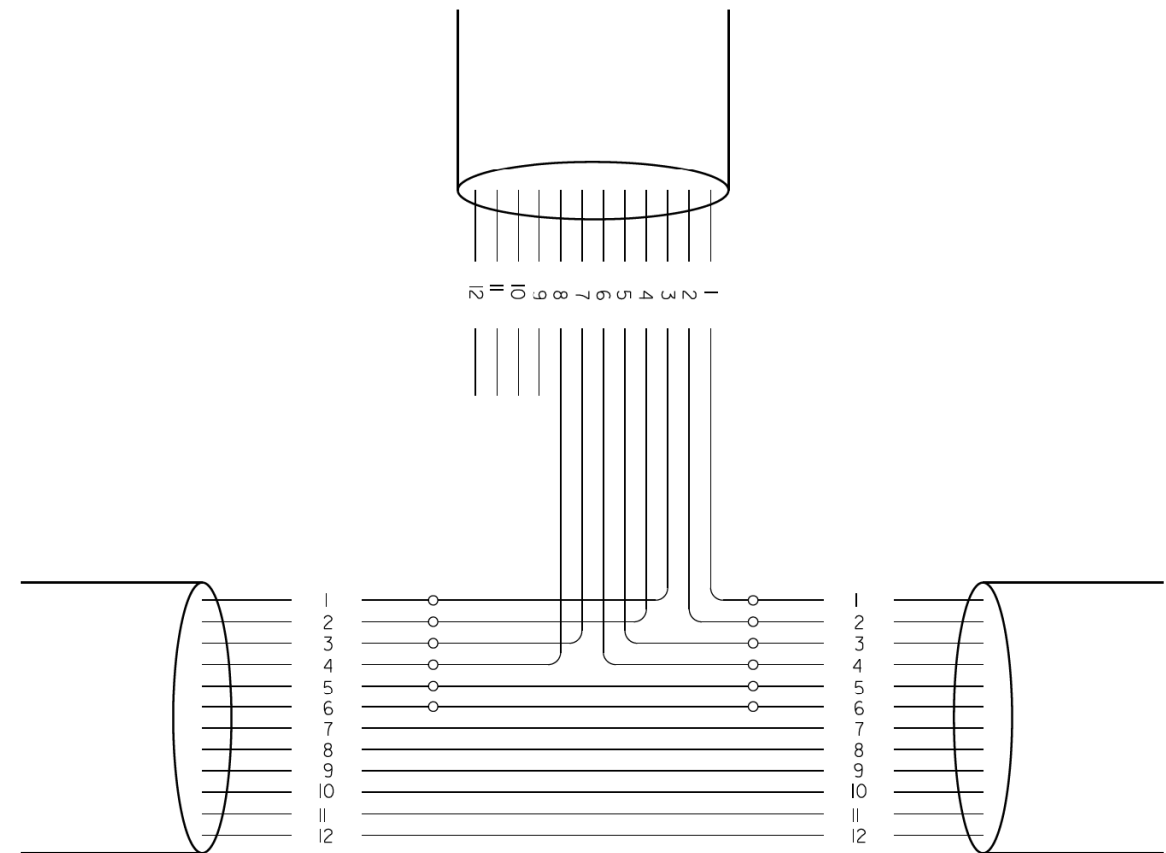
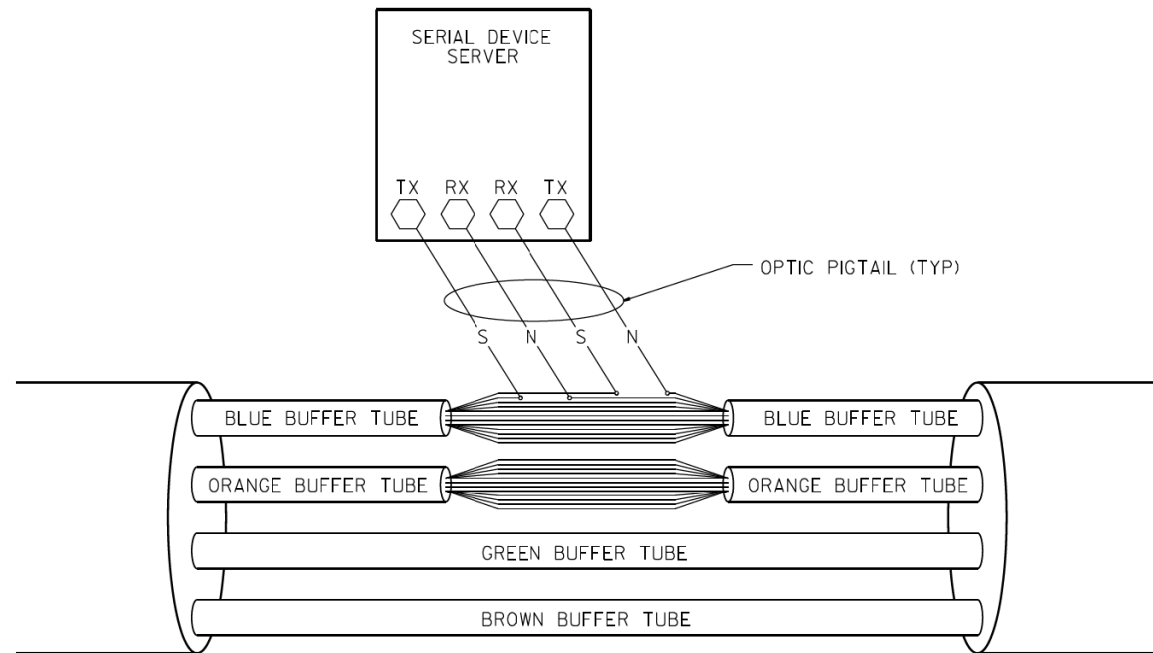
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#MODELNAME#	PLOT DATE = #DATE#	DATE - 01/22/98	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 TRAFFIC SYSTEMS CENTER

EXPANSION FITTING DETAIL SHEET

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	563
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

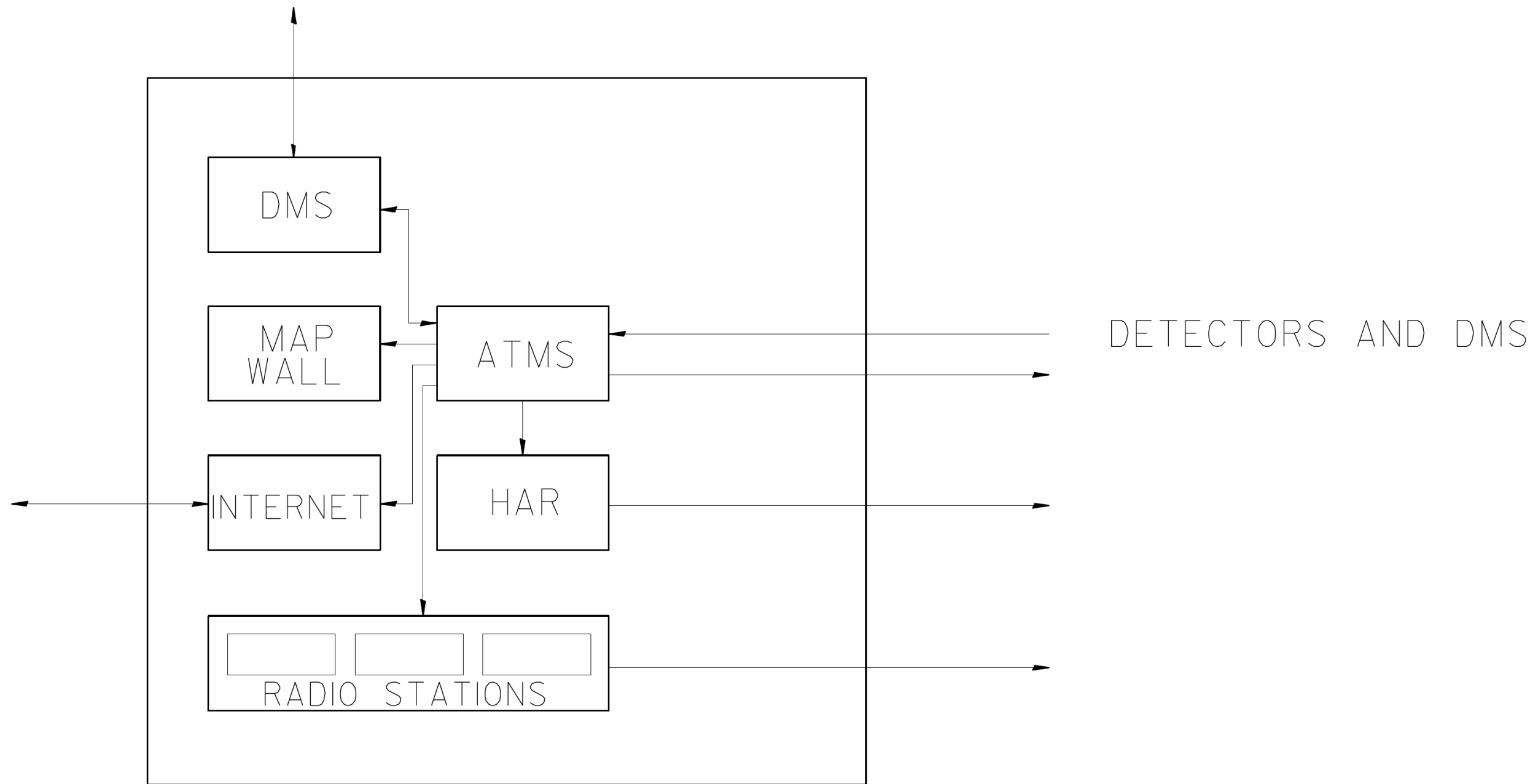


PHYSICAL SPLICE DETAILS (TYP)
(NOT TO SCALE)

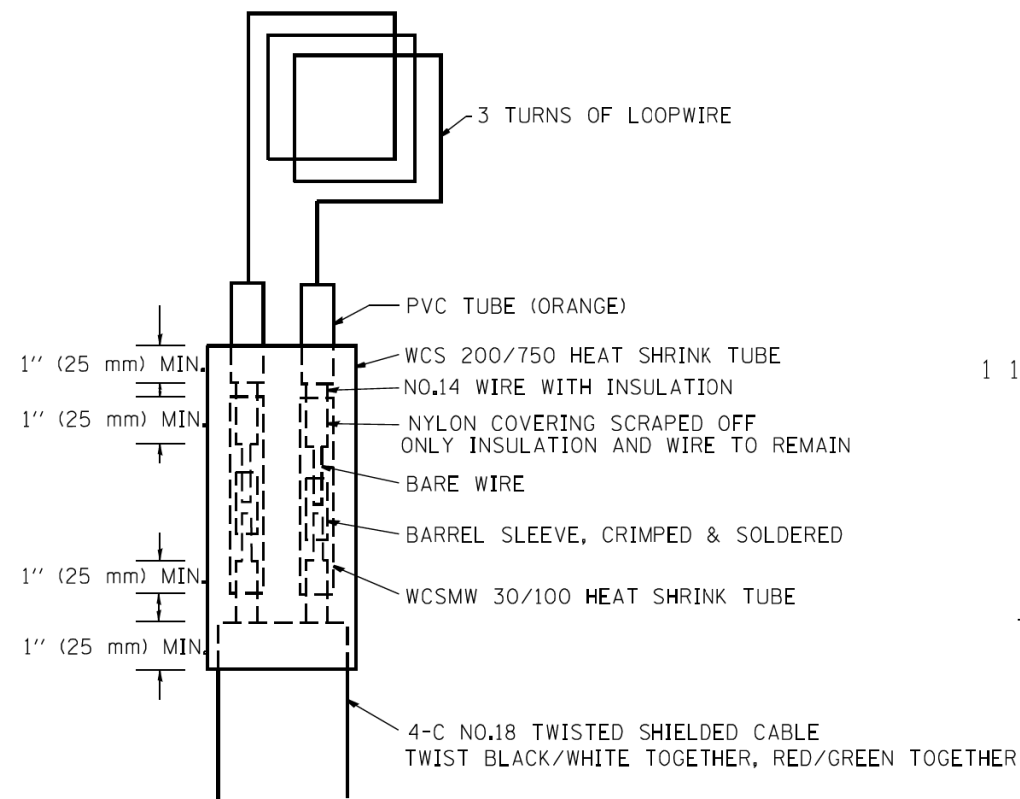
FIBERS		FUNCTION	APPLICATION DESCRIPTION
FIBER NO.	COLOR CODE		
1	BLUE	IN TX	DATA CIRCUIT
2	ORANGE	IN RX	
3	GREEN	OUT RX	
4	BROWN	OUT TX	
5	SLATE	IN TX	DMS
6	WHITE	IN RX	
7	RED	OUT RX	
8	BLACK	OUT TX	
9	YELLOW	IN TX	CCTV
10	VIOLET	IN TX	
11	ROSE	OUT RX	
12	AQUA	OUT TX	

NOTE:

I.- THIS DIAGRAM IS PROVIDED FOR ILLUSTRATION PURPOSES ONLY AND DEPICTS A TYPICAL FIBER OPTIC SPLICE.



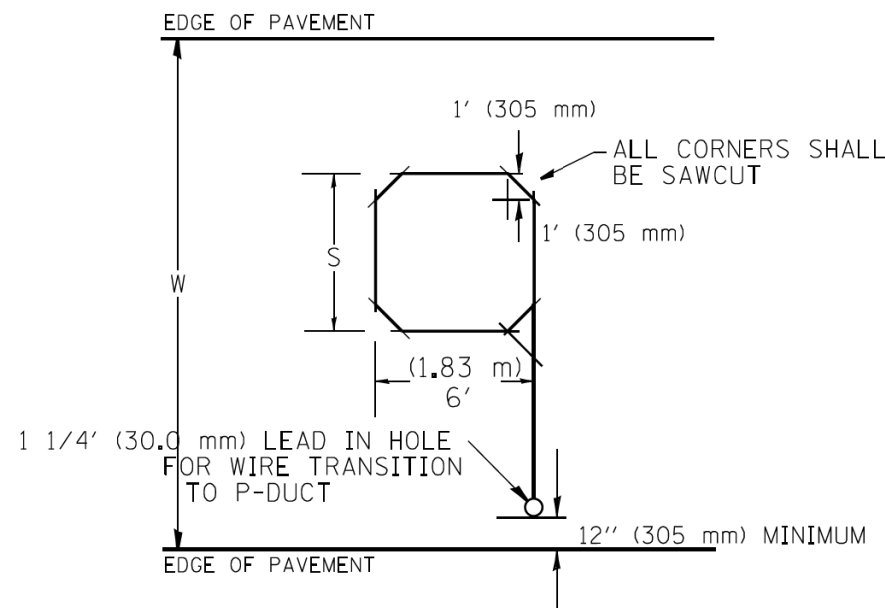
TSC



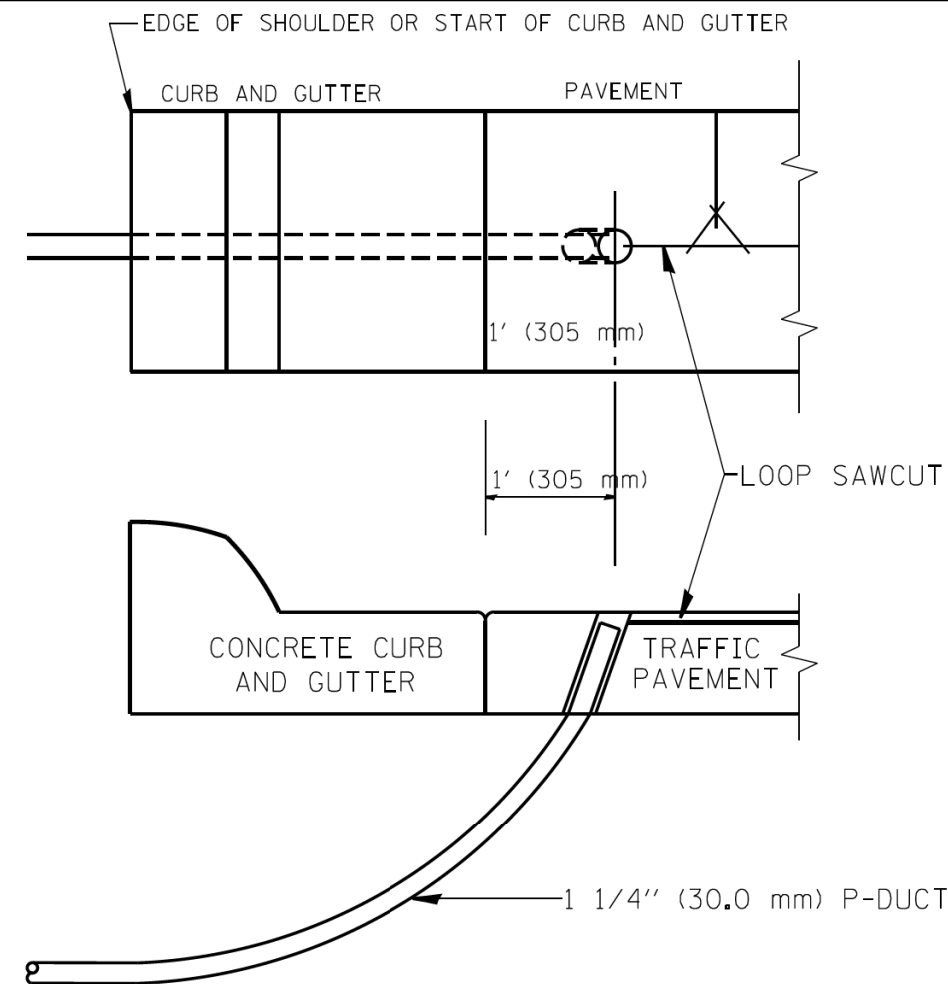
MINIMUM 1" (25 mm) HEAT SHRINK TUBING OVERLAP ON WIRE, PVC & SHIELDED CABLE TO FORM WATER TIGHT SEAL

LOOP SPLICING REQUIREMENTS

WIDTH (W)	WIDTH (S)
12' (3.7 m)	8' (2.5 m)
13' (4.0 m)	9' (2.8 m)
14' (4.3 m)	10' (3.1 m)
15' (4.6 m)	11' (3.4 m)
16' (4.9 m)	12' (3.7 m)
17' (5.2 m)	13' (4.0 m)
18' (5.5 m)	14' (4.3 m)
19' (5.8 m)	15' (4.6 m)
20' (6.1 m)	18' (4.9 m)
21' (6.4 m)	17' (5.2 m)
22' (6.7 m)	18' (5.5 m)
23' (7.0 m)	19' (5.8 m)
24' (7.3 m)	20' (6.1 m)
25' (7.6 m)	21' (6.4 m)



TYPICAL "S" FT. BY 6' (1.83 m) INDUCTION LOOP SAWCUT LAYOUT FOR RAMPS

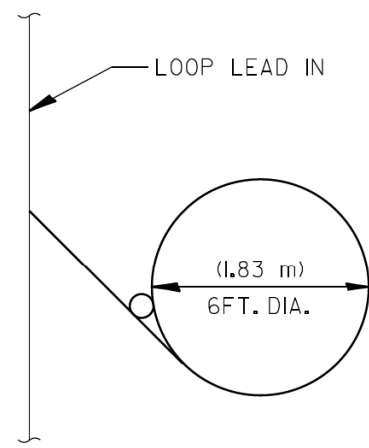


CURB AND GUTTER LOOP LEAD-IN TRANSITION DETAIL

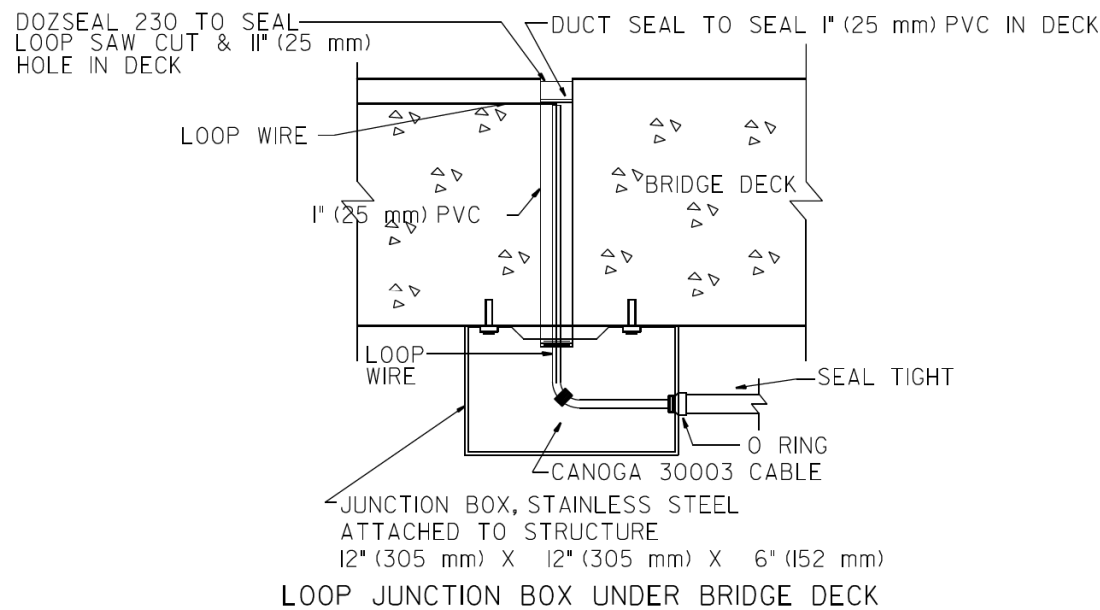
NOTES

1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150' (45 m) OR MORE FROM CABINET.
2. LOOPS SHALL BE SPLICED IN HANDHOLES ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
3. LOOPS SHALL NOT BE SPLICED IN SERIES.
4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.

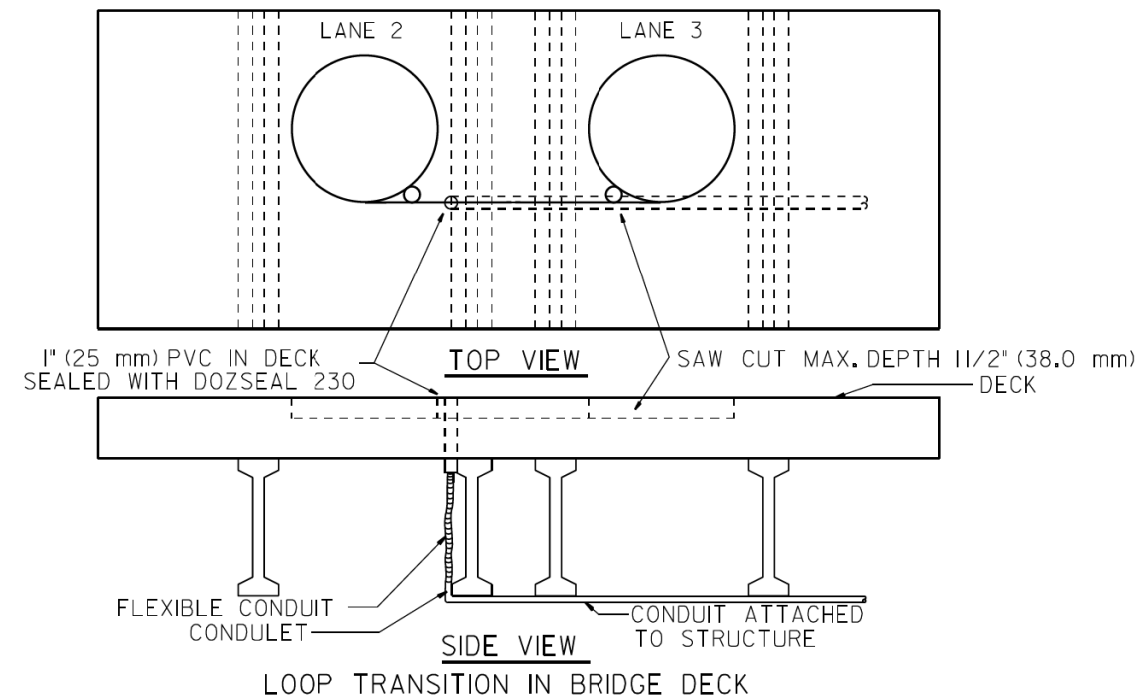
FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED - 6/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	RECTANGULAR INDUCTION LOOP TYPICAL			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwwork\pwwork\mezag\d0287541\TSCYF.dgn	DRAWN - G.M.	REVISED - 11/95	90/94/250					2014-002R&B	COOK	814	566	
PLOT SCALE = 100,0000' / 1" =	CHECKED - R.L.	REVISED - 05/96	CONTRACT NO. 60X76									
PLOT DATE = 2/7/2013	DATE - 6-22-94	REVISED - 10/96	ILLINOIS FED. AID PROJECT									
				SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.				



