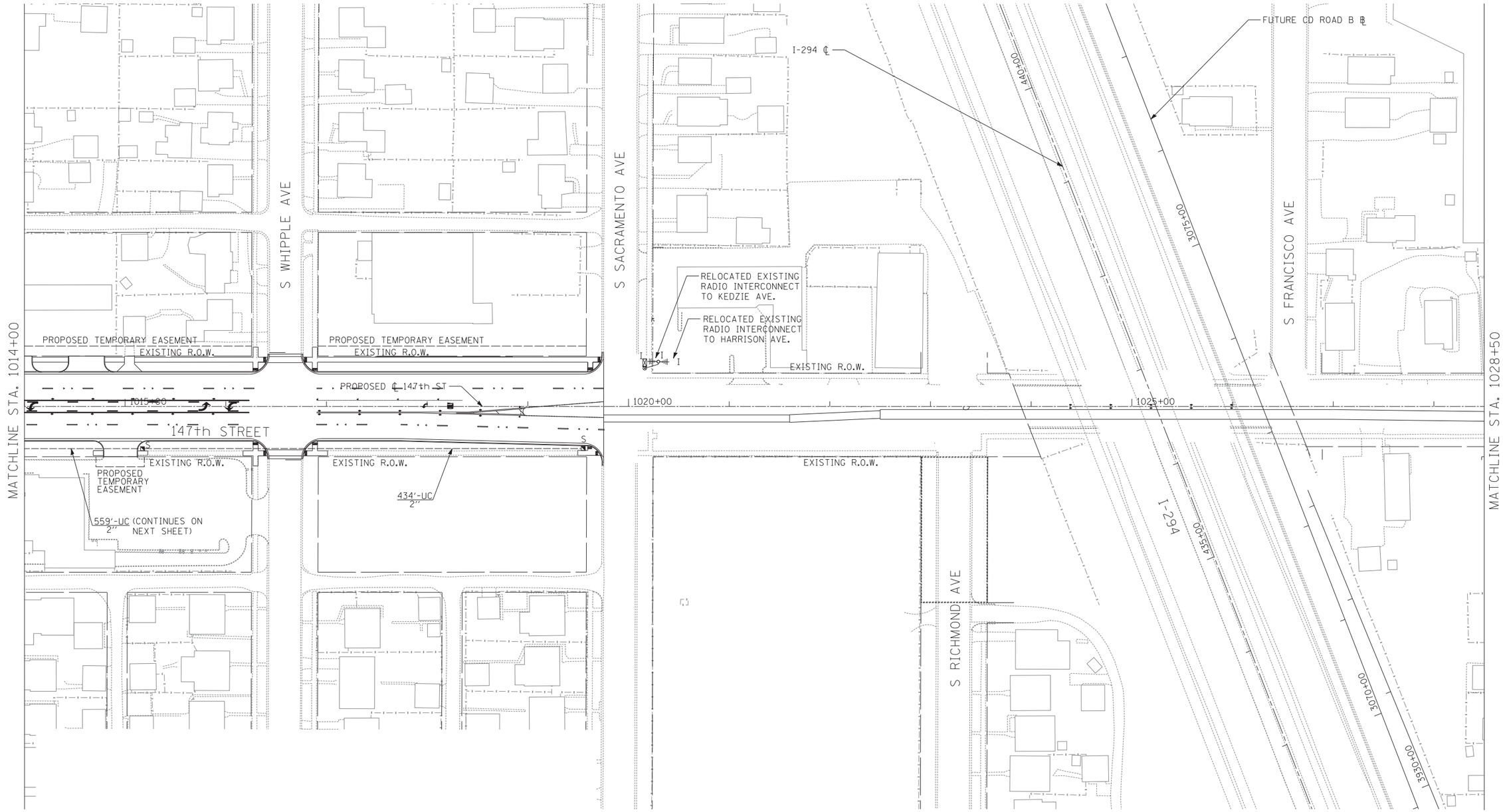

NOTES:

1. RADIO INTERCONNECT TO REMAIN AT KEDZIE, SACRAMENTO, AND HARRISON. WHEN ADJACENT CONTRACT IS BUILT FROM SACRAMENTO AVE TO MOZART AVE, THE SIGNAL AT SACRAMENTO WILL BE REMOVED AND THE EXISTING RADIO INTERCONNECT WILL BE REPLACED WITH NEW FIBER INTERCONNECT WHICH WILL BE RUN FROM KEDZIE AVE TO I-294 EXIT RAMP, TO I-294 ENTRANCE RAMP, TO HARRISON AVE. HANDHOLES AND CONDUIT RUNS ARE BEING PROVIDED WITHIN THESE CONTRACT LIMITS TO FACILITATE THE FUTURE INTERCONNECT CABLE.

0 50 100
SCALE: 1" = 50'-0"

