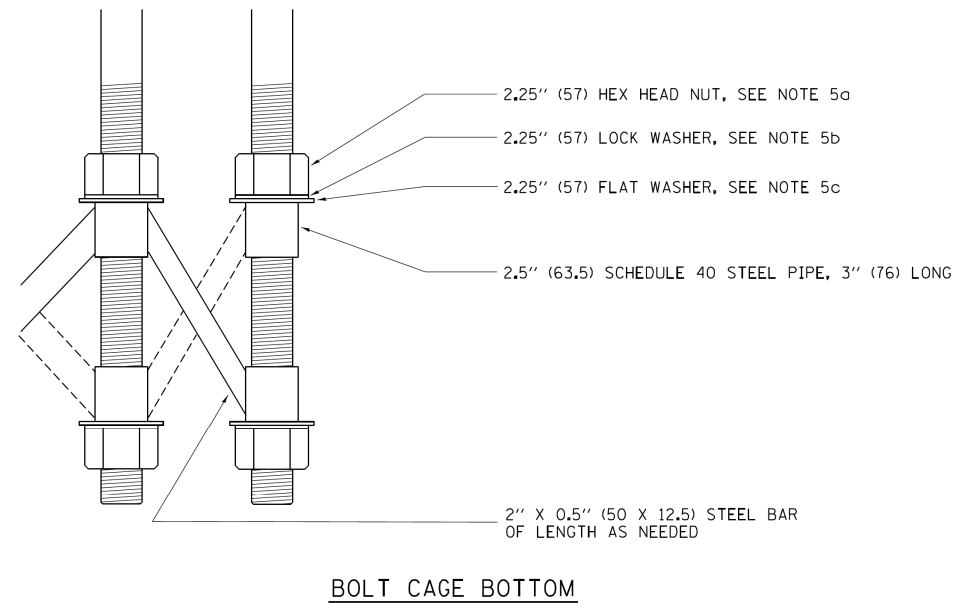
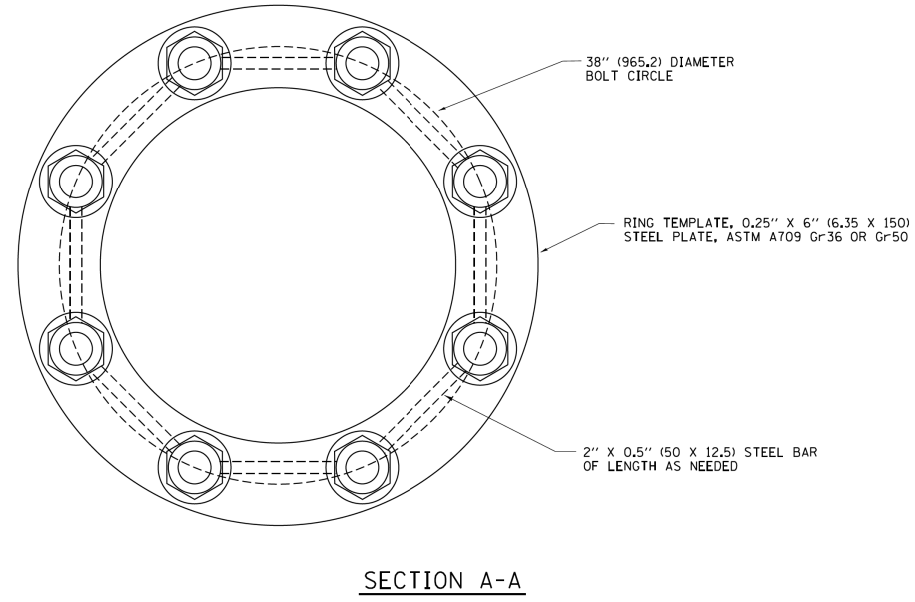
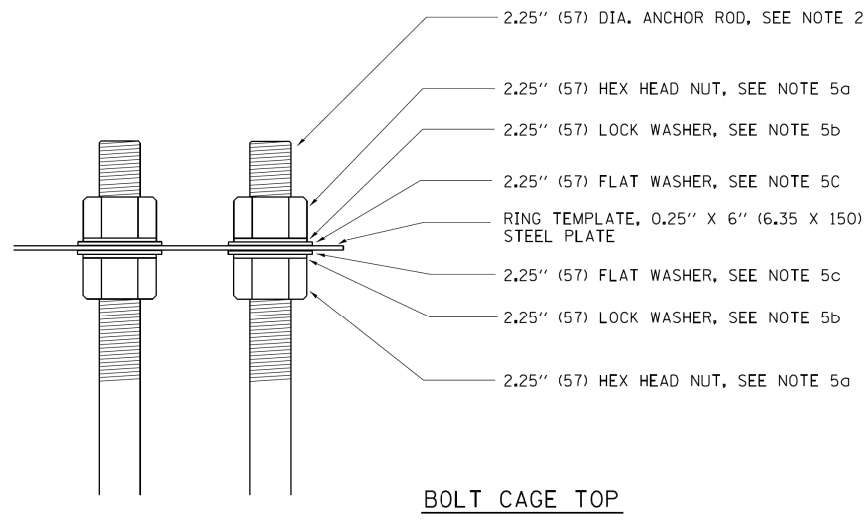
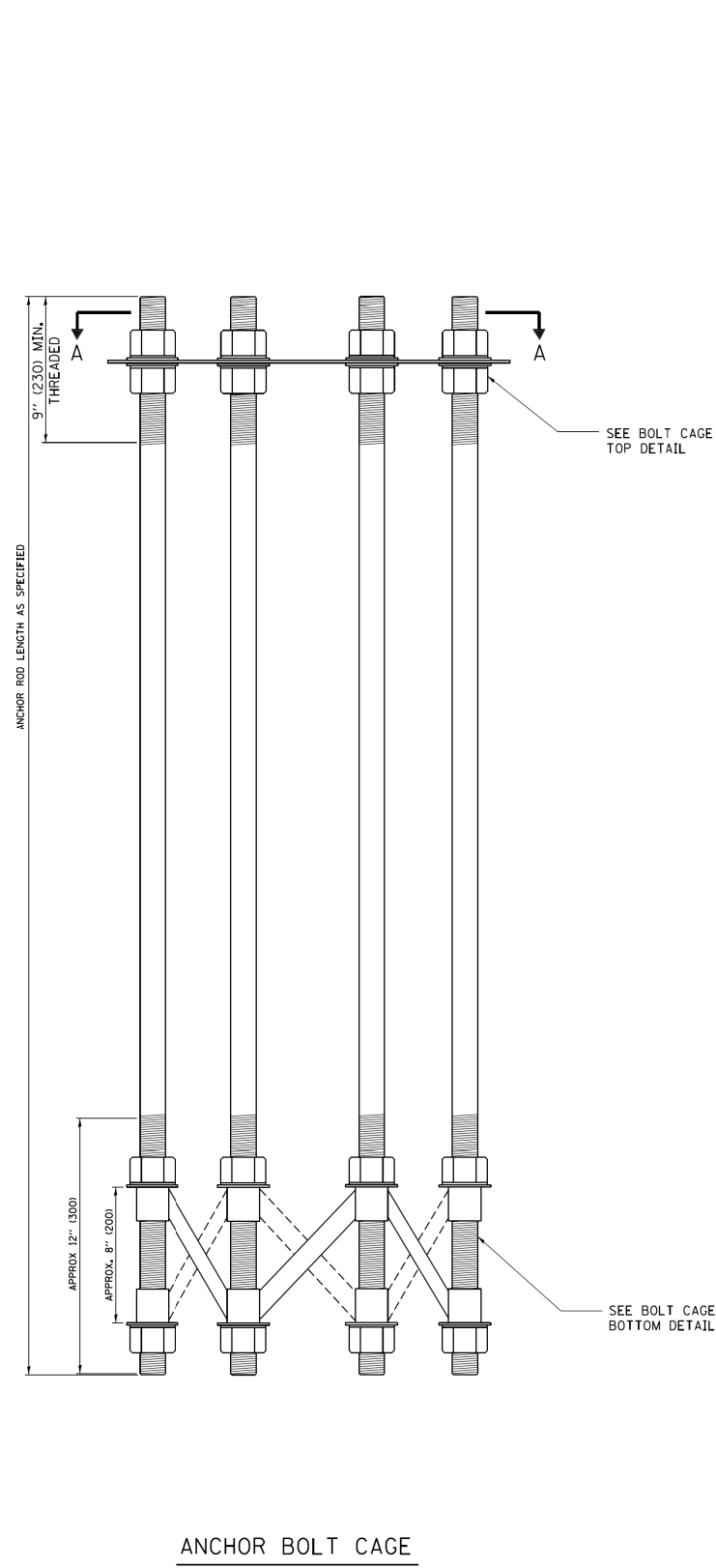


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**NOTES**

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO AASHTO M 314 OR 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) 2.25 (57) HEX HEAD NUTS  
AASHTO M291, GRADE C, C3, D ,DH OR DH3  
HOT DIPPED GALVANIZED AASHTO M 232
  - b) 2.25 (57) HELICAL LOCK WASHERS  
ANSI/ASME B18.21.1  
I.D. 2.262 - 2.287  
O.D. 3.345 MAX.  
WIDTH 0.508 (13) MIN.  
THICKNESS 0.508 (13) MIN.  
HARDNESS 26-45 ROCKWELL C  
HOT DIPPED GALVANIZED AASHTO M232
  - c) 2.25 (57) FLAT WASHERS  
AASHTO M293  
O.D. 4.00 (101)  
I.D. 2.38 (60)  
THICKNESS 0.24 - 0.34  
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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 PLOT DATE = 3/24/2014

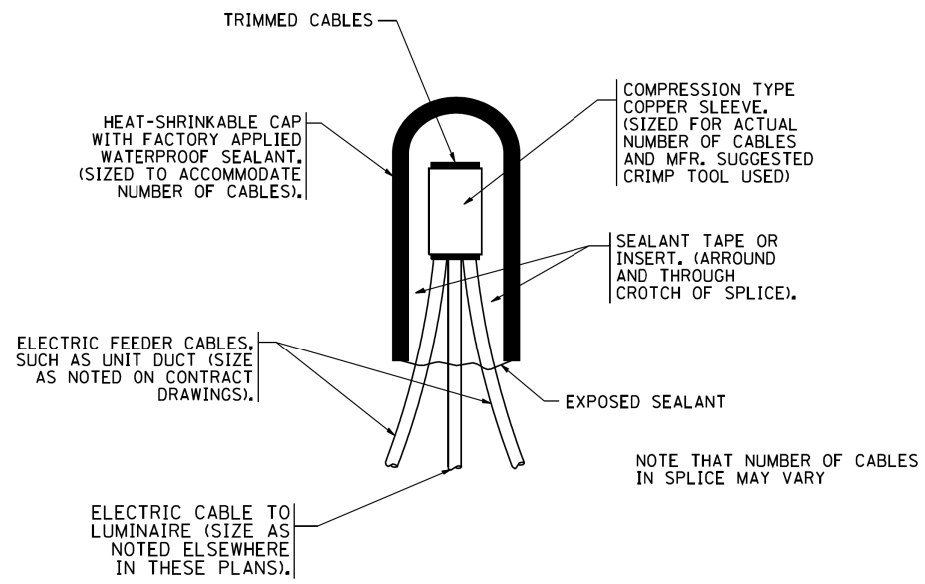
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DRAWN -	REVISED -
CHECKED -	REVISED -
DATE - 03-12-10	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>HIGH MAST LIGHT TOWER</b>			
<b>150 FT TO 160 FT FOUNDATION DETAIL</b>			
SCALE:	SHEET 17 OF 40 SHEETS	STA.	TO STA.

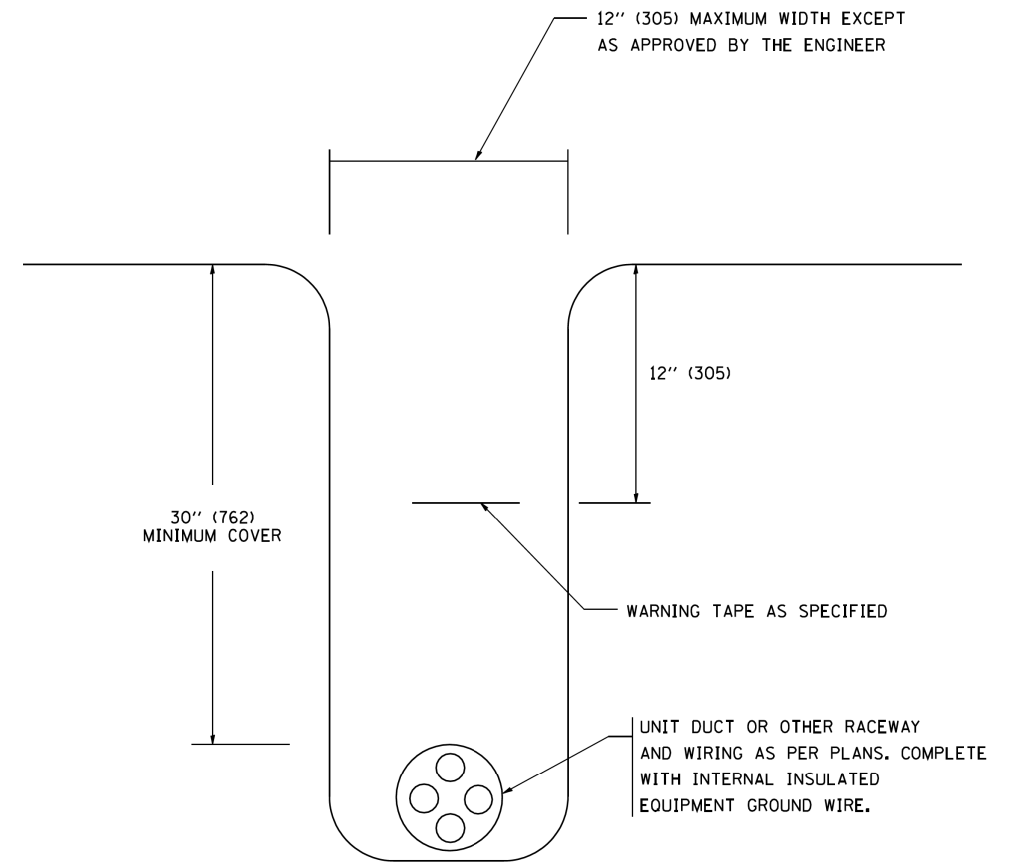
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90/94/290	2013-010R	COOK	747	601
<b>BE-511b</b>			<b>CONTRACT NO. 60W28</b>	
ILLINOIS FED. AID PROJECT				





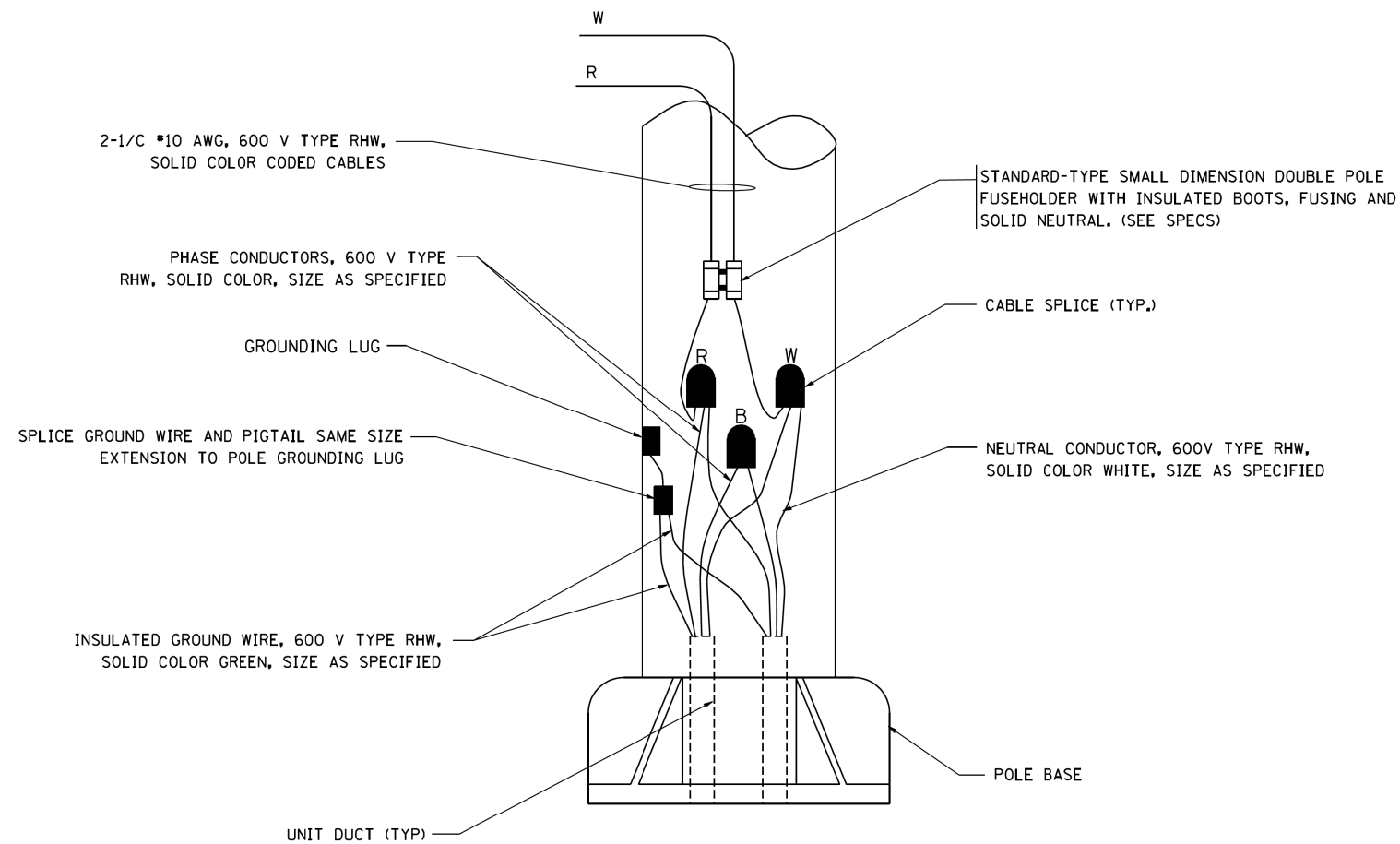
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

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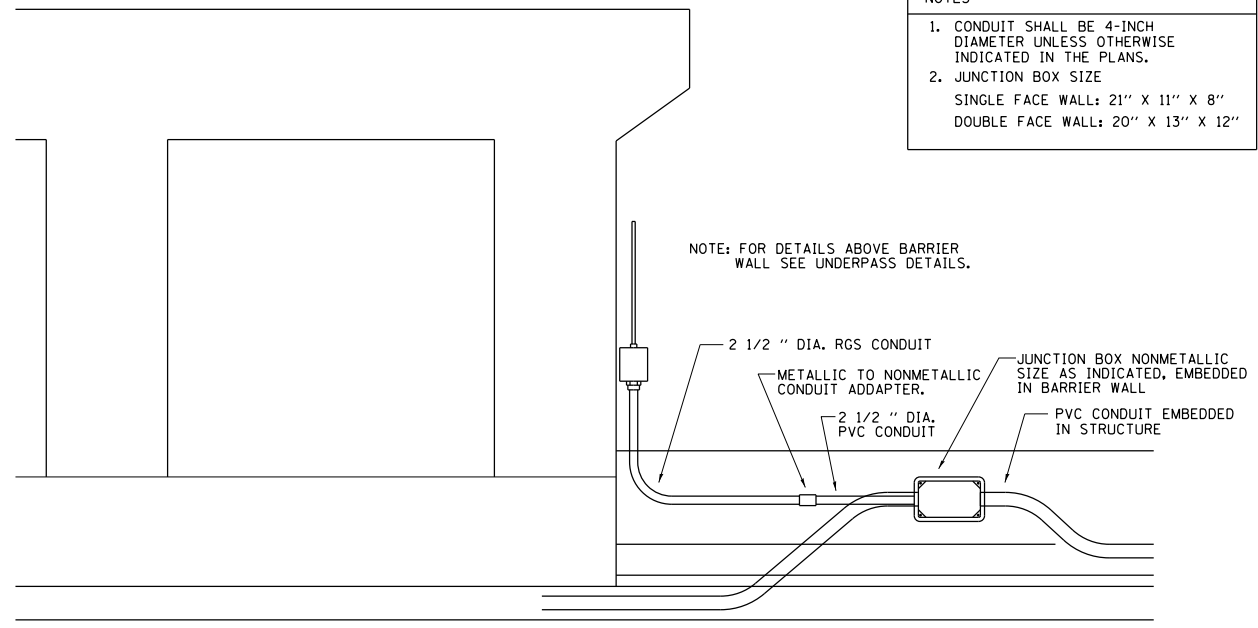
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DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS  
 SHEET A

SCALE: SHEET 19 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	603
BE-702			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

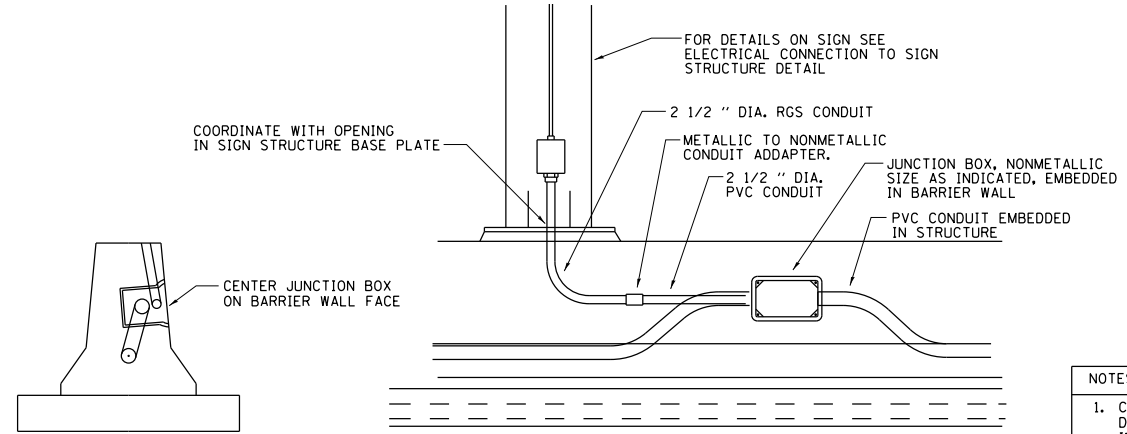


NOTES

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.

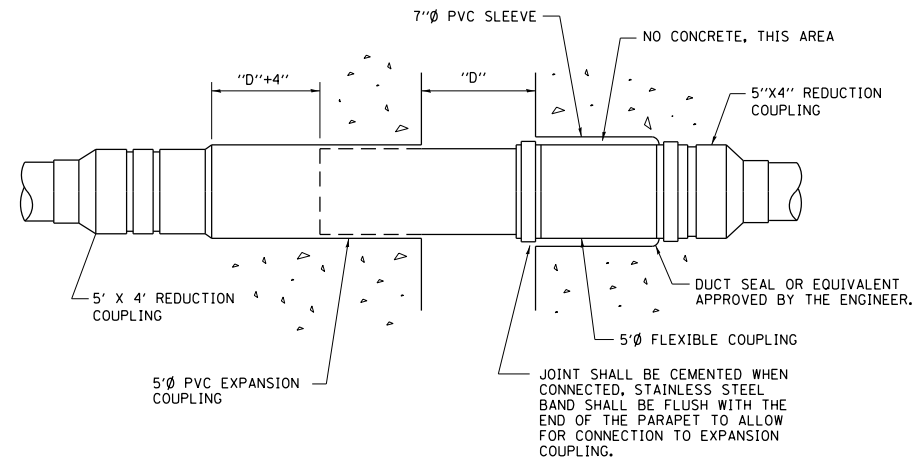
ED - BWD  
ELECTRIC CONNECTION TO UNDERPASS LIGHTING



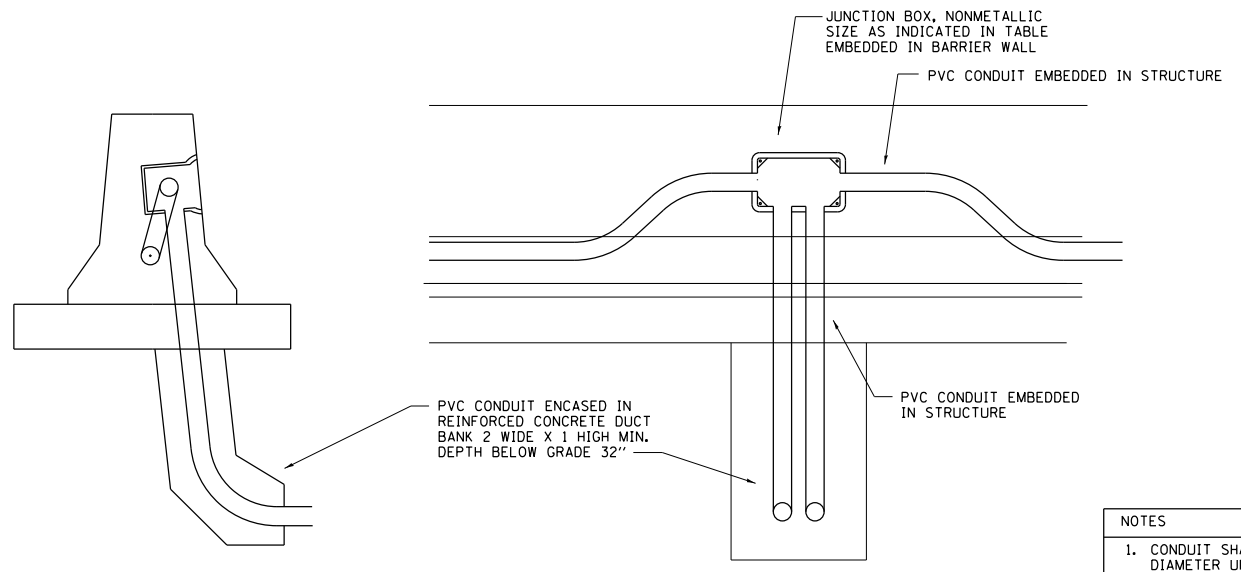
NOTES

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

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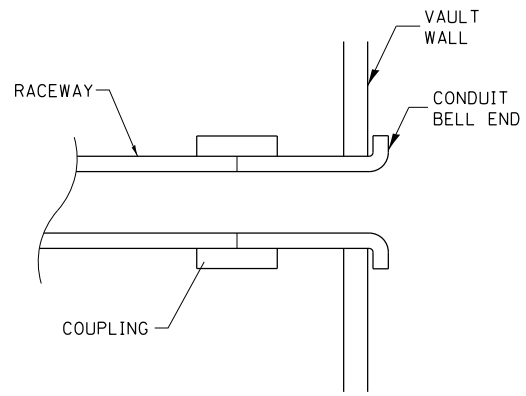
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

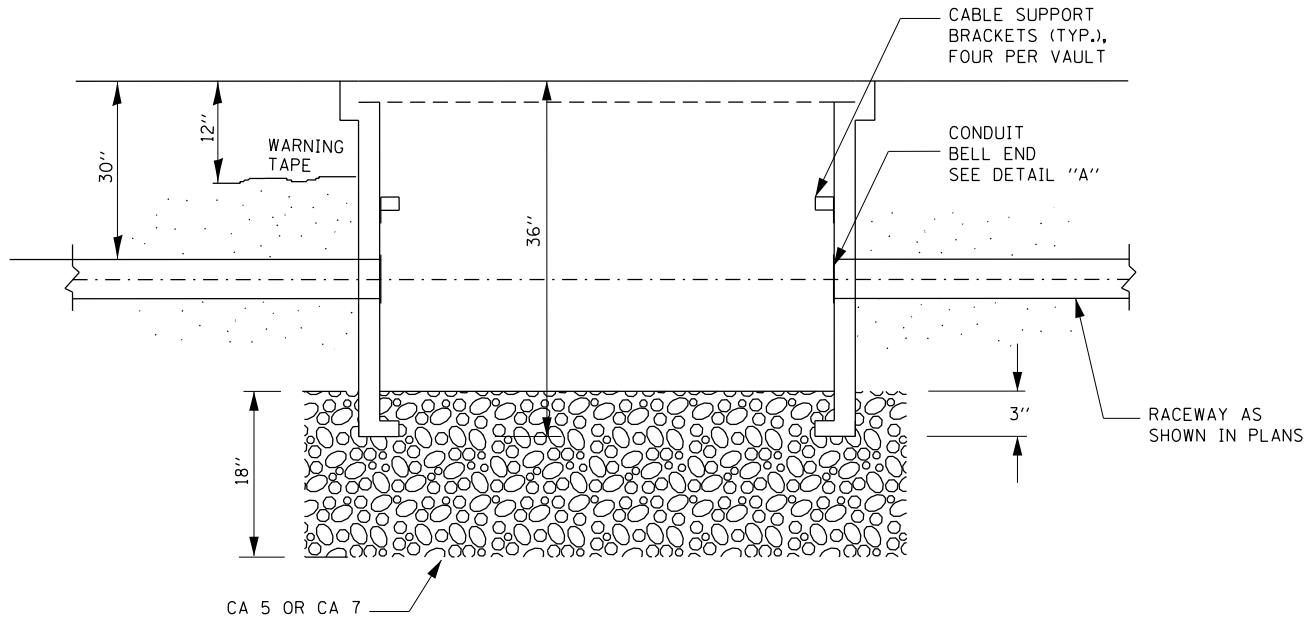
MISCELLANEOUS ELECTRICAL DETAILS, SHEET B			
J BOX EMBEDDED IN BARRIER WALL - INSTALLATION OF CONDUIT IN BRIDGE PARAPET EXPANSION JOINT - ELECTRIC CONNECTION TO UNDERPASS LIGHTING			
SCALE:	SHEET 20 OF 40 SHEETS	STA. TO STA.	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BE-703			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

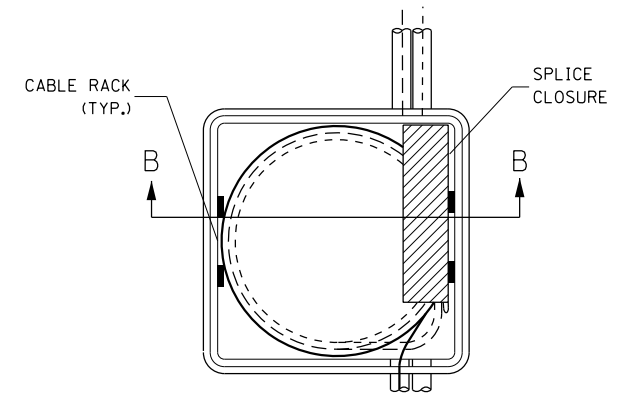
COMMUNICATIONS VAULT LOAD RATINGS			
COMPONENT	ANSI TIER	LOADING	
		DESIGN	TEST
BOX	22	22,500 lbs.	37,750 lbs.
COVER	22	22,500 lbs.	37,750 lbs.



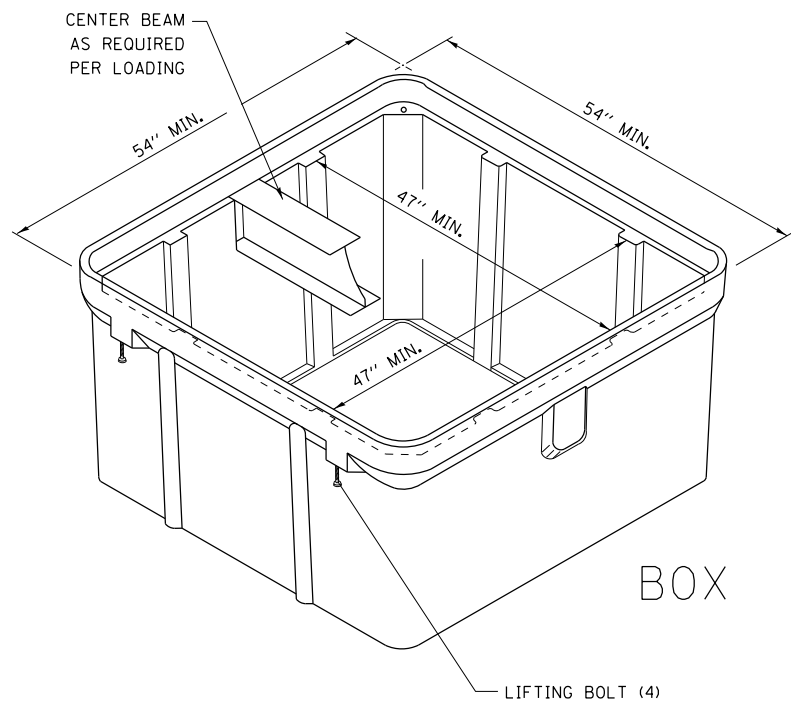
DETAIL A



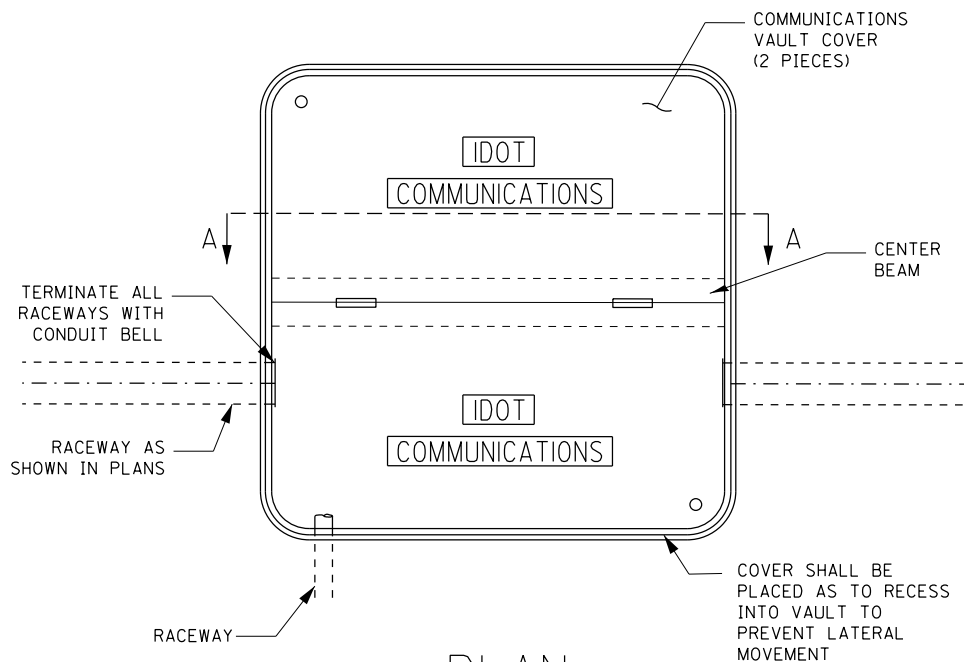
SECTION A-A



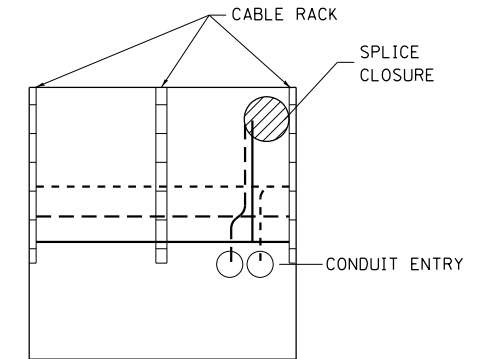
TOP VIEW



ISOMETRIC



PLAN



SECTION B-B

**NOTES:**

1. BOX SHALL HAVE AN OPEN BASE.
2. ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION OR PUNCH DRIVEN AT TIME OF PLACEMENT, IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
3. FIELD PLACEMENT OF COMMUNICATIONS VAULT SHALL BE AS DIRECTED BY THE ENGINEER.
4. ALL DIMENSIONS ARE MINIMUM AND A LARGER SIZE HANDHOLE MAY BE USED, WITH THE APPROVAL OF THE ENGINEER, TO FACILITATE USING A MANUFACTURER'S STANDARD PRODUCT.

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DESIGNED - R. Tomsons  
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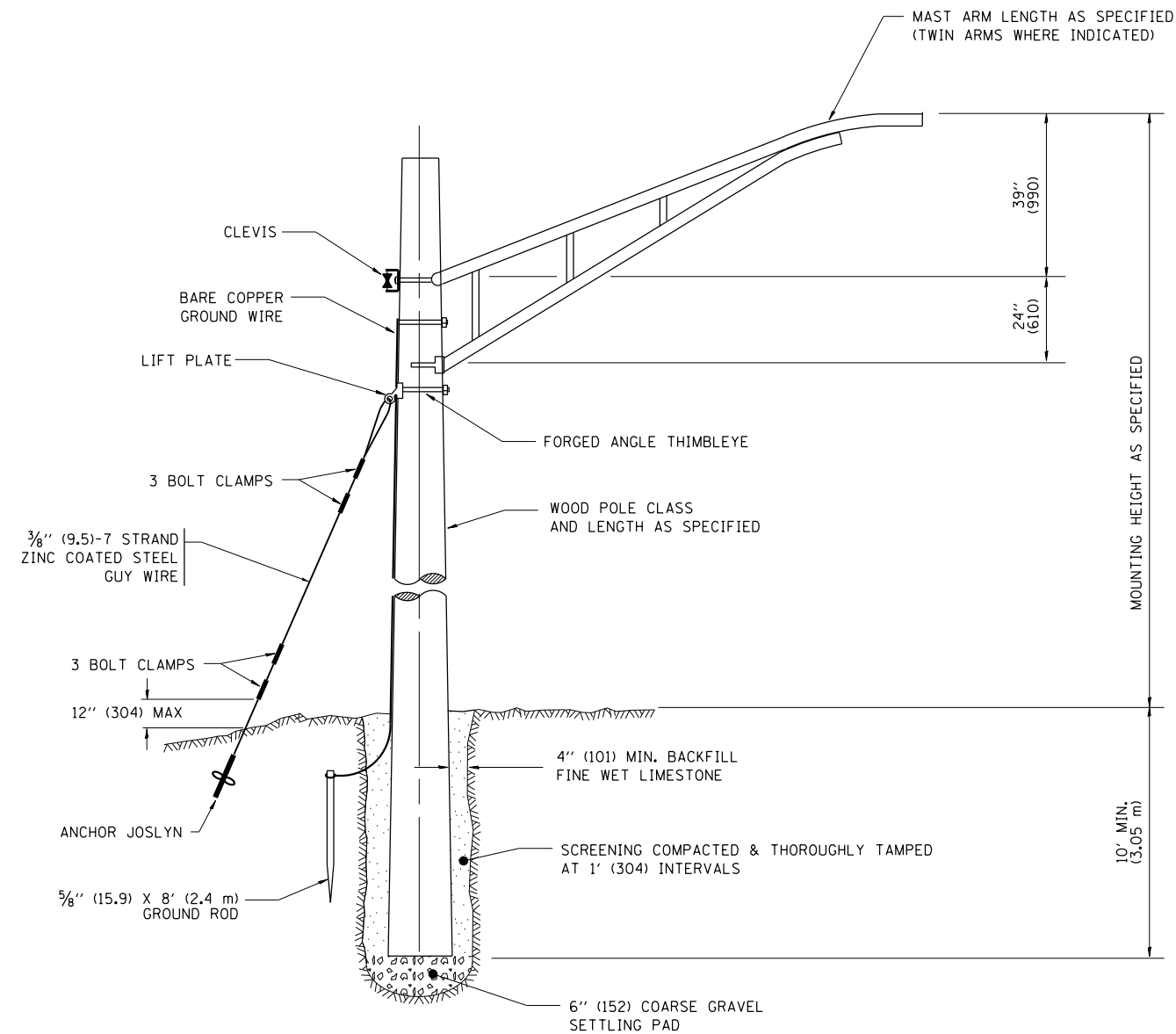
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

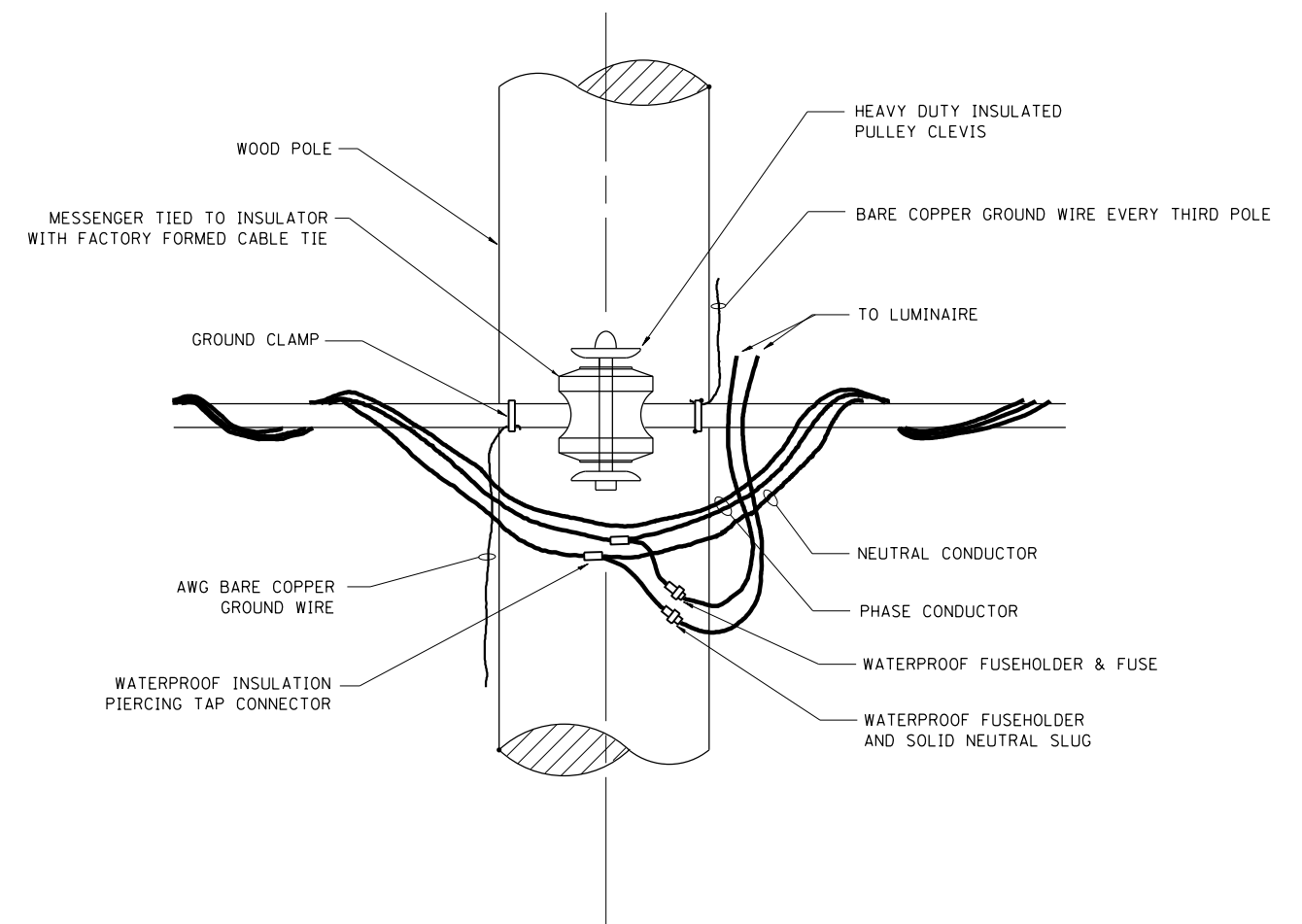
COMMUNICATIONS VAULT, COMPOSITE CONCRETE

SCALE: SHEET 21 OF 40 SHEETS STA. TO STA.

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	605
BE-705		CONTRACT NO. 60W28		
ILLINOIS FED. AID PROJECT				



**TEMPORARY LIGHT POLE DETAIL**



**TEMPORARY LIGHT POLE ATTACHMENT DETAIL**

**NOTES:**  
 1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

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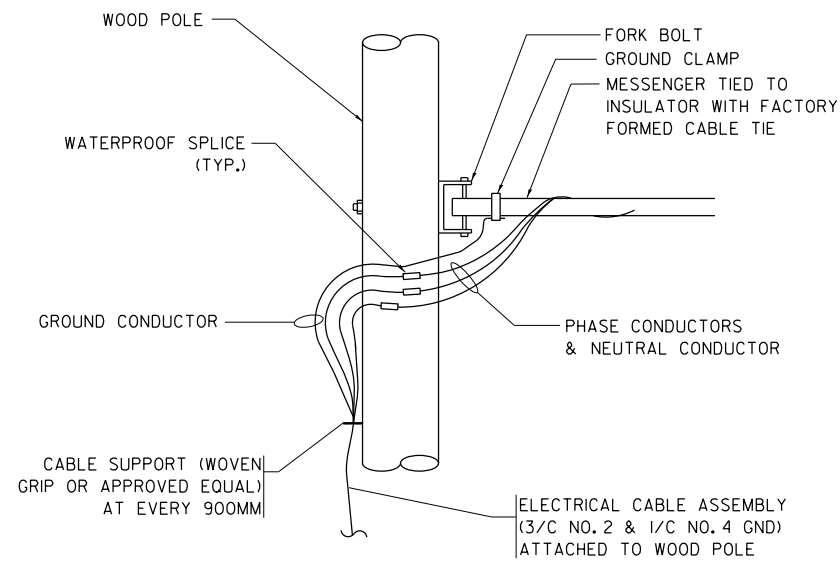
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DATE -	REVISION -

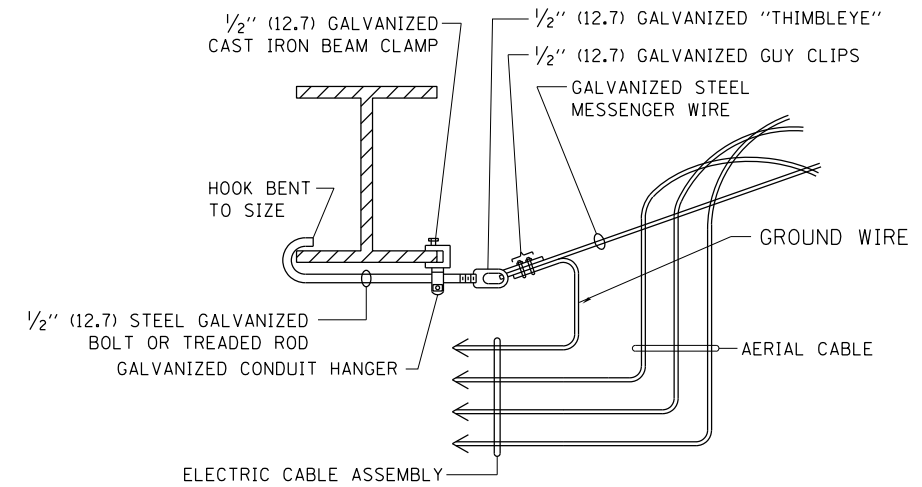
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY LIGHT POLE DETAILS**  
 SCALE: SHEET 22 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	606
<b>BE-800</b>		<b>CONTRACT NO. 60W28</b>		
ILLINOIS FED. AID PROJECT				



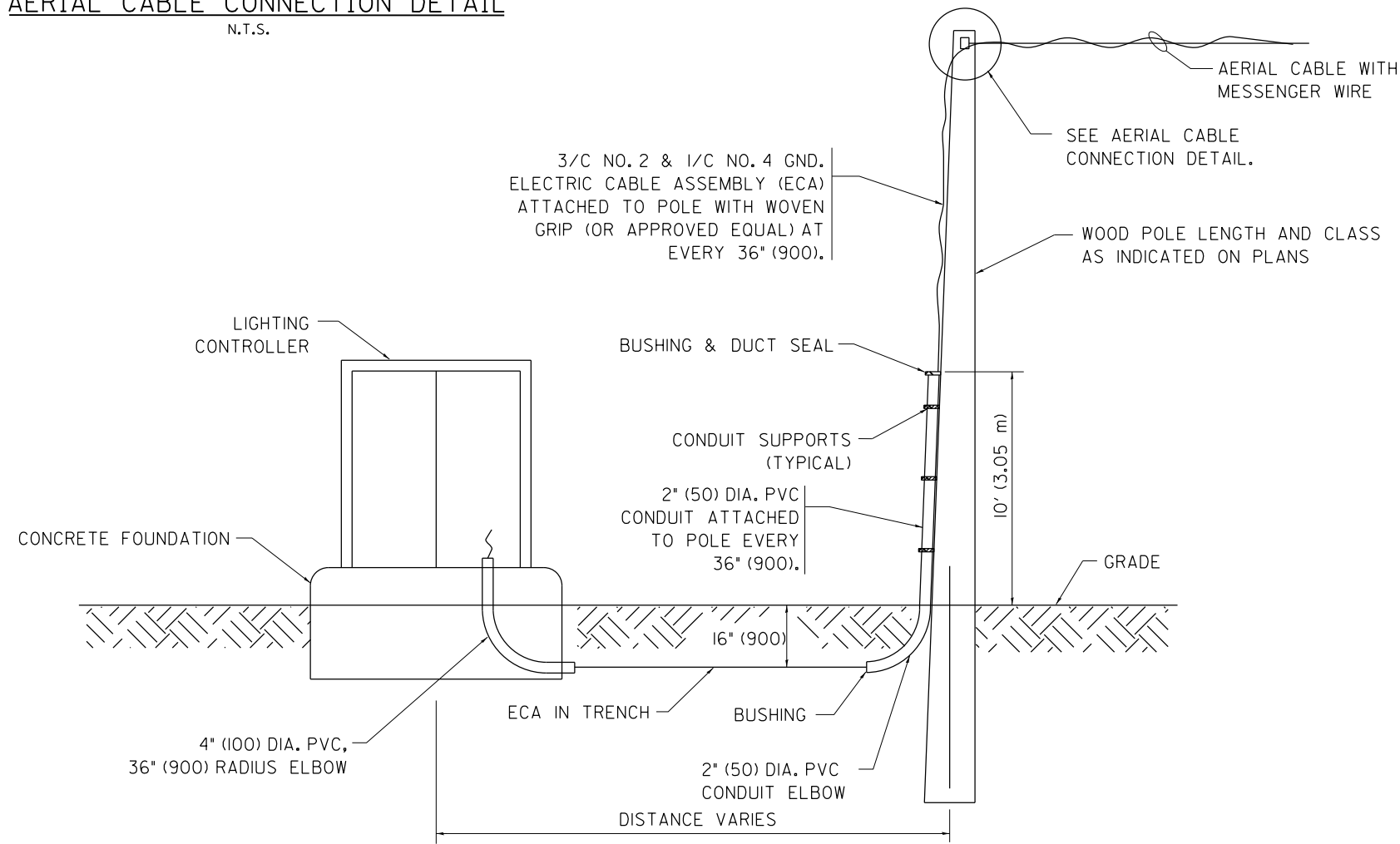
**AERIAL CABLE CONNECTION DETAIL**  
N.T.S.



**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 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 PATH = C:\Project\28-SHT-D1-Detail-1-801.dgn



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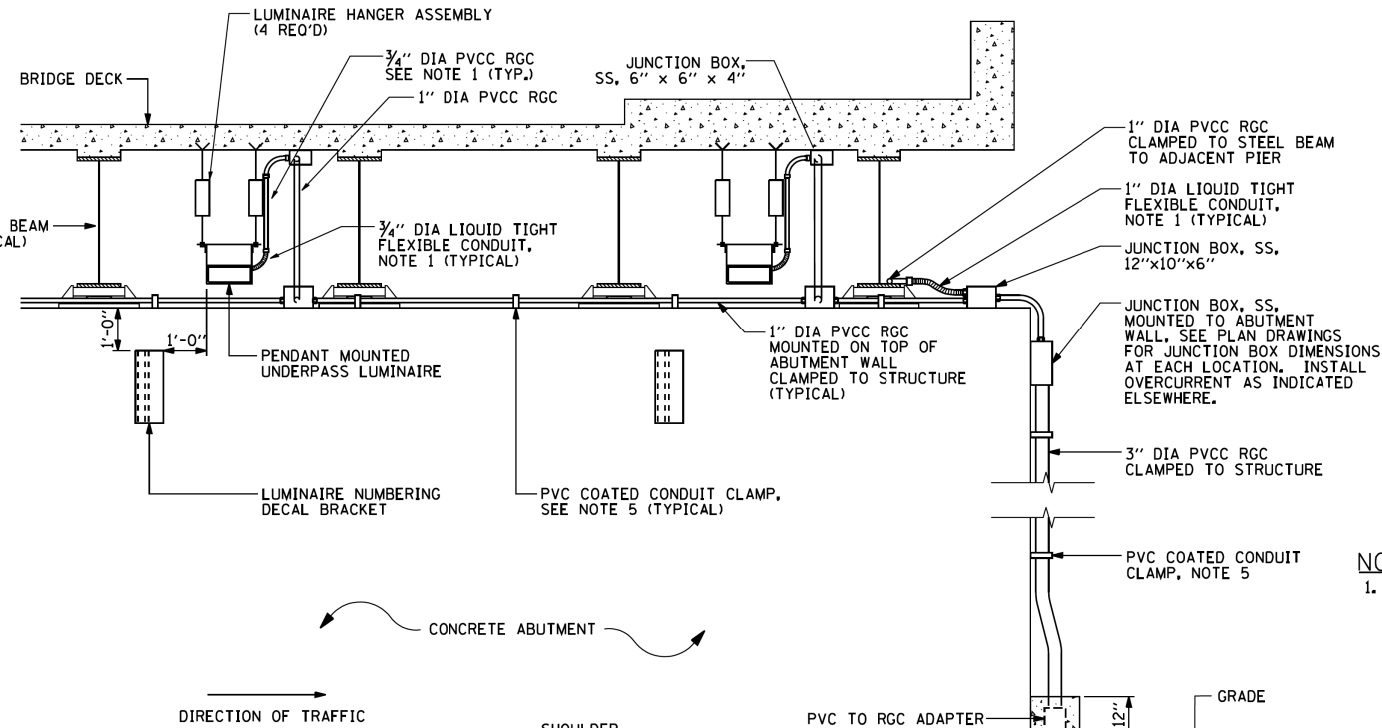
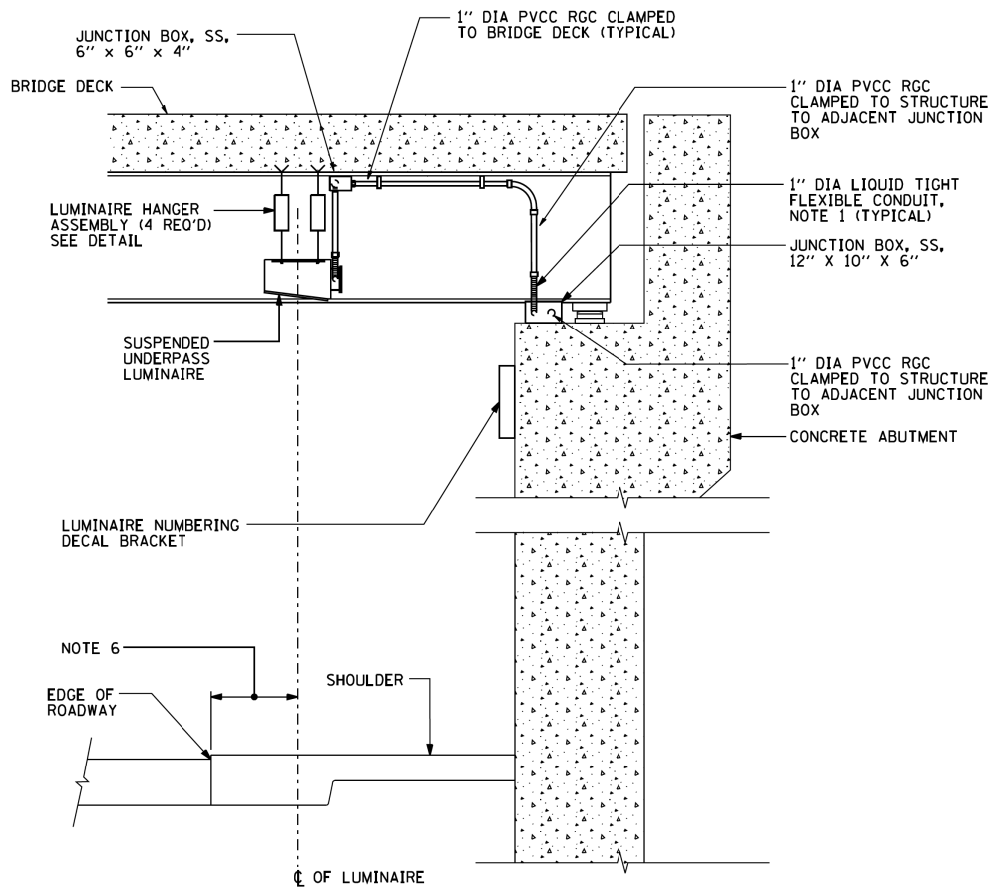
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DRAWN -	REVISED -
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DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

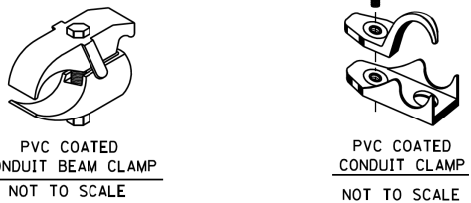
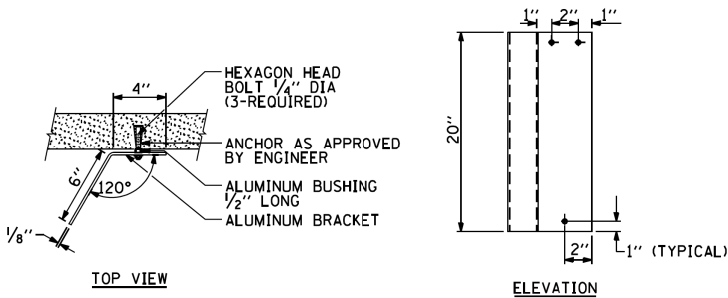
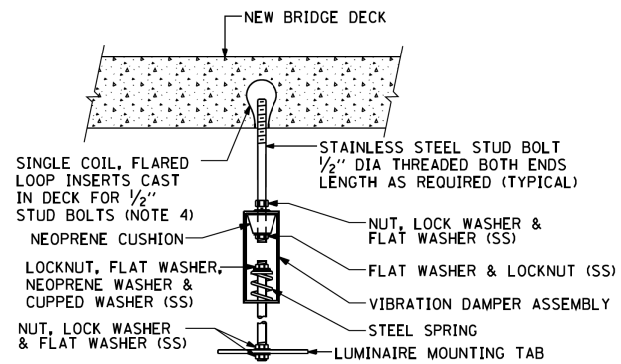
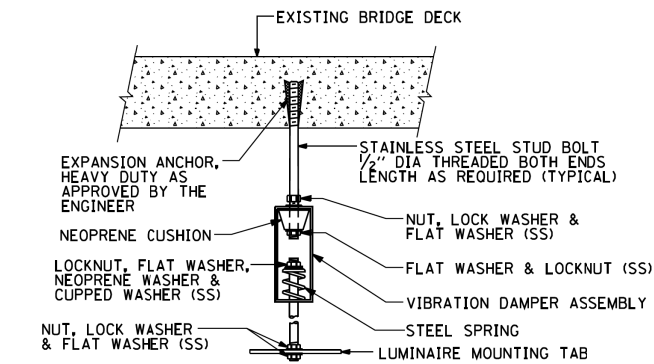
**TEMPORARY AERIAL CABLE INSTALLATION**

SCALE: SHEET 23 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	607
<b>BE-801</b>			<b>CONTRACT NO. 60W28</b>	
ILLINOIS FED. AID PROJECT				



- NOTES:**
- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN, PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT 3/4" DIA. CONDUIT AND 3/4" DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE COST OF UNDERPASS LUMINAIRE INSTALLATION.
  - SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
  - THE CONTRACTOR SHALL USE APPROVED SINGLE COIL FLARED LOOP INSERTS WHEN SUSPENDED MOUNTING AN UNDERPASS LUMINAIRE TO A NEW BRIDGE DECK. THE FLARED LOOP INSERTS MUST BE CAST INTO THE CONCRETE DECK. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING THE INSERT LOCATIONS FOR MOUNTING THE UNDERPASS LIGHTING SYSTEM AS SHOWN ON THE PLANS WITH THE BRIDGE DECK CONTRACTOR. SEE DETAIL.
  - THE UNDERPASS LUMINAIRE HANGER ASSEMBLY COMPLETE WITH HEAVY DUTY ANCHORS/INSERTS AND ALL APPLICABLE HARDWARE SHALL BE INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE PAY ITEM.
  - SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
  - ALL UNDERPASS LUMINAIRES MUST BE CENTERED IN THE BEAM SPACE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGR. LUMINAIRE SETBACK SHALL BE AS INDICATED IN PLANS FOR EACH SPECIFIC UNDERPASS.
  - THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
  - ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.



EXISTING BRIDGE DECK INSTALLATION

NEW BRIDGE DECK INSTALLATION

TYPICAL LUMINAIRE HANGER ASSEMBLY DETAILS

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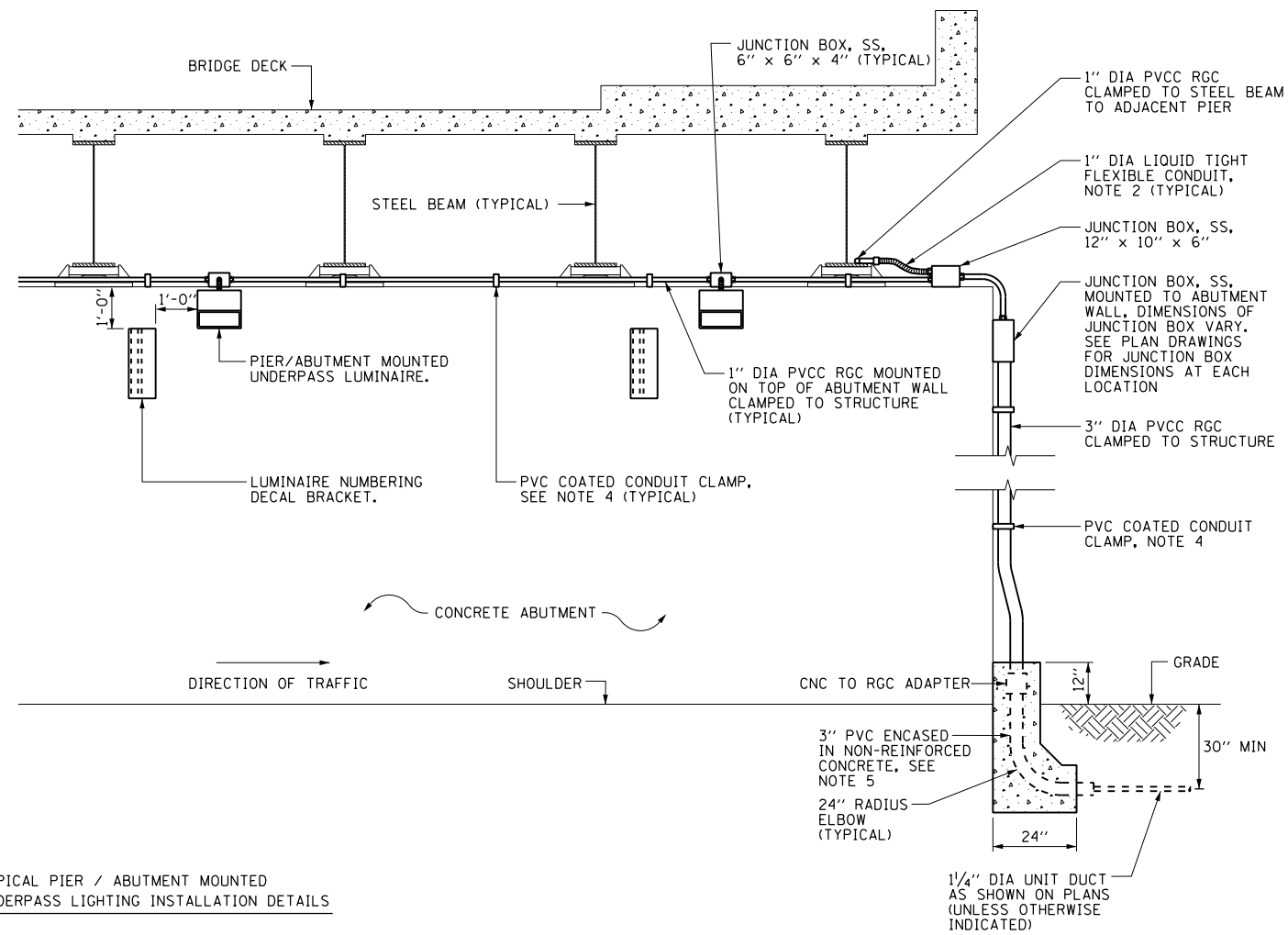
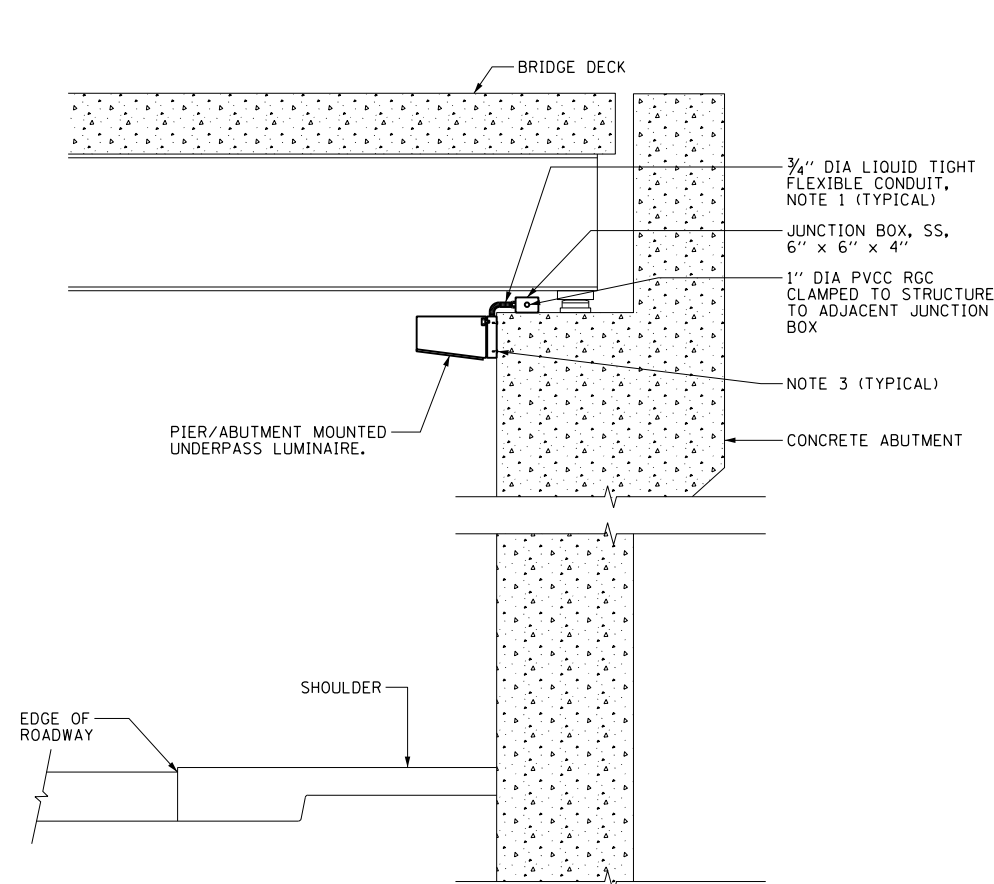
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUSPENDED MOUNT UNDERPASS  
 LUMINAIRE INSTALLATION DETAILS**

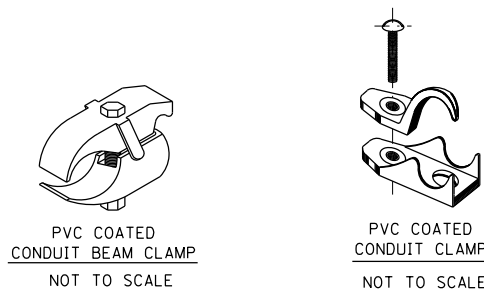
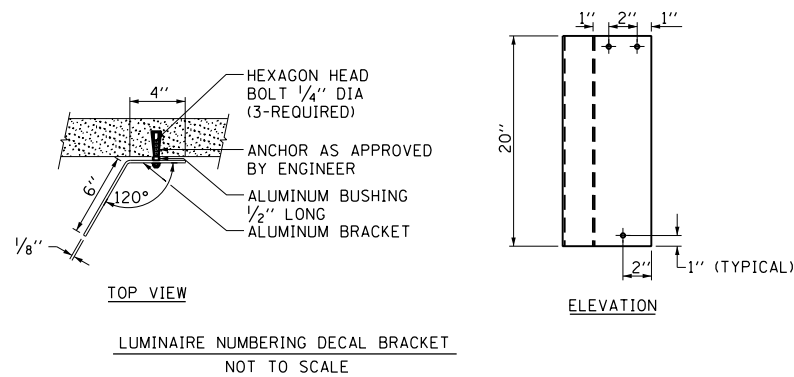
SCALE: SHEET 24 OF 40 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	608
BE-900		CONTRACT NO. 60W28		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





TYPICAL PIER / ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS



NOTES:

- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE 3/4" DIA. RIGID STEEL CONDUIT AND 3/4" DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
- UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
- EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
- SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
- THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
- ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

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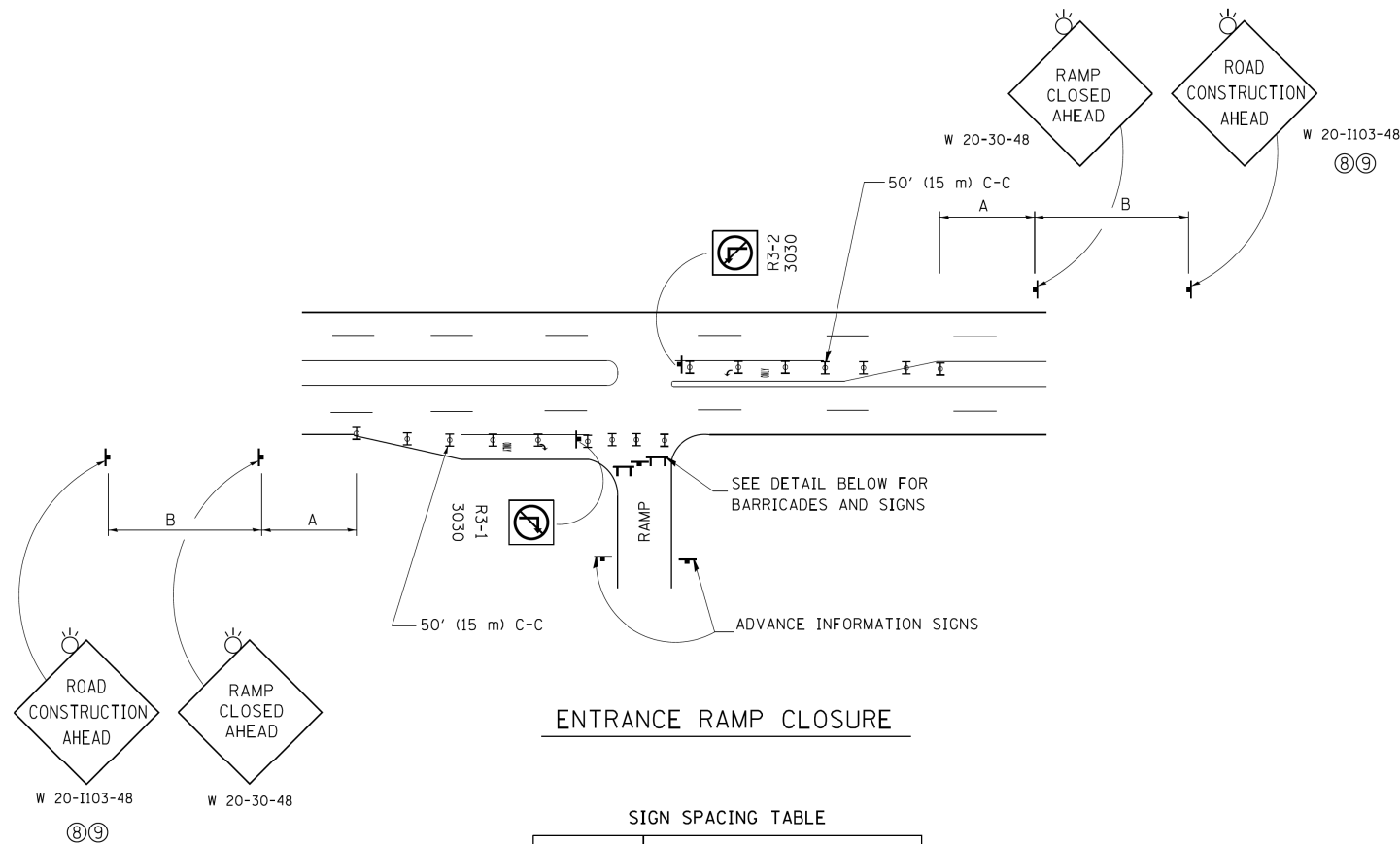
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER / ABUTMENT MOUNTED UNDERPASS  
 LUMINAIRE INSTALLATION DETAILS

SCALE: SHEET 25 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	609
BE-902		CONTRACT NO. 60W28		
ILLINOIS FED. AID PROJECT				

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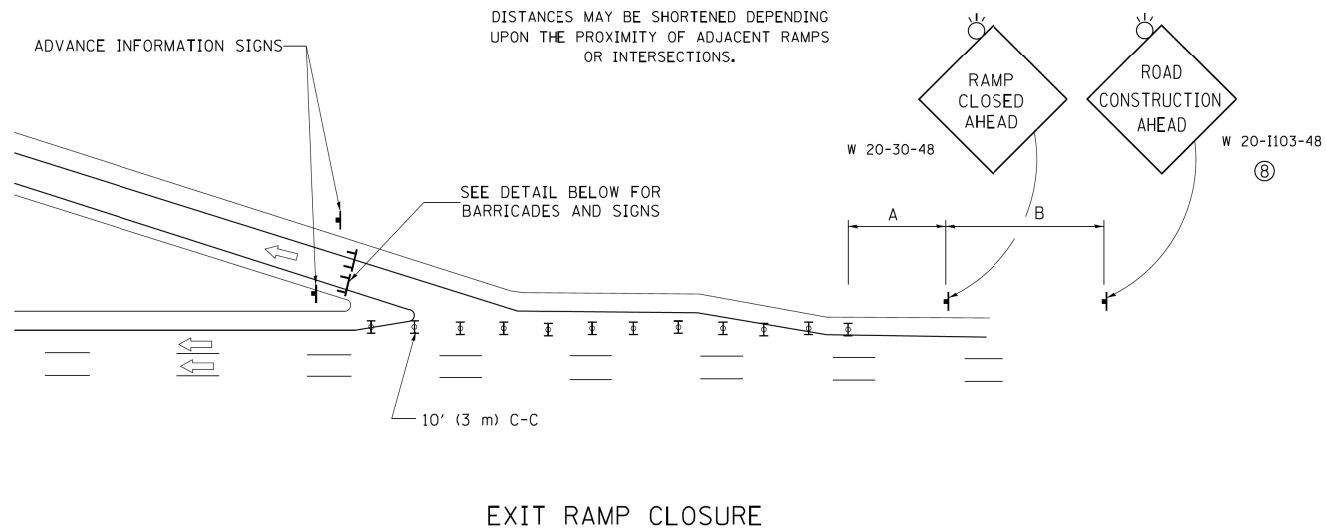


**ENTRANCE RAMP CLOSURE**

**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)

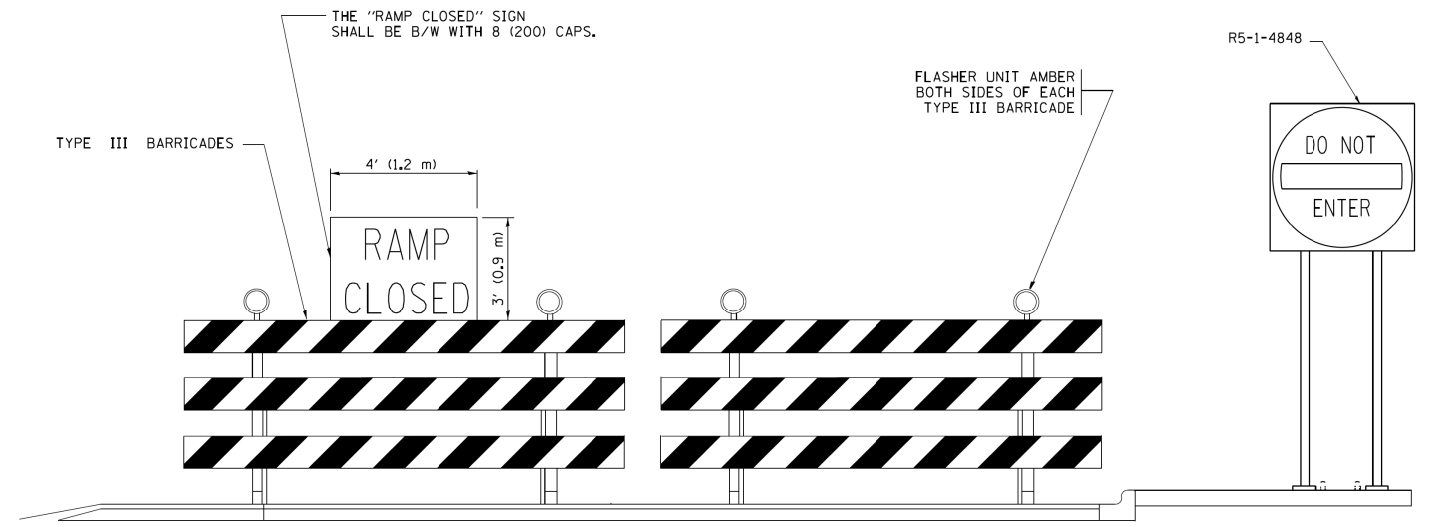
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



**EXIT RAMP CLOSURE**

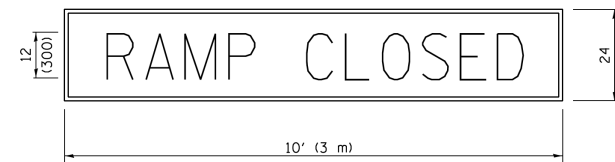
**SYMBOLS**

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



**DETAIL FOR REQUIRED BARRICADES & SIGNS**

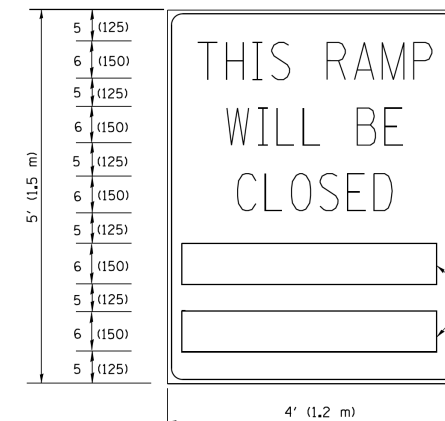
**RAMP CLOSURE ADVANCE WARNING SIGN**



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.