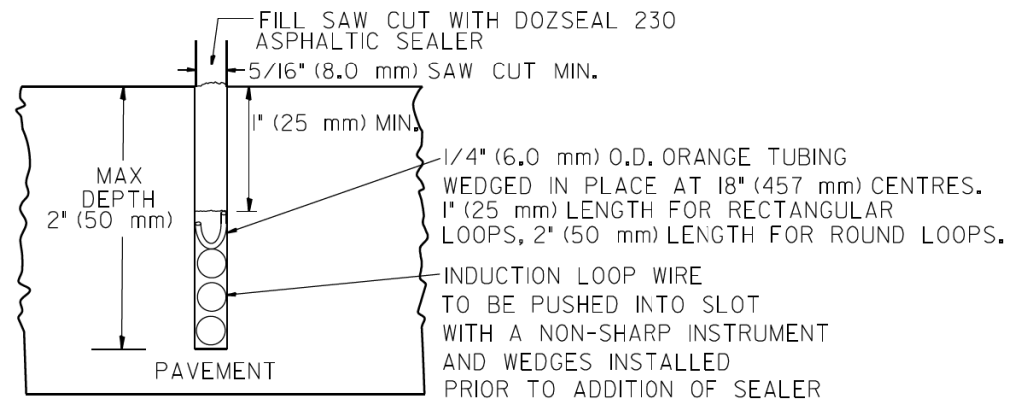
TYPICAL LOOP SAWCUT LAYOUT



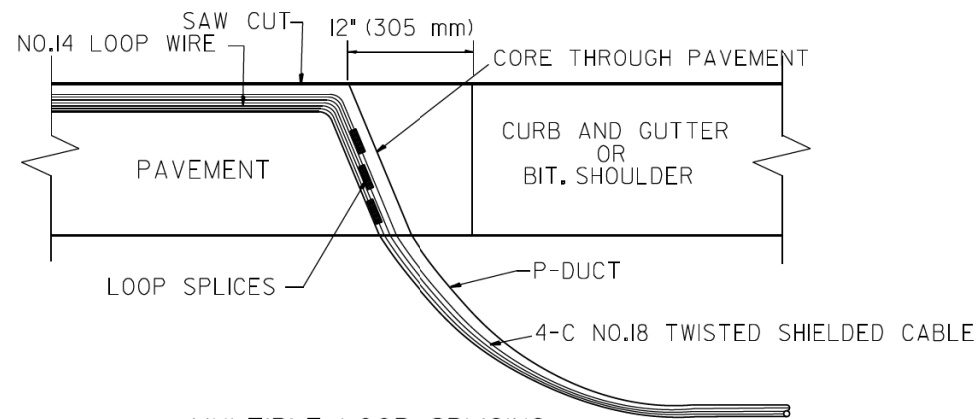
LOOP JUNCTION BOX UNDER BRIDGE DECK



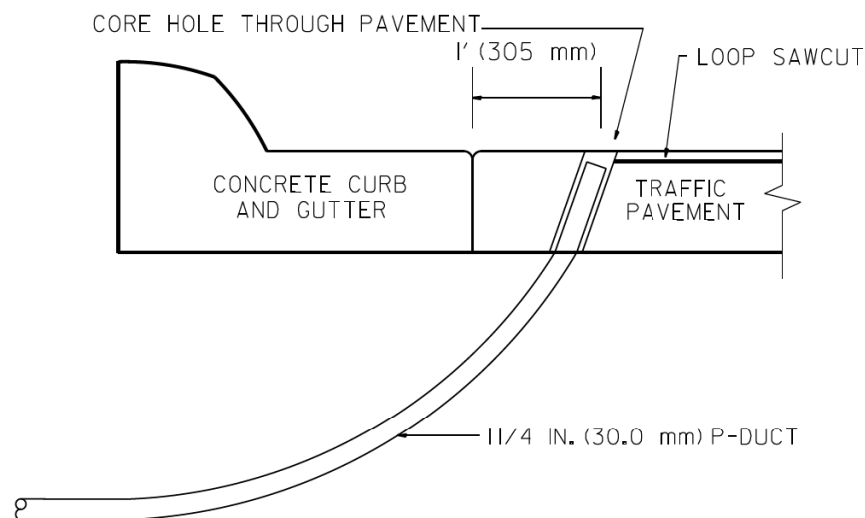
LOOP TRANSITION IN BRIDGE DECK



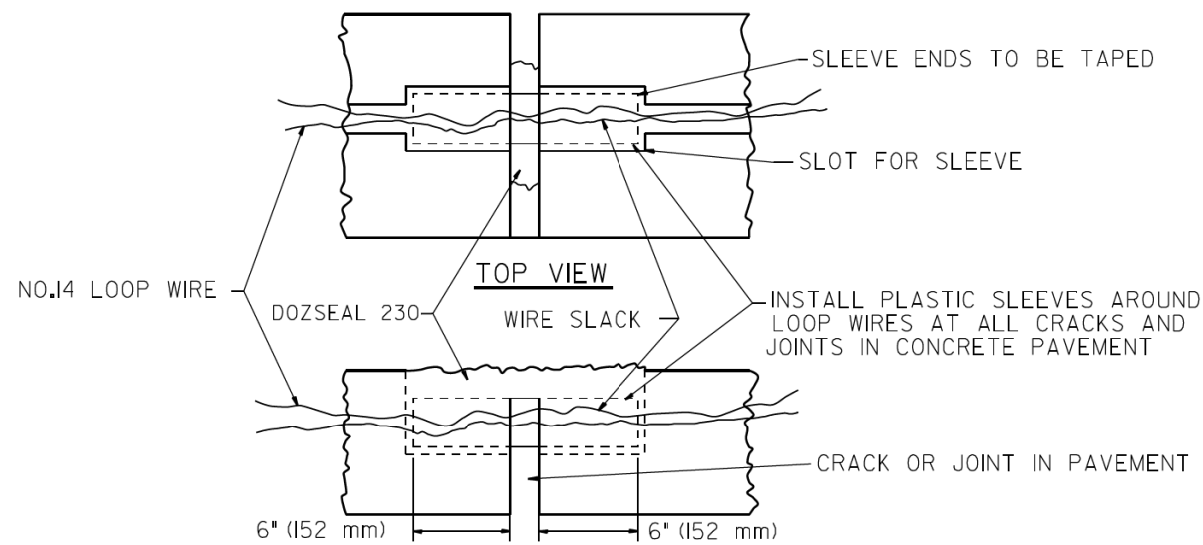
LOOP CROSS SECTION IN PAVEMENT



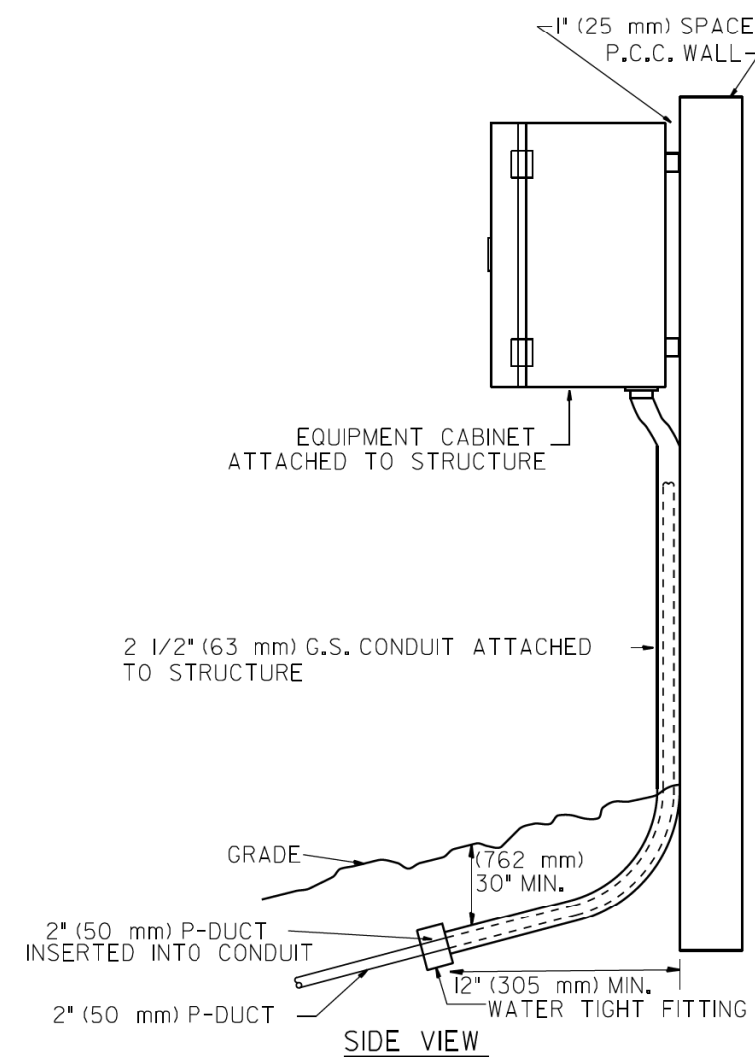
MULTIPLE LOOP SPLICING



SIDE SECTION LOOP LEAD-IN TRANSITION DETAIL



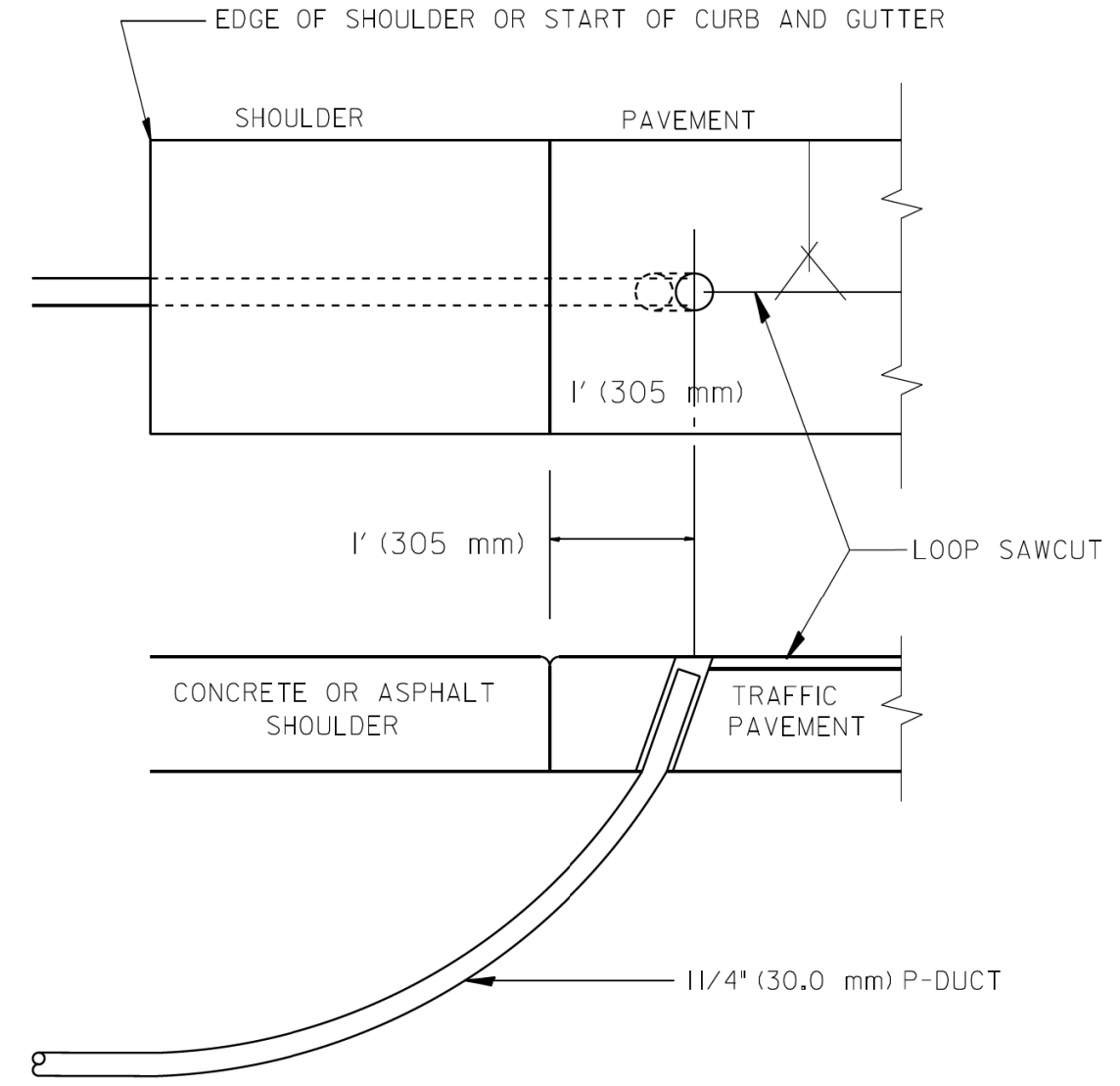
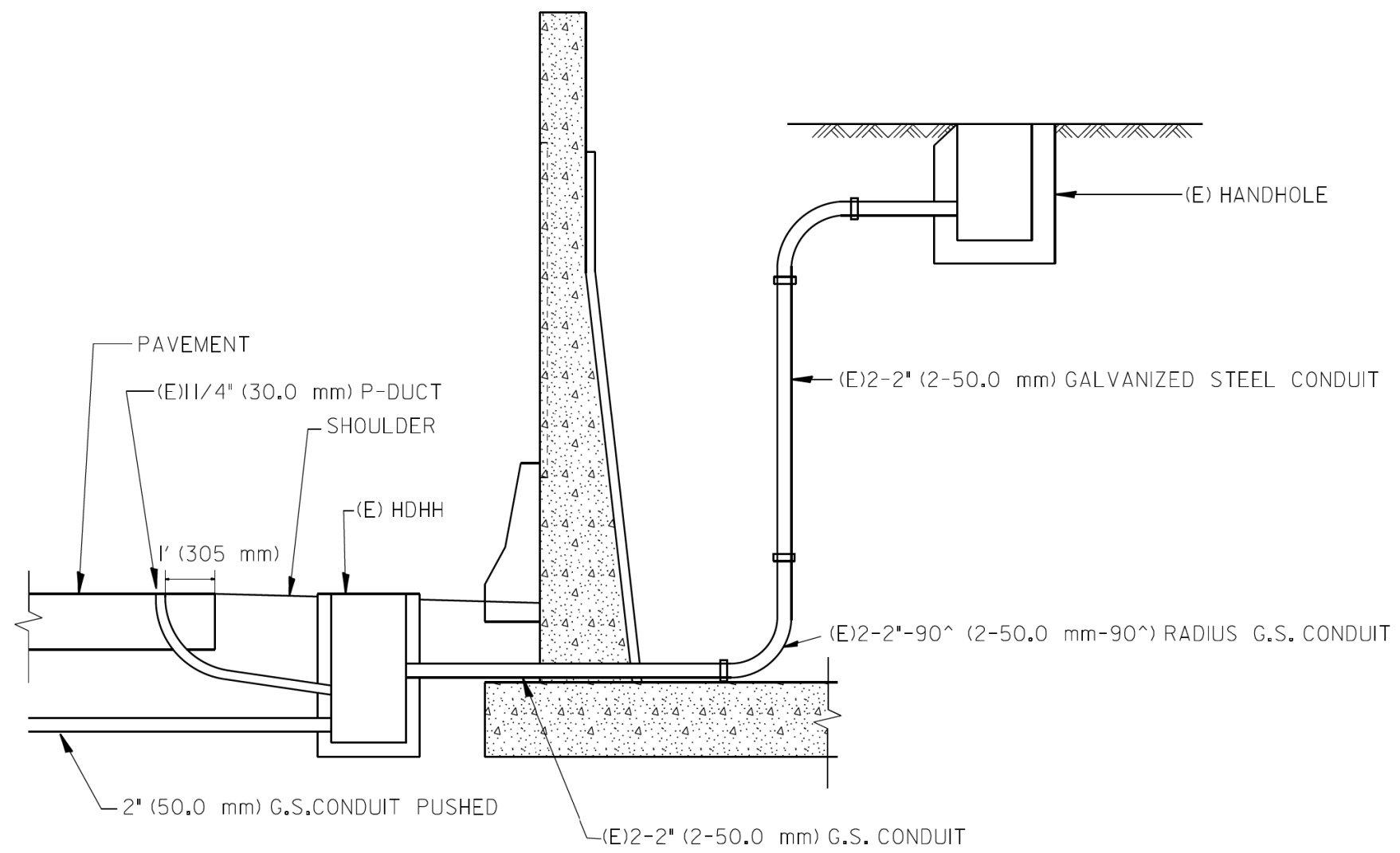
PAVEMENT CRACK TRANSVERSE SLEEVE



POLYETHYLENE DUCT/GS. CONDUIT TRANSITION

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	LOOP, CONDUIT & DUCT INSTALLATION DETAILS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - G.M.	REVISED - 03/95		SCALE: NONE	SHEET	OF SHEETS	STA.	TO STA.	2014-002R&B	COOK	814 567
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		DATE - 06/22/94	REVISED - 10/96									

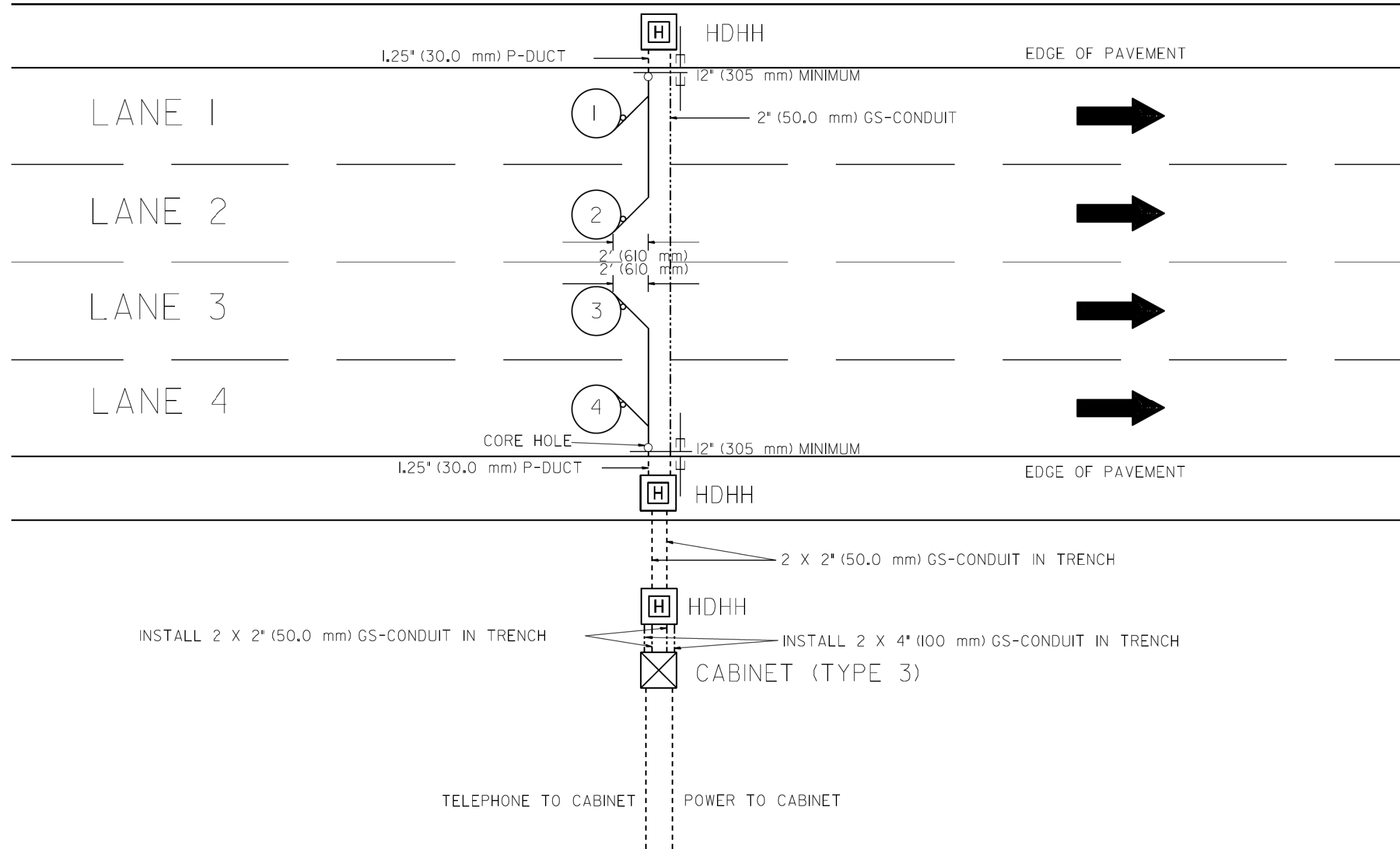
ILLINOIS FED. AID PROJECT
CONTRACT NO. 60X76



SHOULDER LOOP LEAD-IN
TRANSITION DETAIL

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 6/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	TYPICAL INDUCTION LOOP LEAD-IN TRANSITION DIAGRAMS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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#MODELNAME#		CHECKED - R.L.	REVISED - 05/96		SCALE: NONE	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 60X76	
		DATE - 6-22-94	REVISED - 10/96									ILLINOIS FED. AID PROJECT	

NOTE: ALL MAIN LINE LOOPS ARE ROUND 6' DIA. (1.83 m)



NOTES

1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150' (45 m) OR MORE FROM CABINET.
2. LOOPS SHALL BE SPLICED IN HANDHOLES ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
3. LOOPS SHALL NOT BE SPLICED IN SERIES.
4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.

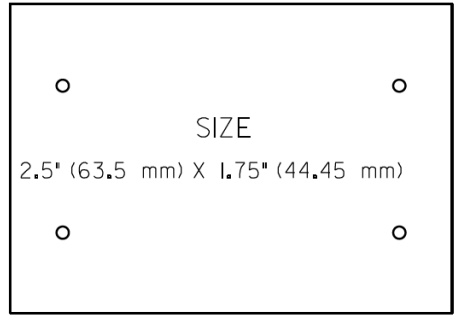
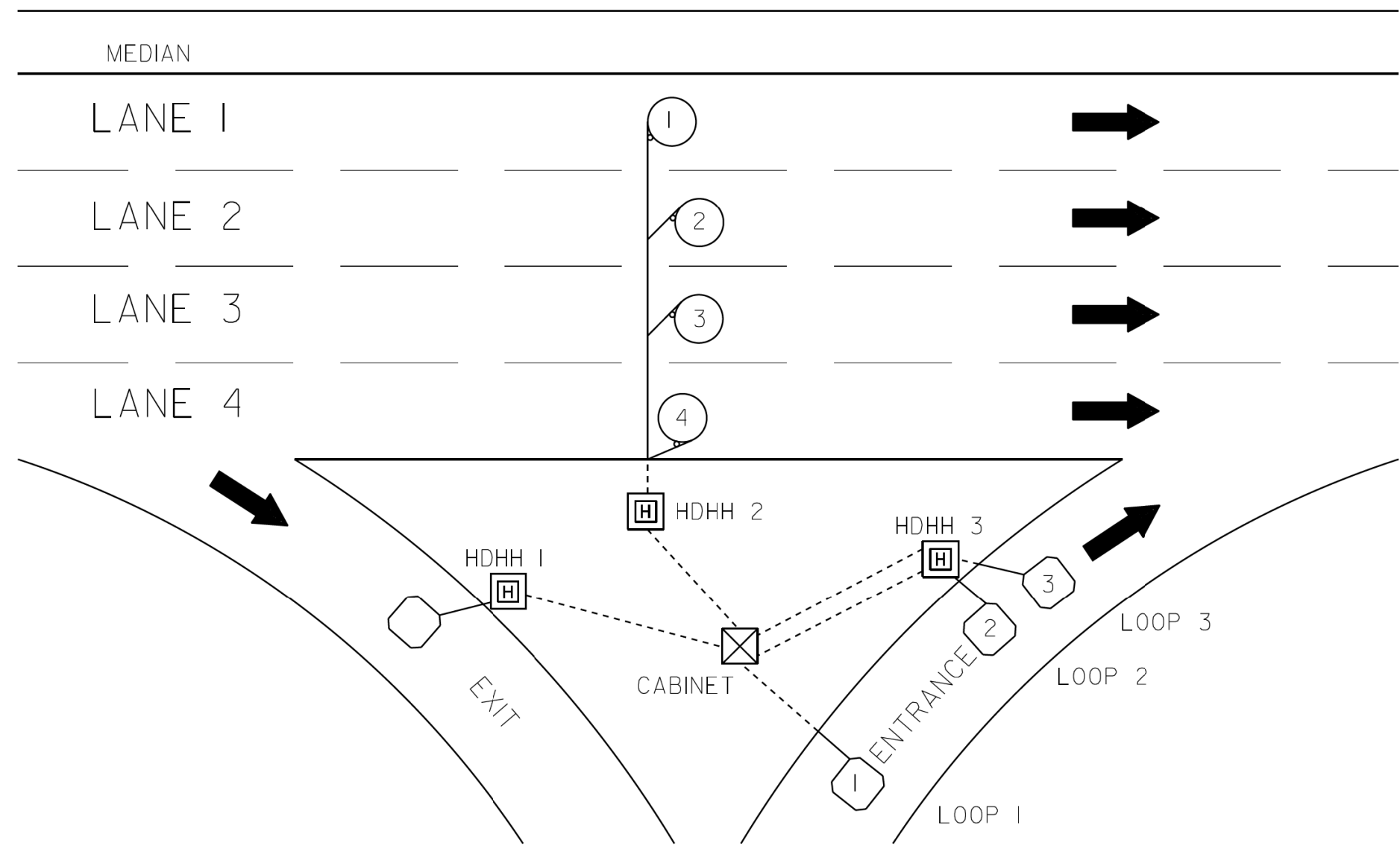
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#MODELNAME#	PLOT DATE = #DATE#	DATE - 6-27-94	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

NEW CONSTRUCTION
ROUND INDUCTION LOOP
TYPICAL INSTALLATION

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/250	2014-002R&B	COOK	814	569
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	



SUGGESTED TAG
 PANDUIT
 #MP250WI75-C
 OR EQUIVALENT

LOOP ANALYZER					
LOCATION _____				DATE _____	
LOOP LOCATION -- LANE DIRECTION	LOOP WIRE MARKED AND CODED	LOOP SIZE	FREQ. INDUCTANCE	INSULATION	LOOP RESISTANCE

HDHH 1 EXAMPLE

IB-EB EXIT
 CCW IN/
 TO CABINET # _____

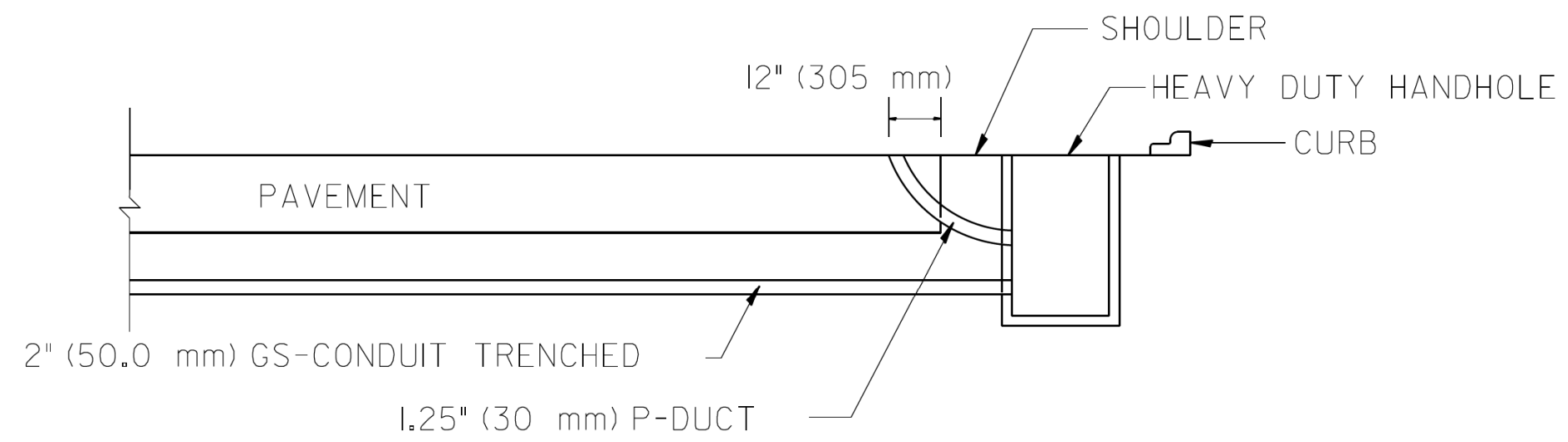
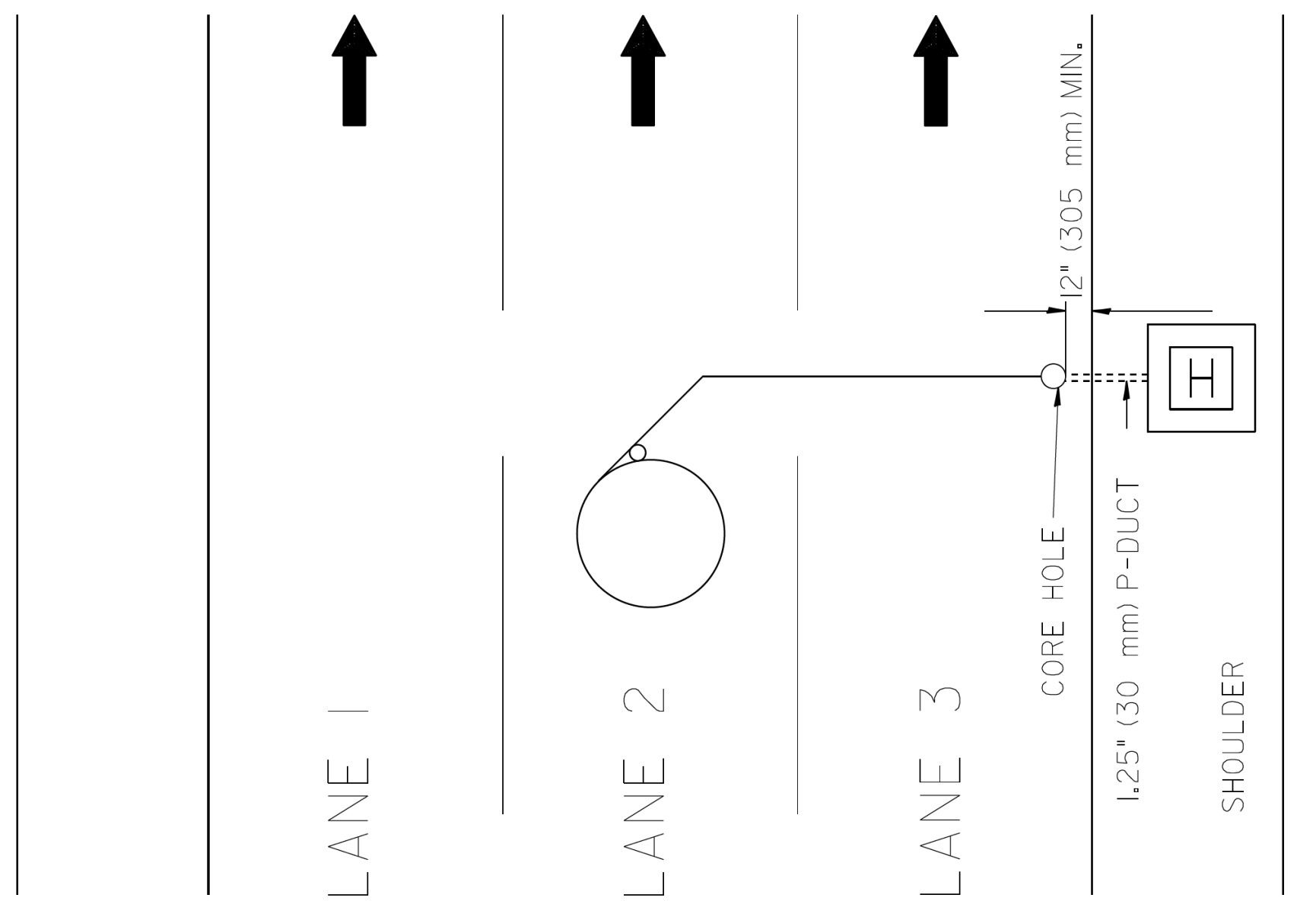
HDHH 2 EXAMPLE

IB (OB) LANE # ___
 CCW /OUT
 TO CABINET # _____

HDHH 3 EXAMPLE

IB-EB ENT.
 LOOP #2
 CW IN/

NOTE:
 EACH LOOP WIRE SHALL BE TAGGED AS "IN" OR "OUT" AND "CW" OR "CCW". SHIELDED CABLE WILL BE TAGGED IN EACH HANDHOLE AND CABINET TO MATCH THE CABLE LOG.



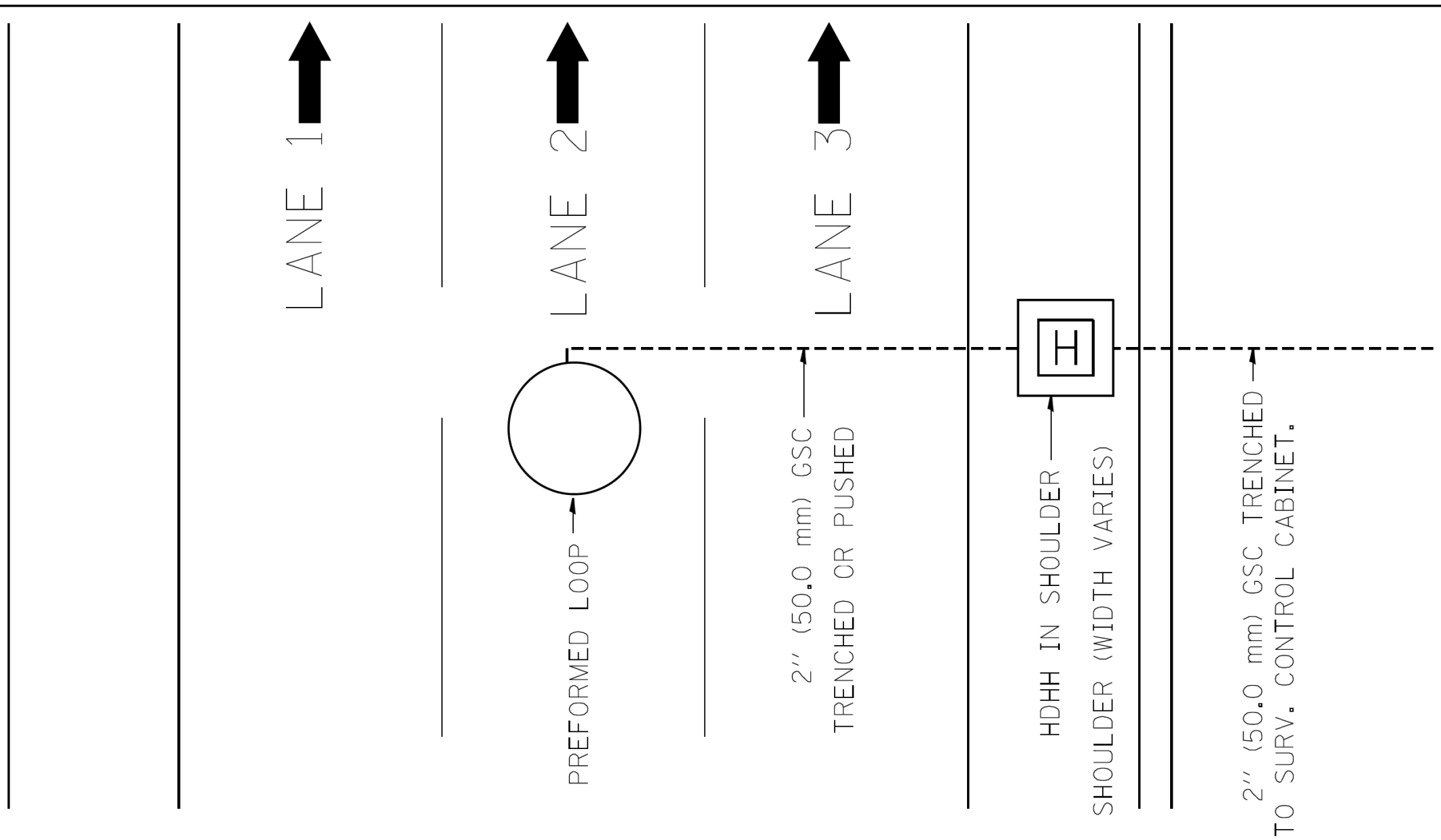
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

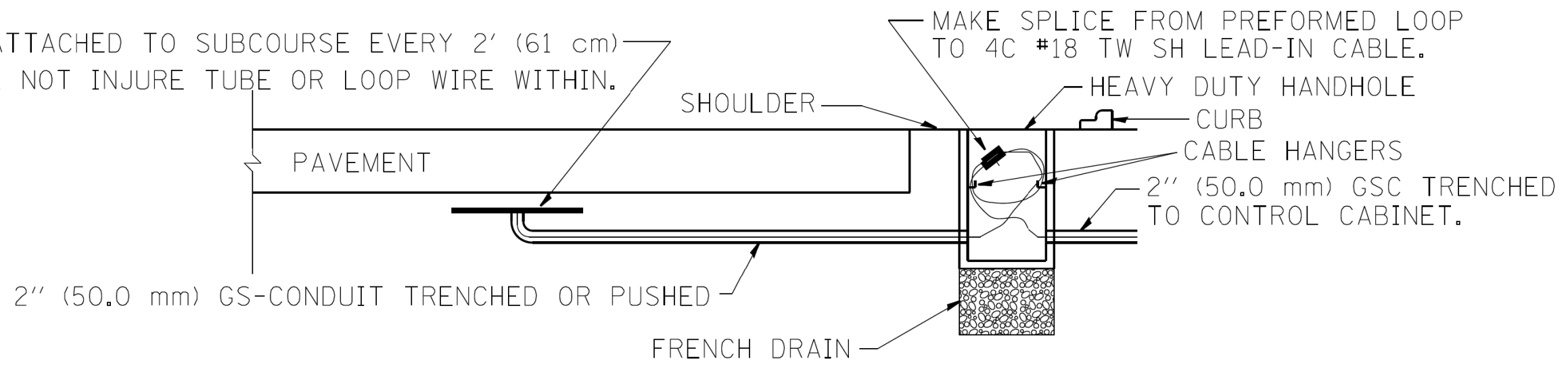
DIVE HOLE DUCT SYSTEM

SCALE: NONE SHEET OF SHEETS STA. TO STA.

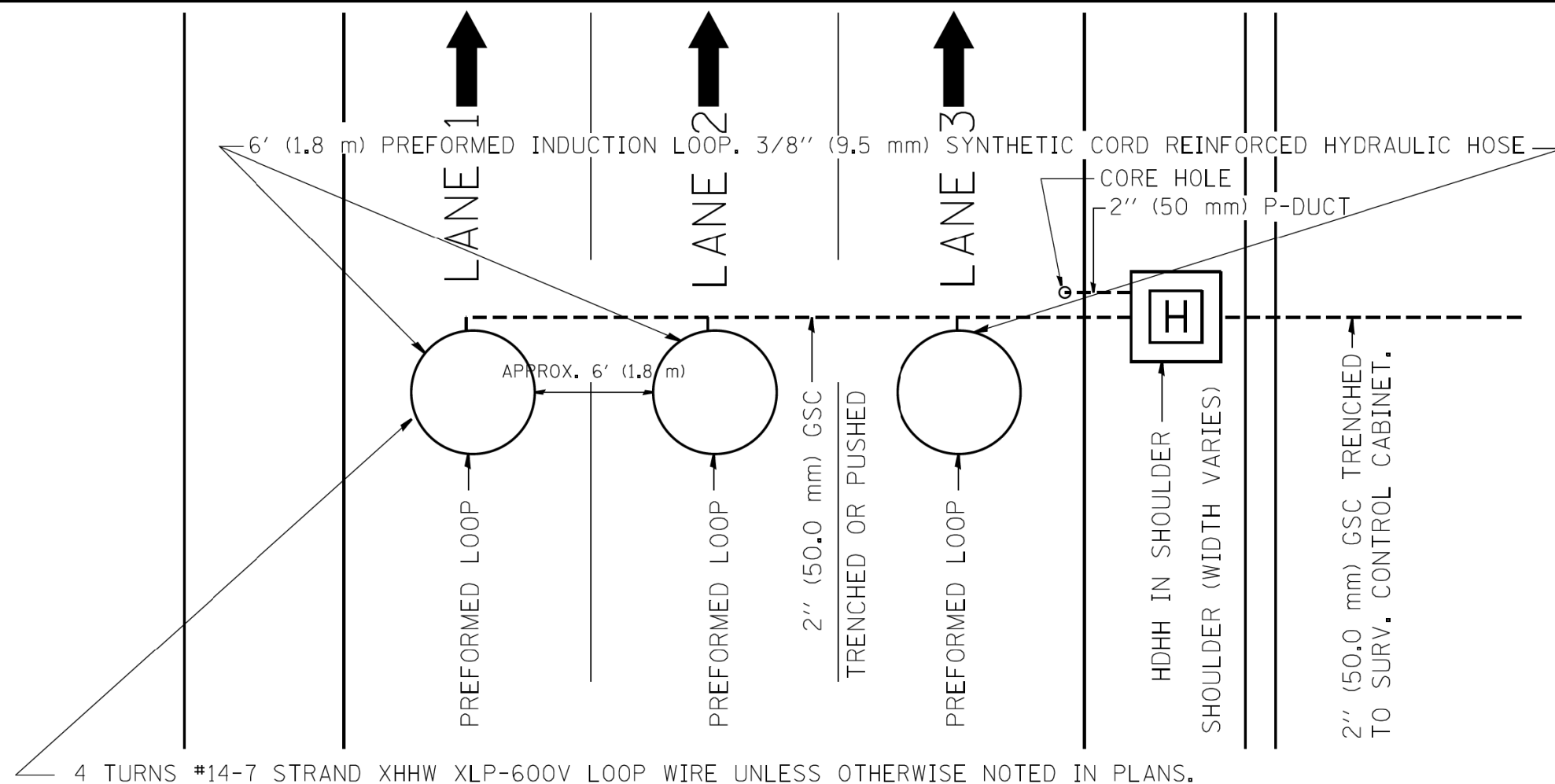
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	571
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



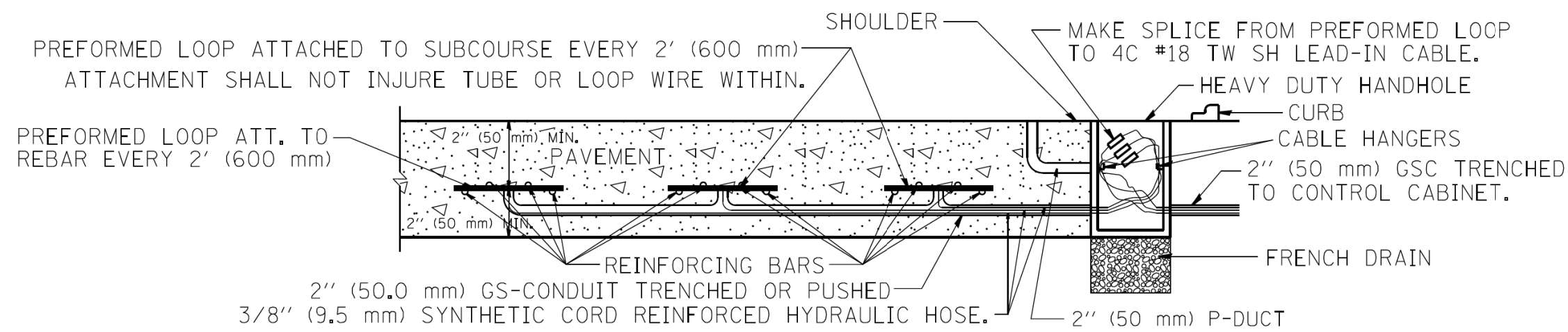
PREFORMED LOOP ATTACHED TO SUBCOURSE EVERY 2' (61 cm)
ATTACHMENT SHALL NOT INJURE TUBE OR LOOP WIRE WITHIN.



FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PREFORMED LOOP TYPICAL INSTALLATION NON-BRIDGE DECK APPLICATION			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
ca:\pwork\widot\mezag\d0287541\TSCYF.dgn		DRAWN - G.M.	REVISED -		SCALE: NONE	SHEET NO.	OF	SHEETS	STA.	TO STA.	2014-002R&B	COOK	814	572
		CHECKED - R.L.	REVISED -									CONTRACT NO. 60X76		
		DATE - 03/18/02	REVISED -									ILLINOIS FED. AID PROJECT		



TYPICAL 3 LANE COUNT STATION IN NEW CONCRETE PAVEMENT

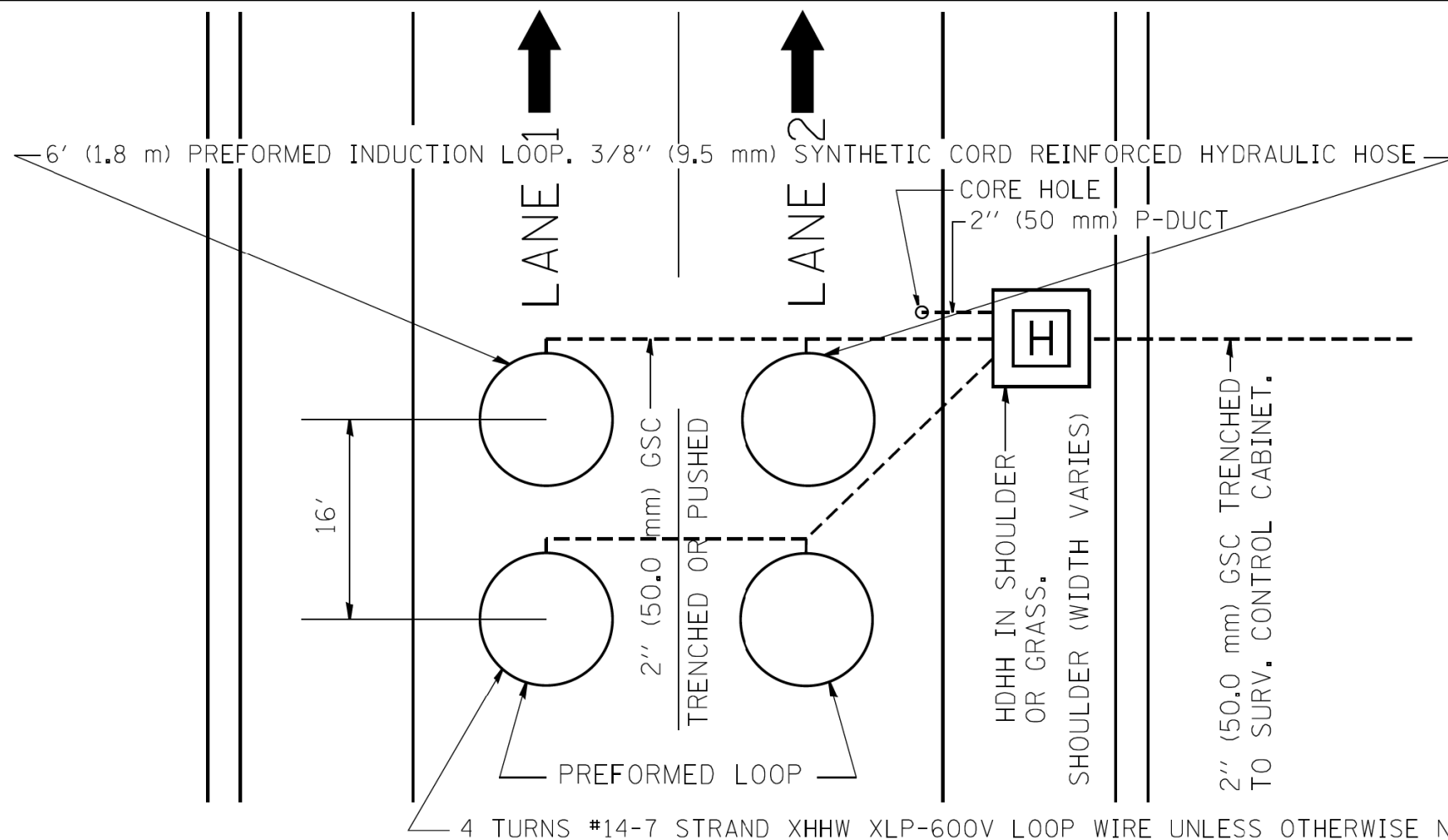


LOOP INSTALLATION IN NEW CONCRETE PAVEMENT

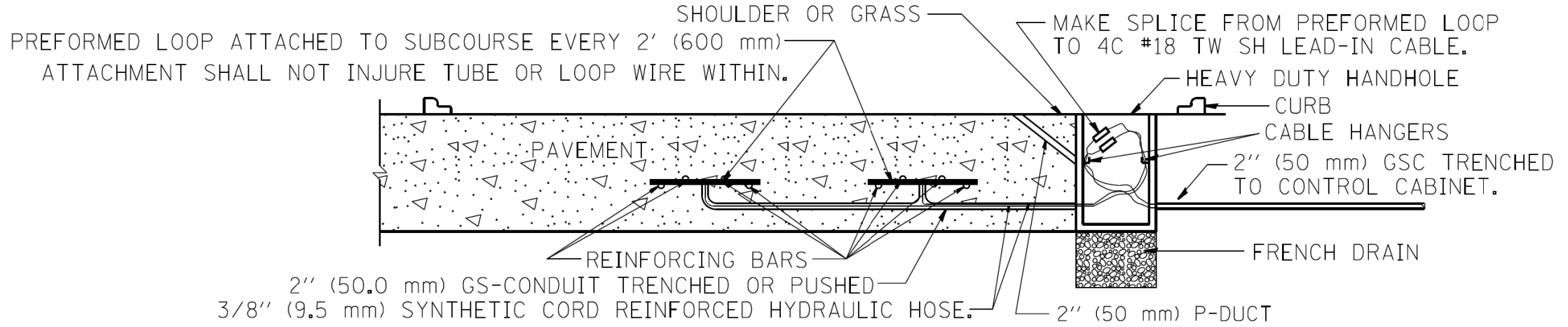
NOTES:

- 1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN LEAD-IN CABLE TO CABINET.
- 2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
- 3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.
- 4.- FOR LANES 1 AND 3 WRAP LOOPS CLOCKWISE, FOR LANE 2 WRAP LOOP COUNTER CLOCKWISE.
- 5.- FOR COUNT STATIONS WHICH HAVE MORE THAN 3 LANES, A 3" (75 mm) GSC SHALL BE USED.
- 6.- COREHOLE SHALL BE FILLED WITH DUCT SEAL, JOINT SEALER (OZ GEDNEY DOZSEAL 230 OR BETTER) SHALL BE ADDED AFTER DUCT SEAL.

FILE NAME =	USER NAME = mezag	DESIGNED - J.G.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PREFORMED LOOP TYPICAL INSTALLATION NEW CONCRETE PAVEMENT			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwwork\pwwid\mezag\d0287541\TSCTYP.dgn	DRAWN - G.M.	REVISED -	30/94/250					2014-002R&B	COOK	814	573	
PLOT SCALE = 100,0000' / 1" =	CHECKED - J.G.	REVISED -	CONTRACT NO. 60X76									
PLOT DATE = 2/7/2013	DATE - 06/22/04	REVISED -	ILLINOIS FED. AID PROJECT									
				SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.				



TYPICAL 2 LANE SPEED COUNT, CLASSIFICATION STATION IN NEW CONCRETE PAVEMENT

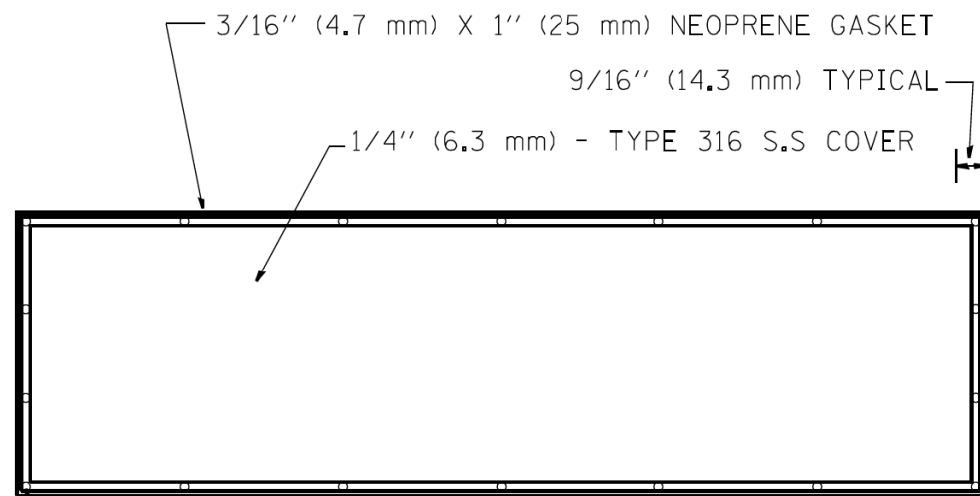


LOOP INSTALLATION IN NEW CONCRETE PAVEMENT

NOTES:

- 1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN 4C #18 TWISTED SHIELD LEAD-IN CABLE TO CABINET.
- 2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
- 3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.
- 4.- FOR LANE 1 WRAP LOOPS CLOCKWISE, FOR LANE 2 WRAP LOOP COUNTER CLOCKWISE.
- 5.- COREHOLE SHALL BE FILLED WITH DUCT SEAL. JOINT SEALER (OZ GEDNEY DOZSEAL 230 OR BETTER) SHALL BE ADDED AFTER DUCT SEAL.

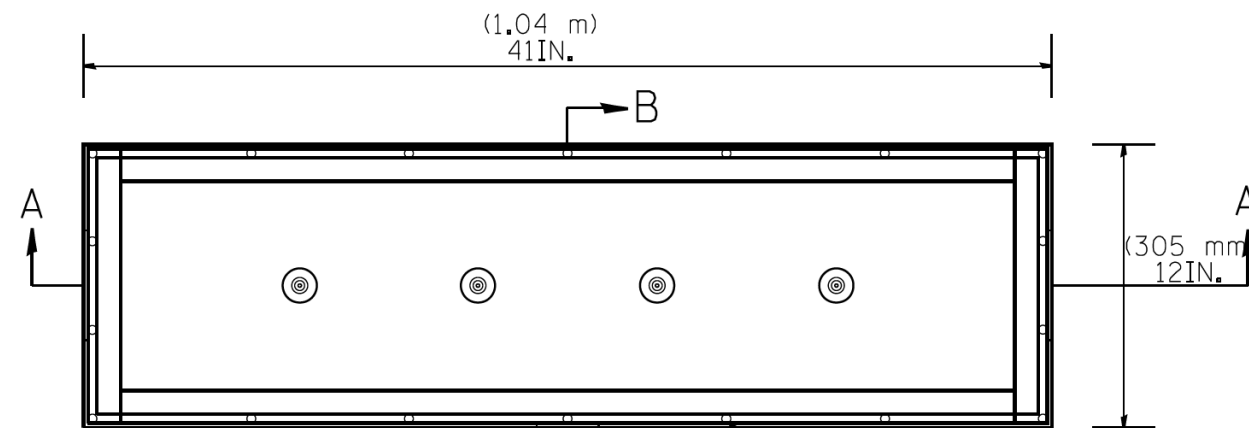
FILE NAME =	USER NAME = mezag	DESIGNED - J.G.	REVISED - 07/01/2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PREFORMED LOOP TYPICAL INSTALLATION NEW CONCRETE PAVEMENT			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\mezag\d0287541\TSCYF.dgn	DRAWN - G.M.	REVISED -	30/94/250					2014-002R&B	COOK	814	574	
PLOT SCALE = 100,0000' / 1" =	CHECKED - J.G.	REVISED -	CONTRACT NO. 60X76									
PLOT DATE = 2/7/2013	DATE - 06/25/2010	REVISED -	ILLINOIS FED. AID PROJECT									
				SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.				



DRILL AND COUNTERSINK TOP OF COVER FOR
3/8'' (9.5 mm) 16 X 3/4'' (19 mm)
FLAT HEAD STAINLESS STEEL SLOTTED SCREWS

BACK VIEW

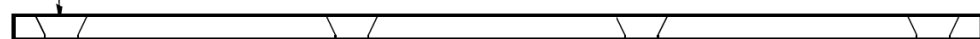
STAINLESS STEEL COVER WITH NEOPRENE GASKET



2.625IN. (67 mm) DIA. FOR 2IN. (50.0 mm) GS-CONDUIT
3/8 IN. (9.5 mm)-16 TAP

TOP VIEW

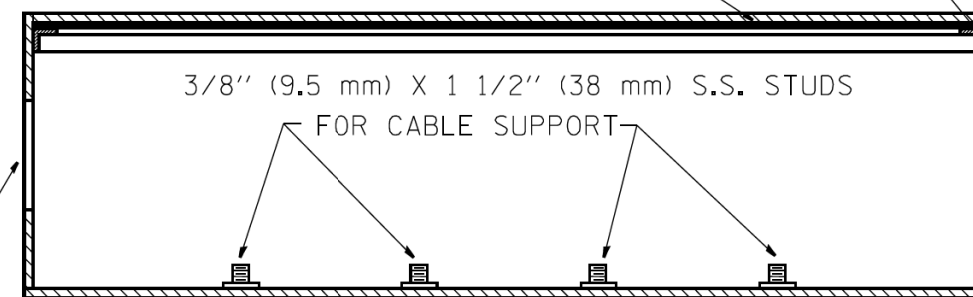
STAINLESS STEEL JUNCTION BOX TYPE "J"



SIDE VIEW

STAINLESS STEEL COVER

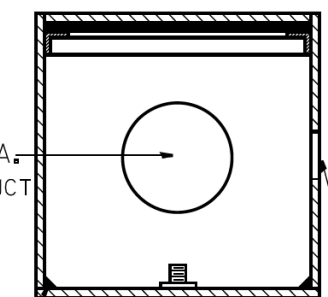
1'' (25 mm) X 1'' (25 mm) X 1/4'' (63 mm) S.S. ANGLE
CONTINUOUSLY WELDED AND LEAKPROOF
NEOPRENE GASKET



4.625'' (117 mm) DIA.
FOR 4'' (100 mm) PVC DUCT

SIDE VIEW SECTION A-A

(305 mm)
12IN.



4.625'' (117 mm) DIA.
FOR 4'' (100 mm) PVC DUCT
2.625IN. (67 mm) DIA. HOLE

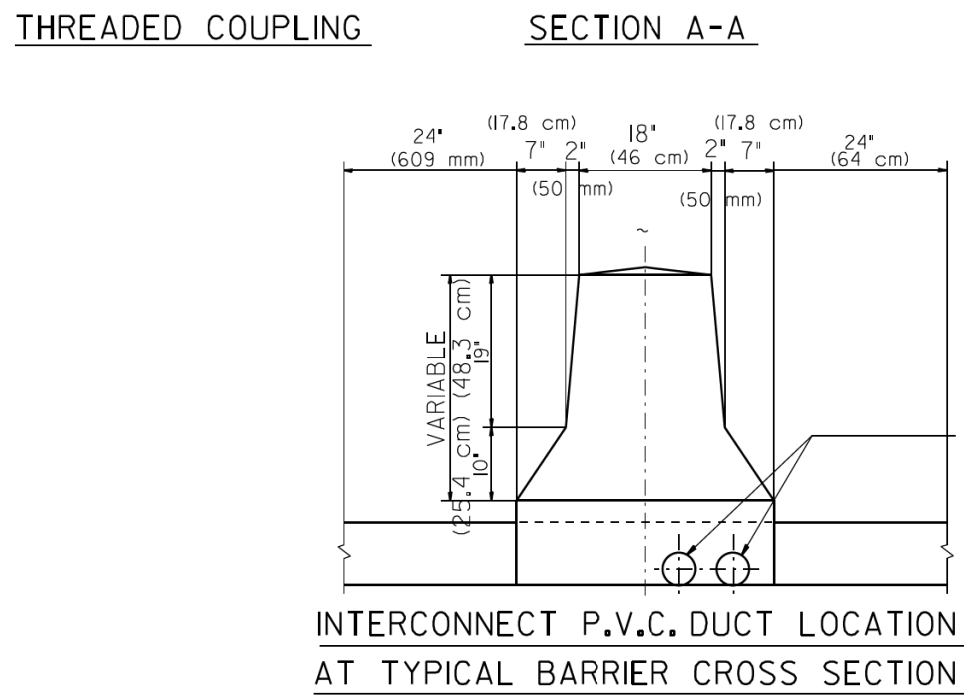
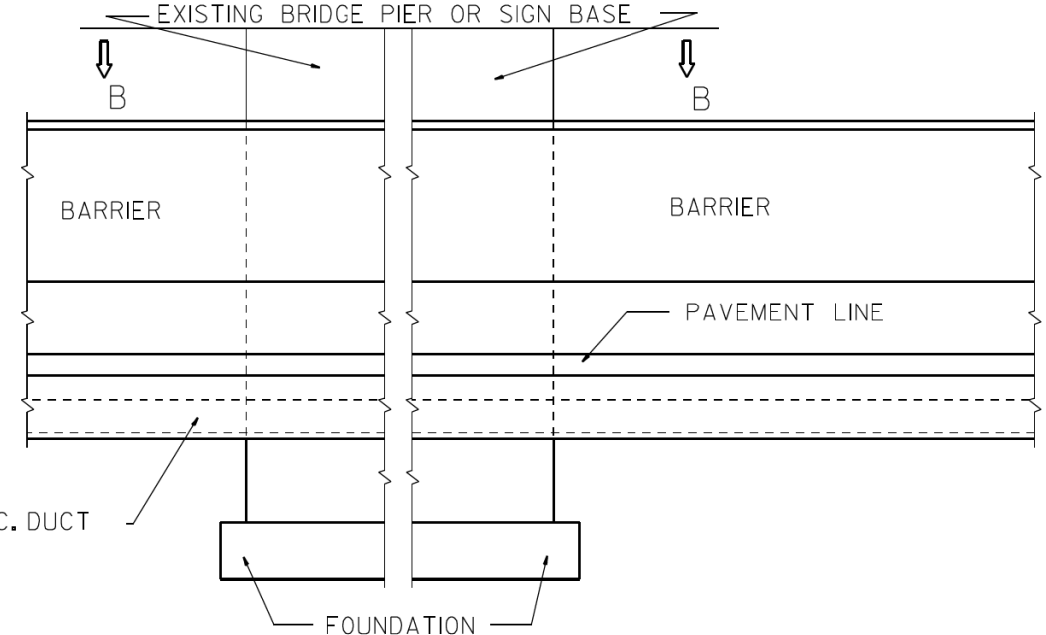
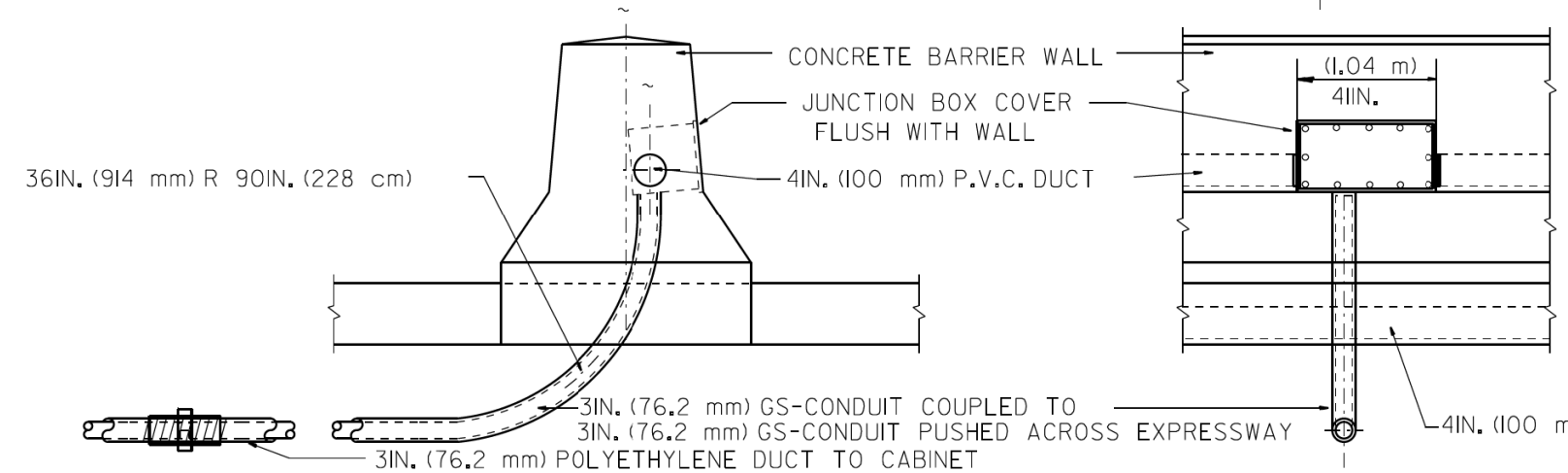
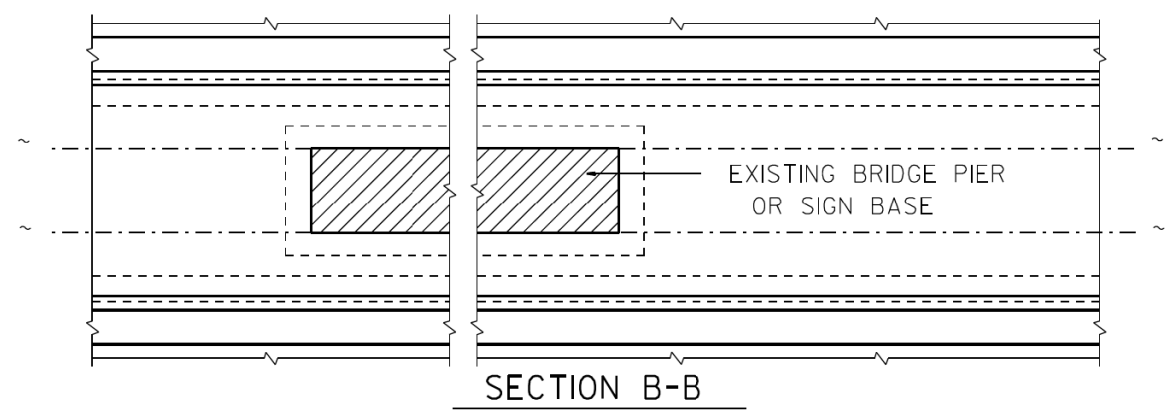
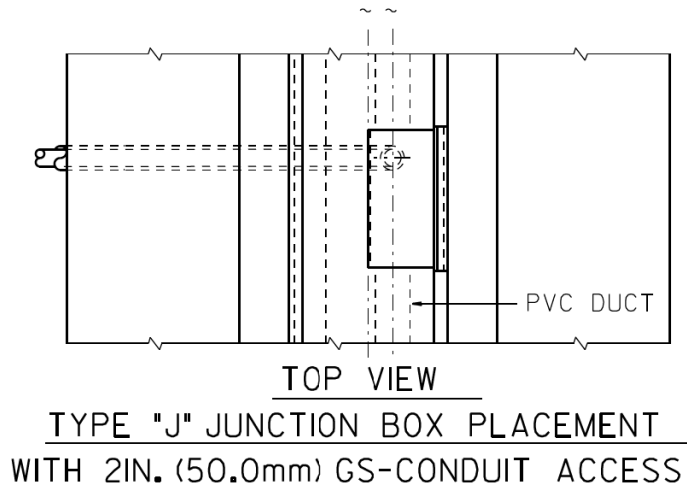
SIDE VIEW SECTION B-B

NOTE:

JUNCTION BOX TO BE CONSTRUCTED OF
1/4 IN. (6.3 mm) TYPE 316 STAINLESS STEEL
ALL WELDS SHALL BE CONTINUOUS AND LEAKPROOF
ALL COVERS SHALL BE UNIVERSAL IN FIT.

BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

FILE NAME =	USER NAME = mezag	DESIGNED - RL.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	CONCRETE BARRIER WALL JUNCTION BOX TYPE "J"			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
ca:\pwork\pwork\mezag\d0287541\TSCTYP.dgn		DRAWN - G.M.	REVISED - 10/96		SCALE: NONE	SHEET NO.	OF	SHEETS	STA.	TO STA.	2014-002R&B	COOK	814	575
		PLOT SCALE = 100.0000' / 1" =	CHECKED - RL.		REVISED -									
		PLOT DATE = 2/7/2013	DATE - 06/22/94		REVISED -									
ILLINOIS FED. AID PROJECT												CONTRACT NO. 60X76		

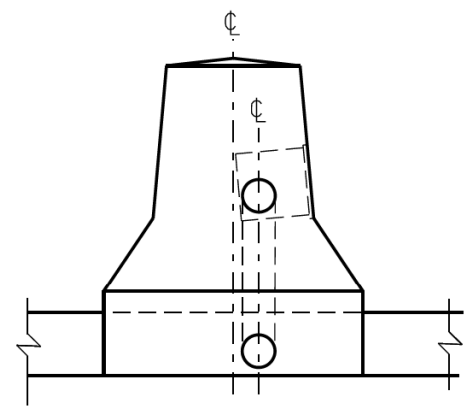


FRONT VIEW (SEE NOTE NO. 1)
TYPE "J" JUNCTION BOX PLACEMENT
WITH 2IN. (50.0 mm) GS-CONDUIT ACCESS

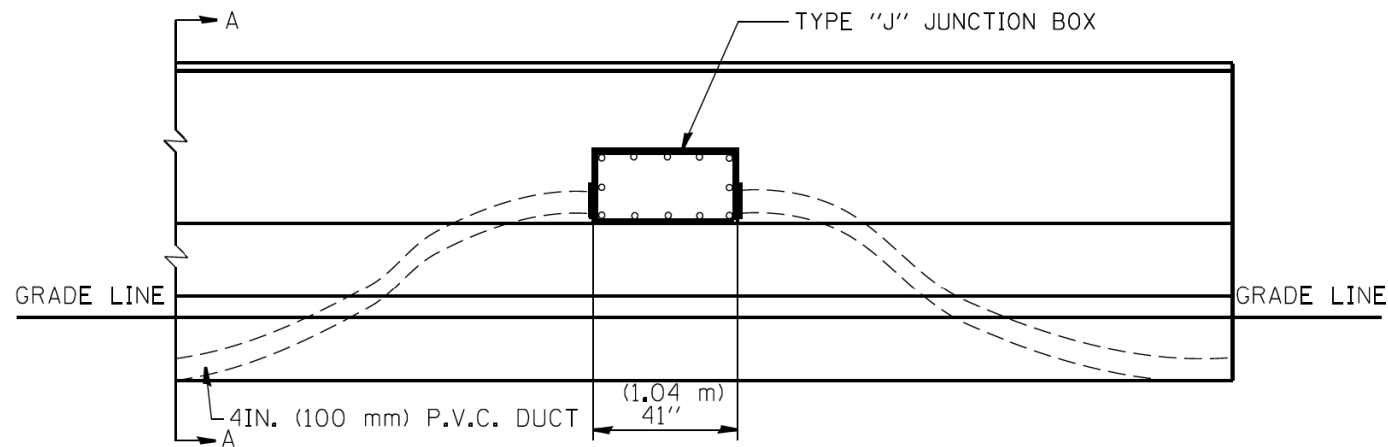
FRONT VIEW
BARRIER WALL AT BRIDGE PIER
P.V.C. DUCT PLACEMENT

BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

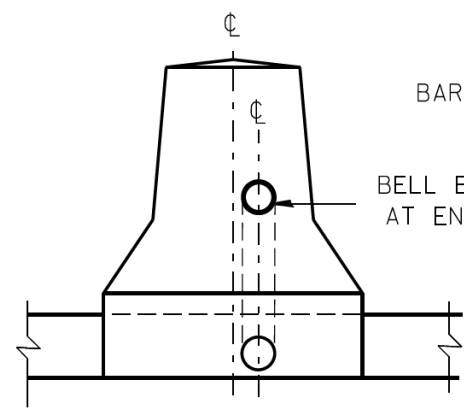
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#FILEL#		DRAWN - G.M.	REVISED - 10/96			90/94/250	2014-002R&B	COOK	814	576	
#MODELNAME#		CHECKED - R.L.	REVISED -			CONTRACT NO. 60X76					
		DATE - 06/22/94	REVISED -			ILLINOIS	FED. AID PROJECT				
				SCALE: NONE	SHEET OF SHEETS	STA. TO STA.					