TY LIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -
		DRAWN - MBR	REVISED -
	PLOT SCALE =	CHECKED - DAJ	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1" = 50' | SHEET NO. 2 OF 7 SHEETS | STA. 1014+00 TO STA. 1028+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	401
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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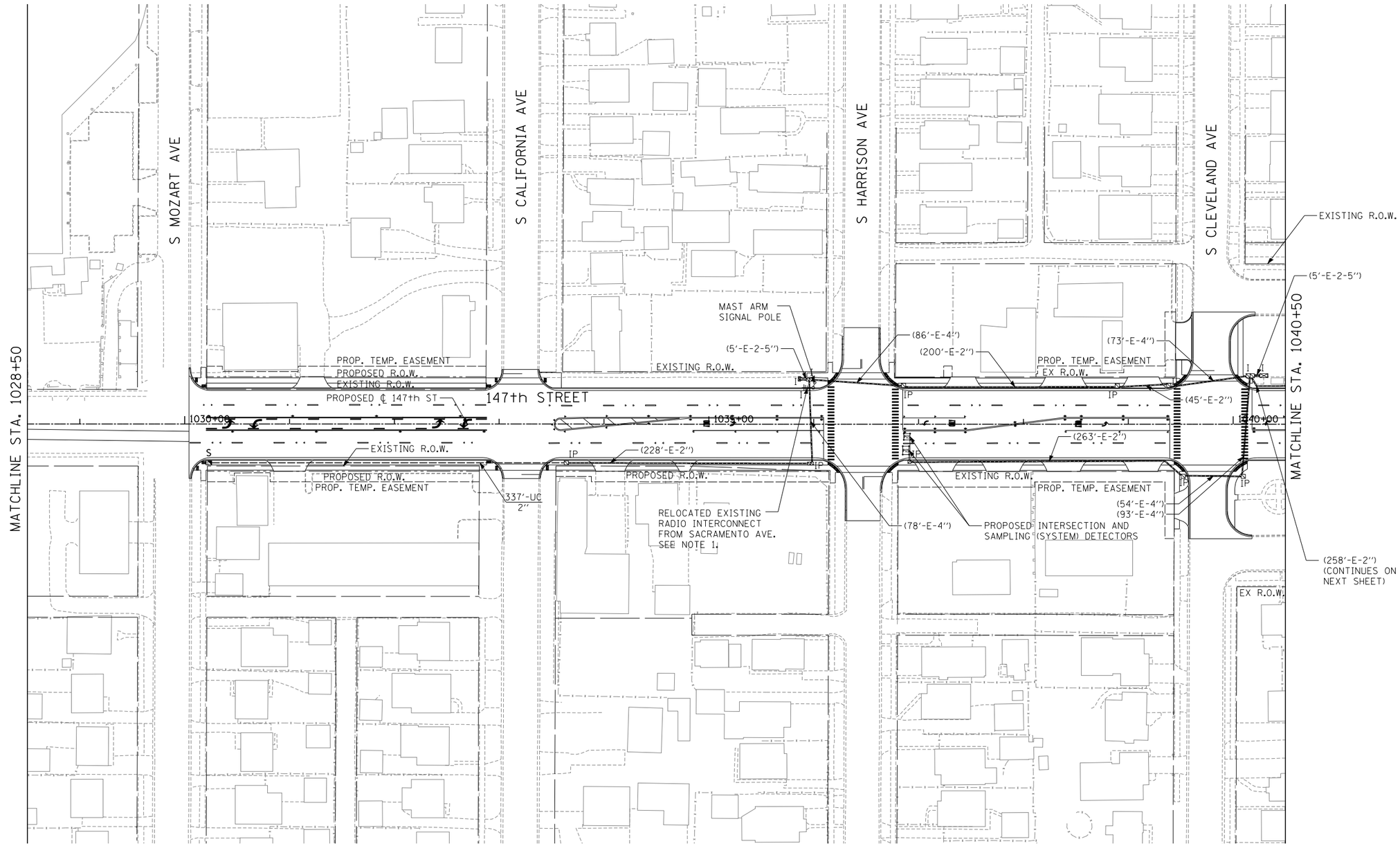

NOTES:

1. RADIO INTERCONNECT TO REMAIN AT KEDZIE, SACRAMENTO, AND HARRISON. WHEN ADJACENT CONTRACT IS BUILT FROM SACRAMENTO AVE TO MOZART AVE, THE SIGNAL AT SACRAMENTO WILL BE REMOVED AND THE EXISTING RADIO INTERCONNECT WILL BE REPLACED WITH NEW FIBER INTERCONNECT WHICH WILL BE RUN FROM KEDZIE AVE TO I-294 EXIT RAMP, TO I-294 ENTRANCE RAMP, TO HARRISON AVE. HANDHOLES AND CONDUIT RUNS ARE BEING PROVIDED WITHIN THESE CONTRACT LIMITS TO FACILITATE THE FUTURE INTERCONNECT CABLE.

0 50 100
SCALE: 1″ = 50′-0″

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -
		DRAWN - MBR	REVISED -
	PLOT SCALE =	CHECKED - DAJ	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED - 8/1/2012