D160W28-SHT-D1-Detail-TC-081.dgn  
USER NAME = chluA  
PLOT SCALE = 50.000' / in.  
PLOT DATE = 3/27/2014

DESIGNED -  
DRAWN -  
CHECKED -  
DATE - 03/28/14

REVISED JAF 02-06  
REVISED SPB 01-07  
REVISED SPB 12-09  
REVISED MB 06-13

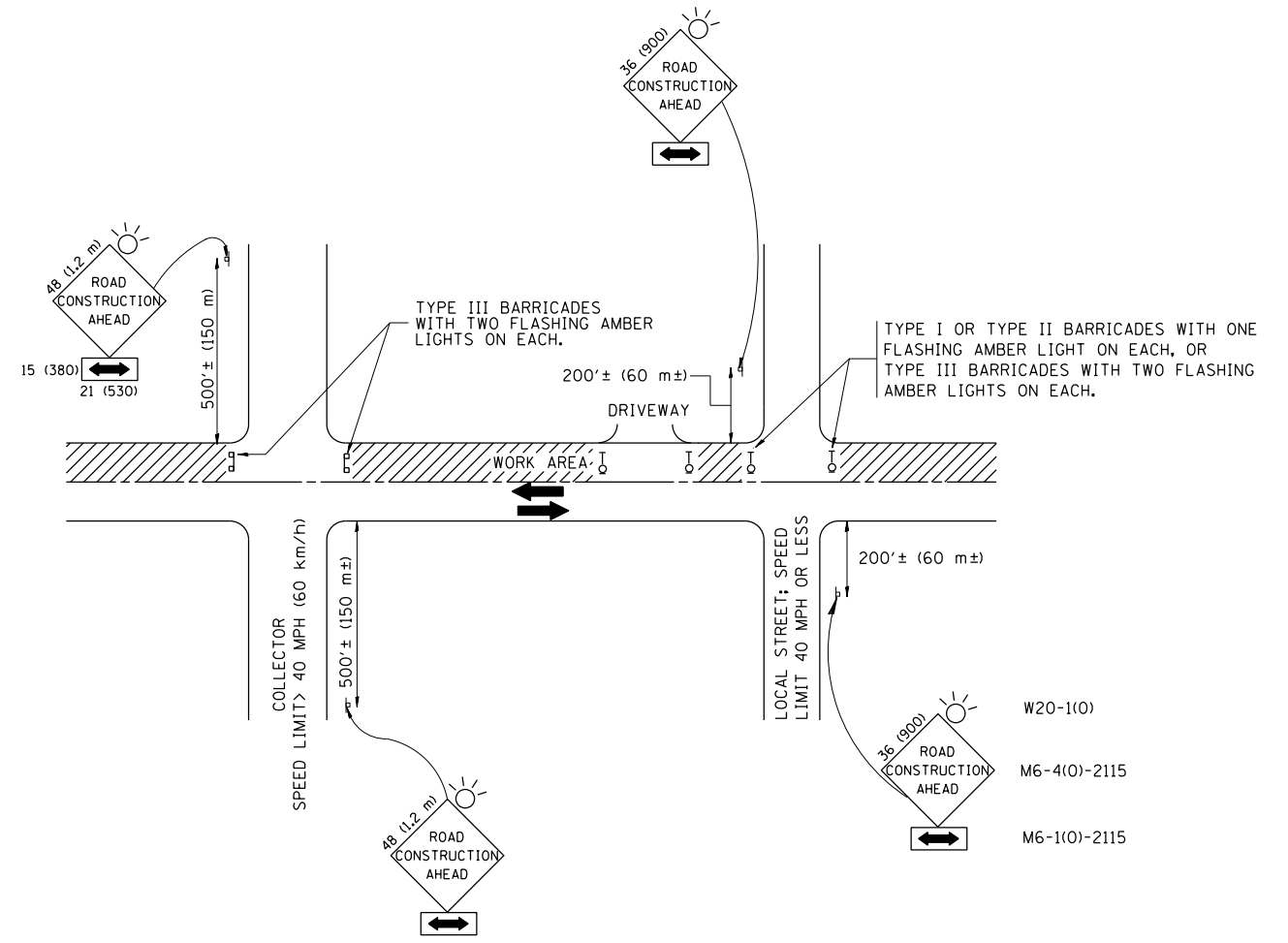
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FREEWAY ENTRANCE AND EXIT RAMP  
CLOSURE DETAILS**

SCALE: NONE SHEET 26 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	610
TC-08			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				





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

NOTES:

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

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

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

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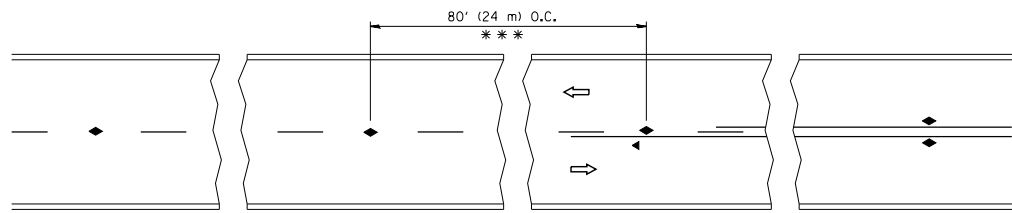


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USER NAME = auyeungh	DRAWN -	REVISED-A. HOUSEH 03-06-96
PLOT SCALE = 50.000' / in.	CHECKED -	REVISED-A. HOUSEH 10-15-96
PLOT DATE = 3/24/2014	DATE - 06-89	REVISED-T. RAMMACHER 01-06-00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

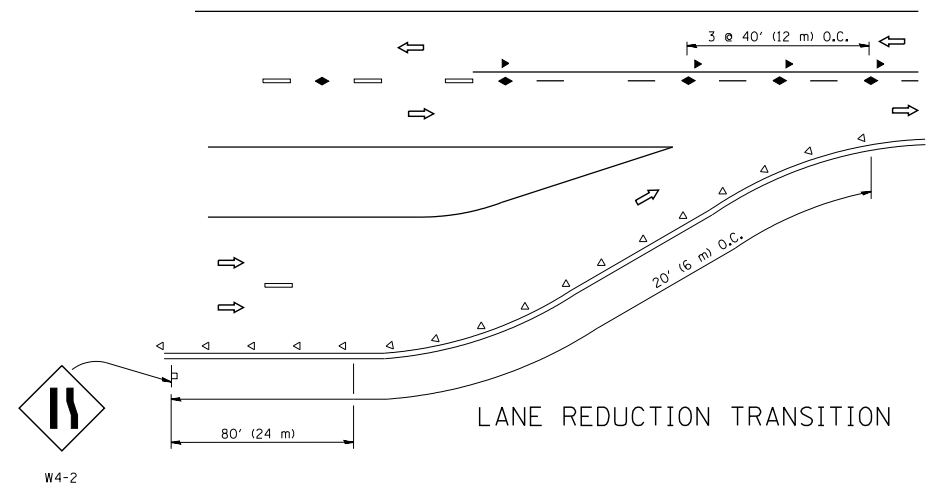
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS			
SCALE:	SHEET 28 OF 40 SHEETS	STA. TO STA.	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

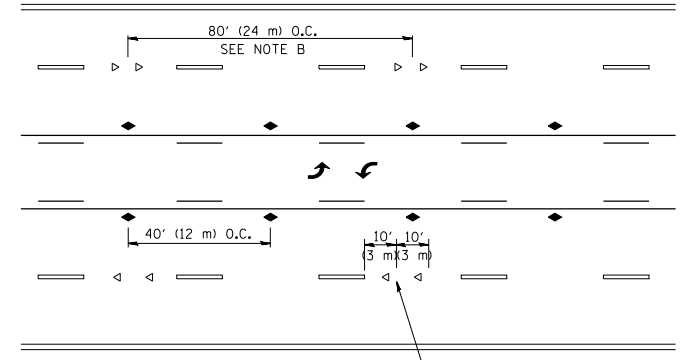


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

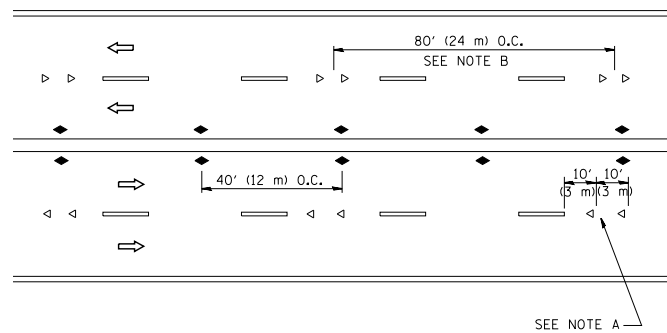
TWO-LANE/TWO-WAY



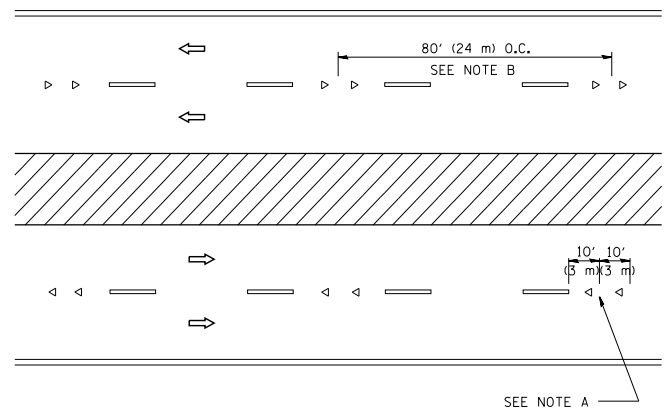
LANE REDUCTION TRANSITION



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

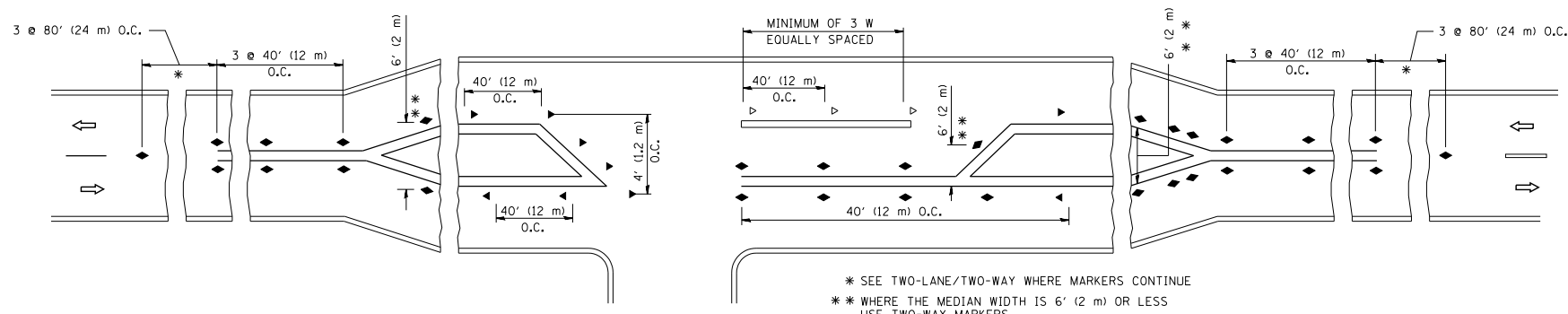
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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.



LEFT TURN

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

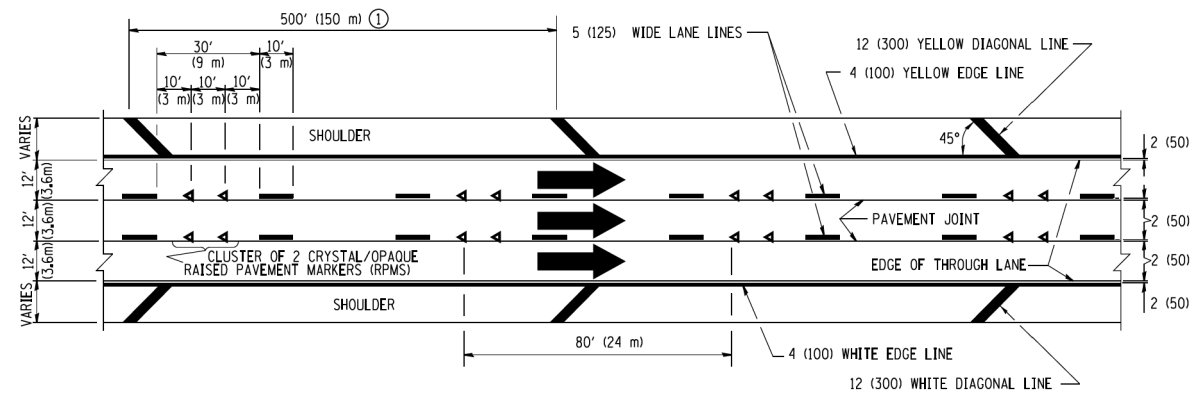
All dimensions are in inches (millimeters) unless otherwise shown.

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		CHECKED -	REVISED - T. RAMMACHER 01-06-00
		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. 1 OF 1 SHEETS	STA.	TO STA.

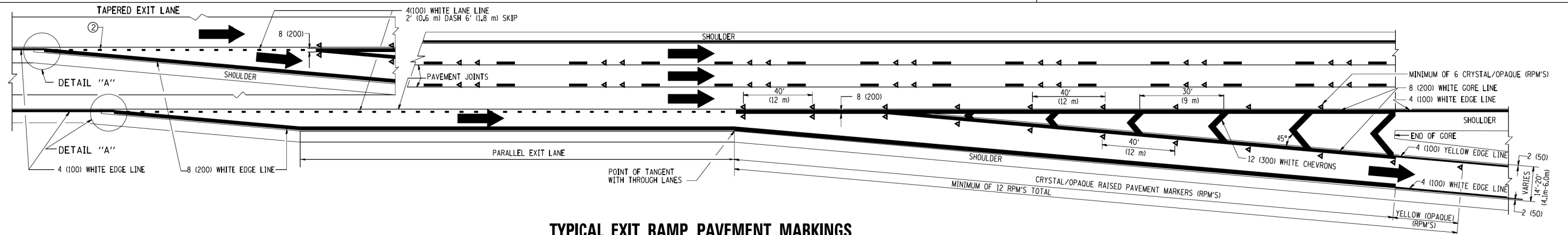
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			747	612A
TC-11			CONTRACT NO.	60W28
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



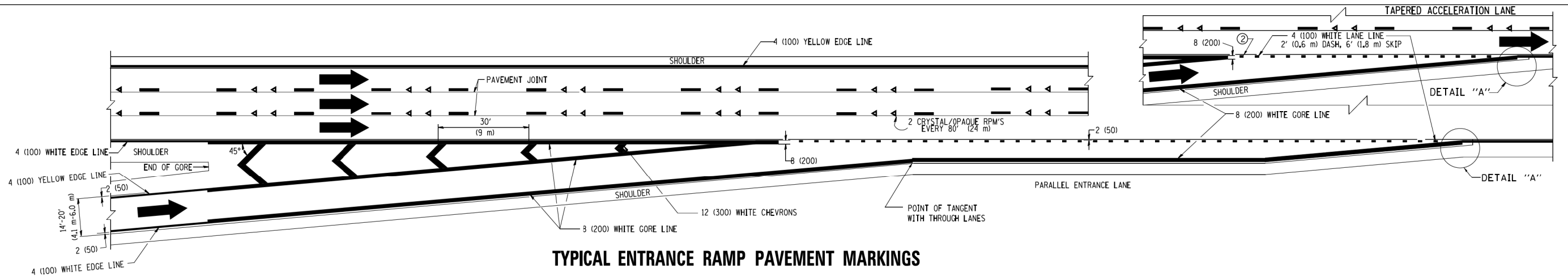
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

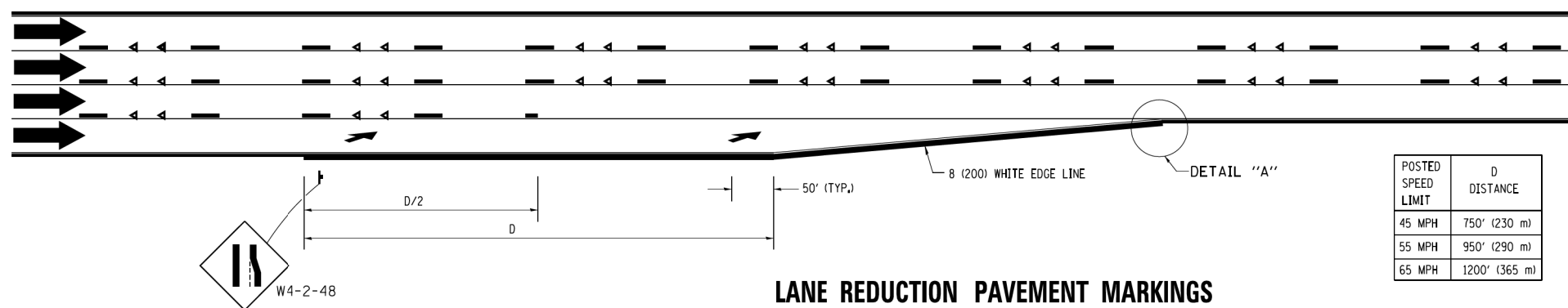
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE; INLAID OR GROOVED IN SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENT PROJECTS.
3. POLYUREA PAVEMENT MARKING SHALL BE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



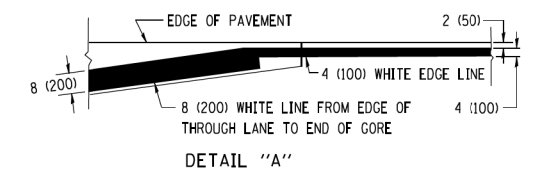
TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



LANE REDUCTION PAVEMENT MARKINGS



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.

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

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D160W28-SHT-D1-Detail-TC-12AB1.dgn  
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 PLOT SCALE = 50.000' / in.  
 PLOT DATE = 3/27/2014

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

REVISED - J.A.F. 02-06  
 REVISED - S.P.B. 01-07  
 REVISED - S.P.B. 01-10  
 REVISED - M.D. 05-13

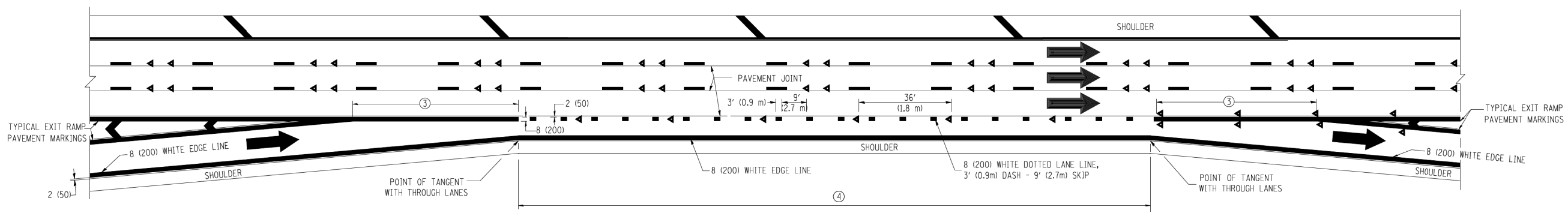
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MULTI-LANE FREEWAY  
 PAVEMENT MARKING DETAILS

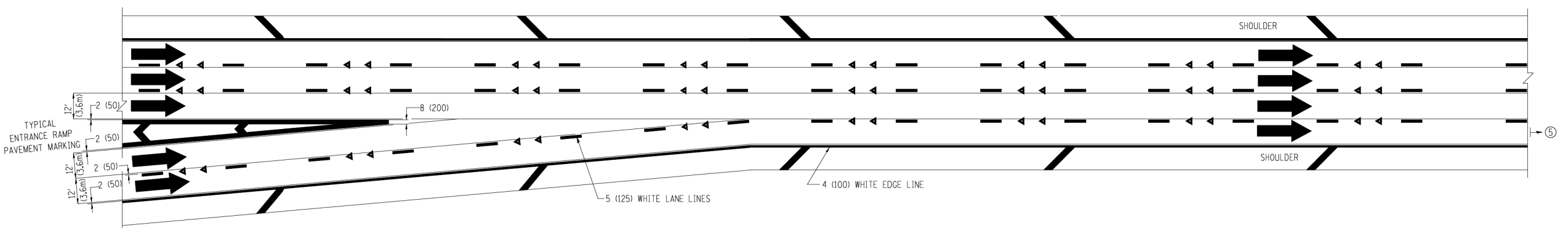
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-12			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

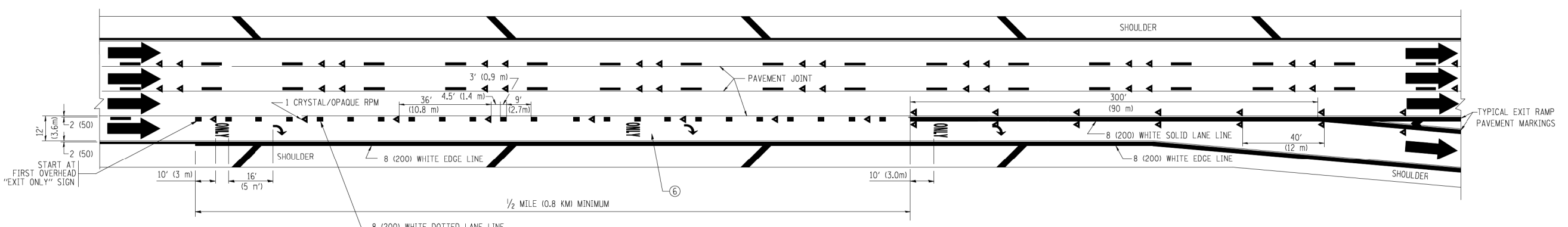
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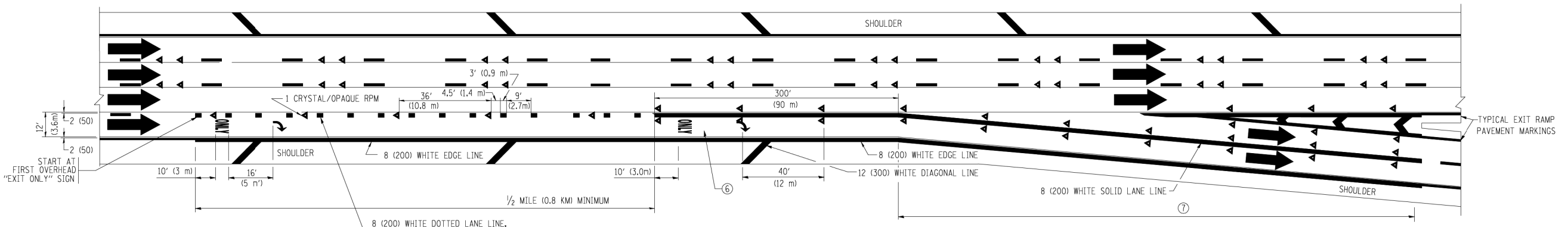
**AUXILIARY LANE MARKINGS**



**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 GORE.



D160W28-SHT-D1-Detail-TC-12AB1.dgn  
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 PLOT SCALE = 50.000' / in.  
 PLOT DATE = 3/27/2014

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

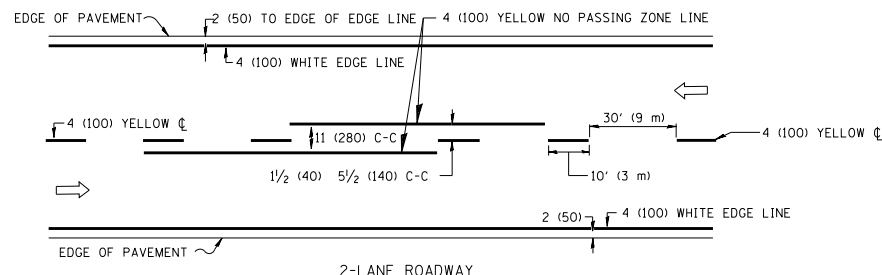
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 REVISED - J.A.F. 02-06  
 REVISED - S.P.B. 01-07  
 REVISED - S.P.B. 01-10

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

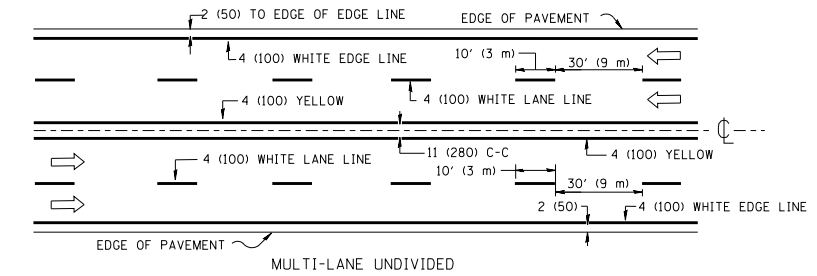
MULTI-LANE FREEWAY  
 PAVEMENT MARKING DETAILS

SCALE: SHEET 30 OF 40 SHEETS STA. TO STA.

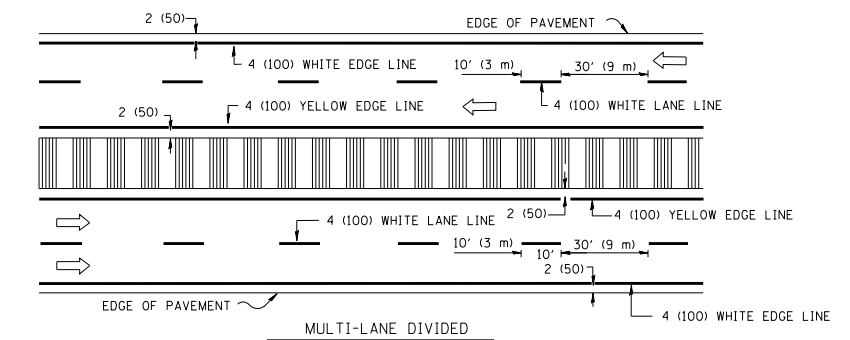
F.A.I. RTE. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 614
TC-12		CONTRACT NO. 60W28		
ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY



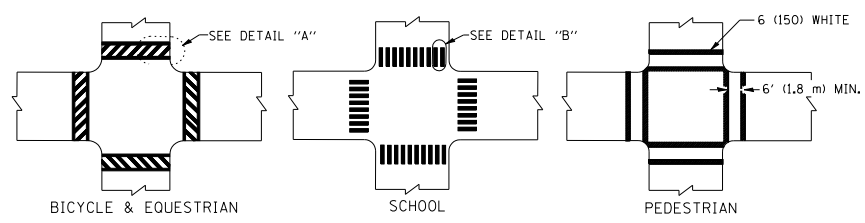
MULTI-LANE UNDIVIDED



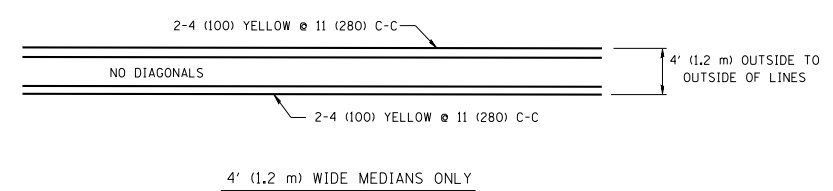
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

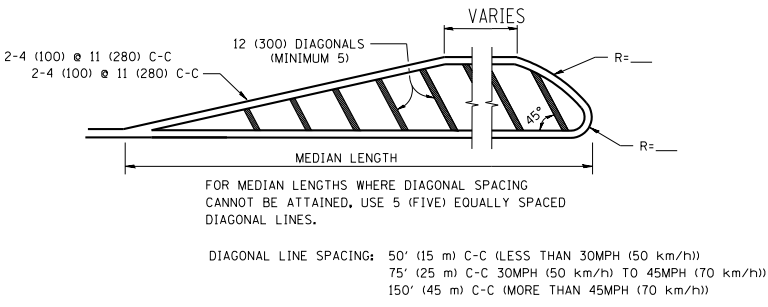
TYPICAL LANE AND EDGE LINE MARKING



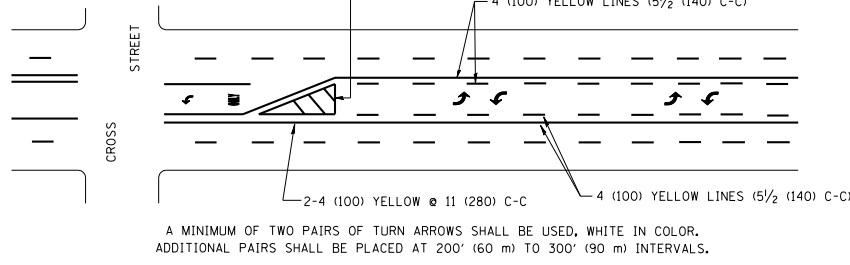
TYPICAL CROSSWALK MARKING



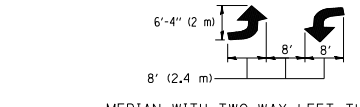
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE



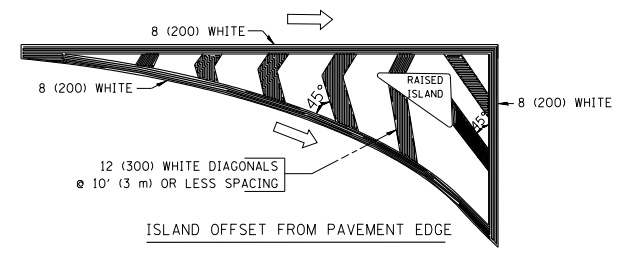
TYPICAL PAINTED MEDIAN MARKING



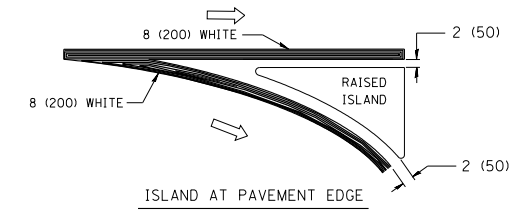
TYPICAL LEFT (OR RIGHT) TURN LANE

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

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	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	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 MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	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°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE 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 (30MPH (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' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	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))

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.

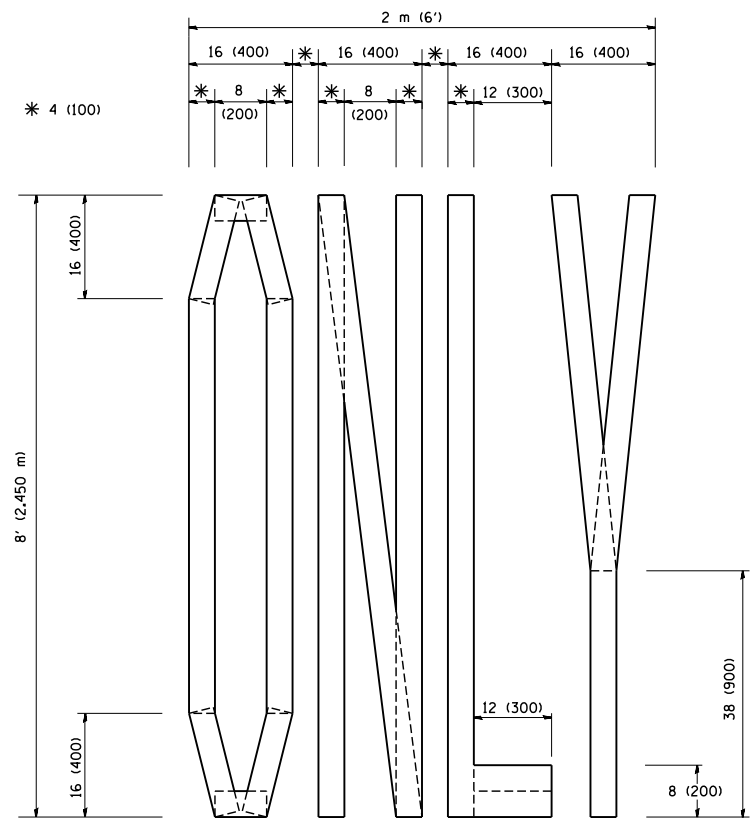
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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

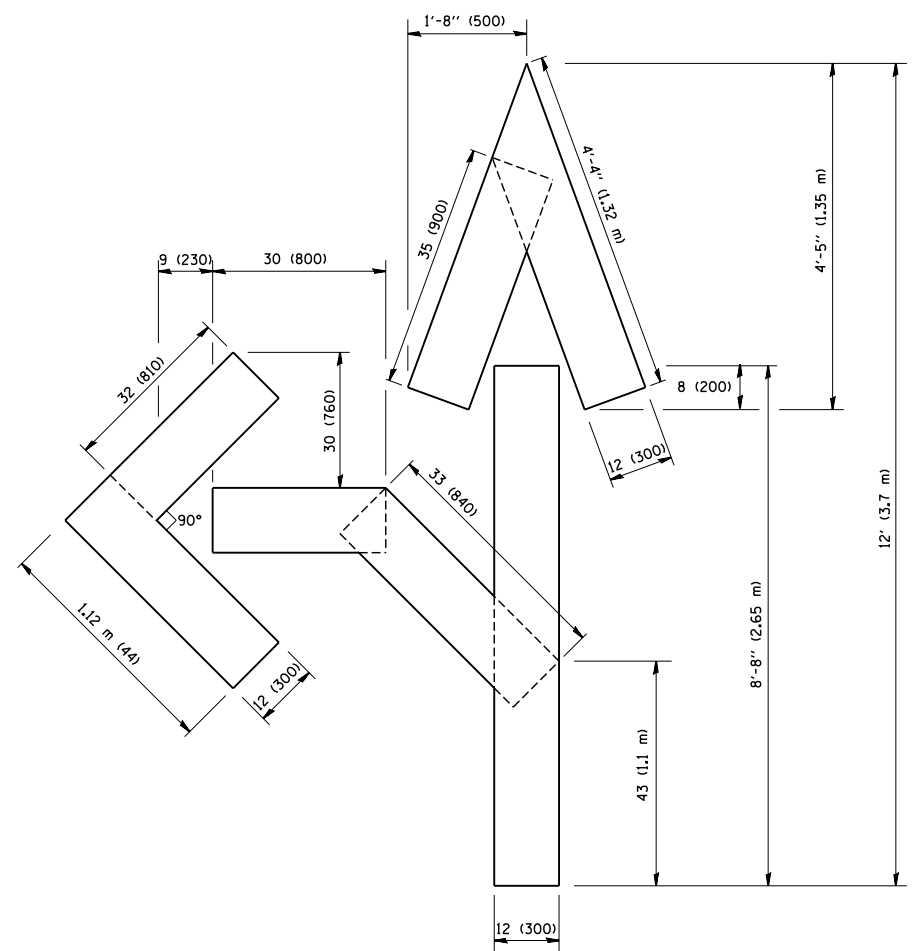
DISTRICT ONE			
TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-13		747	614A
FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60W28		
FED. AID PROJECT				

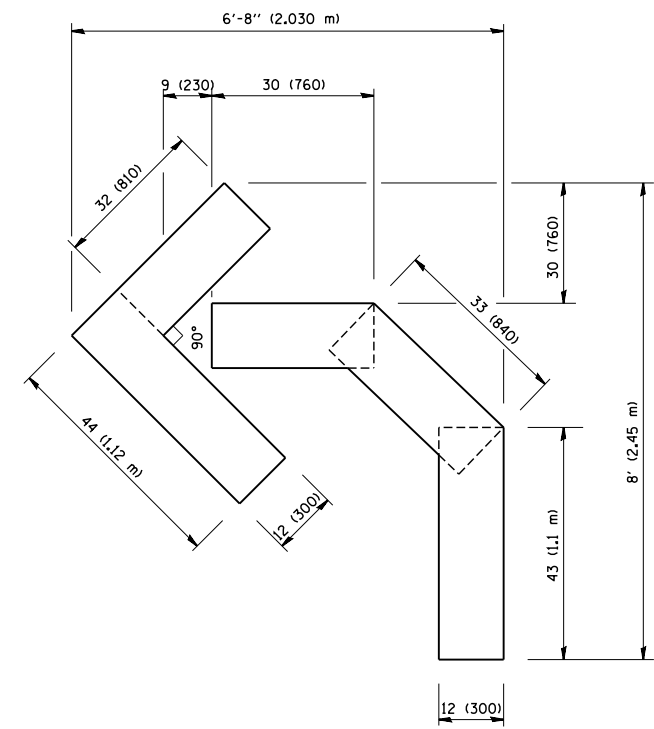




QUANTITY  
 4 (100) LINE = 64.1 ft. (19.7 m)  
 21.1 sq. ft. (1.97 sq. m)



QUANTITY  
 4 (100) LINE = 82.5 ft. (25.3 m)  
 27.5 sq. ft. (2.53 sq. m)



QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

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

FILE NAME = W:\diststd\22x34\16.dgn	USER NAME = gaglianobt	DESIGNED - DRAWN -	REVISED -T. RAMMACHER 06-05-96 REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

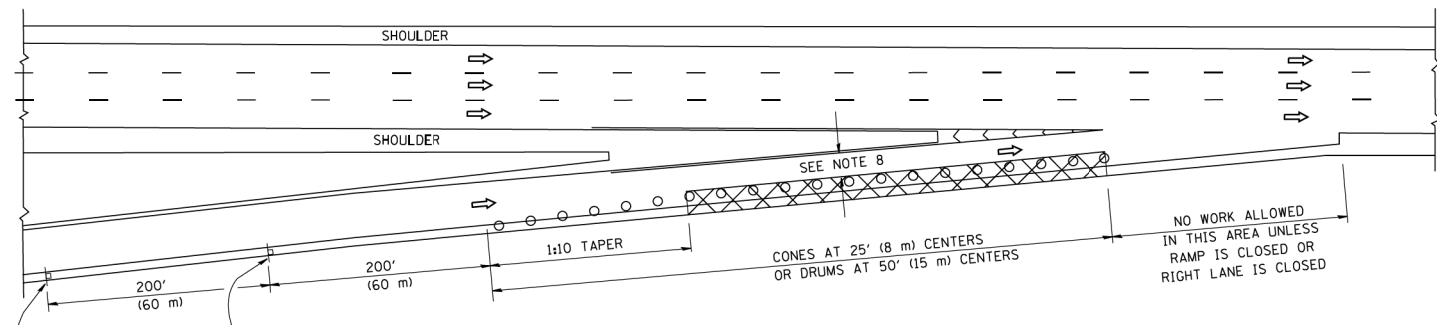
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

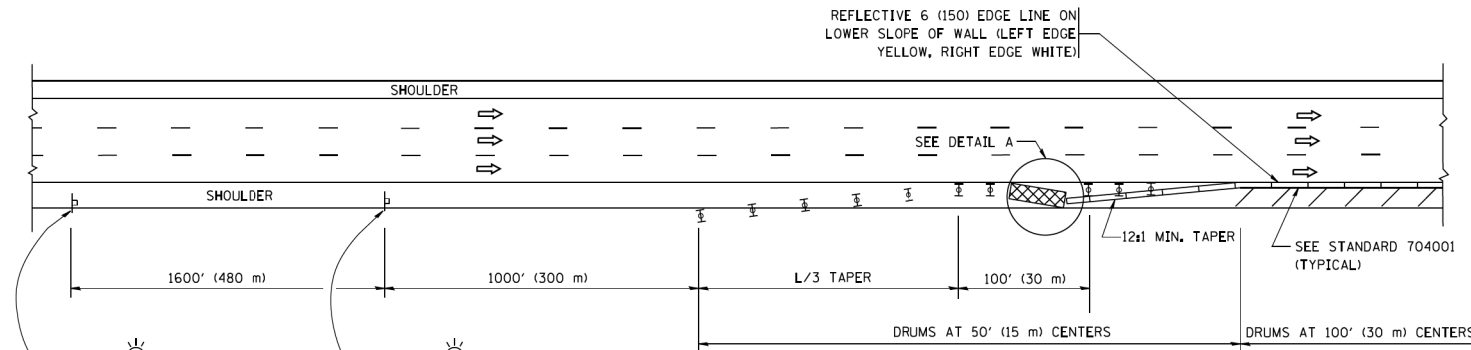
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			747	614B
TC-16			CONTRACT NO. 60W28	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

PARTIAL RAMP CLOSURE DETAILS

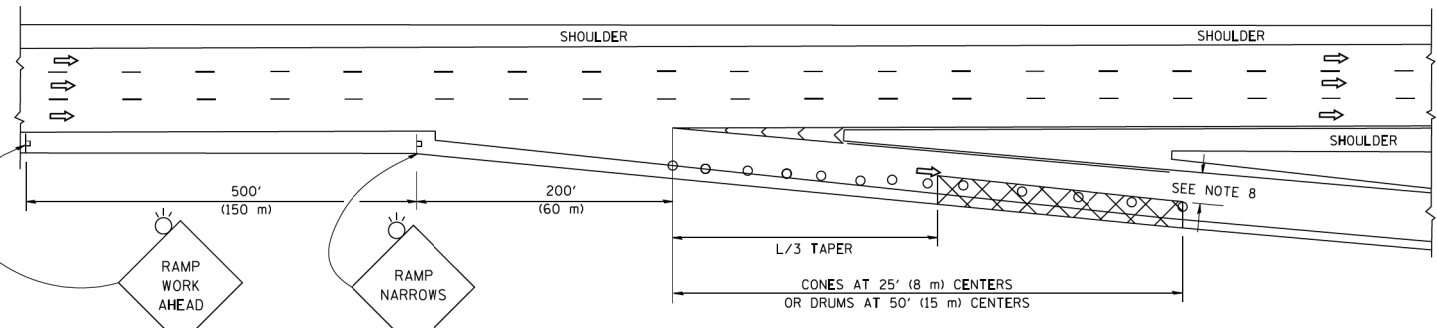
SHOULDER CLOSURE DETAILS



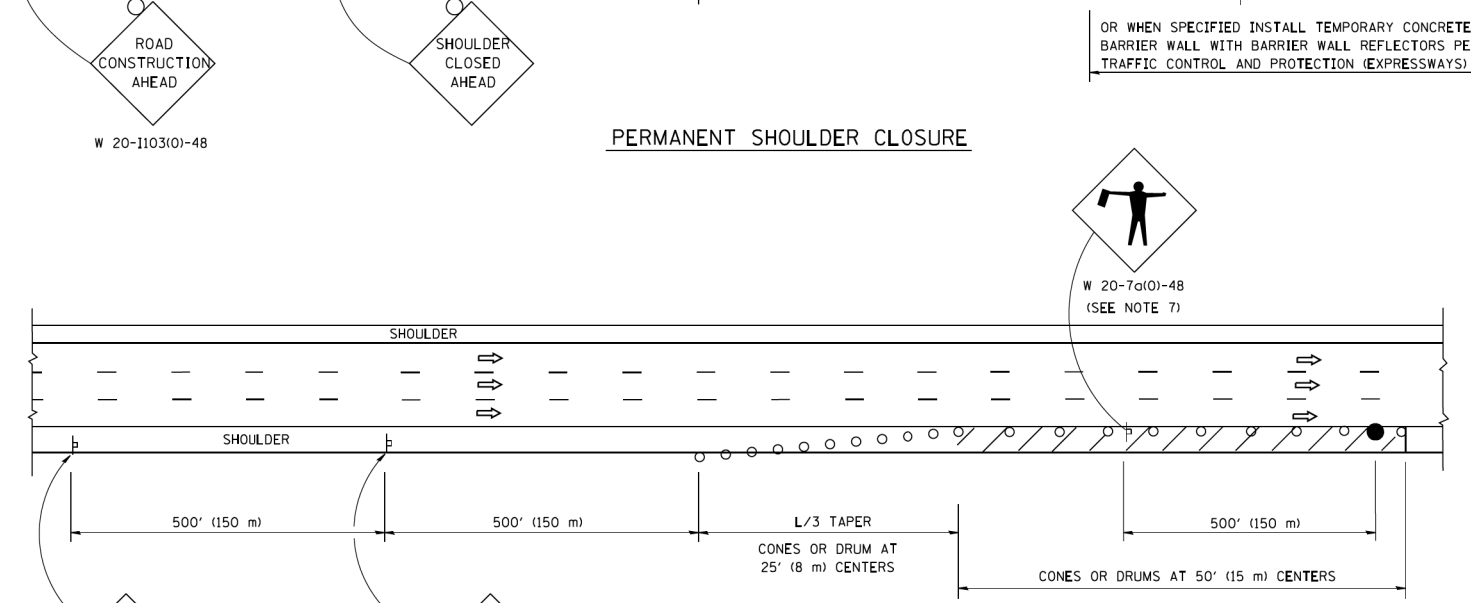
TYPICAL ENTRANCE RAMP



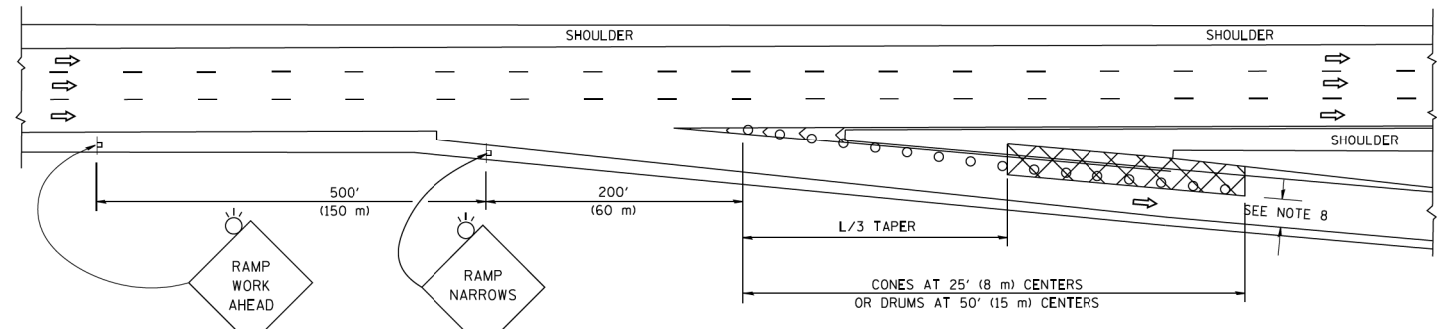
PERMANENT SHOULDER CLOSURE



TYPICAL EXIT RAMP



DAYTIME SHOULDER CLOSURE



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:
 

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

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

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

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

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

FILE PATH = p:\388935\part1\escomonline\local\p\AECOM\Documents\01\_Americas\Transportation\62629938\_Circle\Phase 1\000\_CAD\005\_Roadway\Sheets\60W28-SHT-D1-Detail-TC-17.dgn



D160W28-SHT-D1-Detail-TC-17.dgn  
USER NAME = potelp2  
PLOT SCALE = 50.0000' / 1"  
PLOT DATE = 3/27/2014

DESIGNED -	REVISOR - J.A.F. 12-06
DRAWN - D.W.S.	REVISOR - S.P.B. 01-07
CHECKED -	REVISOR - S.P.B. 12-09
DATE - 11-96	REVISOR - M.D. 06-13

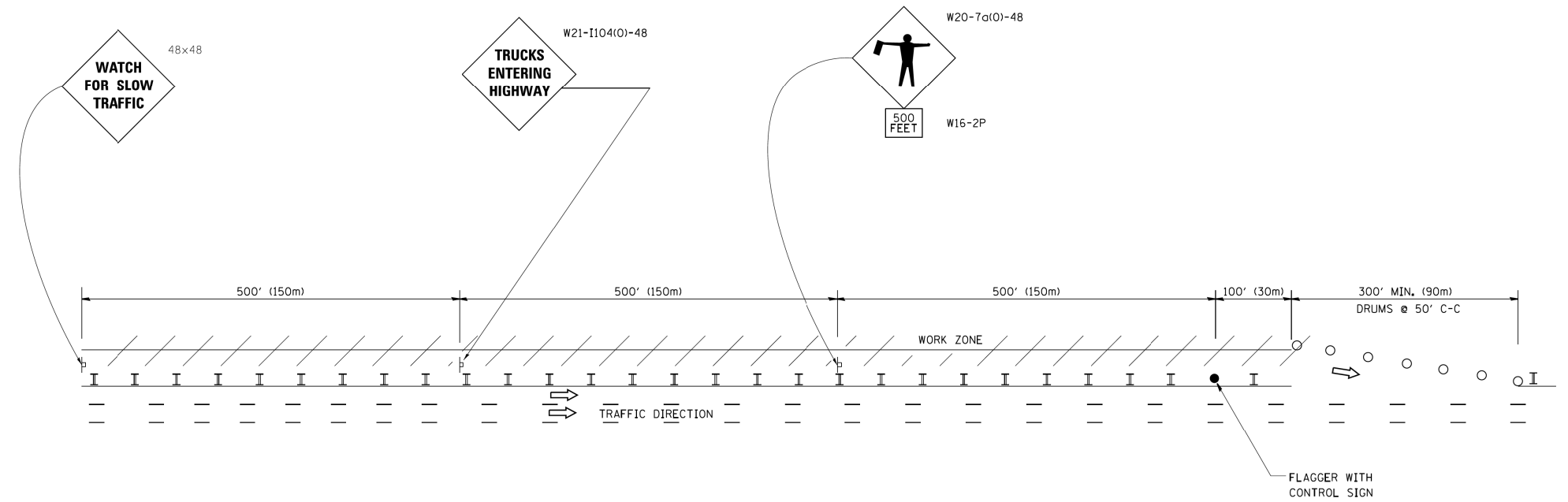
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY  
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES  
SCALE: SHEET 31 OF 40 SHEETS STA. TO STA.

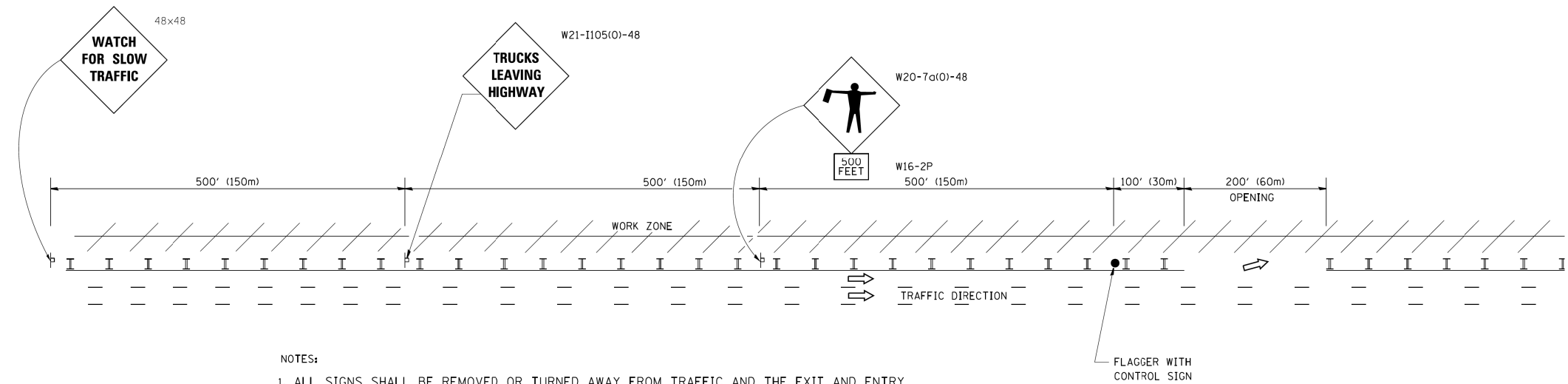
F.A.I. RTE. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 615
TC-17			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

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 RAMPS.
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 PATH = C:\Project\state\14-0323 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-181.dgn



D160W28-SHT-D1-Detail-TC-181.dgn  
 USER NAME = auyeungh  
 PLOT SCALE = 50.000' / in.  
 PLOT DATE = 3/24/2014

DESIGNED -	REVISOR	J.A.F. 02-06
DRAWN -	REVISOR	S.P.B. 01-07
CHECKED -	REVISOR	S.P.B. 12-09
DATE -	REVISOR	M.D. 06-13

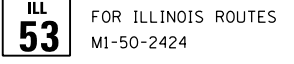
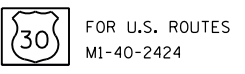
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS  
 AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS

SCALE: SHEET 32 OF 40 SHEETS STA. TO STA.

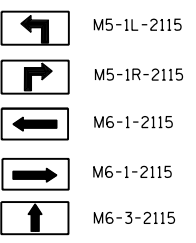
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	616
TC-18			CONTRACT NO. 60W28	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**ROUTE MARKERS**

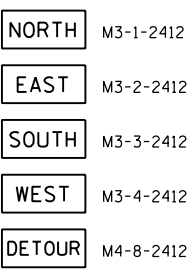


**MAIN STREET**  
R.R., UNMARKED ROUTES  
SPECIAL 24" x 18" VARIABLE  
4" BLACK LETTERS ON WHITE  
REFLECTIVE BACKGROUND

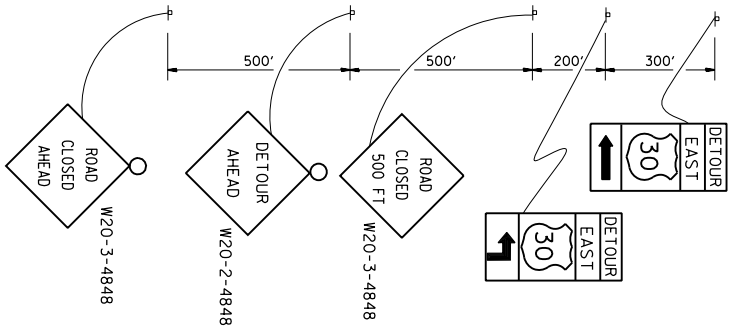
**ARROWS SIGNS**



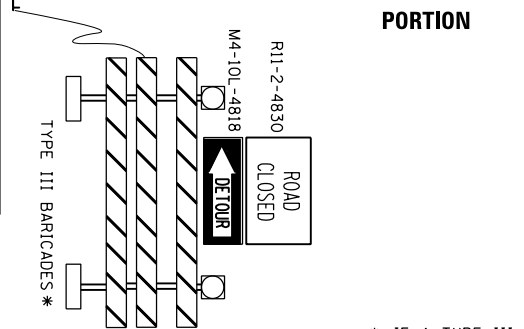
**CARDINAL DIRECTION & DETOUR SIGNS**



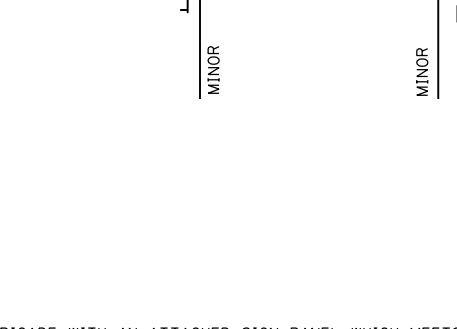
**STATE ROUTE**



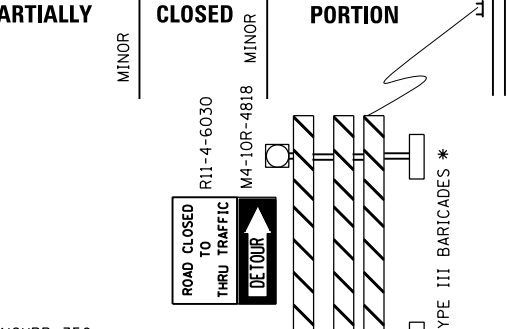
**COMPLETELY CLOSED PORTION**



**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 PATH = C:\Projects\2014\14-0323 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-21.dgn



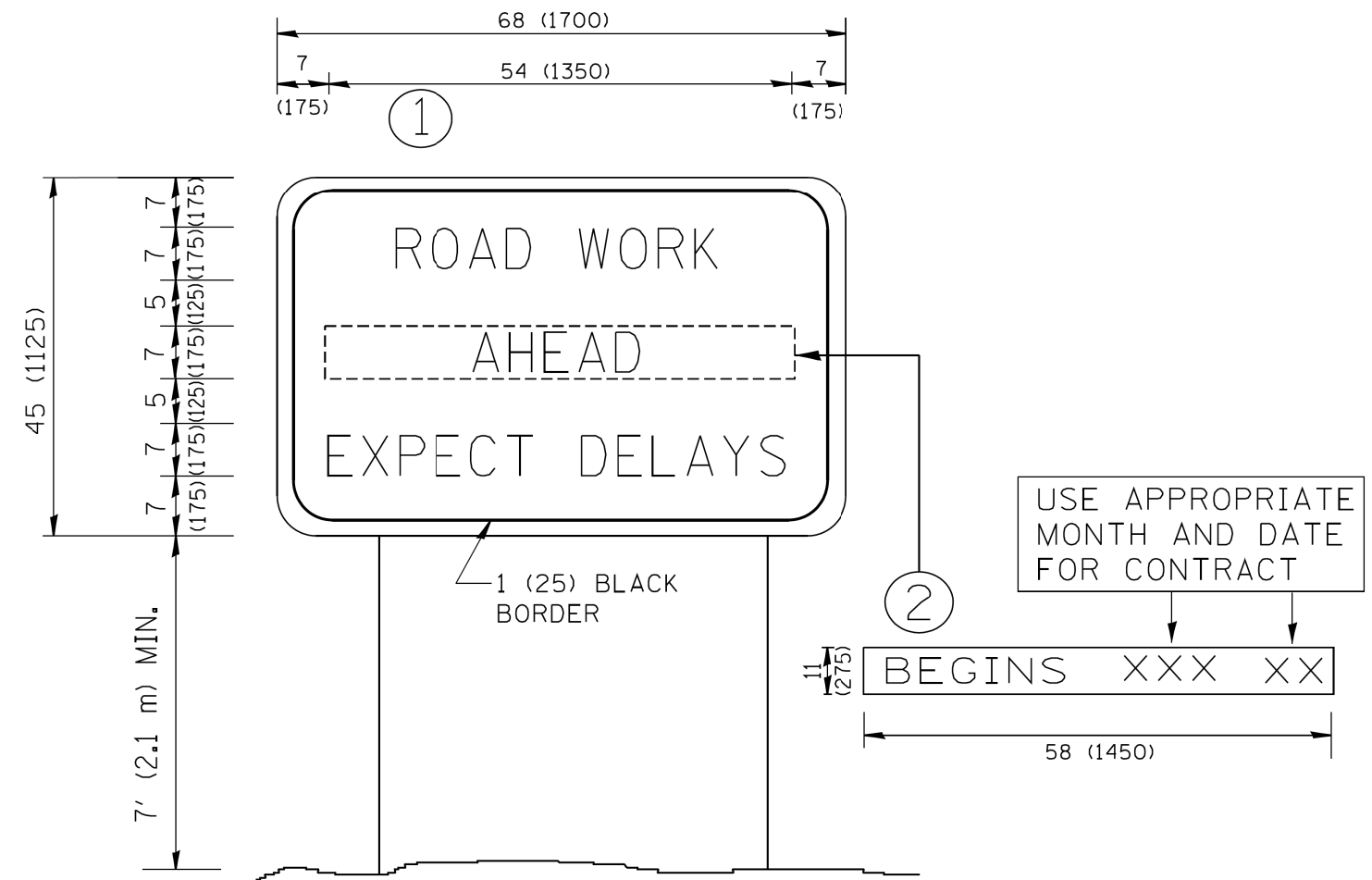
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USER NAME = auyeurgh  
PLOT SCALE = 50.0000' / in.  
PLOT DATE = 3/24/2014

DESIGNED -	REVISED - 10-18-02
DRAWN -	REVISED - R, BORO 09-14-09
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DETOUR SIGNING FOR CLOSING STATE HIGHWAYS</b>			
SCALE:	SHEET 33 OF 40 SHEETS	STA.	TO STA.

F.A.I. R.T.E. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 617
<b>TC-21</b>			<b>CONTRACT NO. 60W28</b>	
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 PATH = C:\Project\w28-0223 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-22.dgn

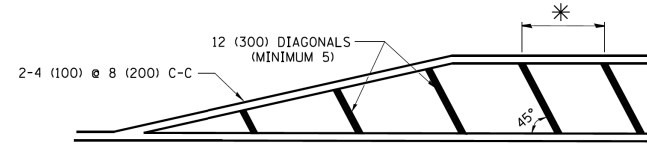
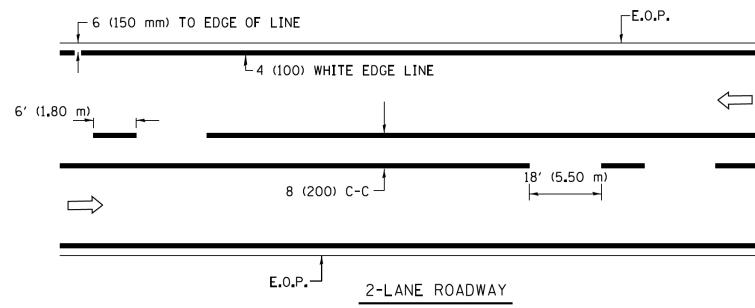


D160W28-SHT-D1-Detail-TC-22.dgn	DESIGNED -	REVISED R. MIRS 09-15-97
USER NAME = auyeungh	DRAWN -	REVISED R. MIRS 12-11-97
PLOT SCALE = 50.000' / in.	CHECKED -	REVISED RAMMACHER 02-02-99
PLOT DATE = 3/24/2014	DATE -	REVISED C. JUCCIUS 01-31-07

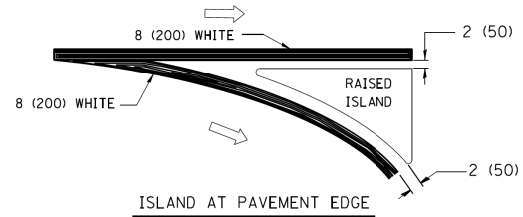
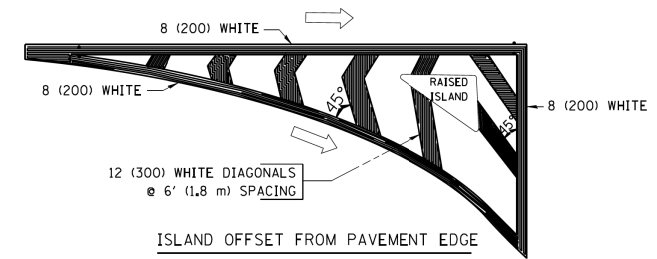
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>ARTERIAL ROAD INFORMATION SIGN</b>			
SCALE:	SHEET 34 OF 40 SHEETS	STA.	TO STA.