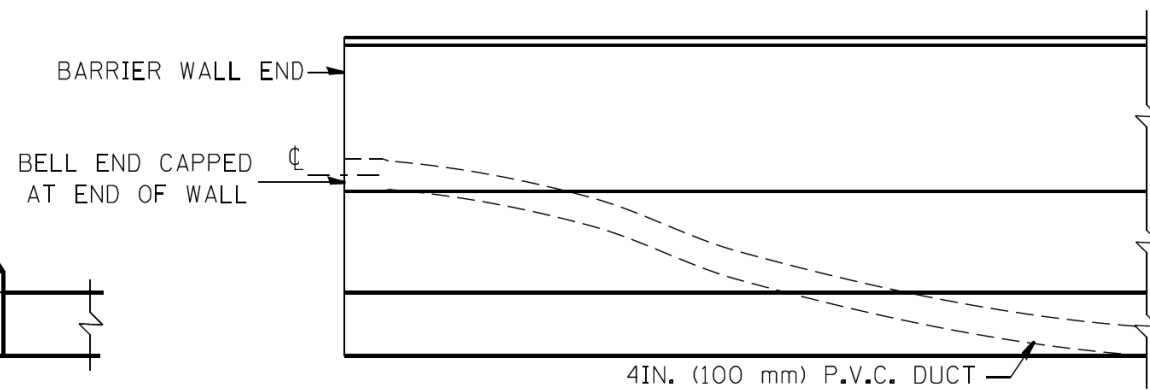
SECTION A-A



**ELEVATION
BARRIER WALL DUCT DETAIL
1500FT. (457.2 m) INTERVAL**

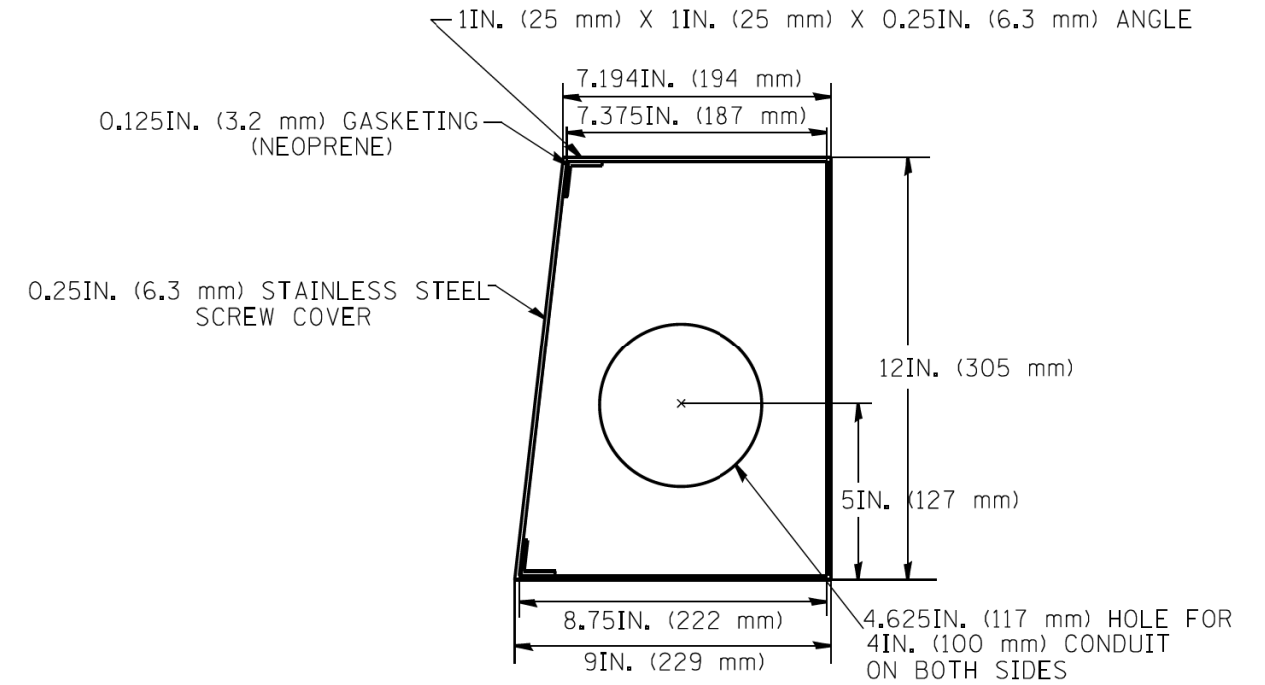


END VIEW



ELEVATION

END OF BARRIER WALL DUCT DETAIL



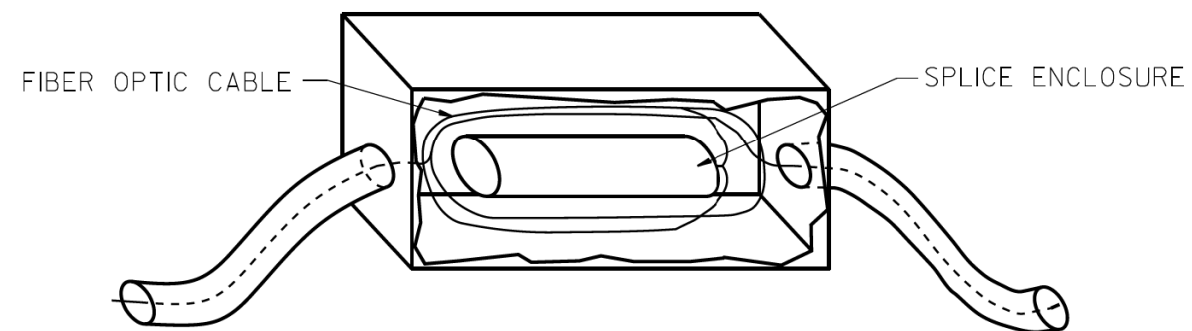
SIDE VIEW

**SPECIAL JUNCTION BOX TYPE "J" TO BE
INSTALLED IN BARRIER WALL TYPE "2" ONLY**

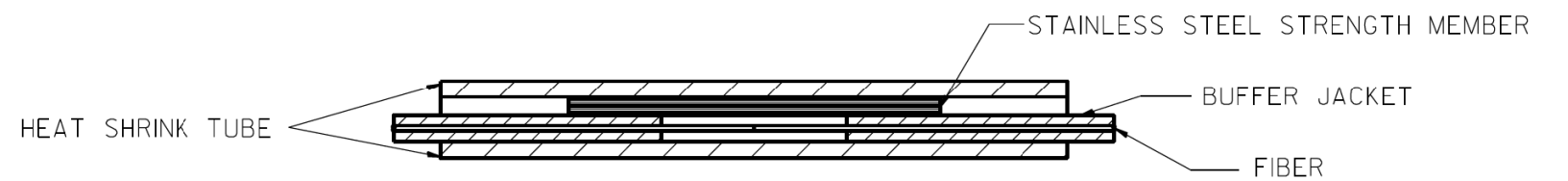
ALL WELDS SHALL BE CONTINUOUS AND LEAK PROOF
BOX AND COVER SHALL BE 0.25IN. (6.4 mm) TYPE 316 STAINLESS STEEL

BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J"
AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	TRAFFIC SURVEILLANCE BARRIER WALL DUCT DETAILS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 100,0000' / 1" =	CHECKED - R.L.	REVISED - 02/94	CONTRACT NO. 60X76									
PLOT DATE = 2/7/2013	DATE - 06/22/94	REVISED -	ILLINOIS FED. AID PROJECT									
				SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				



JUNCTION BOX DETAIL



FIBER SPLICE DETAIL

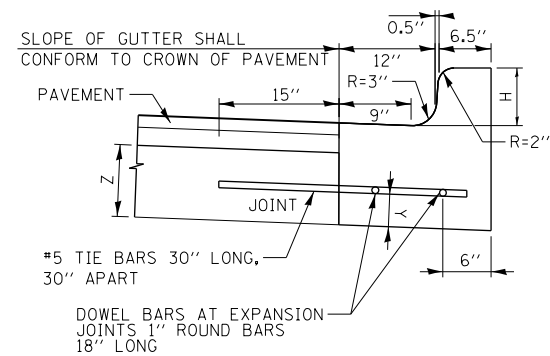
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

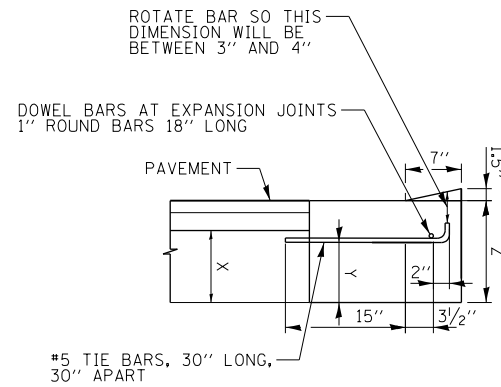
FIBER OPTIC
WIRING DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

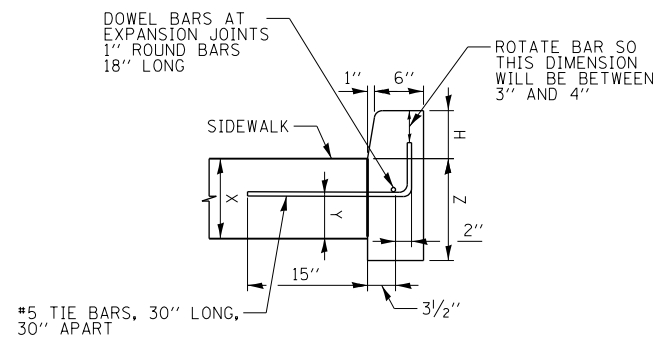
F.A.I. RTE. 93/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 578
ILLINOIS FED. AID PROJECT				CONTRACT NO. 60X76



**COMBINATION CURB AND GUTTER
TYPE B V.12 (CDOT)**



DEPRESSED CURB



BARRIER CURB

CONCRETE CURB, TYPE B (SPECIAL) (CDOT)

**DETAILS OF CONCRETE CURB, TYPE B (SPECIAL) (CDOT) AND
COMBINATION CURB AND GUTTER TYPE B V.12 (CDOT)**

DEPRESSED CURB & GUTTER

DEPRESSED CURB AND GUTTER AND TRANSITIONS BETWEEN BARRIER CURB WILL BE PAID FOR UNDER THE ADJACENT CURB ITEM. DEPRESSED CURB AND MOUNTABLE GUTTER MUST MEET CDOT ADA STANDARDS.

JOINTS IN CURB, COMBINED CURB AND GUTTER

TRANSVERSE JOINTS OF A TYPE SIMILAR TO THAT USED IN THE ADJACENT PAVEMENT SHALL BE INSTALLED IN THE CURB, GUTTER AND COMBINED CURB & GUTTER IN PROLONGATION WITH THE JOINTS IN THE PAVEMENT. THE DETAILS OF THE TRANSVERSE JOINTS IN THE CURB, GUTTER AND COMBINED CURB & GUTTER SHALL BE APPROVED BY THE ENGINEER. CURB, GUTTER OR COMBINED CURB AND GUTTER IS CONSTRUCTED ADJACENT TO A FLEXIBLE BASE PAVEMENT, 1" THICK EXPANSION JOINTS COMPOSED OF BITUMINOUS PREFORMED JOINT FILLER SHALL BE INSTALLED IN THE CURB AND/OR GUTTER AT POINTS OF CURVATURE AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL ALSO BE PLACED BETWEEN THESE EXPANSION JOINTS AT DISTANCES NOT EXCEEDING 20 FEET. ALL TIE BARS SHALL BE DEFORMED - ALL DOWEL BARS SHALL BE SMOOTH. ALL TIE BARS AND DOWEL BARS TO BE EPOXY COATED.

JOINTS IN CURB, COMBINED CURB AND GUTTER

THE COST OF ALL JOINTS, INCLUDING LABOR, FURNISH AND PLACING OF STEEL, JOINT FILLER, SEALANT, AND ALL OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE CURB, TYPE B (SPECIAL) (CDOT), AND COMBINATION CURB AND GUTTER TYPE B V.12 (CDOT) ITEMS. SAWCUTTING AND FURNISHING AND INSTALLING CURB ANCHORS, DOWELS, AND TIE BARS SHALL ALSO BE INCIDENTAL TO THESE ITEMS.

NOTE:

- H = VARIABLE, MINIMUM 3" AND NOT TO EXCEED 9" (SEE PLANS)
- X = THICKNESS OF PAVEMENT
- Y = ONE HALF THE THICKNESS OF CONCRETE PAVEMENT OR CONCRETE BASE
- Z = 10" OR THICKNESS OF PAVEMENT - WHICHEVER IS GREATER

FILE PATH = p:\6179-PMINT\secomon\line\local\IACOM\DS02_NA\Documents\01_Americas\Transportation\6026-9938_Circle\Phase_1\000_CAD\006_Roadway\Sheets\60X76_Contract\0160X76-sht-Detail-01.dgn



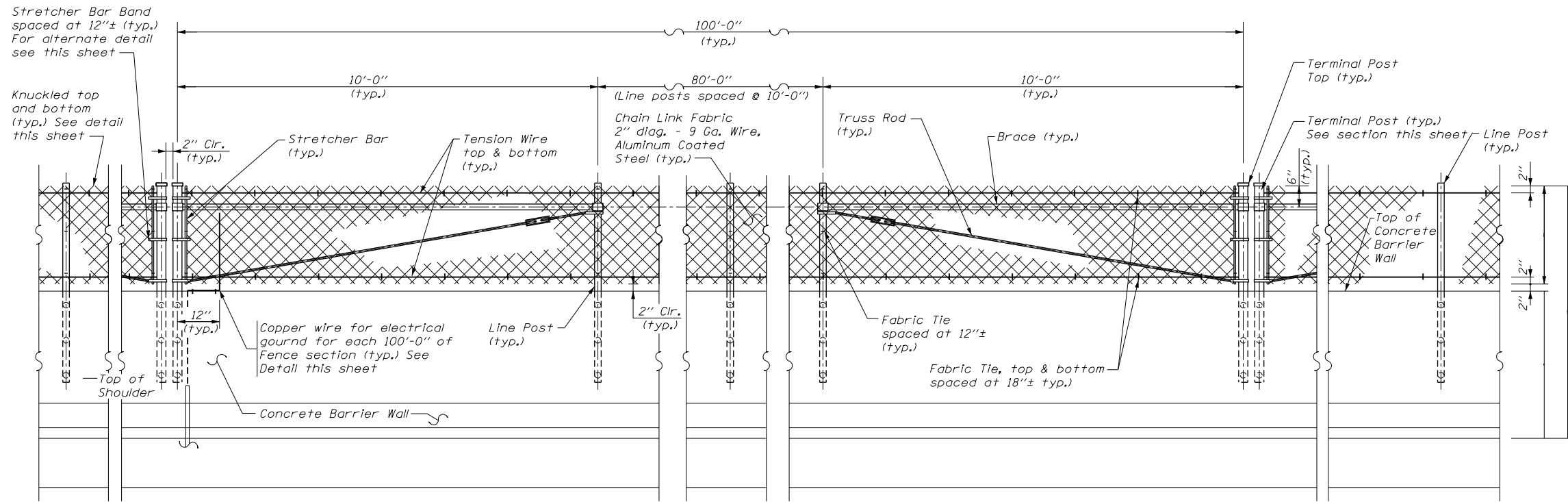
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PLOT SCALE = 20.0000' / in.	CHECKED - JMG	REVISED -
PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

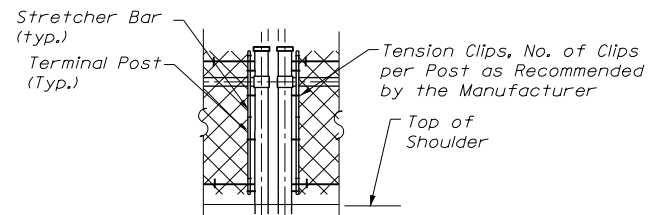
ROADWAY DETAILS			
COMBINATION CURB AND GUTTER TYPE B V.12 (CDOT) AND CONCRETE CURB, TYPE B (SPECIAL) (CDOT)			
SCALE: NONE	SHEET 1	OF 5 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	579
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

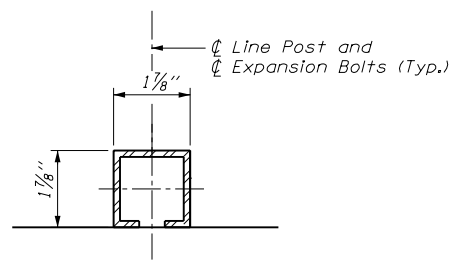
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ELEVATION
CHAIN LINK FENCE ON CONCRETE BARRIER WALL
ATTACHED TO THE BACK OF BARRIER

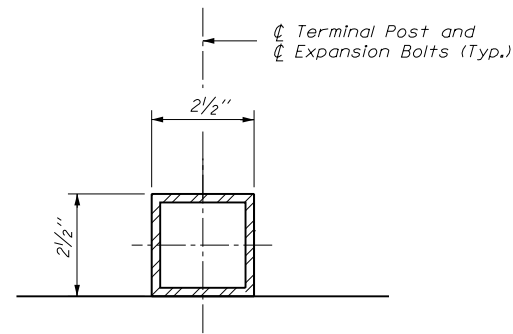


ALTERNATE DETAIL FOR
STRETCHER BAR BAND

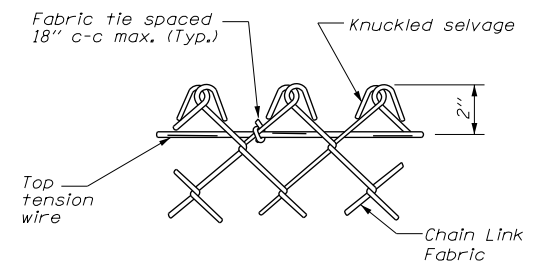


LINE POST SECTION

NOTE: The Contractor May Use Another C Section as per the Standards of the Illinois Department of Transportation.



TERMINAL POST SECTION



KNUCKLED DETAIL



D160X76-SHT-Detail-02.dgn
 USER NAME = v1janachione
 PLOT SCALE = 100.0000' / 1" =
 PLOT DATE = 5/9/2017

DESIGNED - JLV
 DRAWN - CAT
 CHECKED - JMG
 DATE - 5/10/17

REVISED -
 REVISED -
 REVISED -
 REVISED -

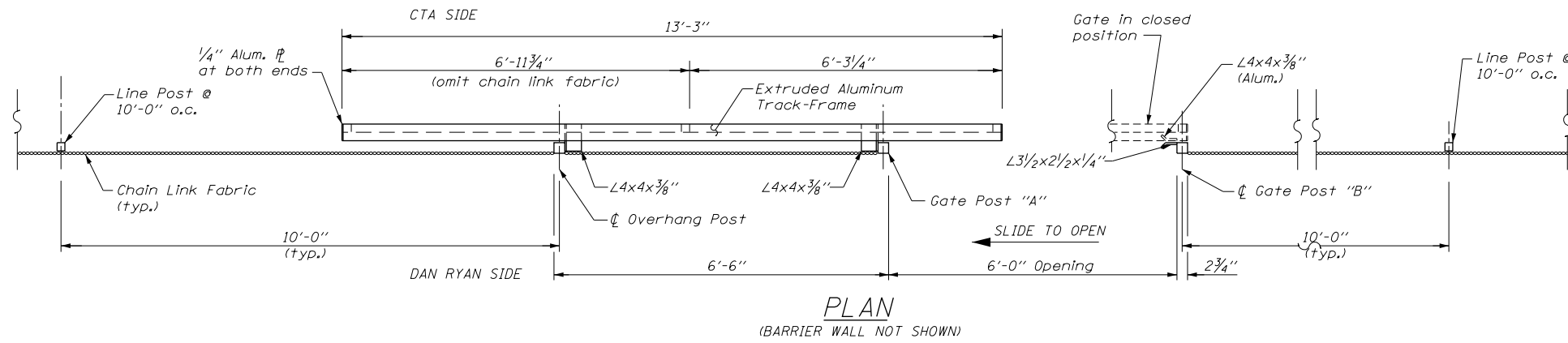
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS: CTA FENCE

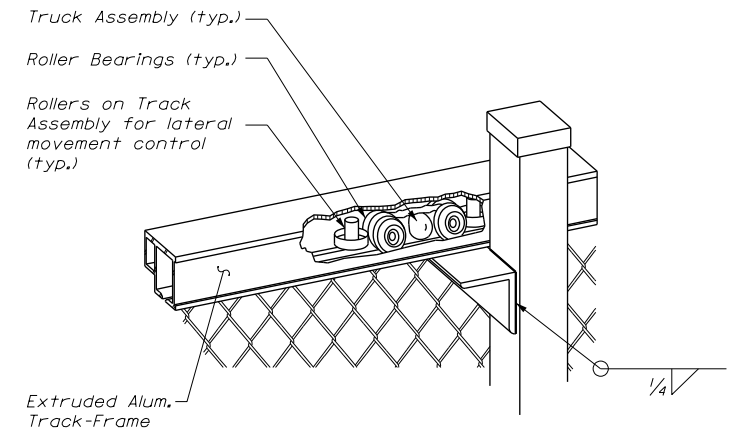
SCALE: NONE SHEET 2 OF 5 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	580
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

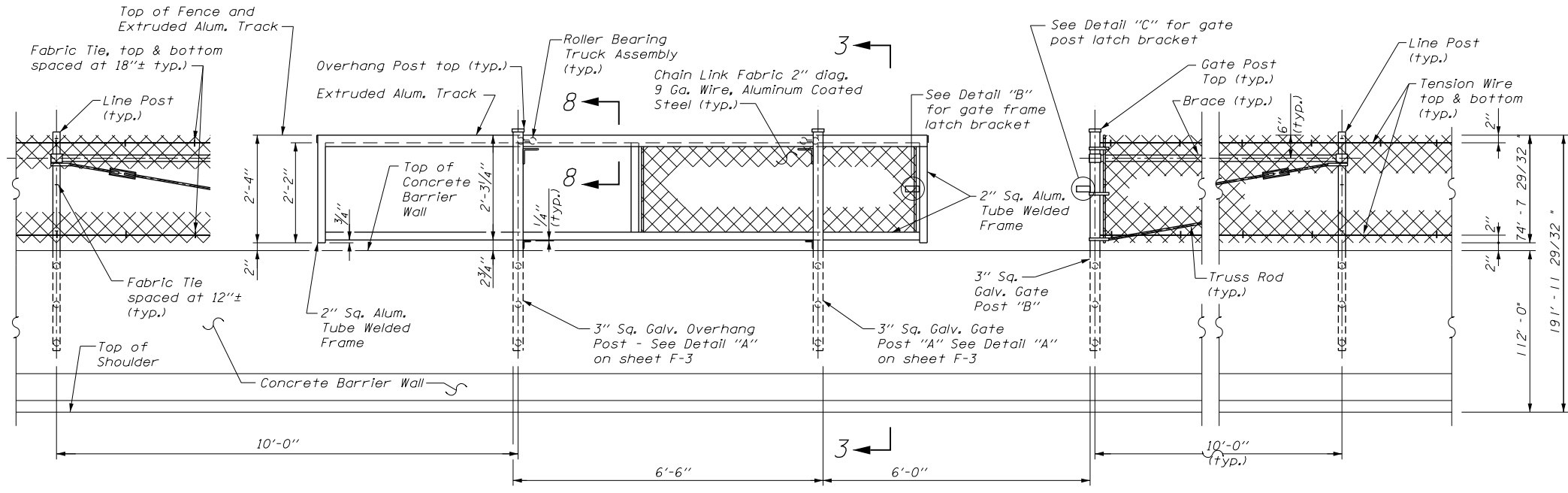
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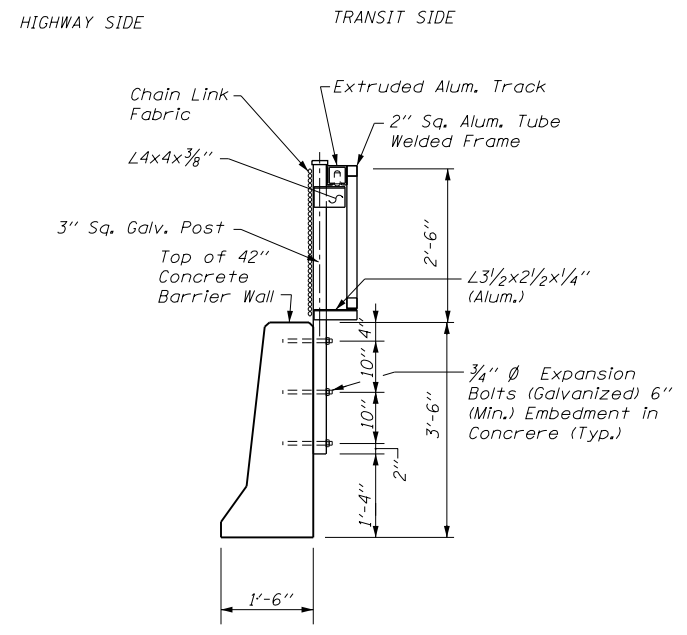
PLAN
(BARRIER WALL NOT SHOWN)



ROLLER BEARING TRUCK ASSEMBLY DETAIL



ELEVATION
CHAIN LINK FENCE SLIDING GATE
(FOOTING NOT SHOWN)



SECTION 3-3



DI60X76-SHT-Details-03.dgn	DESIGNED - JLV	REVISED -
USER NAME = v1janachione	DRAWN - CAT	REVISED -
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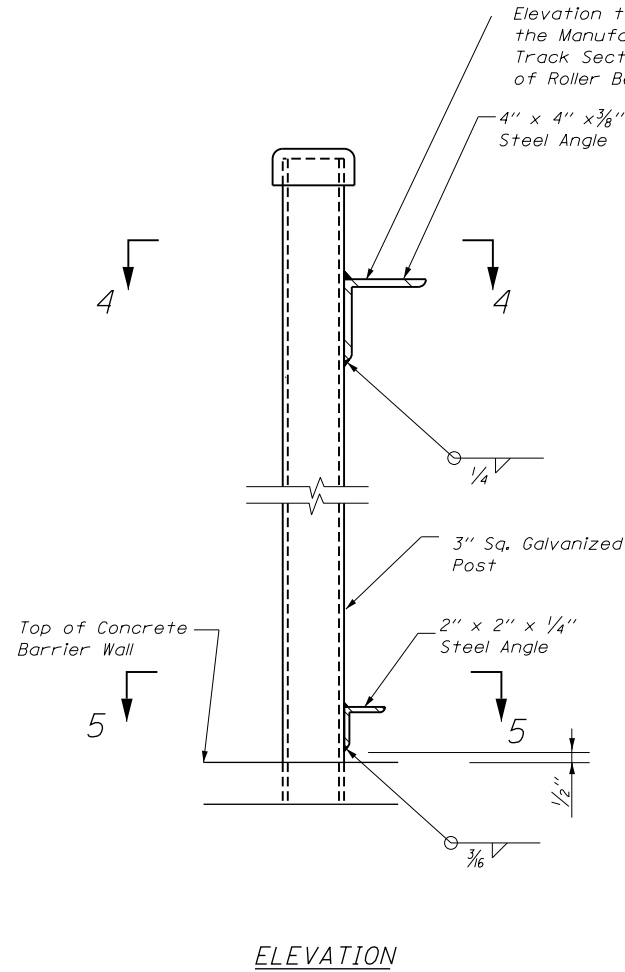
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS: CTA FENCE

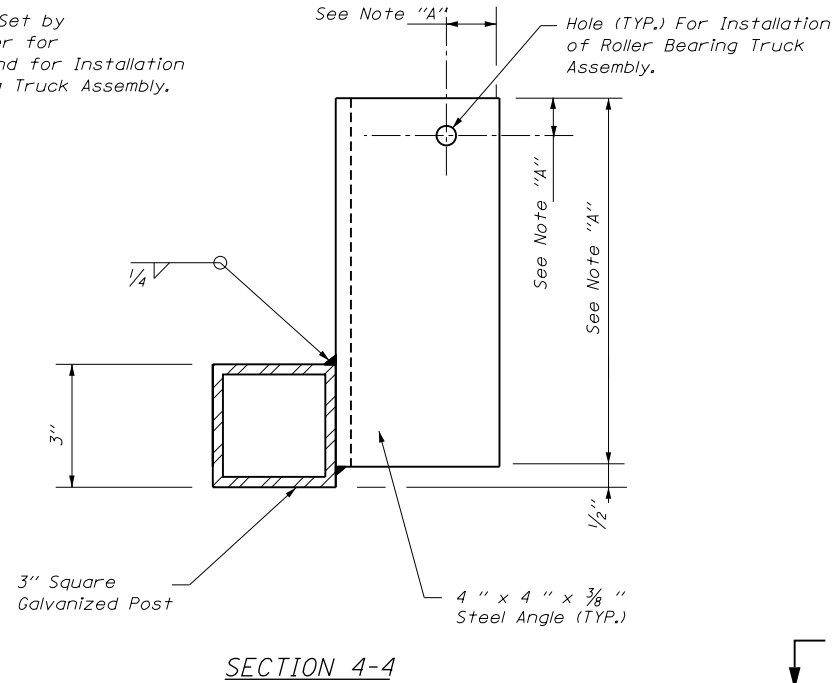
SCALE: NONE SHEET 3 OF 5 SHEETS STA. TO STA.

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	581
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

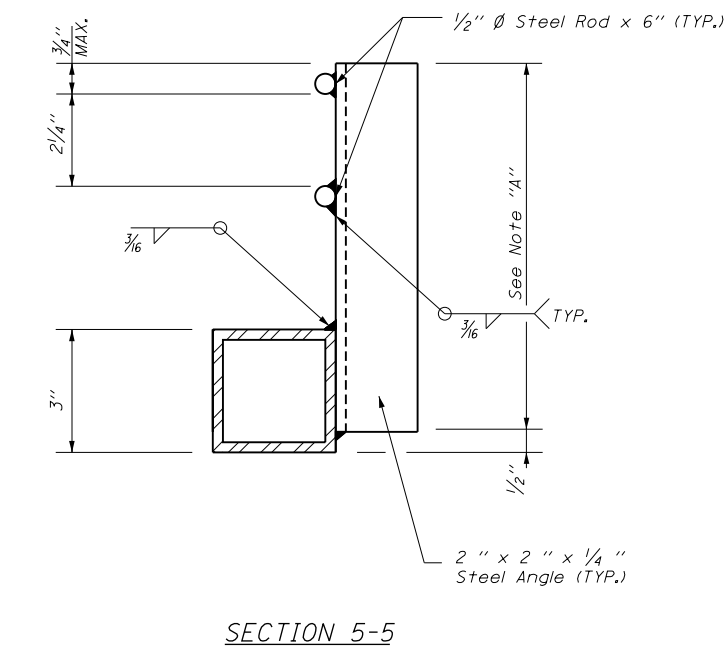
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ELEVATION



SECTION 4-4



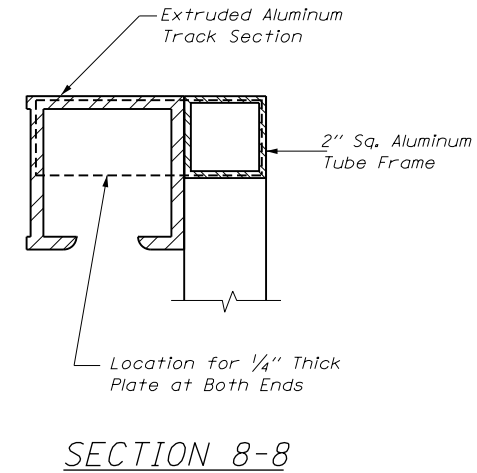
SECTION 5-5

DETAIL A

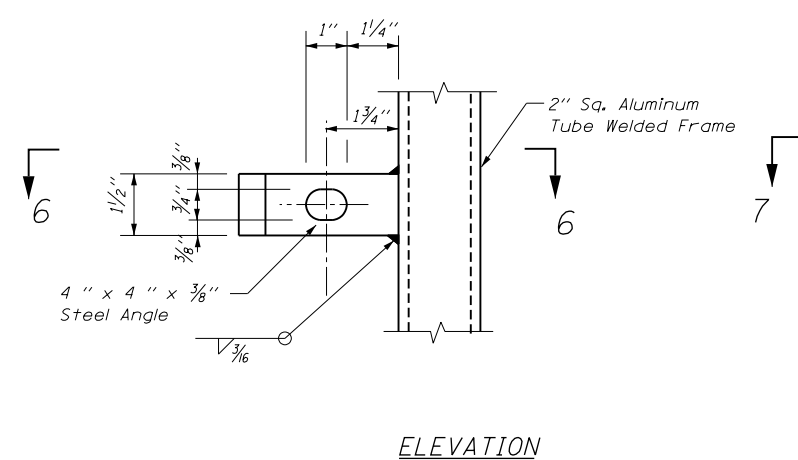
For Overhang Post - As Shown
For Gate Post "A" - Opposite Hand

NOTE "A": The Manufacturer of the Sliding Gate Shall Determine the Length of Angles and Location of Hole for Installation of Roller Bearing Truck Assembly.

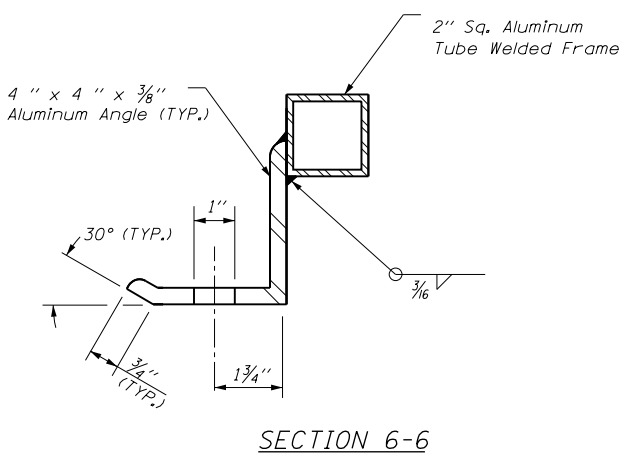
NOTE: The Slide Gates Shall be of the Cantilevered Type with no Track or Support Across the Opening.



SECTION 8-8



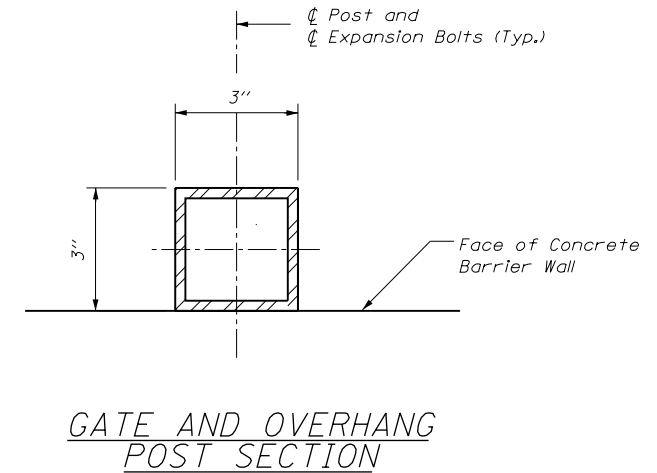
ELEVATION



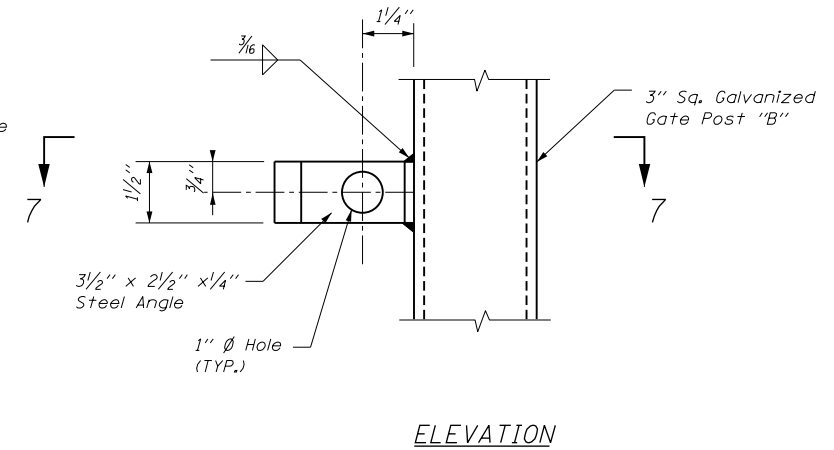
SECTION 6-6

DETAIL B

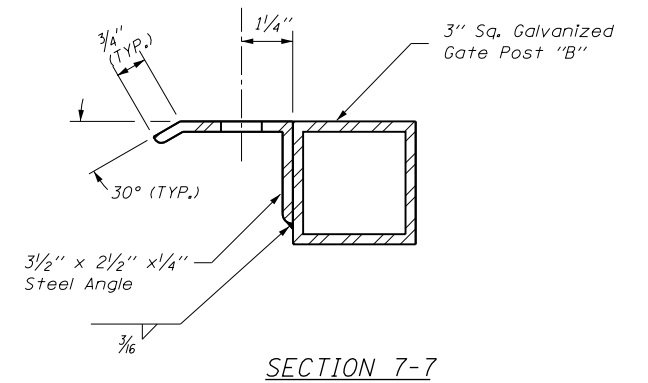
NOTE "A": The Manufacturer of the Sliding Gate Shall Set the Angle Based on the Size of the Track Frame



GATE AND OVERHANG POST SECTION



ELEVATION



SECTION 7-7

DETAIL C



DI60X76-SHT-Detail-04.dgn	DESIGNED - JLV	REVISED -
USER NAME = v1janachione	DRAWN - CAT	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - JMG	REVISED -
PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

DESIGNED - JLV	REVISED -
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DATE - 5/10/17	REVISED -

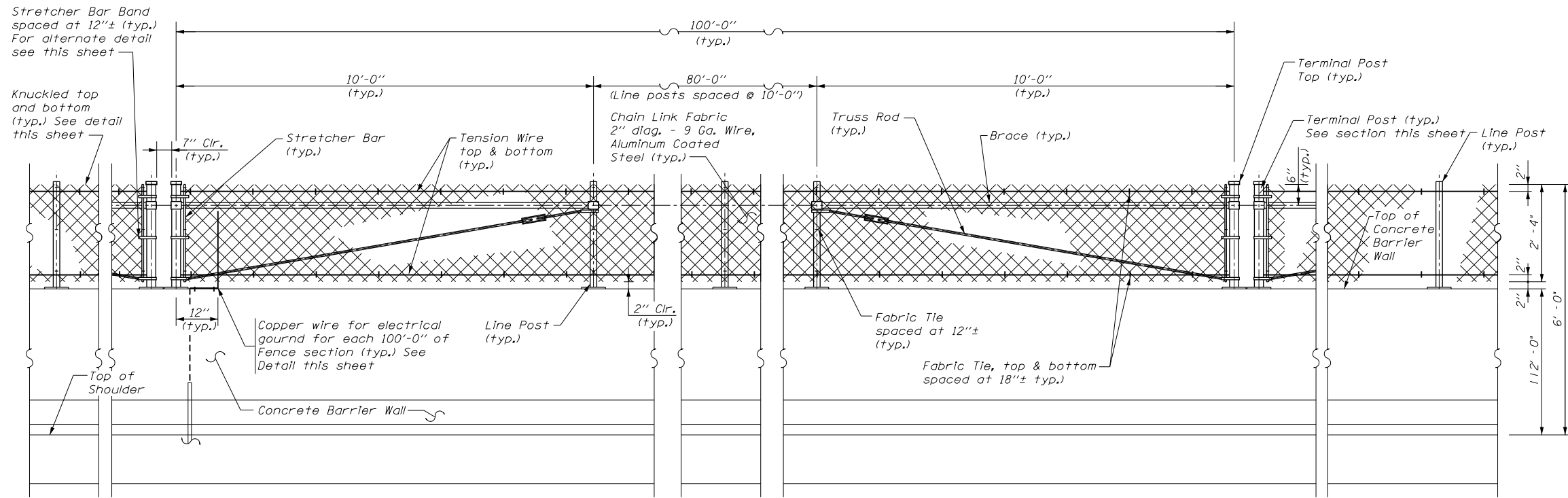
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS: CTA FENCE

SCALE: NONE SHEET 4 OF 5 SHEETS STA. TO STA.