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1″ = 50′ | SHEET NO. 3 OF 7 SHEETS | STA. 1028+50 TO STA. 1040+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	402
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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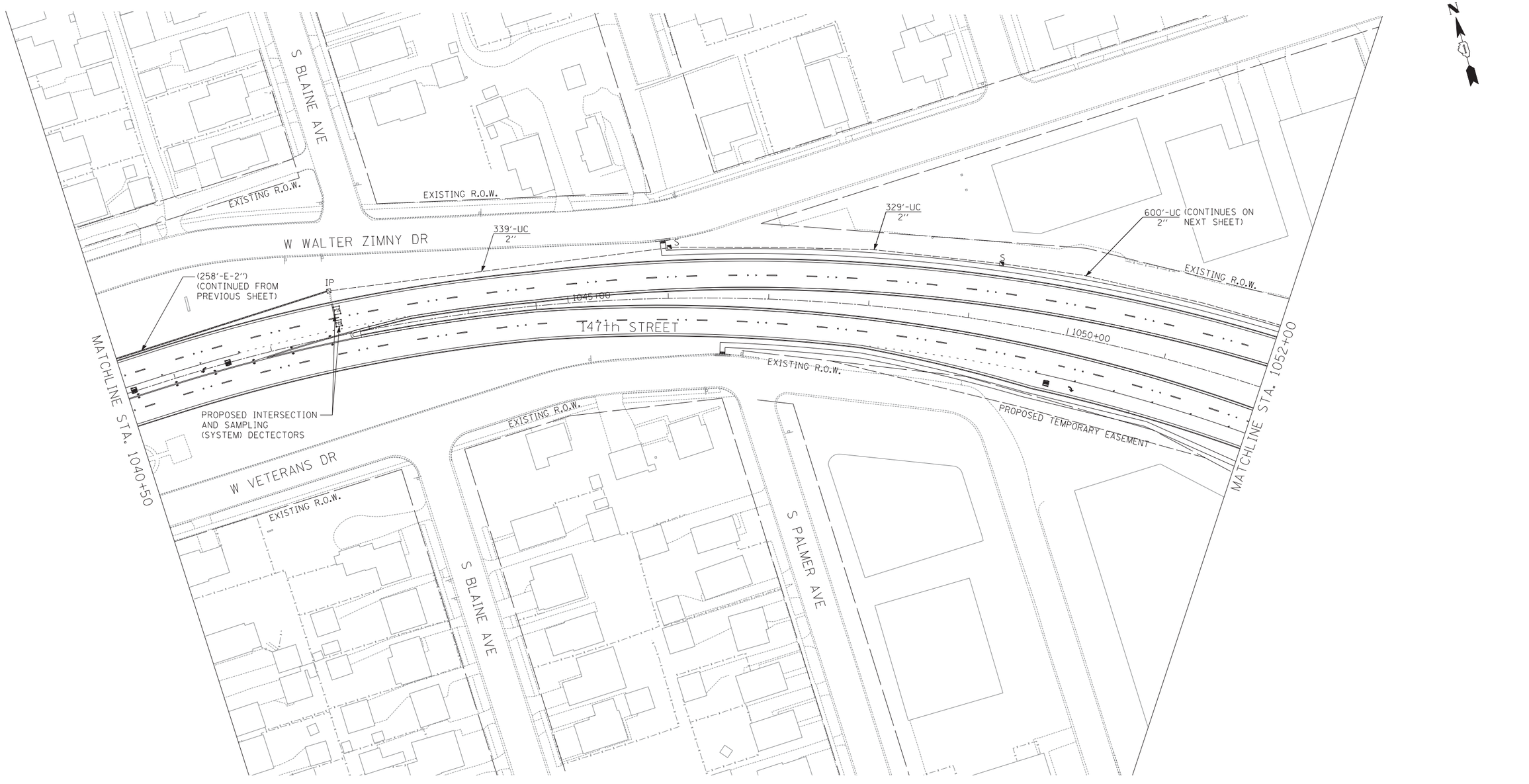

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	147TH STREET PROJECT PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MBR	REVISED -			XX	(0405-1 & 0506-2) R-1	COOK	577	403
	PLOT SCALE =	CHECKED - DAJ	REVISED -					CONTRACT NO. 60M57		
	PLOT DATE =	DATE - 5/23/2012	REVISED -		SCALE: 1" = 50' SHEET NO. 4 OF 7 SHEETS STA. 1040+50 TO STA. 1052+00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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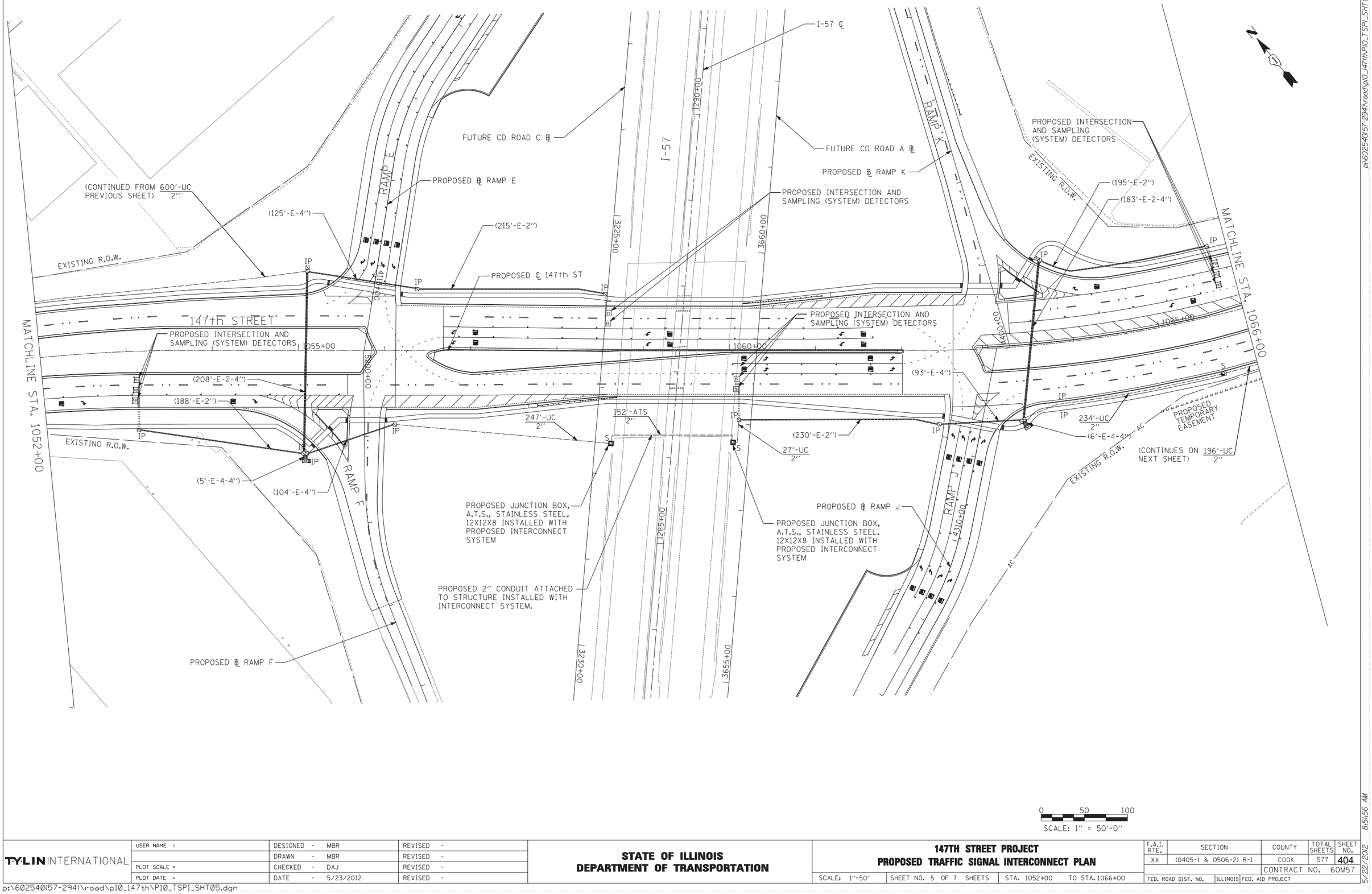