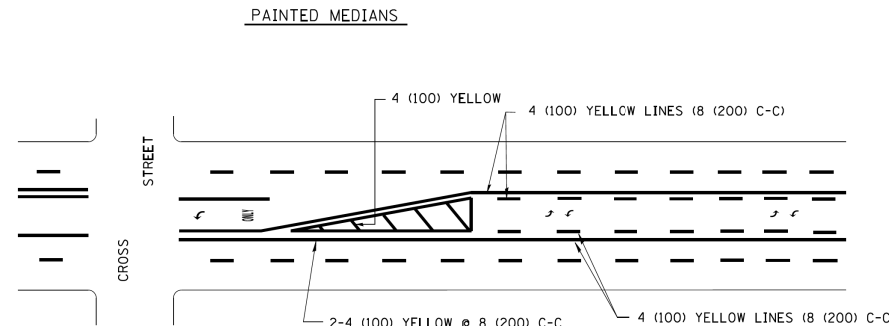
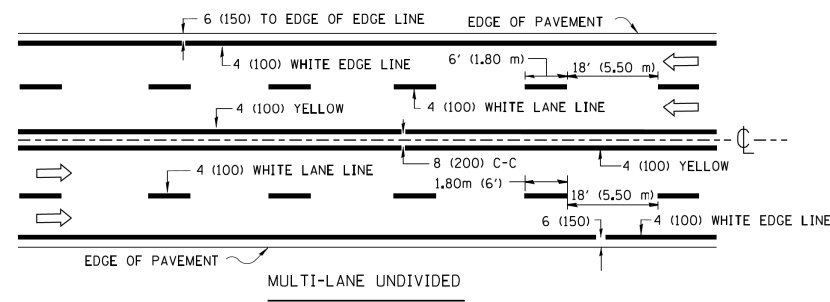
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	617A
<b>TC-22</b>			<b>CONTRACT NO. 60W28</b>	
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



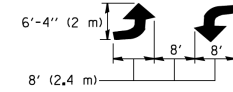
\* FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.  
 \* DIAGONAL LINE SPACING: 20' (6.1 m) C-C



TYPICAL ISLAND MARKING

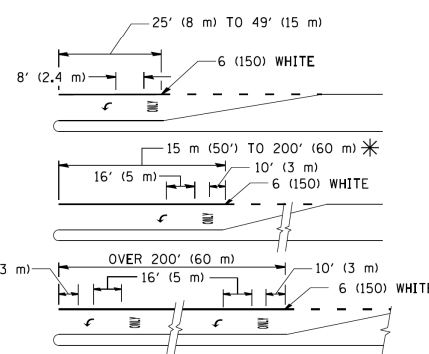
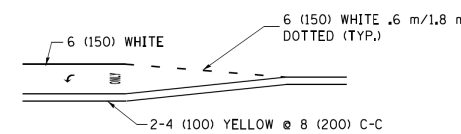


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 AREA = 15.8 SQ. FT. (1.47 m<sup>2</sup>) ONLY AREA = 22.9 SQ. FT. (2.13 m<sup>2</sup>)  
 \* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

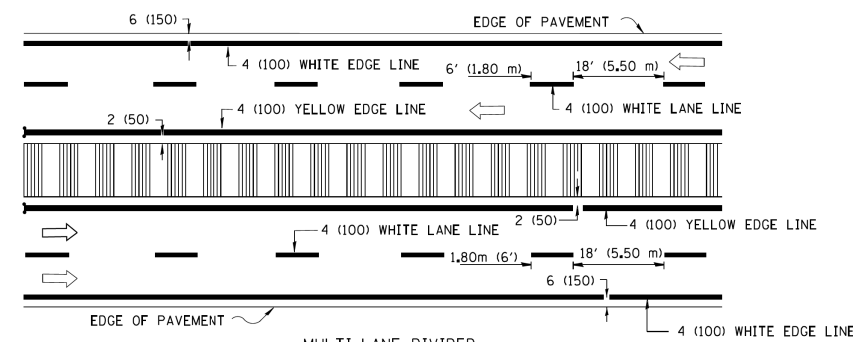
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	8 (200) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	8 (200) C-C
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN)	12 (300) @ 45° 24 (600) @ 90°	SOLID SOLID	WHITE WHITE	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°	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	8 (200) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF "RR"=3.6 SQ. FT. (0.33m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )

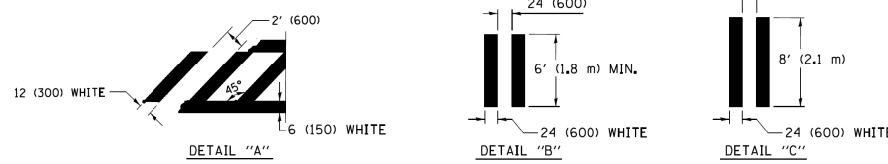
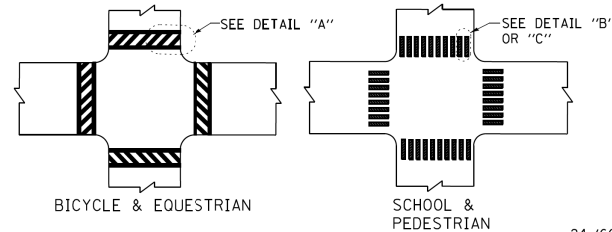
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

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



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

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

FILE PATH = C:\Projects\14-0323 - W28 Final PDFs\016028-SHT-D1-Detail-TC-24.dgn



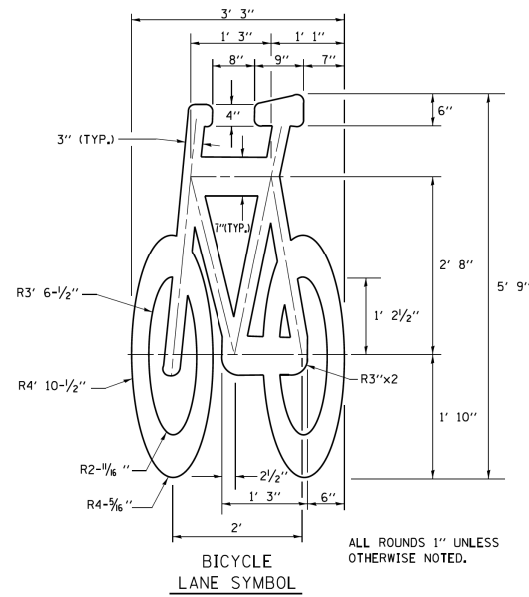
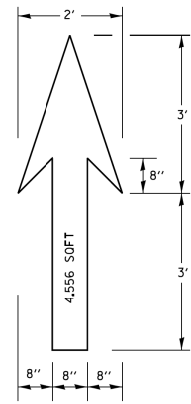
D16028-SHT-D1-Detail-TC-24.dgn  
 USER NAME = ayeungh  
 PLOT SCALE = 50.000' / in.  
 PLOT DATE = 3/24/2014

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -  
 REVISED T. R. 12-07-00  
 REVISED K. ENG 02-28-12  
 REVISED  
 REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO  
 TYPICAL PAVEMENT MARKINGS  
 SCALE: SHEET 35 OF 40 SHEETS STA. TO STA.

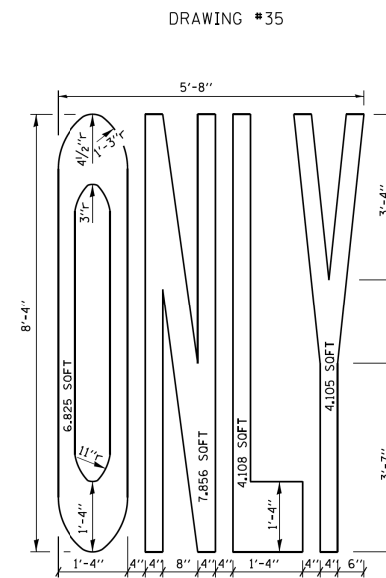
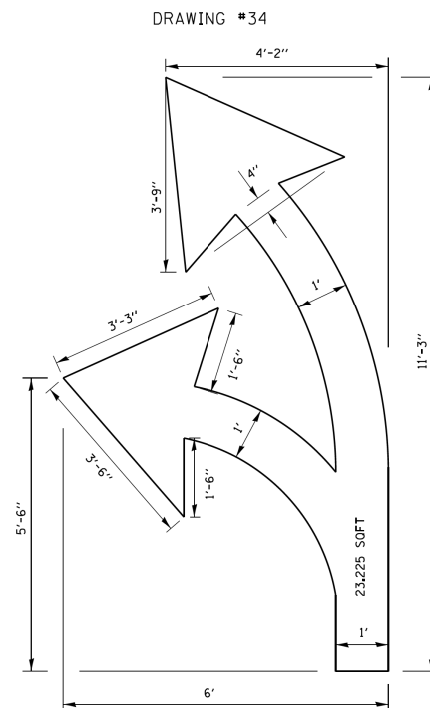
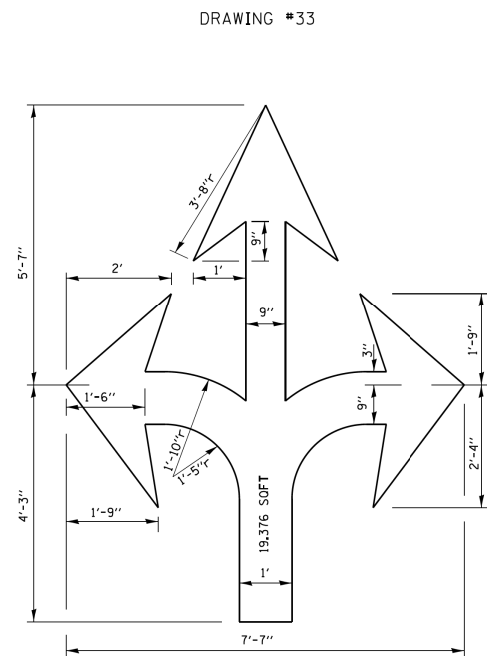
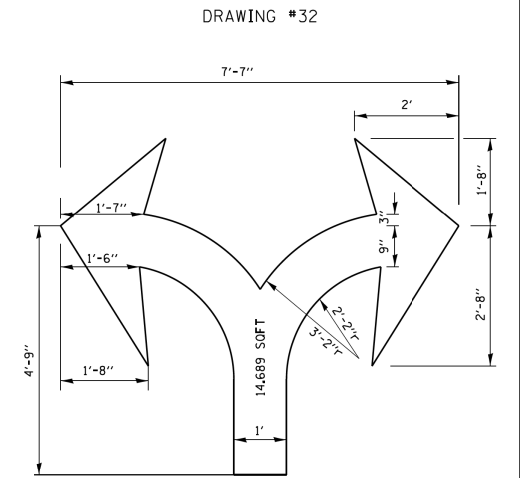
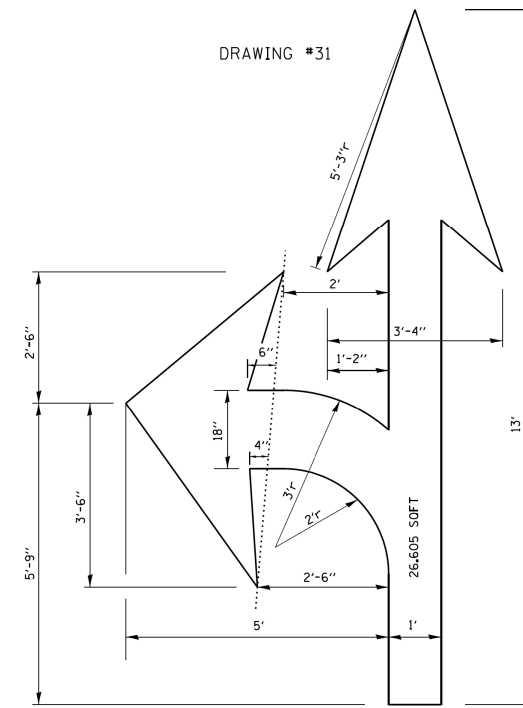
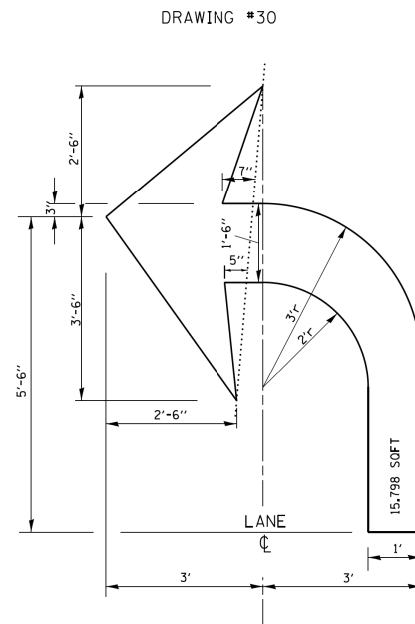
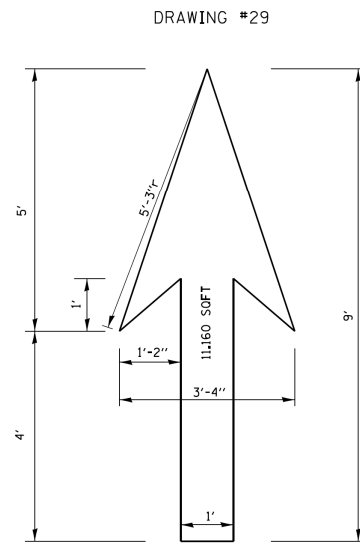
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	617B
TC-18		CONTRACT NO. 60W28		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**NOTE:**

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

TYPICAL BIKE LANE SYMBOLS  
DRAWING #28



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

FILE PATH = C:\Project\14-0323 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-24b.dgn



D160W28-SHT-D1-Detail-TC-24b.dgn  
USER NAME = ayeuengh  
PLOT SCALE = 50.000' / in.  
PLOT DATE = 3/24/2014

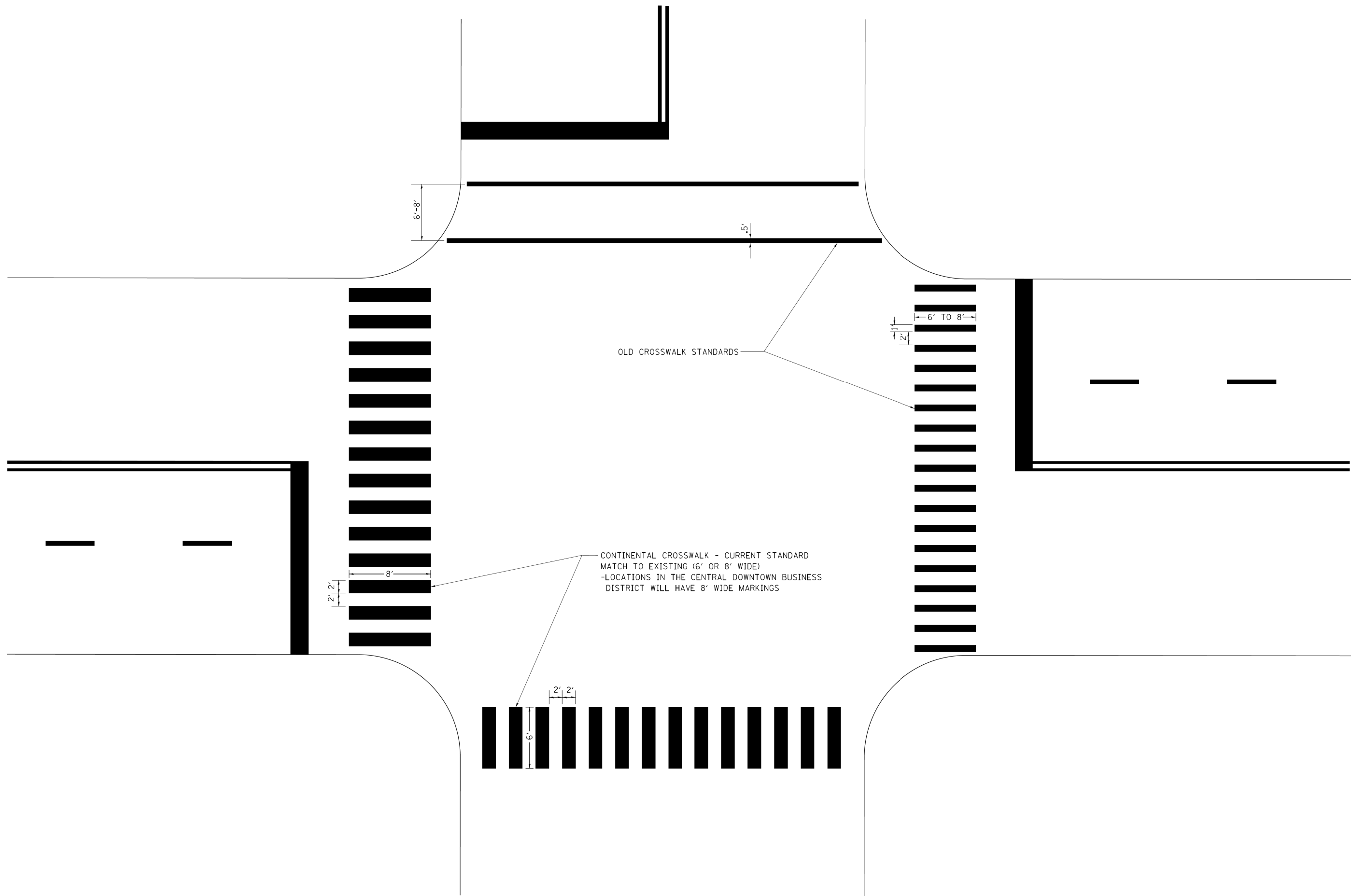
DESIGNED - T. R. 12-07-00  
DRAWN - K. ENG 02-28-12  
CHECKED -  
DATE -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO  
TYPICAL PAVEMENT MARKINGS  
SCALE: SHEET 36 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	617C
<b>TC-24</b>			<b>CONTRACT NO. 60W28</b>	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FILE PATH = C:\Project\state\14-0323 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-24c.dgn



D:\60W28-SHT-D1-Detail-TC-24c.dgn	DESIGNED -	REVISED T. R. 12-07-00
USER NAME = auyeungh	DRAWN -	REVISED K. ENG 02-28-12
PLOT SCALE = 50.000' / in.	CHECKED -	REVISED
PLOT DATE = 3/24/2014	DATE -	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

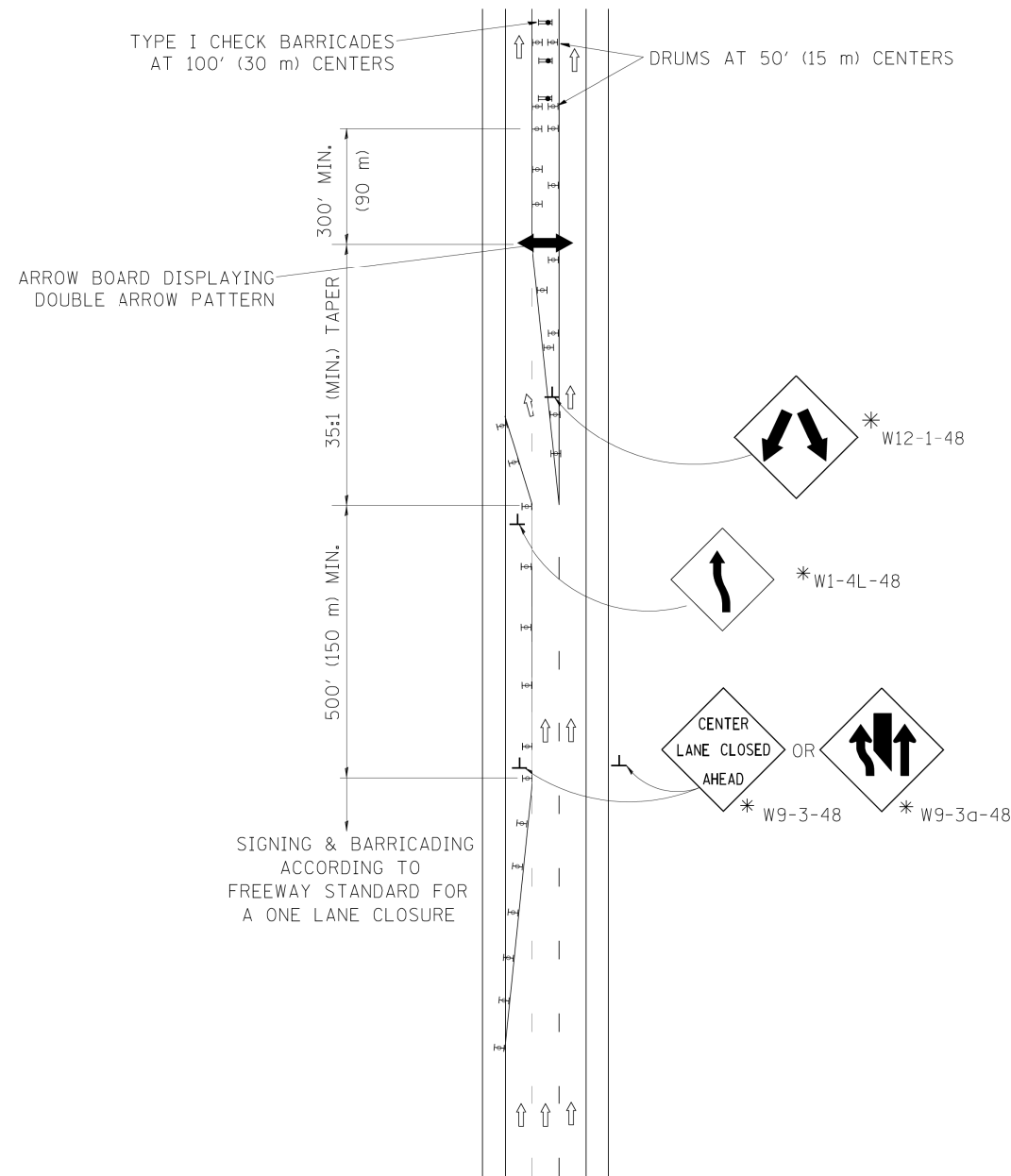
**CITY OF CHICAGO  
TYPICAL PAVEMENT MARKINGS**

SCALE: SHEET 37 OF 40 SHEETS STA. TO STA.

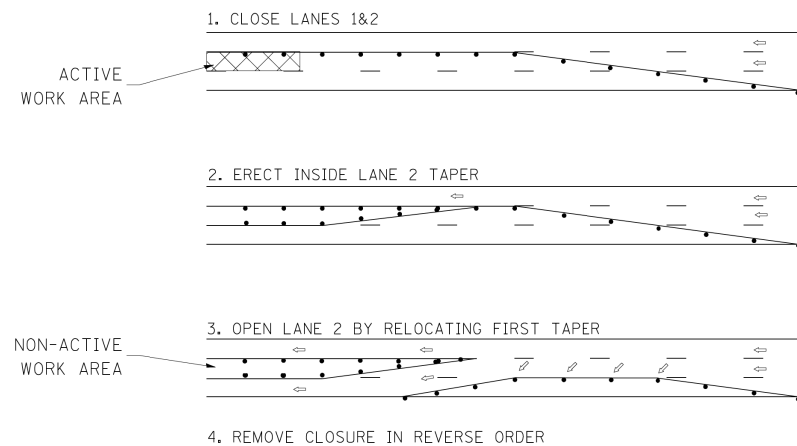
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	617D
<b>TC-14</b>			<b>CONTRACT NO. 60W28</b>	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



# CENTER LANE CLOSURE



## INSTALLATION SEQUENCE

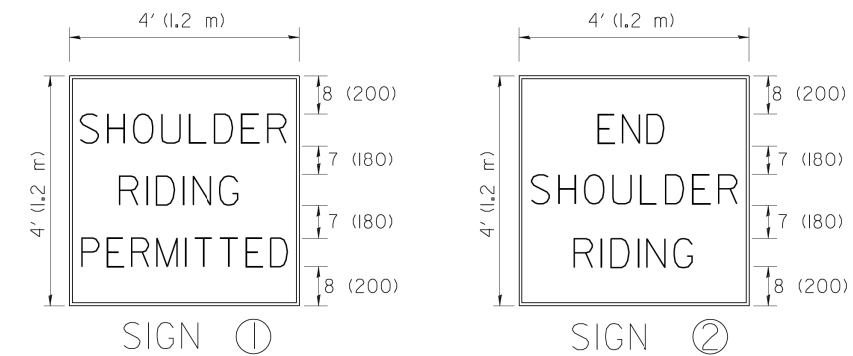
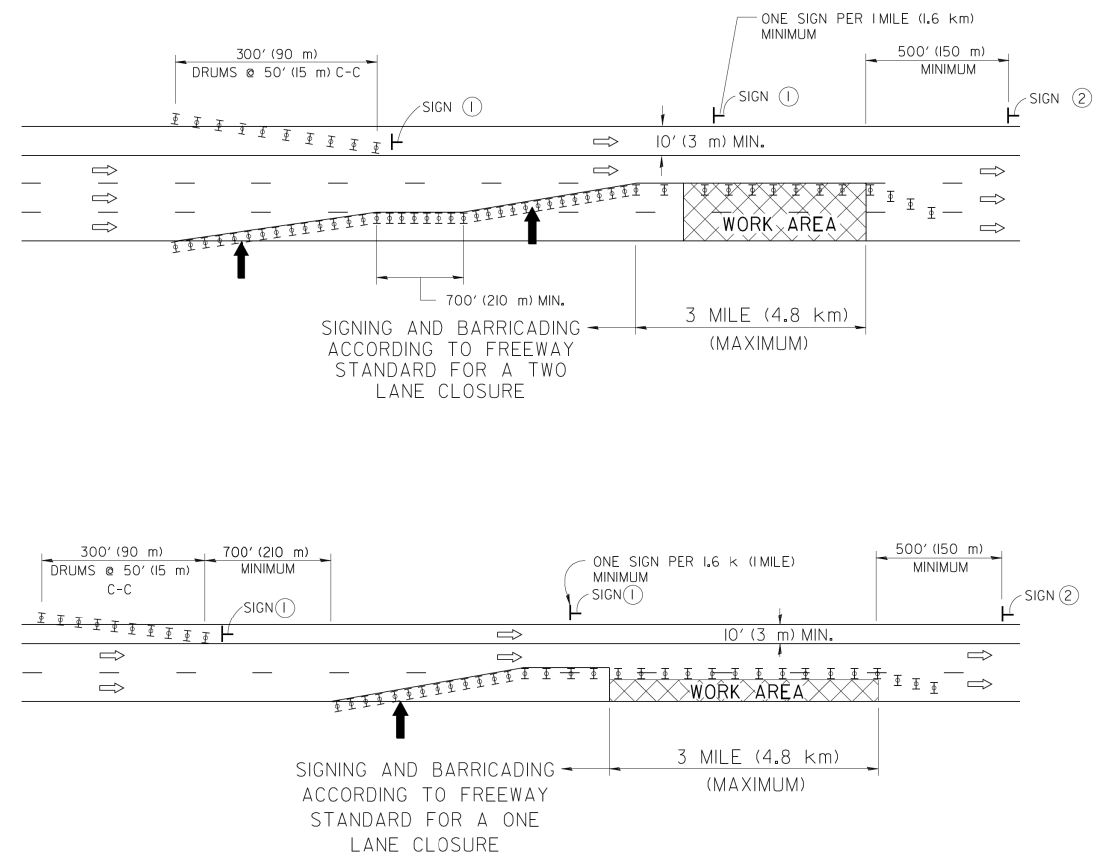


### NOTES

1. DRUMS WITH STEADY BURN LIGHTS SHALL BE USED AT 50' (15 m) CENTERS ON ALL TAPERS AND TANGENTS IN ADVANCE OF WORK AREA.
2. CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.
3. CENTER LANE CLOSURE CONFIGURATION IS NOT TO BE USED WITH WORKERS PRESENT.

# SHOULDER LANE

NOTE: CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.



6 (150) SERIES "C" LEGEND  
BLACK LEGEND  
WHITE REFLECT. BACKGROUND  
1 (25) BORDER

### SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ➔ ARROWBOARD
- ▨ ACTIVE WORK AREA
- ⊥ SIGN ON PORTABLE OR PERMANENT SUPPORT \*
- ⊥ TYPE II BARRICADE, OR DRUM WITH MONO-DIRECTIONAL STEADY BURN LIGHT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

\* ALL SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).

FILE PATH = CA\Project\14-0323 - W28 Final PDFs\0160W28-SHT-D1-Detail-TC-25.dgn



D160W28-SHT-D1-Detail-TC-25.dgn  
USER NAME = auyeungh  
PLOT SCALE = 50.000' / in.  
PLOT DATE = 3/24/2014

DESIGNED -	J.A.F. 04-03
DRAWN -	S.P.B. 01-07
CHECKED -	S.P.B. 12-09
DATE -	REVISED

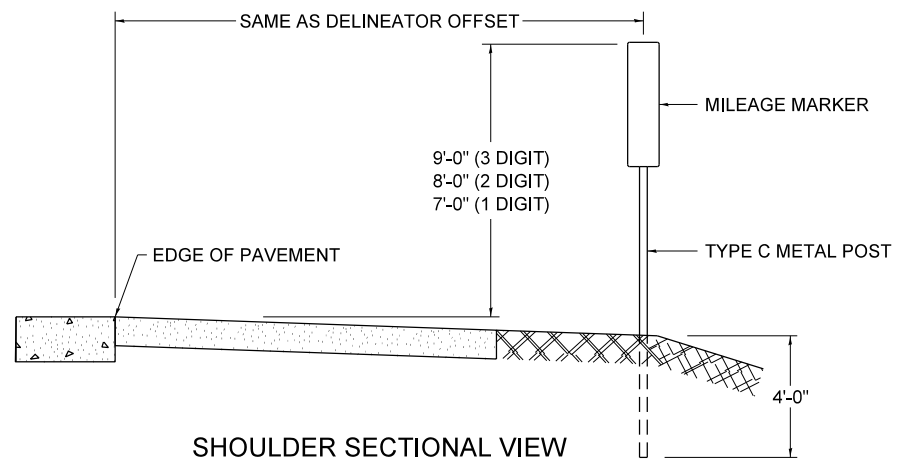
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY  
CENTER LANE CLOSURE SHOULDER LANE

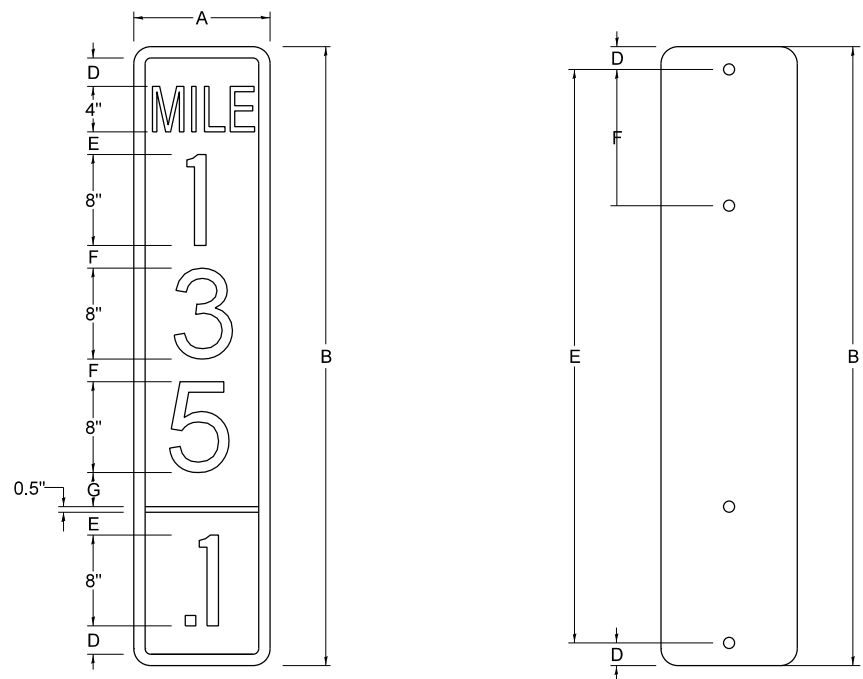
SCALE: SHEET 38 OF 40 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	618
TC-25			CONTRACT NO. 60W28	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STANDARD DESIGN FOR MILE POST



SHOULDER SECTIONAL VIEW

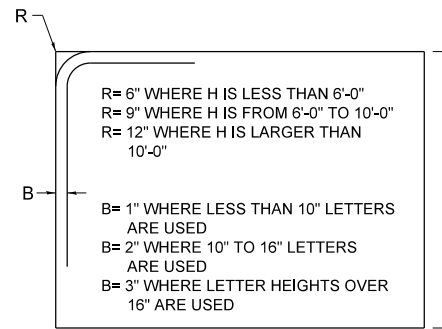


SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	DIGIT
12 x 24	12.0	24.0	1.5	1.5	1.5	N/A	1.5	1
12 x 36	12.0	36.0	1.5	2.0	2.0	2.0	1.5	2
12 x 48	12.0	48.0	1.5	2.5	2.0	2.0	2.5	3

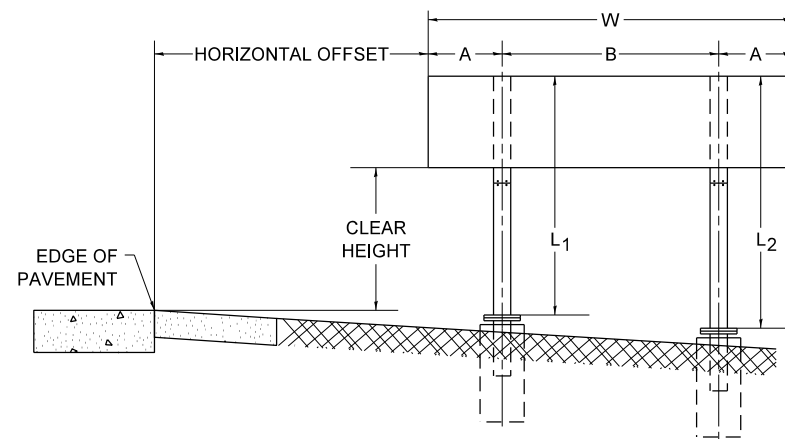
BLANK	A	B	C	D	E	F
B9-1224	12.0	24.0	1.5	2.0	20.0	N/A
B9-1236	12.0	36.0	1.5	2.0	32.0	12.0
B9-1248	12.0	48.0	1.5	2.0	44.0	12.0

SIGN SIZE	SERIES					BLANK STD.	
	LINES						
	1	2	3	4	5	BORDER	
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

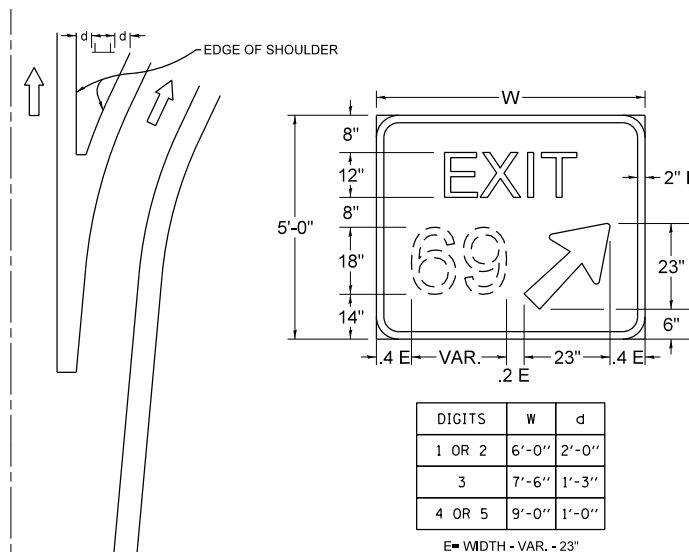


NUMBER OF STEEL SUPPORTS	A	B
2	.2 W	.6 W
3	.15 W	.35 W
4	.125 W	.25 W
5	.1 W	.2 W

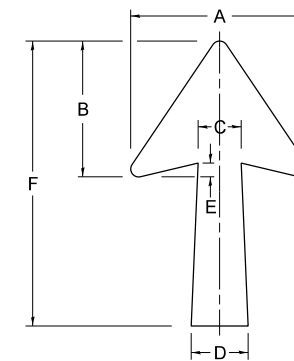
"L1 IS THE LENGTH OF SUPPORT, NOT INCLUDING THE STUB PROJECTION, CLOSEST TO THE EDGE OF THE PAVEMENT."

"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

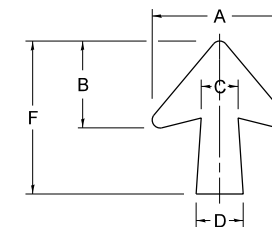


STANDARD ARROWS FOR INTERSTATE GUIDE SIGNS



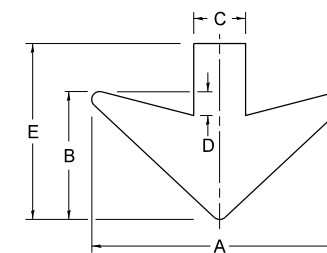
ARROW SYMBOL	A	B	C	D	E	F	R
24 1/4 x 15 1/8	15 1/8	11 3/8	3 3/4	5	1 5/8	24 1/4	1/8
29 1/4 x 18 1/4	18 1/4	14	4 1/2	6	1 1/2	29 1/4	3/4
35 5/8 x 22 1/4	22 1/4	17	5 3/8	7 1/8	1 3/4	35 5/8	1
18 1/4 x 11 1/4	11 1/4	8 3/4	3 1/8	3 3/8		18 1/4	

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	1 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 5/8 x 8 1/8	8 1/8	5 5/8	2 3/8	2 3/8		9 5/8	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

FILE PATH = CA\Project\state\14-0323 - W28 Final PDFs\016028-SHT-D1-Detail-TC-27.dgn



D16028-SHT-D1-Detail-TC-27.dgn  
 USER NAME = auyeungh  
 PLOT SCALE = 50.0000' / in.  
 PLOT DATE = 3/24/2014

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE - 03-08-1984

REVISED - 02-04-2009  
 REVISED -  
 REVISED -  
 REVISED -

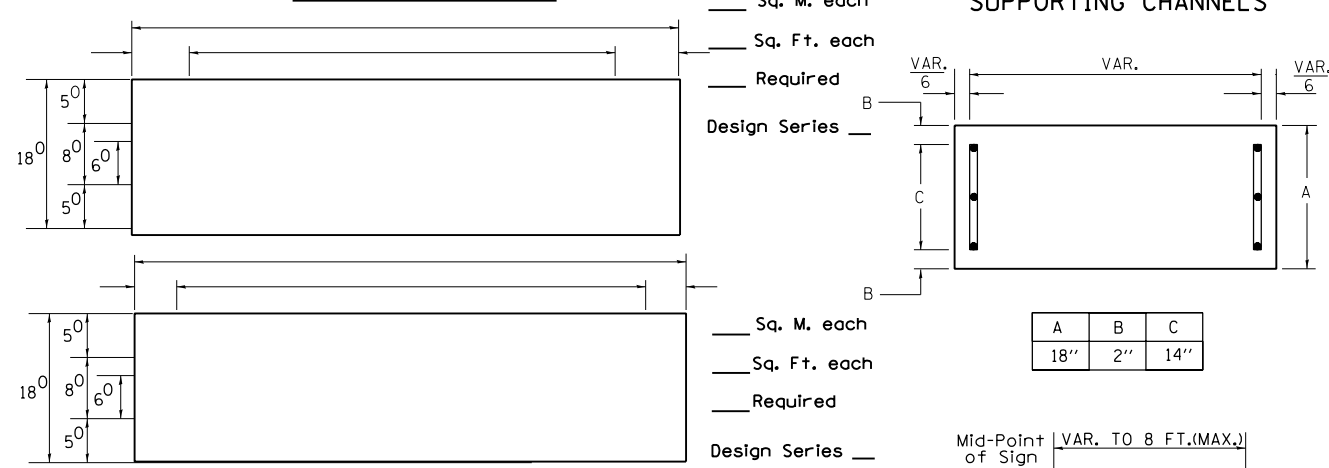
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MILE POST MARKERS - GORE SIGNS  
 MAJOR GUIDE SIGN LAYOUT - ARROWS

SCALE: SHEET 40 OF 40 SHEETS STA. TO STA.

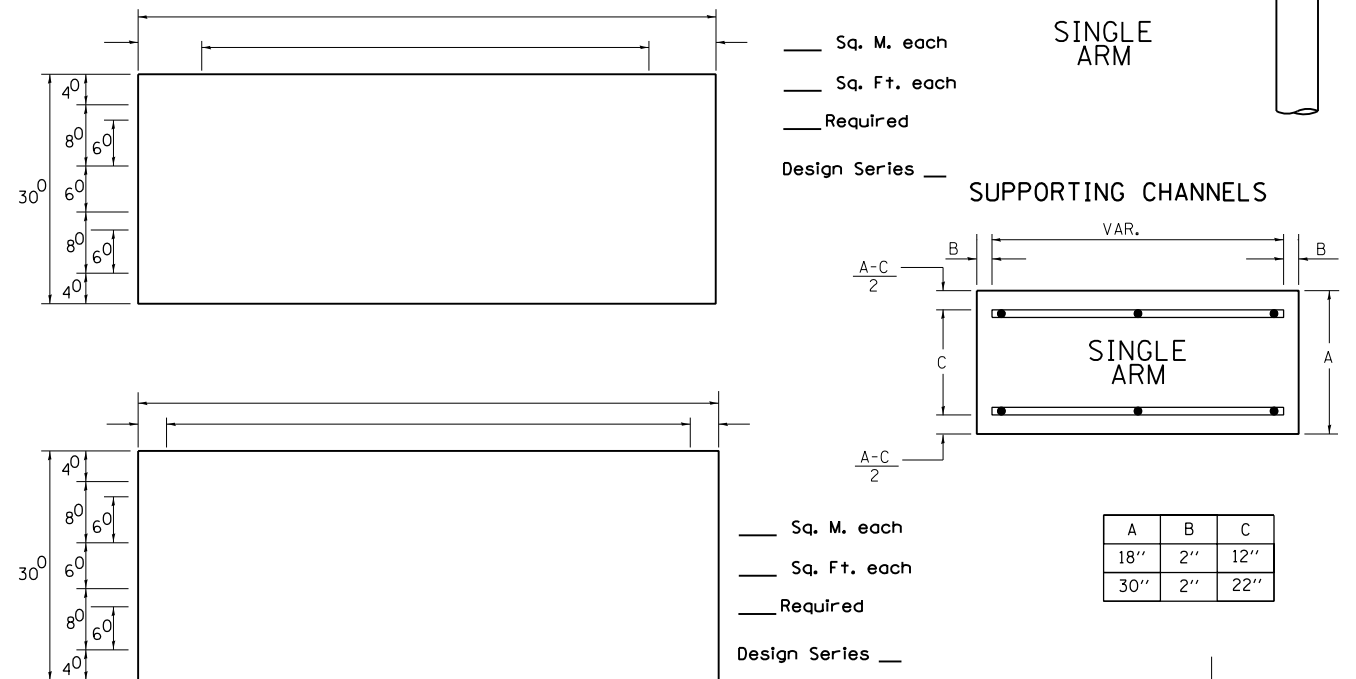
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	619
TC-27 (TS-2341-1)			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

PANEL SIGN DESIGN TYPE 1



NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2



GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:

\* J.O. HERBERT CO. MIDLOTHIAN, VA. \* WESTERN REMAC INC. WOODRIDGE, IL.

**PARTS LISTING:**  
 SIGN CHANNEL PART \*HPN053 (MED. CHANNEL)  
 SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3  
 SELF TAPPING WITH NEOPRENE WASHER  
 BRACKETS PART \*HPN034 (UNIVERSAL)  
 CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

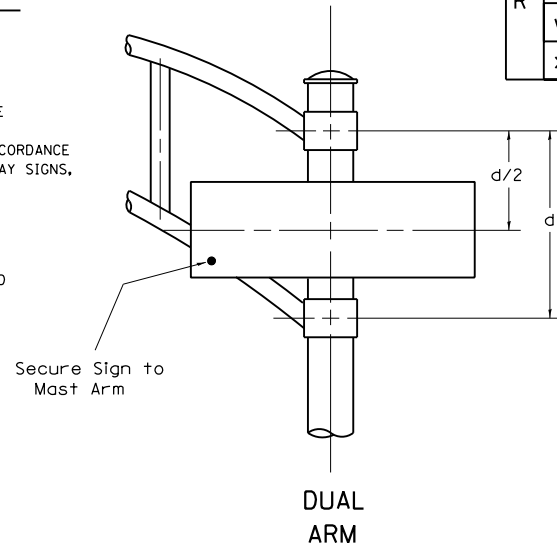
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM shall be used. See Note #5.

SUPPORTING CHANNELS

A	B	C
18"	2"	14"

A	B	C
18"	2"	12"
30"	2"	22"



Upper Case To Lower Case  
 Spacing Chart 8-6 Inch Series "C & D"

SERIES	SECOND LETTER																					
	ac		de		bh		ik		l		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
B	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>
C E G	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
D O O R	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
F	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>4</sup>	1 <sup>5</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
H I M N	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>2</sup>	2 <sup>4</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>
J U	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>
K L	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
P	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
S	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
T	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
V	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
Y	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>4</sup>	1 <sup>5</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>5</sup>	0 <sup>7</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
Z	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>2</sup>	2 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>

Lower Case To Lower Case  
 Spacing Chart 6 Inch Series "C & D"

SERIES	SECOND LETTER																					
	ac		de		bh		ik		l		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgij	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>2</sup>	2 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>
lmnqu	1 <sup>6</sup>	1 <sup>7</sup>	2 <sup>2</sup>	2 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>
bfkops	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
ce	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
r	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>
t z	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>
vy	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	0 <sup>6</sup>	1 <sup>0</sup>	0 <sup>6</sup>	1 <sup>0</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
w	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>
x	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>

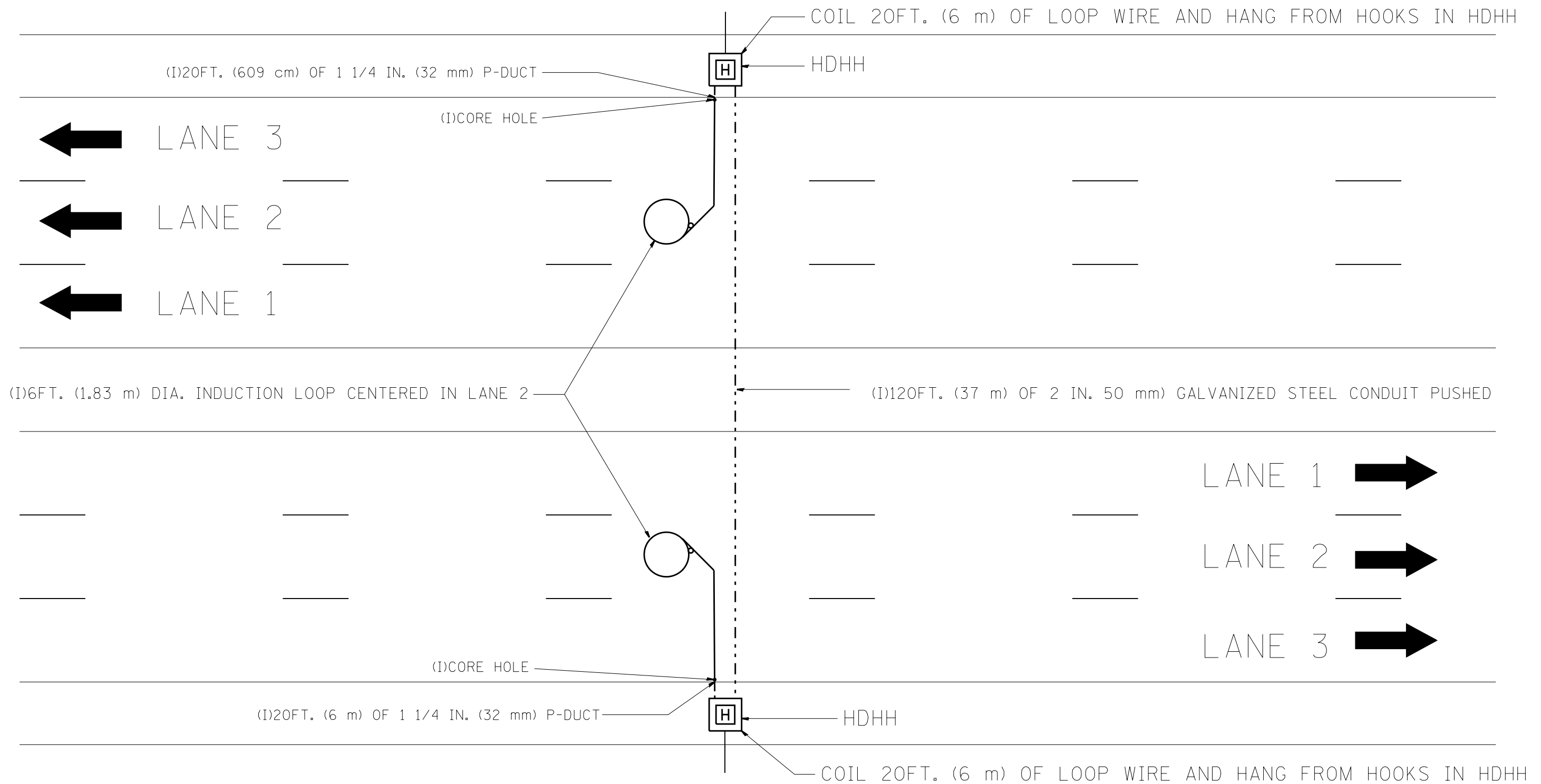
Number To Number  
 Spacing Chart 8 Inch Series "C & D"

SERIES	SECOND NUMBER																					
	0		1		2		3		4		5		6		7		8		9			
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>
1	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	1 <sup>4</sup>	1 <sup>5</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>	2 <sup>0</sup>	2 <sup>1</sup>
2 3 4	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
5	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
6	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>
7	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>5</sup>	0 <sup>5</sup>	0 <sup>6</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>
8	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>5</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>2</sup>	1 <sup>4</sup>	1 <sup>6</sup>	1 <sup>7</sup>	1 <sup>4</sup>	1 <sup>5</sup>	1 <sup>4</sup>	1 <sup>5</sup>

EXAMPLE, 2<sup>3</sup> DENOTES 3/8

UPPER AND LOWER CASE LETTER WIDTHS

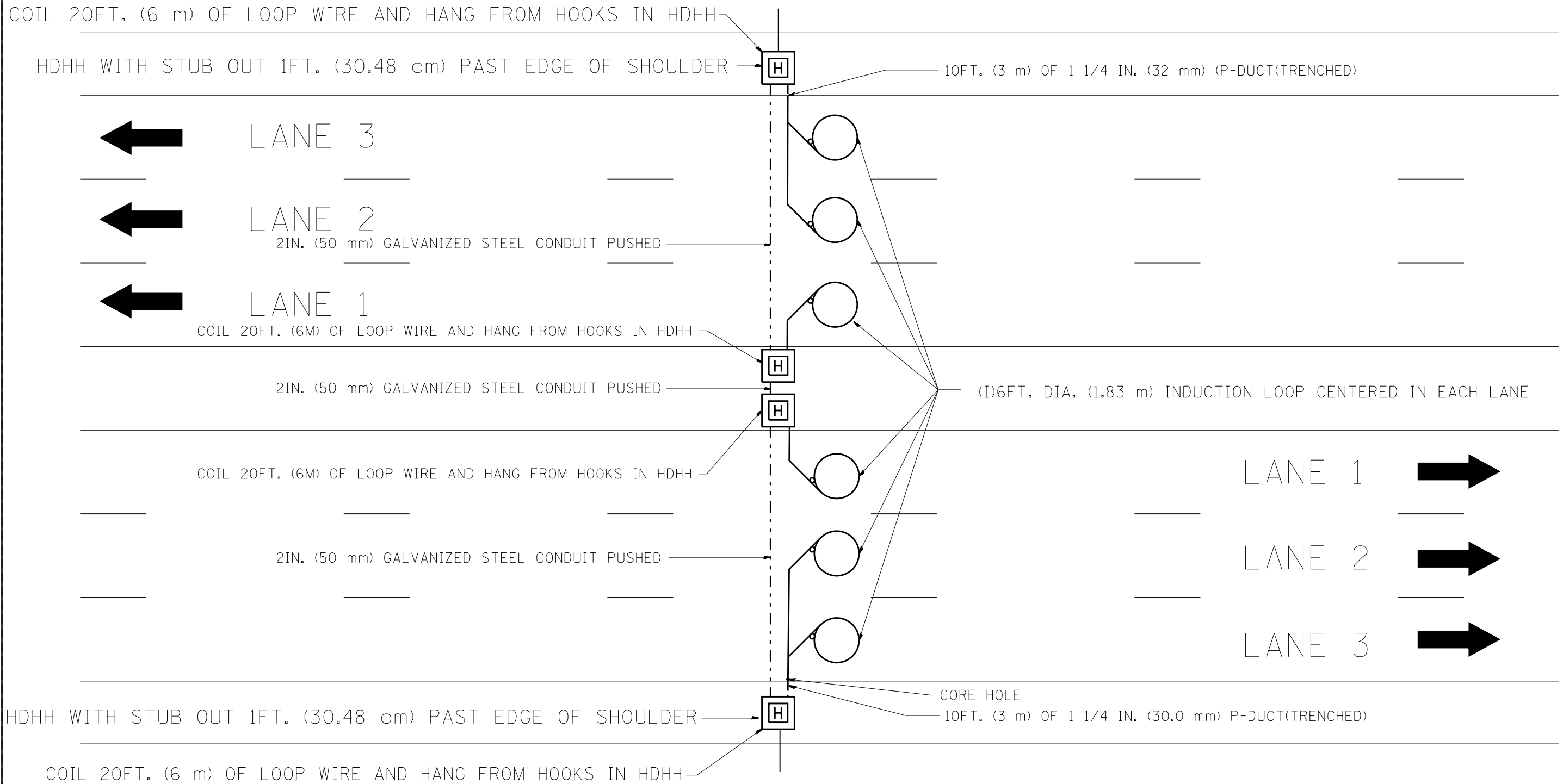
LETTERS	6 INCH UPPER CASE LETTERS				8 INCH UPPER CASE LETTERS				LETTERS	6 INCH LOWER CASE LETTERS	
	SERIES		SERIES		SERIES		SERIES			C	D
	C	D	C	D	C	D	C	D			
A	3 <sup>6</sup>	5 <sup>0</sup>	5 <sup>0</sup>	6 <sup>5</sup>	a	3 <sup>5</sup>	4 <sup>2</sup>				
B	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	b	3 <sup>5</sup>	4 <sup>2</sup>				
C	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	c	3 <sup>5</sup>	4 <sup>1</sup>				
D	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	d	3 <sup>5</sup>	4 <sup>2</sup>				
E	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	e	3 <sup>5</sup>	4 <sup>2</sup>				
F	3 <sup>0</sup>	3 <sup>5</sup>	4 <sup>0</sup>	4 <sup>7</sup>	f	2 <sup>3</sup>	2 <sup>6</sup>				
G	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	g	3 <sup>5</sup>	4 <sup>2</sup>				
H	3 <sup>2</sup>	4 <sup>0</sup>	4 <sup>3</sup>	5 <sup>3</sup>	h	3 <sup>5</sup>	4 <sup>2</sup>				
I	0 <sup>7</sup>	0 <sup>7</sup>	1 <sup>1</sup>	1 <sup>2</sup>	i	1 <sup>1</sup>	1 <sup>1</sup>				
J	3 <sup>0</sup>	3 <sup>6</sup>	4 <sup>0</sup>	5 <sup>0</sup>	j	2 <sup>0</sup>	2 <sup>2</sup>				
K	3 <sup>2</sup>	4 <sup>1</sup>									



**NOTE:**

THE COST OF LOOP WIRE IN HDHH IS INCIDENTAL TO THE INDUCTION LOOP.  
IT SHALL NOT BE MEASURE FOR PAYMENT.

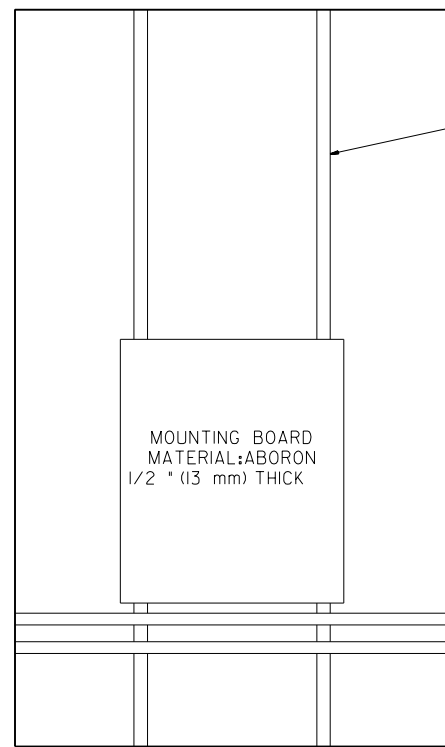
FILE NAME =	USER NAME = mezag	DESIGNED - J.G.	REVISED - 12-02-2010	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>TRAFFIC SYSTEMS CENTER</b>	<b>ONE LANE COUNT STATION</b>		F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pw\work\p\dot\mezag\d0287541\TSCTYP.dgn	DRAWN - G.M.	REVISED -	SCALE: NONE				SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
PLOT SCALE = 100.0000' / in.	CHECKED - J.G.	REVISED -					<b>CONTRACT NO.</b> 60W28					
PLOT DATE = 2/7/2013	DATE - 01-31-07	REVISED -										



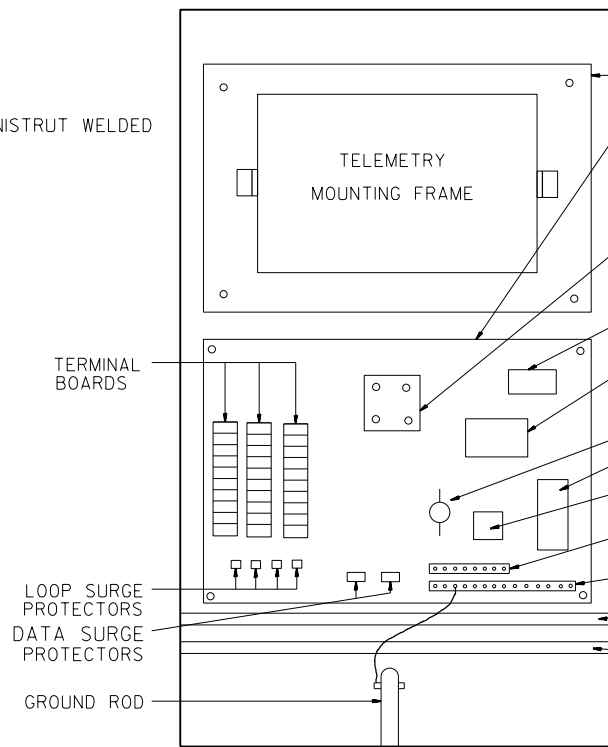
**NOTE:**

THE COST OF LOOP WIRE IN HDHH IS INCIDENTAL TO THE INDUCTION LOOP. IT SHALL NOT BE MEASURED FOR PAYMENT.

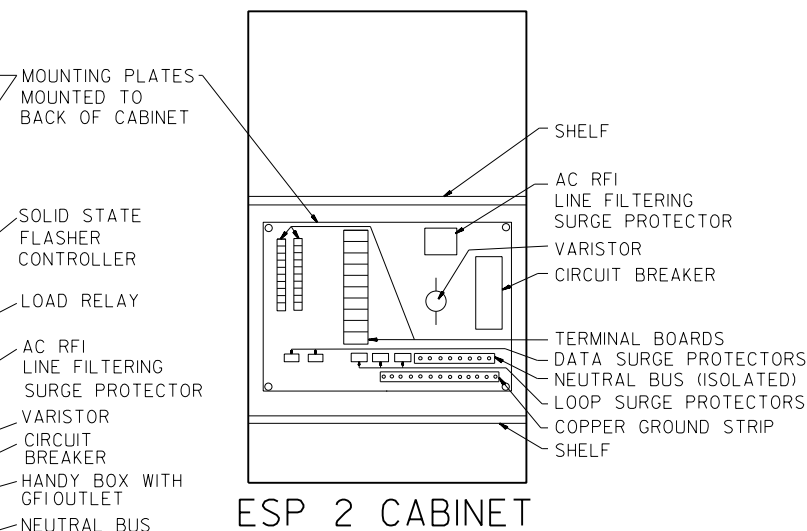
FILE NAME =	USER NAME = mezag	DESIGNED - J.G.	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>TRAFFIC SYSTEMS CENTER</b>	<b>3 LANE COUNT STATION</b> <b>(DIFFERENT DIRECTIONS)</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\dot\mezag\d0287541\TSCYP.dgn	PLOT SCALE = 100.0000' / in.	DRAWN - G.M.	REVISED -								747	622
PLOT DATE = 2/7/2013	DATE - 12-02-2010	CHECKED - J.G.	REVISED -		SCALE: NONE    SHEET NO. OF SHEETS    STA. TO STA.			<b>CONTRACT NO.</b> 60W28				
		DATE - 12-02-2010	REVISED -		FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT							



SIDE VIEW ESP 3 & 4 CABINET



ESP 3 CABINET



ESP 2 CABINET

TYPICAL CABINET INTERIORS

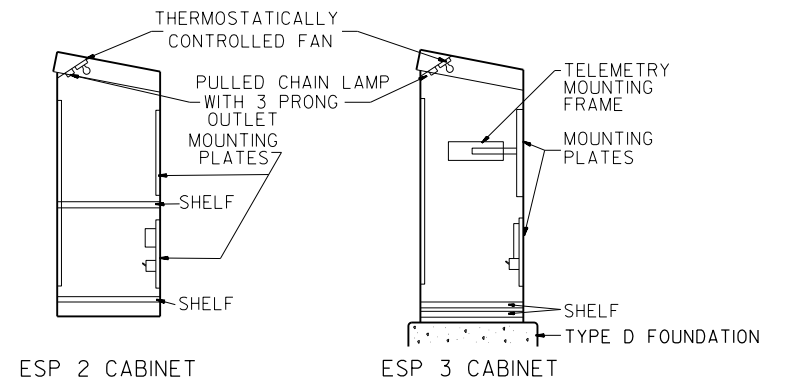
STANDARD TRAFFIC SYSTEMS CENTER CABINETS

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)	7/16" (4.76mm)	FABRICATED ALUMINUM
ESP3	49.5" (1,26 m)	30" (762.0mm)	17" (431.8mm)	3/16" (4.76mm)	FABRICATED ALUMINUM
ESP4	55" (1,4 m)	44" (1,12 m)	26" (660.4mm)	3/16" (4.76mm)	FABRICATED ALUMINUM

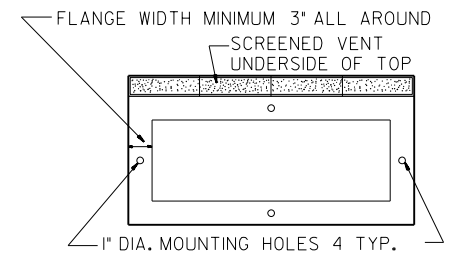
NOTES:

- 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 (1,25 m) 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



BOTTOM VIEW MOUNTING PATTERN

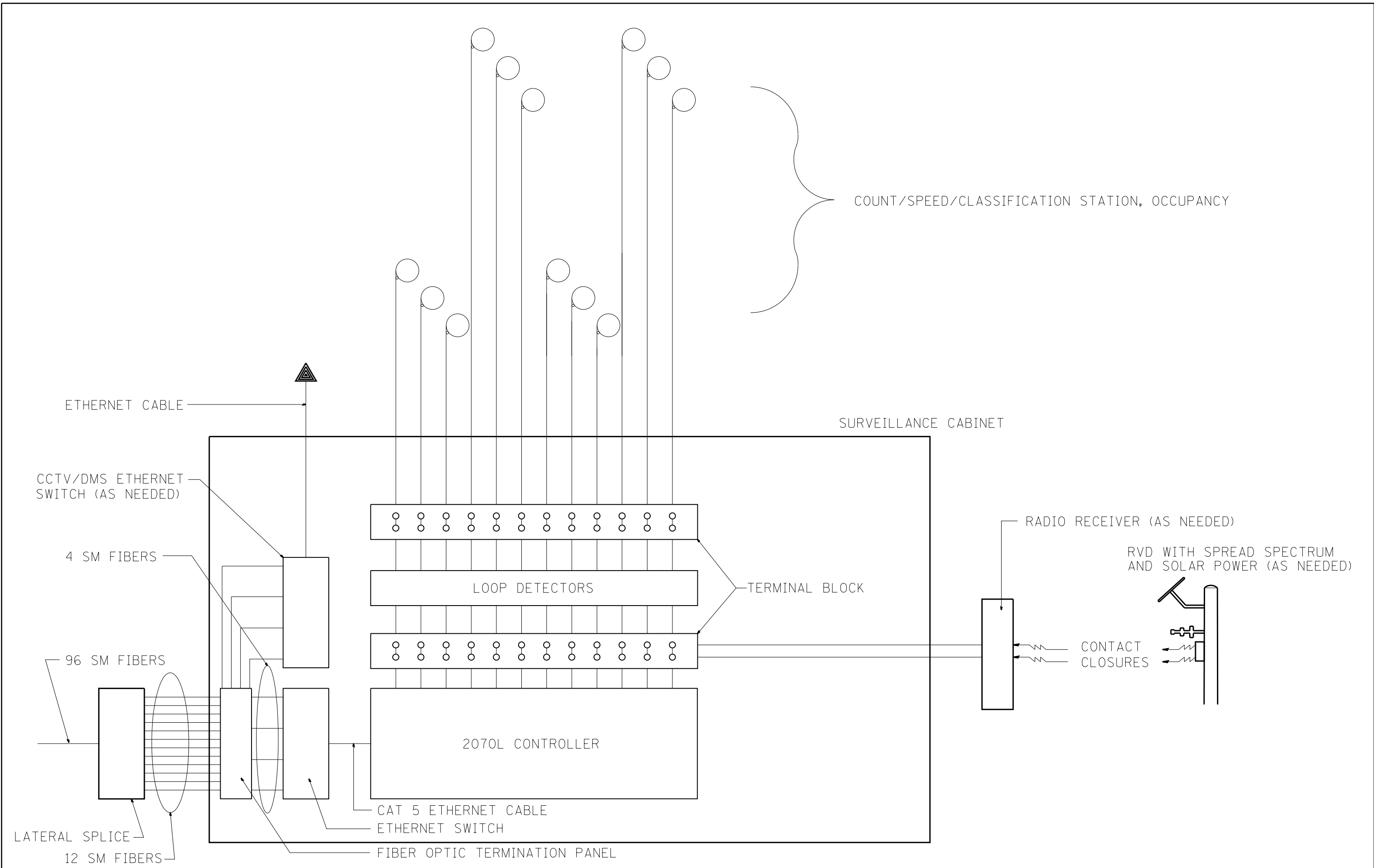
(X)

- |                  |                     |
|------------------|---------------------|
| 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

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 12/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	CABINET DETAIL SHEET	F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - G.M.	REVISED - 09/96			747	623			
PLOT SCALE = #SCALE#		CHECKED - R.L.	REVISED - 02/98			CONTRACT NO. 60W28				
#MODELNAME#		DATE - 06/21/94	REVISED - 03/99			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SYSTEMS CENTER (TY-ITSC-400#4)



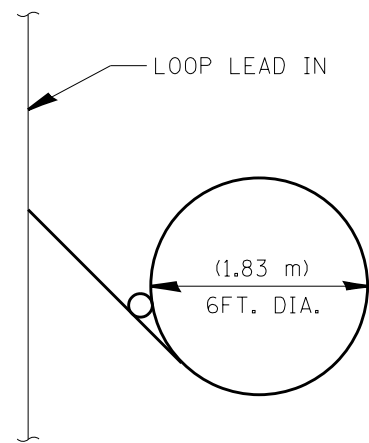
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	PLOT SCALE = 100.0000' / 1"	CHECKED - J.G.	REVISED -
	PLOT DATE = 2/7/2013	DATE - 12/29/09	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**TRAFFIC SYSTEMS CENTER**

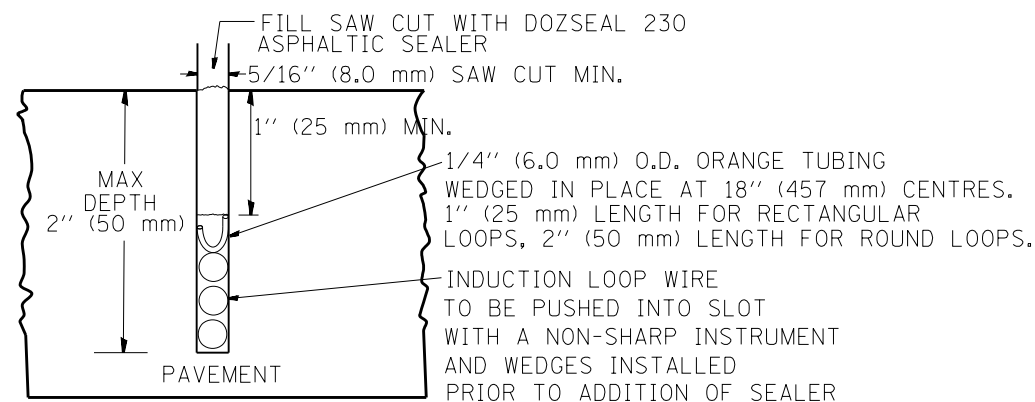
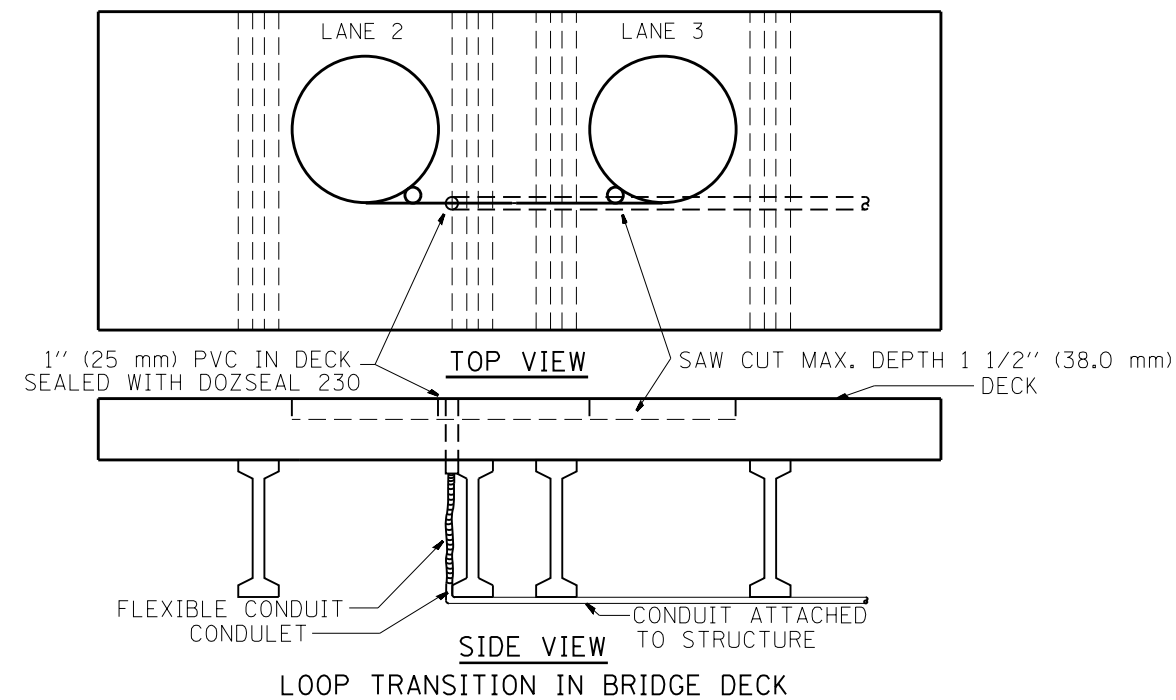
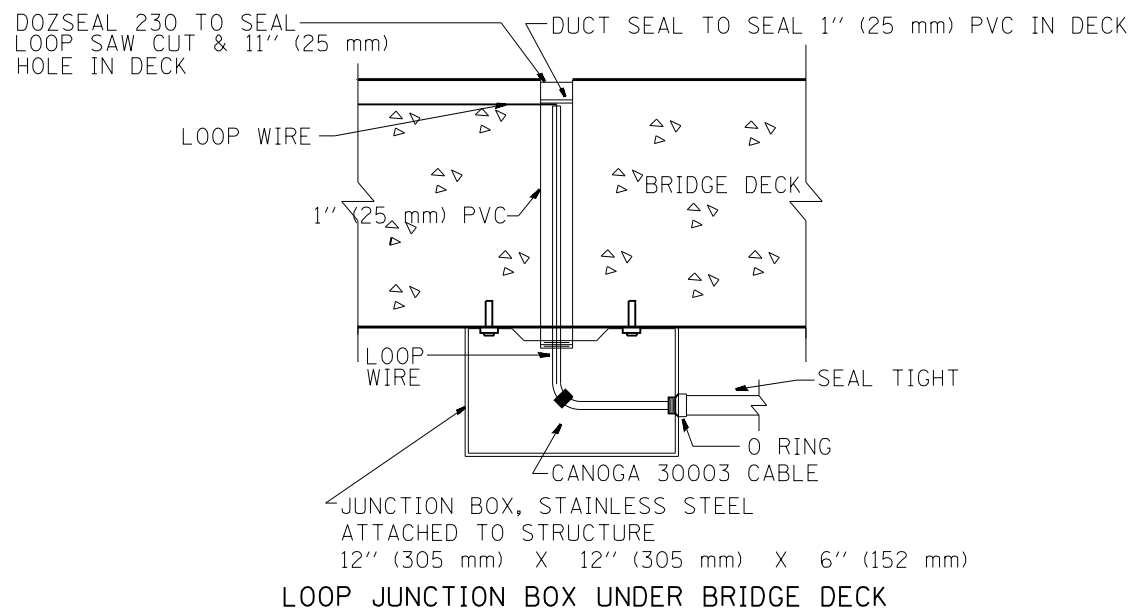
<b>LOOP DETECTOR/SPEED DETECTOR</b> <b>CABINET LAYOUT</b>			
SCALE: NONE	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			747	624
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60W28	