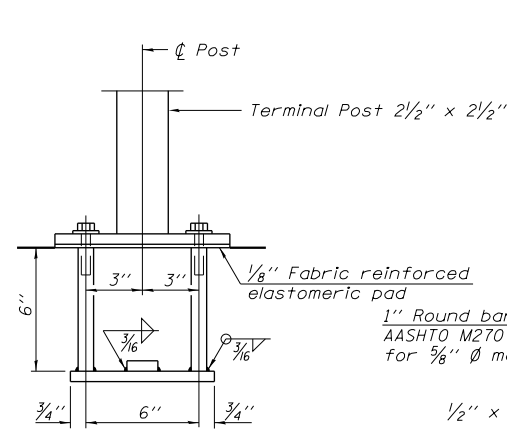
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	582
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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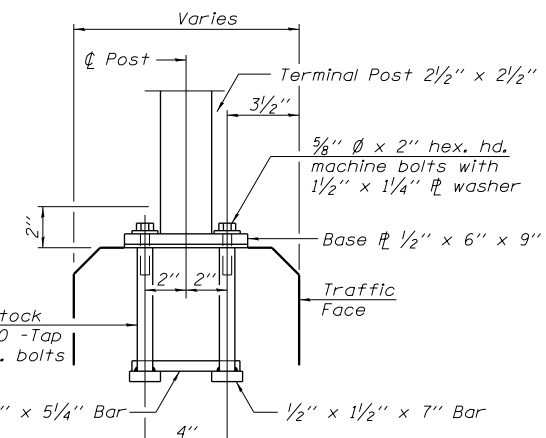


**ELEVATION
CHAIN LINK FENCE ON CONCRETE BARRIER WALL
ATTACHED ON TOP OF BARRIER**

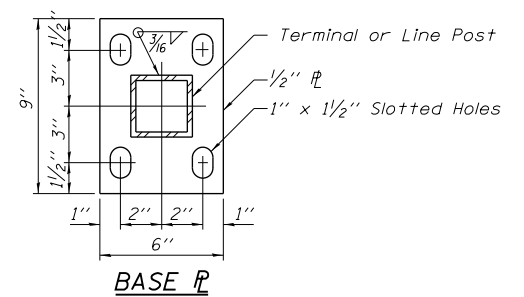
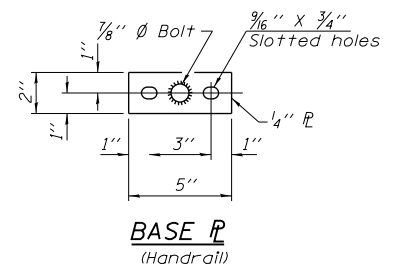
NOTE: See detail sheets 580 to 582 for more CTA Fence information.



ANCHOR BOLT DETAILS - TERMINAL POST



ANCHOR BOLT DETAILS - LINE POST



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" Ø anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



DI60X76-SHT-Details-05.dgn	DESIGNED - JLV	REVISED -
USER NAME = v1janachione	DRAWN - CAT	REVISED -
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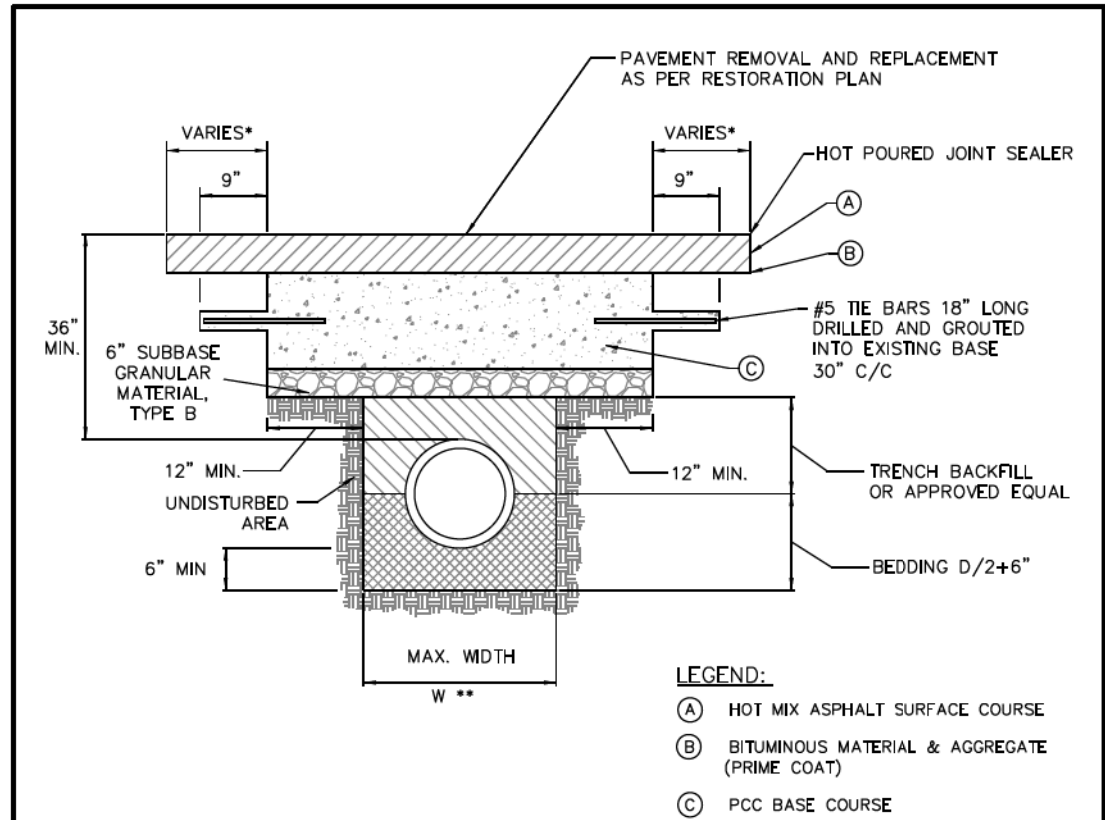
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROADWAY DETAILS: CTA FENCE

SCALE: NONE SHEET 5 OF 5 SHEETS STA. TO STA.

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	583
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

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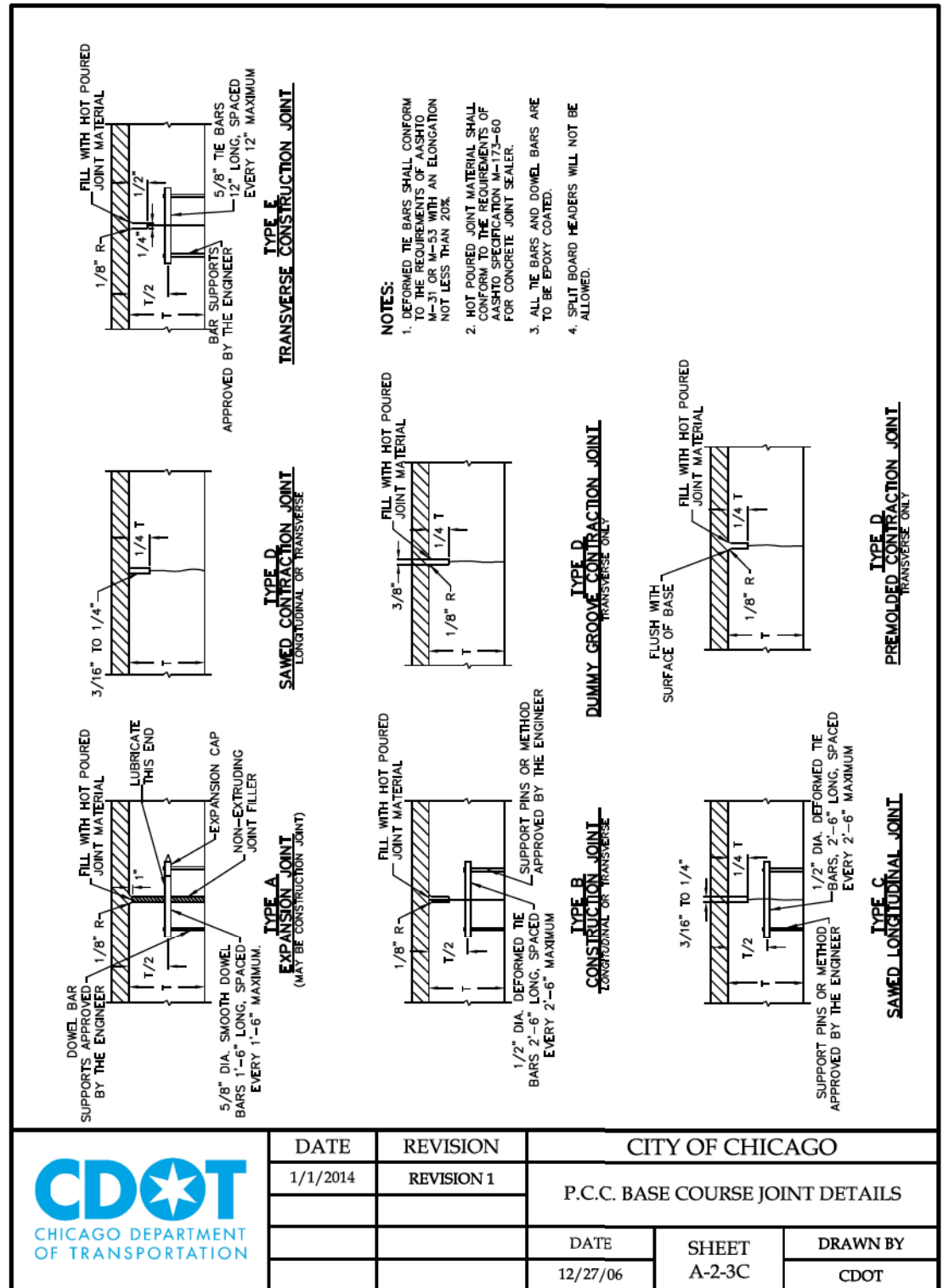


- * PAVEMENT SHALL BE REMOVED & REPAVED TO NEAREST CONSTRUCTION JOINT IF TRENCH EDGE IS 5' OR LESS FROM JOINT. (OR AS REQUIRED BY THE COMMISSIONER)
- ** W = 9" + O.D. + 9", WHEN TRENCH DEPTH ≤ 5 FT.
W = 18" + O.D. + 18", WHEN TRENCH DEPTH > 5 FT.

NOTES:

1. THE PORTLAND CEMENT CONCRETE BASE SHALL BE 8" OR MORE (SEE TABLE 4.2-2 FOR REQUIRED THICKNESS). FOR CONCRETE STREETS THE CONCRETE SHALL BE BROUGHT TO GRADE (INCLUDING 1'-0" OVERLAP) AND FINISHED AS REQUIRED IN THE IDOT SSRBC.
2. ALL EXISTING PAVEMENTS SHALL BE SAW CUT 1'-0" ON BOTH SIDES OF THE TRENCH OR PAVEMENT OPENING. UNDER NO CIRCUMSTANCES SHOULD EXISTING PAVEMENT, WHICH HAS BEEN UNDERMINED OR OTHERWISE DISTURBED, BE LEFT IN PLACE AND NOT RESTORED.
3. ALL STREET PAVEMENT WILL REQUIRE PLACEMENT OF #5 TIE BARS, 18 INCHES LONG DRILLED AND GROUTED (NON SHRINK) AT 30" CENTERS ON ALL SIDES. A MINIMUM OF TWO TIE BARS WILL BE REQUIRED ON EACH SIDE OF SAW CUT BOUNDARIES.
4. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED (INCIDENTAL).

 CHICAGO DEPARTMENT OF TRANSPORTATION	DATE	REVISION	CITY OF CHICAGO		
	1/1/2014	REVISION 1	STREET PAVEMENT RESTORATION DETAIL WITH TRENCH BACKFILL		
			DATE	SHEET	DRAWN BY
			12/12/06	A-2-2A	CDOT



- NOTES:**
1. DEFORMED TIE BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 WITH AN ELONGATION NOT LESS THAN 20%.
 2. HOT POURED JOINT MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-173-60 FOR CONCRETE JOINT SEALER.
 3. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED.
 4. SPLIT BOARD HEADERS WILL NOT BE ALLOWED.

 CHICAGO DEPARTMENT OF TRANSPORTATION	DATE	REVISION	CITY OF CHICAGO		
	1/1/2014	REVISION 1	P.C.C. BASE COURSE JOINT DETAILS		
			DATE	SHEET	DRAWN BY
			12/27/06	A-2-3C	CDOT



D160X76-Sht-CDOT-DETAIL-01.dgn	DESIGNED - CDOT	REVISED -
USER NAME = v1janachione	DRAWN - CDOT	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - CDOT	REVISED -
PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

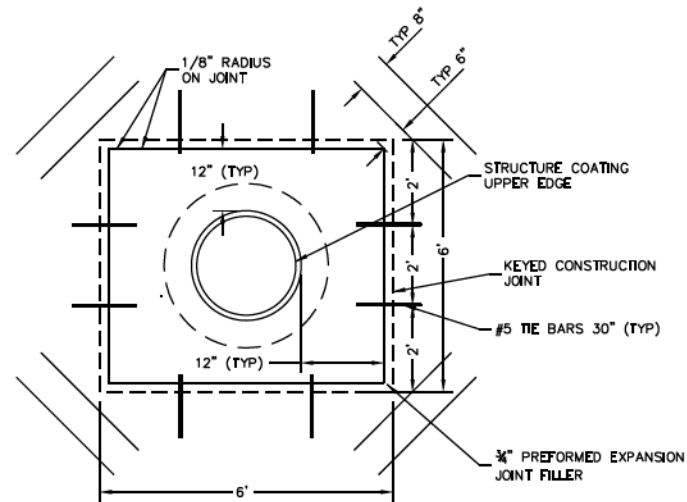
CHICAGO DEPARTMENT OF TRANSPORTATION
STANDARDS

SCALE: N.T.S. SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	584
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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2-#4 DEFORMED TIE BARS 30" LONG AT A MID DEPTH (TYPICAL) SEE SPECIAL CONDITION BELOW.



SPECIAL CONDITIONS:

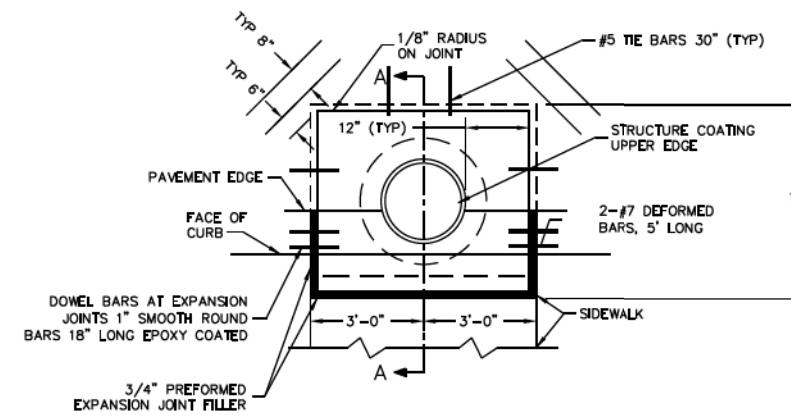
TIE BARS SHALL NOT BE INSTALLED AT ISOLATION BOX CORNERS WHERE EITHER SIDE OF THE BOX FORMING SAID CORNER IS A LONGITUDINAL OR TRAVERSE JOINT. MOREOVER, AT NO TIME SHALL A TIE BAR CROSS A JOINT (ALREADY FORMED OR PROPOSED) IN THE VICINITY OF THE ISOLATION BOX. IF THIS SITUATION OCCURS, THE TIE BAR SHALL BE ADJUSTED PARALLEL TO THE AXIS OF THE BAR SO THAT THE END OF THE BAR IS NO CLOSER THAN 1 1/2" TO THE JOINT.

ONLY BY THE DIRECTION OR APPROVAL OF THE COMMISSIONER SHALL THE DISTANCE BETWEEN THE UPPER EXTERNAL CASTING EDGE AND THE EDGE OF STANDARD ISOLATION BOX, SHOWN AS 12", BE INCREASED SO THAT AN IMMOVABLE LONGITUDINAL JOINT AND (OR) TRAVERSE JOINT WILL THEN THENCE FORM (O) SIDE (S) OF THE BOX. THIS ADJUSTMENT WILL BE ALLOWED ONLY WHEN THE DISTANCE BETWEEN THE SIDE OF THE STANDARD ISOLATION BOX AND IMMOVABLE JOINT IS 18" OR LESS.

BACKFILL MATERIAL AROUND STRUCTURE WILL BE COMPACTED TO 95% MODIFIED PROCTOR PRIOR TO THE PLACEMENT OF CONCRETE WITHIN THE ISOLATION BOX.

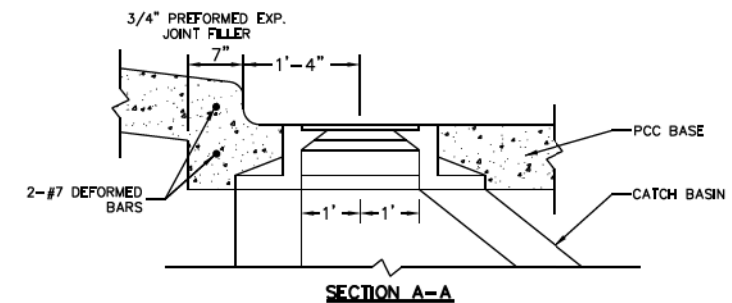


DATE	REVISION	CITY OF CHICAGO		
1/1/2014	REVISION 1	DETAILS OF STRUCTURE CASTING ISOLATION BOX		
		DATE	SHEET	DRAWN BY
		12/21/06	A-2-10A	CDOT



NOTES:

- STRUCTURE CASTING MAY BE ROUND OR RECTANGULAR.
- CONCRETE WITHIN THE ISOLATION BOX WILL BE OF THE SAME TYPE AND THICKNESS AS CONCRETE IN THE ADJACENT PAVEMENT.



DATE	REVISION	CITY OF CHICAGO		
1/1/2014	REVISION 1	DETAILS OF STRUCTURE CASTING ISOLATION BOX FOR P.C.C. PAVEMENT AND BASE COURSE		
		DATE	SHEET	DRAWN BY
		12/22/06	A-2-10B	CDOT



DI60X76-Sht-CDOT-DETAIL-02.dgn	DESIGNED - CDOT	REVISED -
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PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHICAGO DEPARTMENT OF TRANSPORTATION
STANDARDS

SCALE: N.T.S. SHEET 2 OF 3 SHEETS STA. TO STA.

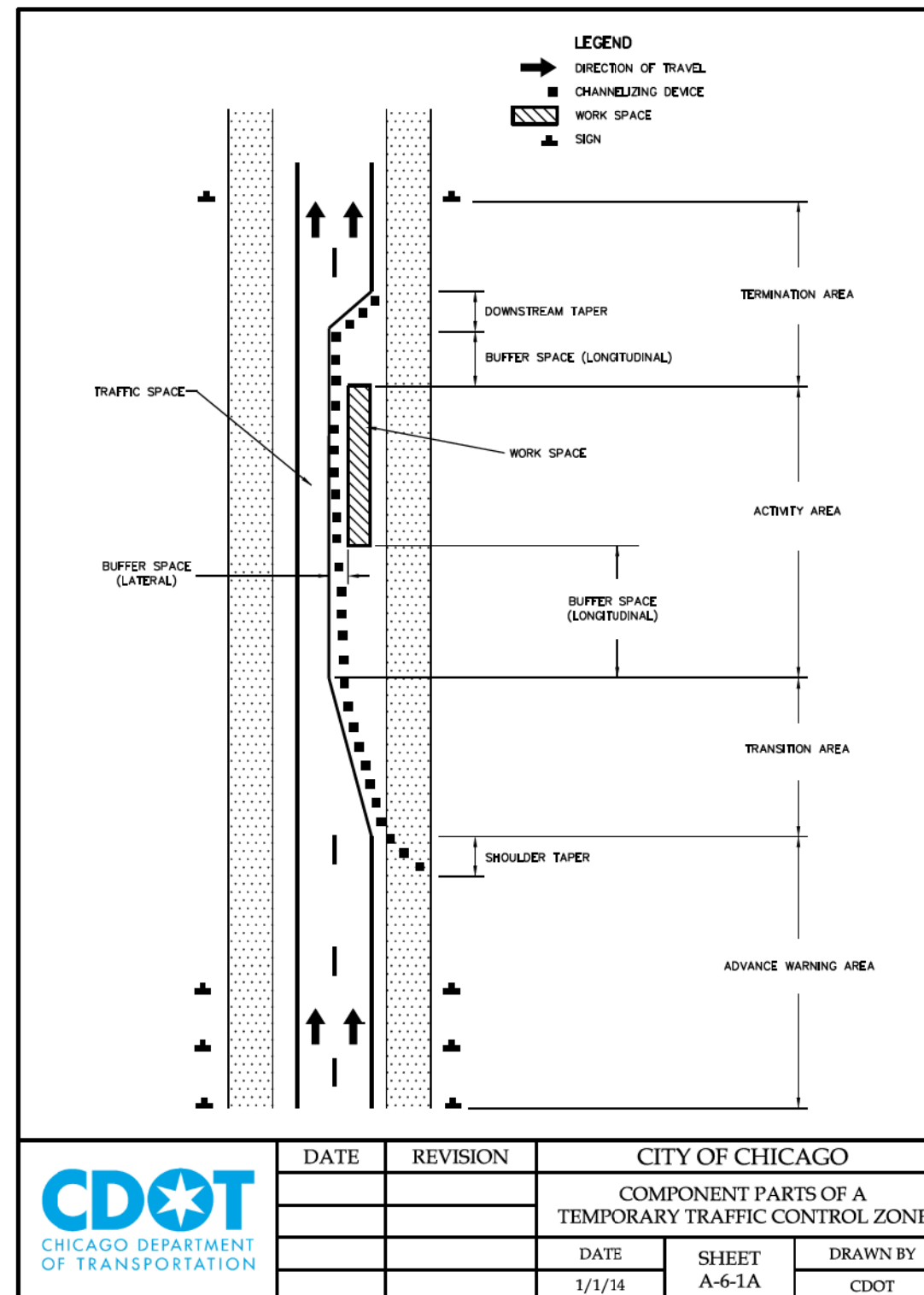
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90/94/290	2014-002R&B	COOK	814	585
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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For standard details see Regulations of Sewer Construction and Stormwater Management:
http://www.cityofchicago.org/city/en/depts/water/provdrs/engineer/svcs/2009_sewer_constructionandstormwatermanagementrequirements.html



DATE	REVISION	CITY OF CHICAGO		
1/1/2014	REVISION 1	SEWER CONSTRUCTION AND STORMWATER MANAGEMENT REQUIREMENTS		
		DATE	SHEET	DRAWN BY
		12/28/06	A-4-1	CDOT



DATE	REVISION	CITY OF CHICAGO		
		COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL ZONE		
		DATE	SHEET	DRAWN BY
		1/1/14	A-6-1A	CDOT



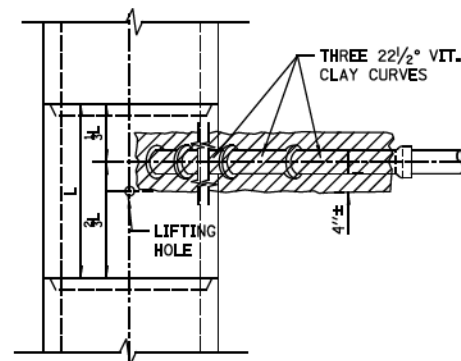
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

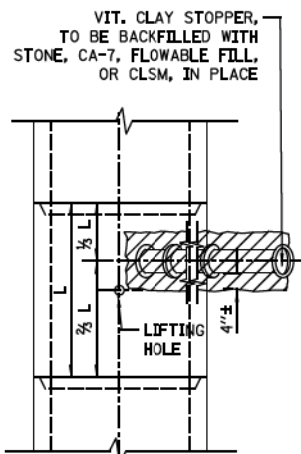
CHICAGO DEPARTMENT OF TRANSPORTATION
STANDARDS

SCALE: N.T.S. SHEET 3 OF 3 SHEETS STA. TO STA.

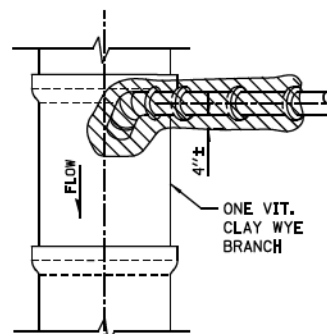
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	586
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



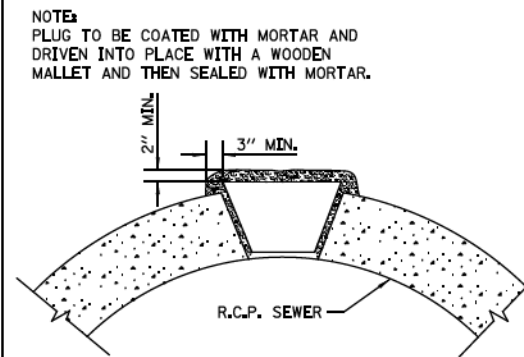
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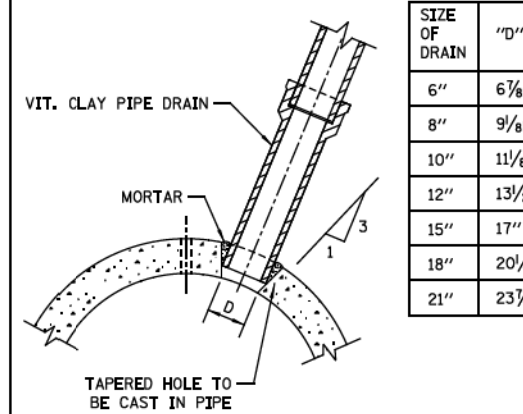
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PLAN

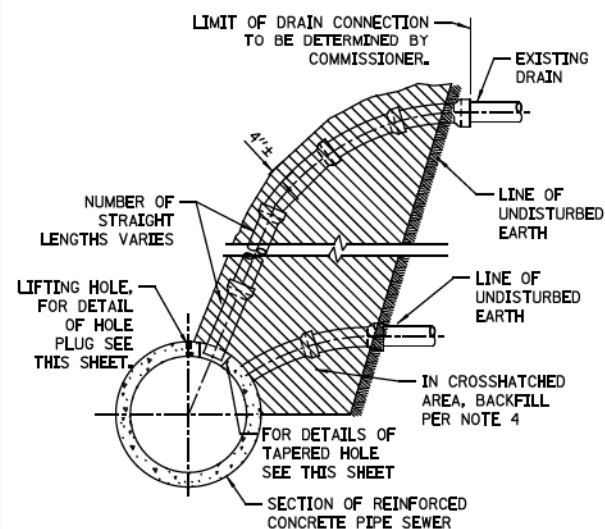


LIFTING HOLE PLUG DETAIL FOR CONCRETE PIPE

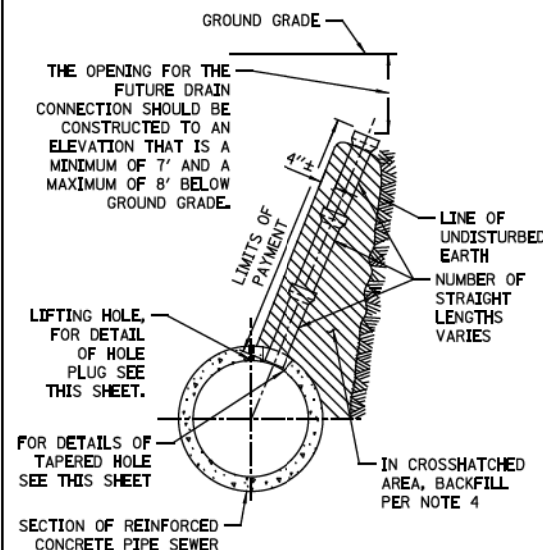


DETAIL OF TAPERED HOLE

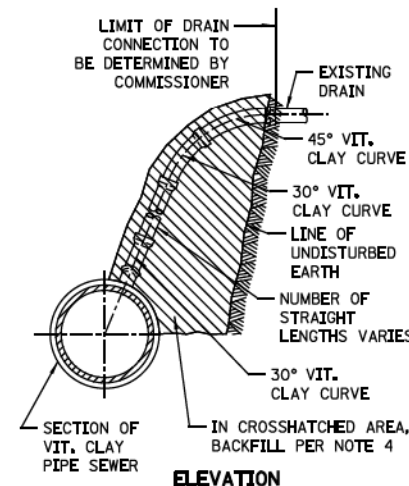
SIZE OF DRAIN	"D"
6"	6 7/8"
8"	9 5/8"
10"	11 1/8"
12"	13 1/2"
15"	17"
18"	20 1/4"
21"	23 7/8"



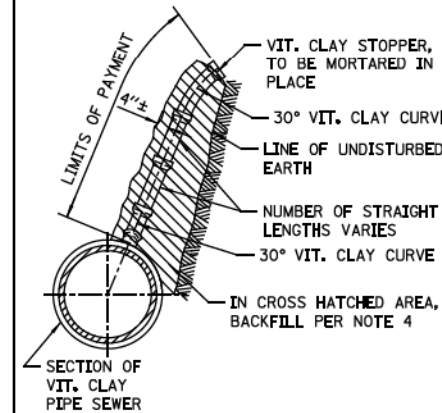
TYPICAL DRAIN CONNECTIONS FOR EXISTING DRAINS



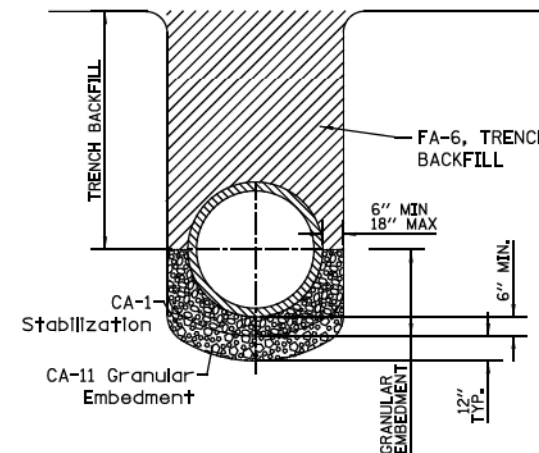
TYPICAL DRAIN STACKS FOR FUTURE USE



TYPICAL DRAIN CONNECTIONS FOR EXISTING DRAINS



TYPICAL DRAIN STACKS FOR FUTURE USE



- NOTE:
1. FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND OR STONE SAND.
 2. FOR GRANULAR EMBEDMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.
 3. 12" OF CA-1 STONE IS ONLY REQUIRED WHEN UNSTABLE MATERIAL IS ENCOUNTERED AT TRENCH BOTTOM.

SEWER TRENCH DETAIL

NOTES:

1. ALL DRAIN CONNECTION JOINTS MUST BE MADE AS SPECIFIED IN SPECIFICATIONS..
2. FOR DUCTILE IRON PIPE DRAIN CONNECTIONS SEE SHEET NO. A.2.
3. FOR ALL GRANULAR EMBANKMENT, USE CA-7 OR CA-11
4. FOR BACKFILL OF HATCHED SUPPORT AREAS, USE CONCRETE, CA-11, FLOWABLE FILL, OR CLSM.