TY·LIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	147TH STREET PROJECT PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MBR	REVISED -					XX	(0405-1 & 0506-2) R-1	COOK	577	404
	PLOT SCALE =	CHECKED - DAJ	REVISED -							CONTRACT NO. 60M57		
	PLOT DATE =	DATE - 5/23/2012	REVISED -		SCALE: 1"=50'	SHEET NO. 5 OF 7 SHEETS	STA. 1052+00 TO STA. 1066+00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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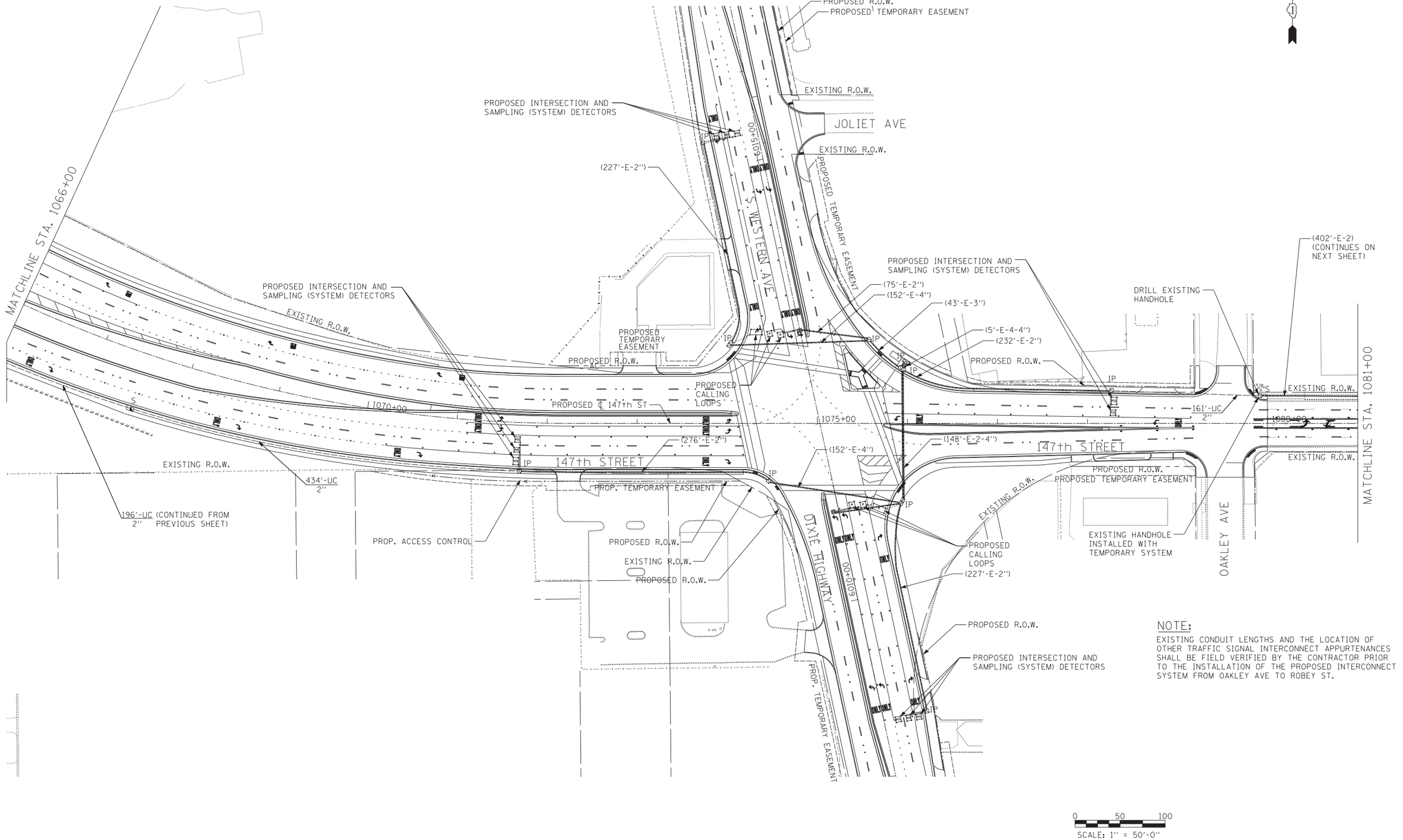

NOTE:

EXISTING CONDUIT LENGTHS AND THE LOCATION OF OTHER TRAFFIC SIGNAL INTERCONNECT APPURTENANCES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF THE PROPOSED INTERCONNECT SYSTEM FROM OAKLEY AVE TO ROBEY ST.