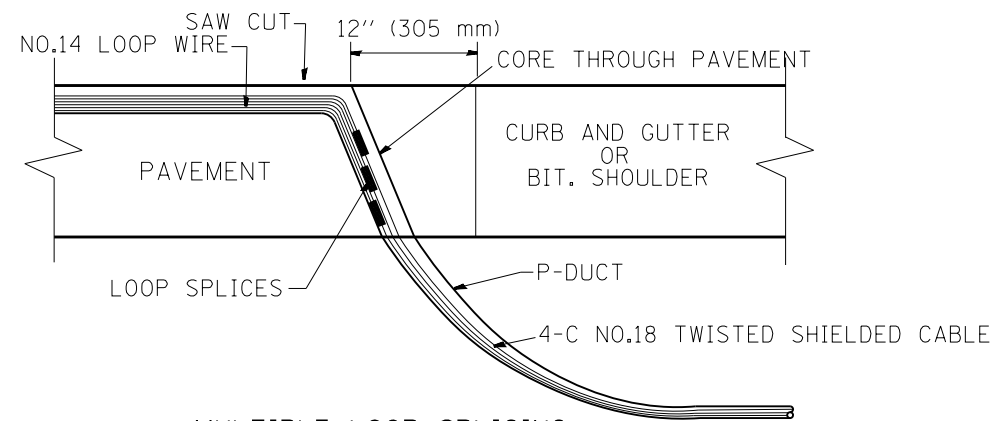
TRAFFIC SYSTEMS CENTER 4TY-1TSC-400#44)



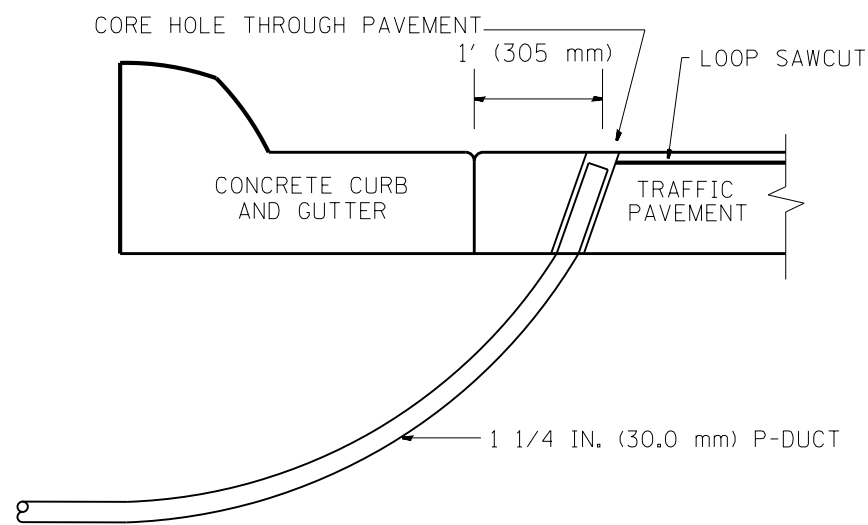
TYPICAL LOOP SAWCUT LAYOUT



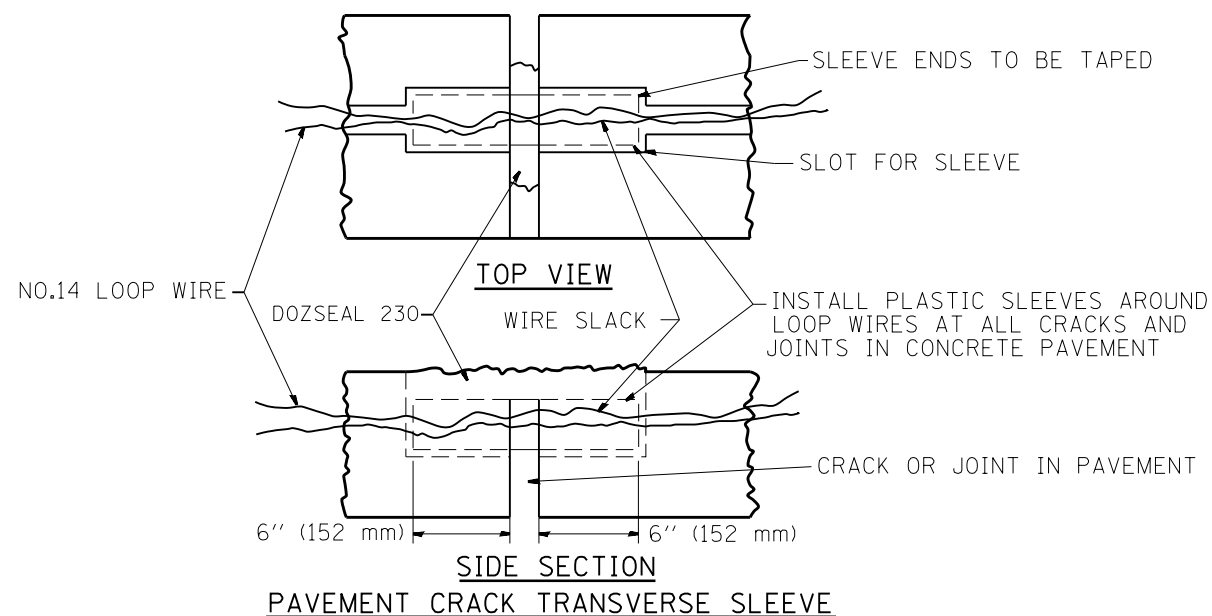
LOOP CROSS SECTION IN PAVEMENT



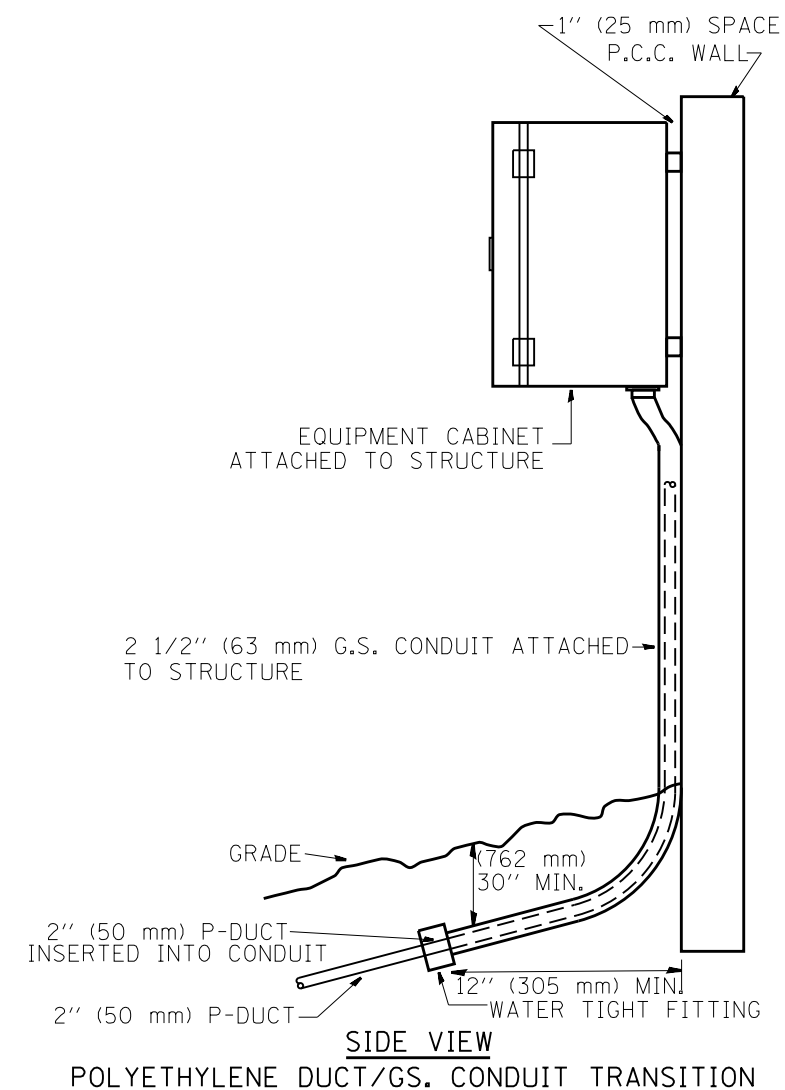
MULTIPLE LOOP SPLICING



SIDE SECTION LOOP LEAD-IN TRANSITION DETAIL



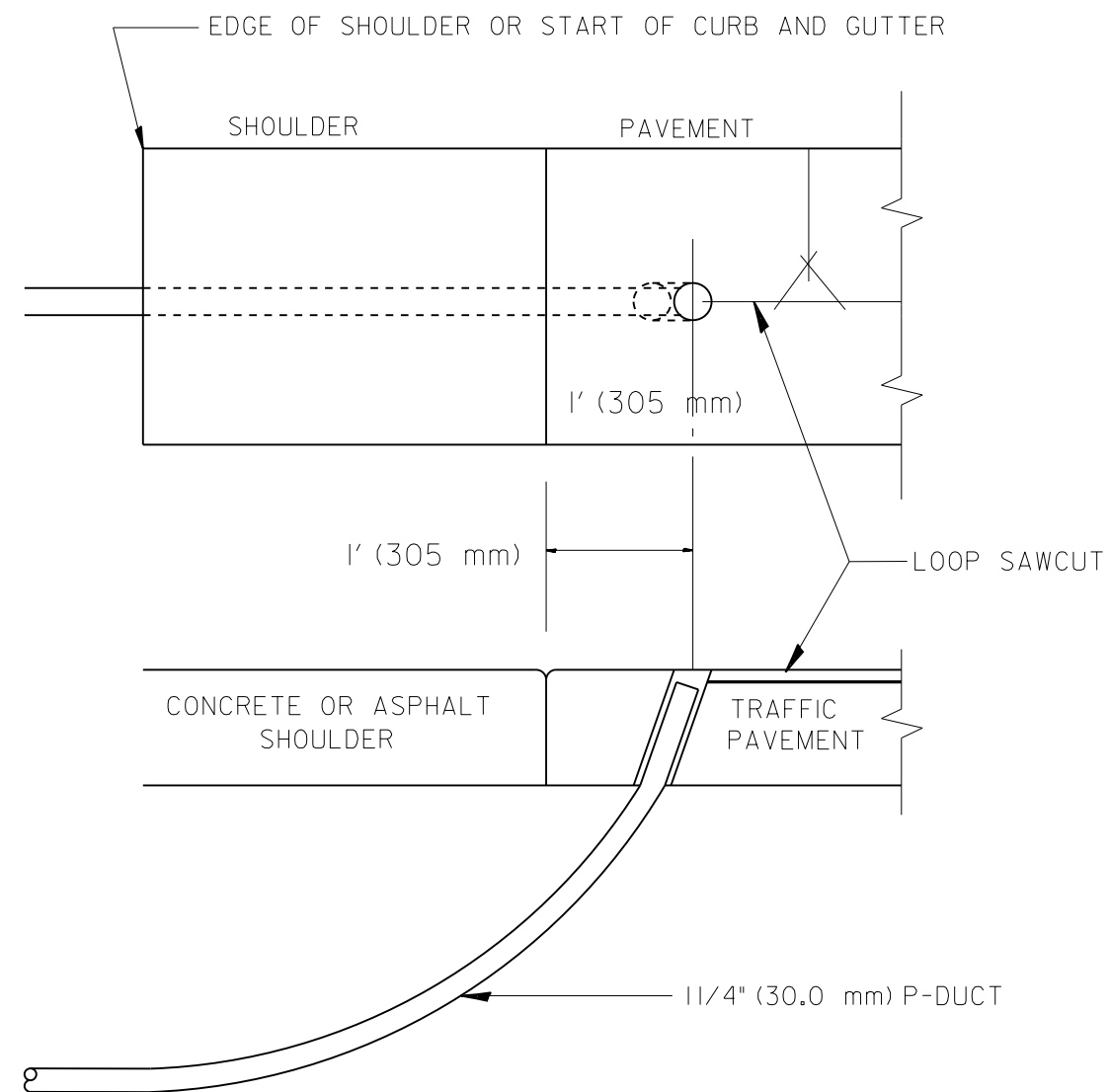
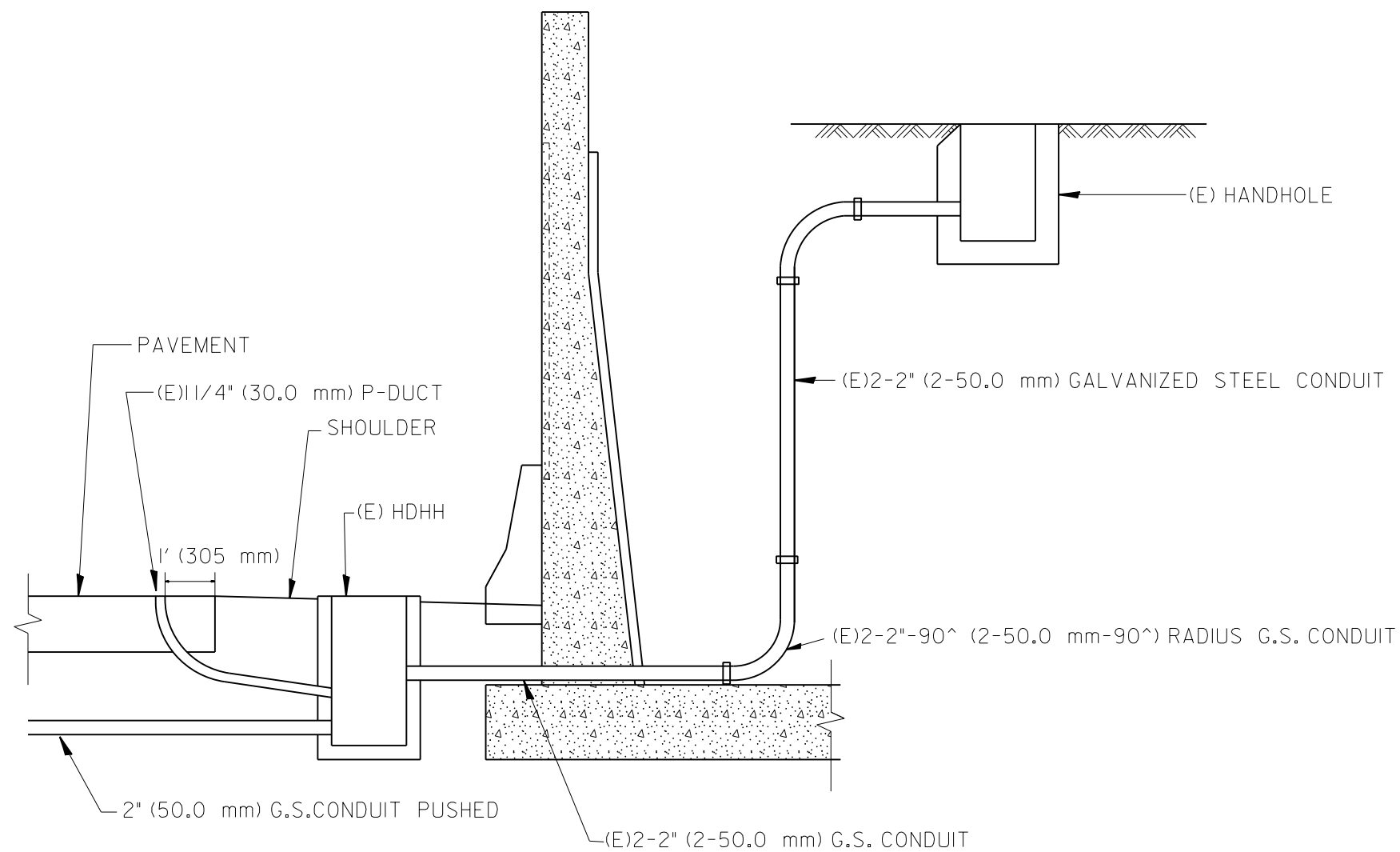
SIDE SECTION PAVEMENT CRACK TRANSVERSE SLEEVE



SIDE VIEW POLYETHYLENE DUCT/GS. CONDUIT TRANSITION

FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	LOOP, CONDUIT & DUCT INSTALLATION DETAILS			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED - R.L.	REVISED - 11/95										
		DATE - 06/22/94	REVISED - 10/96										





SHOULDER LOOP LEAD-IN  
TRANSITION DETAIL

FILE NAME =	USER NAME = #USER#	DESIGNED - R.L.	REVISED - 6/94
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#MODELNAME#	PLOT DATE = #DATE#	DATE - 6-22-94	REVISED - 10/96

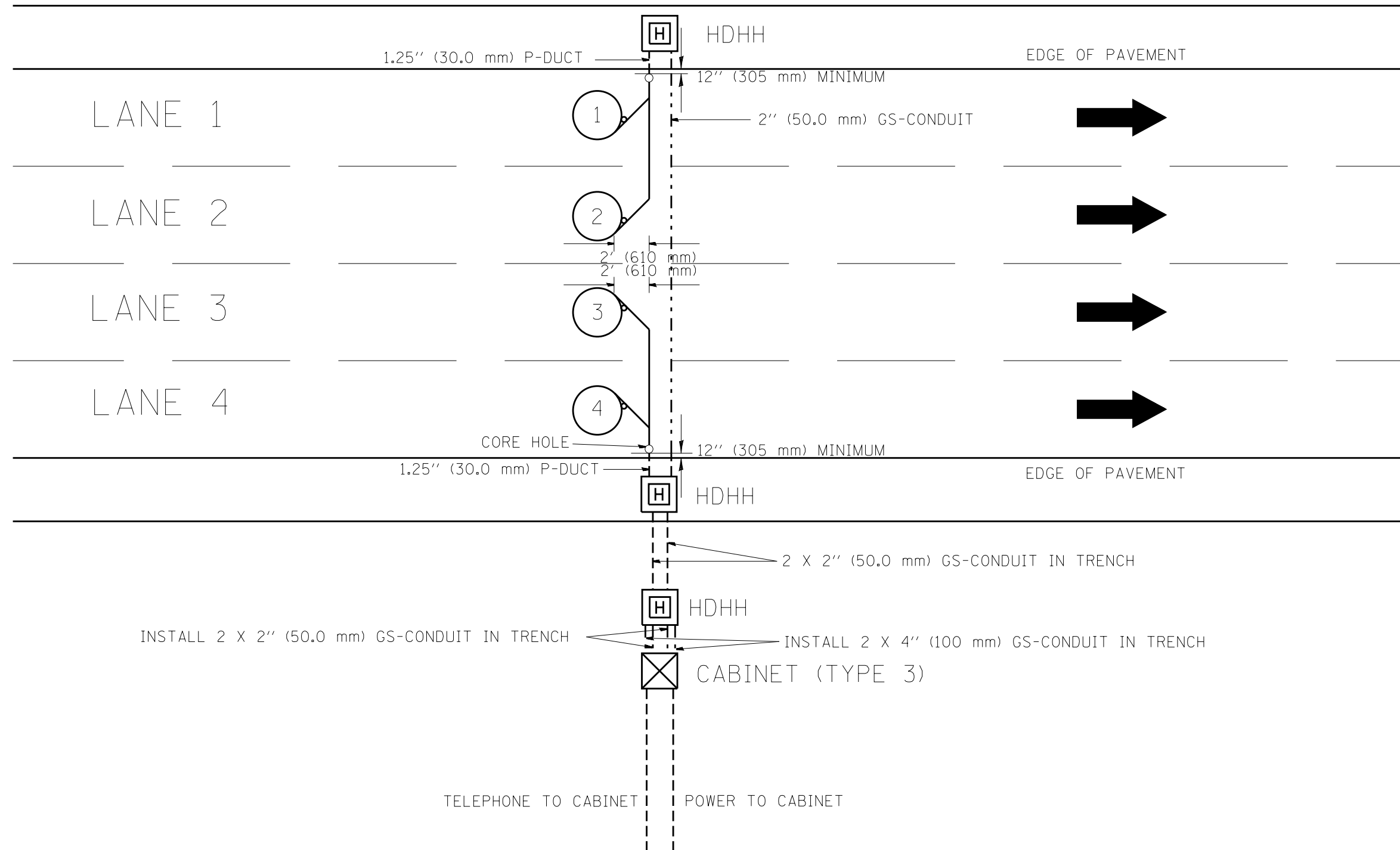
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
TRAFFIC SYSTEMS CENTER

TYPICAL INDUCTION LOOP LEAD-IN  
TRANSITION DIAGRAMS

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			747	626
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60W28	

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.

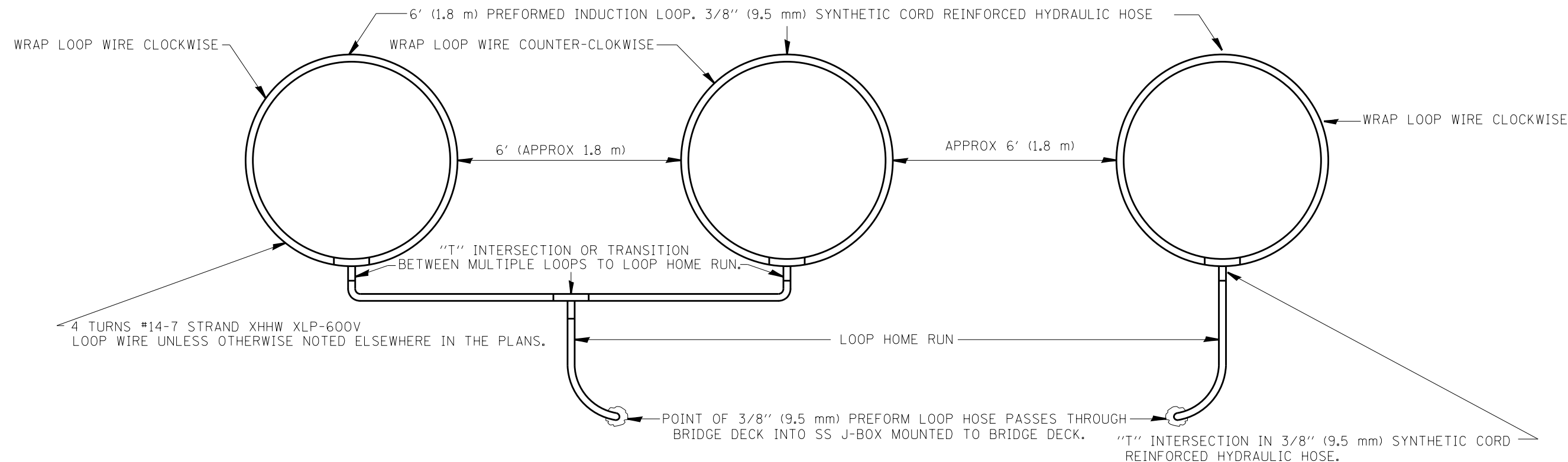
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
TRAFFIC SYSTEMS CENTER

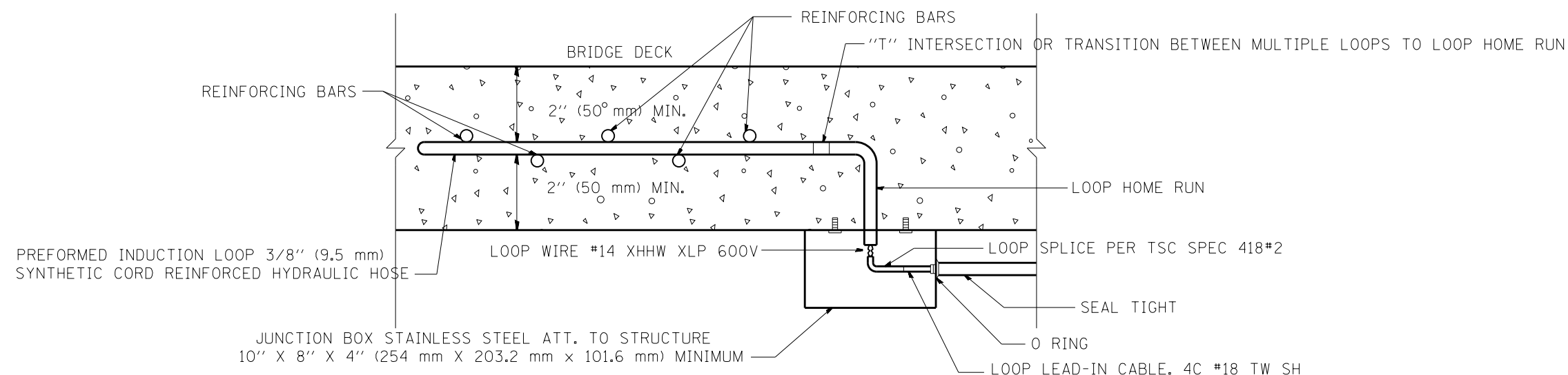
NEW CONSTRUCTION ROUND INDUCTION LOOP TYPICAL INSTALLATION			
SCALE: NONE	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			747	627
CONTRACT NO.			60W28	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TRAFFIC SYSTEMS CENTER (TY-1TSC-418#6)



**TYPICAL 3 LANE COUNT STATION EMBEDDED IN BRIDGE DECK**

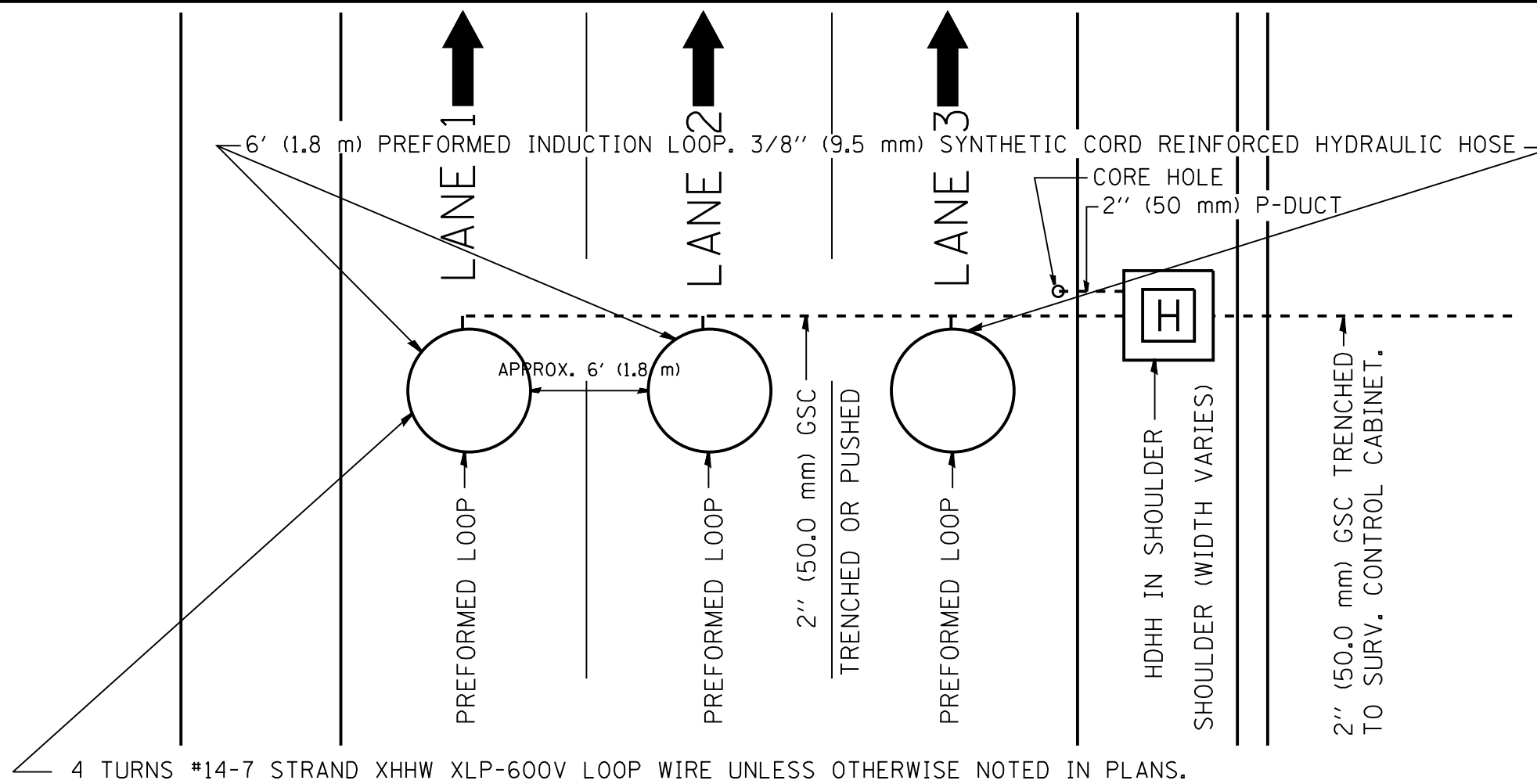


**LOOP JUNCTION BOX UNDER BRIDGE DECK**

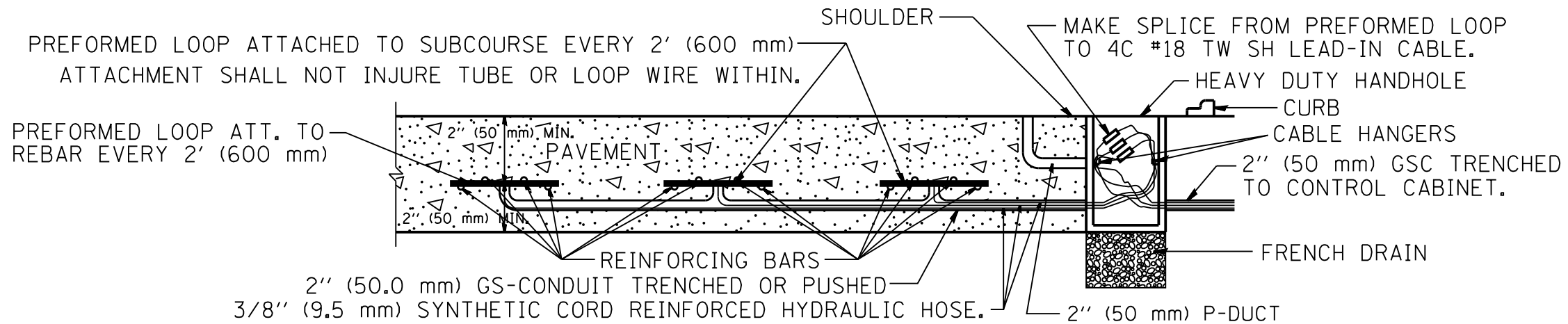
**NOTES:**

- 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.

FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>PREFORMED LOOP INSTALLATION IN BRIDGE DECK</b>			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 2/7/2013	DATE - 2-97	CHECKED - R.L.	REVISED -									CONTRACT NO. 60W28	
		DATE - 2-97	REVISED -									ILLINOIS FED. AID PROJECT	



**TYPICAL 3 LANE COUNT STATION IN NEW CONCRETE PAVEMENT**

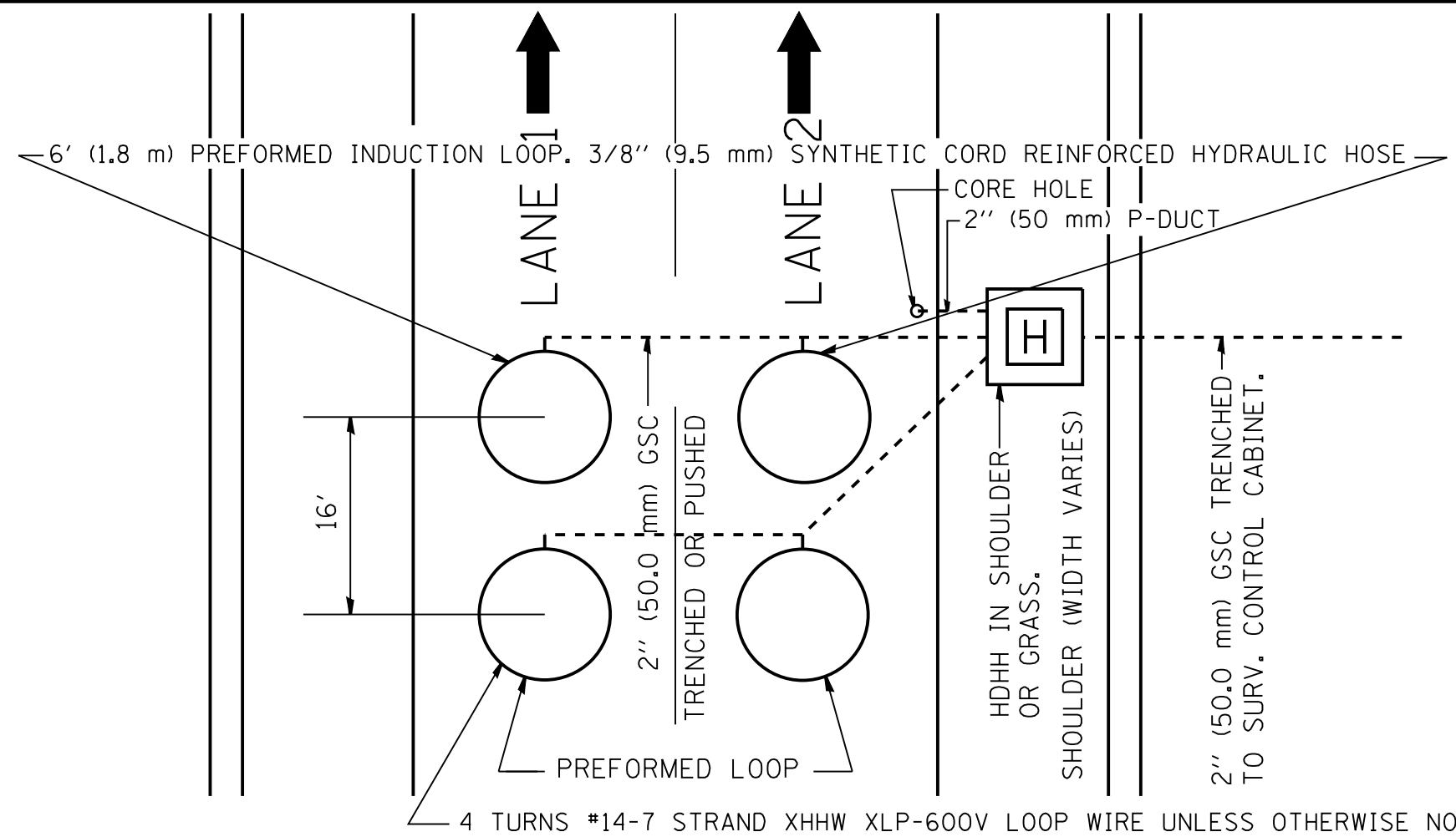


**LOOP INSTALLATION IN NEW CONCRETE PAVEMENT**

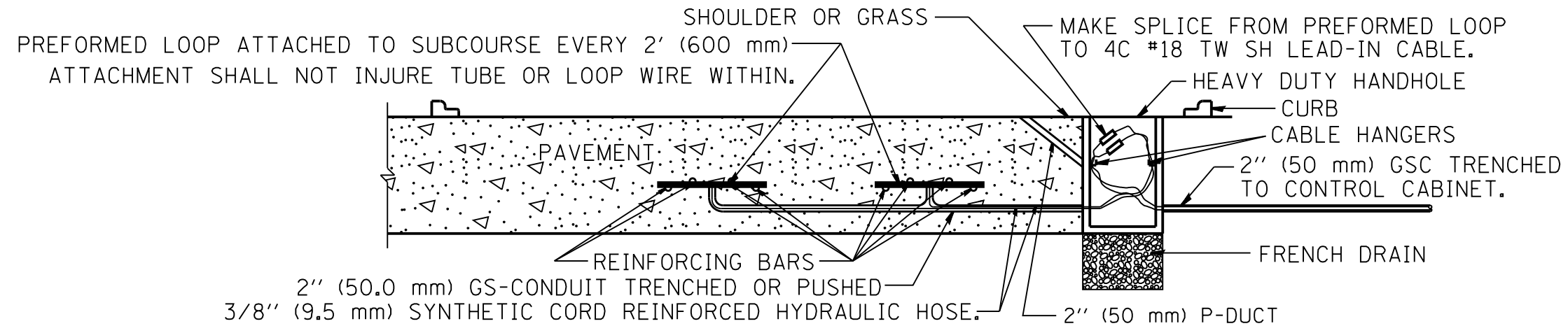
**NOTES:**

- 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 * USER*	DESIGNED - J.G.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PREFORMED LOOP TYPICAL INSTALLATION NEW CONCRETE PAVEMENT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*FILEL*	PLOT SCALE * SCALE*	DRAWN - G.M.	REVISED -					SCALE: NONE	SHEET	OF	SHEETS	STA.
*MODELNAME*	PLOT DATE * DATE*	CHECKED - J.G.	REVISED -		CONTRACT NO. 60W28							
		DATE - 06/22/04	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							



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

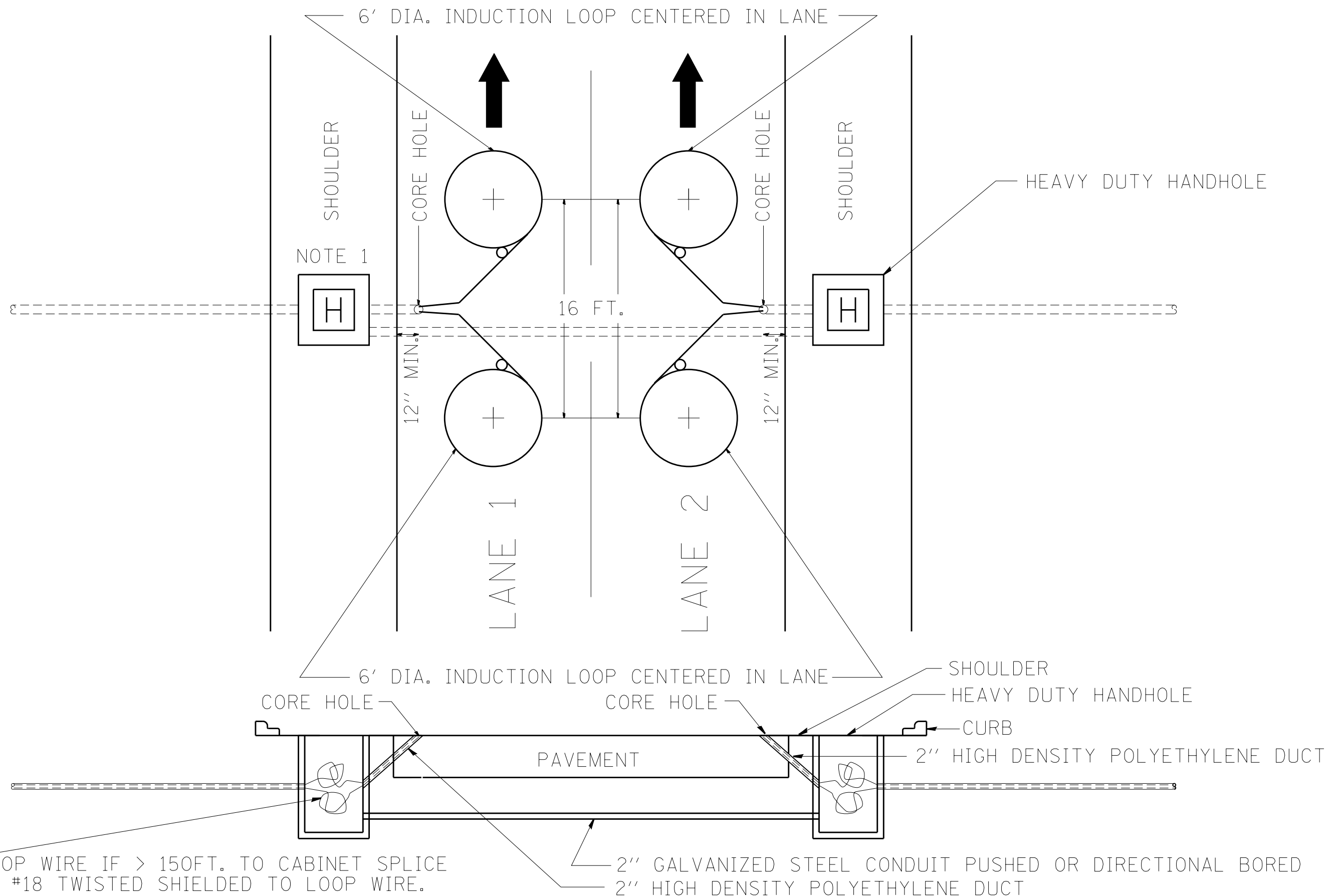


**LOOP INSTALLATION IN NEW CONCRETE PAVEMENT**

**NOTES:**

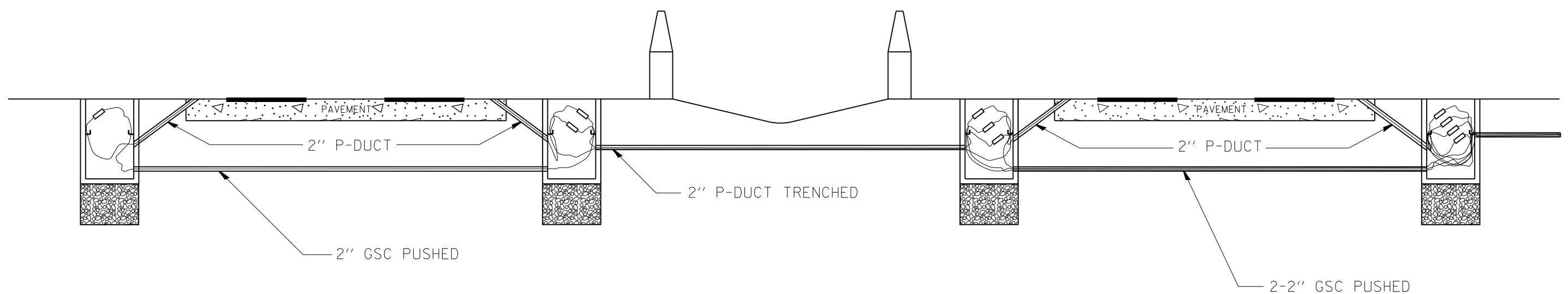
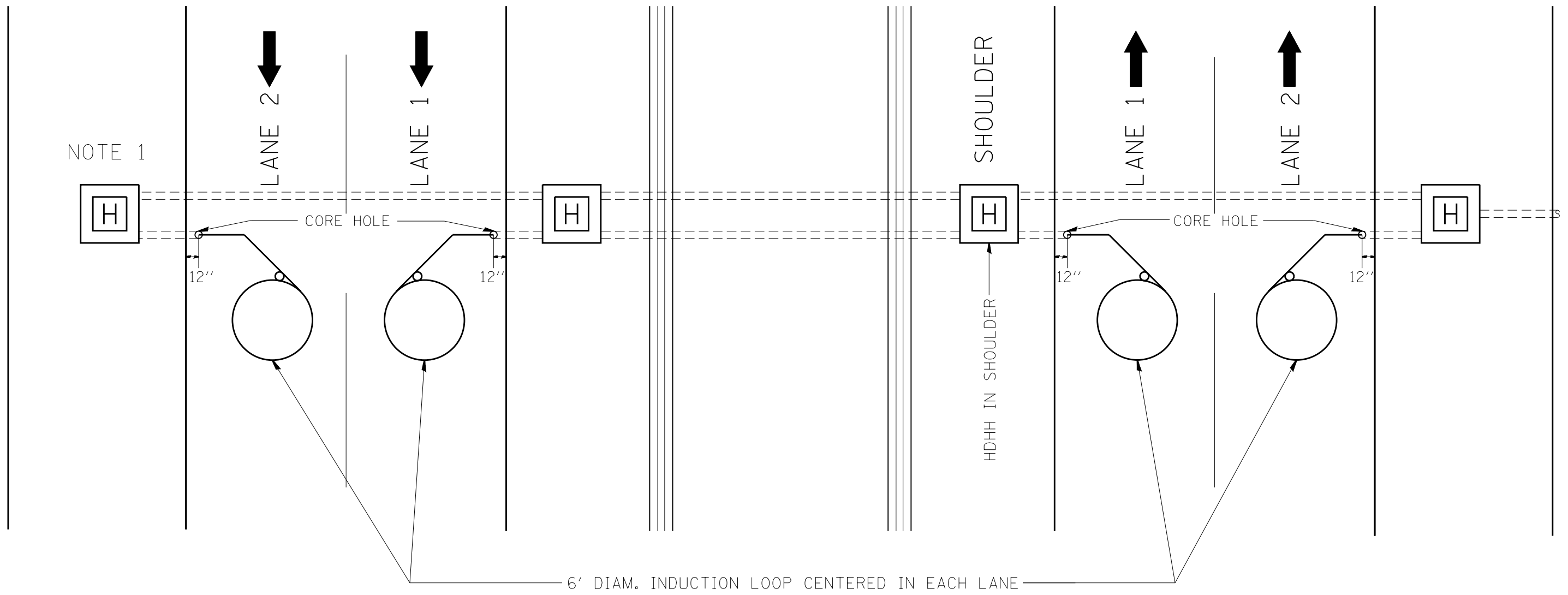
- 1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN 4C #18 TWISTED SHIELD LEAD-IN CABLE TO CABINET.
- 2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
- 3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.
- 4.- FOR LANE 1 WRAP LOOPS CLOCKWISE, FOR LANE 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 * USER*	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. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
*FILEL*		DRAWN - G.M.	REVISED -		SCALE: NONE	SHEET	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	747	630
*MODELNAME*	PLOT DATE * DATE*	CHECKED - J.G.	REVISED -										CONTRACT NO.	60W28
		DATE - 06/25/2010	REVISED -											



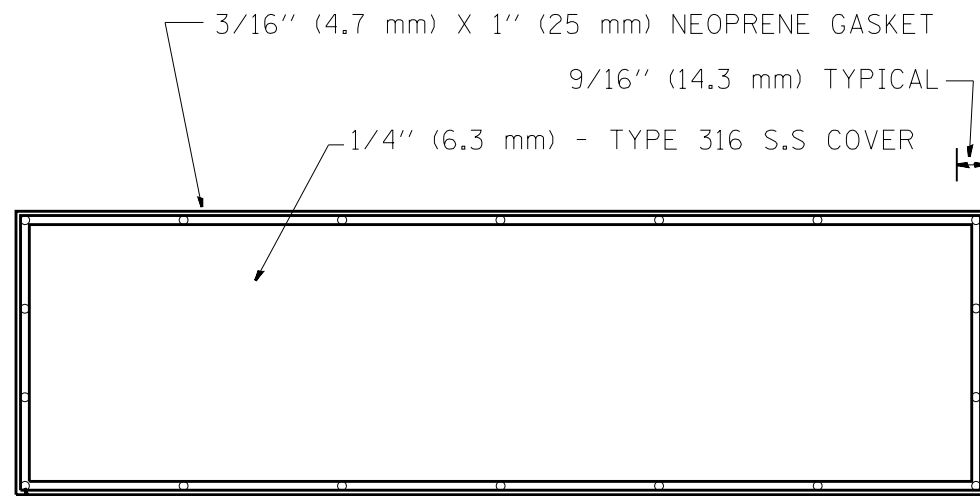
FILE NAME =	USER NAME = mezag	DESIGNED - J.G.	REVISED - 07/27/2010	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>TRAFFIC SURVEILLANCE 2 LANE SPEED, COUNT, CLASSIFICATION STATION</b>			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED - J.G.	REVISED -										
		DATE - 06/25/2010	REVISED -										
											CONTRACT NO. 60W28		

NOTE 1



NOTE 1: IF HDHH NOT POSSIBLE THEN LANE 2 LOOP USES SAME CORE HOLE AS LANE 1 LOOP.

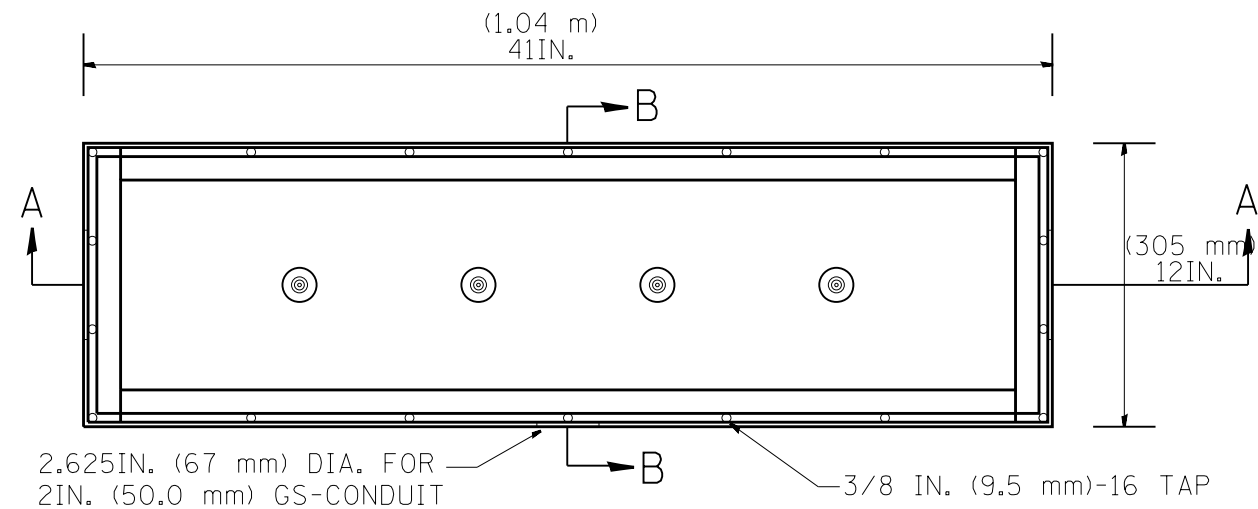
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	PLOT SCALE = 100.0000' / 1in.	CHECKED - J.G.	REVISED -							<b>CONTRACT NO. 60W28</b>			
	PLOT DATE = 2/7/2013	DATE - 07/01/2010	REVISED -							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



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

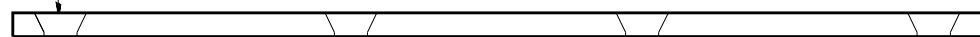


2.625 IN. (67 mm) DIA. FOR  
2 IN. (50.0 mm) GS-CONDUIT

3/8 IN. (9.5 mm)-16 TAP

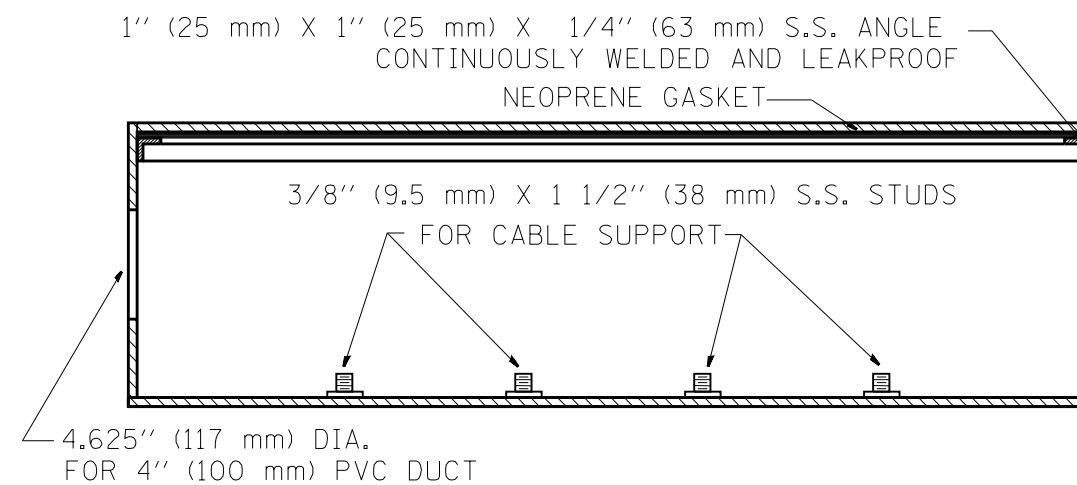
TOP VIEW

STAINLESS STEEL JUNCTION BOX TYPE "J"

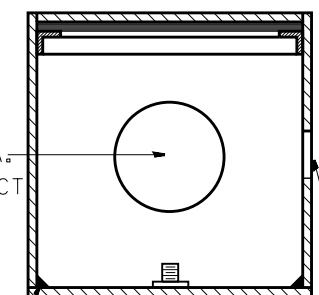
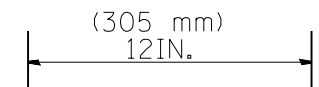


SIDE VIEW

STAINLESS STEEL COVER



SIDE VIEW SECTION A-A



WELDED SEAMS (TYP.)  
2.625 IN. (67 mm) DIA. HOLE

SIDE VIEW SECTION B-B

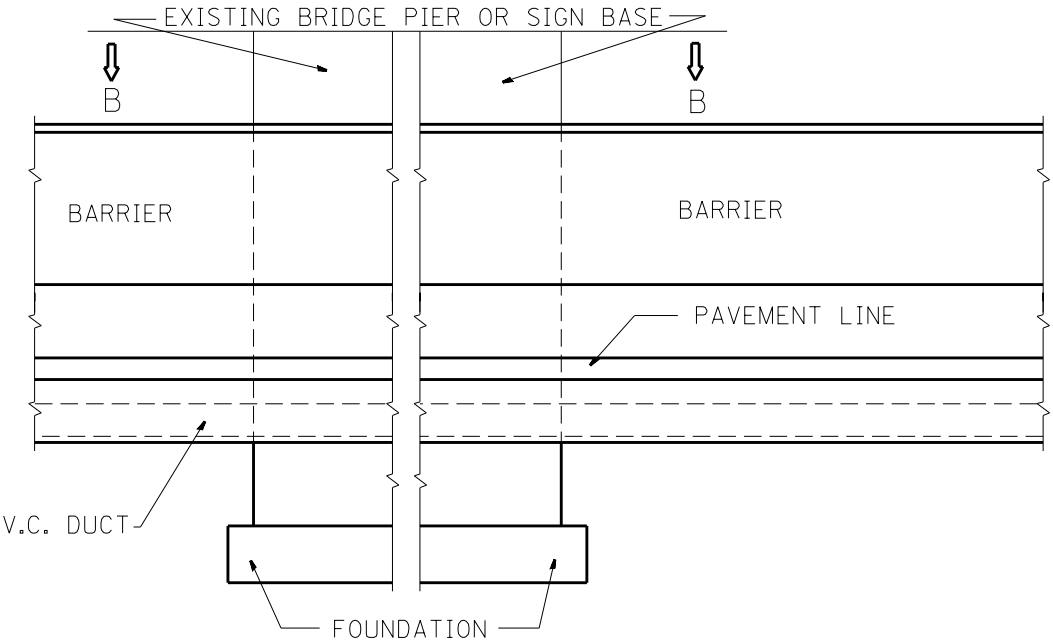
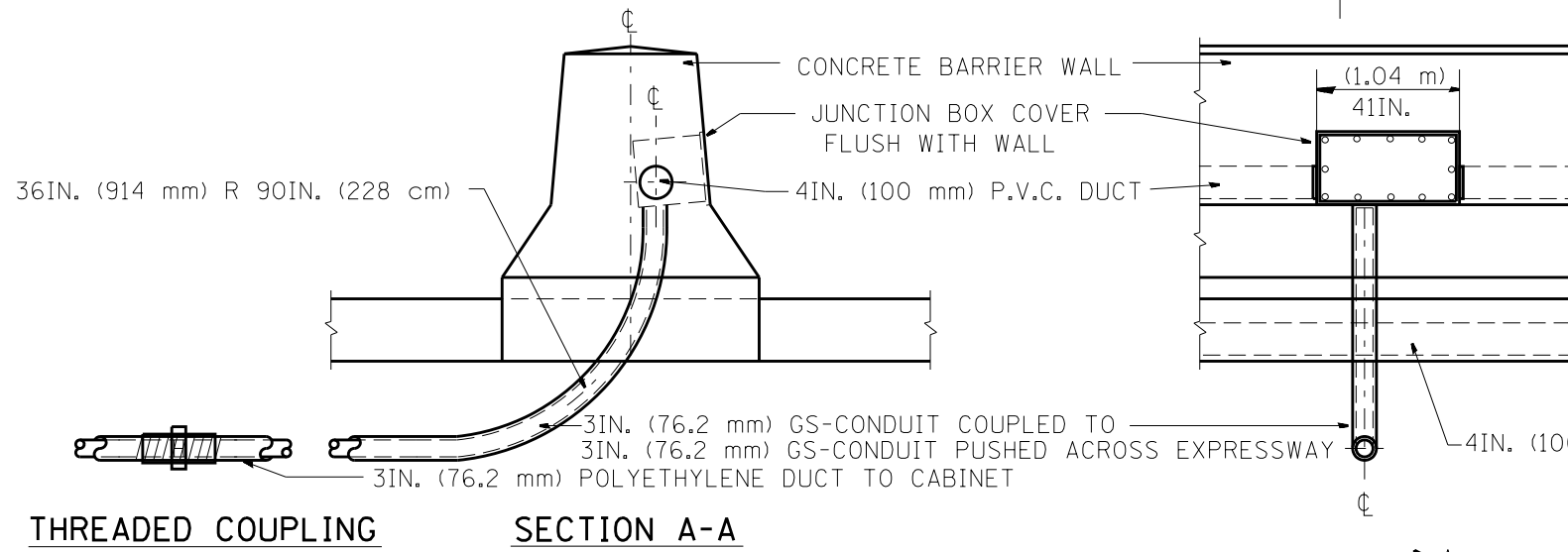
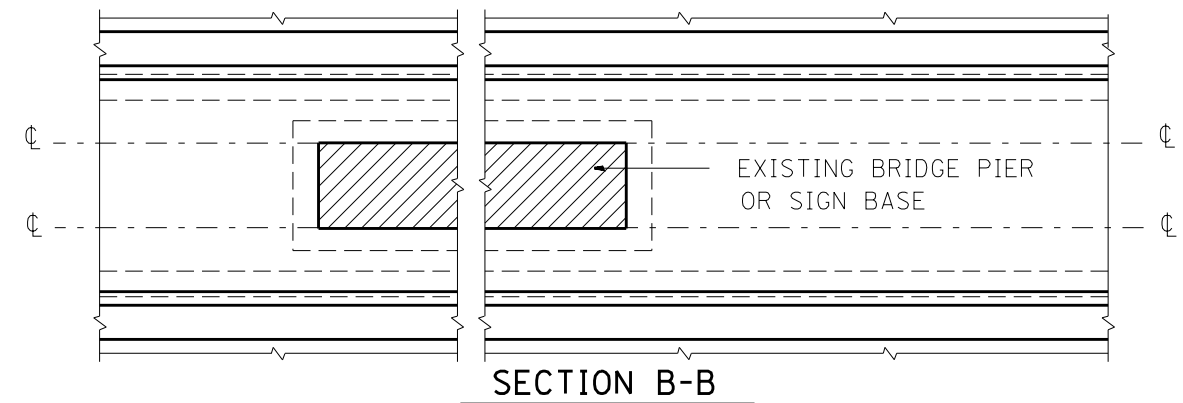
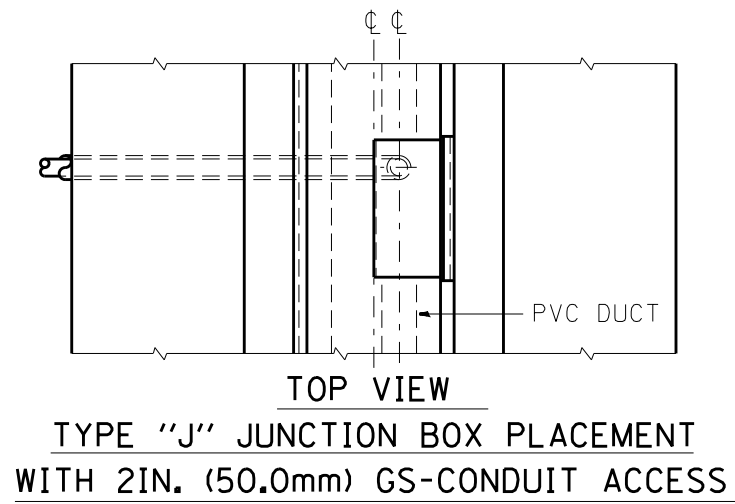
**NOTE:**

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 - R.L.	REVISED - 06/94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>CONCRETE BARRIER WALL JUNCTION BOX TYPE "J"</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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PLOT DATE = 2/7/2013	DATE - 06/22/94	REVISED -												
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											CONTRACT NO. 60W28			

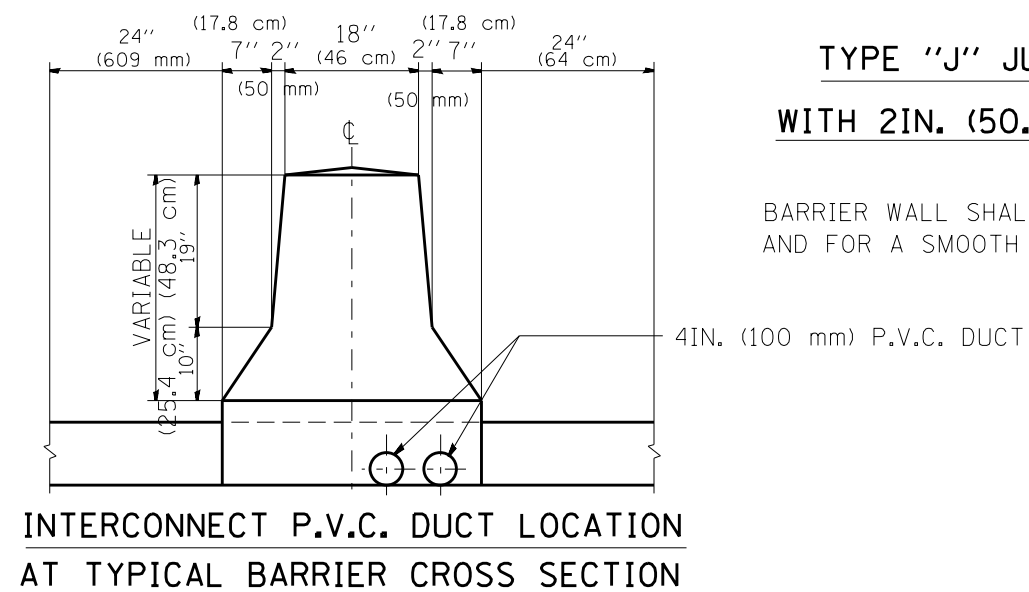




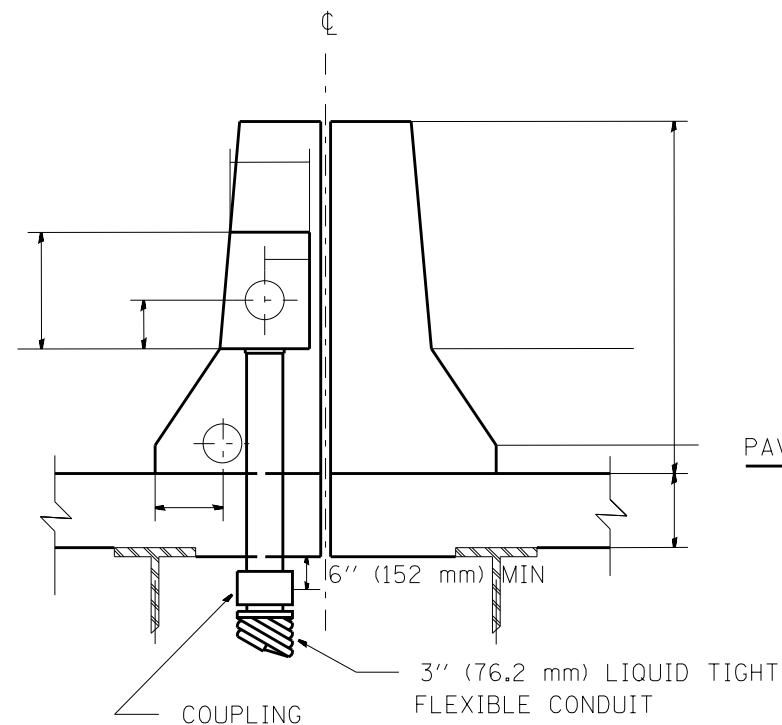
(SEE NOTE NO. 1)  
**TYPE "J" JUNCTION BOX PLACEMENT**  
**WITH 2IN. (50.0 mm) GS-CONDUIT ACCESS**

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

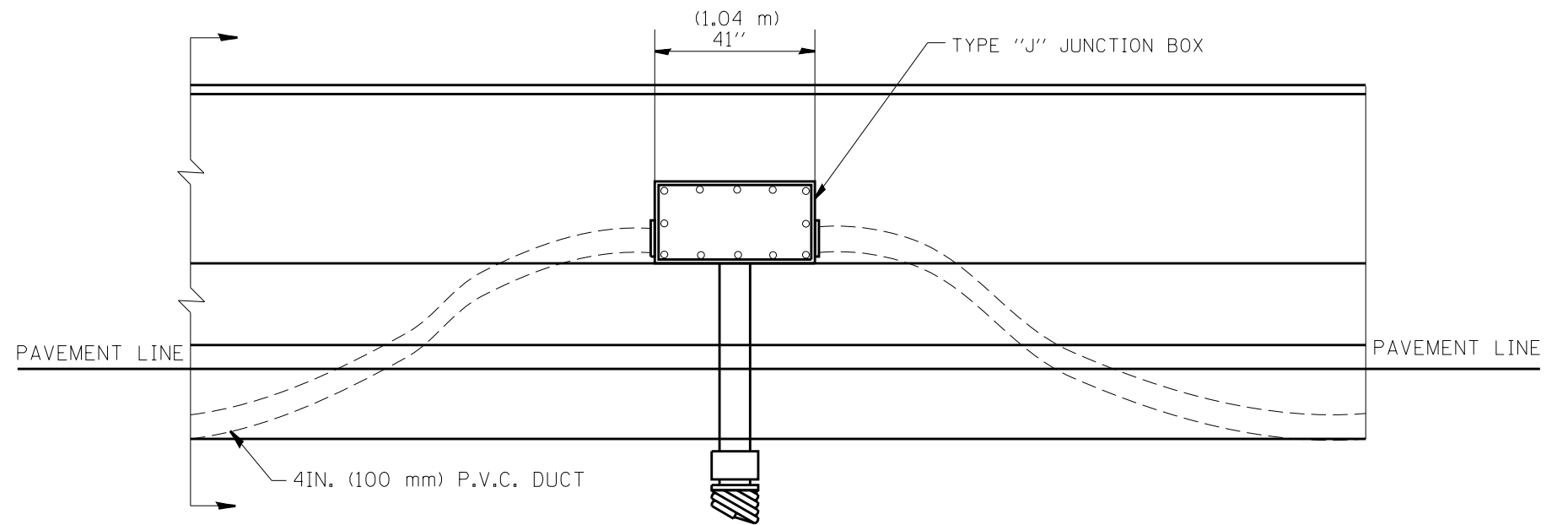
BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.