STANDARD REVISIONS

DATE	DESCRIPTION
2/24/15	APPROVED PLAN

PERCENT COMPLETE

30
60
75
90
100
BULLETIN

DATE

CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

VITRIFIED CLAY PIPE
DRAIN CONNECTIONS

DRAWING NO. A.1

OF

PN



D160X76-Sht-CDWM-DETAIL-01.dgn
USER NAME = v1janachione
PLOT SCALE = 2.0000' / in.
PLOT DATE = 5/9/2017

DESIGNED - CDWM
DRAWN - CDWM
CHECKED - CDWM
DATE - 5/10/17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

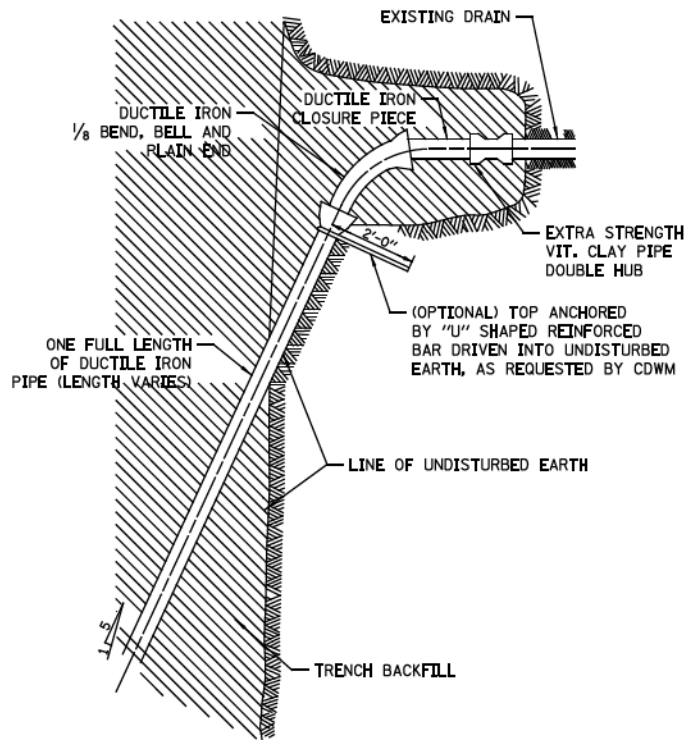
DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT

F.A.I. RTE. 90/94/290
SECTION 2014-002R&B
COUNTY COOK
TOTAL SHEETS 814
SHEET NO. 587
CONTRACT NO. 60X76
ILLINOIS FED. AID PROJECT

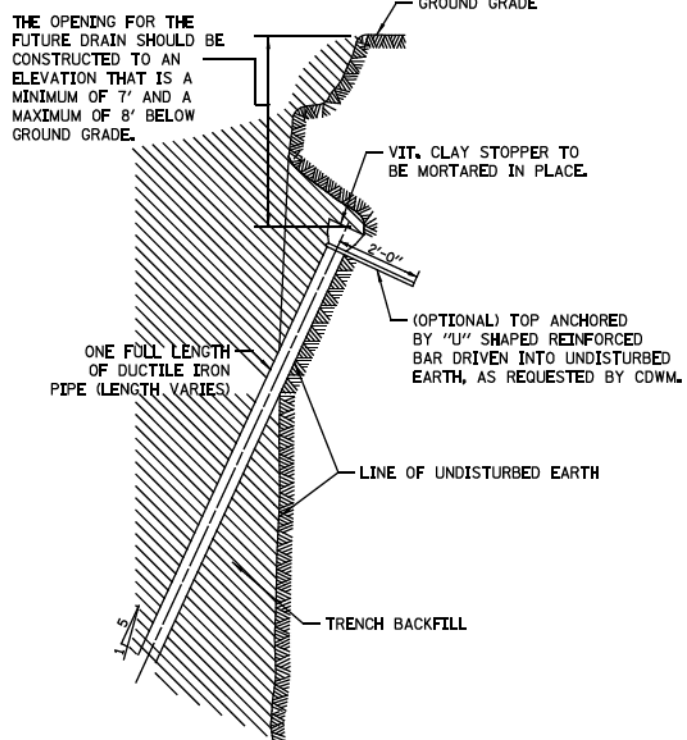
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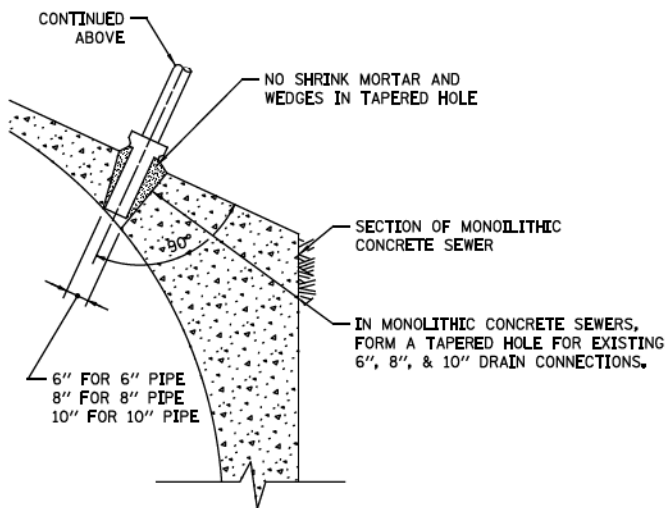
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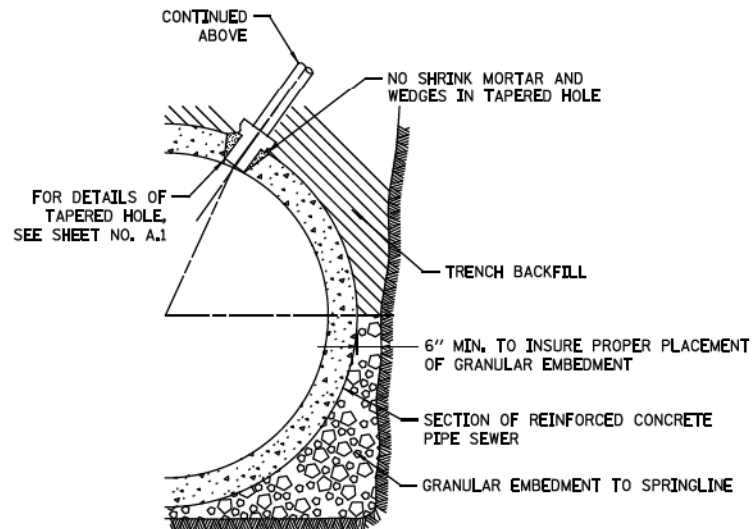
TYPICAL DRAIN CONNECTIONS FOR EXISTING DRAINS



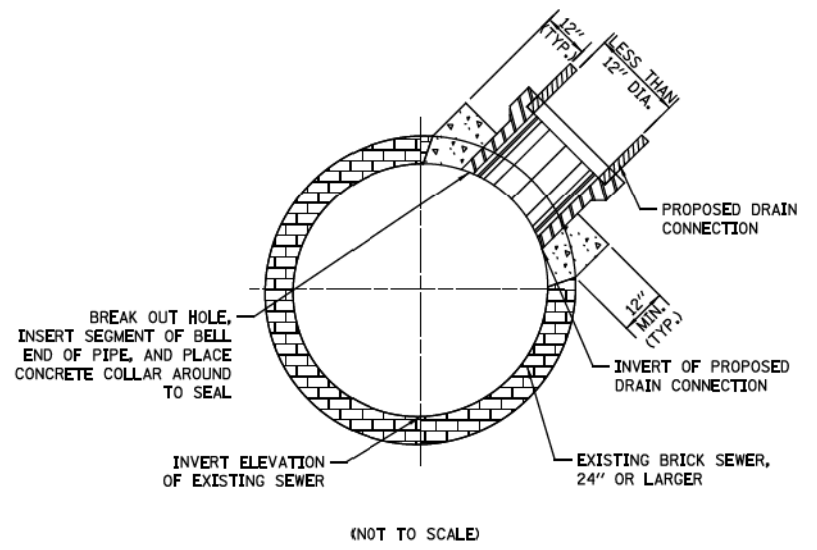
TYPICAL DRAIN STACKS FOR FUTURE USE



FOR MONOLITHIC CONCRETE SEWERS



FOR REINFORCED CONCRETE PIPE SEWERS



FOR BRICK SEWERS

DUCTILE IRON PIPE DRAIN CONNECTIONS

BRICK SEWER DRAIN CONNECTIONS

- NOTES:
1. DUCTILE IRON PIPE MUST BE BELL END WITH PUSH-ON JOINTS CONFORMING TO ANSI SPECIFICATIONS A21.51 WITH CLASS 52 THICKNESS.
 2. CONNECTIONS AND STACKS SHOWN MUST BE USED FOR 6", 8", & 10" DRAINS ONLY.
 3. FOR VITRIFIED CLAY PIPE DRAIN CONNECTION AND DRAIN STACK CONSTRUCTION, SEE SHEET NO. A.1.
 4. FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND, OR STONE SAND.
 5. FOR GRANULAR EMBEDMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.

\$FILE\$
\$DATE\$

STANDARD REVISIONS	
DATE	DESCRIPTION
1/5/15	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
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BULLETIN	

CITY OF CHICAGO		DRAWN: _____	SHEET NO. A.2
DEPARTMENT OF WATER MANAGEMENT			
BUREAU OF ENGINEERING SERVICES		CHECKED: _____	OF _____
DUCTILE IRON PIPE DRAIN CONNECTIONS		REVIEWED: _____	PN _____

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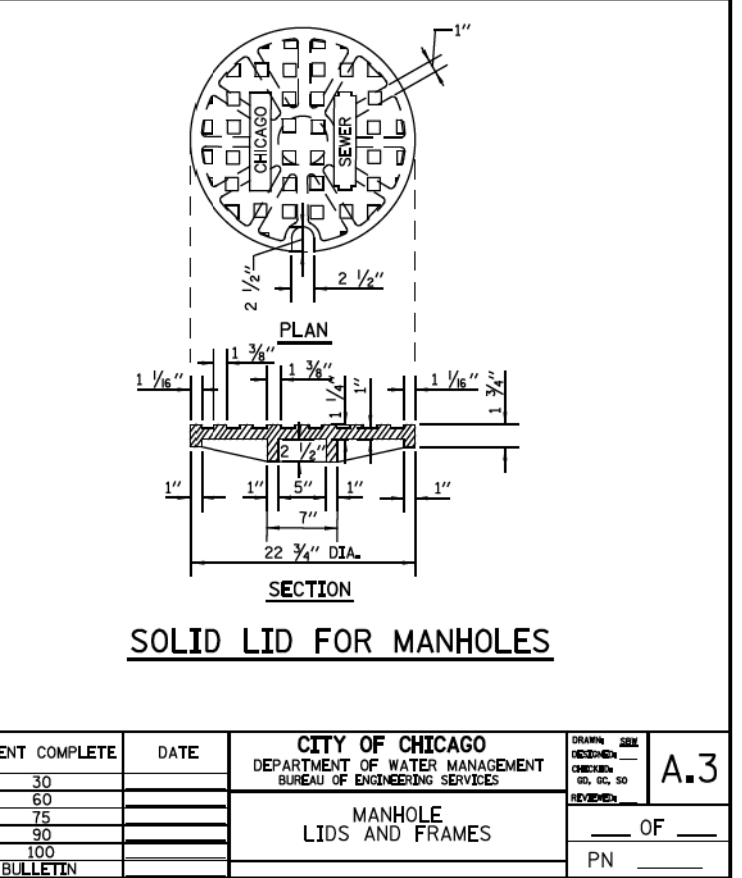
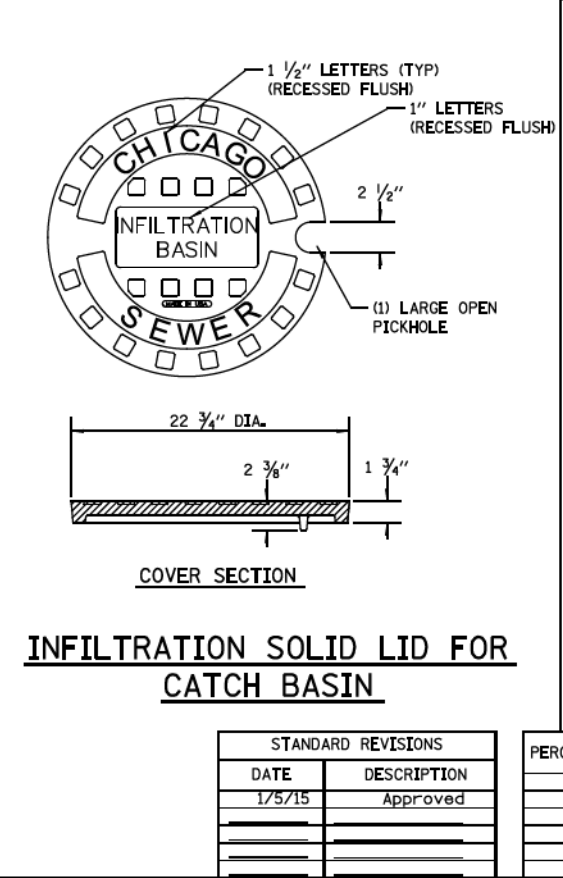
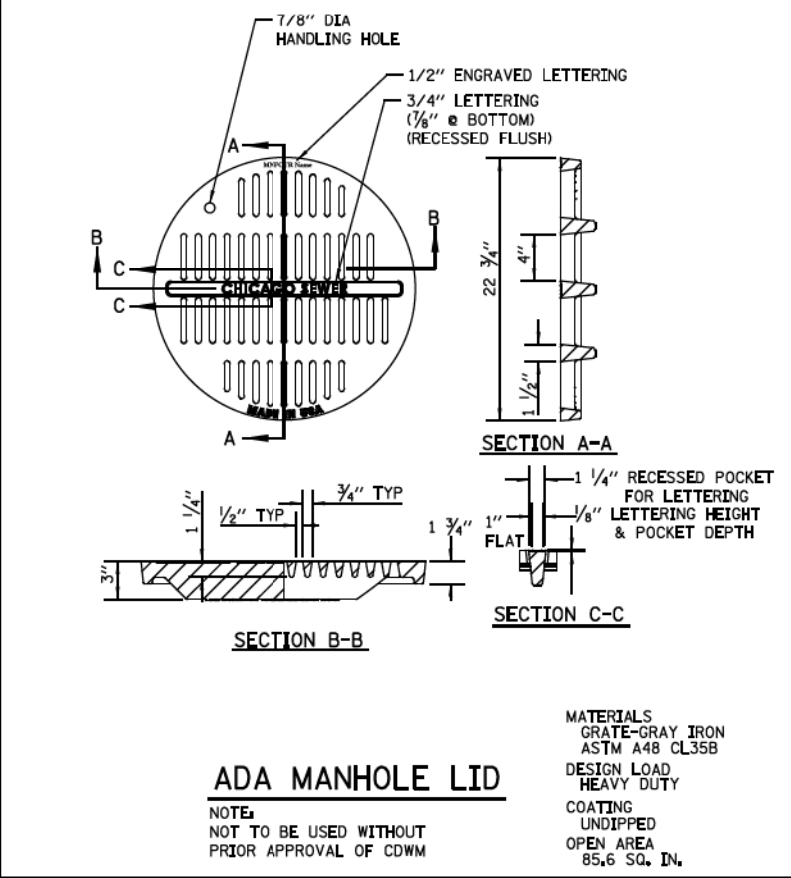
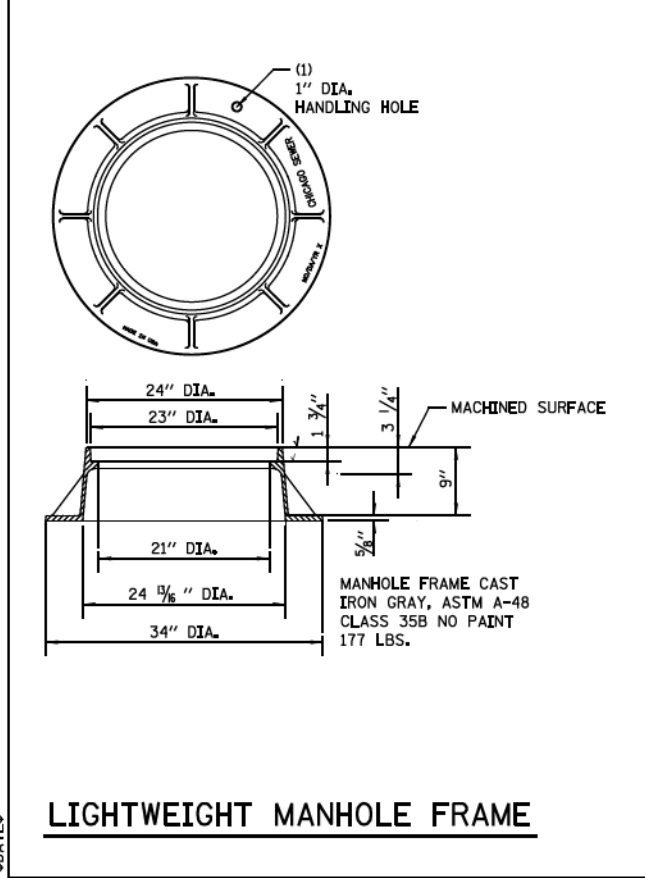
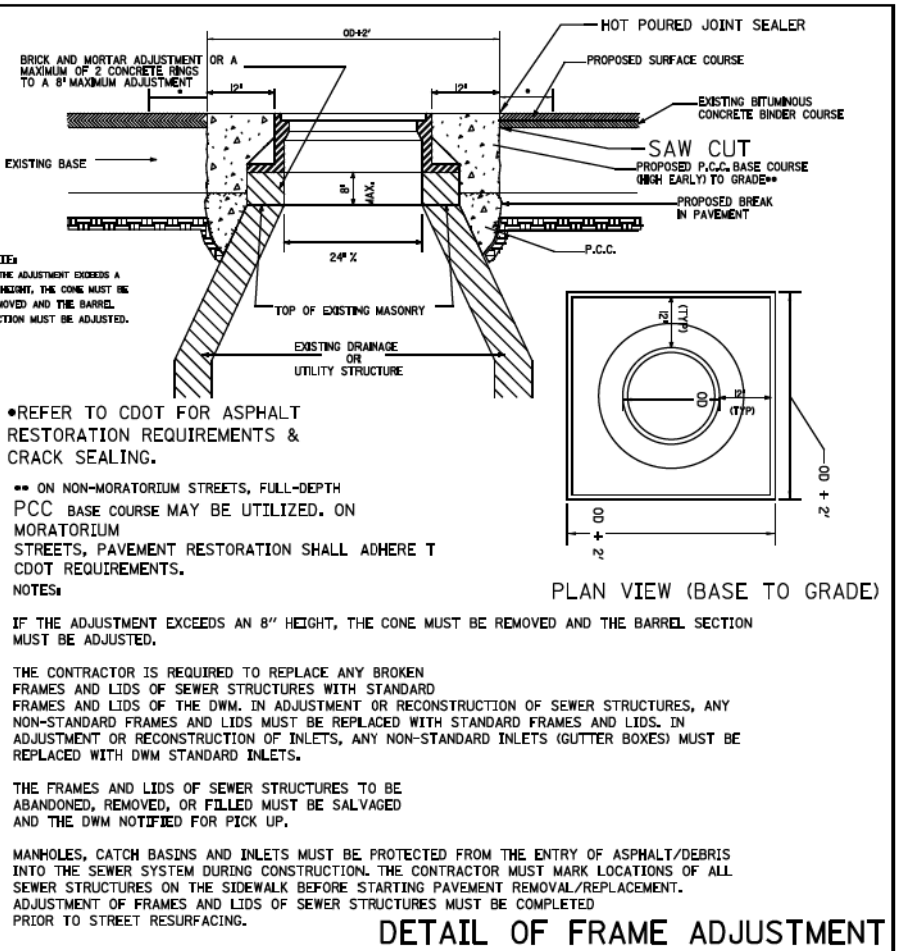
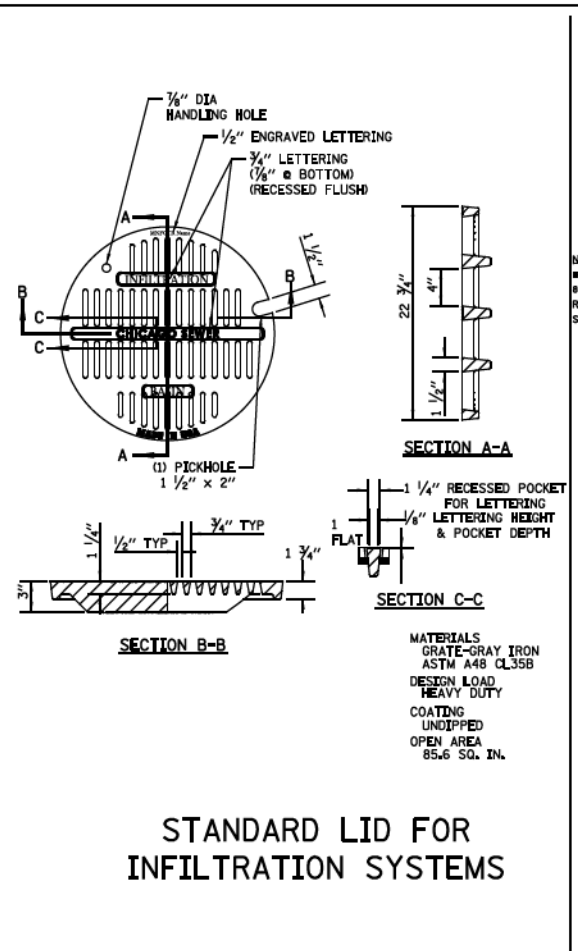
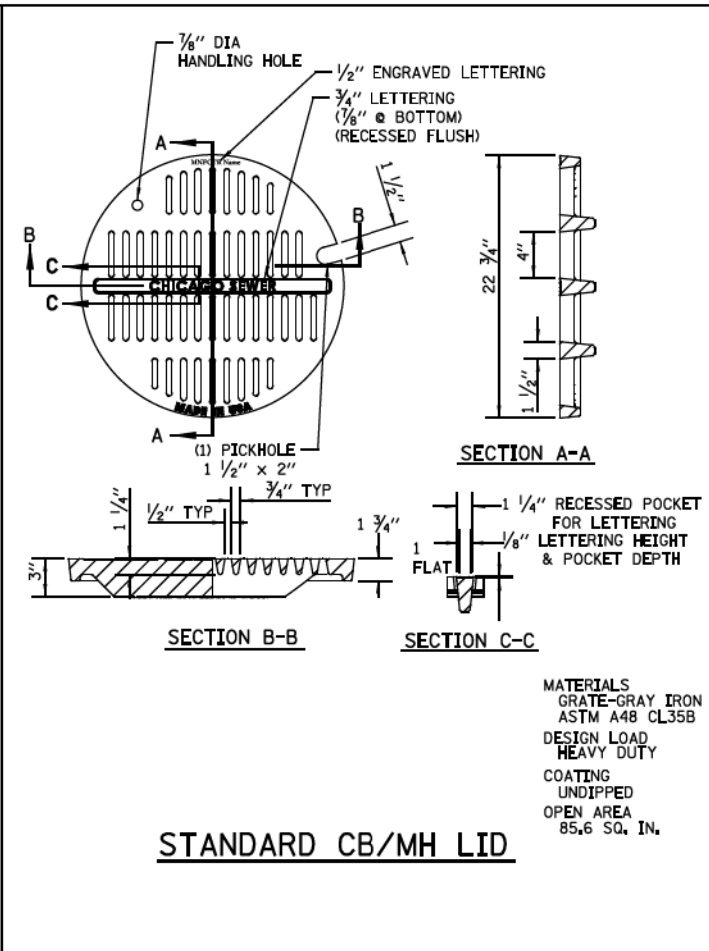
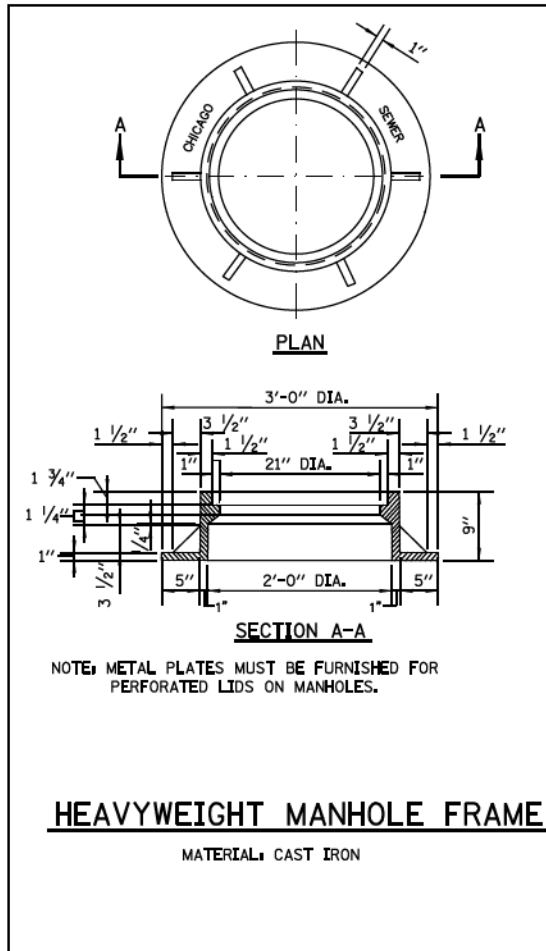
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DRAWN - CDWM	REVISED -
CHECKED - CDWM	REVISED -
DATE - 5/10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT

SCALE: N.T.S. SHEET 2 OF 10 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 588
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



STANDARD REVISIONS	
DATE	DESCRIPTION
1/5/15	Approved

PERCENT COMPLETE	DATE
30	
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BULLETIN	

CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES	
MANHOLE LIDS AND FRAMES	

DRAWING NO.	DATE	BY	CHKD BY	REVISED
A.3				

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	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

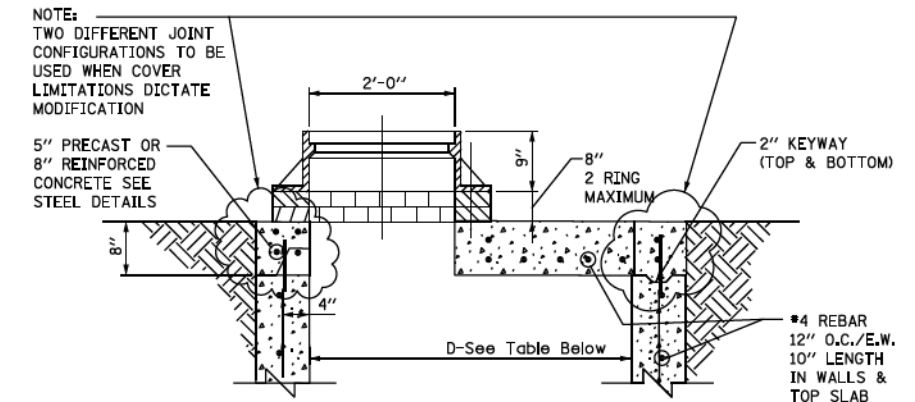
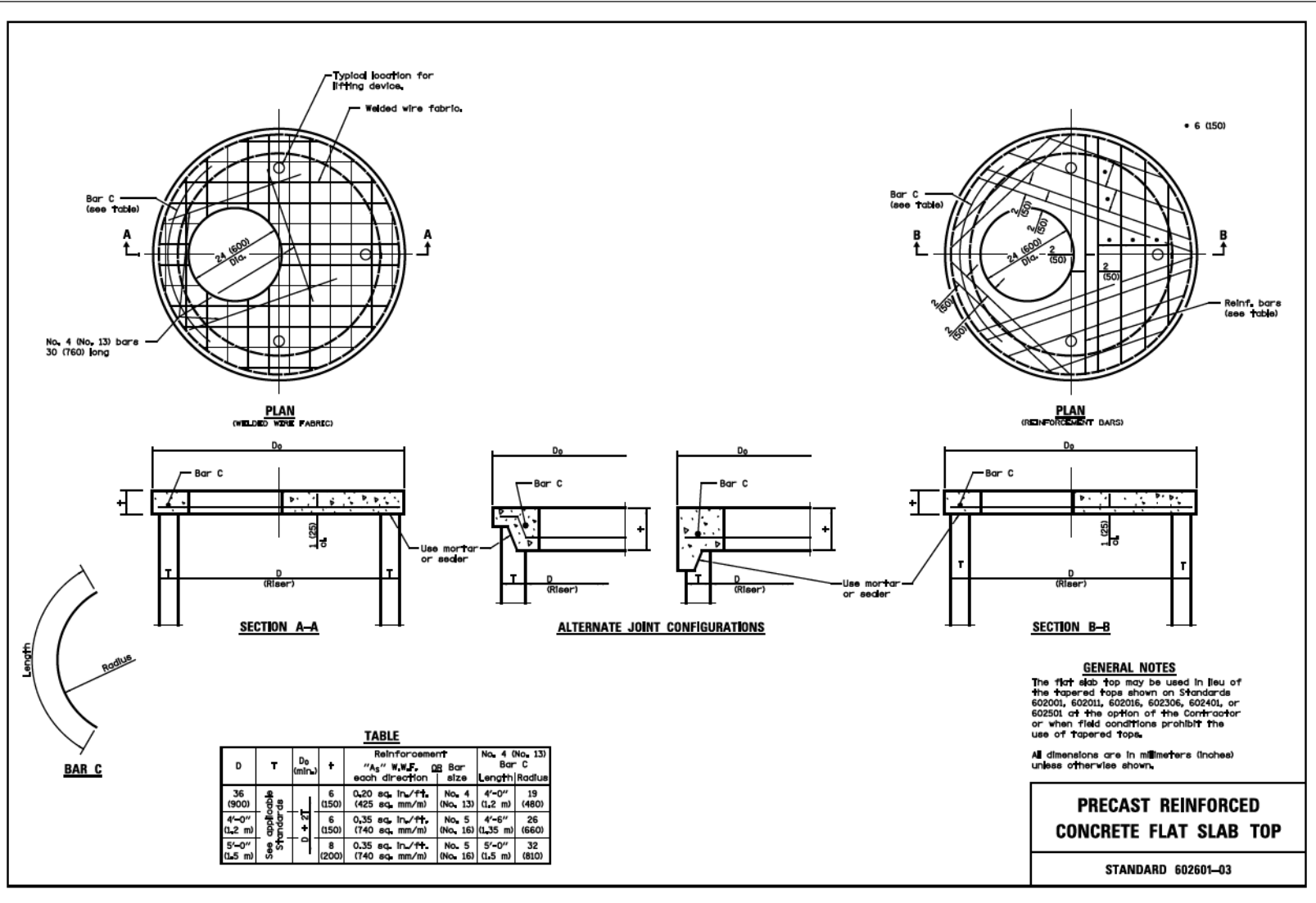
**DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT**

SCALE: N.T.S. SHEET 3 OF 10 SHEETS STA. TO STA.

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CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



SPECIAL DRAINAGE STRUCTURES
FOR PUBLIC STREETS AND ALLEYS



STANDARD FLAT TOP SLAB FOR CATCH BASINS

NOTES:
FLAT TOP SLAB APPLICATION CAN ONLY BE USED WITH WRITTEN PERMISSION FROM CDWM.
USE LATEST IDOT DETAIL, #602601

\$FILE\$
\$DATE\$

STANDARD REVISIONS	
DATE	DESCRIPTION
1/5/15	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
60	
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BULLETIN	

CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES				DRAWN	SIZE
					A.4
FLAT TOP SLAB DETAILS					

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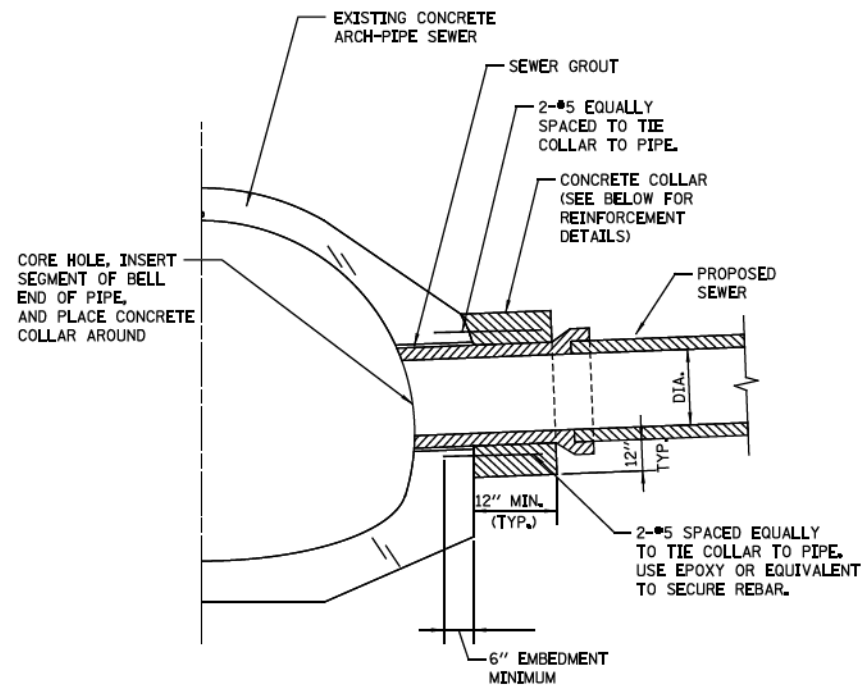
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DATE - 5/10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

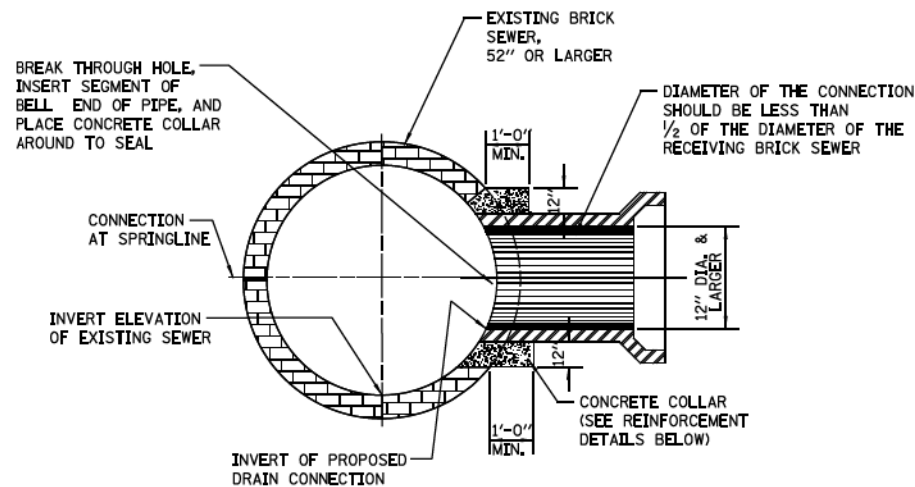
DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT

SCALE: N.T.S. SHEET 4 OF 10 SHEETS STA. TO STA.