TY·LIN INTERNATIONAL

USER NAME =	DESIGNED - MBR	REVISED -
	DRAWN - MBR	REVISED -
PLOT SCALE =	CHECKED - DAJ	REVISED -
PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1" = 50' | SHEET NO. 6 OF 7 SHEETS | STA. 1066+00 TO STA. 1081+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	405
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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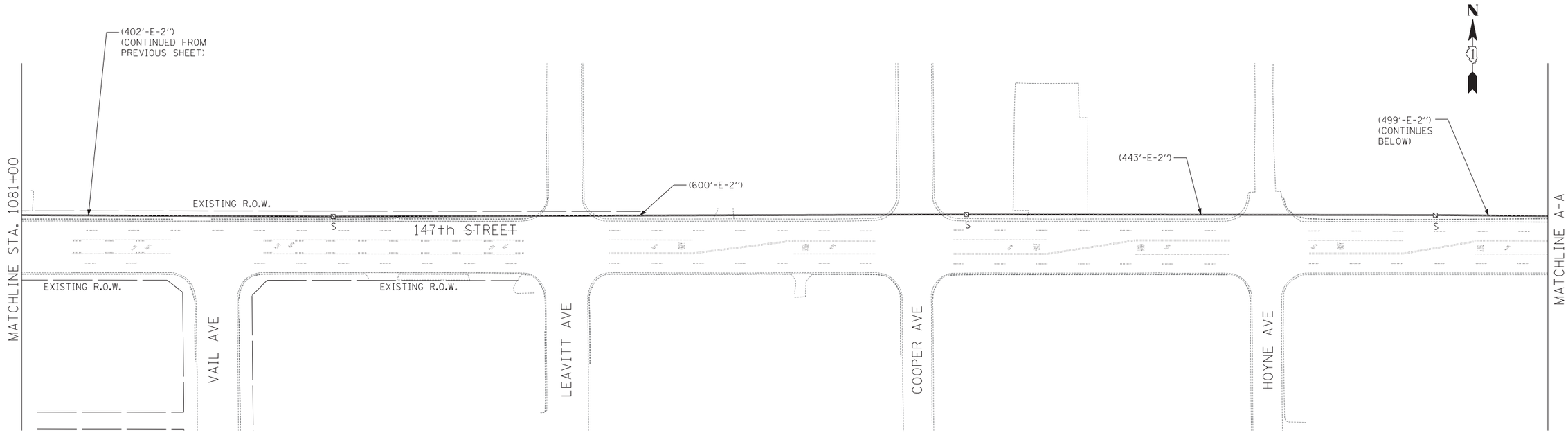

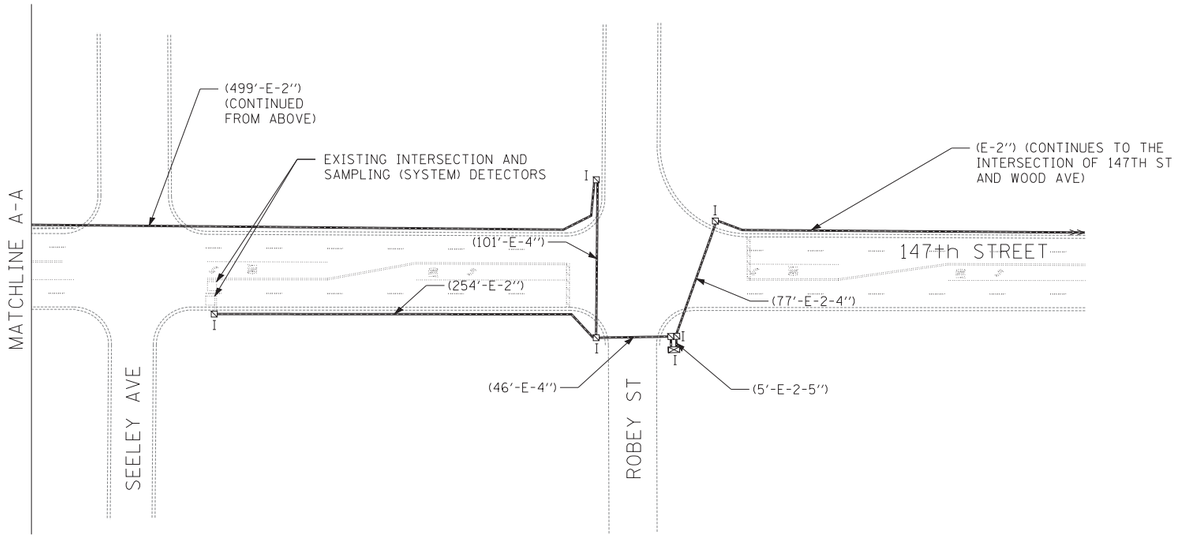

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	4089
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	152
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 8"	EACH	2
HANDHOLE	EACH	10
DRILL EXISTING HANDHOLE	EACH	2
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	9182
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	9026
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	7
RELOCATE EXISTING RADIO INTERCONNECT SYSTEM	EACH	2
TEMPORARY TRAFFIC SIGNAL INTERCONNECTION SYSTEM	LSUM	1

NOTE:

EXISTING CONDUIT LENGTHS AND THE LOCATION OF OTHER TRAFFIC SIGNAL INTERCONNECT APPURTENANCES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF THE PROPOSED INTERCONNECT SYSTEM FROM OAKLEY AVE TO ROBEY ST.