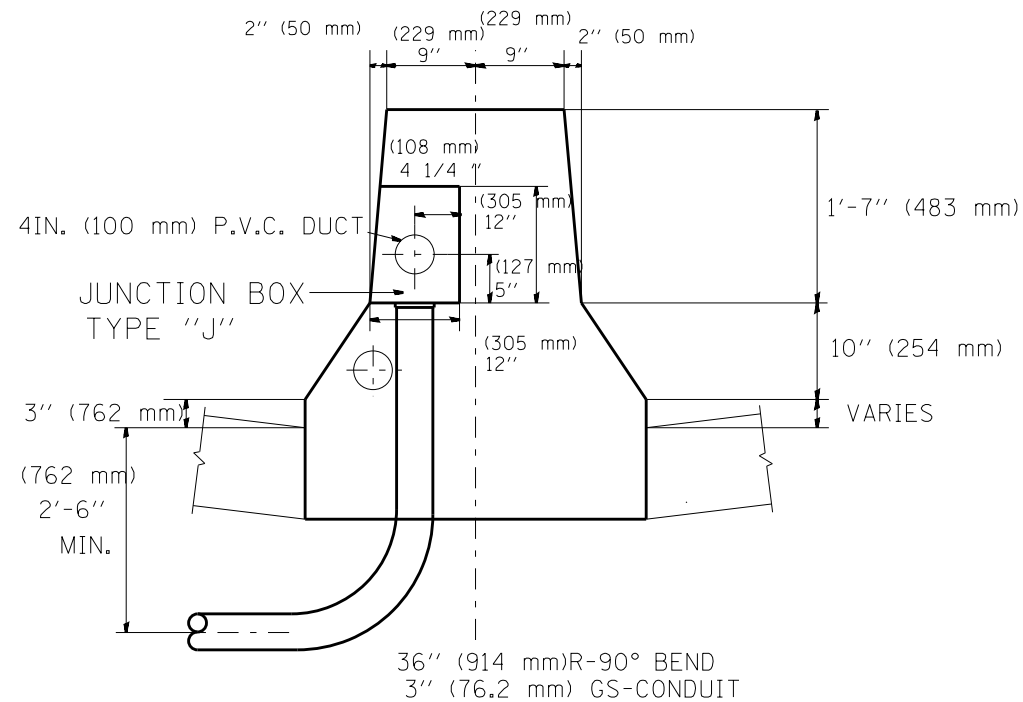
FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED - 06/94	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>TRAFFIC SYSTEMS CENTER</b>	<b>TYPE "J" JUNCTION BOX</b> <b>&amp; P.V.C. DUCT PLACEMENT</b>	F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pw\work\p\idot\mezag\d0287541\TSCTYP.dgn	DRAWN - G.M.	REVISED - 10/96									
PLOT SCALE = 100.0000' / 1"	CHECKED - R.L.	REVISED -									
PLOT DATE = 2/7/2013	DATE - 06/22/94	REVISED -									
					SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
										CONTRACT NO. 60W28	



**DOUBLE SINGLE FACED BARRIER WALL  
ON BRIDGE DECK**



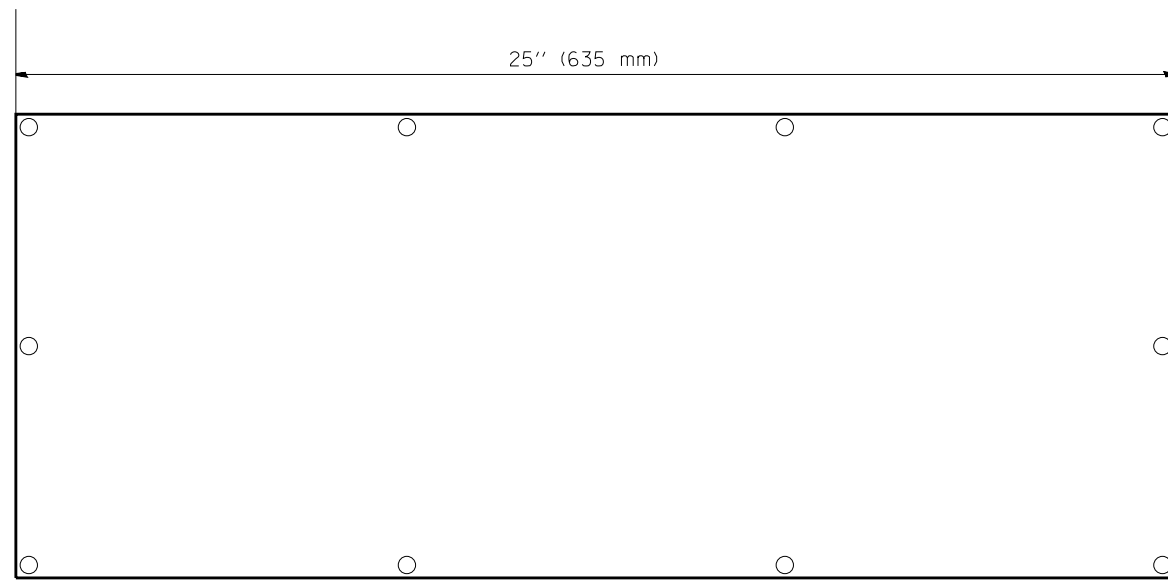
**ELEVATION  
BARRIER WALL DUCT DETAIL  
ON BRIDGE DECK**



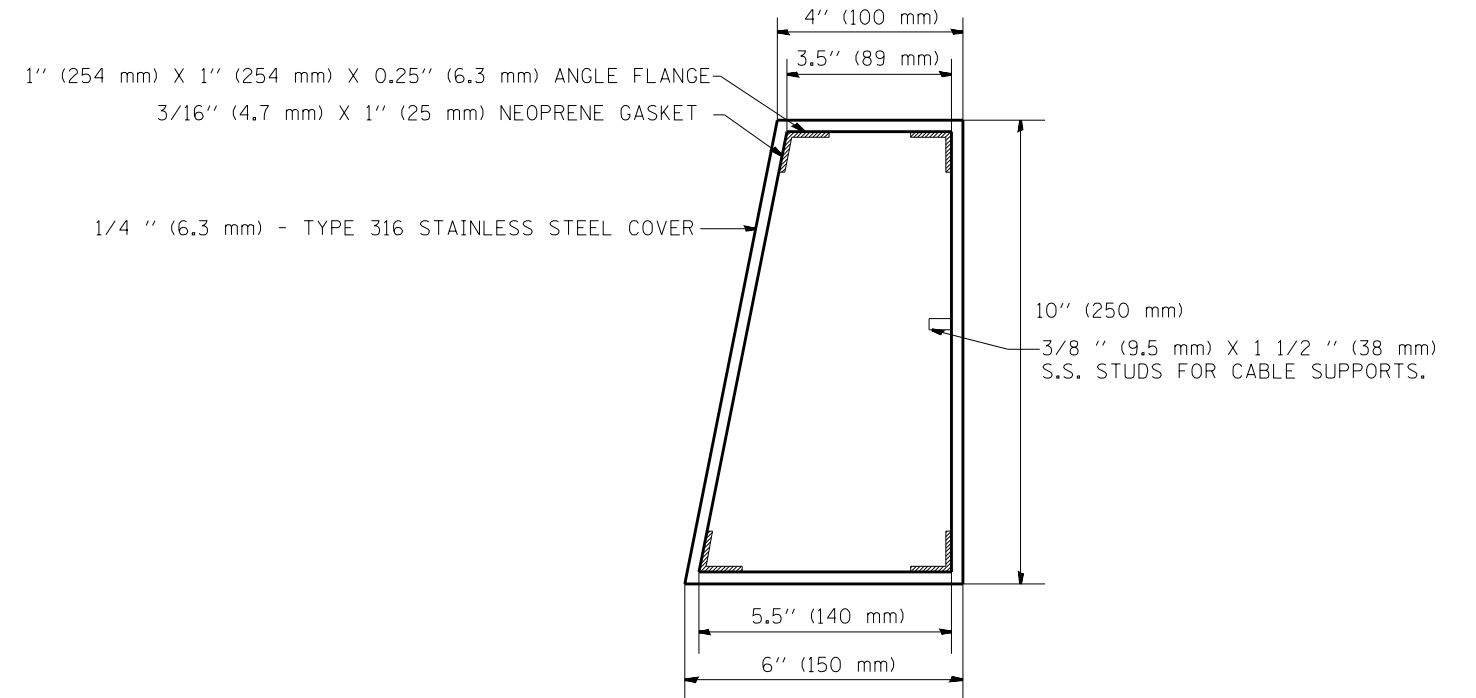
**DOUBLE FACED BARRIER WALL**

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.

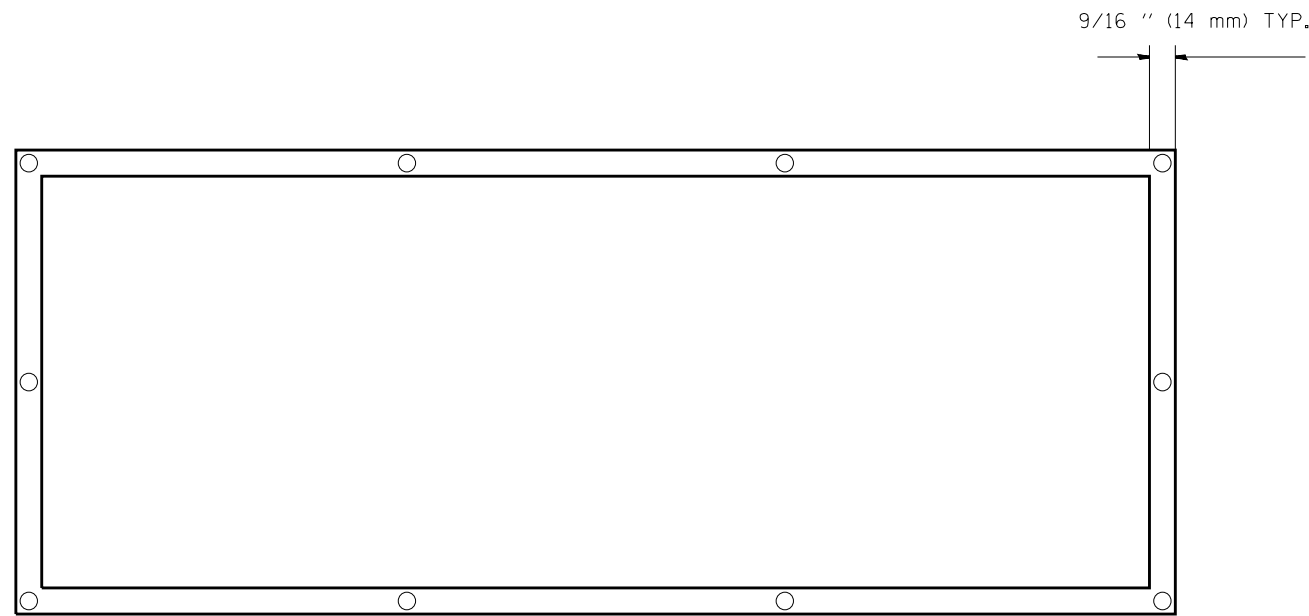
FILE NAME =	USER NAME = mezag	DESIGNED - R.L.	REVISED - 06/94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER</b>	<b>TRAFFIC SURVEILLANCE BARRIER WALL DUCT DETAIL ON BRIDGE DECK</b>			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pw\work\p\idot\mezag\d0287541\TSCYP.dgn		DRAWN - G.M.	REVISED - 10/96		SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	747	635
		CHECKED - R.L.	REVISED - 02/98										
		DATE - 06/22/94	REVISED -										



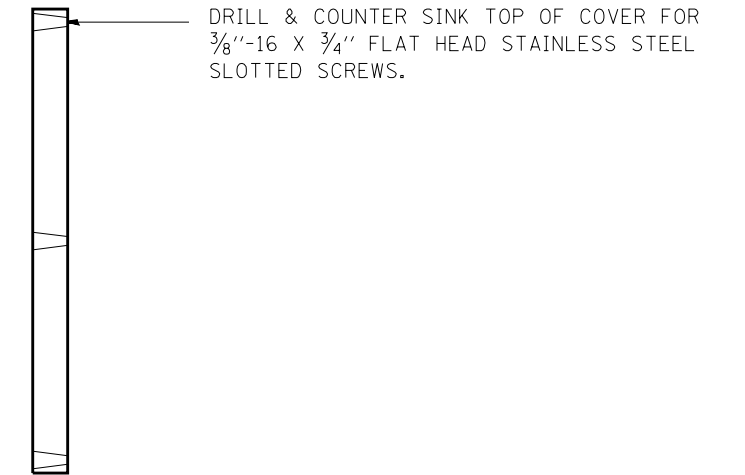
FRONT VIEW



SIDE VIEW



BACK VIEW  
OF COVER WITH NEOPRENE GASKET



SIDE VIEW OF COVER

**NOTES:**

JUNCTION BOXES TO BE CONSTRUCTED OF 1/4 IN. (3 mm) TYPE 316 STAINLESS STEEL.  
 ALL WELDS SHALL BE CONTINUOUS AND LEAK PROOF.  
 ALL COVERS SHALL BE UNIVERSAL IN FIT.  
 TAP ANGLE FLANGE FOR 3/8 IN.-16 X 3/4 IN. SCREW.

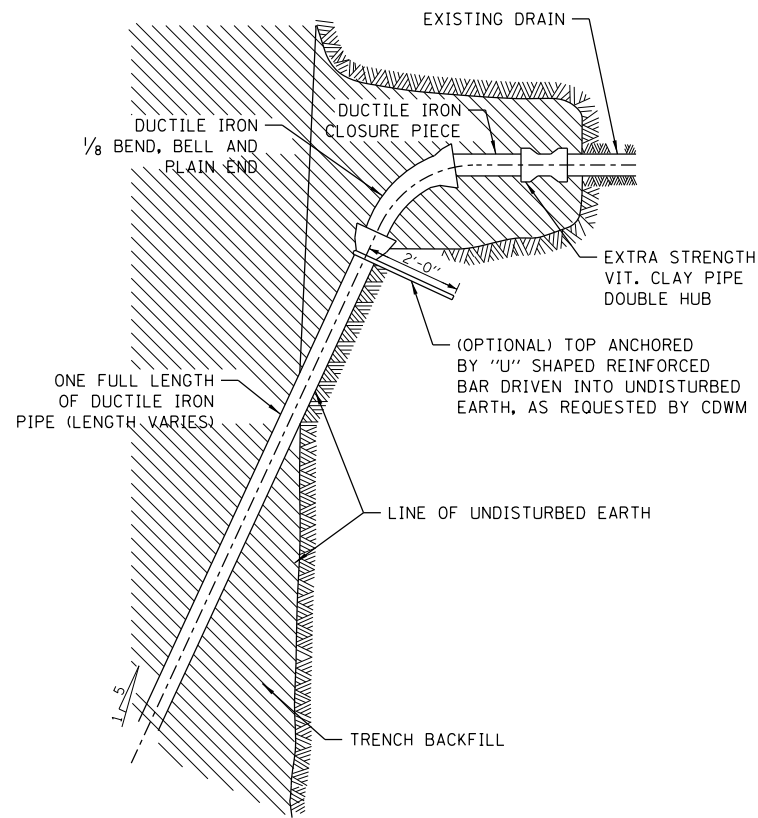
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		CHECKED - R.L.	REVISED -
		DATE - 02/98	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
TRAFFIC SYSTEMS CENTER**

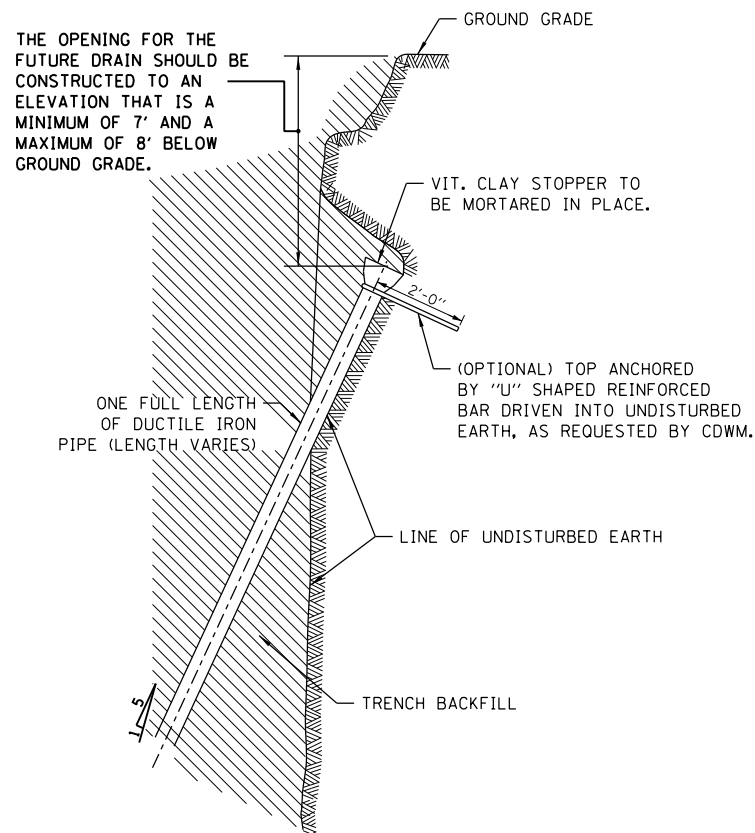
**JUNCTION BOX**

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

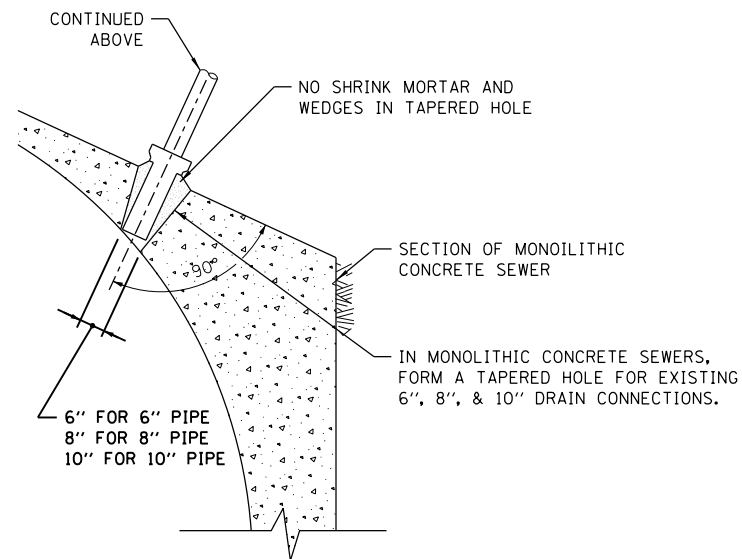
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			747	636
CONTRACT NO.			60W28	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



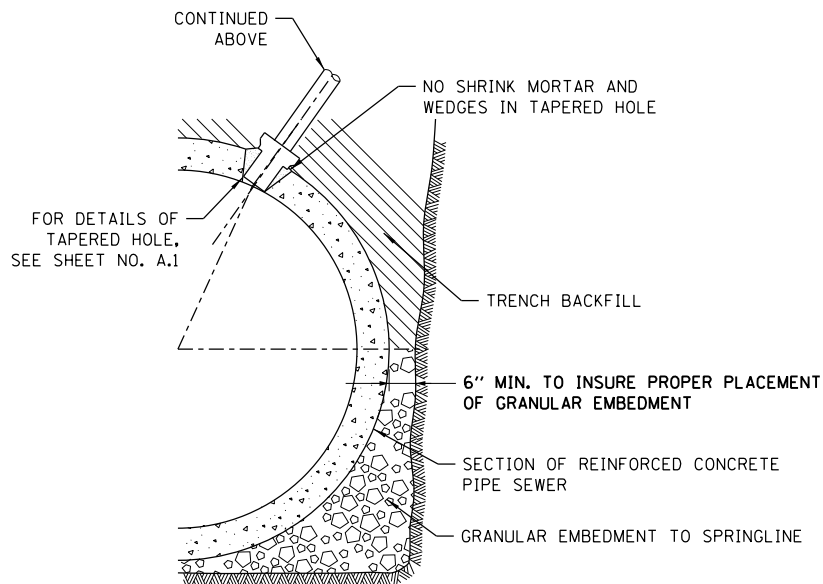
**TYPICAL DRAIN CONNECTIONS FOR EXISTING DRAINS**



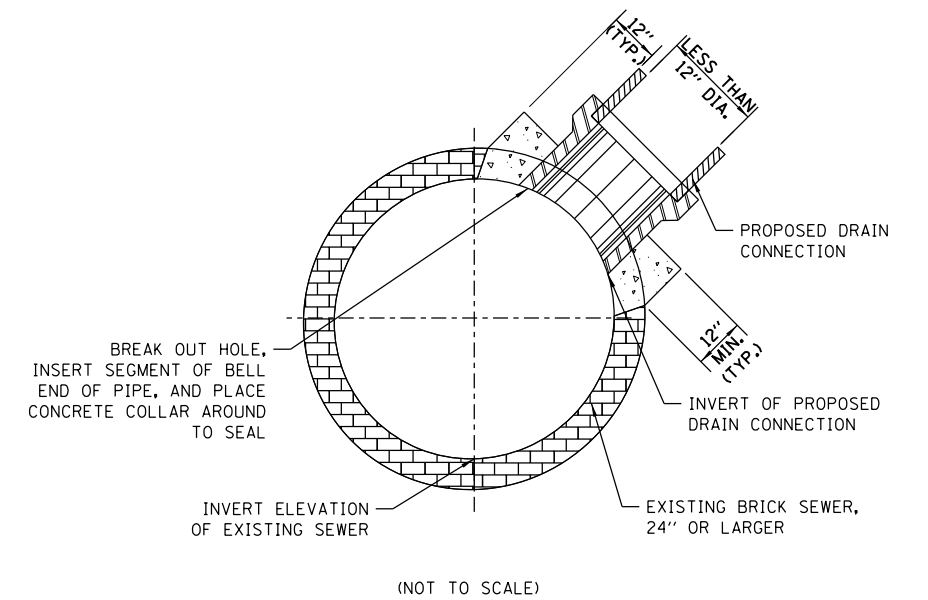
**TYPICAL DRAIN STACKS FOR FUTURE USE**



**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 ALL GRANULAR EMBANKMENT, USE CA-7 OR CA11.

STANDARD REVISIONS	
DATE	DESCRIPTION
1/22/14	APPROVED PLAN

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES				DRAWN: SDB DESIGNED: CHECKED: REVIEWED: A.2
DUCTILE IRON PIPE DRAIN CONNECTIONS				OF
				PN



D160W28-sht-CDWM-Detail-01.dgn  
USER NAME = ch1ua  
PLOT SCALE = 1.0000' / 1" =  
PLOT DATE = 3/25/2014

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE - 03/28/14	REVISED -

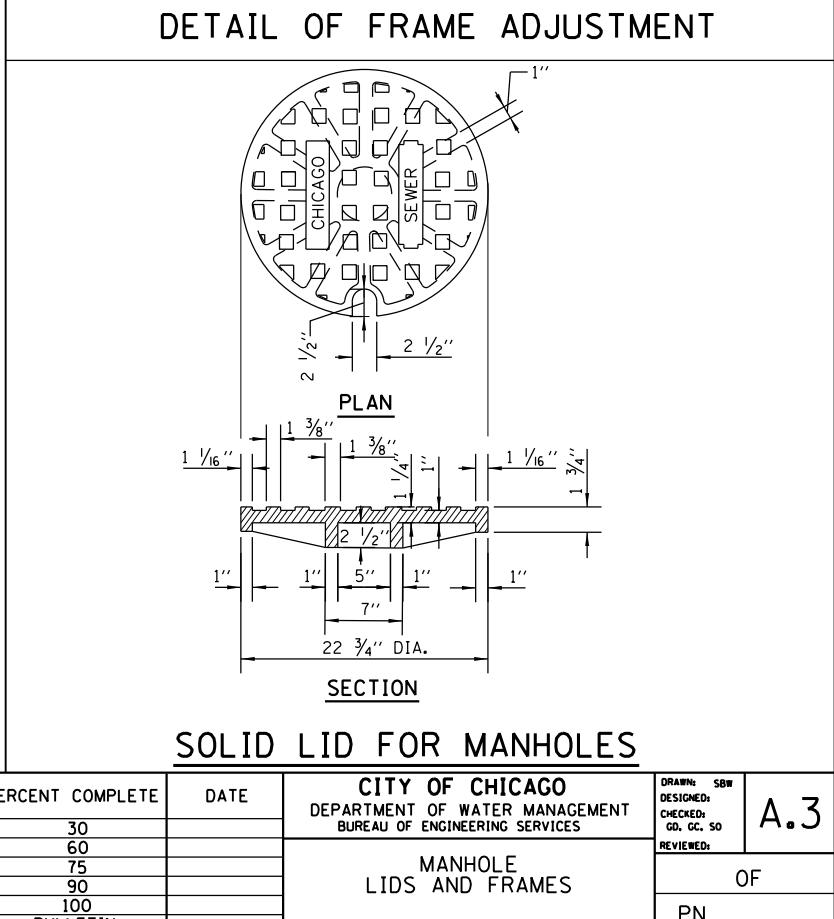
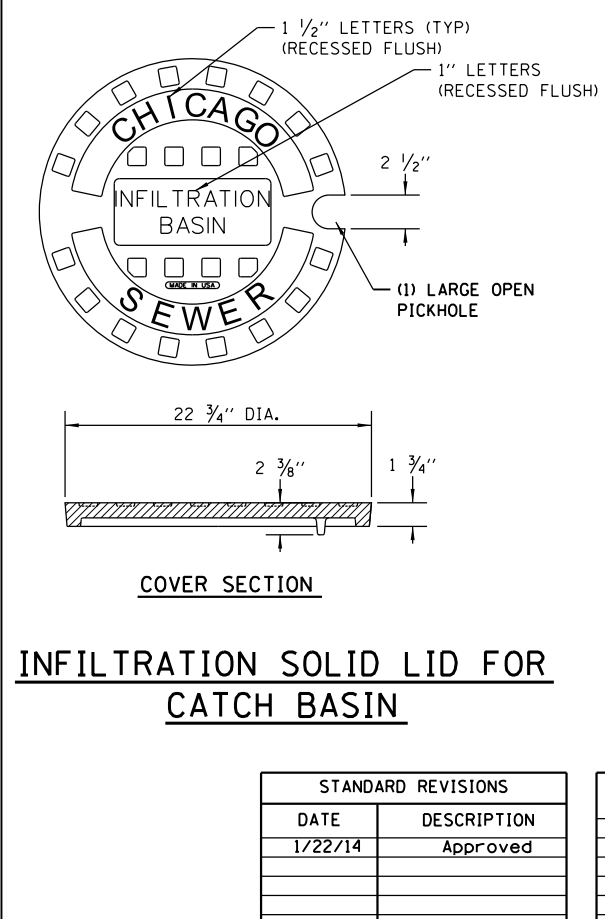
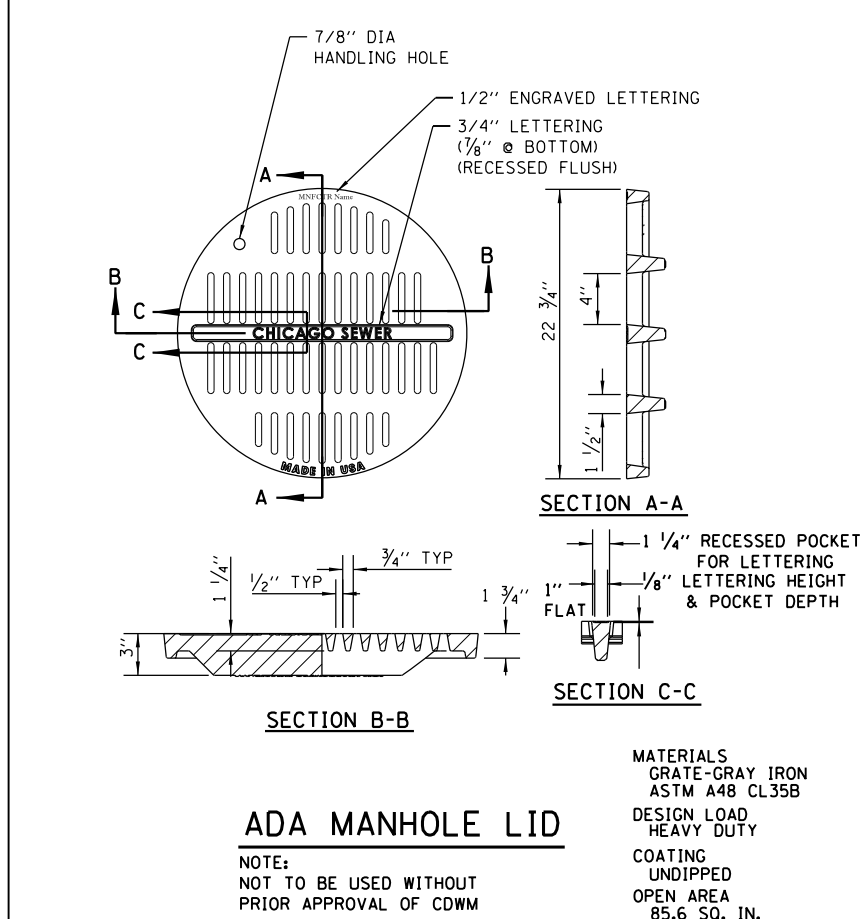
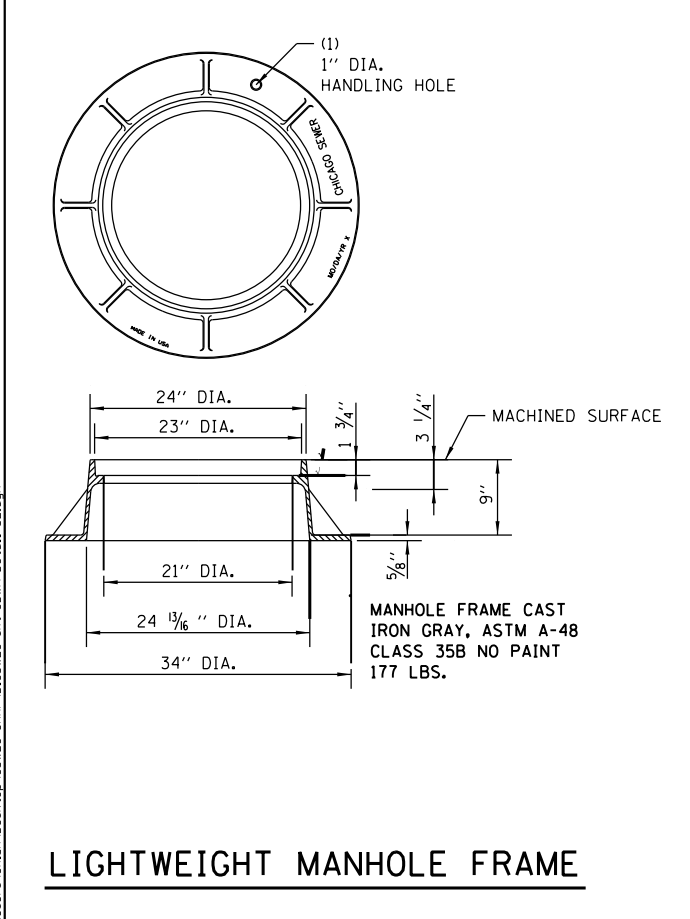
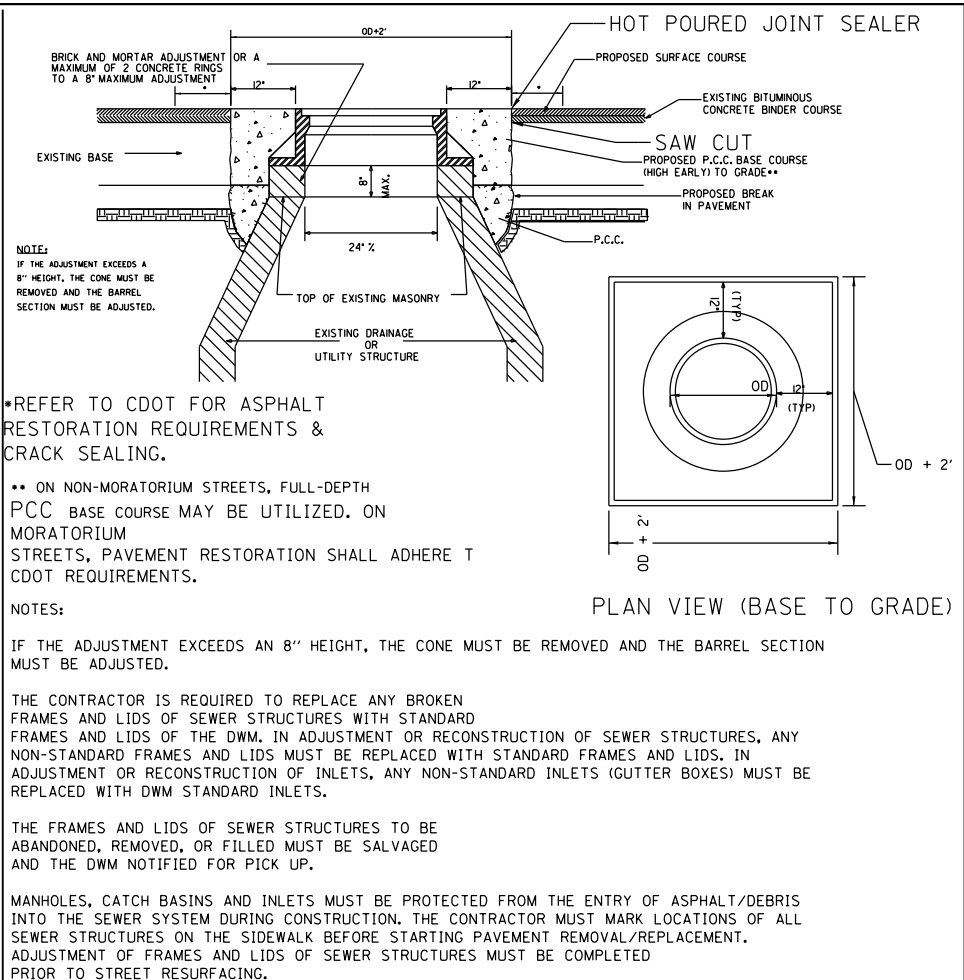
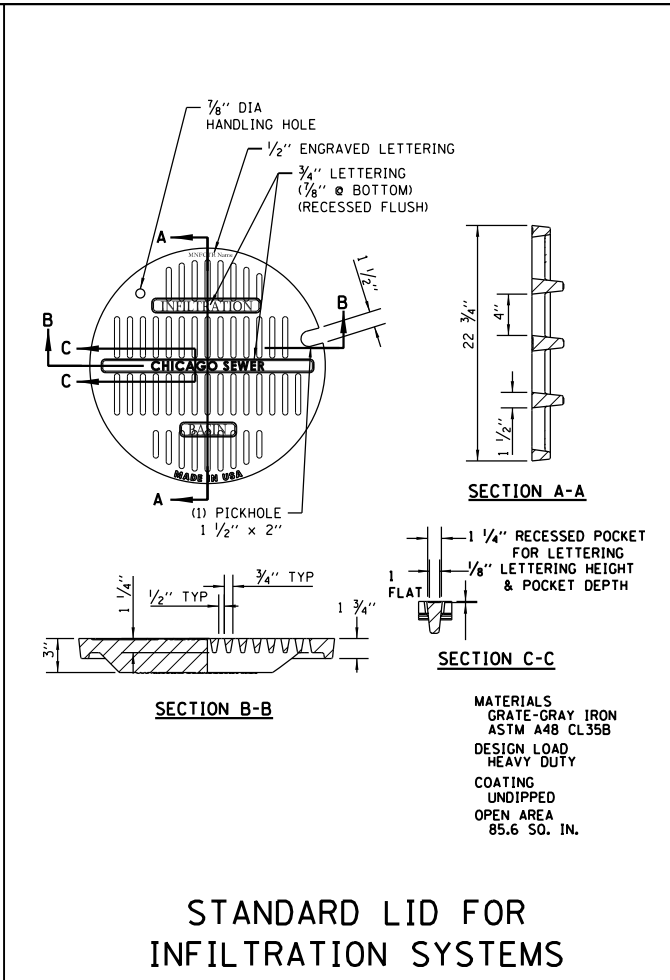
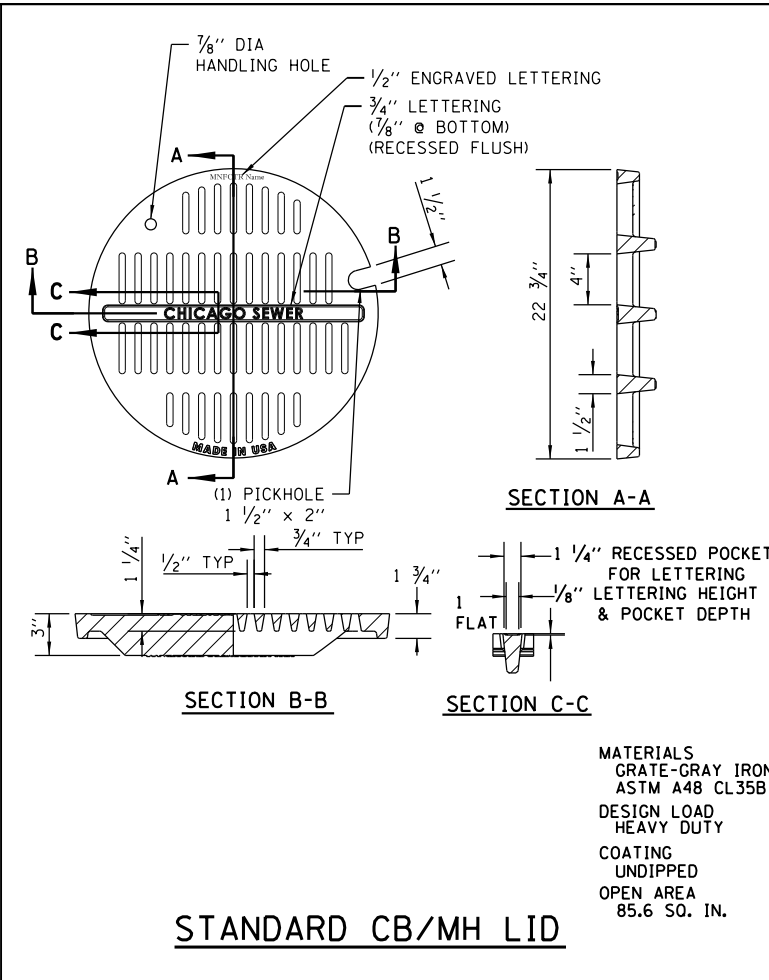
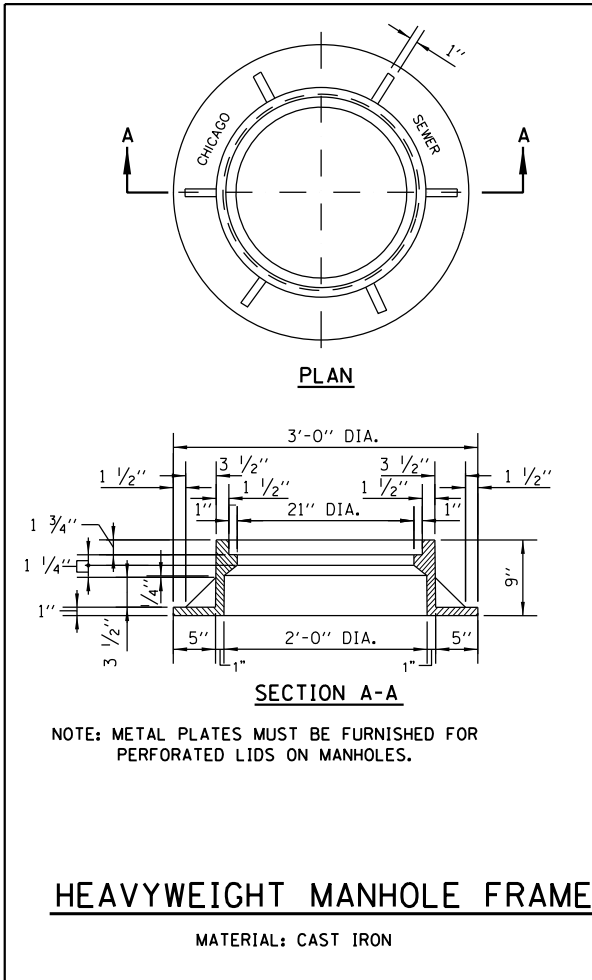
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CHICAGO DEPARTMENT OF WATER MANAGEMENT  
STANDARD DETAILS**

SCALE: NTS SHEET 1 OF 8 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 637
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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STANDARD REVISIONS	
DATE	DESCRIPTION
1/22/14	Approved

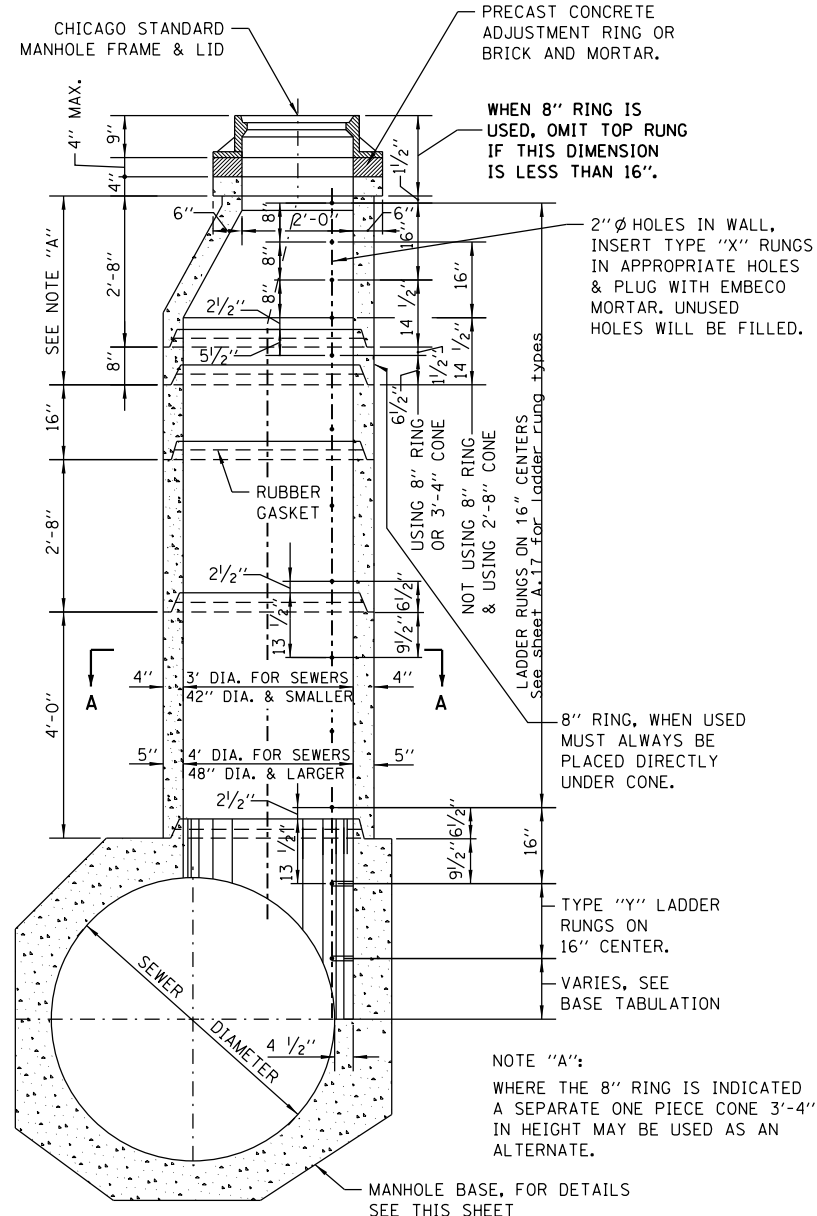
PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES		DRAWN: SDB DESIGNED: SDB CHECKED: GD, CC, SO REVIEWED: SDB	A.3
MANHOLE LIDS AND FRAMES		OF	
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS
90/94/290	2013-010R	COOK	747 638
CONTRACT NO. 60W28			PN

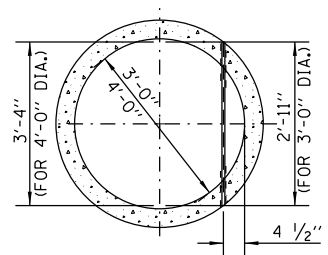
**NUMBER OF PRECAST RINGS REQUIRED FOR MANHOLES OF VARIOUS HEIGHTS**

TOTAL HEIGHT "H"	9" FRAME ±2'-8" CORBEL ±3'-5"	PRECAST RINGS				BRICK AND/OR MORTAR	TOTAL HEIGHT "H"	9" FRAME ±2'-8" CORBEL ±3'-5"	PRECAST RINGS				BRICK AND/OR MORTAR
		4'-0"	2'-8"	1'-4"	8"				4'-0"	2'-8"	1'-4"	8"	
5'-0"	3'-5"	1				3"	12'-0"	3'-5"	2				3"
1"		1				4"	1"		2				4"
2"		1				5"	2"		2				5"
3"		1				6"	3"		2				6"
4"		1				7"	4"		2				7"
5"		1				8"	5"		2				8"
6"		1				9"	6"		2				9"
7"		1				10"	7"		2				10"
8"		1				11"	8"		2				11"
9"		1				12"	9"		2				12"
10"		1				13"	10"		2				13"
11"		1				14"	11"		2				14"
12"		1				15"	12"		2				15"
13"		1				16"	13"		2				16"
14"		1				17"	14"		2				17"
15"		1				18"	15"		2				18"
16"		1				19"	16"		2				19"
17"		1				20"	17"		2				20"
18"		1				21"	18"		2				21"
19"		1				22"	19"		2				22"
20"		1				23"	20"		2				23"
21"		1				24"	21"		2				24"
22"		1				25"	22"		2				25"
23"		1				26"	23"		2				26"
24"		1				27"	24"		2				27"
25"		1				28"	25"		2				28"
26"		1				29"	26"		2				29"
27"		1				30"	27"		2				30"
28"		1				31"	28"		2				31"
29"		1				32"	29"		2				32"
30"		1				33"	30"		2				33"
31"		1				34"	31"		2				34"
32"		1				35"	32"		2				35"
33"		1				36"	33"		2				36"
34"		1				37"	34"		2				37"
35"		1				38"	35"		2				38"
36"		1				39"	36"		2				39"
37"		1				40"	37"		2				40"
38"		1				41"	38"		2				41"
39"		1				42"	39"		2				42"
40"		1				43"	40"		2				43"
41"		1				44"	41"		2				44"
42"		1				45"	42"		2				45"
43"		1				46"	43"		2				46"
44"		1				47"	44"		2				47"
45"		1				48"	45"		2				48"
46"		1				49"	46"		2				49"
47"		1				50"	47"		2				50"
48"		1				51"	48"		2				51"
49"		1				52"	49"		2				52"
50"		1				53"	50"		2				53"
51"		1				54"	51"		2				54"
52"		1				55"	52"		2				55"
53"		1				56"	53"		2				56"
54"		1				57"	54"		2				57"
55"		1				58"	55"		2				58"
56"		1				59"	56"		2				59"
57"		1				60"	57"		2				60"
58"		1				61"	58"		2				61"
59"		1				62"	59"		2				62"
60"		1				63"	60"		2				63"
61"		1				64"	61"		2				64"
62"		1				65"	62"		2				65"
63"		1				66"	63"		2				66"
64"		1				67"	64"		2				67"
65"		1				68"	65"		2				68"
66"		1				69"	66"		2				69"
67"		1				70"	67"		2				70"
68"		1				71"	68"		2				71"
69"		1				72"	69"		2				72"
70"		1				73"	70"		2				73"
71"		1				74"	71"		2				74"
72"		1				75"	72"		2				75"
73"		1				76"	73"		2				76"
74"		1				77"	74"		2				77"
75"		1				78"	75"		2				78"
76"		1				79"	76"		2				79"
77"		1				80"	77"		2				80"
78"		1				81"	78"		2				81"
79"		1				82"	79"		2				82"
80"		1				83"	80"		2				83"
81"		1				84"	81"		2				84"
82"		1				85"	82"		2				85"
83"		1				86"	83"		2				86"
84"		1				87"	84"		2				87"
85"		1				88"	85"		2				88"
86"		1				89"	86"		2				89"
87"		1				90"	87"		2				90"
88"		1				91"	88"		2				91"
89"		1				92"	89"		2				92"
90"		1				93"	90"		2				93"
91"		1				94"	91"		2				94"
92"		1				95"	92"		2				95"
93"		1				96"	93"		2				96"
94"		1				97"	94"		2				97"
95"		1				98"	95"		2				98"
96"		1				99"	96"		2				99"
97"		1				100"	97"		2				100"

**NOTES:**  
 PRECAST CONCRETE RINGS MUST CONFORM TO A.S.T.M. DESIGNATION C76 FOR "REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE", CLASS II, WALL B.  
 STANDARD LENGTHS OF RINGS ARE: 4'-0", 2'-8", 1'-4", 0'-8" AND 0'-4" COLLAR.  
 ALL REINFORCEMENT STEEL REQUIRED FOR PRECAST RINGS MUST BE INCLUDED IN THE PRICE BID FOR ALL MANHOLE ITEMS.

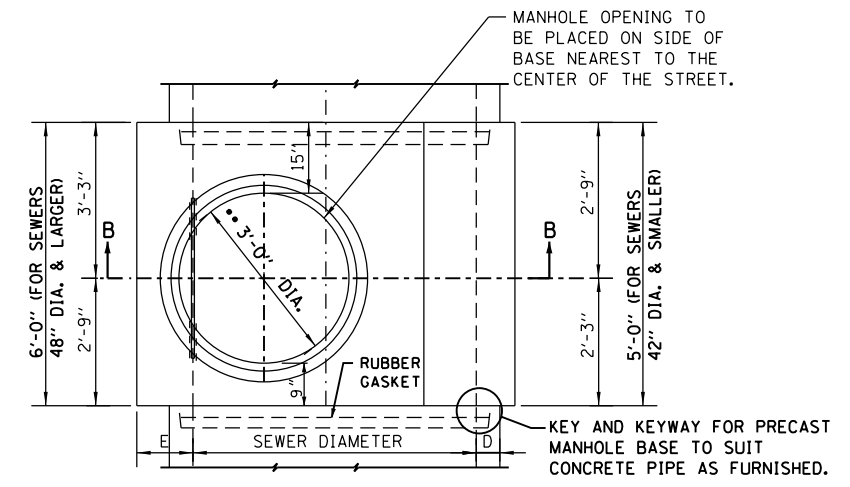


**DETAIL OF PRECAST RINGS**

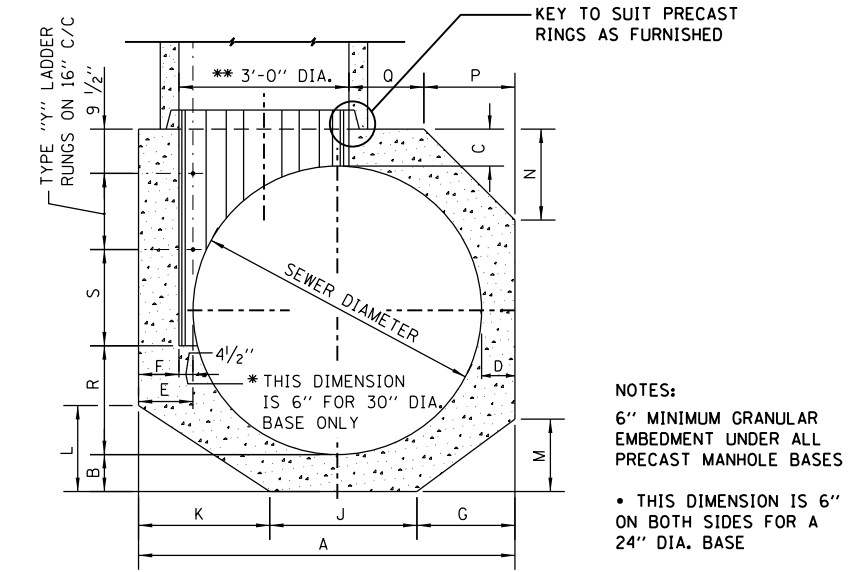


1"Ø LADDER RUNG, TYPE "X", LENGTH 2'-11" OR 3'-4" INSERTED INTO 2"Ø HOLE IN WALL & PLUGGED BY MFR. WITH EMBECO MORTAR.

**SECTION A-A**



**PLAN**  
 •• 3'-0" DIA. FOR SEWERS 42" DIA. & SMALLER  
 4'-0" DIA. FOR SEWERS 48" DIA. & LARGER



**SECTION B-B**

**NOTES:**  
 6" MINIMUM GRANULAR EMBEDMENT UNDER ALL PRECAST MANHOLE BASES  
 • THIS DIMENSION IS 6" ON BOTH SIDES FOR A 24" DIA. BASE

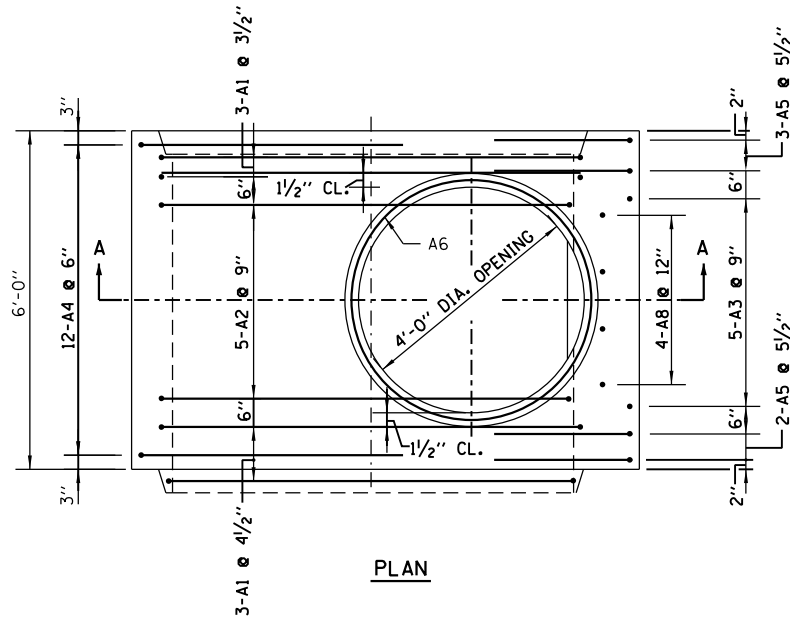
SEWER DIA.	PART OF ITEM	DIMENSIONS OF PRECAST MANHOLE BASE																NO. "Y" RUNGS
		A	B	C	D	E	F	G	J	K	L	M	N	P	O	R	S	
120"	-	12'-4 1/2"	12"	12"	12"	16 1/2"	12"	4'-0"	4'-0"	4'-4 1/2"	2'-7 1/2"	2'-5"	3'-6"	3'-6"	3'-10 1/2"	2'-0"	18 1/2"	6
108"	-	11'-4 1/2"	12"	12"	12"	16 1/2"	12"	3'-8"	4'-0 1/2"	3'-8"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

STANDARD REVISIONS	
DATE	DESCRIPTION
12/07/09	APPROVED PLAN

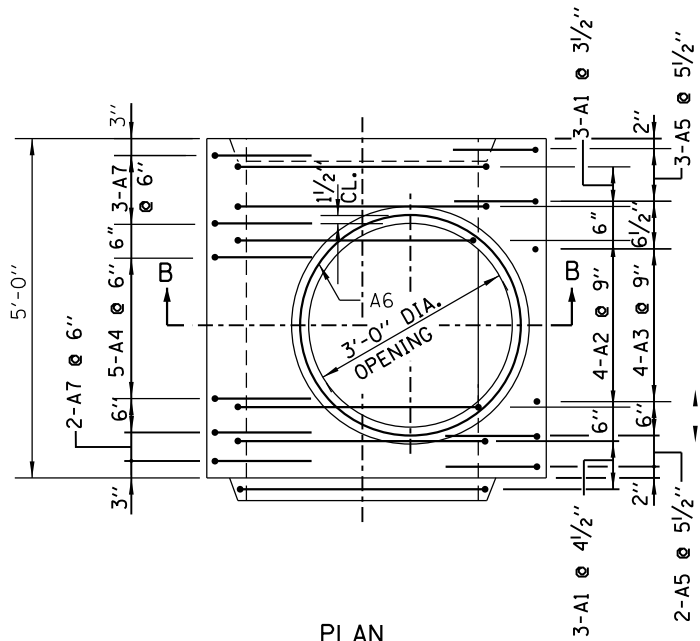
PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES				DRAWN: SDB	A.4
TYPE "A" MANHOLE PRECAST BASES AND RINGS				CHECKED:	
				REVIEWED:	OF
					PN

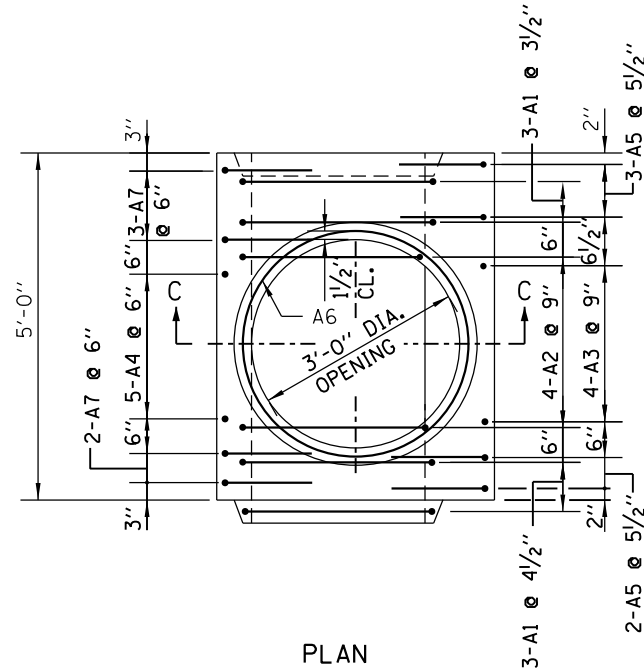
CHICAGO DEPARTMENT OF WATER MANAGEMENT STANDARD DETAILS				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NTS	SHEET 3	OF 8 SHEETS	STA.	90/94/290</				



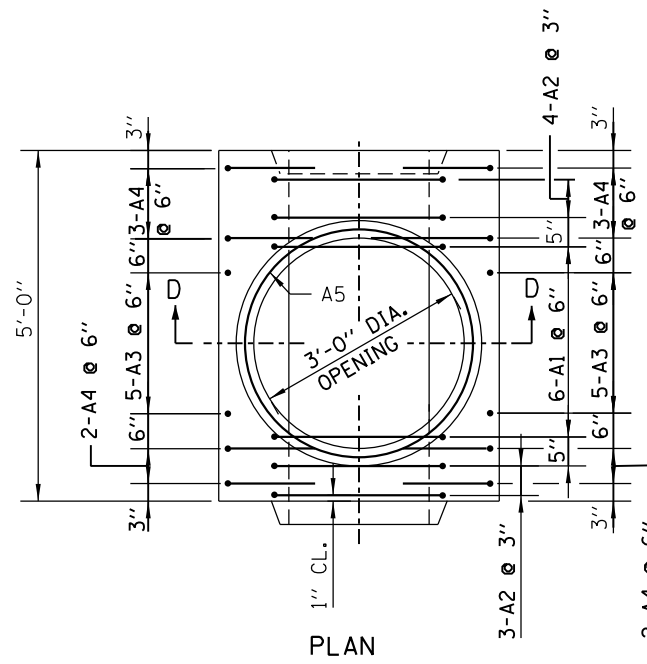
PLAN



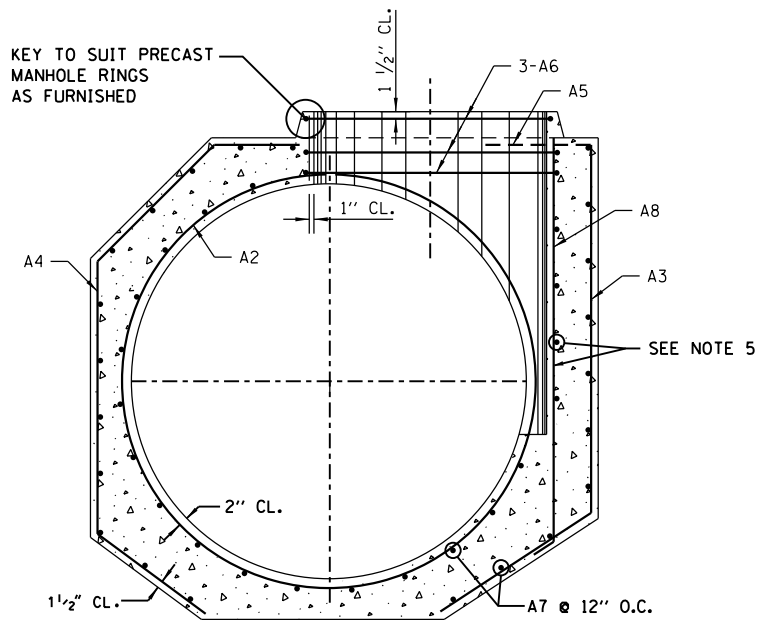
PLAN



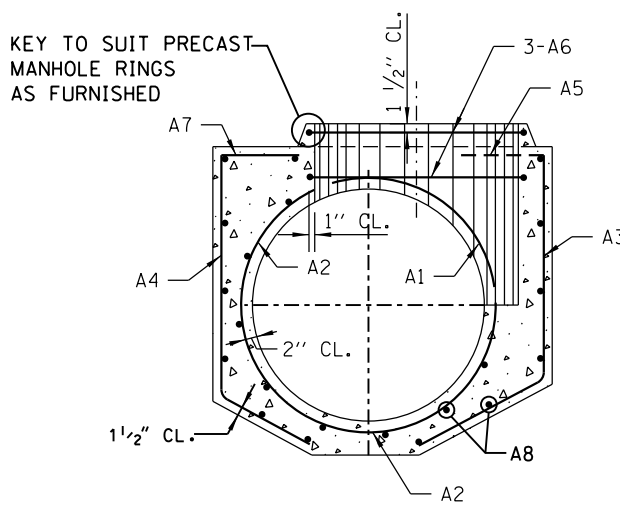
PLAN



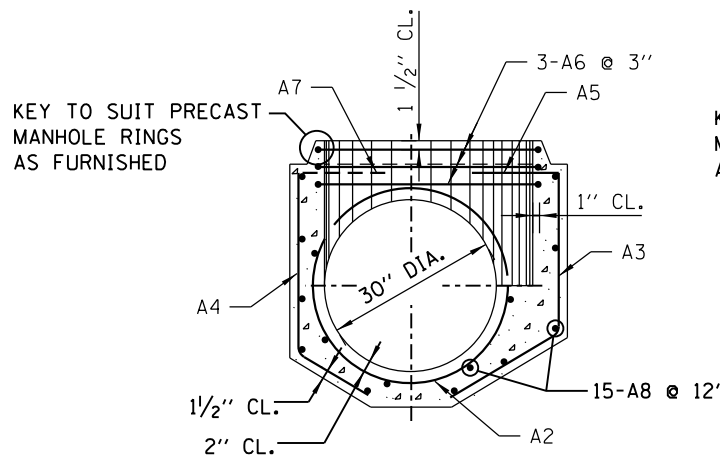
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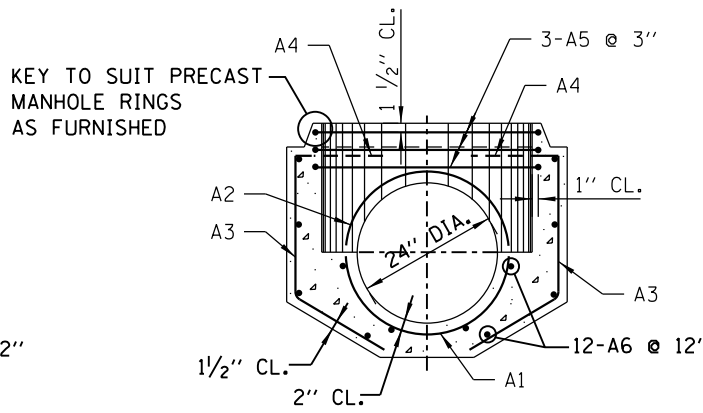
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

**MANHOLE BASE FOR SEWERS  
48" DIA. TO 120" DIA. INCLUSIVE**

**MANHOLE BASE FOR SEWERS  
36" DIA. AND 42" DIA.**

**MANHOLE BASE FOR 30" DIA. SEWERS**

**MANHOLE BASE FOR 24" DIA. SEWERS**

NOTES:  
1. TWO LAYERS OF REINFORCEMENT FOR 66" DIA. MANHOLE AND OVER.

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STANDARD REVISIONS	
DATE	DESCRIPTION
1/9/14	REVISION

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

<b>CITY OF CHICAGO</b> DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES		DRAWN: SDB DESIGNED: SDB CHECKED: SDB REVIEWED: SDB	<b>A.5</b>  OF  PN
		REINFORCEMENT FOR TYPE "A" PRECAST MANHOLE BASES	



DI60W28-sht-CDWM-Detail-04.dgn  
 USER NAME = chun  
 PLOT SCALE = 1.0000' / 1"  
 PLOT DATE = 3/25/2014

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE - 03/28/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CHICAGO DEPARTMENT OF WATER MANAGEMENT  
STANDARD DETAILS**

SCALE: NTS SHEET 4 OF 8 SHEETS STA. TO STA.