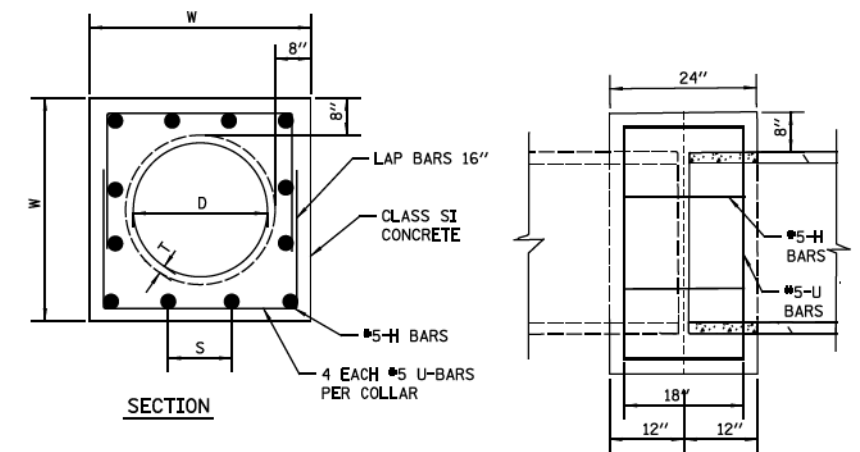
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90/94/290	2014-002R&B	COOK	814	590
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				



EXAMPLE TYPICAL CONNECTION DETAIL
(NOT TO SCALE)



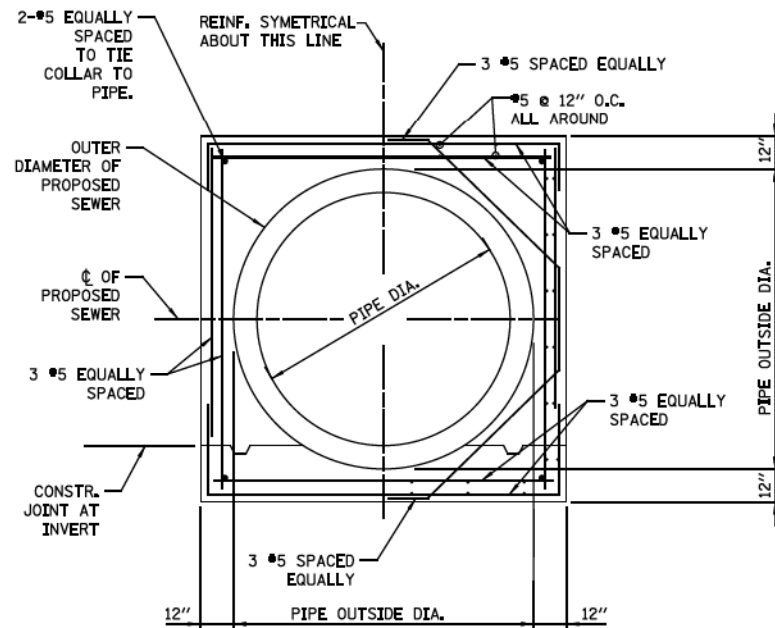
EXAMPLE TYPICAL BRICK SEWER CONNECTION FOR CONNECTING PIPE SIZES GREATER THAN 12" DIA.
(NOT TO SCALE)



PIPE TO PIPE REINFORCED CONCRETE COLLAR DETAIL
SCALE: N.T.S.

CONCRETE COLLAR NOTES:

- ALL ITEMS AND MATERIALS SHALL CONFORM TO THE LATEST IDOT SSRBC SPECIFICATIONS, UNLESS OTHERWISE NOTED IN SUPPLEMENTAL SPECIFICATIONS FOR THE SPECIFIC PROJECT BEING CONSTRUCTED.
- ALL CONCRETE SHALL CONFORM TO IDOT SSRBC ARTICLE 1020.04, CLASS SI, WITH A COMPRESSIVE STRENGTH OF 3500 PSI.
- ALL EPOXY COATED REINFORCEMENT BARS SHALL CONFORM TO IDOT SSRBC SECTION 508, AND ARTICLE 1006.10.
- UNLESS OTHERWISE SHOWN, THE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
A.) CONCRETE CAST AGAINST PERMANENTLY EXPOSE EARTH: 3" B.) ALL OTHER REINFORCING BARS: 2"
- CONCRETE COLLARS SHALL BE USED AT ALL EXISTING/PROPOSED PIPE CONNECTIONS. TRIM EXISTING PIPE END TO PROVIDE FLUSH BUTT JOINT, INSTALL REBAR, AND PLACE CONCRETE COLLAR.
- THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE EXISTING SEWER DURING CONSTRUCTION. CONTRACTOR SHALL ADEQUATELY BRACE OR SHORE EXISTING SEWER IF REQUIRED TO MAINTAIN INTEGRITY OF SEWER DURING CONSTRUCTION. SUBMIT DESIGN AND DETAILS, SEALED AND SIGNED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, SHOWING TEMPORARY BRACING FOR THE EXISTING SEWER DURING CONSTRUCTION FOR REVIEW PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURE IS RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL DIVERT ALL FLOW FROM THE EXISTING SEWER PRIOR TO CONSTRUCTION SO THAT THE WORK CAN BE PERFORMED IN THE DRY CONDITION. SEWER MUST BE MAINTAINED IN SERVICE AT ALL TIMES. SUBMIT MEANS OF FLOW DIVERSION FOR REVIEW PRIOR BREAKING INTO EXISTING BRICK SEWER. ALL EXCAVATION SHALL BE KEPT DEWATERED DURING CONSTRUCTION OPERATIONS UNTIL BACKFILL IN PLACE. PROVISIONS SHALL BE MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING AT ALL TIMES. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE SHALL BE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN 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 THE WORK, HOWEVER, CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE OF THE WORK.



EXAMPLE CONCRETE COLLAR REINFORCEMENT - SECTION
(NOT TO SCALE)

D RCP DIA. (IN)	T PIPE THICKNESS (IN)	W WIDTH (IN)	U BAR				H BAR				CLASS SI CONCRETE (CU YD)	#5 EPOXY REBAR (LBS)
			X (IN)	Y (IN)	QTY (EACH)	LENGTH (FT)	S (IN)	QTY (EACH)	LENGTH (FT)			
12"	2.00	32.0	26.00	21.00	4	22.7	8 1/8	12.0	18.0	0.42	42.5	
15"	2.25	35.5	29.50	22.75	4	25.0	9 3/8	12.0	18.0	0.49	44.8	
18"	2.50	39.0	33.00	24.50	4	27.3	10 1/2	12.0	18.0	0.57	47.2	
21"	2.75	42.5	36.50	26.25	4	29.7	8 3/4	16.0	24.0	0.65	56.0	
24"	3.00	46.0	40.00	28.00	4	32.0	9 5/8	16.0	24.0	0.72	58.4	
27"	3.25	49.5	43.50	29.75	4	34.3	10 1/2	16.0	24.0	0.81	60.8	
30"	3.50	53.0	47.00	31.50	4	36.7	11 3/8	16.0	24.0	0.89	63.3	
33"	3.75	56.5	50.50	33.25	4	39.0	9 4/5	20.0	30.0	0.98	72.0	
36"	4.00	60.0	54.00	35.00	4	41.3	10 1/2	20.0	30.0	1.07	74.4	
42"	4.50	67.0	61.00	38.50	4	46.0	9 7/8	24.0	36.0	1.26	85.5	
48"	5.00	74.0	68.00	42.00	4	50.7	11 1/8	24.0	36.0	1.46	90.4	

*NOTE: OPTION TO USE WITHOUT REBAR

FILE #
DATE #

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PLOT SCALE = 2.0000' / in.
PLOT DATE = 5/9/2017

DESIGNED - CDWM
DRAWN - CDWM
CHECKED - CDWM
DATE - 5/10/17

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD REVISIONS	
DATE	DESCRIPTION
1/22/14	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
60	
75	
90	
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BULLETIN	

CITY OF CHICAGO
DEPARTMENT OF WATER MANAGEMENT
BUREAU OF ENGINEERING SERVICES

CONCRETE COLLAR / CONNECTION DETAILS

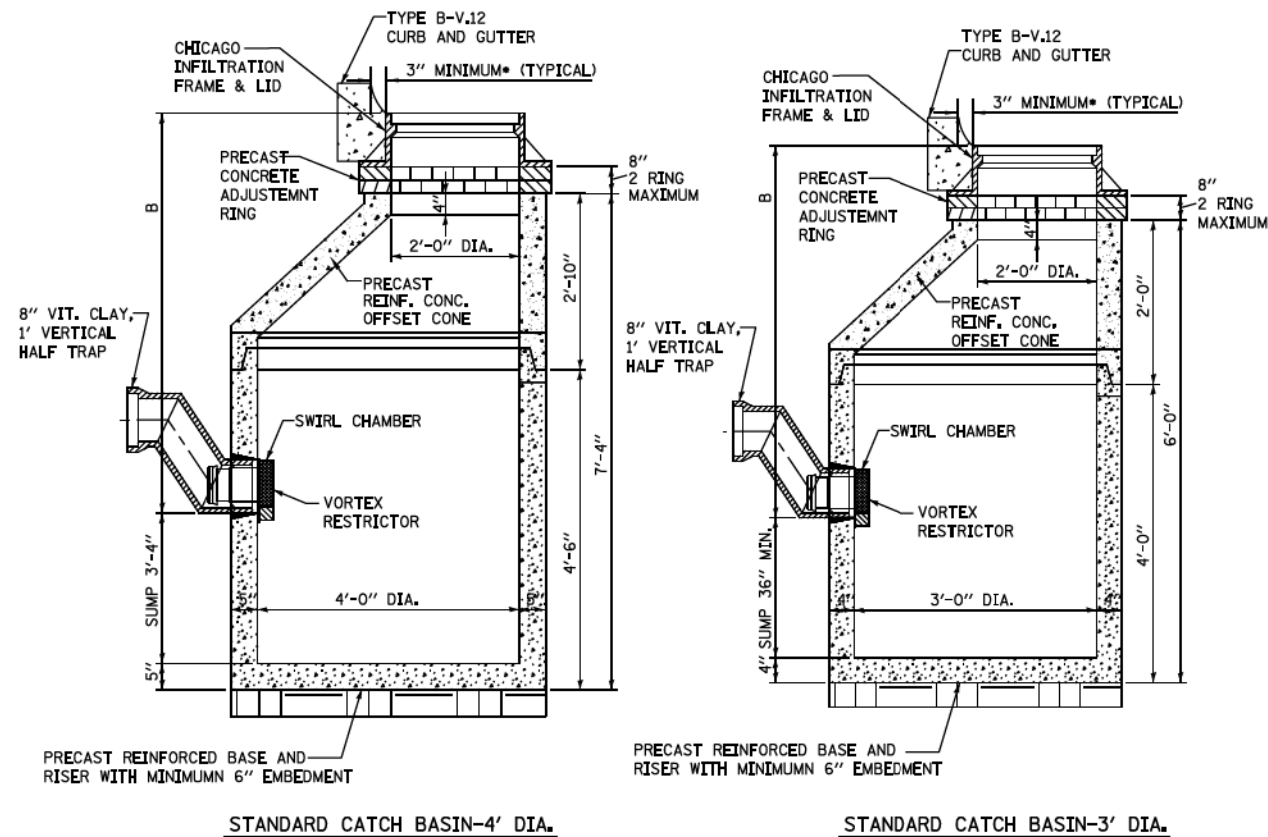
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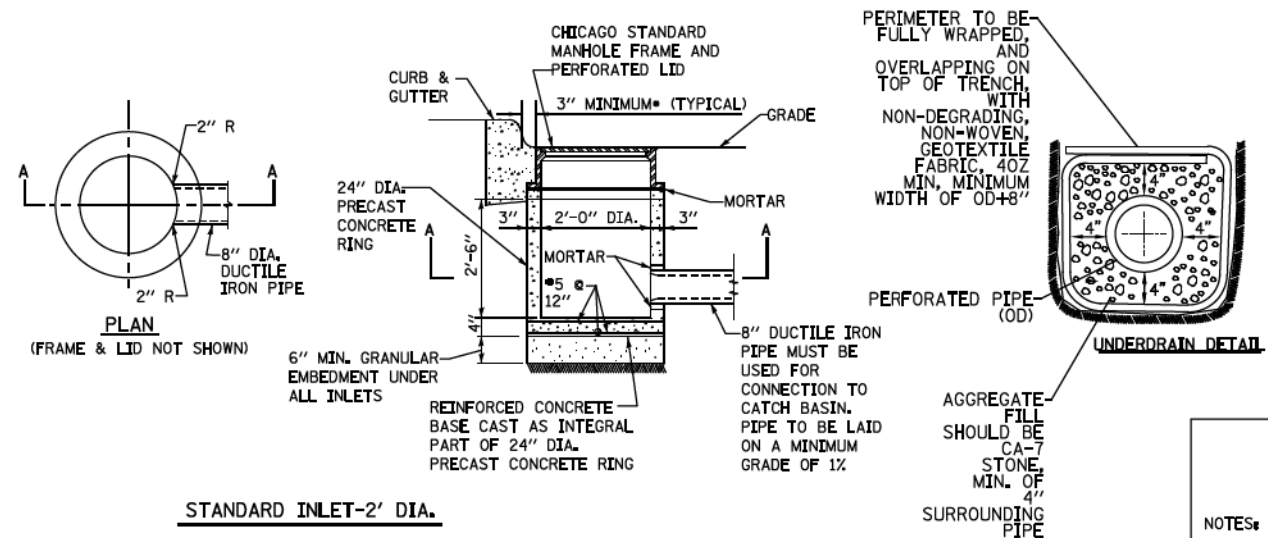
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STANDARD DRAINAGE STRUCTURES FOR PUBLIC STREETS



STANDARD CATCH BASIN-4' DIA.

STANDARD CATCH BASIN-3' DIA.



STANDARD INLET-2' DIA.

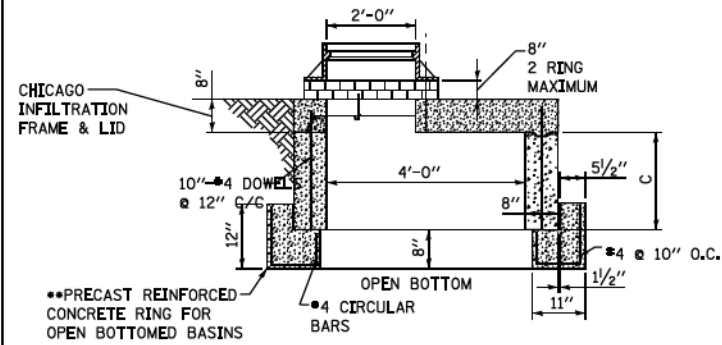
NOTE:
INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM SEWER ENGINEER OR FIELD INSPECTOR.

FOR TRENCH BACKFILL, USE FA-6 SAND, CRUSHED CONCRETE SAND, OR STONE SAND.

FOR GRANULAR EMBEDMENT, USE CA-11, CRUSHED GRAVEL, CRUSHED STONE, OR CRUSHED CONCRETE.

#FILE#
#DATE#

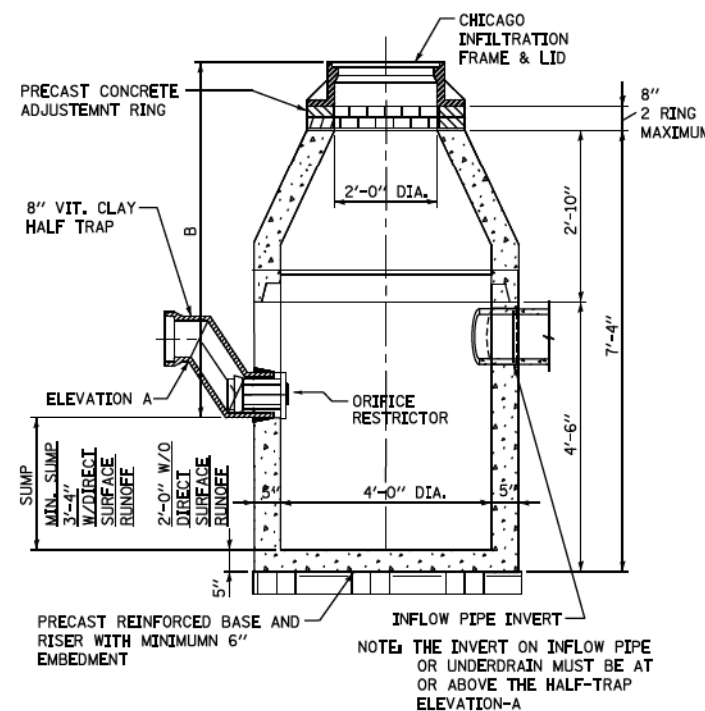
STANDARD DRAINAGE STRUCTURES FOR PUBLIC ALLEYS



GREEN ALLEY OPEN BOTTOM CATCH BASIN
TO BE USED IF STANDARD CONE WITH REQUIRED SUMP DEPTH INSTALLATION IS IMPOSSIBLE.

****IF FLAT TOP SLAB CATCH BASIN IS USED IN AN OPEN BOTTOM APPLICATION, THE FOLLOWING CRITERIA MUST BE FOLLOWED:**

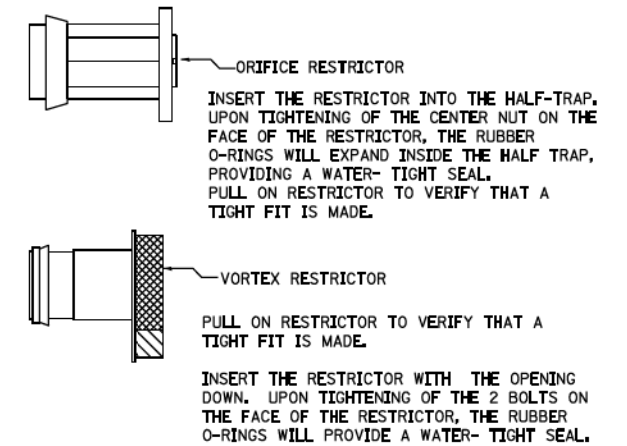
- "C" MUST BE A MINIMUM OF 3 FEET.
- PROVIDE A MINIMUM AGGREGATE BASE OF 1.0 FEET BELOW PRECAST REINFORCED CONCRETE RING.
- GEOTECH FABRIC MUST BE PLACED ON SIDES AND BOTTOM OF AGGREGATE SURROUNDING BASIN.
- AGGREGATE BASE MUST PROVIDE ADEQUATE STORMWATER STORAGE CAPACITY PER THE APPROVED/PERMITTED PLANS.



CATCH BASIN-ORIFICE RESTRICTOR
N.T.S.

- NOTES:**
1. FOR ANY DRAIN TILE CONNECTION, THE WATER TABLE MUST BE AT LEAST 3.5 FEET BELOW ELEVATION A.
 2. PVC UNDERDRAINS MUST BE 4" MINIMUM DIAMETER, (6" RECOMMENDED) AND MUST BE WRAPPED IN GEOTECH FABRIC.

DRAINAGE STRUCTURES RESTRICTORS



GENERAL NOTES:

1. CATCH BASIN TO CATCH BASIN CONNECTIONS ARE ALLOWED IN PRIVATE SITES & ALLEYS. ONLY THE DOWNSTREAM CATCH BASIN IS REQUIRED TO HAVE A HALF-TRAP.
2. IF B < 4 FEET, THEN USE A DUCTILE IRON PIPE HALF TRAP AND FLAT TOP SLAB CATCH BASIN AS NECESSARY.
3. INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM FIELD INSPECTOR.

RESTRICTOR NOTES:

THE DWM'S RAIN BLOCKER RESTRICTOR PROGRAM MUST BE MAINTAINED WITH ANY ROADWAY IMPROVEMENT.

THE DESIGN OF ANY ROADWAY IMPROVEMENT MUST CONSIDER LIMITING THE NUMBER OF CATCH BASINS TO THE EXTENT PRACTICAL. THE NUMBER OF EXISTING STRUCTURES SHOULD NOT BE INCREASED.

THE RESTRICTORS CAN BE OBTAINED FROM DWM CENTRAL DISTRICT AT 3901 S. ASHLAND AVE. THE CONTRACTOR SHOULD ARRANGE FOR PICK UP BY CONTACTING 312-747-1177 (7AM TO 3PM, M-F)

FLOW RESTRICTORS MUST BE INSTALLED IN ALL CATCH BASINS OUTSIDE OF THE CENTRAL BUSINESS DISTRICT. RESTRICTORS MUST NOT BE INSTALLED IN CATCH BASINS IN CLOSE PROXIMITY TO VIADUCT AREAS, BUS STOPS, OR EMERGENCY ENTRANCES. THE DWM MUST APPROVE THE NON-INSTALLATION OR REMOVAL OF ANY RESTRICTOR. REQUIREMENTS FOR RESTRICTOR INSTALLATION ARE AS FOLLOWS:

- ARTERIAL STREETS: 3-INCH ORIFICE RESTRICTOR
- BUS ROUTES: 3-INCH ORIFICE RESTRICTOR
- RESIDENTIAL STREETS: 3-INCH VORTEX RESTRICTOR
- ALLEYS: 3-INCH ORIFICE RESTRICTOR IN THE LAST CB.
- CLOSED LIDS ARE REQUIRED ON ALL MANHOLES EXCEPT AT INTERSECTIONS WHERE A PERFORATED LID SHALL BE USED.

STANDARD REVISIONS	
DATE	DESCRIPTION
12/28/15	APPROVED

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO			
DEPARTMENT OF WATER MANAGEMENT			
BUREAU OF ENGINEERING SERVICES			
DRAWN	DATE	CHECKED	REVISIONS
DRAINAGE STRUCTURE DETAILS			
			PN

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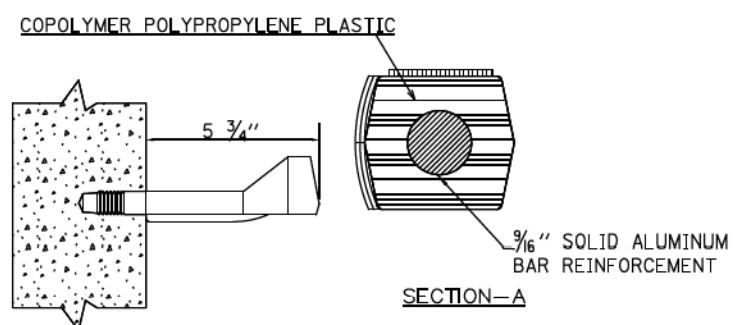
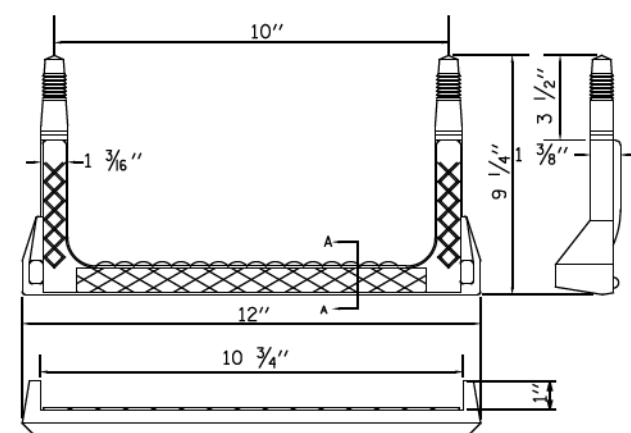
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	592
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

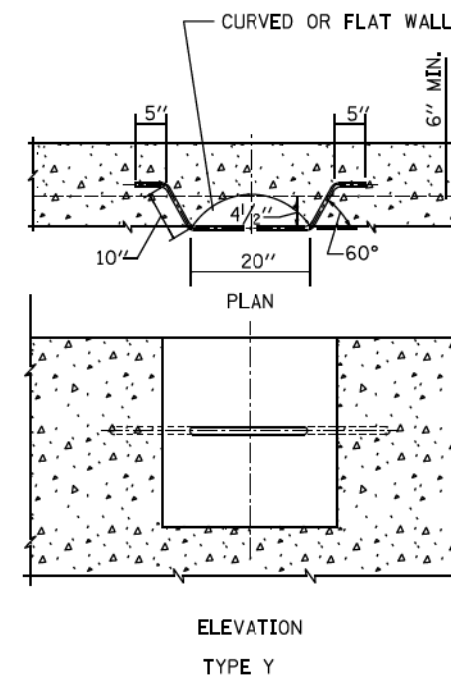
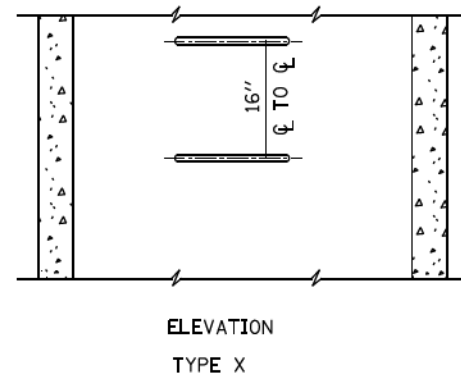
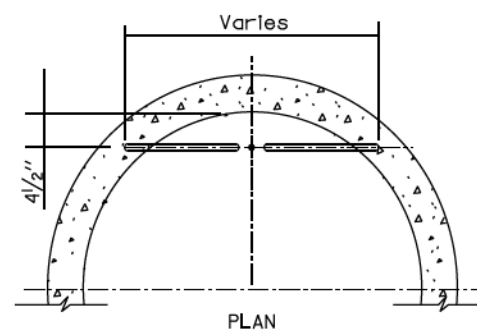
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RECTANGULAR STEP LADDER RUNG

FOR USE ONLY IN 48" DIAMETER AND LARGER MANHOLES.



NOTES:

1. VERTICAL SPACING = 16" O.C., ON VERTICAL WALL ONLY.
2. FIRST LADDER RING SHOULD BE A MAXIMUM OF 31" BELOW TOP OF MANHOLE FRAME
3. STEPS SHALL MEET THE REQUIREMENTS OF ASTM C478 IN ADDITION TO A HORIZONTAL PULL-OUT LOAD OF 1000 LBS. WHEN INSTALLED.
4. ALL STEPS SHALL BE VERTICALLY ALIGNED IN A STRAIGHT LINE.
5. NO STEPS LOCATED INSIDE MANHOLE CHIMNEY.
6. MINIMUM CONCRETE STRENGTH MUST BE 3000 PSI
7. HOLES- PREFORMED/DRILLED
 - A. HOLES MUST BE PARALLEL
 - B. HOLES MUST BE 10" CENTERED, 1" DIAMETER
 - C. MINIMUM DEPTH- 3 1/2" TO 3 3/4"

STANDARD REVISIONS		PERCENT COMPLETE	DATE	CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES	DRAWN CHECKED REVISIONS	SCALE
DATE	DESCRIPTION					
12/28/15	APPROVED PLAN	30		LADDER RUNGS	A.20	OF
		60				
		75				
		90				
		100				
		BULLETIN				PN

DATE

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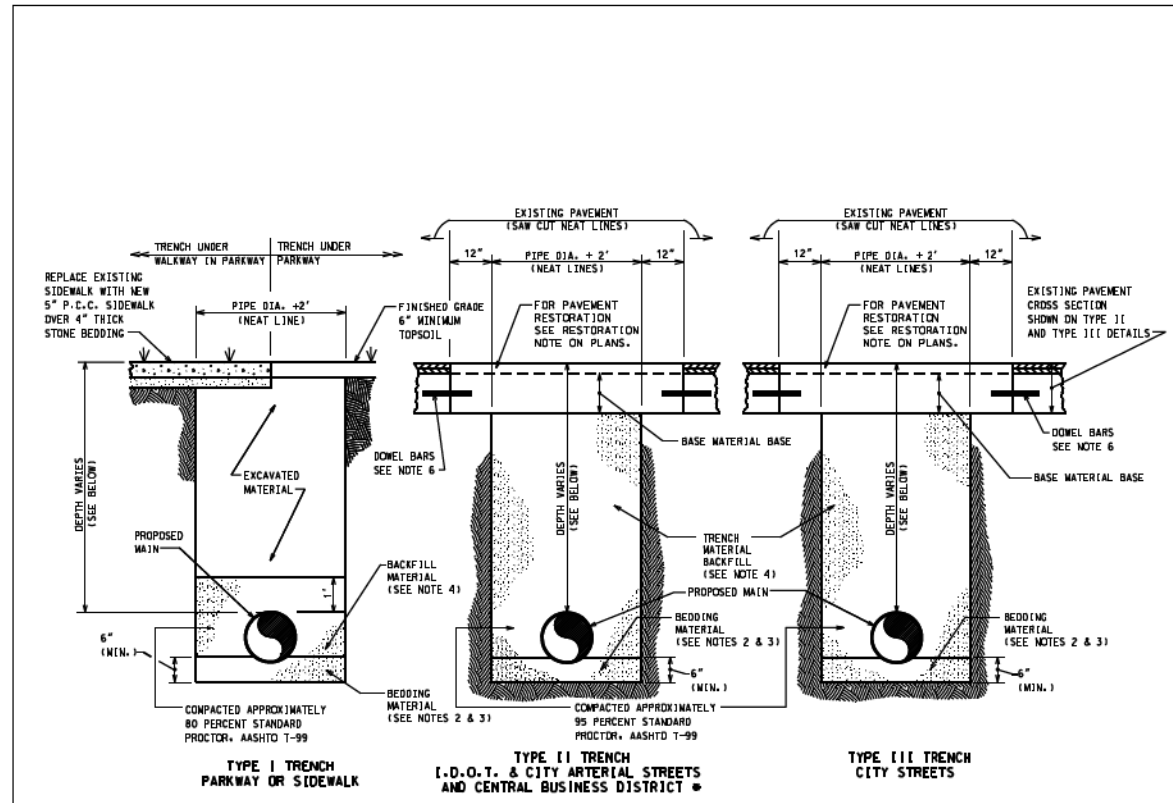
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT

SCALE: N.T.S. SHEET 7 OF 10 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2014-002R&B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 593
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X76	

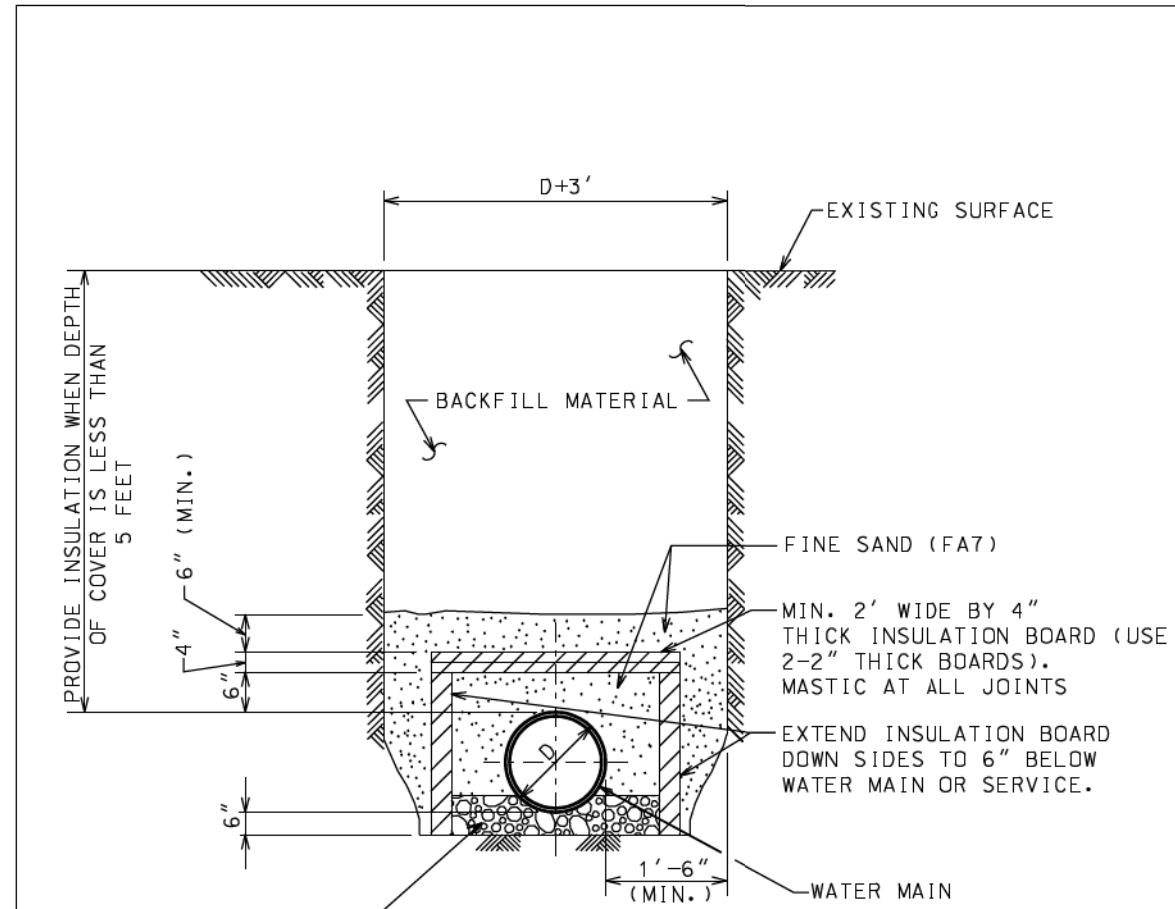
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- NOTES:**
1. PROVIDE PIPE BEDDING TO A DEPTH OF 1/4 OF PIPE DIAMETER OR 6" MINIMUM OF COMPACTED GRANULAR MATERIAL, GRAVEL, OR CRUSHED STONE.
 2. USE CA-16 BEDDING MATERIAL FOR PIPE SIZES UP TO 16-INCH DIAMETER.
 3. USE CA-11 BEDDING MATERIAL FOR PIPE SIZES LARGER THAN 16-INCH DIAMETER.
 4. BACKFILL MUST BE COMPACTED UP TO ONE FOOT ABOVE THE PIPE IN TYPICAL TRENCH TYPE I AND TO THE TOP OF THE TRENCH IN TYPICAL TRENCH TYPE II & III. TRENCH BACKFILL GRADATION CA-16, EXCEPT IN CENTRAL BUSINESS DISTRICT USE CLSM (FLOWABLE FILL).
 5. ALL EXCAVATIONS MUST BE PROPERLY SHORED, SHEETED AND BRACED TO PROVIDE SAFE WORKING CONDITIONS, ALL IN COMPLIANCE WITH THE U.S. DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION STIPULATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT, (O.S.H.A.).
 6. #5 EPOXY COATED BARS, 18" LONG DRILLED AND GROUTED AT 30" CENTERS, EXCEPT OMIT ON CDDT STREETS WHERE CLSM USED AS TRENCH BACKFILL.
 7. WHEN TRENCH BACKFILL IS COMPLETE POUR CONCRETE BASE COURSE FLUSH TO TOP AND AT A MINIMUM BOTTOM OF EXISTING PAVEMENT GRADE. THE ADDITIONAL THICKNESS IS TO BE REMOVED DURING PAVEMENT RESTORATION WORK. FINAL CONCRETE BASE THICKNESS MUST BE PER C.D.O.T./I.D.O.T. REQUIREMENTS. WHEN THE THICKNESS OF THE EXISTING ROADWAY BASE MATERIAL IS LESS THAN THE MINIMUM THICKNESS NOTED BELOW, THE BOTTOM OF BASE MATERIAL WILL EXTEND BELOW THE BOTTOM OF THE BASE MATERIAL OF THE EXISTING PAVEMENT. MINIMUM THICKNESS FOR ARTERIAL STREETS IS 9 INCHES AND 7 INCHES FOR RESIDENTIAL STREET.
 8. PLATE ALL UNATTENDED EXCAVATIONS IN PAVEMENT AREAS AND SECURE PLATES TO PAVEMENT AND PROVIDE BARRIERS IN PARKWAY AREAS.
- * CENTRAL BUSINESS DISTRICT IS DEFINED AS THE AREA FROM DIVISION STREET SOUTH TO ROOSEVELT ROAD AND HALSTED STREET EAST TO LAKE MICHIGAN.