0 50 100
SCALE: 1" = 50'-0"

TY·LIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -
		DRAWN - MBR	REVISED -
	PLOT SCALE =	CHECKED - DAJ	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED TRAFFIC SIGNAL INTERCONNECT PLAN

SCALE: 1" = 50' | SHEET NO. 7 OF 7 SHEETS | STA. 1081+00 TO ROBEY ST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	406
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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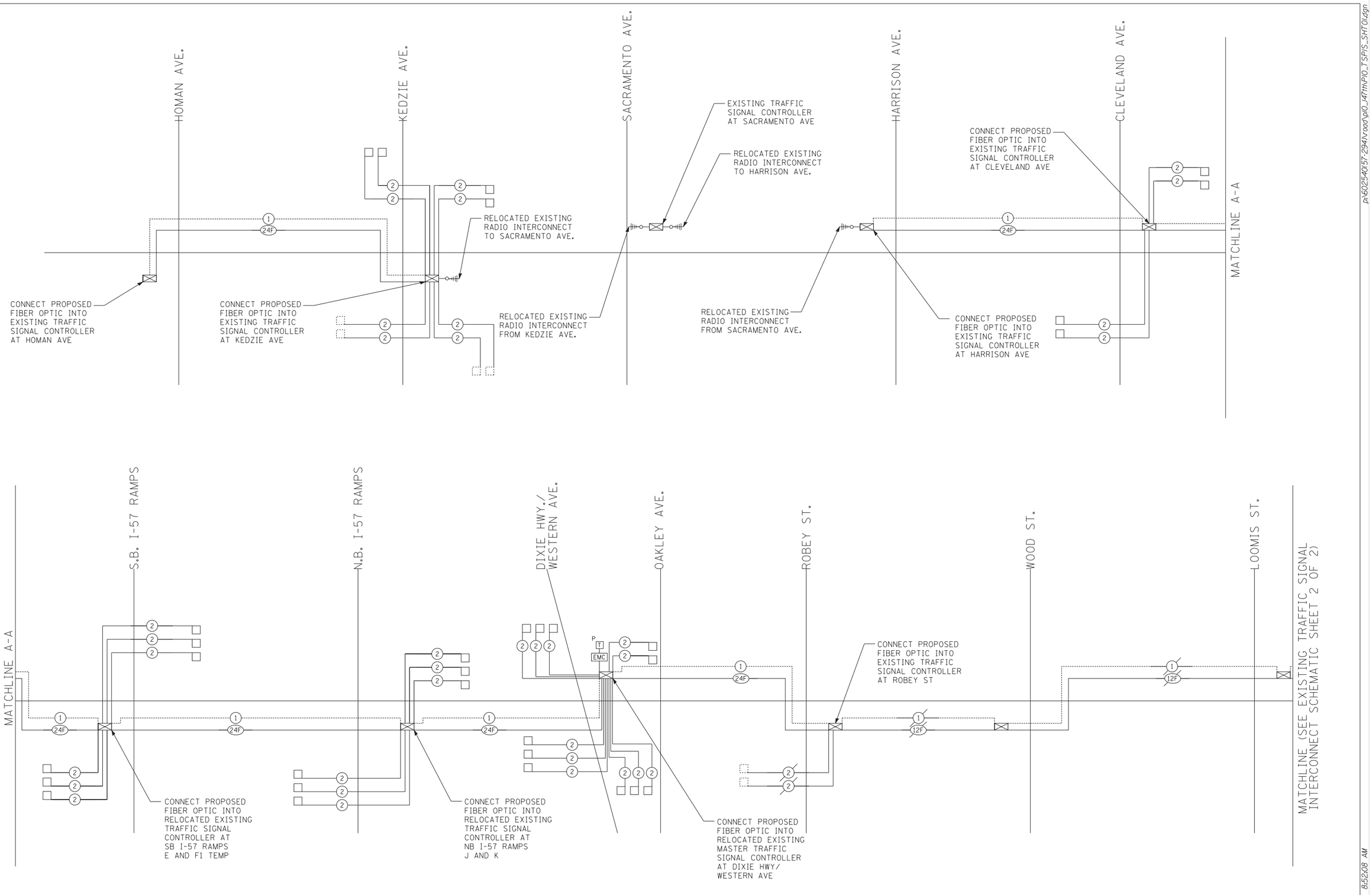

TY·LIN INTERNATIONAL	USER NAME =	DESIGNED - MBR	REVISED -
		DRAWN - MBR	REVISED -
	PLOT SCALE =	CHECKED - DAJ	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED TRAFFIC SIGNAL INTERCONNECT SCHEMATIC ALONG ILL RTE. 83 (147TH ST.) FROM HOMAN AVE. TO MICHIGAN CITY RD.

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	407
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6'' (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

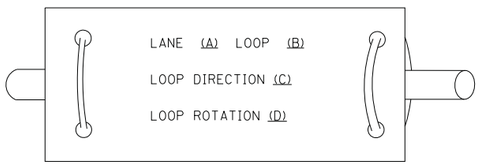
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18'' (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

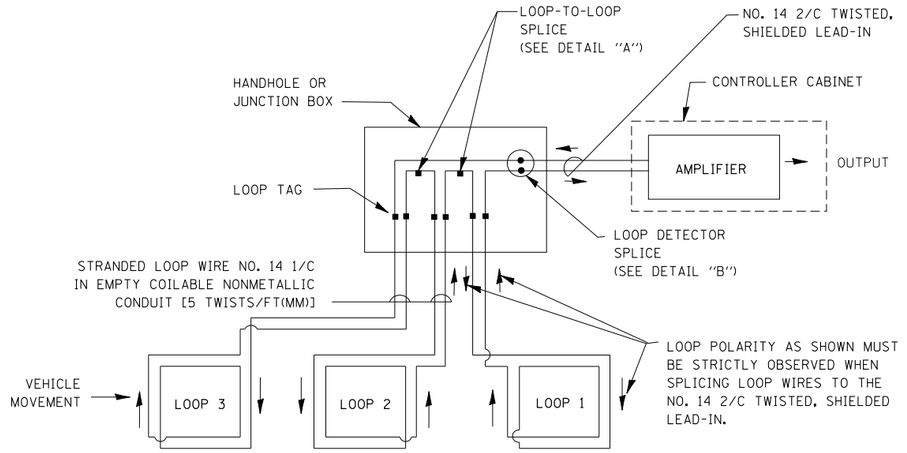


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

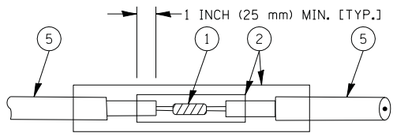
C. LABEL LOOP CABLE ''IN'' OR LOOP CABLE ''OUT''.