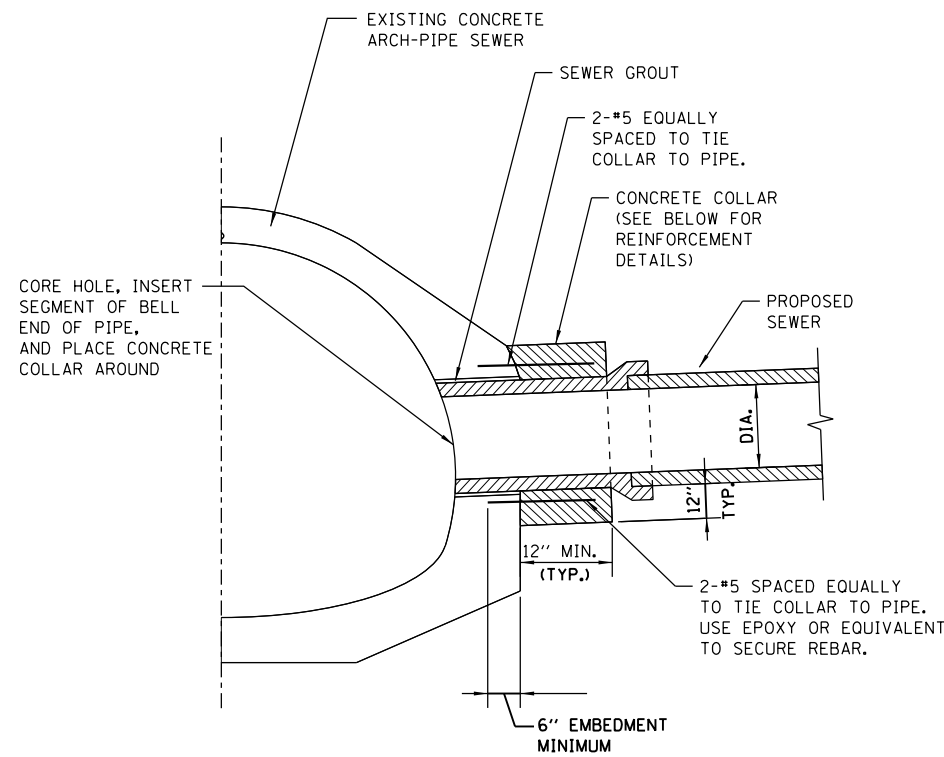
F.A.I. R.T.E. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 640
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W28	

# SCHEDULE OF REINFORCEMENT

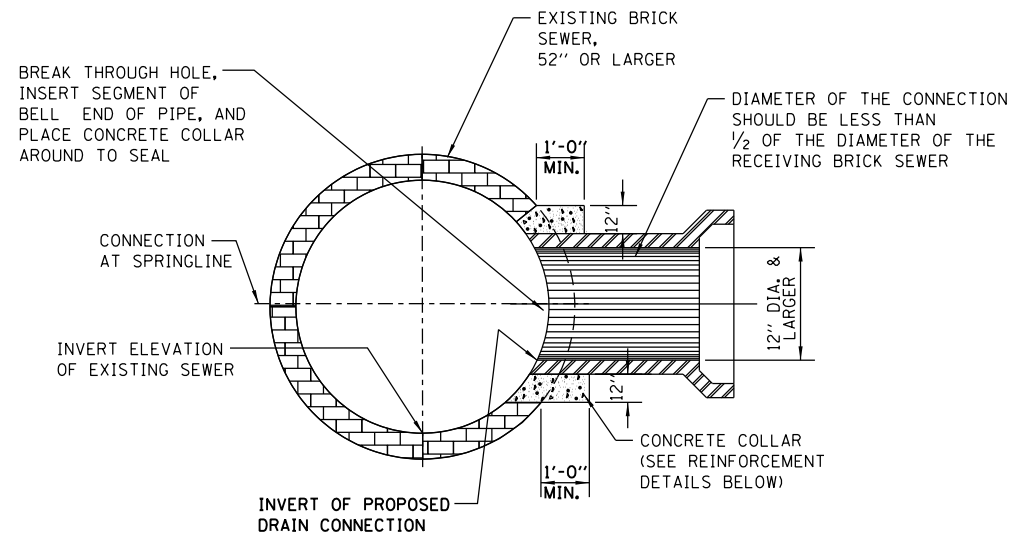
STRUCTURE	REINFORCEMENT BAR						BENDING DIMENSIONS												
	MARK	SIZE NO.	TYPE	LENGTH	NO. REOD.	WEIGHT EACH	A	B	C	D	E	F	G	H	J	K	O	R	
BASES FOR TYPE "A" MANHOLES (Precast)	120A1	8	T3	35'-4 1/2"	6	94.51										2'-8"	10'-5"		
	120A2	7	T3	22'-5"	5	45.82		22'-5"								8'-0"	8'-7 1/2"	5'-2 1/4"	
	120A3	6	T3	14'-4 1/2"	5	21.61			9'-6 1/2"	4'-10"						2'-2 1/2"			
	120A4	7	D10	19'-0 1/2"	12	38.86	4'-6"	5'-11 1/2"	4'-10 1/4"	3'-8 1/2"	3'-10 1/4"	2'-3 1/4"				3'-5 1/2"			
	120A5	8	T3	17'-10 1/2"	5	47.76			3'-6"	9'-6 1/2"	4'-10"					4'-3 1/4"			
	120A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"		
	120A7	4	STR.	5'-8"	66	3.79													
	120A8	5	T3	10'-9"	4	11.21				9'-9"	1'-0"					10 1/4"	6 1/4"		
	TOTAL																		
	108A1	7	T3	31'-11"	6	65.24										2'-4"	9'-5"		
108A2	6	T3	20'-2 1/2"	5	30.37		20'-2 1/2"								7'-2 1/2"	7'-9 1/2"	4'-8 1/2"		
108A3	6	T3	12'-9"	5	19.15			8'-5"	4'-4"						3'-8 1/2"	2'-2 1/2"			
108A4	7	D10	17'-0 1/2"	12	34.81	4'-1"	5'-6 1/4"	4'-9 1/4"	2'-11 1/2"	3'-6"	2'-1 1/4"				3'-1 1/2"	3'-1 1/2"			
108A5	7	T3	16'-0"	5	32.70		3'-3"	8'-5"	4'-4"						3'-8 1/2"	2'-2 1/2"			
108A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
108A7	4	STR.	5'-8"	62	3.79														
108A8	5	T3	9'-8"	4	10.09				8'-8"	1'-0"					10 1/4"	6 1/4"			
TOTAL																			
102A1	7	T3	30'-3"	6	61.83										2'-4"	8'-10 1/2"			
102A2	6	T3	19'-0"	5	28.54		19'-0"								6'-9 1/2"	7'-4 1/2"	4'-5 1/2"		
102A3	6	T3	12'-3"	5	18.40			8'-0"	4'-3"						3'-7 1/2"	2'-2"			
102A4	7	D10	16'-0 1/2"	12	32.79	3'-9"	5'-5 1/4"	4'-1 1/2"	2'-8 1/2"	3'-2 1/4"	23"				2'-11 1/4"	2'-11 1/4"			
102A5	7	T3	15'-4"	5	31.34		3'-1"	8'-0"	4'-3"						3'-7 1/2"	2'-2"			
102A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
102A7	4	STR.	5'-8"	58	3.79														
102A8	5	T3	9'-3"	4	9.65				8'-3"	1'-0"					10 1/4"	6 1/4"			
TOTAL																			
96A1	7	T3	28'-8"	6	58.38										2'-4"	8'-5"			
96A2	6	T3	17'-11 1/4"	5	26.94		17'-11 1/4"								6'-4"	7'-2 1/2"	4'-2 1/2"		
96A3	6	T3	11'-6"	5	17.27			7'-5"	4'-1"						3'-6"	2'-1 1/4"			
96A4	7	D10	14'-10 1/2"	12	30.38	3'-8"	5'-0"	3'-11 1/2"	2'-2 1/2"	3'-1 1/4"	22 1/2"				2'-9 1/2"	2'-9 1/2"			
96A5	7	T3	13'-5"	5	27.43		2'-10 1/2"	7'-5"	4'-1"						3'-6"	2'-1 1/4"			
96A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
96A7	4	STR.	5'-8"	54	3.79														
96A8	5	T3	8'-8"	4	9.04				7'-8"	1'-0"					10"	6 1/2"			
TOTAL																			
90A1	6	T3	26'-6"	6	39.80										2'-0"	7'-10 1/2"			
90A2	5	T3	16'-7 1/4"	5	17.32		16'-7 1/4"								5'-10 1/4"	2'-0"	6'-9 1/2"	3'-11 1/4"	
90A3	6	T3	11'-0"	5	16.52			7'-0"	4'-0"						3'-5"	2'-0 1/2"			
90A4	6	D10	13'-9 1/2"	12	20.70	3'-6"	4'-7 1/2"	3'-9 1/2"	22 1/2"	3'-0"	21 1/2"				2'-8 1/4"	2'-8 1/4"			
90A5	6	T3	13'-9"	5	20.65		2'-9"	7'-0"	4'-0"						3'-5"	2'-0 1/4"			
90A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
90A7	4	STR.	5'-8"	50	3.79														
90A8	5	T3	8'-2"	4	8.51				7'-2"	1'-0"					9 1/4"	7"			
TOTAL																			
84A1	6	T3	25'-3"	6	37.93										2'-0"	7'-4 1/2"			
84A2	5	T3	15'-5 1/2"	5	16.12			15'-5 1/2"							5'-9"	8'-2 1/4"	3'-8 1/4"		
84A3	5	T3	9'-10"	5	10.26			6'-4"	3'-6"						3'-0"	2 1/2"			
84A4	6	D10	12'-6 1/2"	12	18.79	3'-2"	4'-4 1/2"	3'-4 1/2"	1'-6 1/2"	2'-8 1/2"	19 1/2"				2'-4 1/2"	2'-4 1/2"			
84A5	6	T3	12'-5"	5	18.65		2'-7"	6'-4"	3'-6"						3'-0"	2 1/2"			
84A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
84A7	4	STR.	5'-8"	46	3.79														
84A8	5	T3	7'-6"	4	7.82				6'-6"	1'-0"					10 1/4"	6 1/4"			
TOTAL																			
78A1	6	T3	23'-7"	6	35.42										2'-0"	6'-10 1/2"			
78A2	5	T3	14'-3 1/2"	5	14.53			14'-3 1/2"							5'-0"	7'-9 1/4"	3'-5 1/4"		
78A3	5	T3	9'-3"	5	9.65			6'-1"	3'-2"						3'-0"	2 1/2"			
78A4	6	D10	11'-5 1/4"	12	17.26	207	3'-1"	4'-0"	3'-3"	1'-1 1/4"	2'-7 1/2"	19 1/2"			2'-3 1/2"	2'-3 1/2"			
78A5	6	T3	11'-9"	5	17.65		2'-6"	6'-1"	3'-2"						3'-0"	2'-8 1/2"			
78A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
78A7	4	STR.	5'-8"	42	3.79														
78A8	5	T3	7'-3"	4	7.56				6'-3"	1'-0"					9 1/4"	7"			
TOTAL																			
72A1	6	T3	22'-0"	6	33.04										2'-0"	6'-4 1/2"			
72A2	5	T3	13'-3"	5	13.82			13'-3"							4'-8"	5'-6"	3'-2"		
72A3	5	T3	8'-6"	5	8.87			5'-6"	3'-0"						18 1/2"	18 1/2"			
72A4	6	D10	9'-11 1/2"	12	14.94	179	2'-6"	3'-8 1/4"	3'-0"	9 1/4"	2'-1 1/4"	15 1/2"			2'-1 1/2"	2'-1 1/2"			
72A5	6	T3	10'-9"	5	16.15			2'-3"	5'-6"	3'-0"					18 1/2"	18 1/2"			
72A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"			
72A7	4	STR.	5'-8"	38	3.79														
72A8	5	T3	6'-9"	4	7.04				5'-9"	1'-0"					10 1/4"	6 1/4"			
TOTAL																			

STRUCTURE	REINFORCEMENT BAR						BENDING DIMENSIONS												
	MARK	SIZE NO.	TYPE	LENGTH	NO. REOD.	WEIGHT EACH	A	B	C	D	E	F	G	H	J	K	O	R	
BASES FOR TYPE "A" MANHOLES (Precast)	66A1	6	T3	20'-5"	6	30.73										2'-0"	5'-10 1/2"		
	66A2	5	T3	11'-10"	5	12.35		11'-10"								8'-7 1/2"	5'-2 1/4"		
	66A3	5	T3	8'-2"	5	8.52			5'-2"	3'-0"						4'-2 1/4"	18 1/2"	2'-11 1/4"	
	66A4	5	D10	9'-1 1/2"	12	9.51	2'-6"	3'-5"	2'-9 1/2"	4 1/2"	2'-2"	15"				23 1/2"	23 1/2"		
	66A5	6	T3	10'-4"	5	15.50			2'-2"	5'-2"	3'-0"					2'-7"	18 1/2"		
	66A6	5	T3	15'-1"	3	15.74										20"	4'-3 1/4"		
	66A7	4	STR.	5'-8"	36	3.79													
	66A8	5	T3	6'-5"	4	6.69				5'-5"	1'-0"					10 1/4"	6 1/4"		
	TOTAL																		
	60A1	6	T3	18'-11"	6	28.41										2'-4"	9'-5"		
60A2	5	T3	10'-9"	5	11.21										7'-9 1/2"	7'-9 1/2"	4'-8 1/2"		
60A3	5	T3	12'-7"	5	16.55			8'-5"	4'-4"						3'-8 1/2"	2'-2 1/2"			
60A4	5	D10	8'-1 1/2"	12	8.46	2'-3"	3'-6"	23 1/4"	4 1/2"	23 1/4"	14"				16 1/2"	16 1/2"			
60A5	5	T3	9'-4"	5	9.74		2'-0"	4'-7"	2'-9										

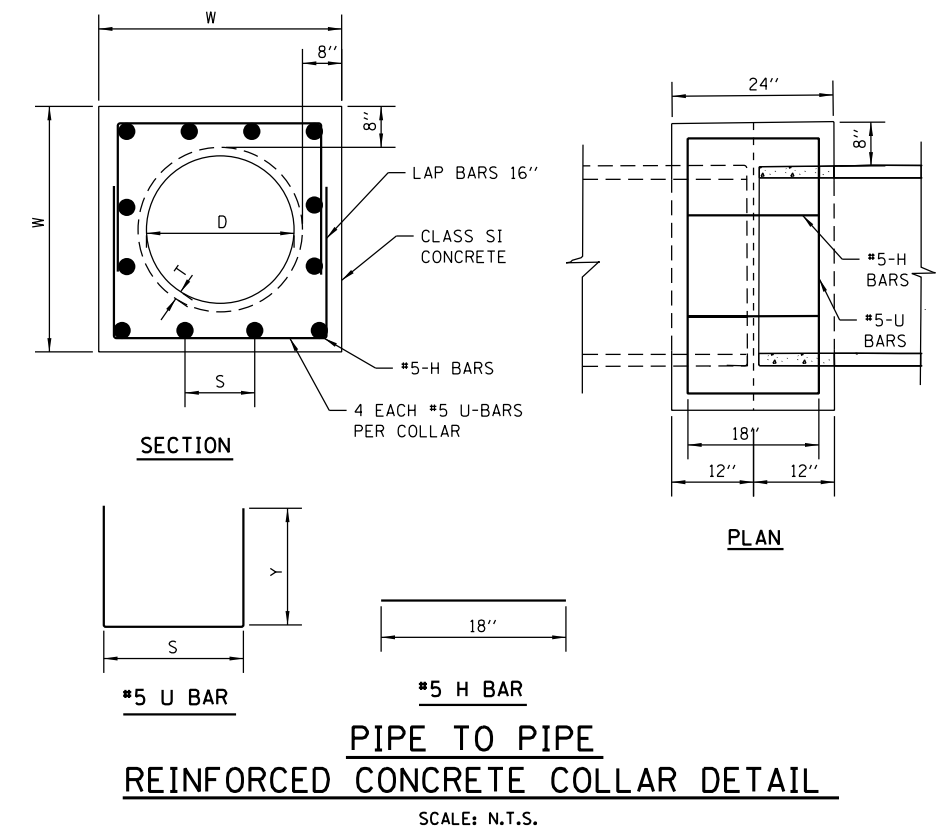




**EXAMPLE TYPICAL CONNECTION DETAIL**  
(NOT TO SCALE)



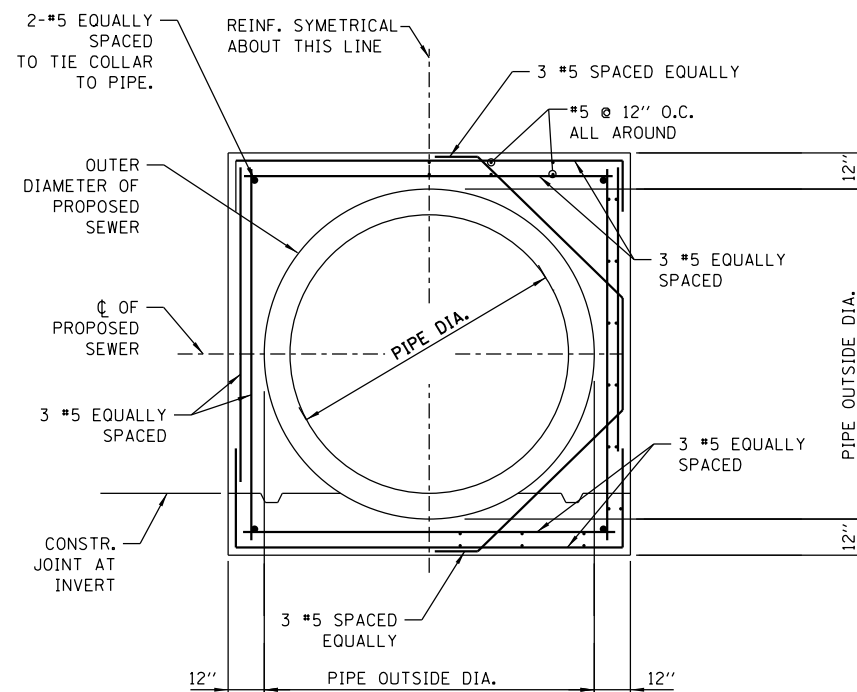
**EXAMPLE TYPICAL BRICK SEWER CONNECTION FOR CONNECTING PIPE SIZES GREATER THAN 12" DIA.**  
(NOT TO SCALE)



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

**CONCRETE COLLAR NOTES:**

1. ALL ITEMS AND MATERIALS SHALL CONFORM TO THE LATEST IDOT SSRBC SPECIFICATIONS, UNLESS OTHERWISE NOTED IN SUPPLEMENTAL SPECIFICATIONS FOR THE SPECIFIC PROJECT BEING CONSTRUCTED.
2. ALL CONCRETE SHALL CONFORM TO IDOT SSRBC ARTICLE 1020.04, CLASS SI, WITH A COMPRESSIVE STRENGTH OF 3500 PSI.
3. ALL EPOXY COATED REINFORCEMENT BARS SHALL CONFORM TO IDOT SSRBC SECTION 50B, AND ARTICLE 1006.10.
4. 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"
5. 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.
6. 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.
7. 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)	TOTAL		
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

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		DESIGNED: SBR	A.14
		CHECKED:	
CONCRETE COLLAR / CONNECTION DETAILS		REVIEWED:	OF
			PN



D160W28-sht-CDWM-Detail-06.dgn  
USER NAME = chitua  
PLOT SCALE = 1:8000 / 1"  
PLOT DATE = 3/25/2014

DESIGNED -	REVISD -
DRAWN -	REVISD -
CHECKED -	REVISD -
DATE - 03/28/14	REVISD -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

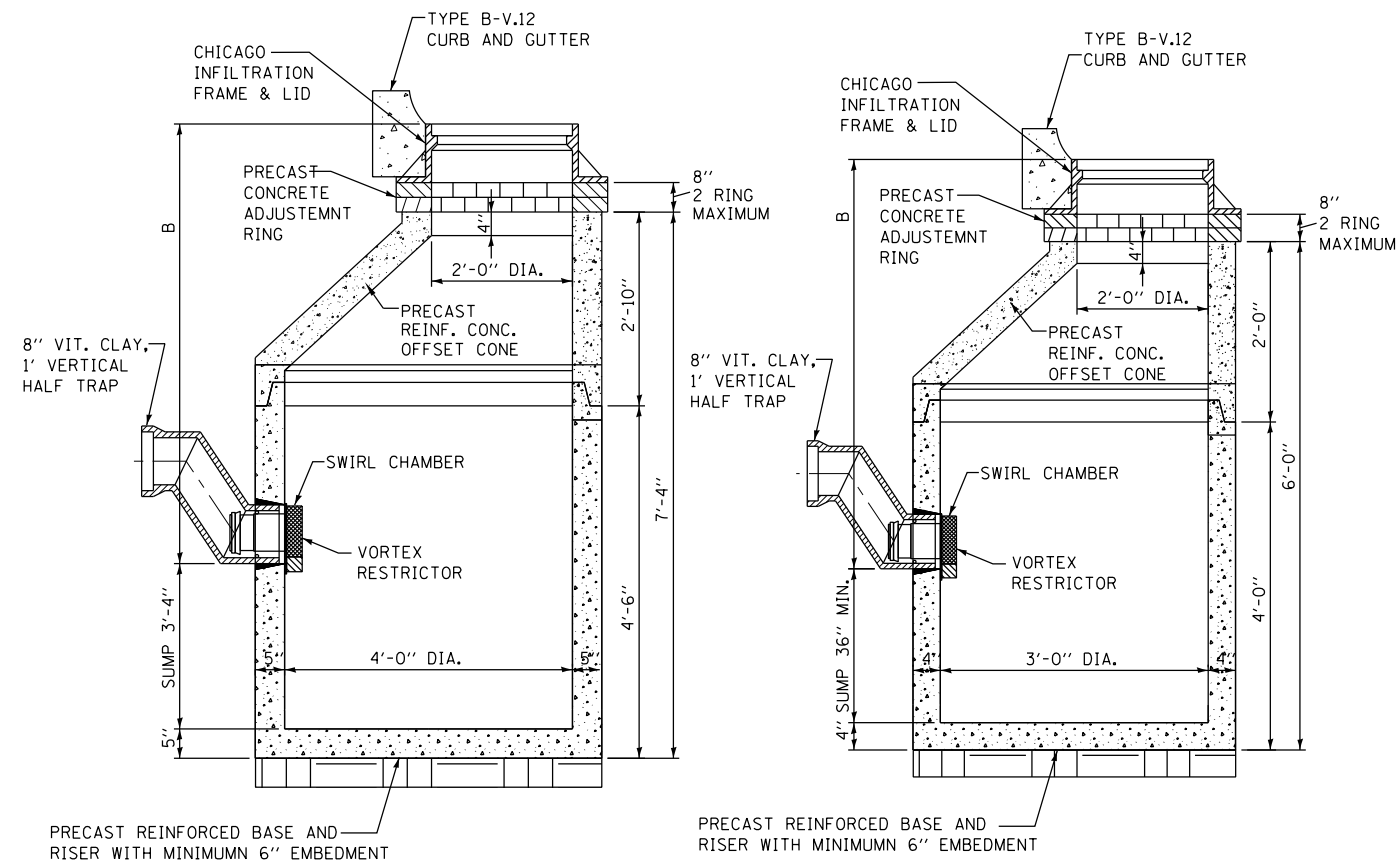
CHICAGO DEPARTMENT OF WATER MANAGEMENT  
STANDARD DETAILS

SCALE: NTS SHEET 6 OF 8 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2013-010R	COUNTY COOK	TOTAL SHEETS 747	SHEET NO. 642
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

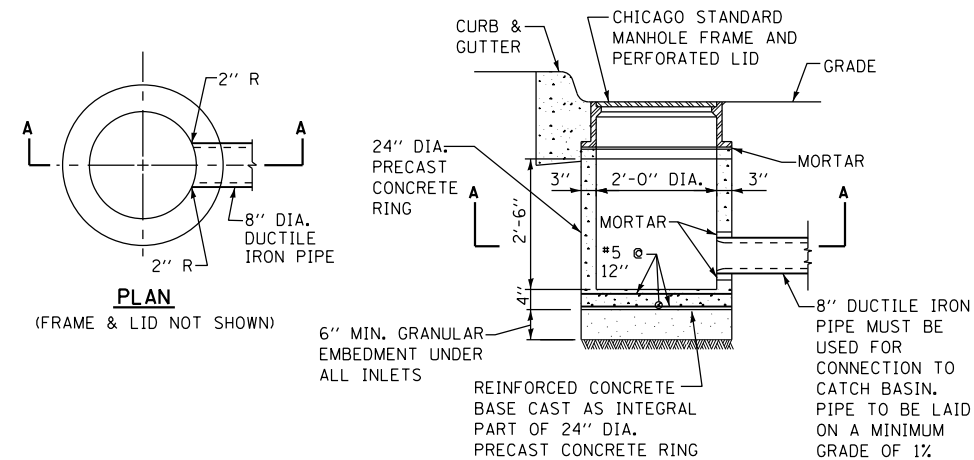
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## STANDARD DRAINAGE STRUCTURES FOR PUBLIC STREETS



**STANDARD CATCH BASIN-4' DIA.**

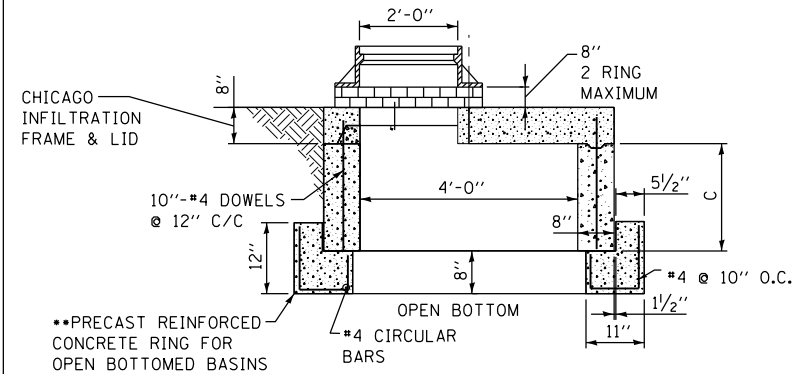
**STANDARD CATCH BASIN-3' DIA.**



**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.

## STANDARD DRAINAGE STRUCTURES FOR PUBLIC ALLEYS

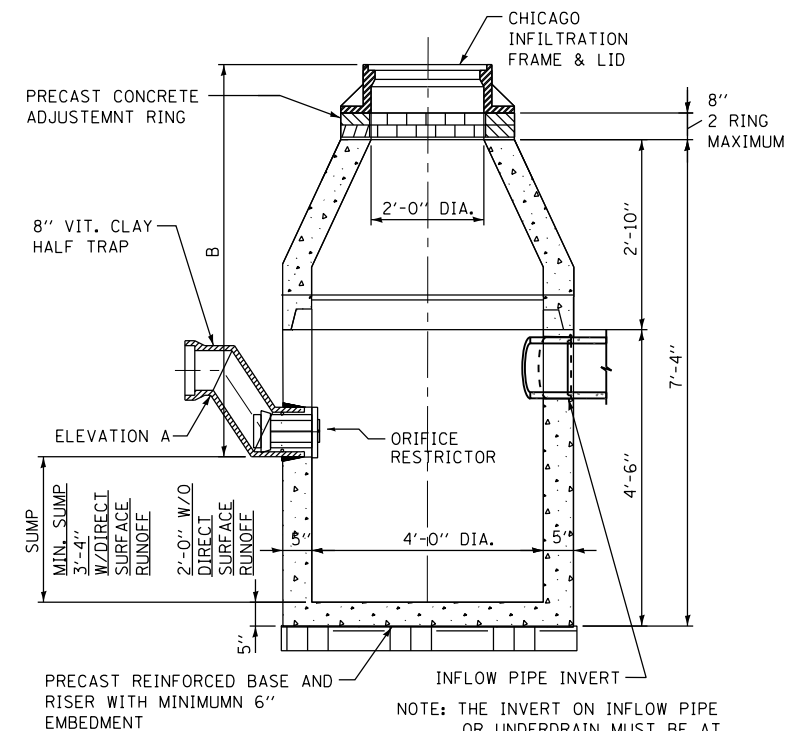


**GREEN ALLEY OPEN BOTTOM CATCH BASIN**

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.



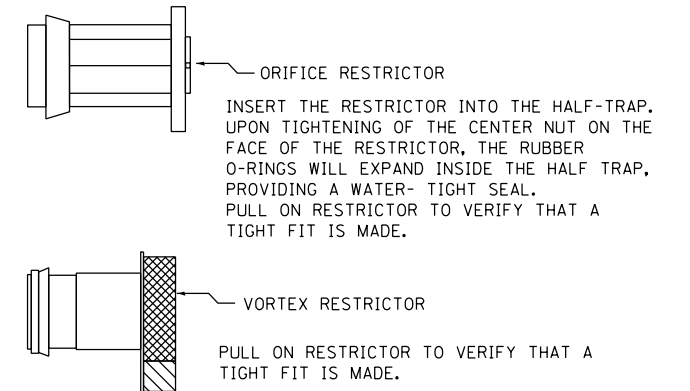
**CATCH BASIN-ORIFICE RESTRICTOR**

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
1/22/14	APPROVED

PERCENT COMPLETE	DATE
30	
60	
75	
90	
100	
BULLETIN	

<b>CITY OF CHICAGO</b>		DRAWN: SBR	<b>A.15</b>
DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES		CHECKED:	
DRAINAGE STRUCTURE DETAILS		REVIEWED:	OF PN



D160W28-sht-CDWM-Detail-07.dgn	DESIGNED -	REVISED -
USER NAME = chitua	DRAWN -	REVISED -
PLOT SCALE = 1.0000' / 1in.	CHECKED -	REVISED -
PLOT DATE = 3/25/2014	DATE - 03/28/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CHICAGO DEPARTMENT OF WATER MANAGEMENT  
STANDARD DETAILS**

SCALE: NTS      SHEET 7 OF 8 SHEETS      STA.      TO STA.

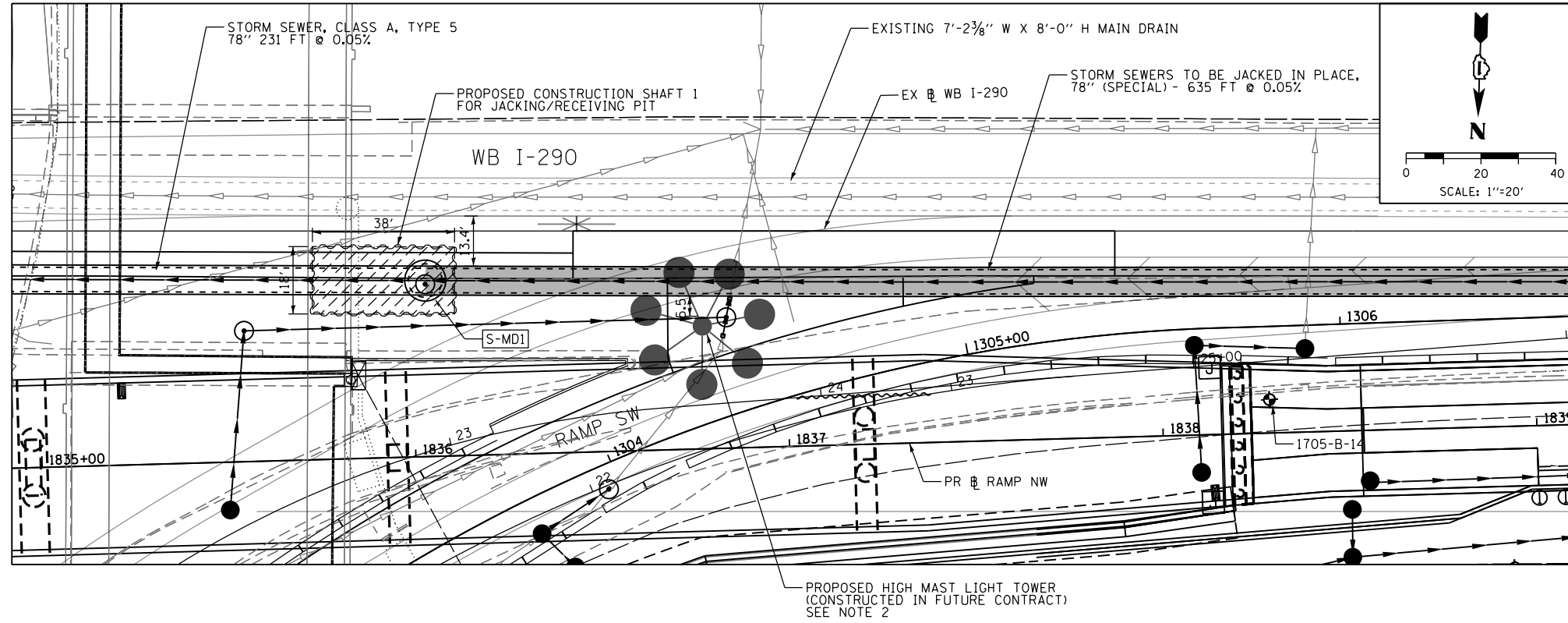
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90/94/290	2013-010R	COOK	747	643
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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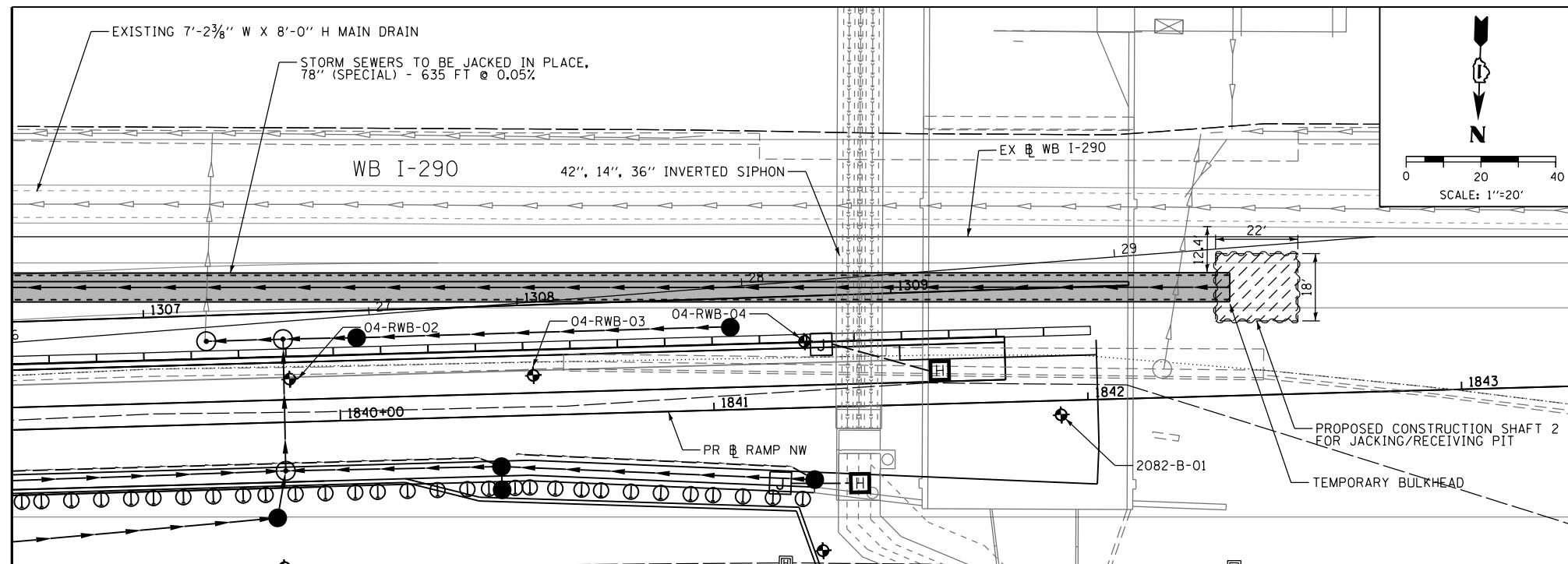


NOTES:

1. TUNNELING OPERATIONS SHALL BE PERFORMED DURING MOT STAGE 3B-2.
2. THE CONTRACTOR MUST MAINTAIN 5.5 FT SEPARATION BETWEEN THE OUTSIDE PIPE DIAMETER OF THE 78" STORM SEWER JACKED IN PLACE PIPE AND THE FUTURE PROPOSED HIGH MAST LIGHT TOWER. THE CENTER LINE OF THE 78" MAIN DRAIN AT STATION 1836+78.52 IS TO BE AT AN OFFSET OF 67.32 FT TO THE LEFT BASED ON THE PR BASELINE RAMP NW.
3. REFER TO STRUCTURAL PLANS FOR SOIL BORING INFORMATION.



MATCHLINE SEE BELOW



MATCHLINE SEE ABOVE

FILE PATH = p:\388035\pmt\escomon\me\local\p\AEC\0400\Documents\01\_Americas\Transportation\62629938\_Circle\Phase\_1\000\_CAD\005\_Roadway\_Sheets\60W28\_sht-Drain-Detail.dgn



D160W28-sht-Drain-Detail.dgn  
 USER NAME = chiue  
 PLOT SCALE = 40.0000' / in.  
 PLOT DATE = 4/28/2014

DESIGNED - DMS  
 DRAWN - DMS  
 CHECKED - EY  
 DATE - 04/28/14

REVISED -  
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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. TO STA.

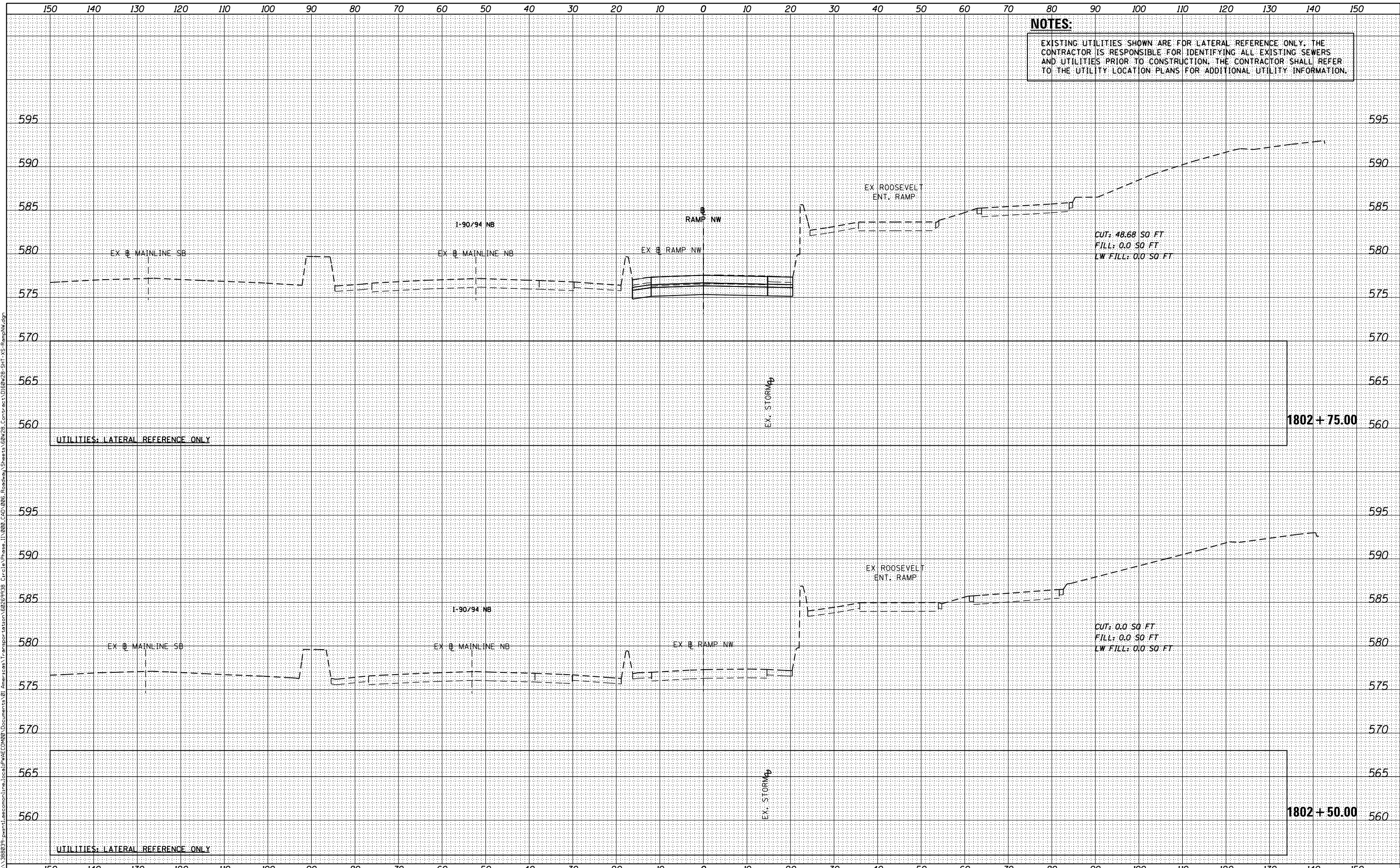
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	645
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

DATE	
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ORIGINAL SURVEY	
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**NOTES:**  
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D160W28-SHT-XS-RampNW.dgn  
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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 01 OF 51 SHEETS STA. 1802+50.00 TO STA. 1802+75.00

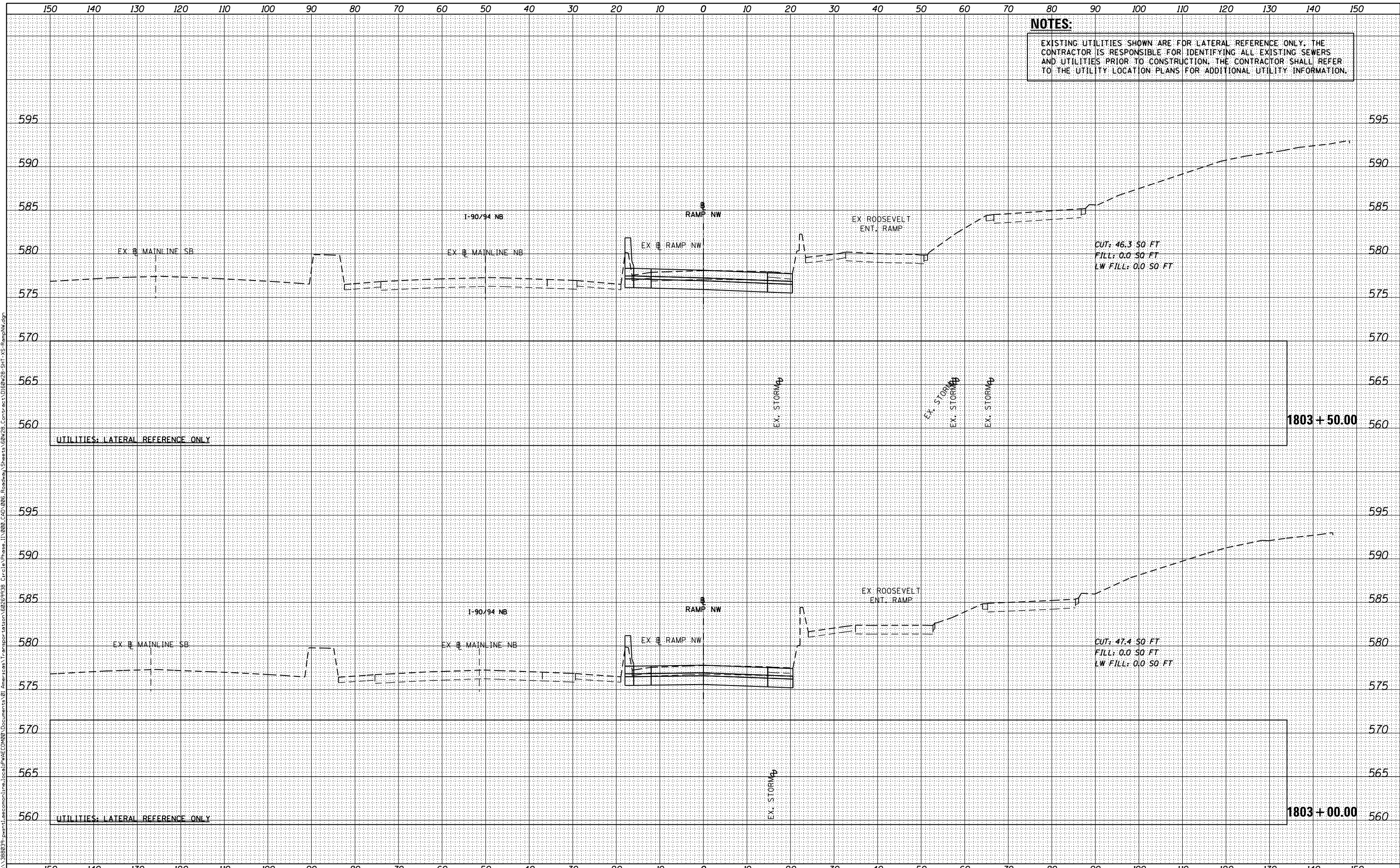
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	646
				CONTRACT NO. 60W28

ILLINOIS FED. AID PROJECT

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DATE	
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FINAL SURVEY	
SURVEYED	
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DATE	
BY	
ORIGINAL SURVEY	
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PLOT SCALE = 10.0000' / in.	CHECKED - <b>K&amp;R</b>	REVISED -
PLOT DATE = 4/25/2014	DATE - <b>04/28/14</b>	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

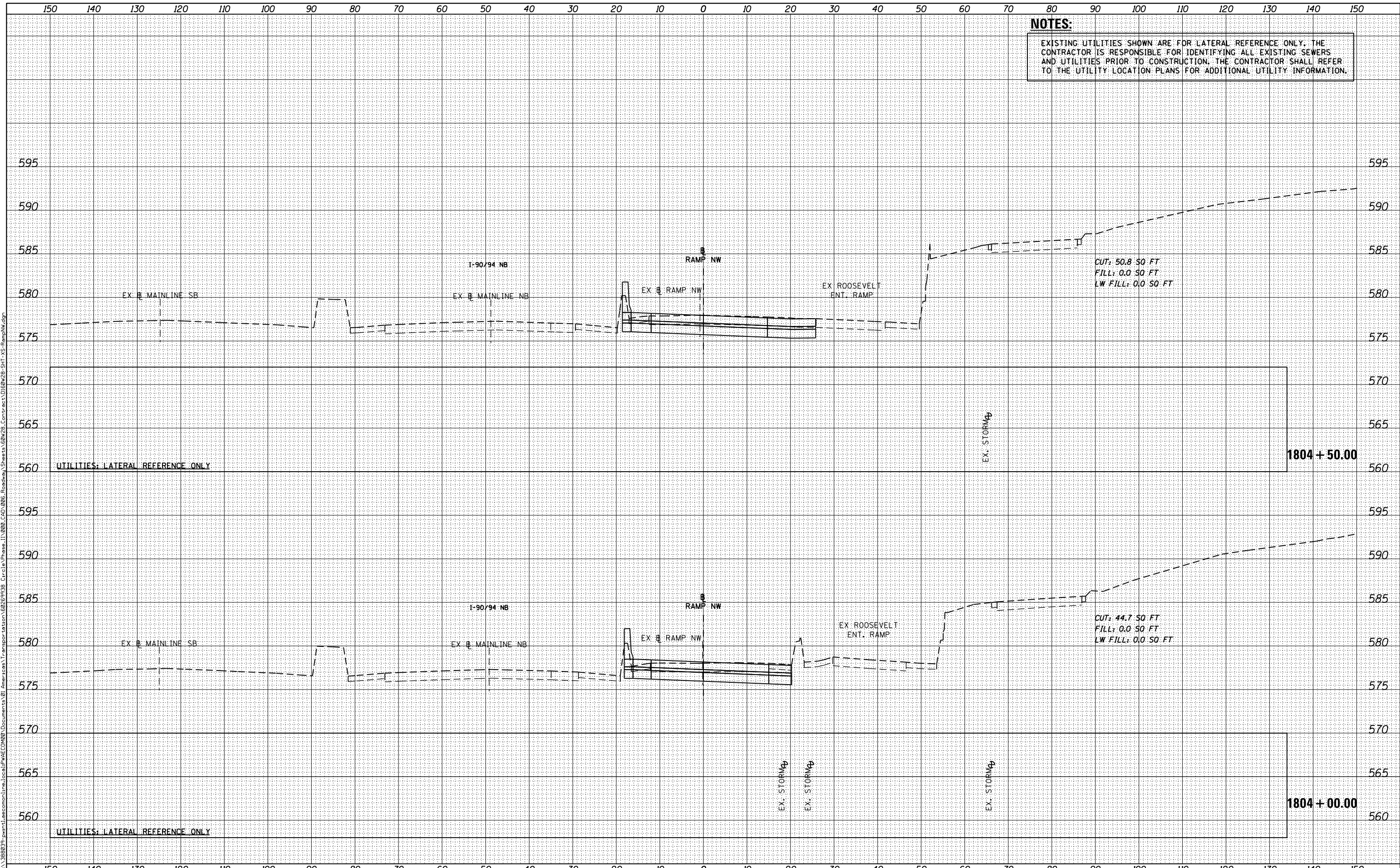
CROSS SECTIONS			
RAMP NW			
SCALE: 1:5V,1:10H	SHEET 02	OF 51 SHEETS	STA. 1803+00.00 TO STA. 1803+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	647
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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DATE	
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FINAL SURVEY	
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AREAS CHECKED	
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AREAS CHECKED	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

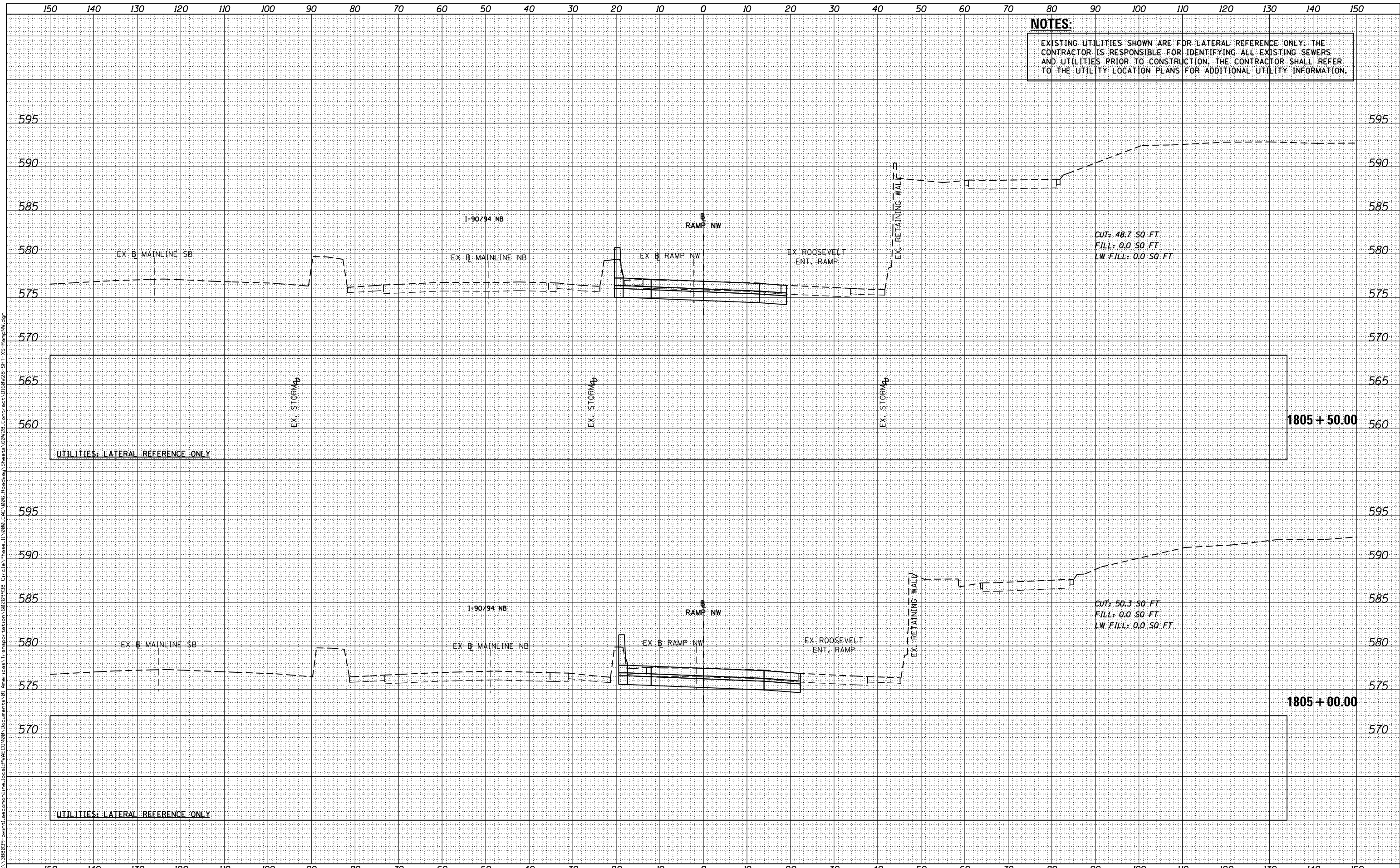
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	648
				CONTRACT NO. 60W28
ILLINOIS FED. AID PROJECT				

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DATE	
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ORIGINAL SURVEY	
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D160W28-SHT-XS-RampNW.dgn	DESIGNED - <b>NMM / AJP</b>	REVISED -
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PLOT DATE = 4/25/2014	DATE - <b>04/28/14</b>	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 04 OF 51 SHEETS STA. 1805+00.00 TO STA. 1805+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	649
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

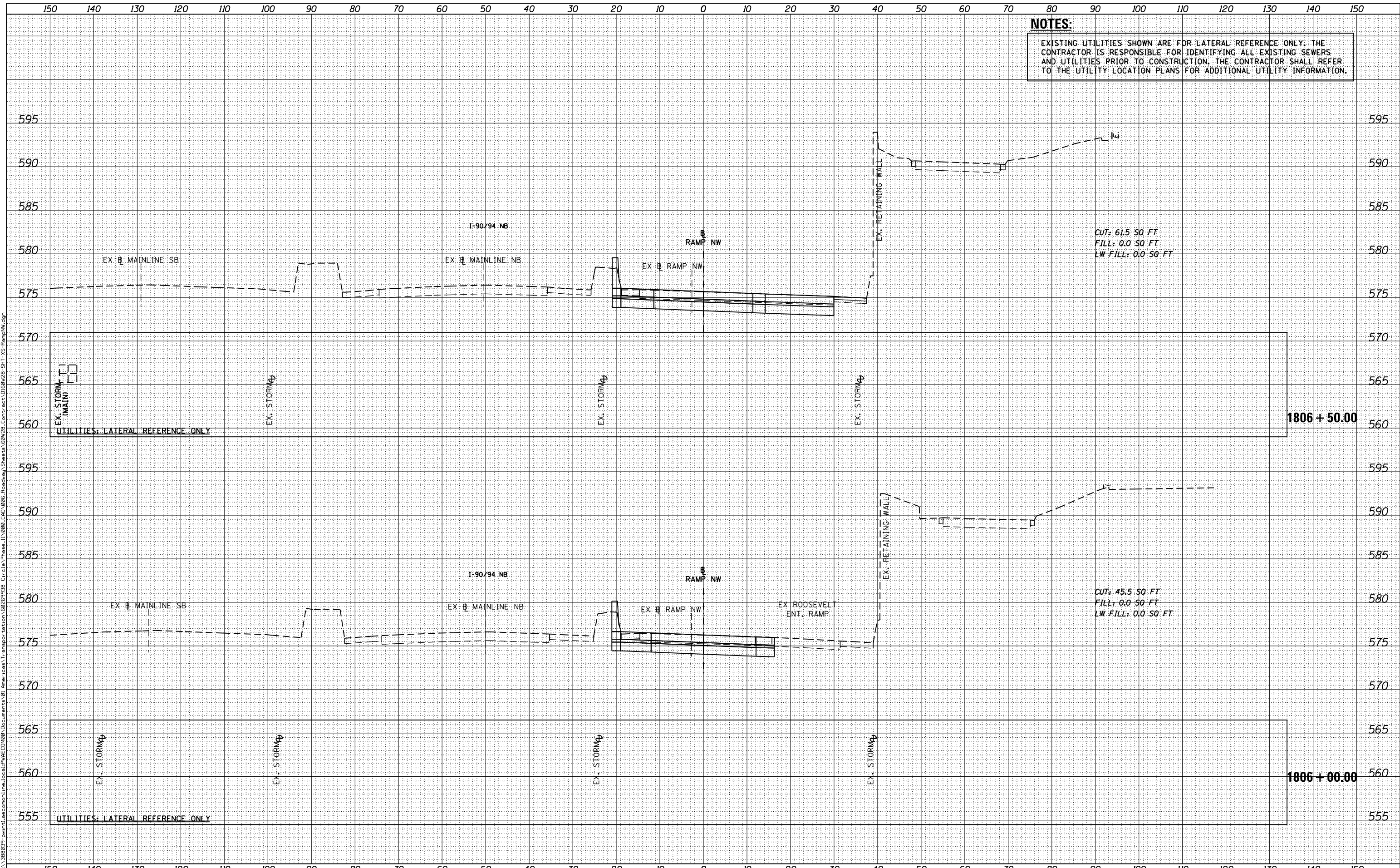


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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
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 CHECKED - K&R  
 DATE - 04/28/14

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 05 OF 51 SHEETS STA. 1806+00.00 TO STA. 1806+50.00

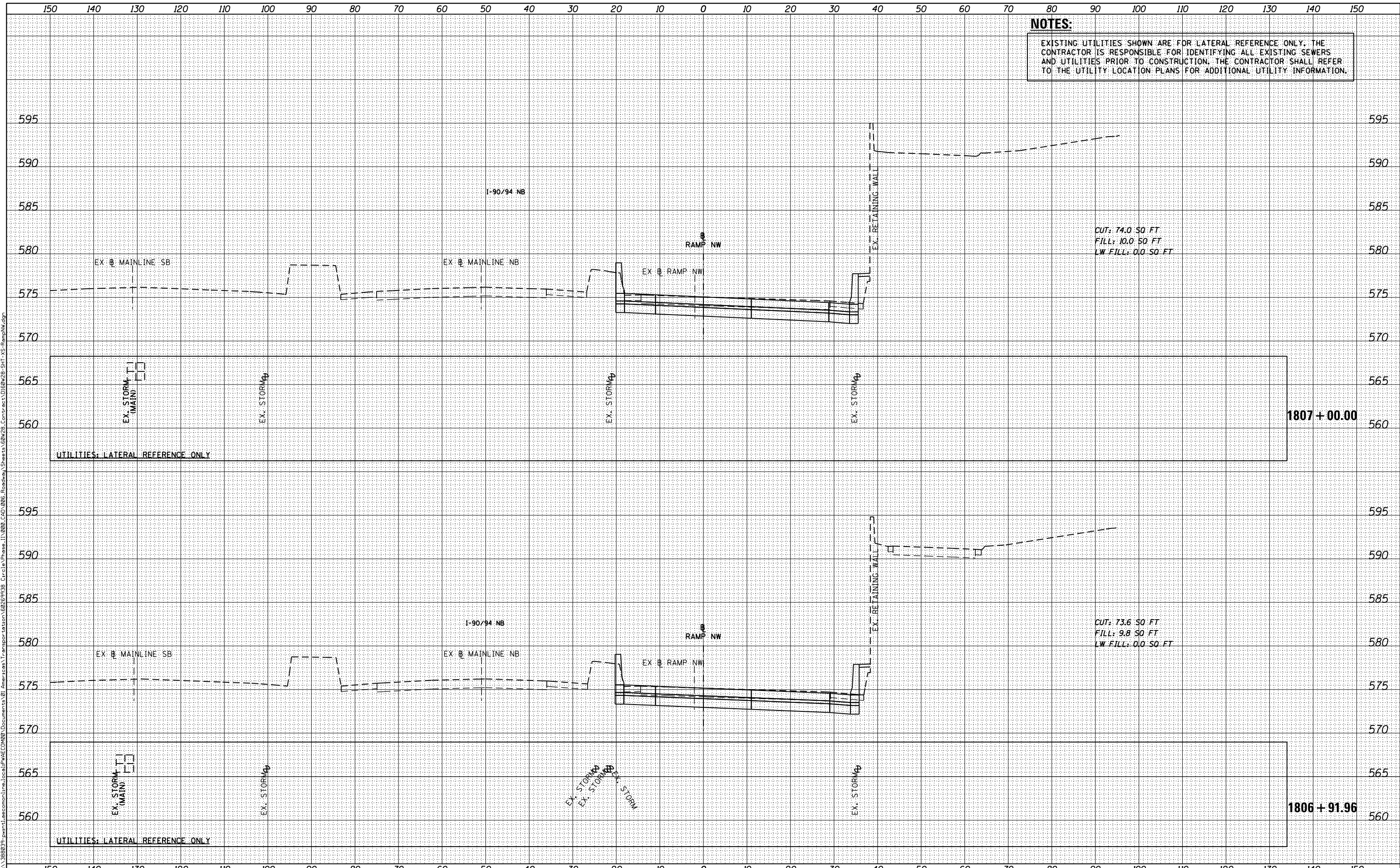
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	650
CONTRACT NO. 60W28				

ILLINOIS FED. AID PROJECT

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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
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 CHECKED - K&R  
 DATE - 04/28/14

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

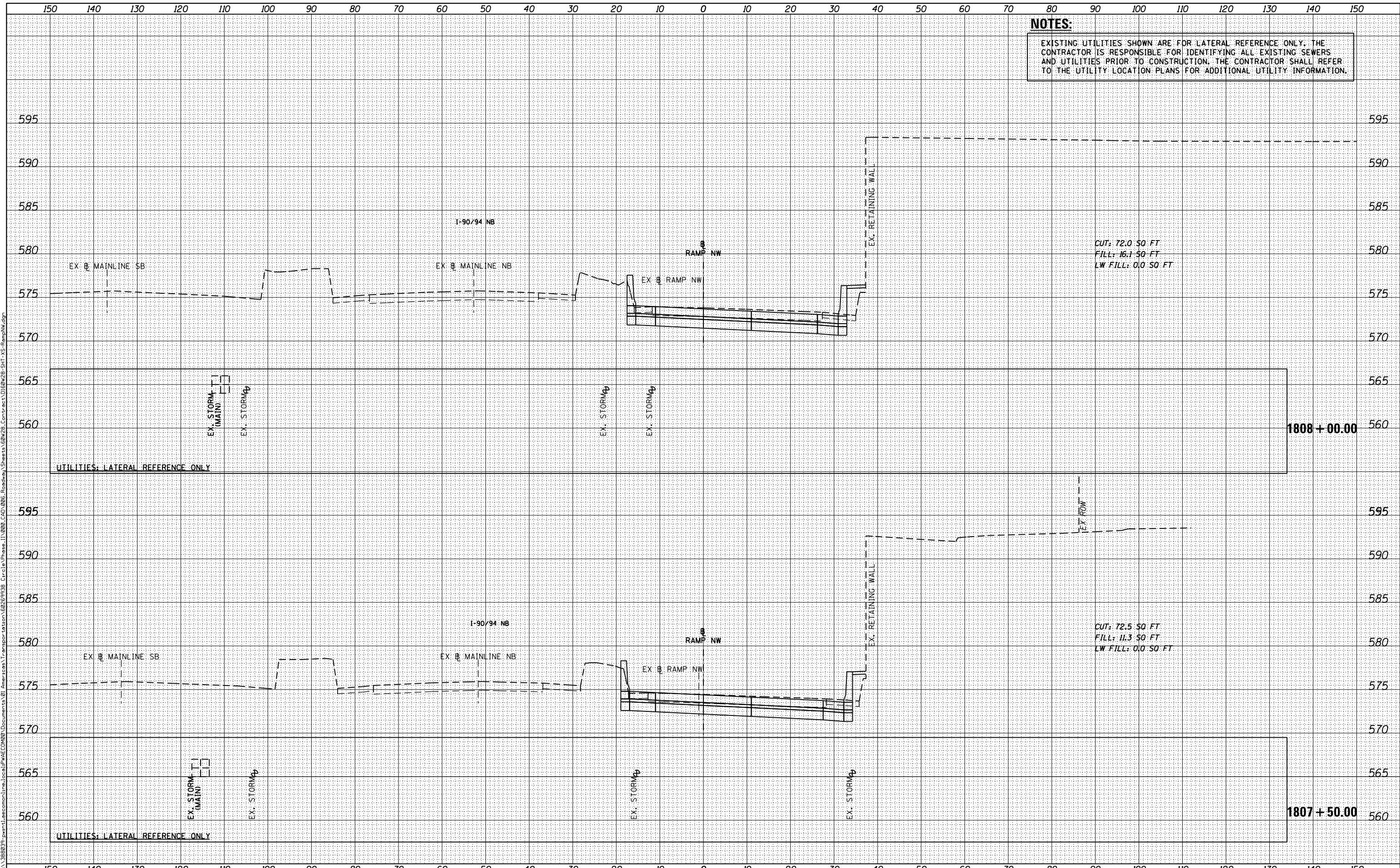
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	651
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

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FINAL SURVEY	
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ORIGINAL SURVEY	
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 PLOT DATE = 4/25/2014

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DRAWN -	NMM / AJP	REVISED -	
CHECKED -	K&R	REVISED -	
DATE -	04/28/14	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

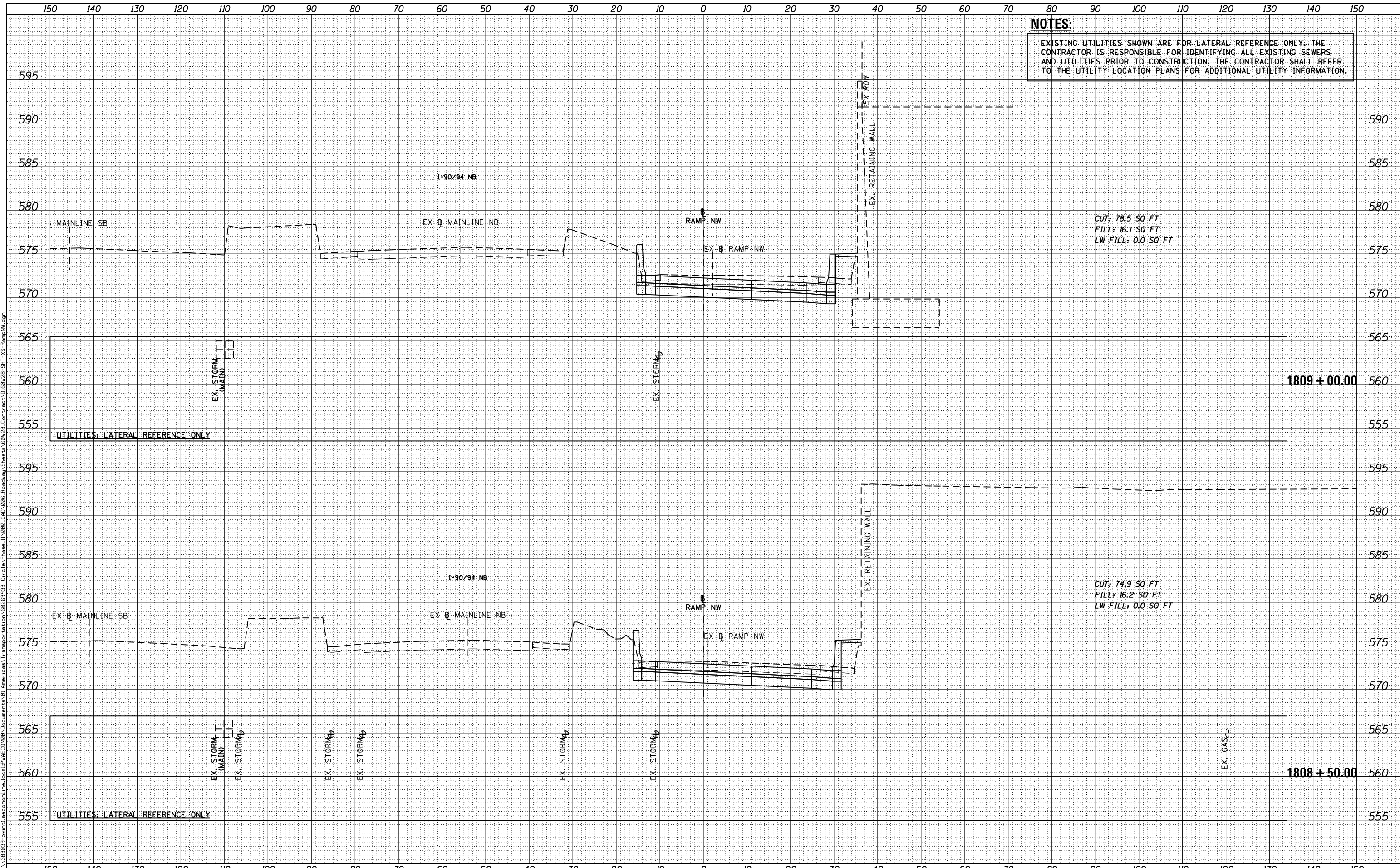
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	652
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

DATE	
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FINAL SURVEY	SURVEYED
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ORIGINAL SURVEY	SURVEYED
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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
 DRAWN - **NMM / AJP**  
 CHECKED - **K&R**  
 DATE - **04/28/14**

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

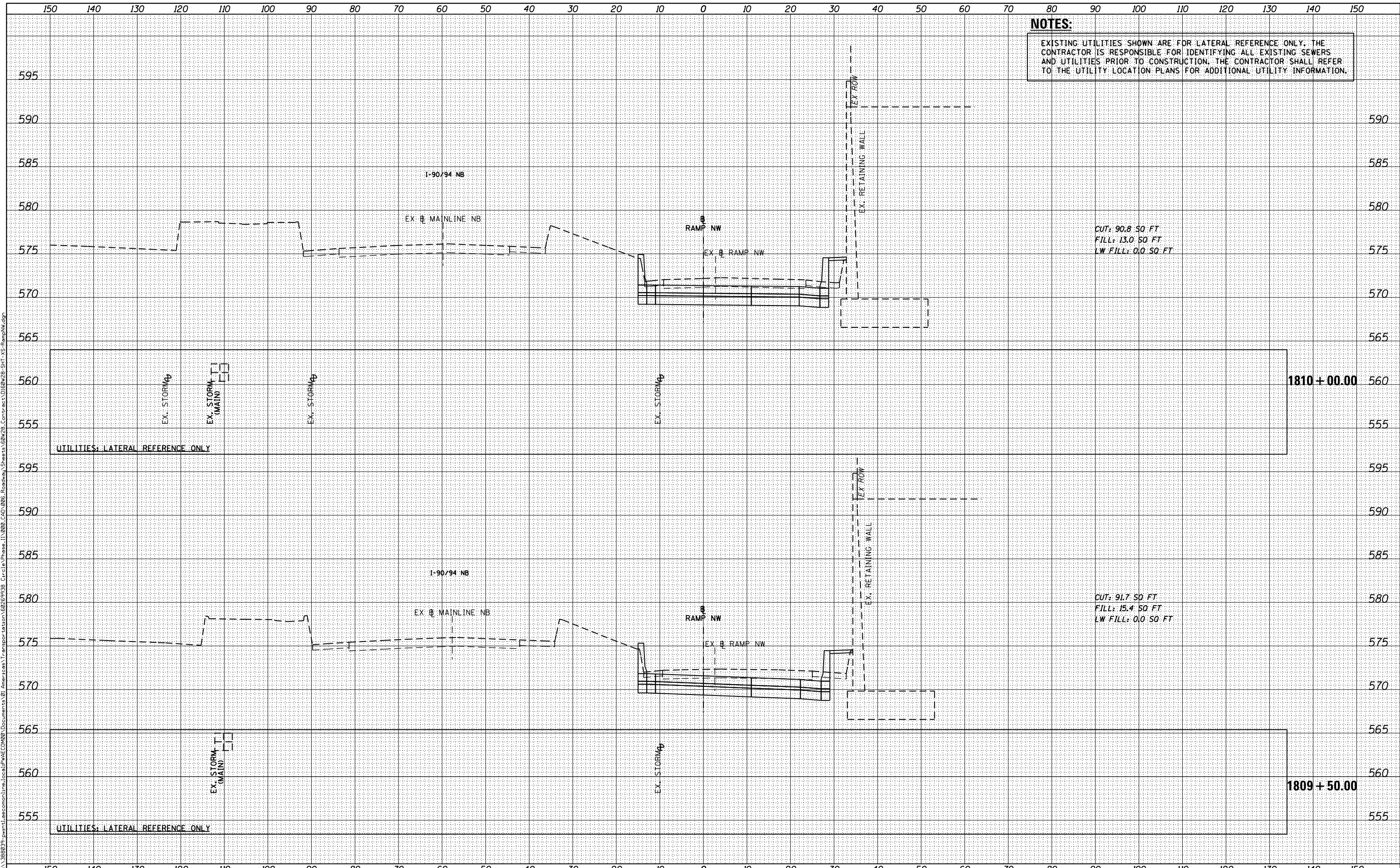
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	653
			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

DATE	
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FINAL SURVEY	SURVEYED
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PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
DRAWN - NMM / AJP  
CHECKED - K&R  
DATE - 04/28/14

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
RAMP NW

SCALE: 1:5V,1:10H SHEET 09 OF 51 SHEETS STA. 1809+50.00 TO STA. 1810+00.00

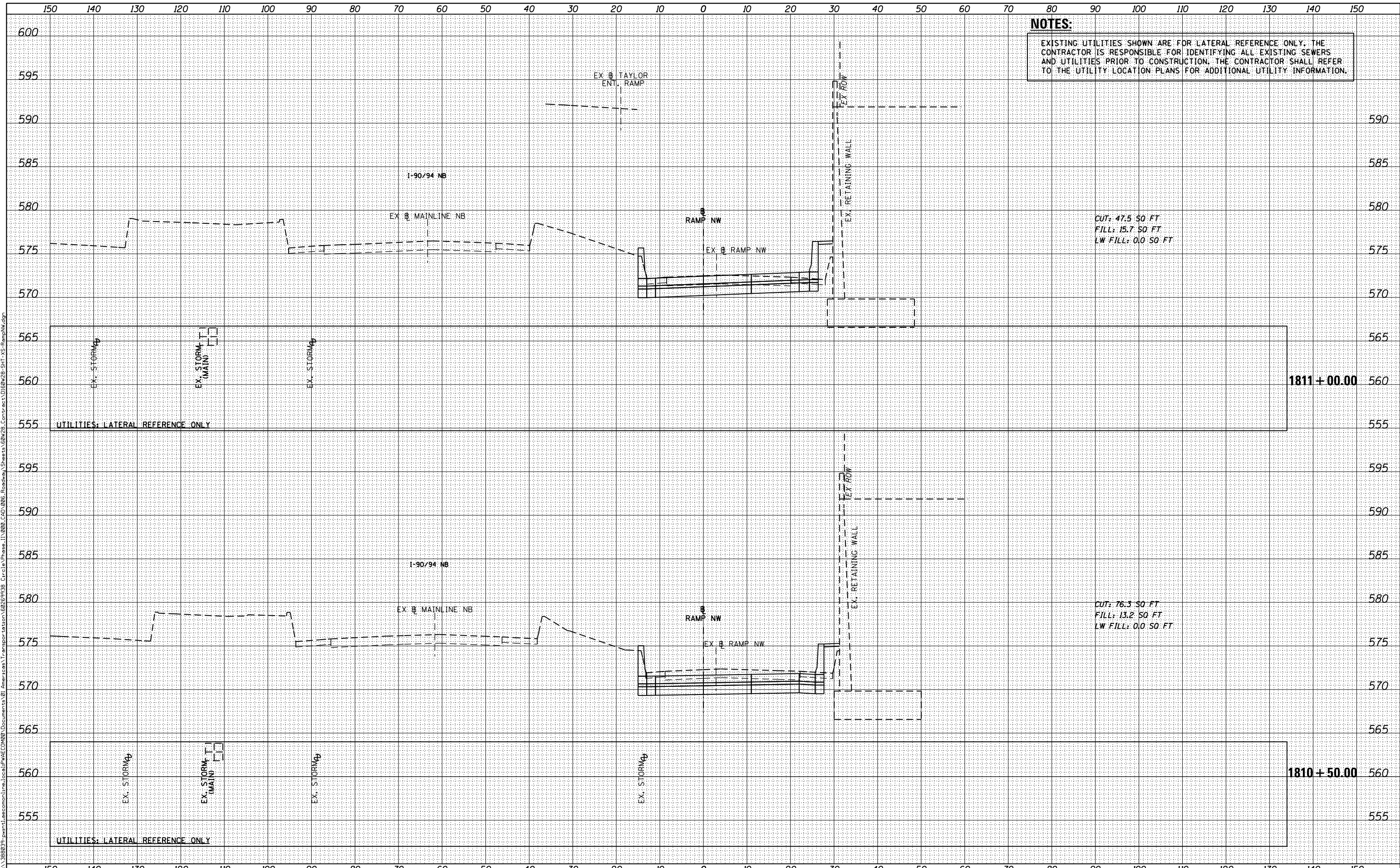
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90/94/290	2013-010R	COOK	747	654
			CONTRACT NO. 60W28	

ILLINOIS FED. AID PROJECT

DATE	
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FINAL SURVEY	SURVEYED
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	AREAS CHECKED

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 10 OF 51 SHEETS STA. 1810+50.00 TO STA. 1811+00.00

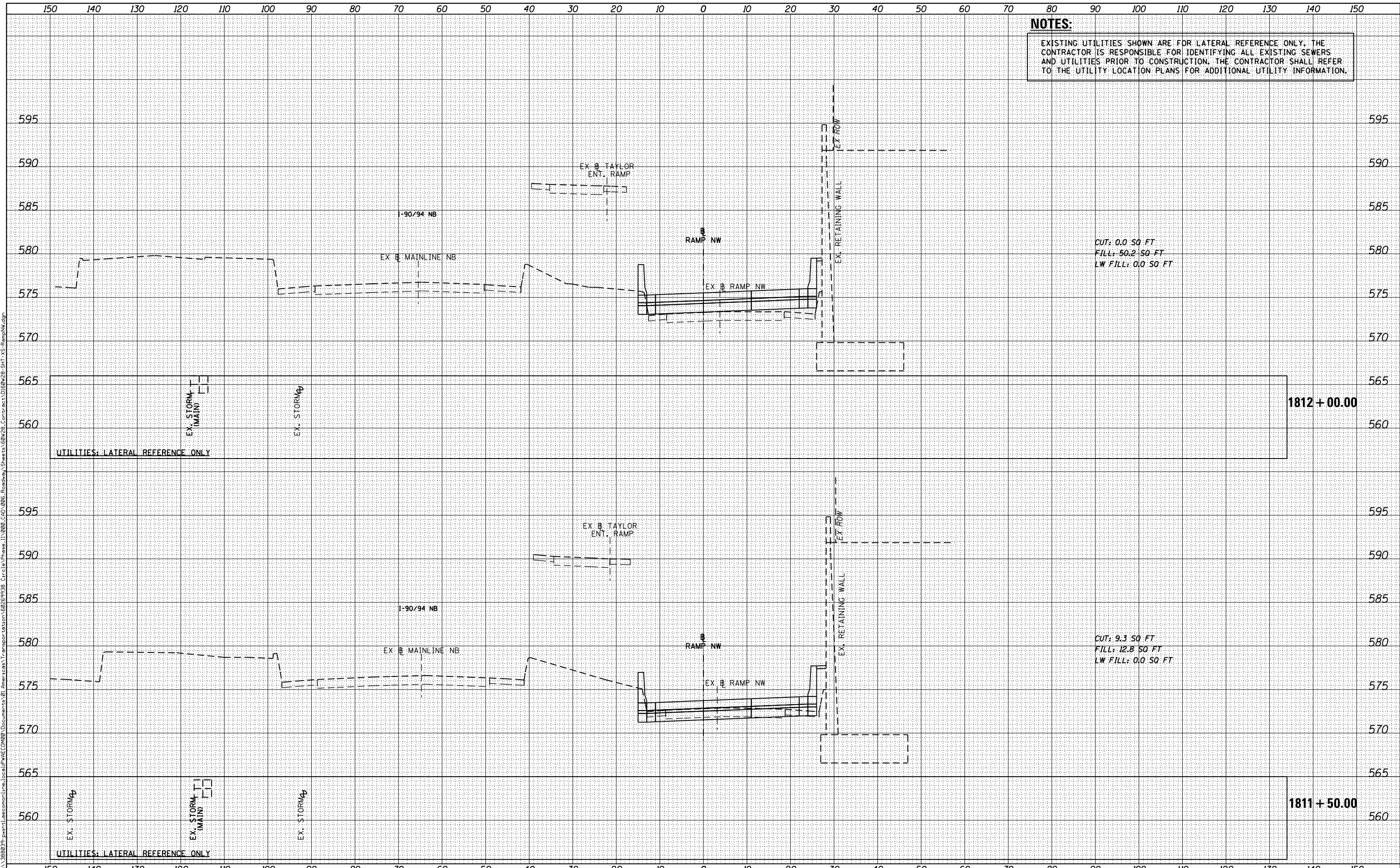
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	655
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