PIPE DEPTH REQUIREMENTS	
SIZE OF PIPE	DEPTH OF COVER
3/4" TO 3"	5'-6" ± 3"
4"	5'-6" ± 3"
6"	5'-6" ± 3"
8"	5'-3" ± 3"
12"	5'-0" ± 2"
16"	4'-6" ± 2"
24"	4'-0" ± 1"
30" TO 42"	3'-6" MIN. (SEE PLAN)
48" & LARGER	3' MIN. (SEE PLAN)

REV:09.07 WATER MAIN TRENCH DETAILS D-8



- NOTES:**
1. INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE VI, 40 PSI COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).
 2. BACKFILL MATERIAL AROUND INSULATION MUST BE FINE SAND FREE FROM ROOTS, ORGANIC MATTER, OR OTHER INJURIOUS MATERIALS.
 3. OVERLAP ALL INSULATION BOARD JOINTS.

REV:04.07 WATER MAIN TRENCH INSULATION DETAIL D-9



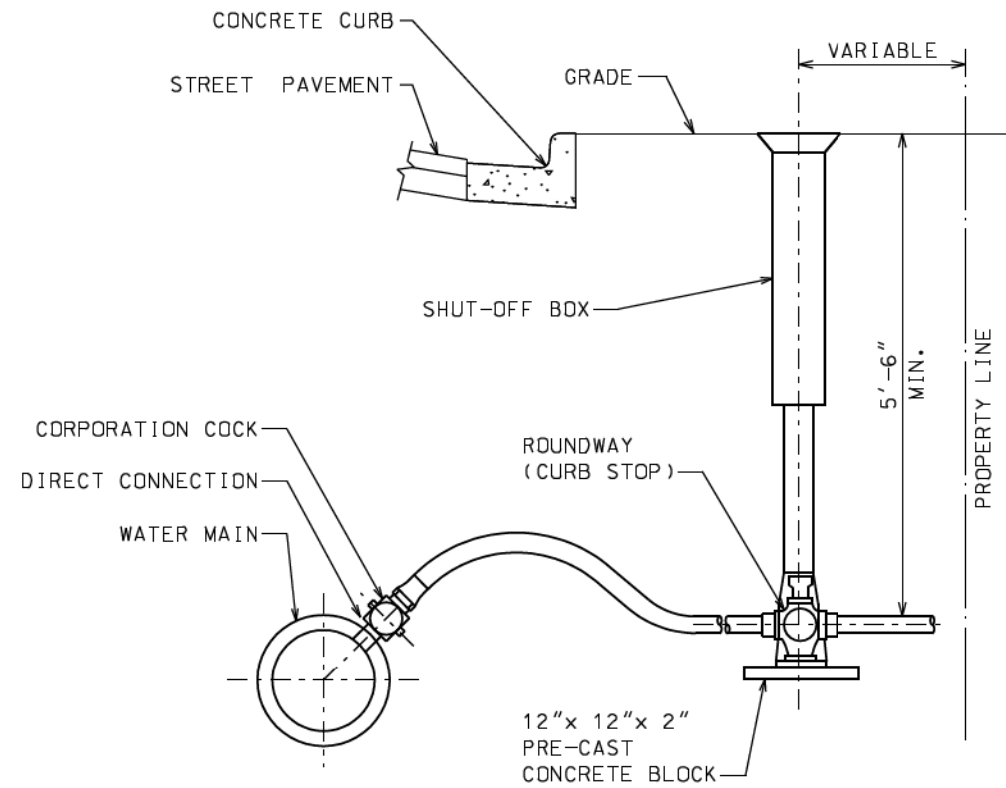
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PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS	
CHICAGO DEPARTMENT OF WATER MANAGEMENT	
SCALE: N.T.S.	SHEET 8 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	594
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				

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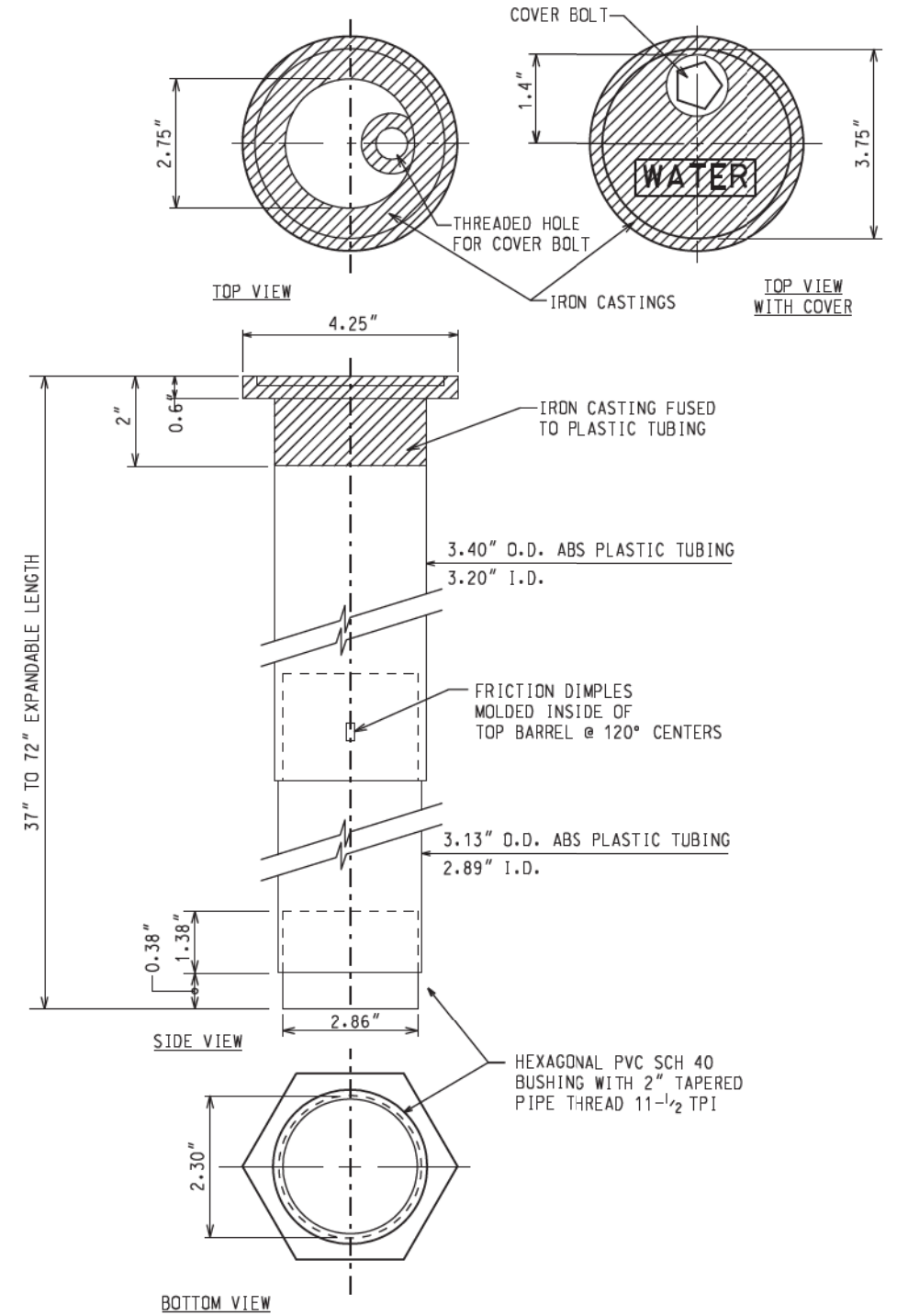


CORPORATION COCK		SHUT-OFF BOX
SIZE	WEIGHT	WEIGHT
In.	Lb.	Lb.
1.0	3.00	7.25
1.5	10.00	7.25
2.0	16.50	7.25

REV:04.07

TYPICAL 1" TO 2" WATER SERVICE

D-16



REV:04.07

**PLASTIC SHUT-OFF BOX
FOR SERVICES 2" & SMALLER**

D-17



D160X76-Sht-CDWM-W-DETAIL-02.dgn
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 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 5/9/2017

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 DATE - 5/10/17

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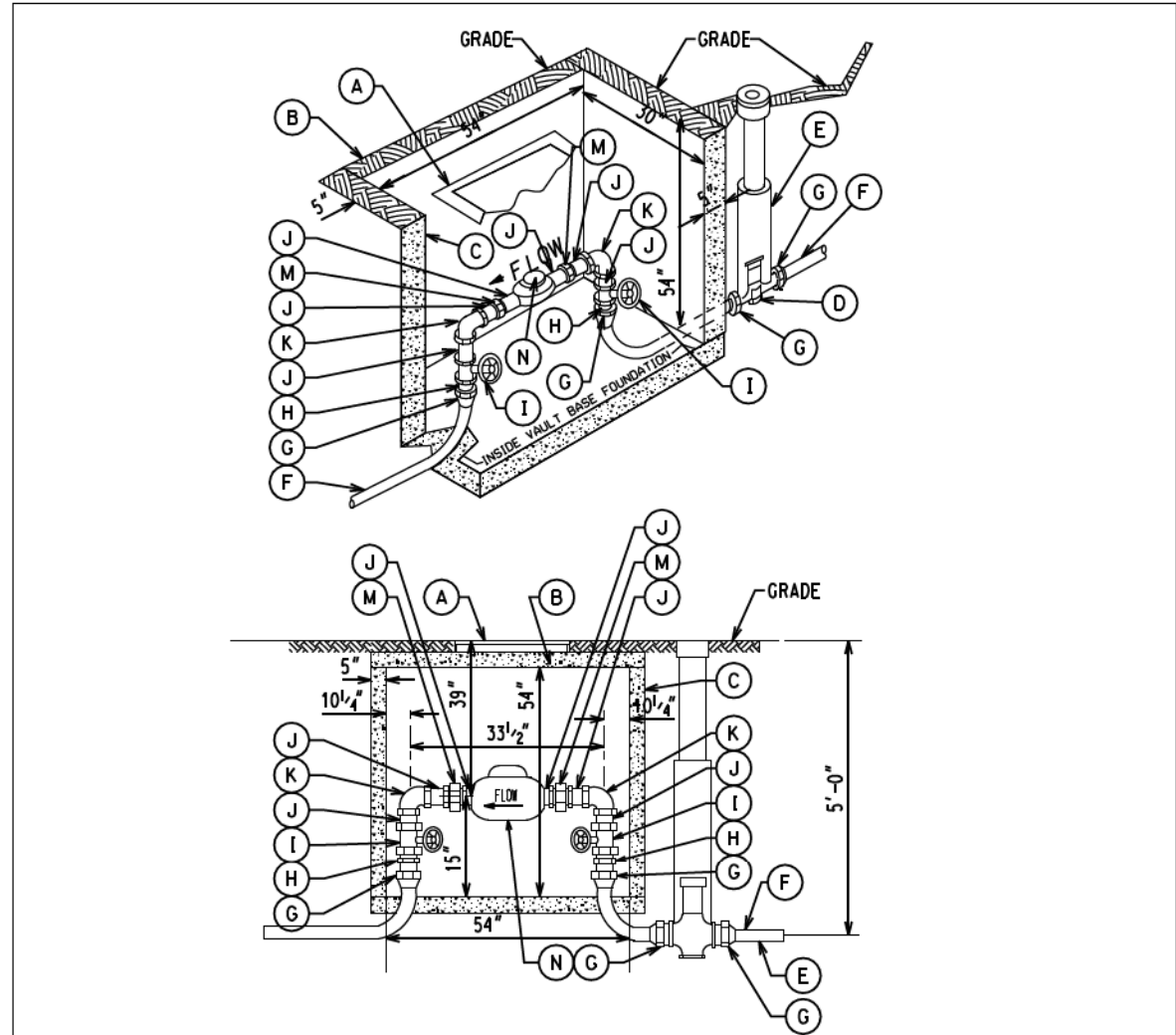
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT**

SCALE: N.T.S. SHEET 9 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	595
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

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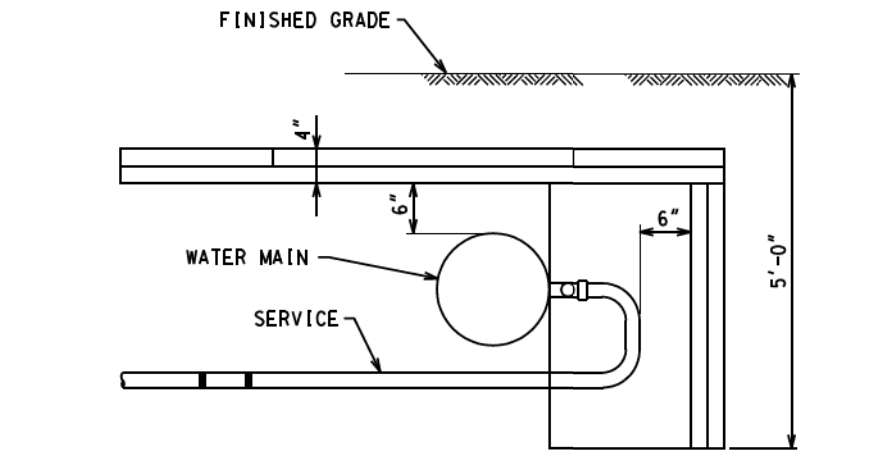


A	COVER 25 1/4" x 25 1/4" (NEENAH, R6662JP OR EQUAL) CENTERED OVER METER
B	PRECAST CONCRETE TOP
C	SOLID CONCRETE BLOCK OR PRECAST CONCRETE
D	ROUNDWAY
E	SHUT-OFF BOX
F	TYPE K COPPER
G	F.M. FLARED FITTING
H	MALE J.P.T. TO FLARED
I	FULL PORT CONTROL VALVE
J	BRASS NIP.
K	BRASS ELL.
M	BRASS UNION
N	METER

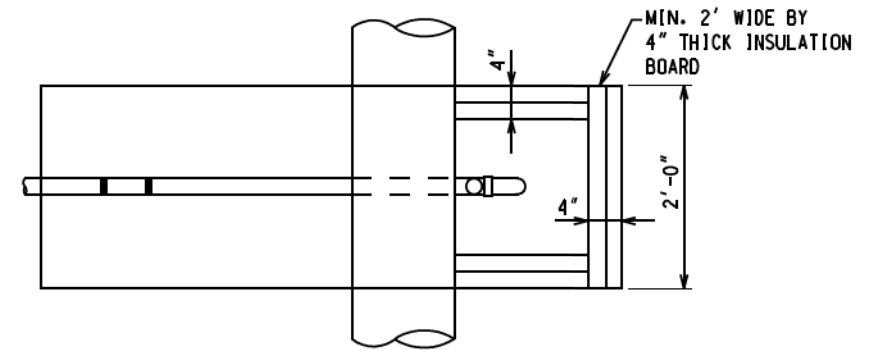
**NEW COPPER 1 1/2" & 2" WATER SERVICES
STANDARD METER VAULT**

REV:04.07

D-24



SIDE VIEW



TOP VIEW

SERVICE PIPE INSULATION DETAILS

NOTES:

1. BACK FILL MATERIAL AROUND INSULATION SHALL BE FINE SAND (FA7), FREE FROM ROOTS, ORGANIC MATTER, LEAVES OR OTHER INJURIOUS MATERIALS.
2. OVERLAP ALL INSULATION BOARD JOINTS.
3. INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE VI, 40 PSI COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).

REV:04.07

SERVICE PIPE INSULATION DETAILS

D-31



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

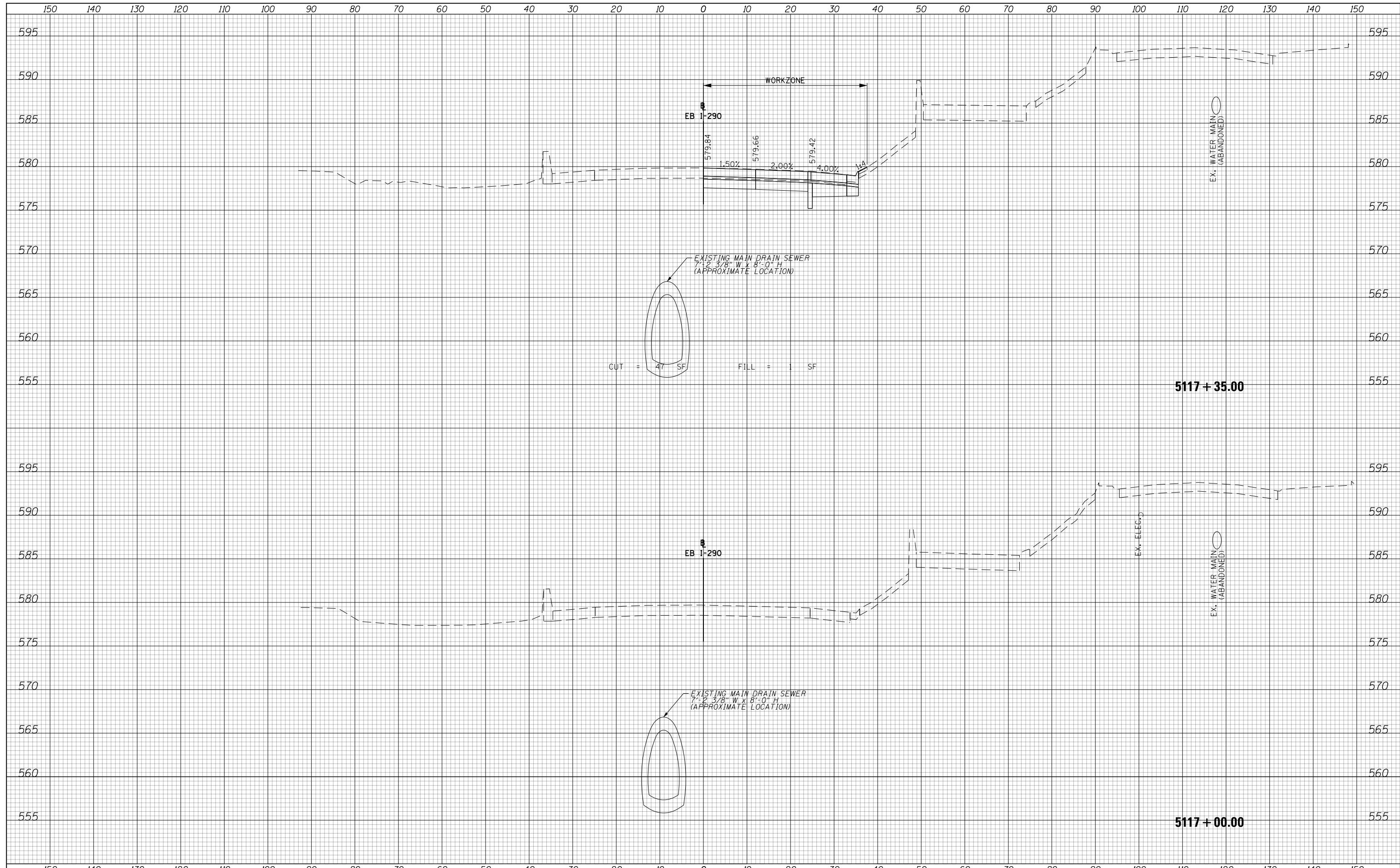
**DRAINAGE DETAILS
CHICAGO DEPARTMENT OF WATER MANAGEMENT**

SCALE: N.T.S. SHEET 10 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-002R&B	COOK	814	596
CONTRACT NO. 60X76			ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



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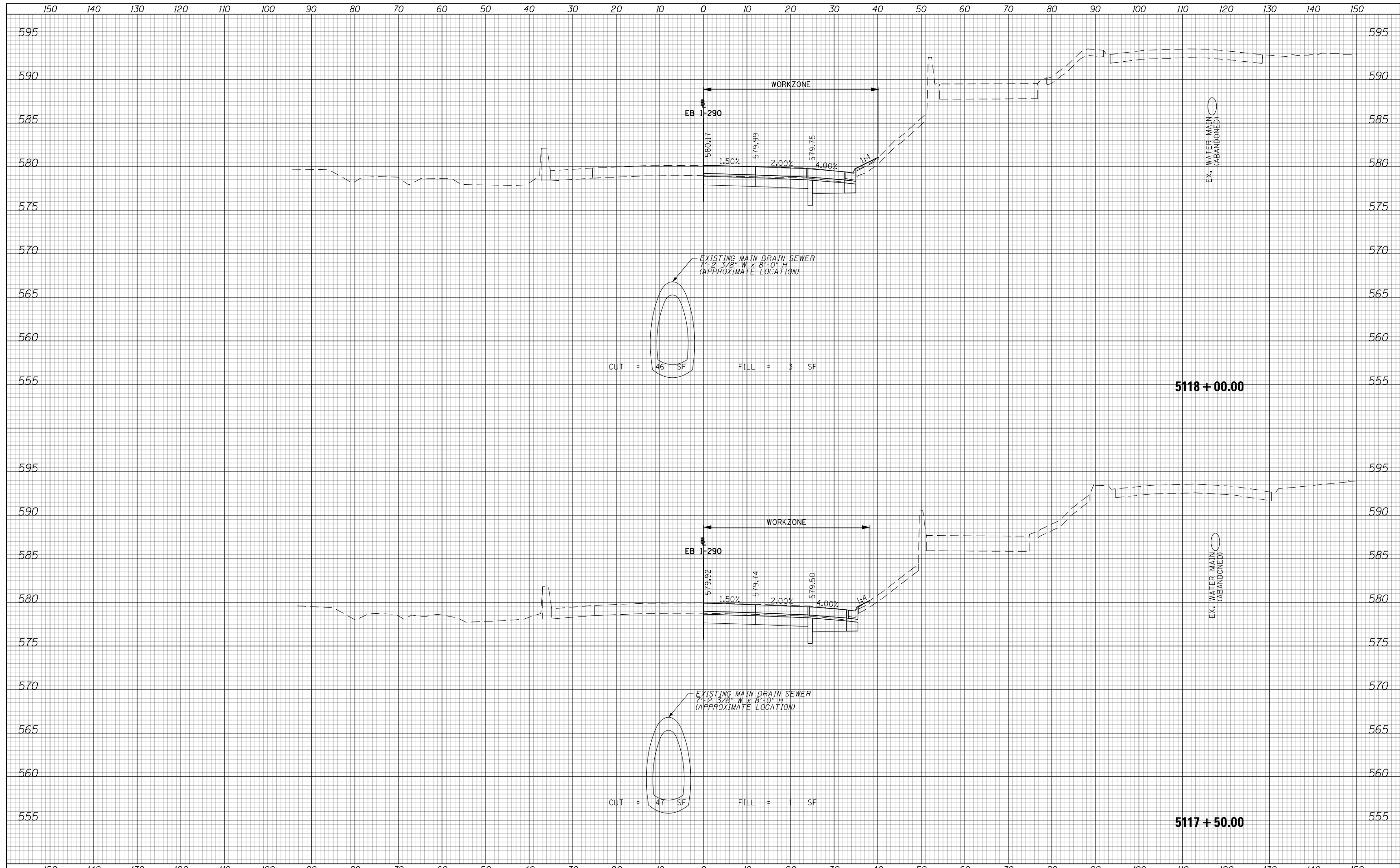
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS EB I-290 MAINLINE STAGE 1B			
SCALE: 10:H 5:V	SHEET 1 OF 40 SHEETS	STA. 5117+00.00 TO STA. 5117+35.00	

F.A.I. RTE. 90/94/290	SECTION 2014-017B	COUNTY COOK	TOTAL SHEETS 814	SHEET NO. 597
CONTRACT NO. 60X76				ILLINOIS FED. AID PROJECT

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BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



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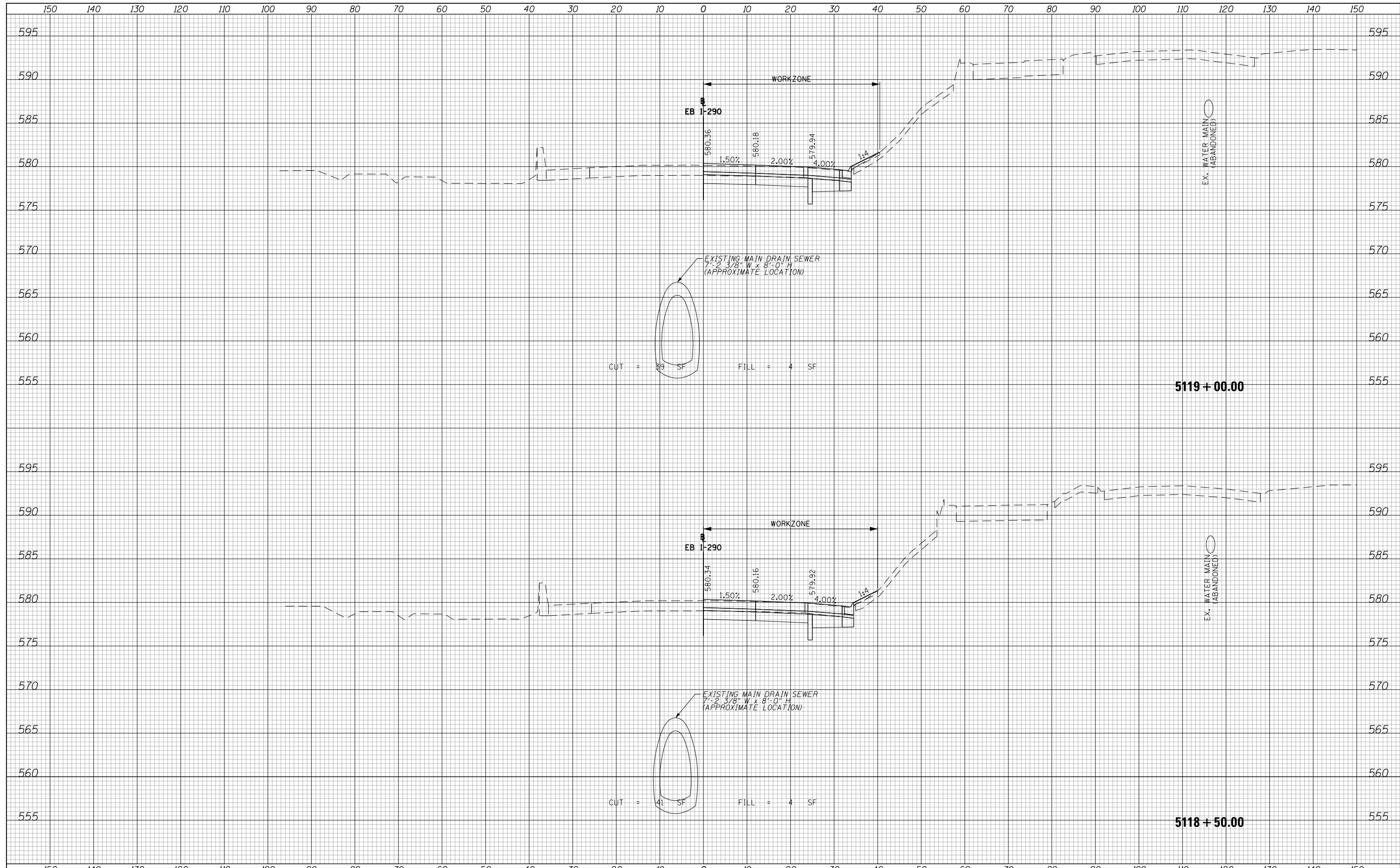
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS			
EB I-290 MAINLINE STAGE 1B			
SCALE: 10:H 5:V	SHEET 2 OF 40 SHEETS	STA. 5117+50.00	TO STA. 5118+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-017B	COOK	814	598
				CONTRACT NO. 60X76
ILLINOIS FED. AID PROJECT				

DATE	
BY	
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PLOTTED	
TEMPLATE	
AREAS	
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NOTE BOOK	
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USER NAME = v1janachione	DRAWN - BSH	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JMG	REVISED -
PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

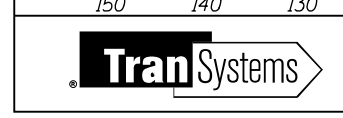
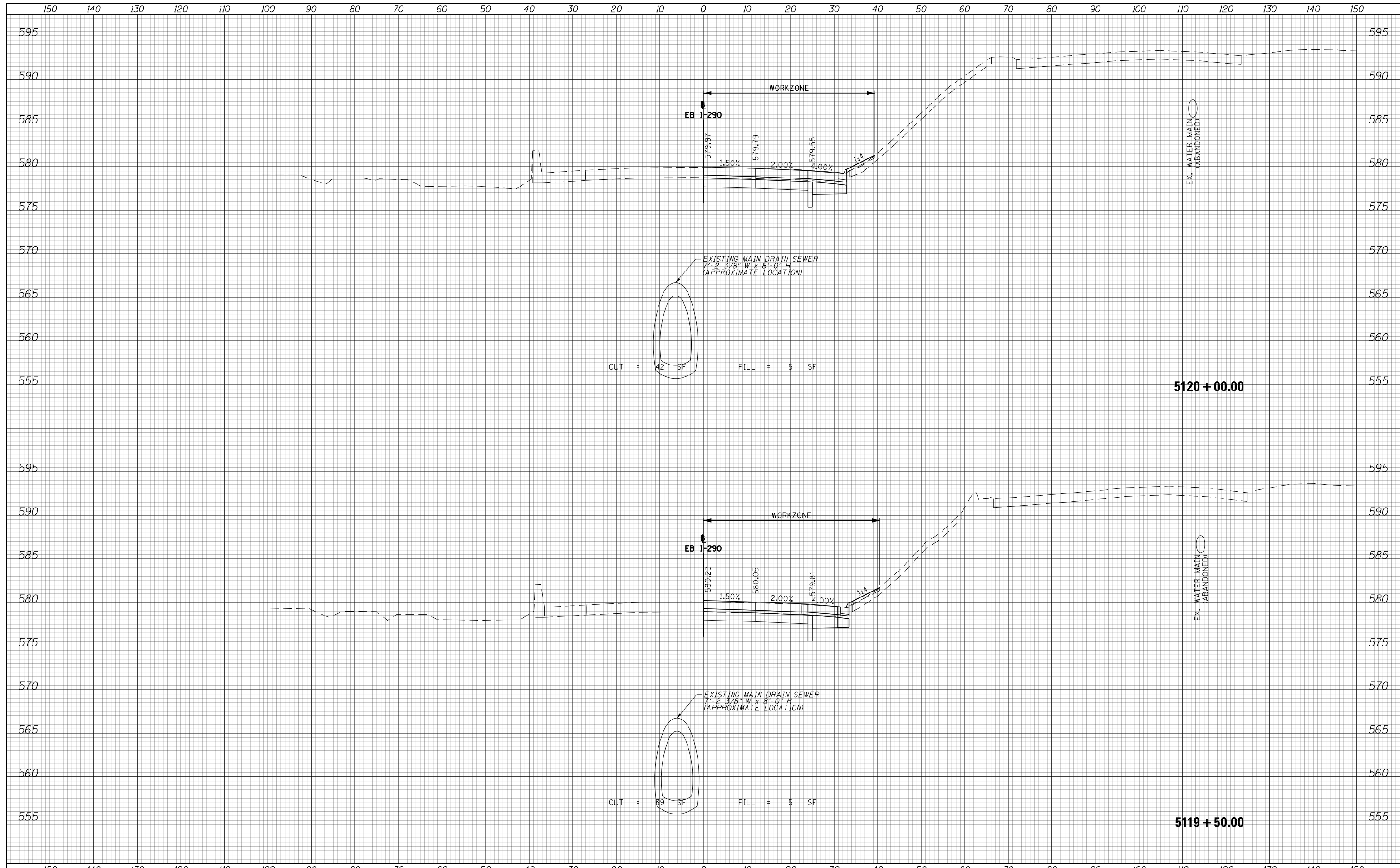
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS	
EB I-290 MAINLINE STAGE 1B	
SCALE: 10'H 5'V	SHEET 3 OF 40 SHEETS
STA. 5118+50.00	TO STA. 5119+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-017B	COOK	814	599
				CONTRACT NO. 60X76
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



D160X76-sht-XS-IKE-STAGE1A.dgn	DESIGNED - MKW	REVISED -
USER NAME = v1janachione	DRAWN - BSH	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JMG	REVISED -
PLOT DATE = 5/9/2017	DATE - 5/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
EB I-290 MAINLINE STAGE 1B**

SCALE: 10:H 5:V SHEET 4 OF 40 SHEETS STA. 5119+50.00 TO STA. 5120+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-017B	COOK	814	600
CONTRACT NO. 60X76				
ILLINOIS FED. AID PROJECT				