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

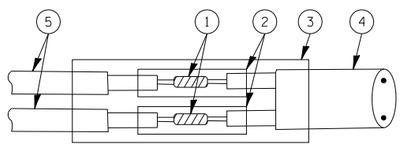


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16'' (8 mm).
- SAW-CUT DEPTHS SHALL BE 3'' (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2'' (50 mm) DIAMETER CORE.

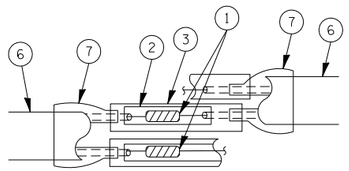


DETAIL ''A''
LOOP-TO-LOOP SPLICE



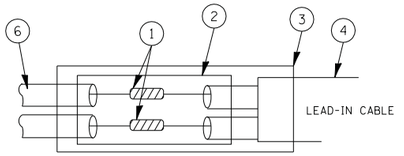
DETAIL ''B''
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL ''A''
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL ''B''
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3'' (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6'' (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

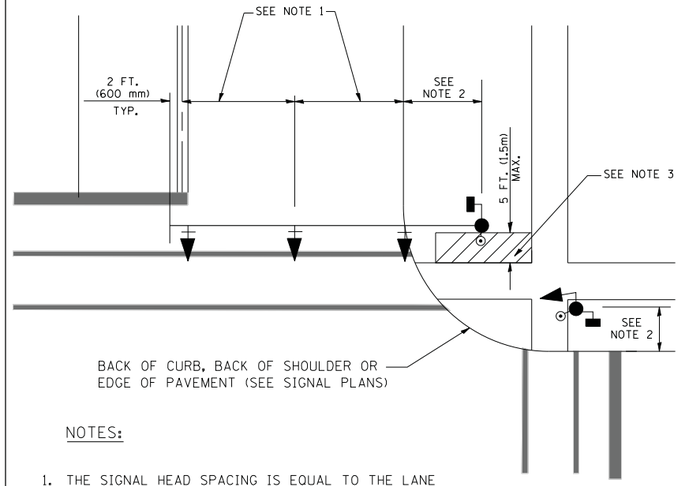
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	408
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

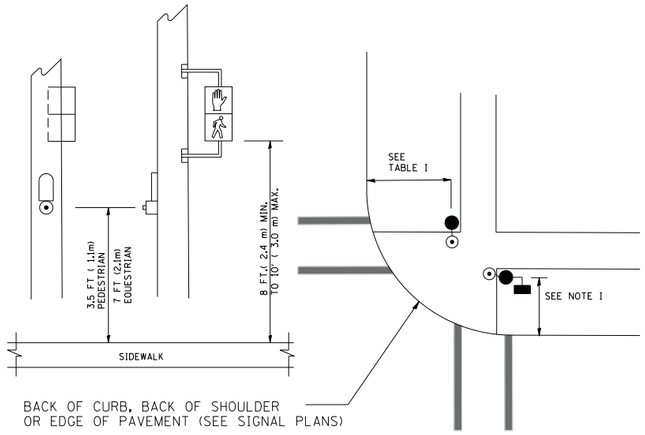
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