DATE	
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FINAL SURVEY	
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NOTE BOOK	
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D160W28-SHT-XS-RampNW.dgn  
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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

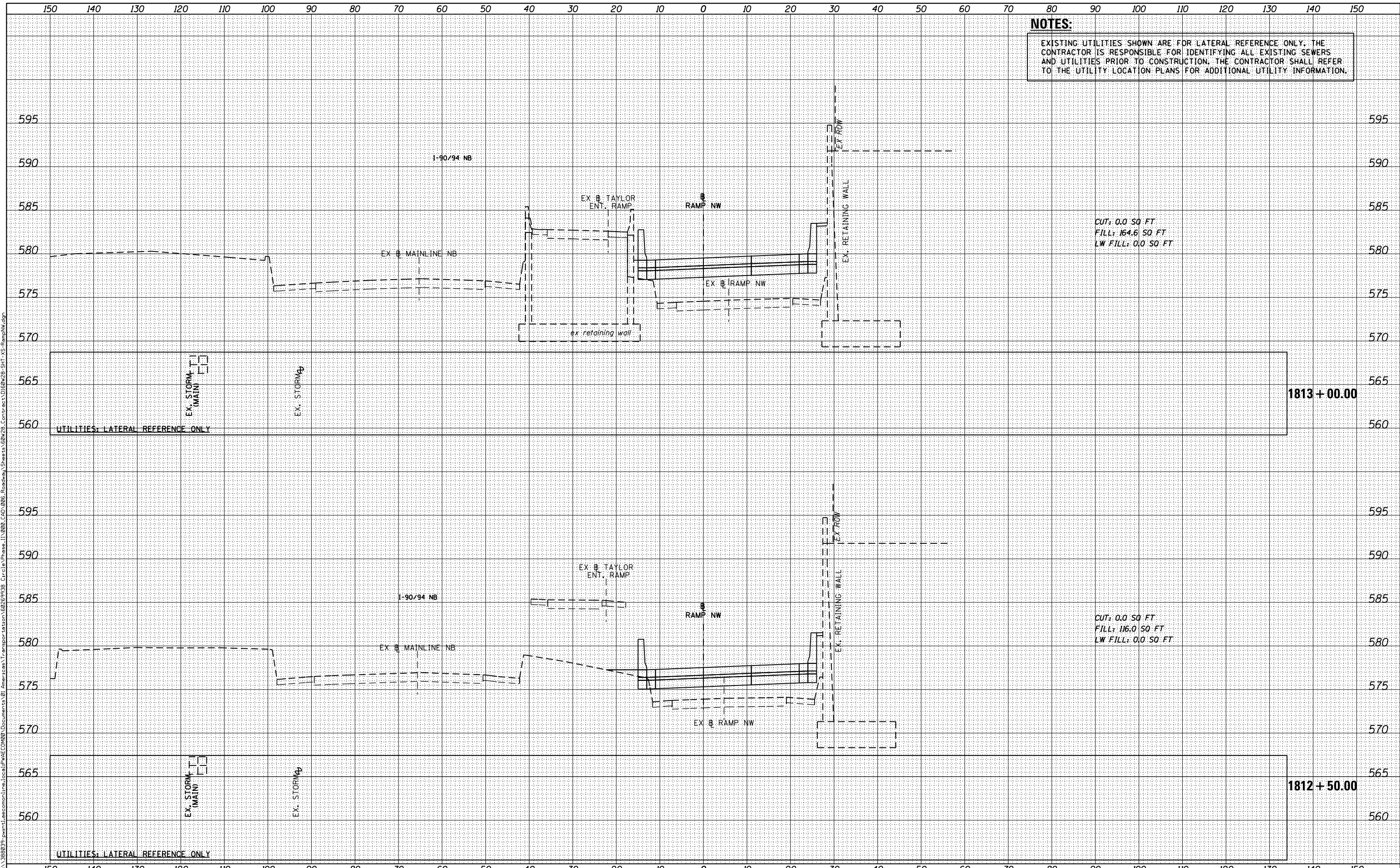
SCALE: 1:5V,1:10H SHEET 11 OF 51 SHEETS STA. 1811+50.00 TO STA. 1812+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	656
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

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DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



CUT: 0.0 SO FT  
 FILL: 164.6 SO FT  
 LW FILL: 0.0 SO FT

CUT: 0.0 SO FT  
 FILL: 116.0 SO FT  
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NWM / AJP  
 DRAWN - NWM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 12 OF 51 SHEETS STA. 1812+50.00 TO STA. 1813+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	657
CONTRACT NO. 60W28				

ILLINOIS FED. AID PROJECT

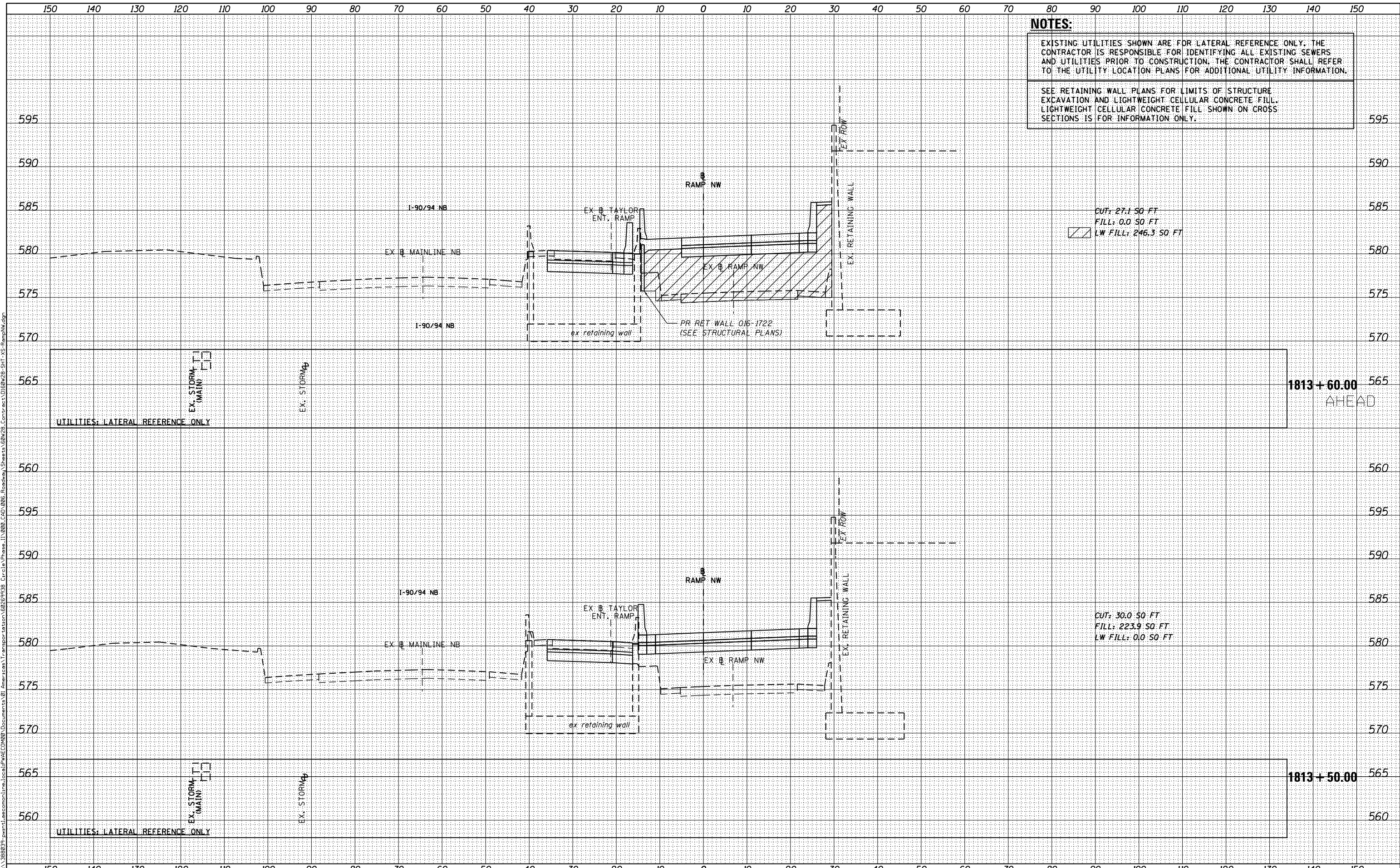
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
 DRAWN - **NMM / AJP**  
 CHECKED - **K&R**  
 DATE - **04/28/14**

REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 13 OF 51 SHEETS STA. 1813+50.00 TO STA. 1813+60.00

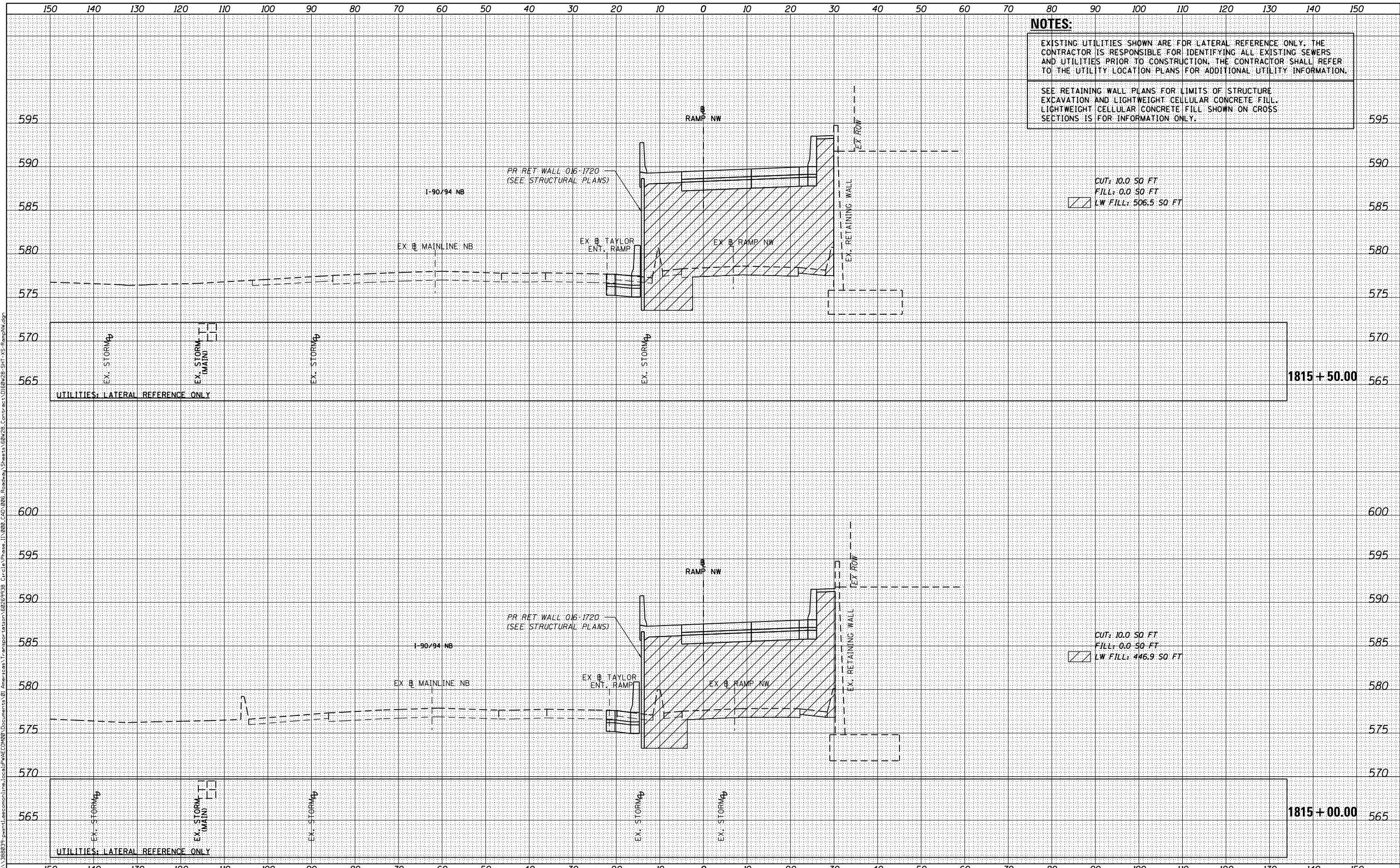
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	658
			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				



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**NOTES:**  
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 SEE RETAINING WALL PLANS FOR LIMITS OF STRUCTURE EXCAVATION AND LIGHTWEIGHT CELLULAR CONCRETE FILL. LIGHTWEIGHT CELLULAR CONCRETE FILL SHOWN ON CROSS SECTIONS IS FOR INFORMATION ONLY.



D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
 DRAWN - **NMM / AJP**  
 CHECKED - **K&R**  
 DATE - **04/28/14**

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V, 1:10H SHEET 15 OF 51 SHEETS STA. 1815+00.00 TO STA. 1815+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	660
CONTRACT NO. 60W28				

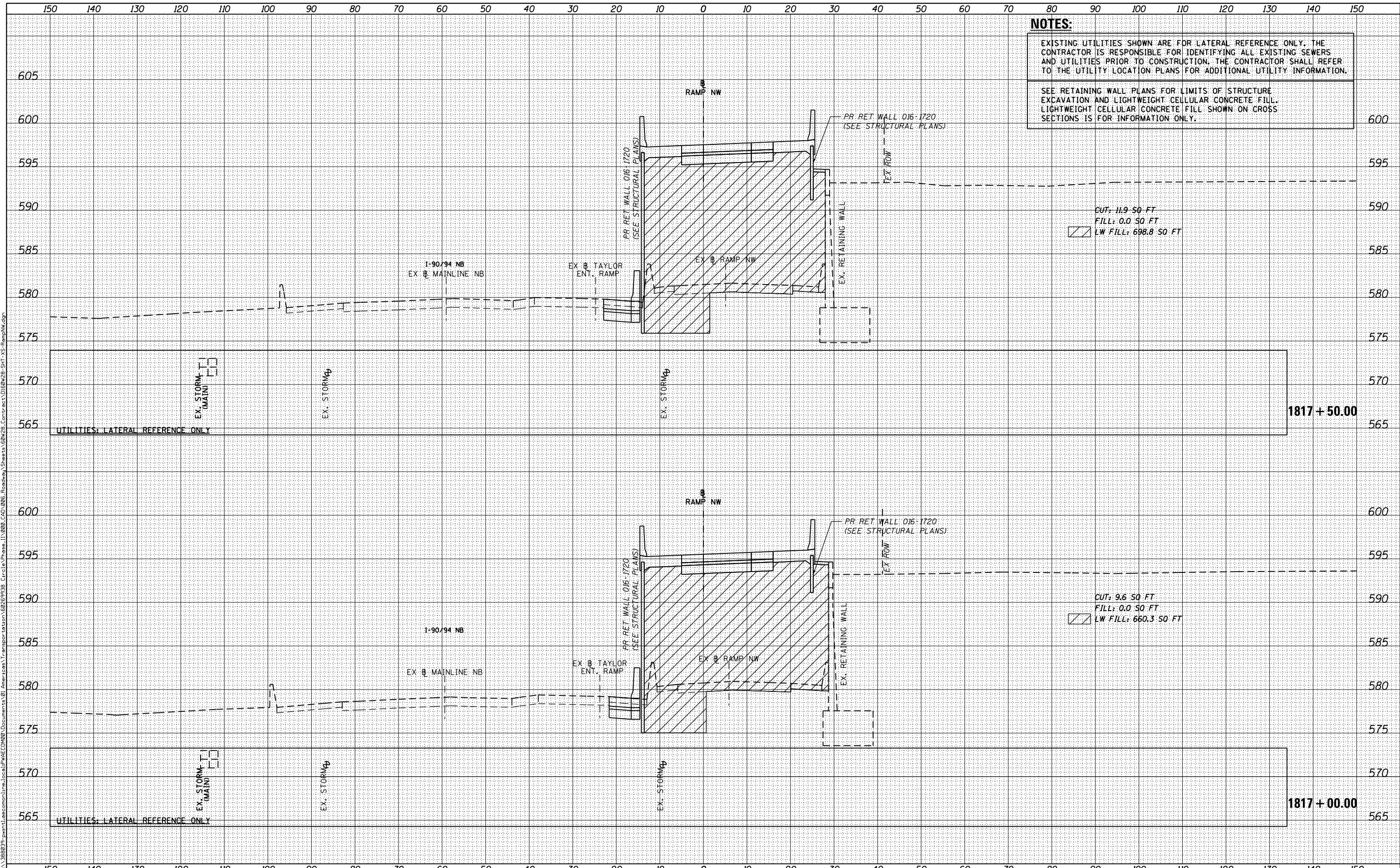
ILLINOIS FED. AID PROJECT



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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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CUT: 11.9 SO. FT  
 FILL: 0.0 SO. FT  
 LW FILL: 698.8 SO. FT

CUT: 9.6 SO. FT  
 FILL: 0.0 SO. FT  
 LW FILL: 660.3 SO. FT



D160w28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V, 1:10H SHEET 17 OF 51 SHEETS STA. 1817+00.00 TO STA. 1817+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	662
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

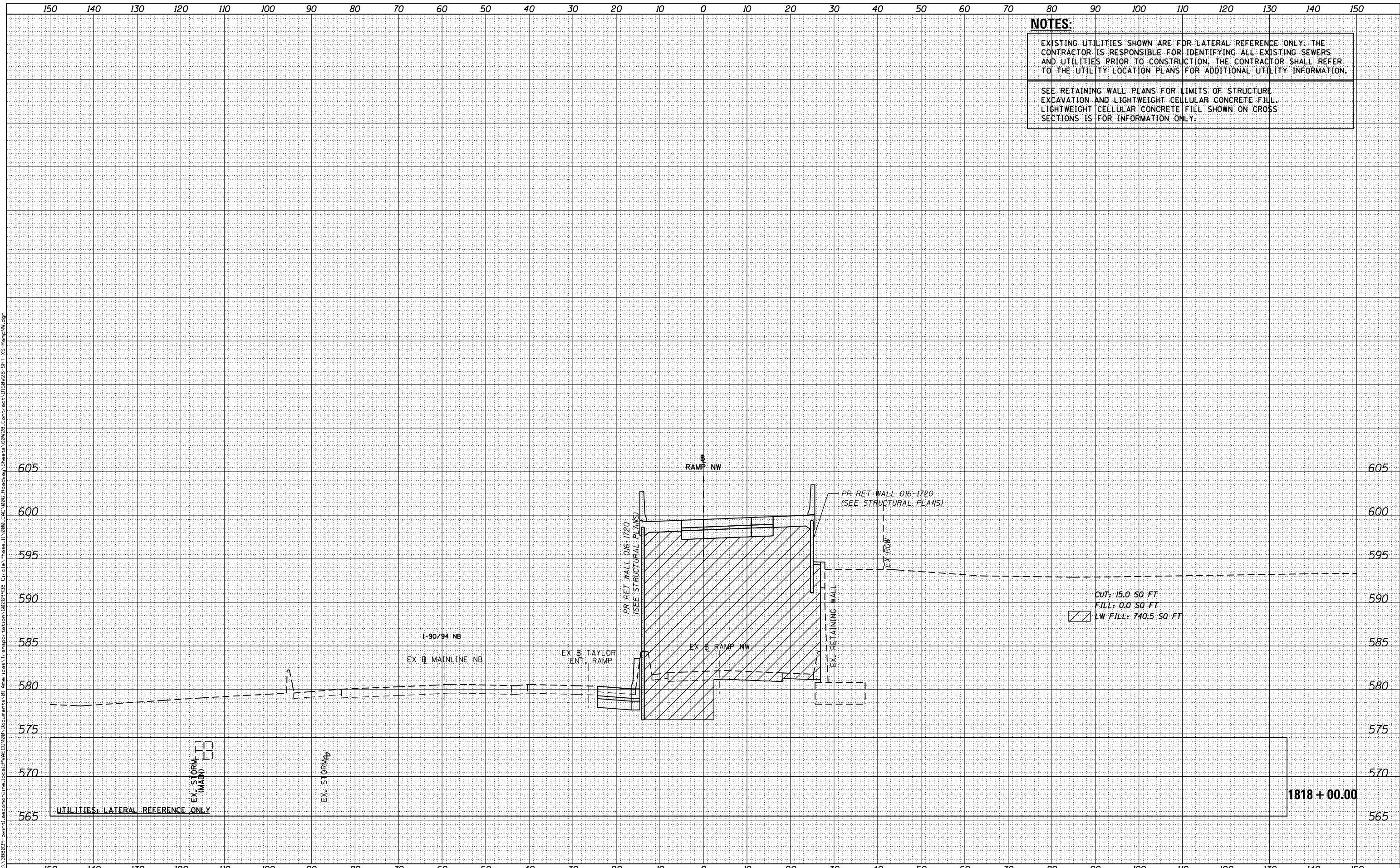
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

DATE	
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

**NOTES:**

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D160W28-SHT-XS-RampNW.dgn	DESIGNED - NMM / AJP	REVISED -
USER NAME = maronik	DRAWN - NMM / AJP	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - K&R	REVISED -
PLOT DATE = 4/25/2014	DATE - 04/28/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
RAMP NW**

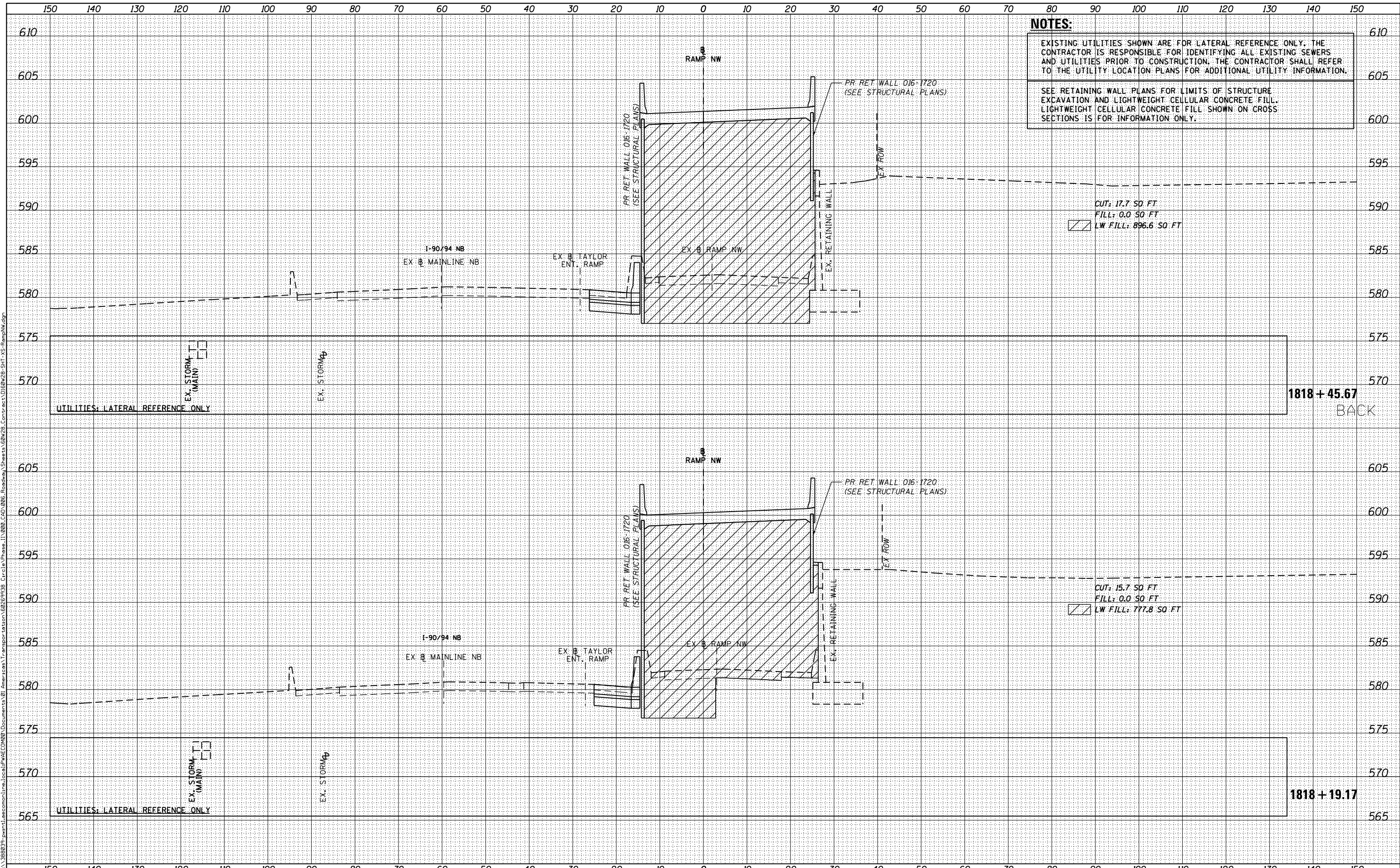
SCALE: 1:5V,1:10H SHEET 18 OF 51 SHEETS STA. 1818+00.00 TO STA. 1818+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	663
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

DATE	
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FINAL SURVEY	
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NOTE BOOK	
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ORIGINAL SURVEY	
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CUT: 17.7 SQ FT  
 FILL: 0.0 SQ FT  
 LW FILL: 896.6 SQ FT

CUT: 15.7 SQ FT  
 FILL: 0.0 SQ FT  
 LW FILL: 777.8 SQ FT



D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 19 OF 51 SHEETS STA. 1818+19.17 TO STA. 1818+45.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	664
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

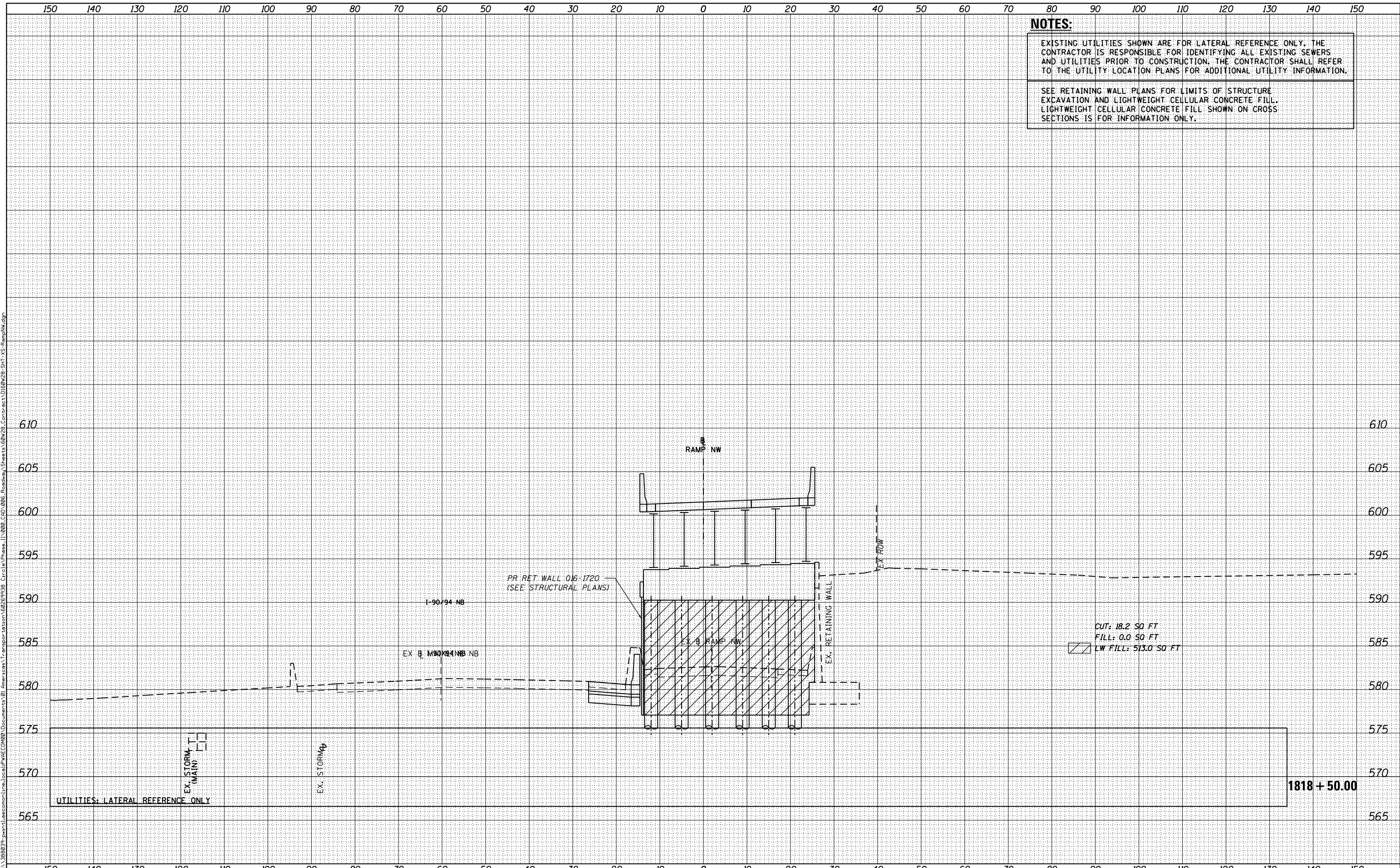
**NOTES:**

EXISTING UTILITIES SHOWN ARE FOR LATERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO THE UTILITY LOCATION PLANS FOR ADDITIONAL UTILITY INFORMATION.

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DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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D160W28-SHT-XS-RampNW.dgn	DESIGNED - NMM / AJP	REVISED -
USER NAME = maronik	DRAWN - NMM / AJP	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - K&R	REVISED -
PLOT DATE = 4/25/2014	DATE - 04/28/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
RAMP NW**

SCALE: 1:5V,1:10H SHEET 20 OF 51 SHEETS STA. 1818+50.00 TO STA. 1818+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	665
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				



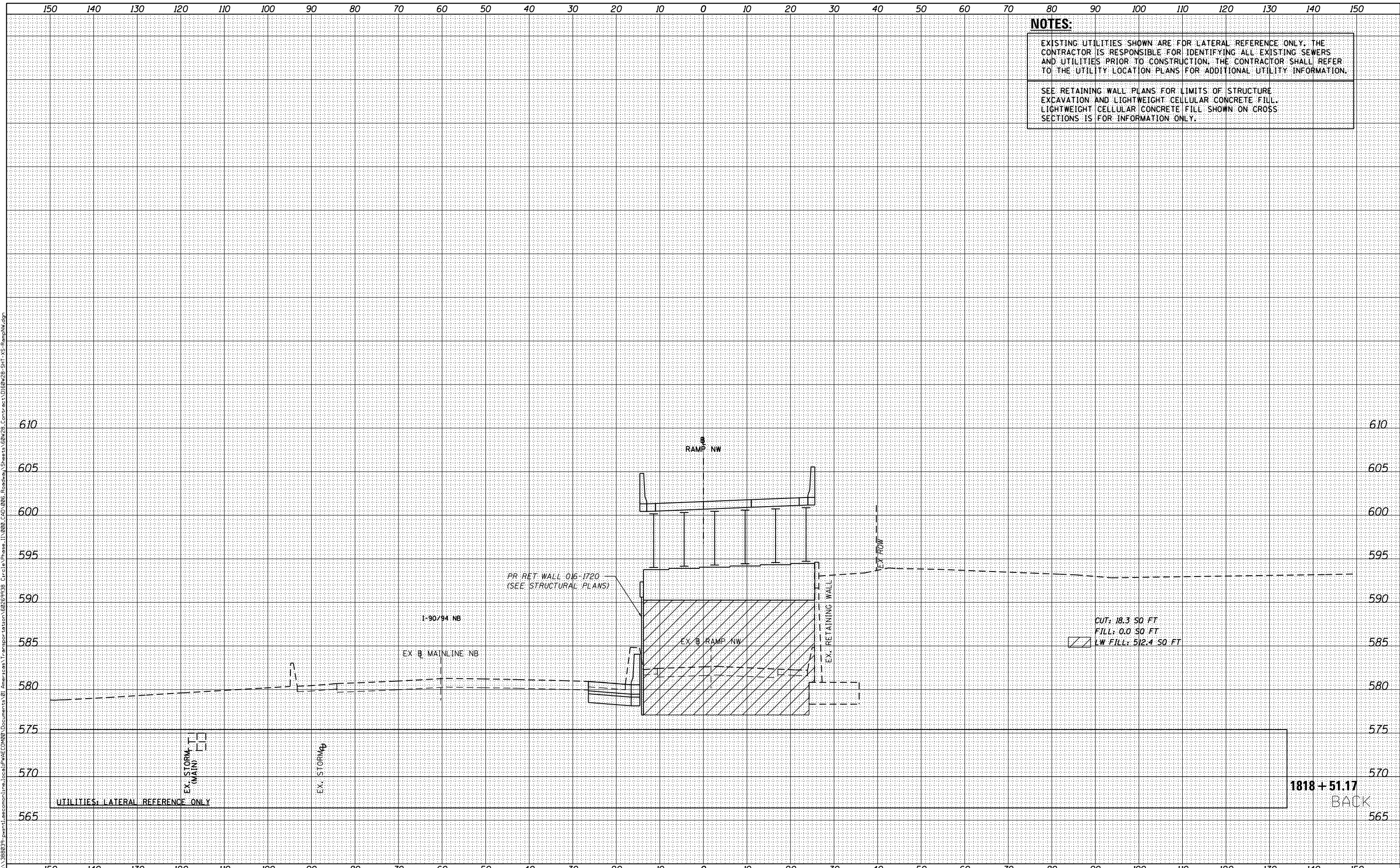
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

**NOTES:**

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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V, 1:10H SHEET 21 OF 51 SHEETS STA. 1818+51.17 TO STA. 1818+51.17

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	666
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

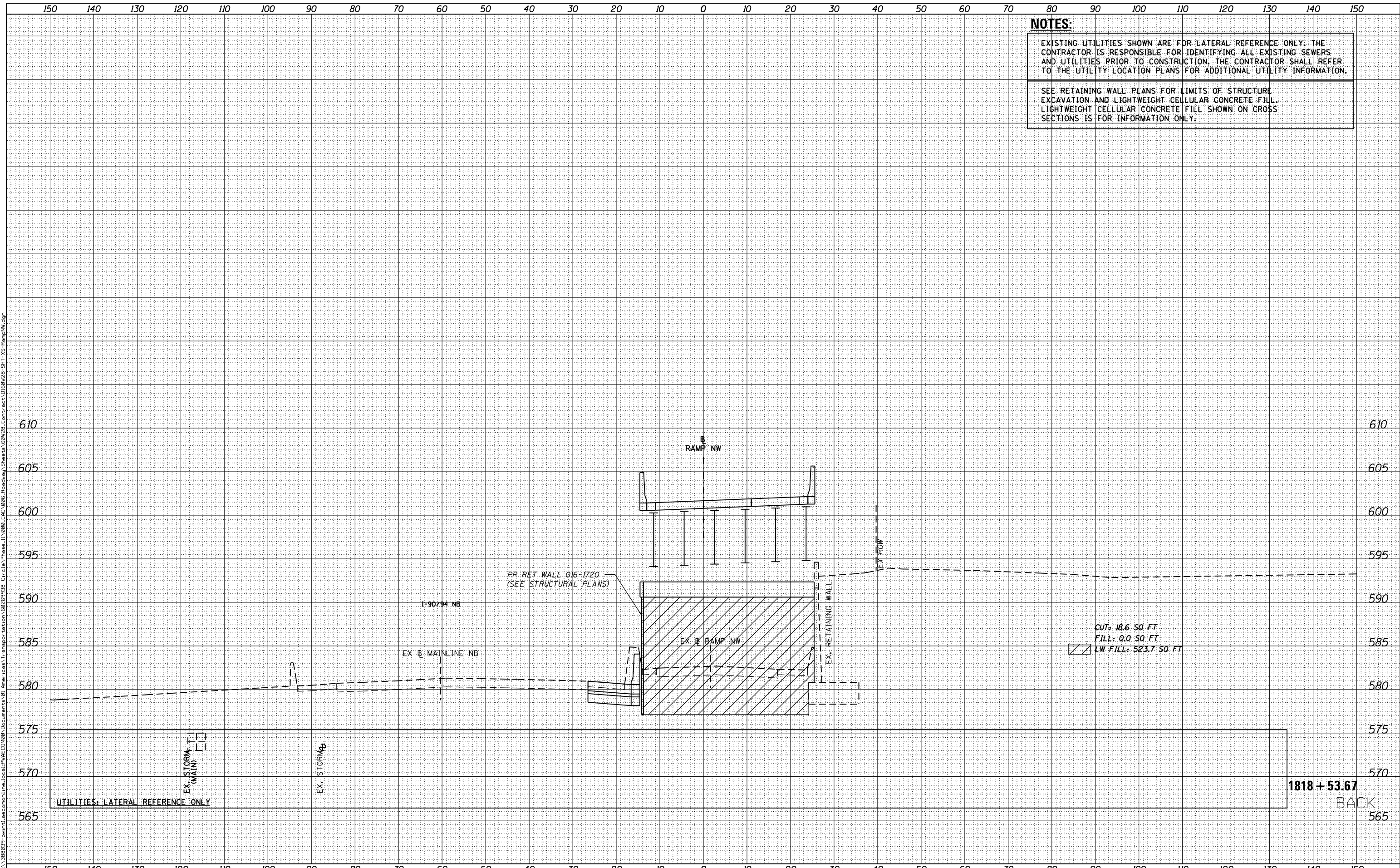
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FINAL SURVEY	SURVEYED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

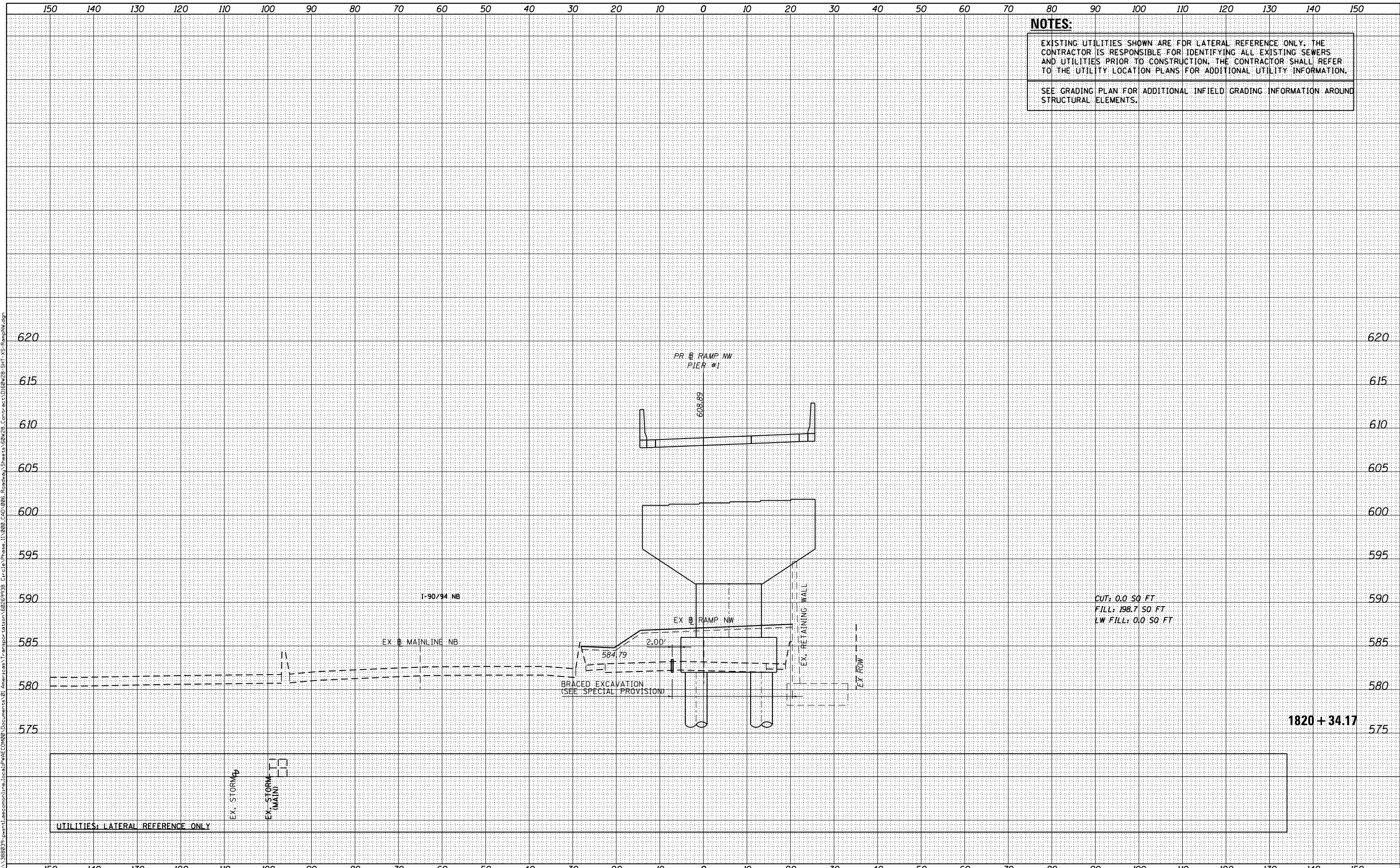
SCALE: 1:5V,1:10H SHEET 22 OF 51 SHEETS STA. 1818+53.67 TO STA. 1818+53.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	667
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

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ORIGINAL SURVEY	
NOTE BOOK	
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 SEE GRADING PLAN FOR ADDITIONAL INFIELD GRADING INFORMATION AROUND STRUCTURAL ELEMENTS.



D160W28-SHT-XS-RampNW.dgn	DESIGNED -	NMM / AJP	REVISED -
USER NAME = maronik	DRAWN -	NMM / AJP	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	K&R	REVISED -
PLOT DATE = 4/25/2014	DATE -	04/28/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 23 OF 51 SHEETS STA. 1820+34.17 TO STA. 1820+34.17

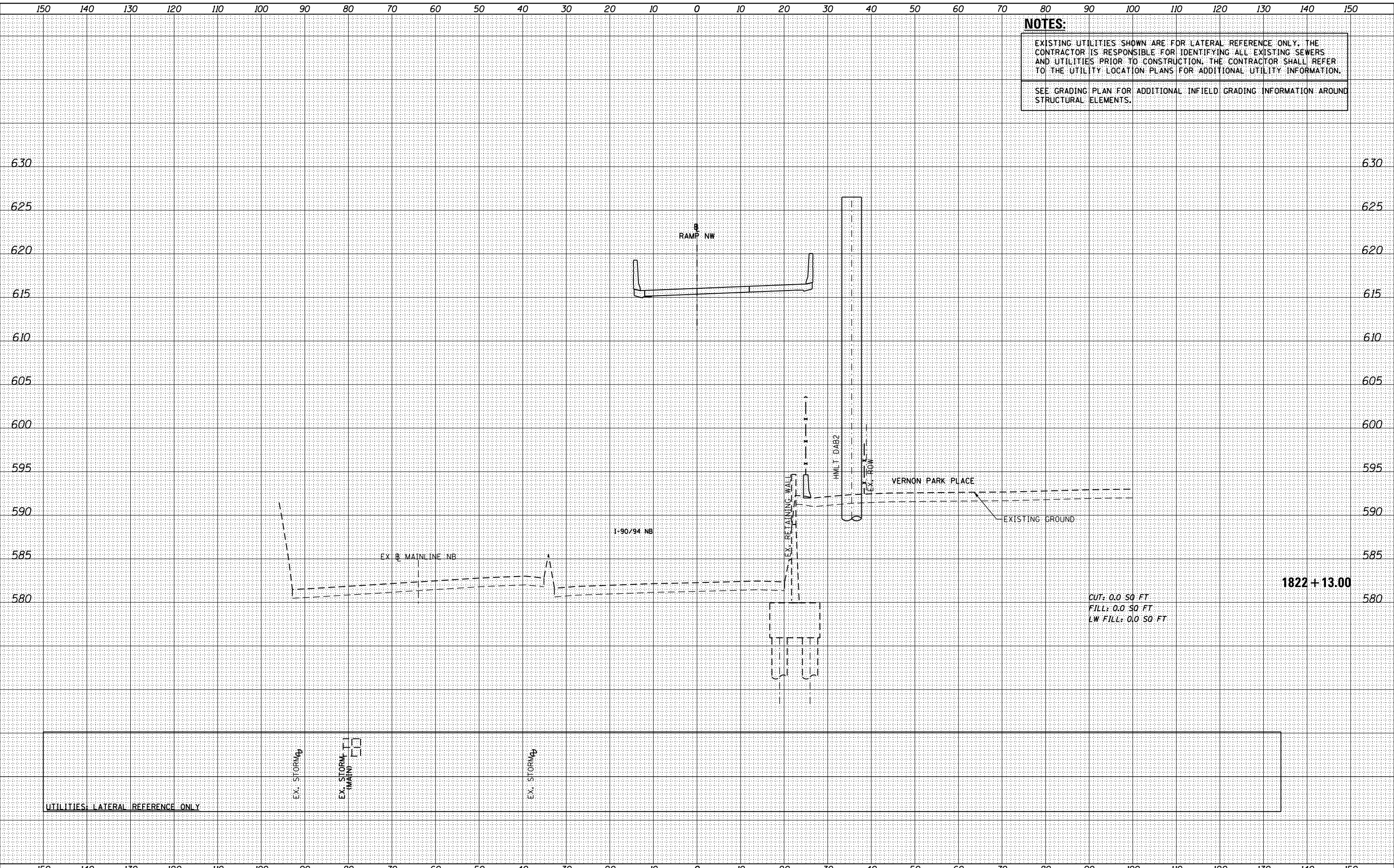
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	668
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

DATE	
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FINAL SURVEY	
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TEMPLATE	
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ORIGINAL SURVEY	
NOTE BOOK	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
 DRAWN - **NMM / AJP**  
 CHECKED - **K&R**  
 DATE - **04/28/14**

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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 24 OF 51 SHEETS STA. 1822+13.00 TO STA. 1822+13.00

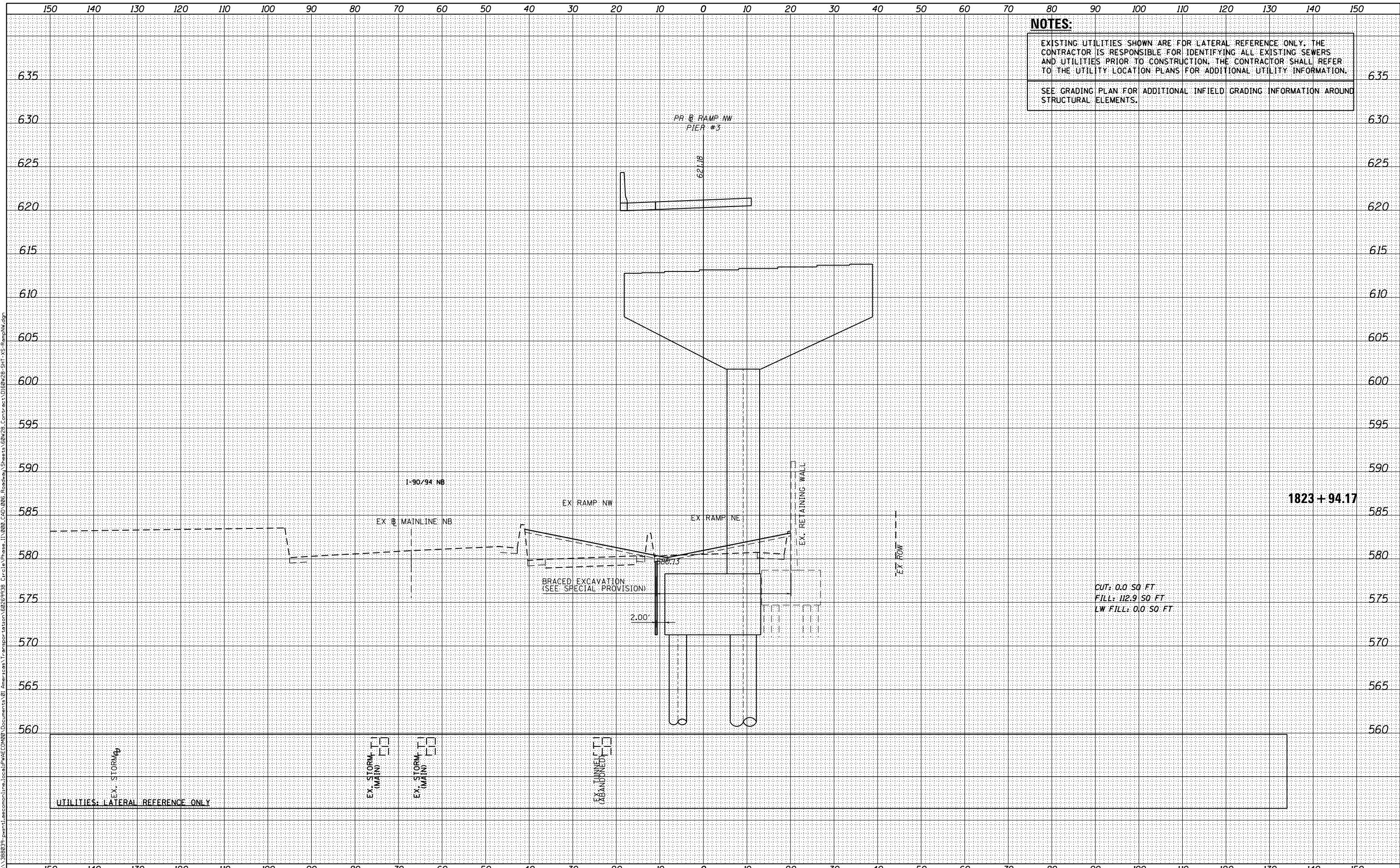
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	669
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	



DATE	
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FINAL SURVEY	
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ORIGINAL SURVEY	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM** / AJP  
 DRAWN - **NMM** / AJP  
 CHECKED - **K&R**  
 DATE - **04/28/14**

REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 26 OF 51 SHEETS STA. 1823+94.17 TO STA. 1823+94.17

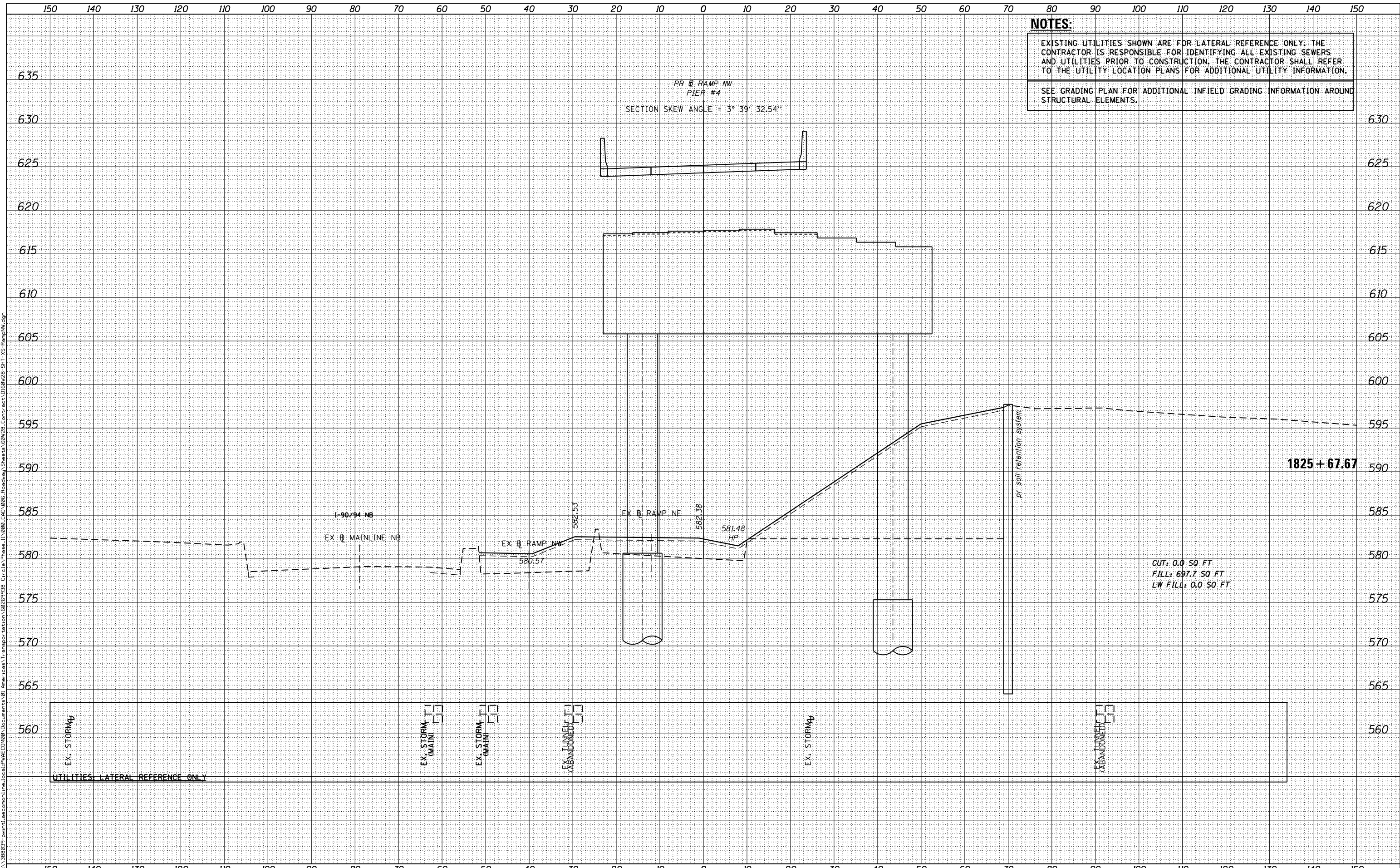
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	671
CONTRACT NO. 60W28				

ILLINOIS FED. AID PROJECT

DATE	
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FINAL SURVEY	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED -	NMM / AJP	REVISED -	
DRAWN -	NMM / AJP	REVISED -	
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DATE -	04/28/14	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

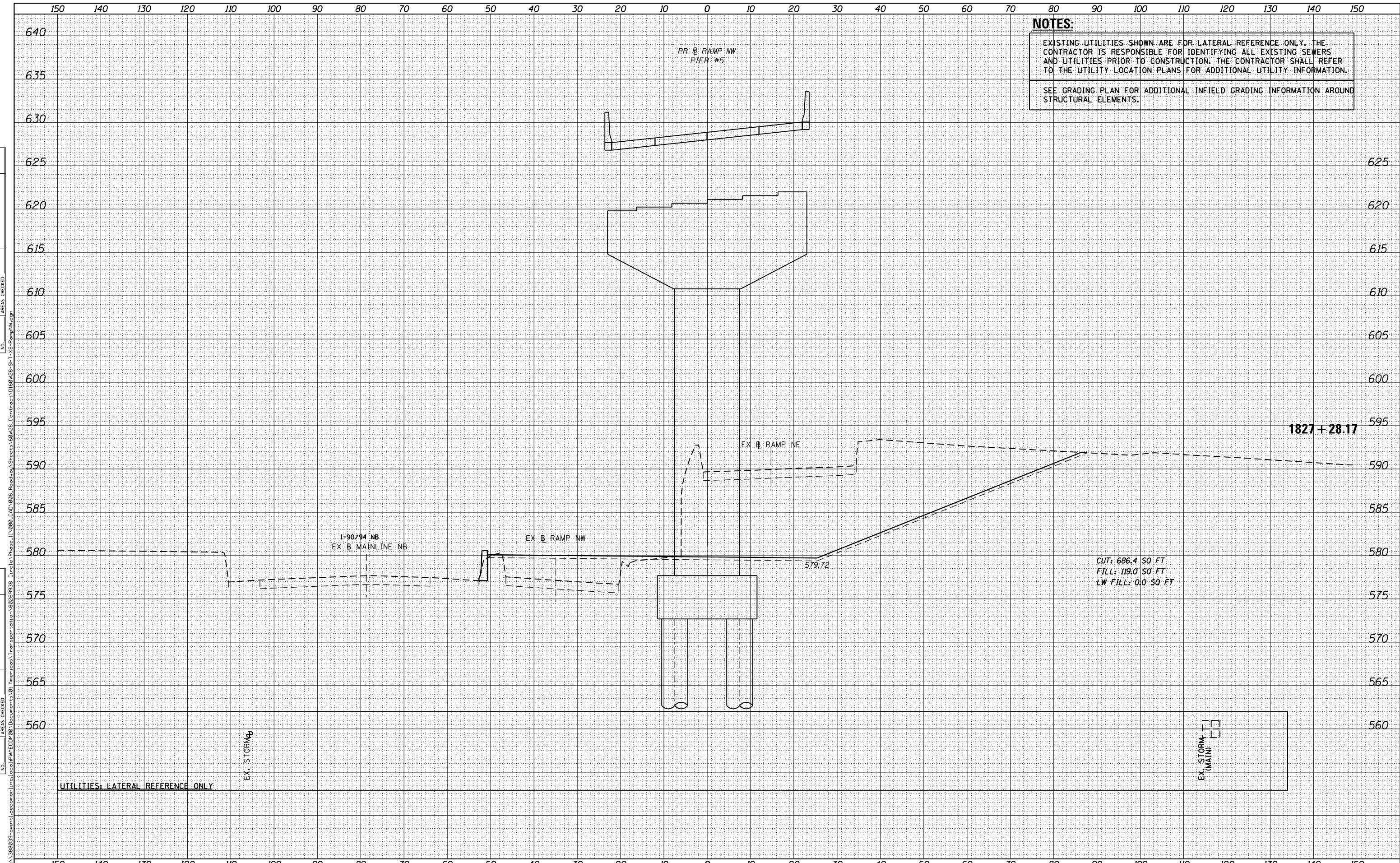
**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V, 1:10H SHEET 27 OF 51 SHEETS STA. 1825+67.67 TO STA. 1825+67.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	672
				CONTRACT NO. 60W28
ILLINOIS FED. AID PROJECT				

DATE	
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ORIGINAL SURVEY	
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TEMPLATE	
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**AECOM**  
 303 EAST WACKER DRIVE, SUITE 1400  
 CHICAGO, IL 60601-5275  
 PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W28-SHT-XS-RampNW.dgn	DESIGNED - <b>NMM / AJP</b>	REVISED -
USER NAME = maronik	DRAWN - <b>NMM / AJP</b>	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - <b>K&amp;R</b>	REVISED -
PLOT DATE = 4/25/2014	DATE - <b>04/28/14</b>	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS RAMP NW</b>			
SCALE: 1:5V,1:10H	SHEET 28	OF 51 SHEETS	STA. 1827+28.17 TO STA. 1827+28.17

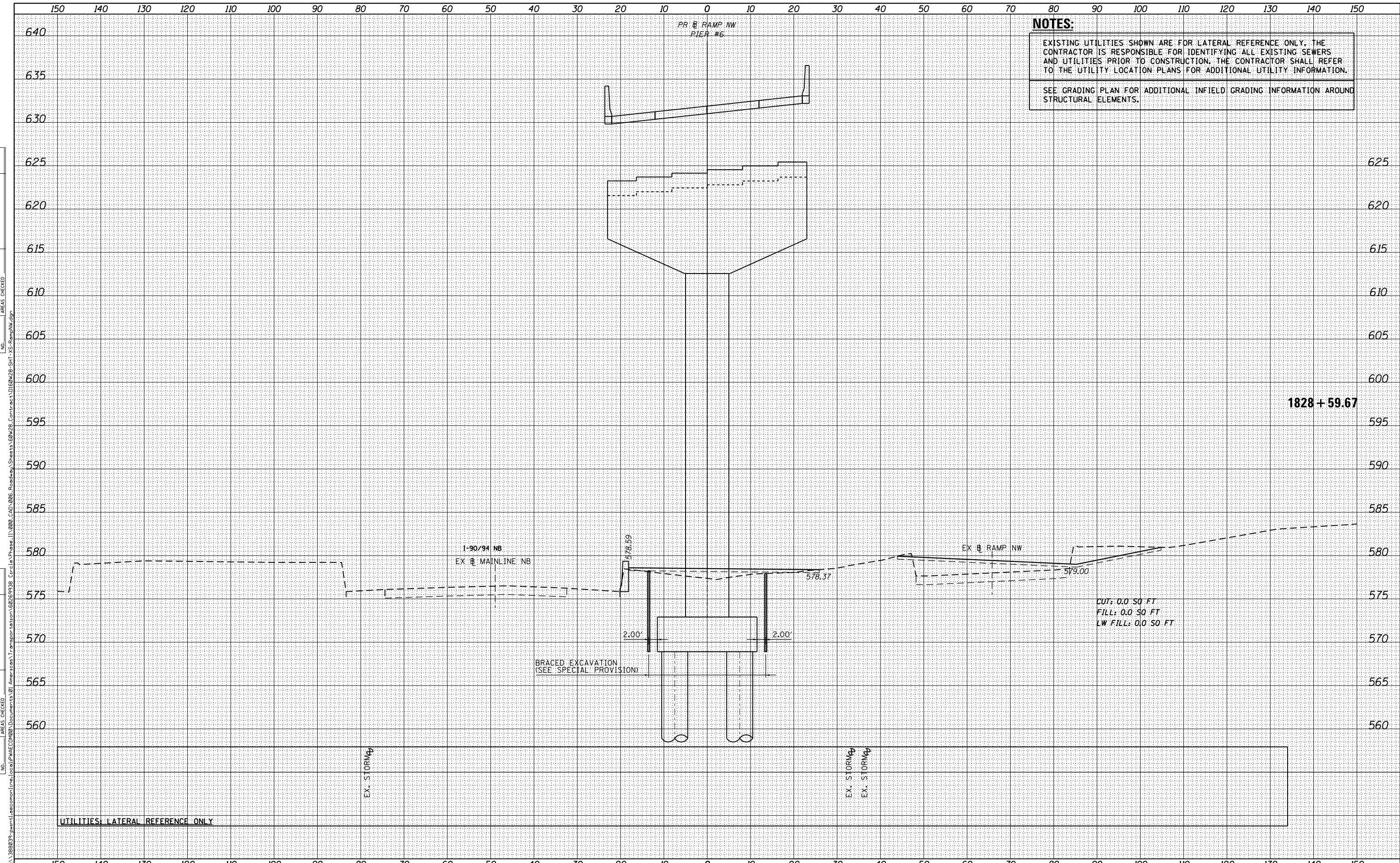
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	673
CONTRACT NO. 60W28				ILLINOIS FED. AID PROJECT

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 SEE GRADING PLAN FOR ADDITIONAL INFIELD GRADING INFORMATION AROUND STRUCTURAL ELEMENTS.

**AECOM**  
 303 EAST WACKER DRIVE, SUITE 1400  
 CHICAGO, IL 60601-5276  
 PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W28-SHT-XS-RampNW.dgn	DESIGNED - <b>NMM / AJP</b>	REVISED -
USER NAME = maronik	DRAWN - <b>NMM / AJP</b>	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - <b>K&amp;R</b>	REVISED -
PLOT DATE = 4/25/2014	DATE - <b>04/28/14</b>	REVISED -

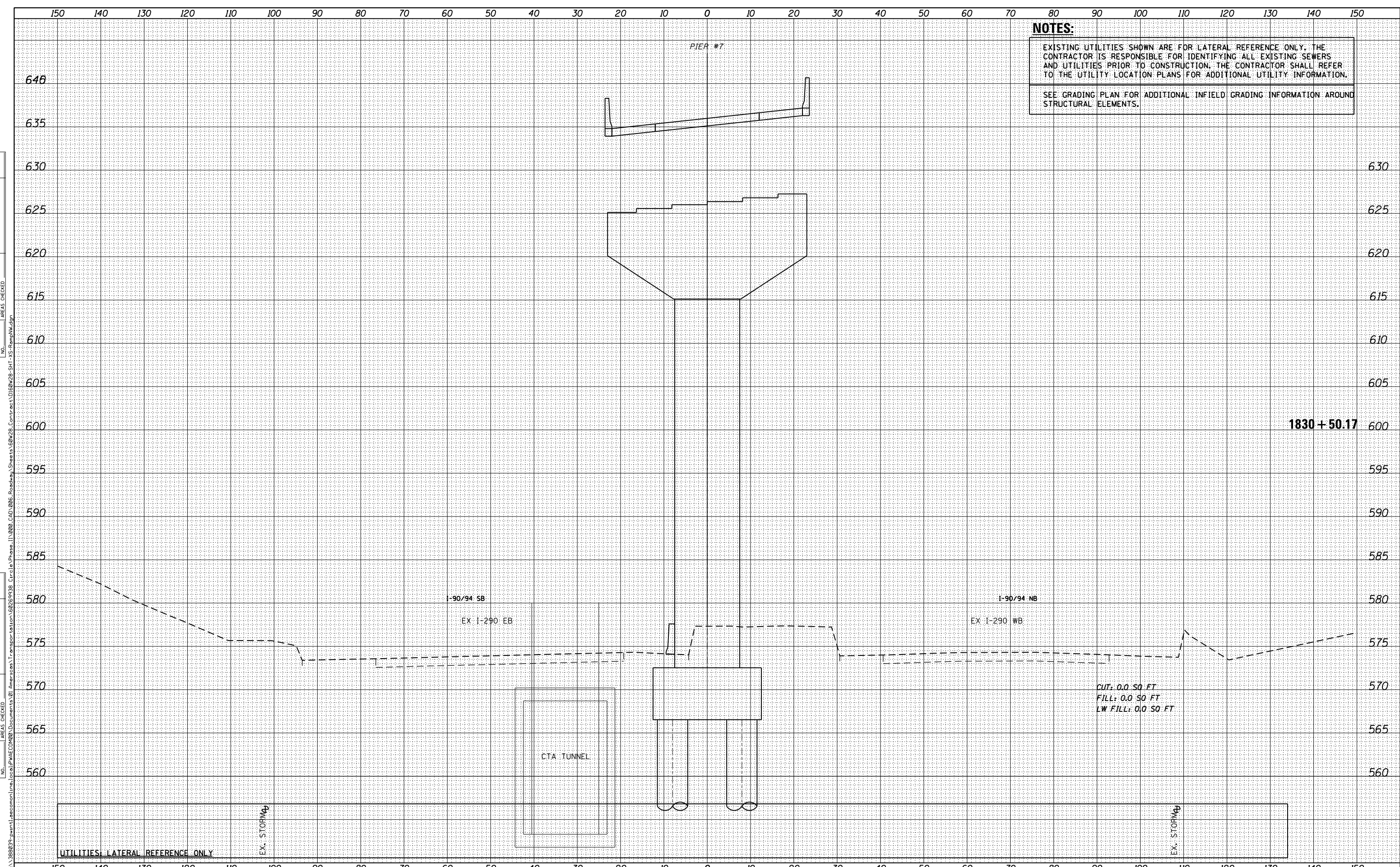
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS RAMP NW</b>			
SCALE: 1:5V,1:10H	SHEET 29	OF 51 SHEETS	STA. 1828+59.67 TO STA. 1828+59.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	674
CONTRACT NO. 60W28				ILLINOIS FED. AID PROJECT

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**AECOM**  
 303 EAST WACKER DRIVE, SUITE 1400  
 CHICAGO, IL 60601-5275  
 PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W28-SHT-XS-RampNW.dgn	DESIGNED - <b>NMM / AJP</b>	REVISED -
USER NAME = maronik	DRAWN - <b>NMM / AJP</b>	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - <b>K&amp;R</b>	REVISED -
PLOT DATE = 4/25/2014	DATE - <b>04/28/14</b>	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

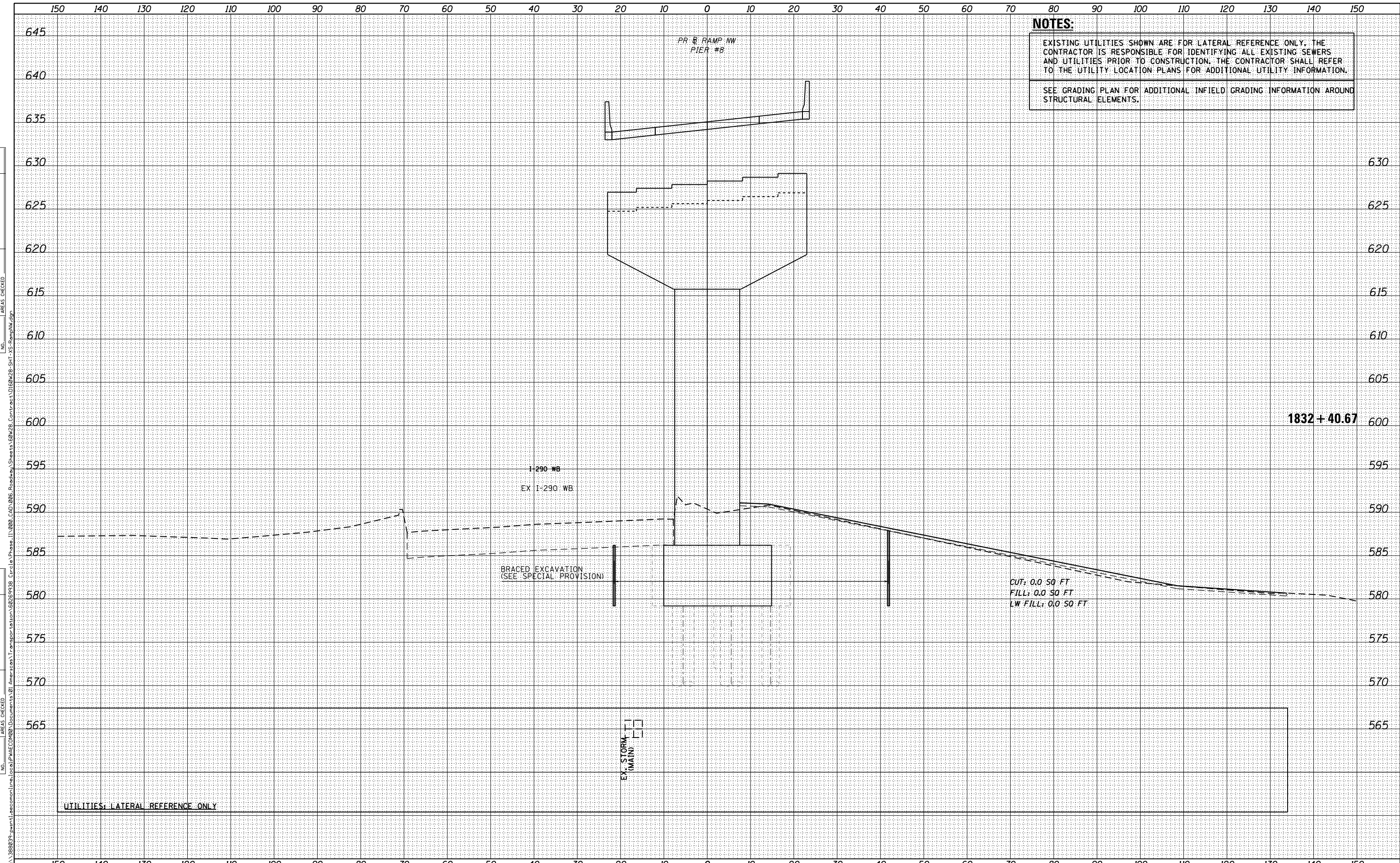
**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H    SHEET 30 OF 51 SHEETS    STA. 1830+50.17 TO STA. 1830+50.17

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	675
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED -	NMM / AJP	REVISED -	
DRAWN -	NMM / AJP	REVISED -	
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DATE -	04/28/14	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

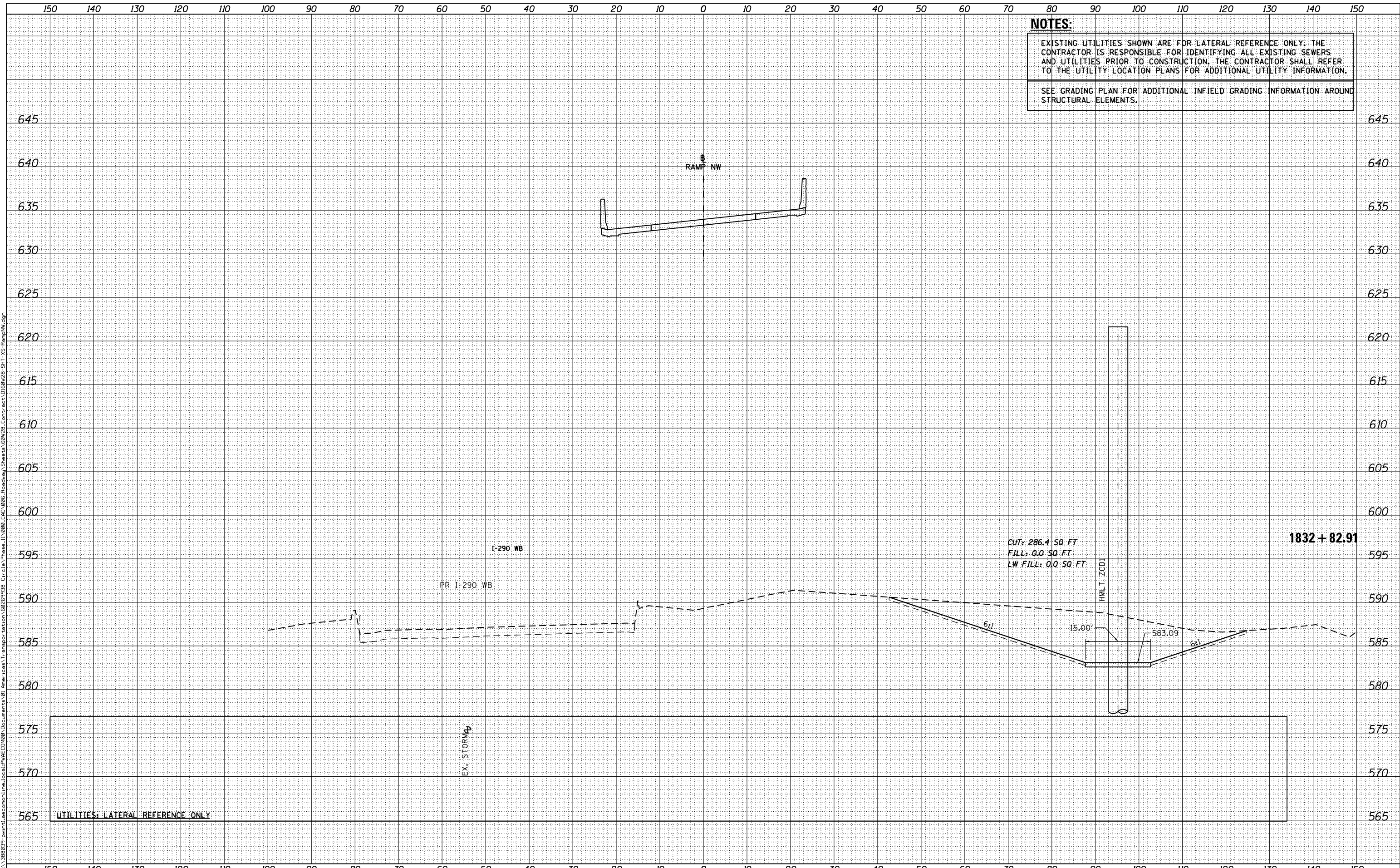
SCALE: 1:5V, 1:10H SHEET 31 OF 51 SHEETS STA. 1832+40.67 TO STA. 1832+40.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	676
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
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 DATE - **04/28/14**

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

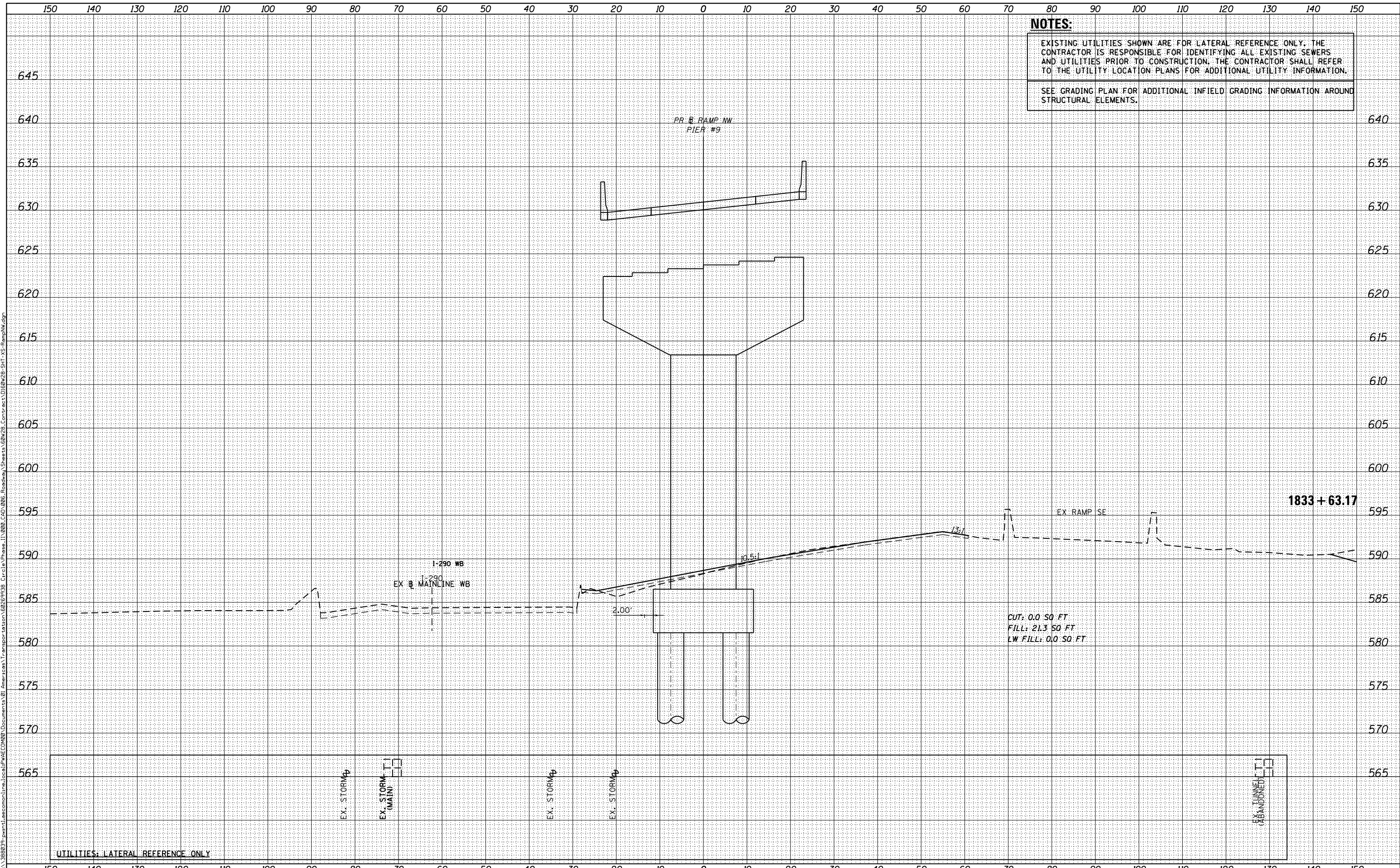
SCALE: 1:5V,1:10H SHEET 32 OF 51 SHEETS STA. 1832+82.91 TO STA. 1832+82.91

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	677
				CONTRACT NO. 60W28
ILLINOIS FED. AID PROJECT				

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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED -	NMM / AJP	REVISED -	
DRAWN -	NMM / AJP	REVISED -	
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DATE -	04/28/14	REVISED -	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 33 OF 51 SHEETS STA. 1833+63.17 TO STA. 1833+63.17

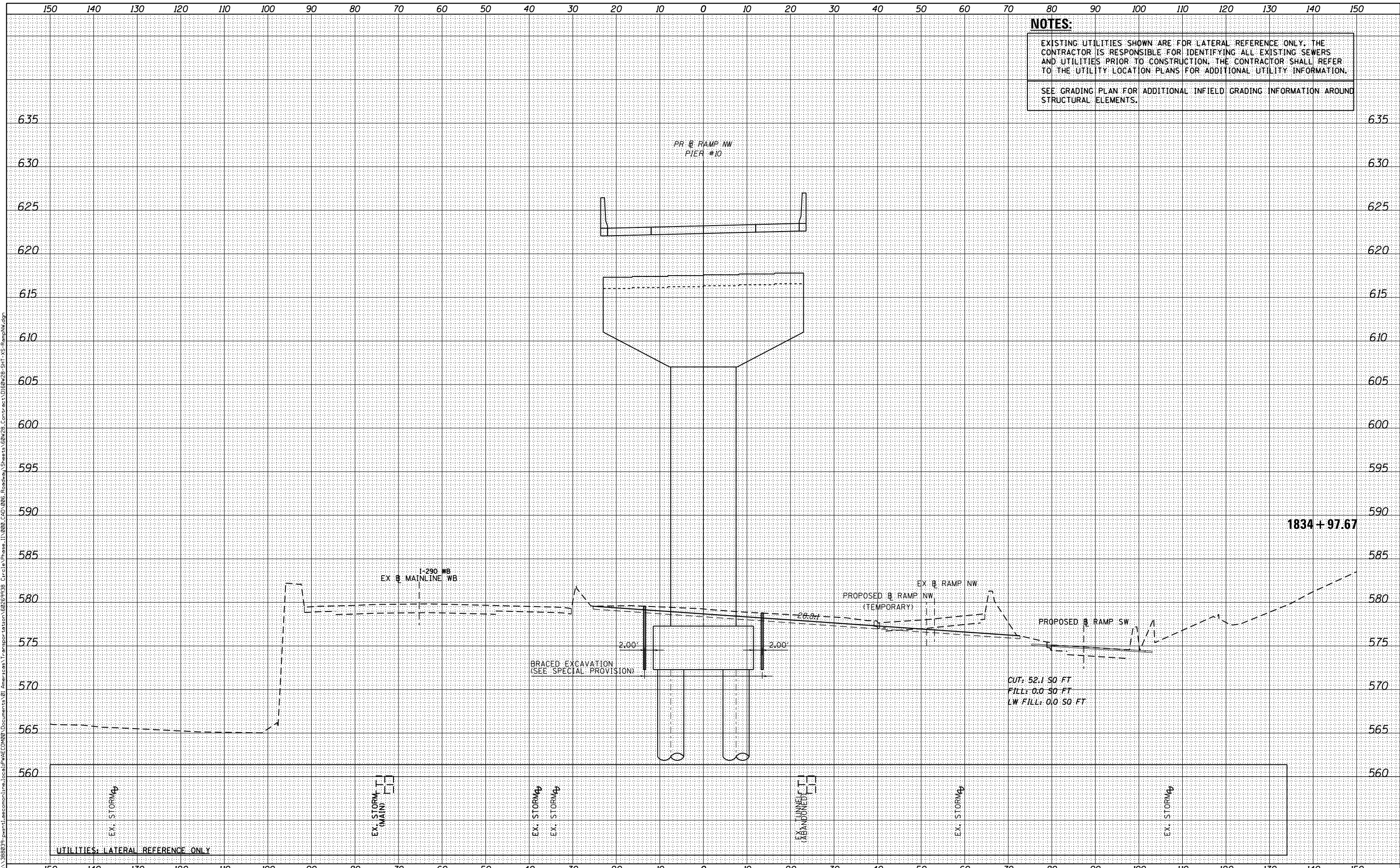
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	678
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

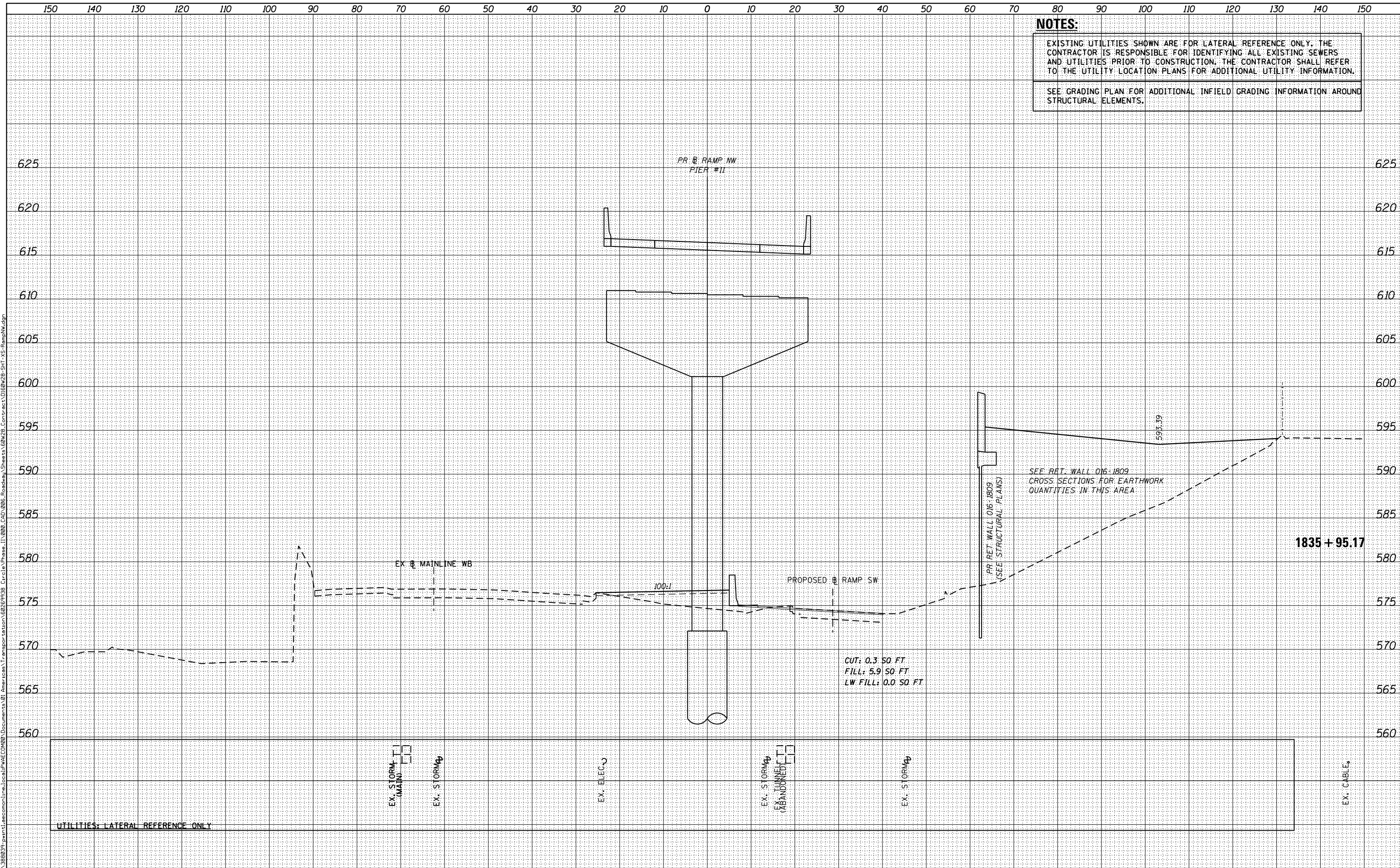
SCALE: 1:5V, 1:10H SHEET 34 OF 51 SHEETS STA. 1834+97.67 TO STA. 1834+97.67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	679
			CONTRACT NO. 60W28	
ILLINOIS FED. AID PROJECT				

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED -	NMM / AJP	REVISED -	
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DATE -	04/28/14	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V, 1:10H SHEET 35 OF 51 SHEETS STA. 1835+95.17 TO STA. 1835+95.17

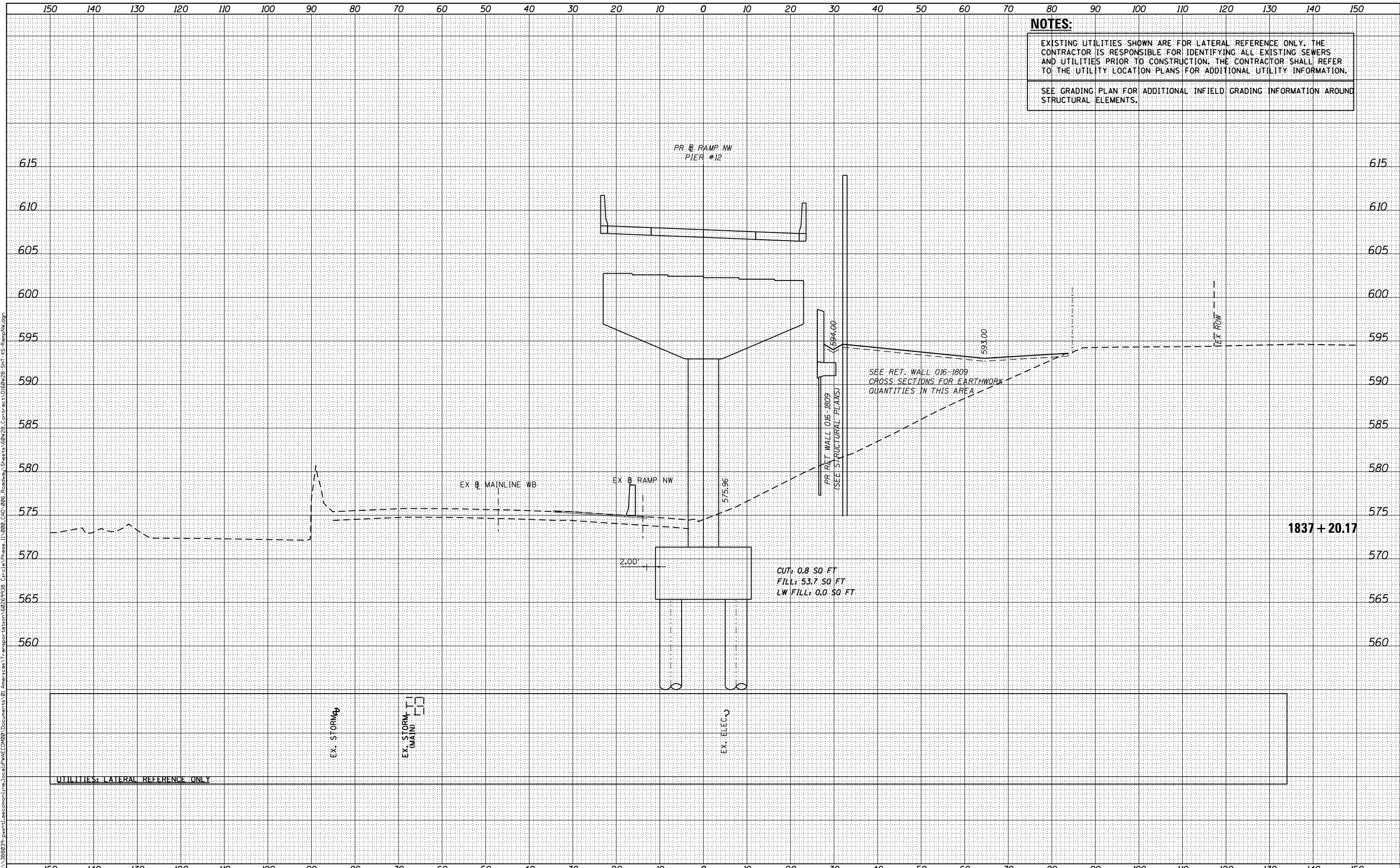
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	680
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 36 OF 51 SHEETS STA. 1837+20.17 TO STA. 1837+20.17

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	681
			CONTRACT NO. 60W28	



D160W28-SHT-XS-RampNW.dgn  
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 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

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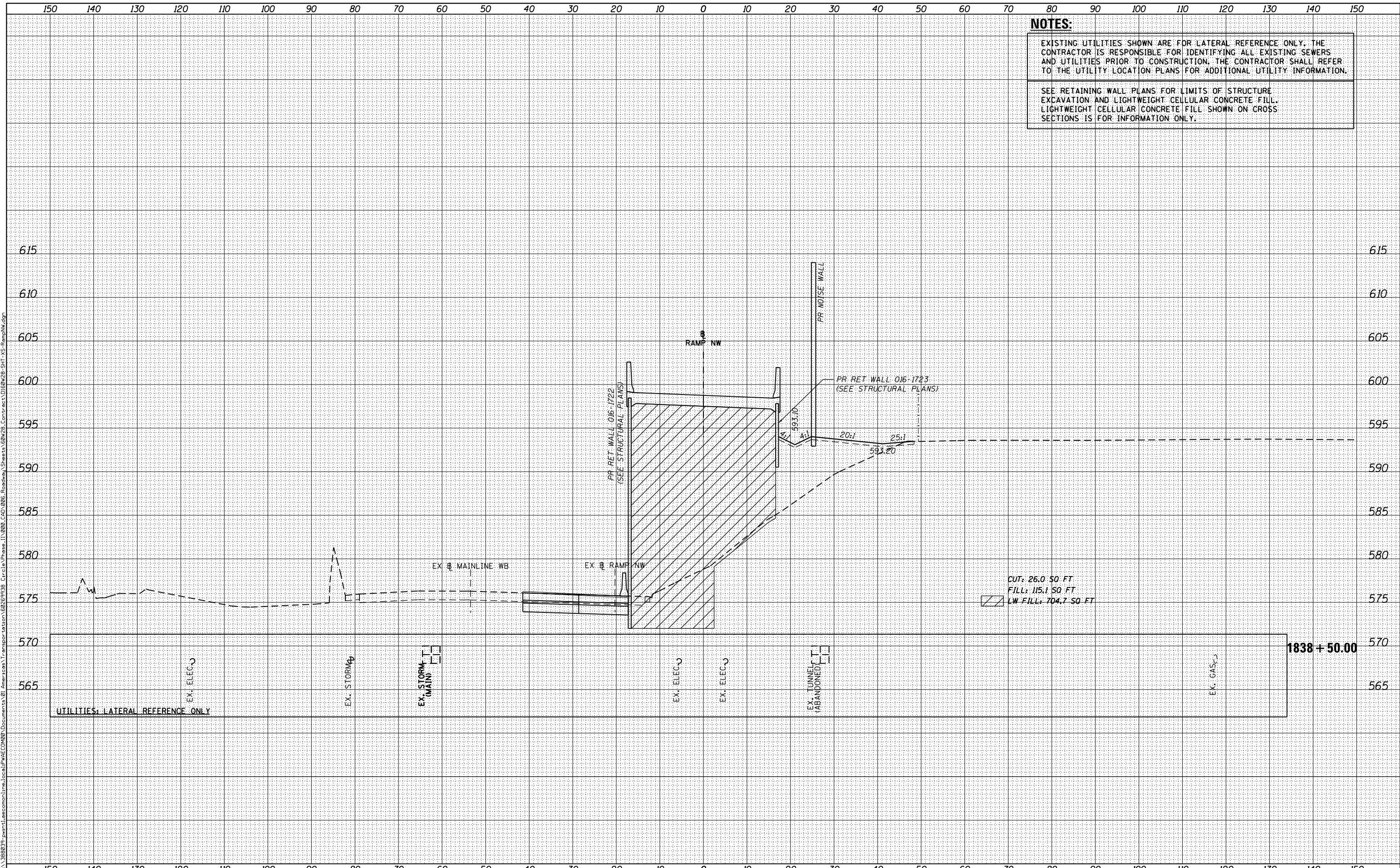
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D160W28-SHT-XS-RampNW.dgn	DESIGNED -	NMM / AJP	REVISED -
USER NAME = maronik	DRAWN -	NMM / AJP	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	K&R	REVISED -
PLOT DATE = 4/25/2014	DATE -	04/28/14	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
RAMP NW

SCALE: 1:5V, 1:10H SHEET 40 OF 51 SHEETS STA. 1838+50.00 TO STA. 1838+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	685
				CONTRACT NO. 60W28
ILLINOIS FED. AID PROJECT				



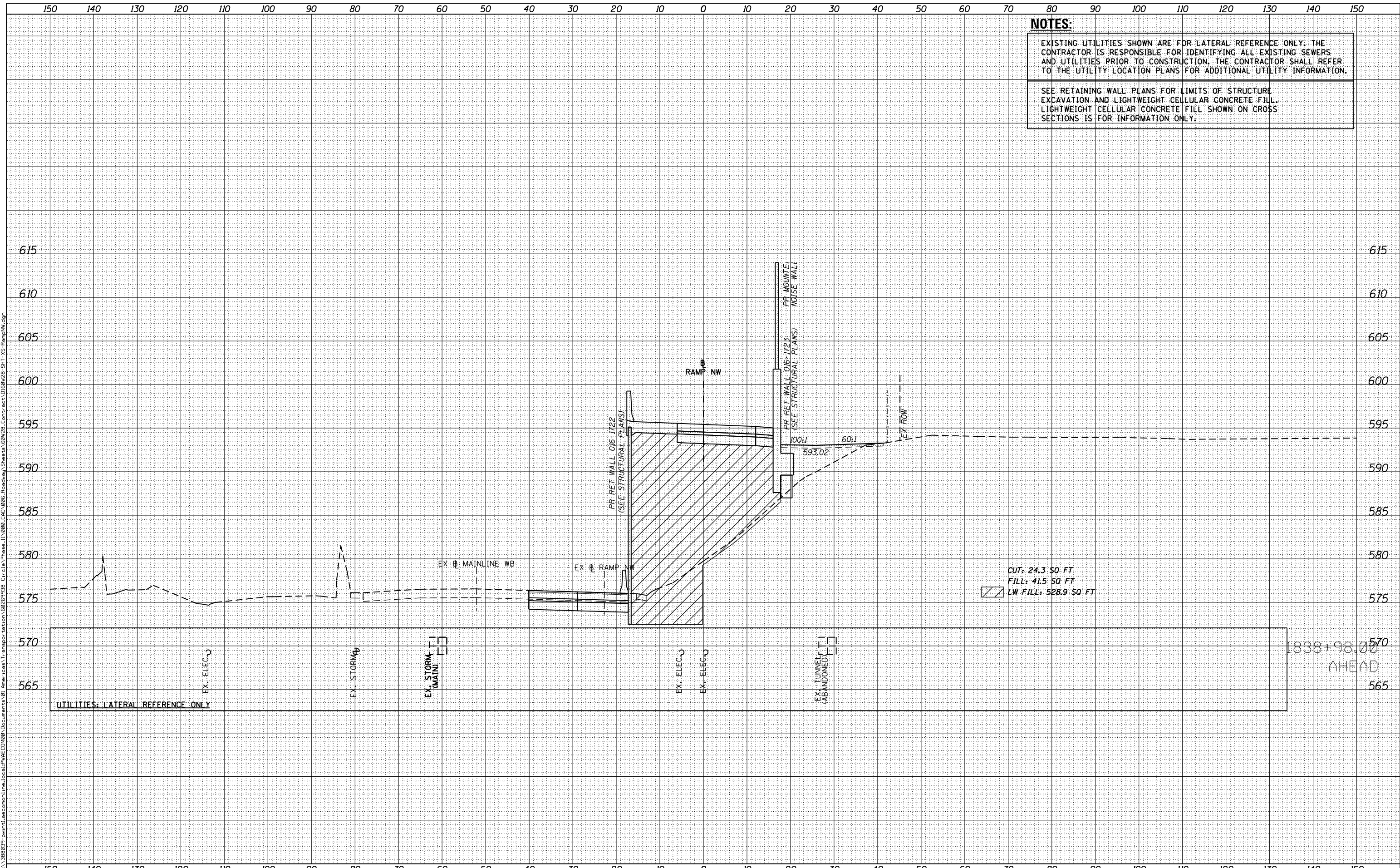
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D160W28-SHT-XS-RampNW.dgn	DESIGNED -	NMM / AJP	REVISED -
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PLOT SCALE = 10.0000' / in.	CHECKED -	K&R	REVISED -
PLOT DATE = 4/25/2014	DATE -	04/28/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
RAMP NW**

SCALE: 1:5V,1:10H SHEET 42 OF 51 SHEETS STA. 1838+98.00 TO STA. 1838+98.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	687
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

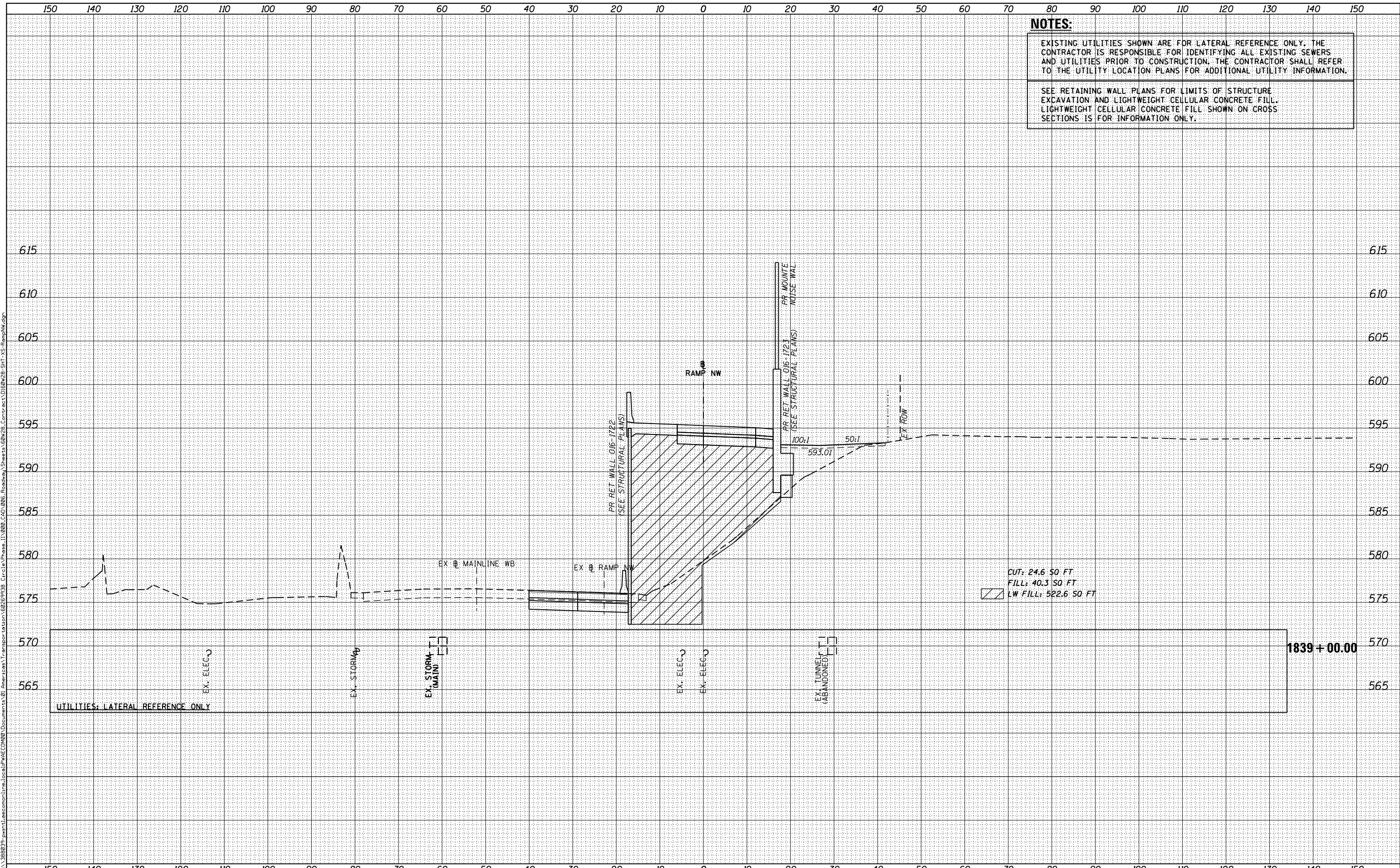
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D160W28-SHT-XS-RampNW.dgn  
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 PLOT DATE = 4/28/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 43 OF 51 SHEETS STA. 1839+00.00 TO STA. 1839+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	688
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

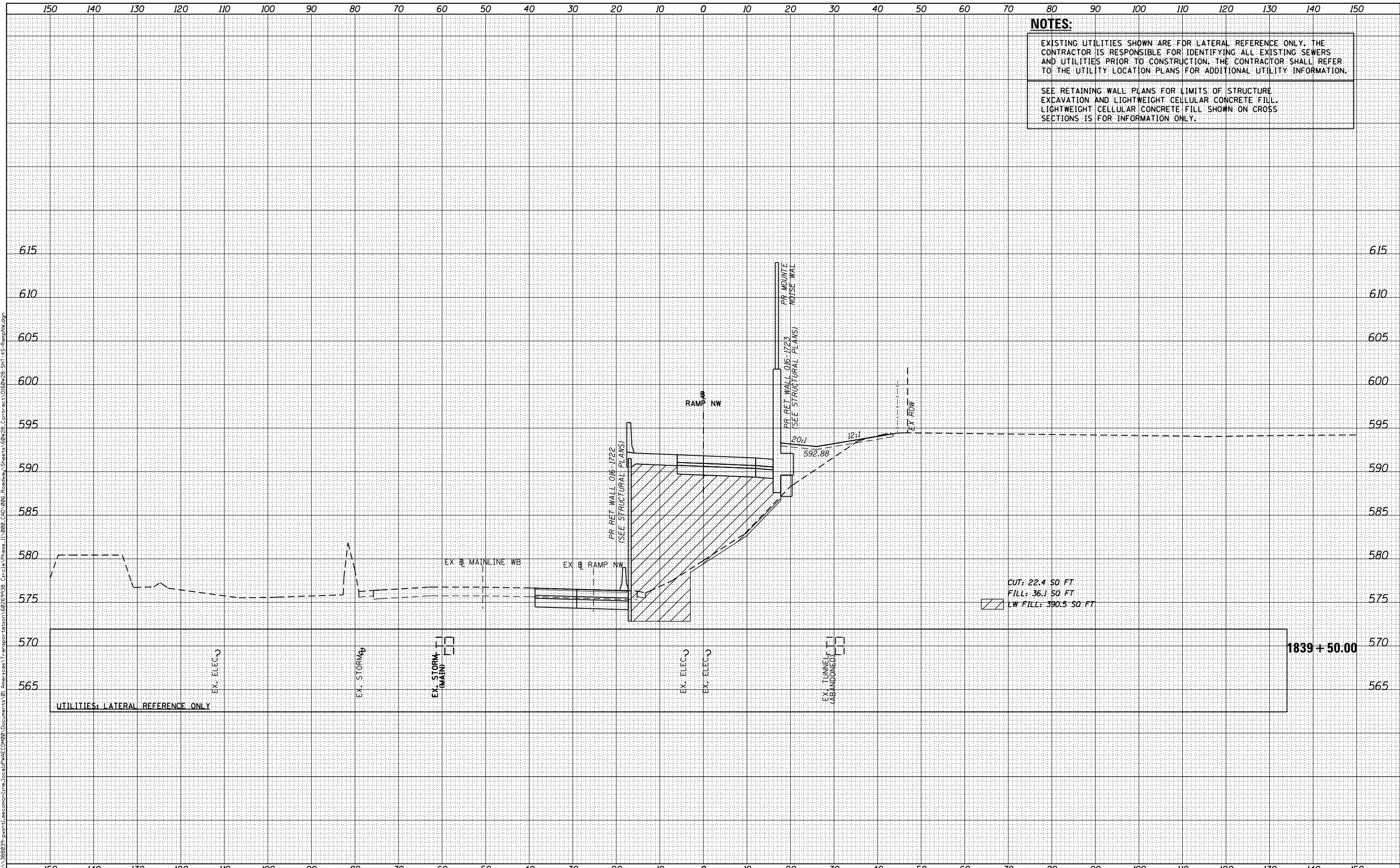
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 DRAWN - **NMM / AJP**  
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 DATE - **04/28/14**

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V, 1:10H SHEET 44 OF 51 SHEETS STA. 1839+50.00 TO STA. 1839+50.00

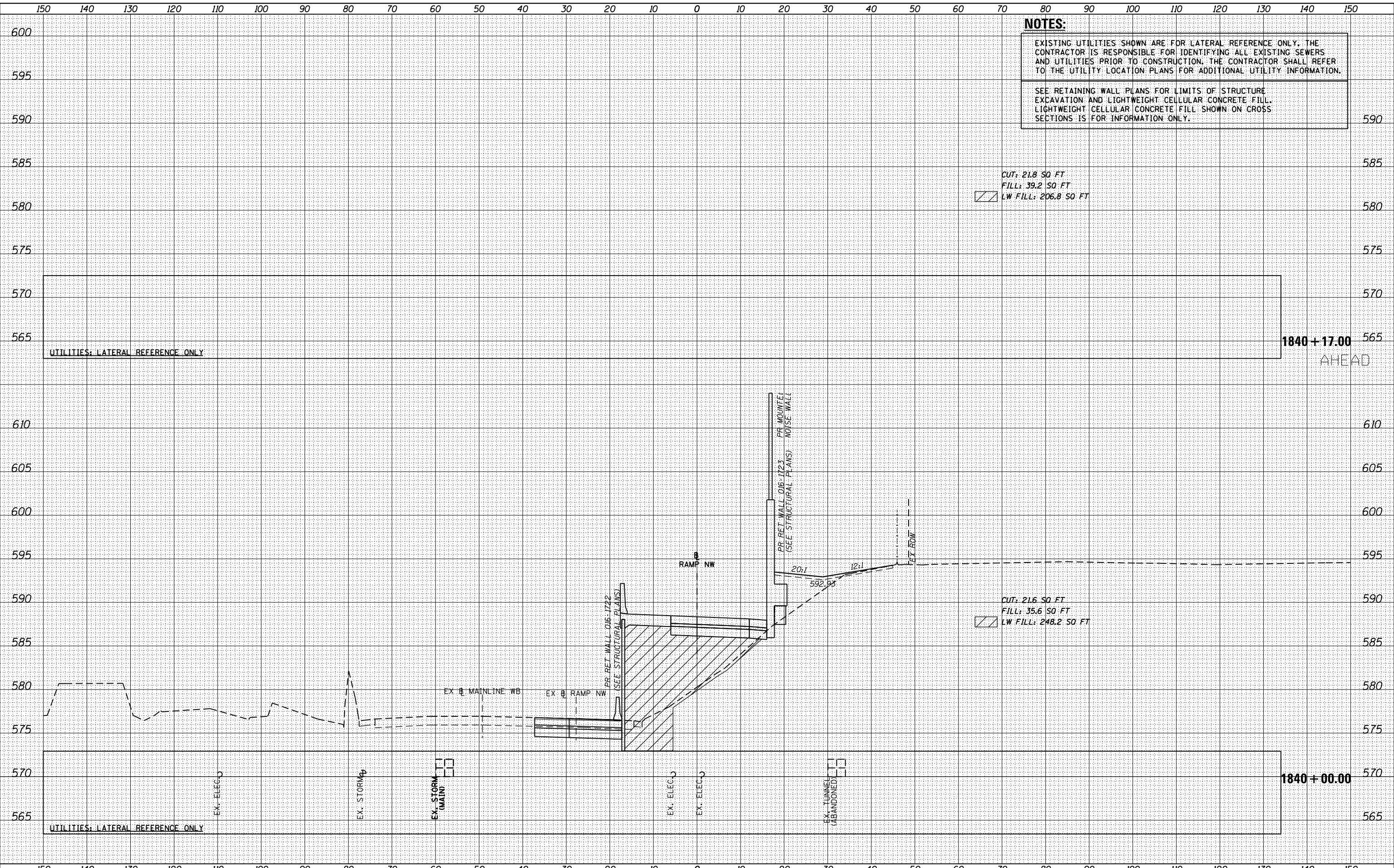
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	689
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				



DATE	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V, 1:10H SHEET 45 OF 51 SHEETS STA. 1840+00.00 TO STA. 1840+17.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	690
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

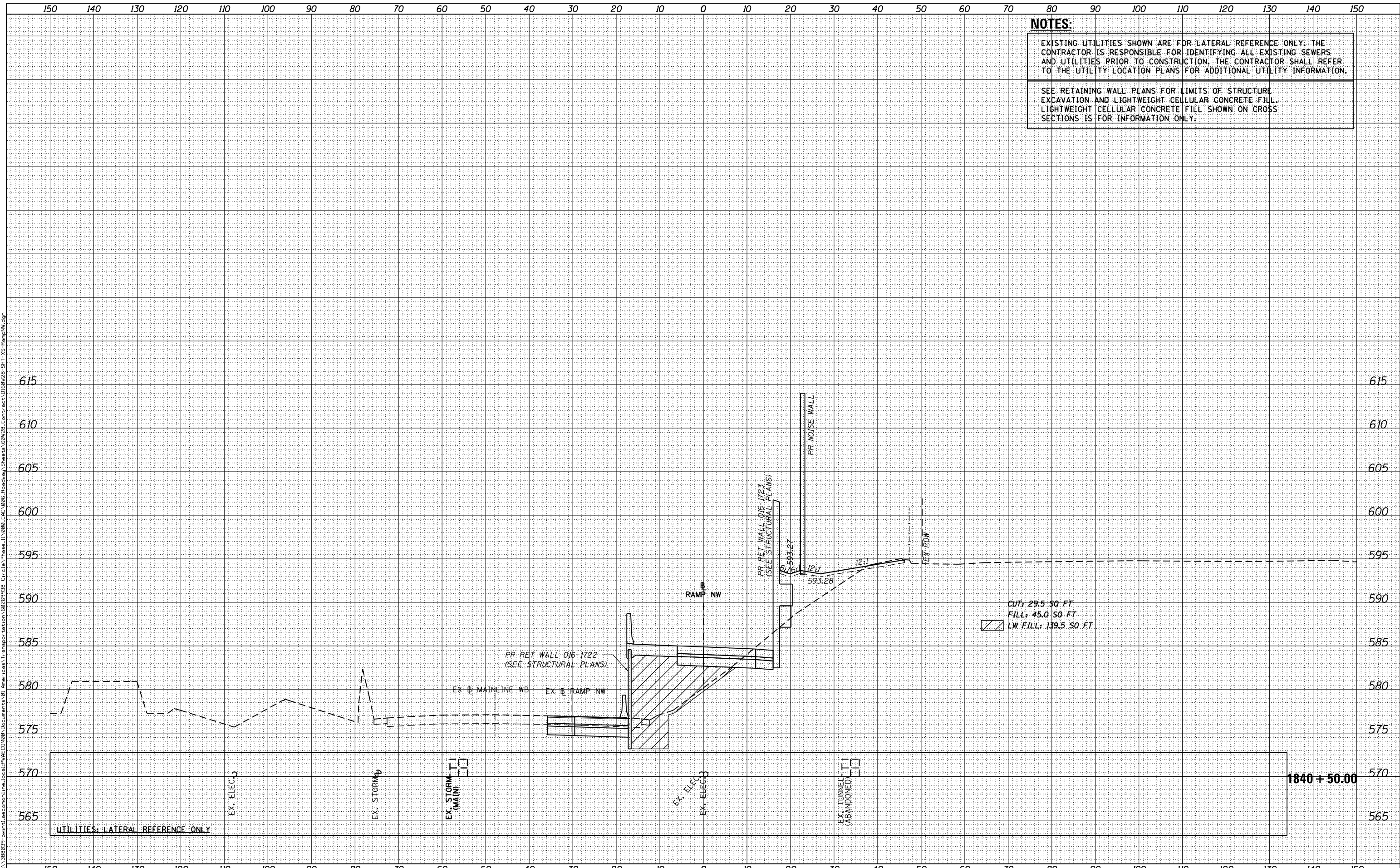
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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

**NOTES:**

EXISTING UTILITIES SHOWN ARE FOR LATERAL REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO THE UTILITY LOCATION PLANS FOR ADDITIONAL UTILITY INFORMATION.

SEE RETAINING WALL PLANS FOR LIMITS OF STRUCTURE EXCAVATION AND LIGHTWEIGHT CELLULAR CONCRETE FILL. LIGHTWEIGHT CELLULAR CONCRETE FILL SHOWN ON CROSS SECTIONS IS FOR INFORMATION ONLY.



D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NMM / AJP**  
 DRAWN - **NMM / AJP**  
 CHECKED - **K&R**  
 DATE - **04/28/14**

REVISED -  
 REVISED -  
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 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

SCALE: 1:5V,1:10H SHEET 46 OF 51 SHEETS STA. 1840+50.00 TO STA. 1840+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	691
CONTRACT NO. 60W28			ILLINOIS FED. AID PROJECT	

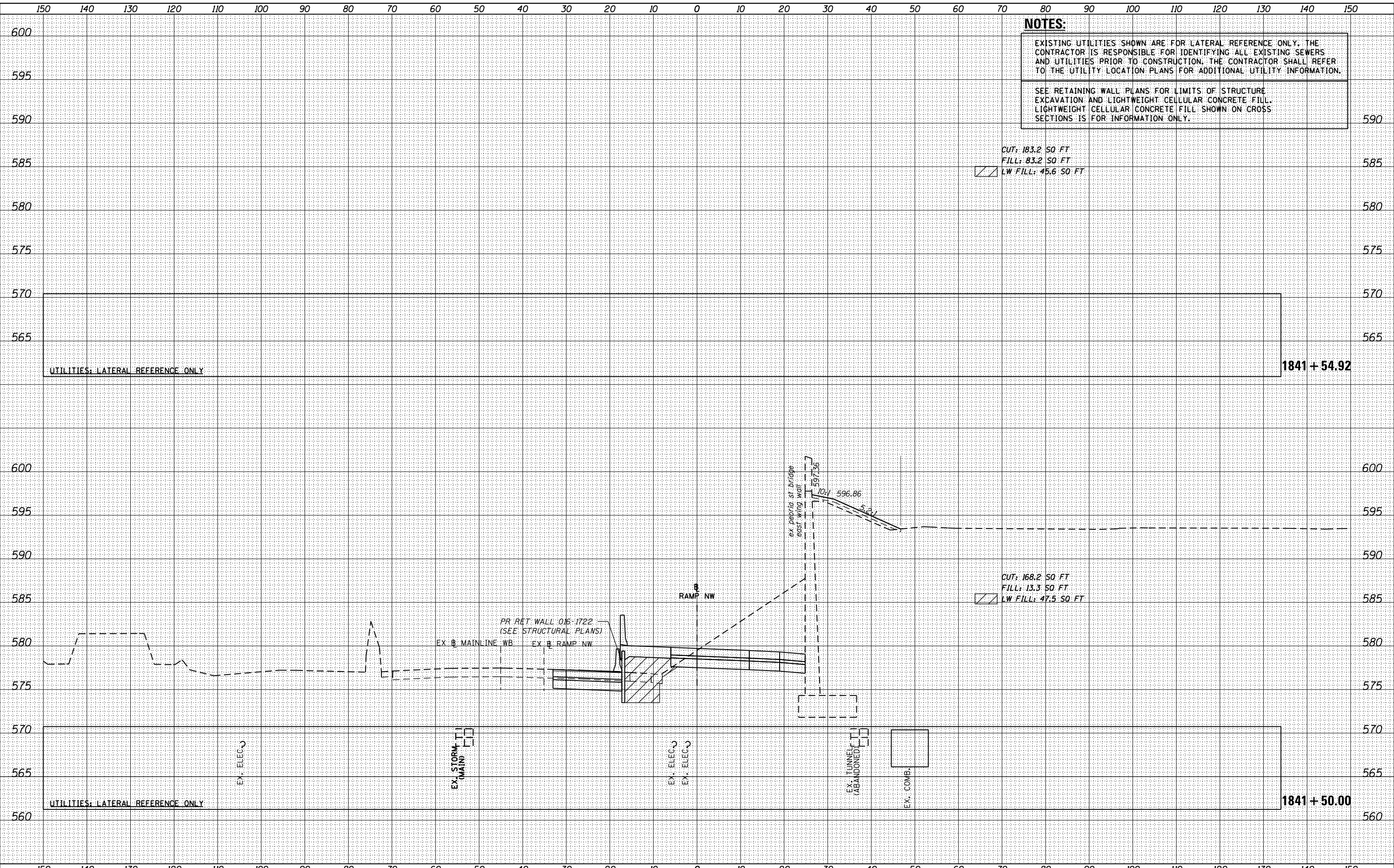




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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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

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 SEE RETAINING WALL PLANS FOR LIMITS OF STRUCTURE EXCAVATION AND LIGHTWEIGHT CELLULAR CONCRETE FILL. LIGHTWEIGHT CELLULAR CONCRETE FILL SHOWN ON CROSS SECTIONS IS FOR INFORMATION ONLY.

CUT: 183.2 SO FT  
 FILL: 83.2 SO FT  
 LW FILL: 45.6 SO FT

CUT: 168.2 SO FT  
 FILL: 13.3 SO FT  
 LW FILL: 47.5 SO FT



D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 RAMP NW

SCALE: 1:5V,1:10H SHEET 49 OF 51 SHEETS STA. 1841+50.00 TO STA. 1841+54.92

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	694
			CONTRACT NO. 60W28	

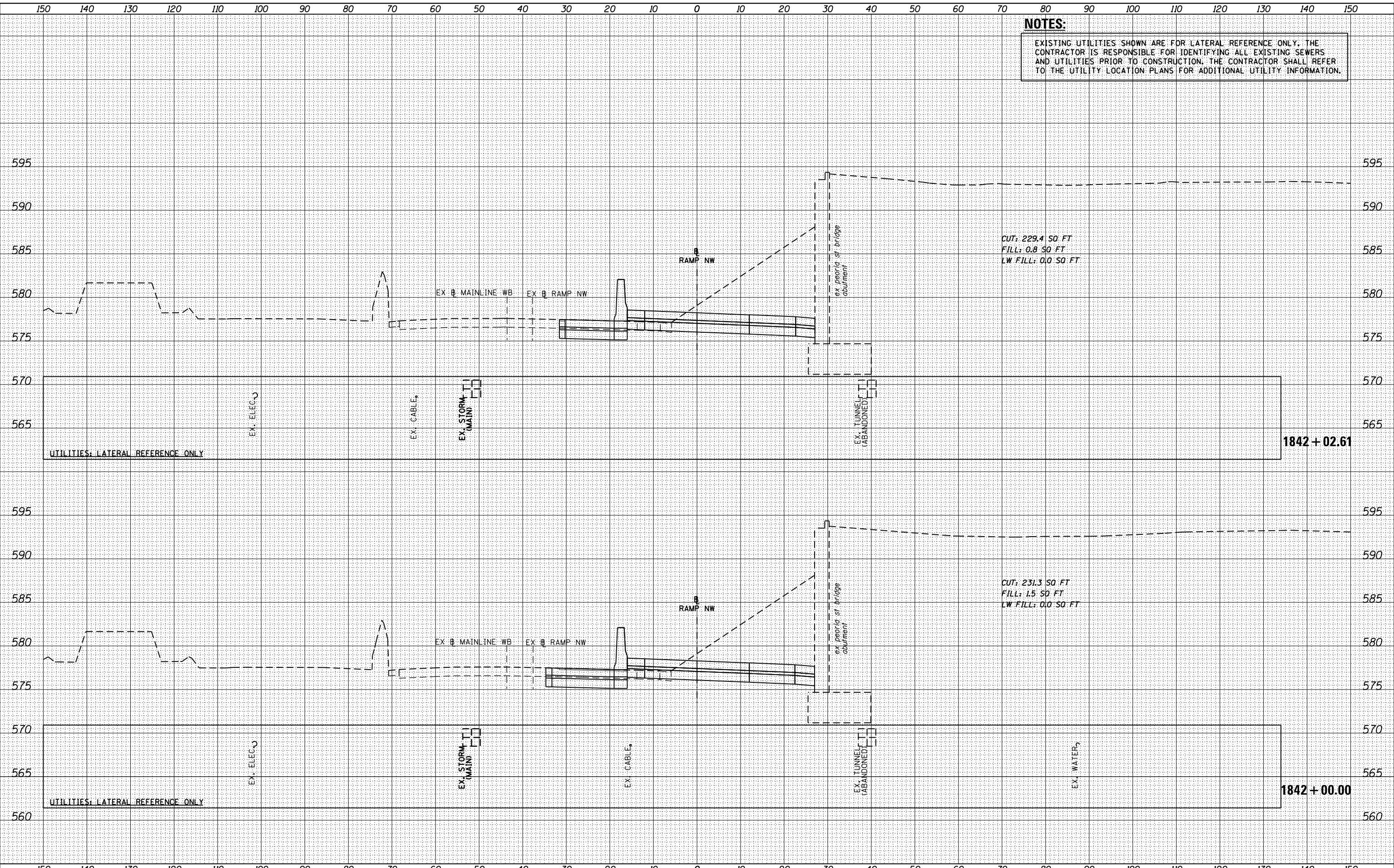
ILLINOIS FED. AID PROJECT

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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DATE	
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ORIGINAL SURVEY	
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D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - NMM / AJP  
 DRAWN - NMM / AJP  
 CHECKED - K&R  
 DATE - 04/28/14

REVISED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

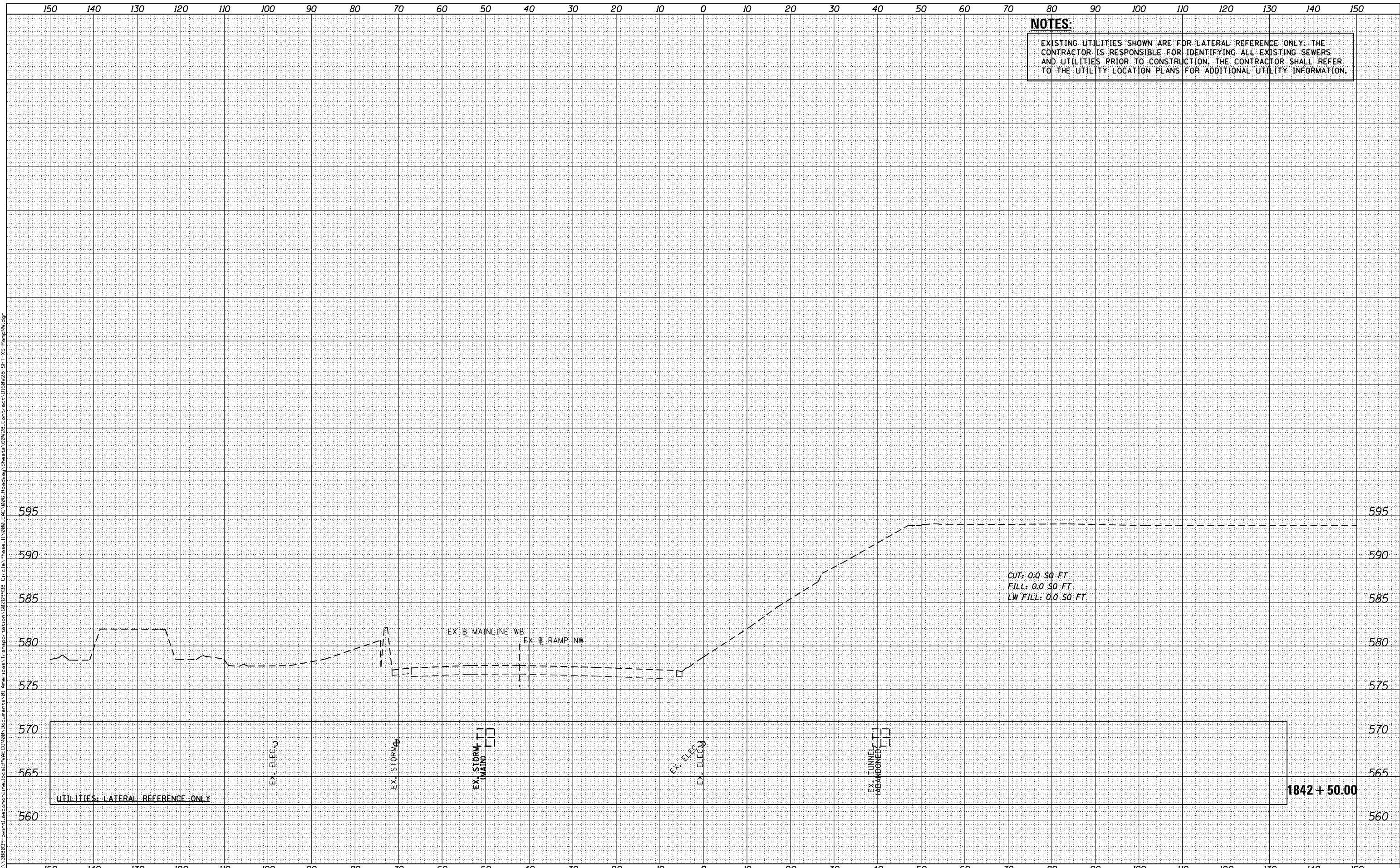
SCALE: 1:5V,1:10H SHEET 50 OF 51 SHEETS STA. 1842+00.00 TO STA. 1842+02.61

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	695
				CONTRACT NO. 60W28
ILLINOIS FED. AID PROJECT				

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

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



**AECOM**  
 303 EAST WACKER DRIVE, SUITE 1400  
 CHICAGO, IL 60601-5275  
 PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W28-SHT-XS-RampNW.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED -	NMM / AJP	REVISED -	
DRAWN -	NMM / AJP	REVISED -	
CHECKED -	K&R	REVISED -	
DATE -	04/28/14	REVISED -	

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW**

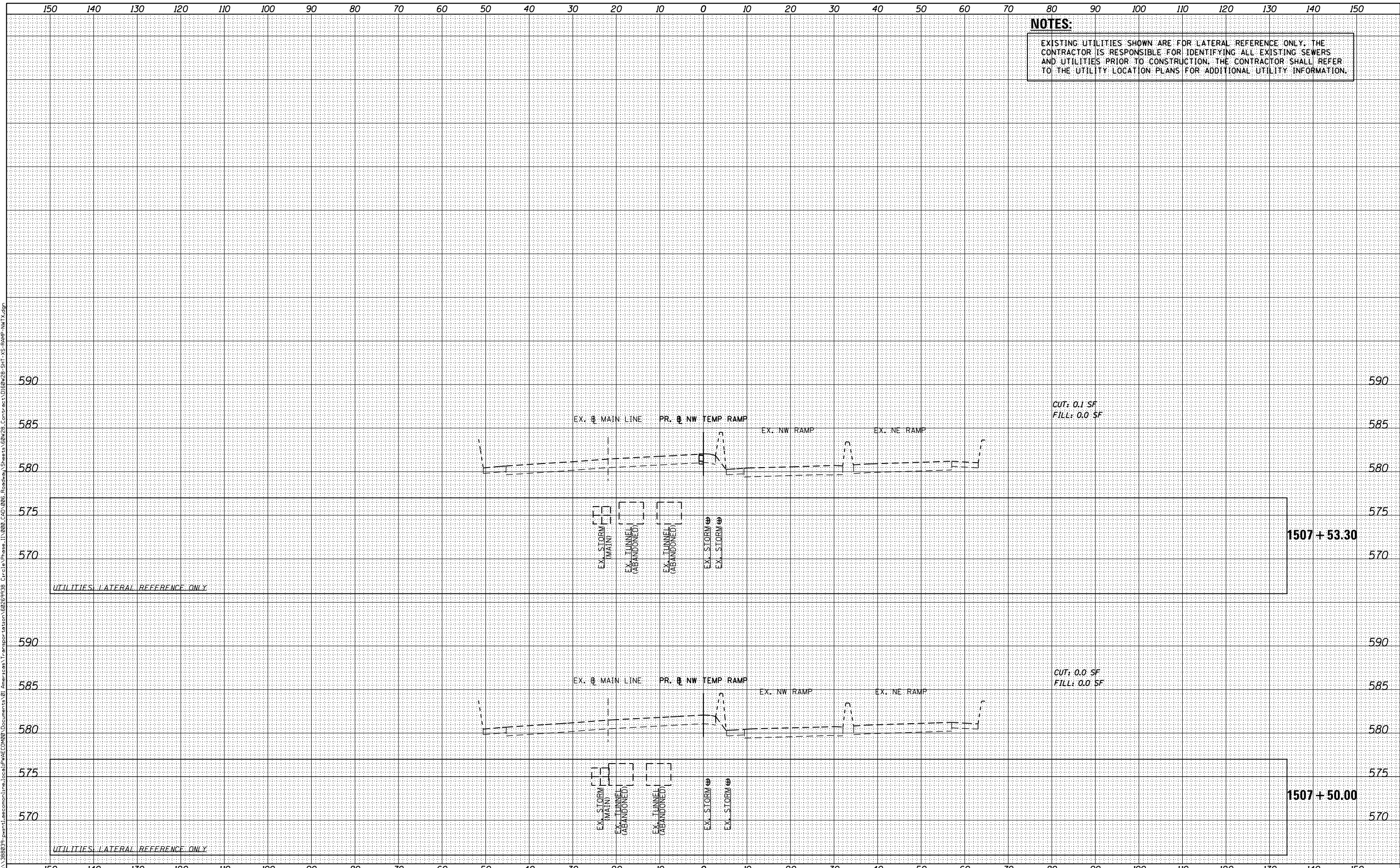
SCALE: 1:5V,1:10H SHEET 51 OF 51 SHEETS STA. 1842+50.00 TO STA. 1842+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	696
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				

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DATE	
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SURVEYED	
NOTE BOOK	
PLOTTED	
AREAS CHECKED	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
NOTE BOOK	
PLOTTED	
AREAS CHECKED	
AREAS CHECKED	



D160W28-SHT-XS-RAMP-NW.TX.dgn	DESIGNED -	NWMP / AJP	REVISED -
USER NAME = maronik	DRAWN -	NWMP / AJP	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED -	KMM	REVISED -
PLOT DATE = 4/25/2014	DATE -	04/28/14	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW (NB TEMP)**

SCALE: 1:5V,1:10H SHEET 1 OF 8 SHEETS STA. 1507+50.00 TO STA.1507+53.30

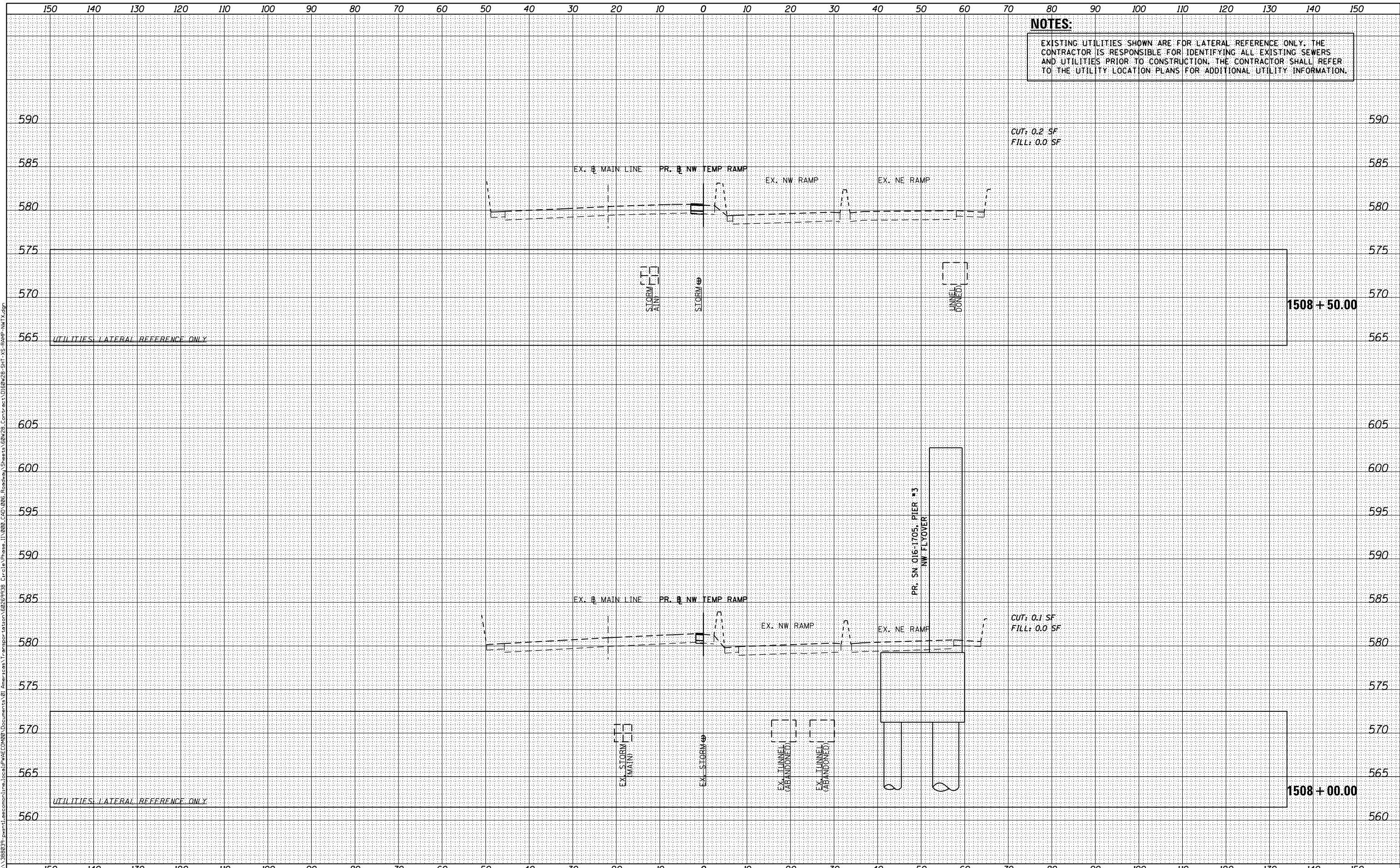
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	697
CONTRACT NO. 60W28				
ILLINOIS FED. AID PROJECT				



DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
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SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
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SURVEYED	
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TEMPLATE	
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CUT: 0.2 SF  
 FILL: 0.0 SF

CUT: 0.1 SF  
 FILL: 0.0 SF



D160W28-SHT-XS-RAMP-NW.TXD  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NWMP / AJP**  
 DRAWN - **NWMP / AJP**  
 CHECKED - **KMM**  
 DATE - **04/28/14**

REVISED -  
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 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW (NB TEMP)**

SCALE: 1:5V, 1:10H SHEET 2 OF 8 SHEETS STA. 1508+00.00 TO STA. 1508+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	698
CONTRACT NO. 60W28				

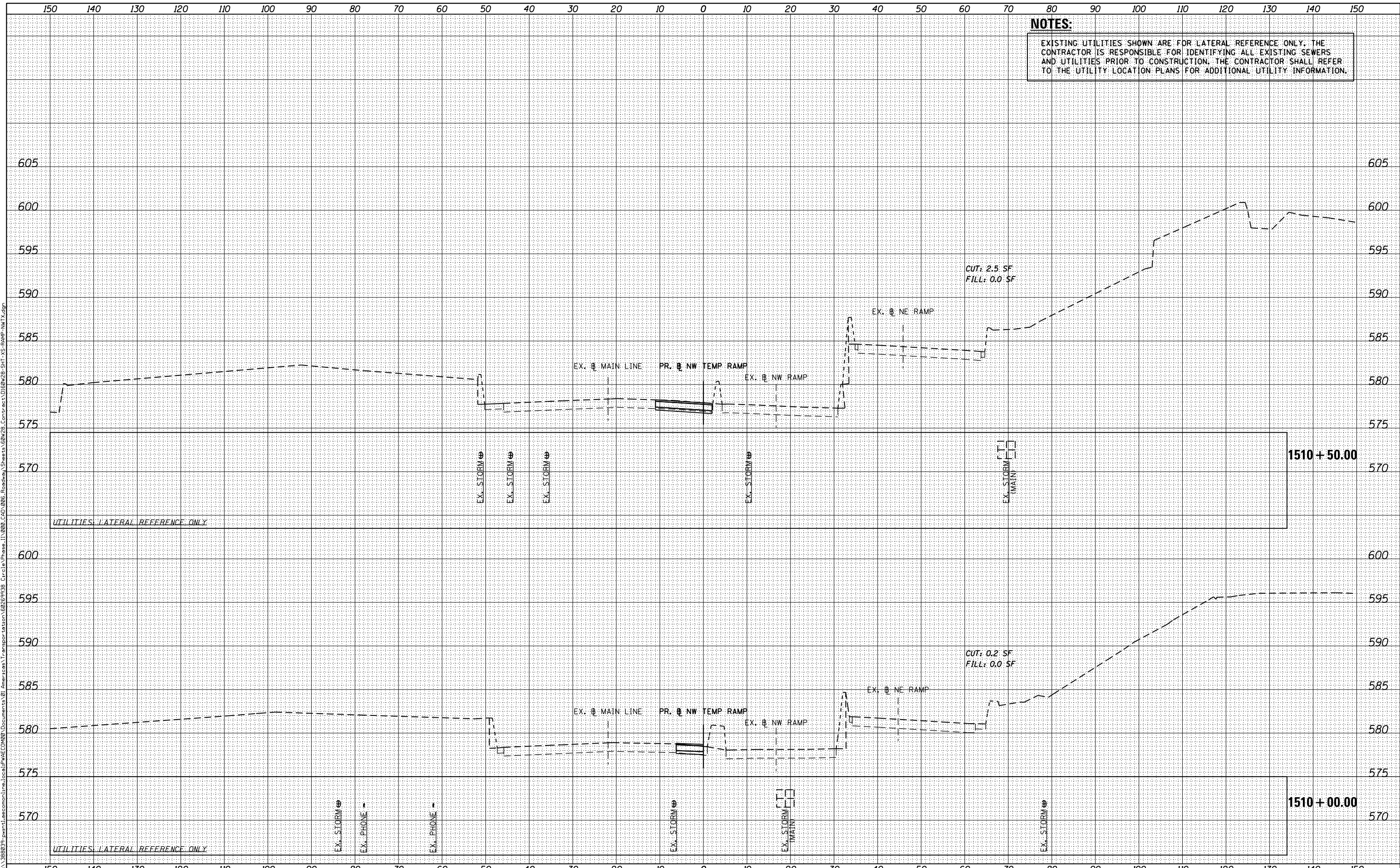
ILLINOIS FED. AID PROJECT



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

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



CUT: 2.5 SF  
 FILL: 0.0 SF

CUT: 0.2 SF  
 FILL: 0.0 SF



D160W28-SHT-XS-RAMP-NW.TX.dgn  
 USER NAME = maronik  
 PLOT SCALE = 10.0000' / in.  
 PLOT DATE = 4/25/2014

DESIGNED - **NWMP / AJP**  
 DRAWN - **NWMP / AJP**  
 CHECKED - **KMM**  
 DATE - **04/28/14**

REVISED -  
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 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 RAMP NW (NB TEMP)**

SCALE: 1:5V, 1:10H SHEET 4 OF 8 SHEETS STA. 1510+00.00 TO STA. 1510+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-010R	COOK	747	700
				CONTRACT NO. 60W28

ILLINOIS FED. AID PROJECT