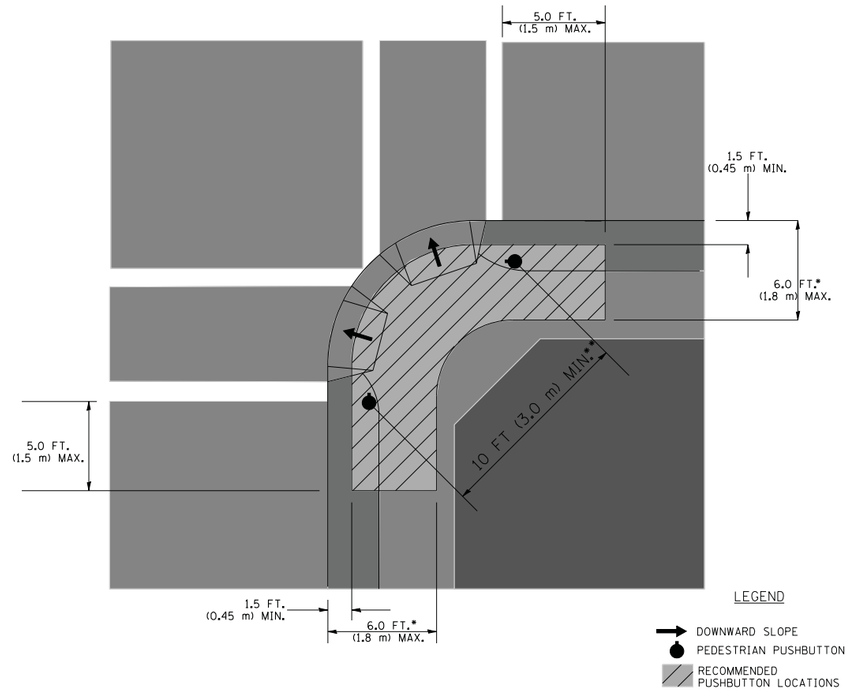
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- * WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- ** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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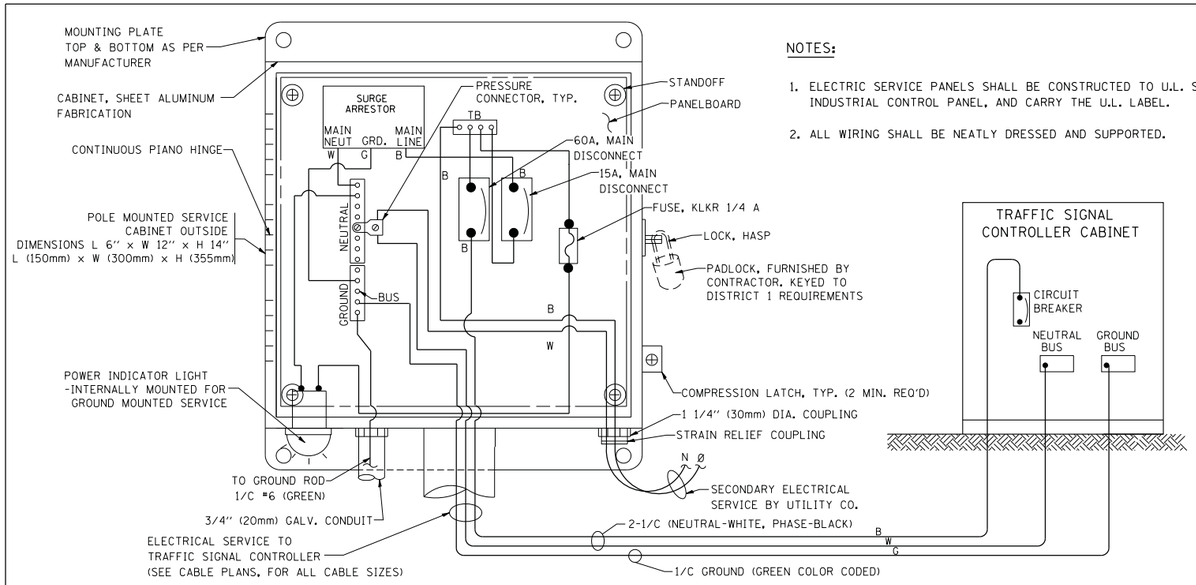
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	409
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



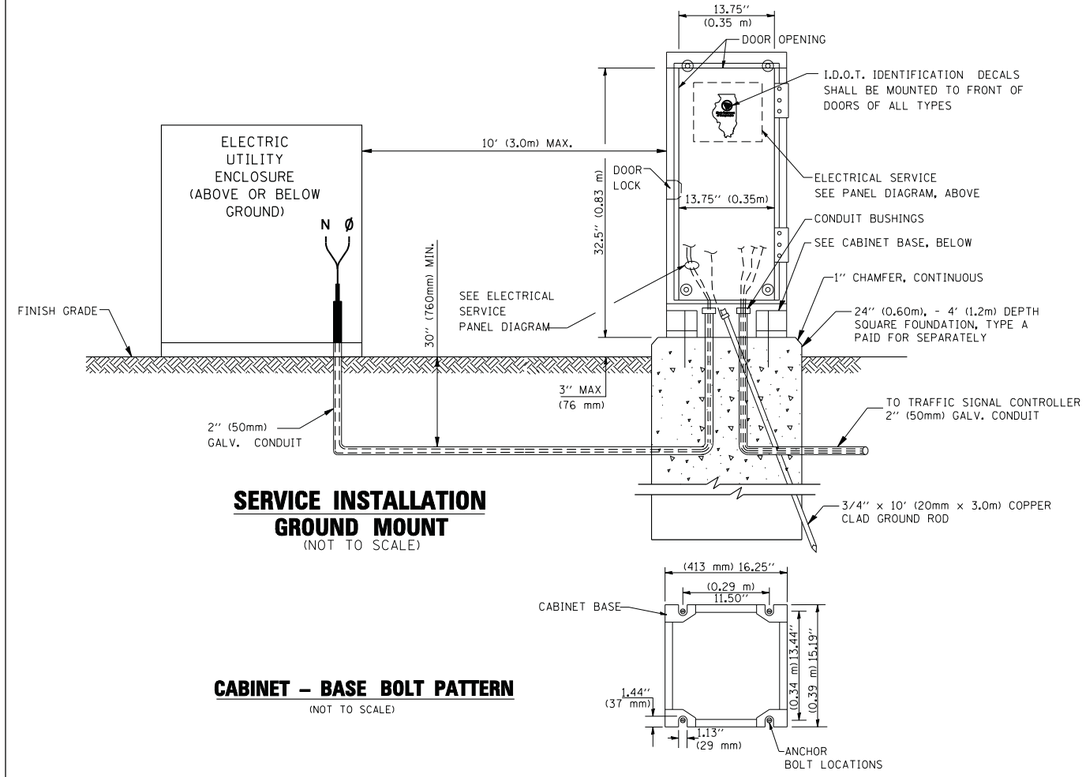
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

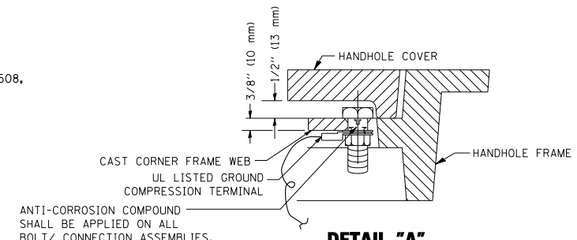


SERVICE INSTALLATION GROUND MOUNT

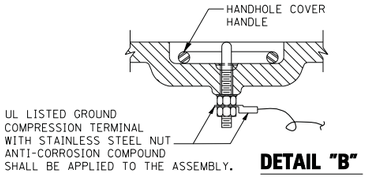
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"

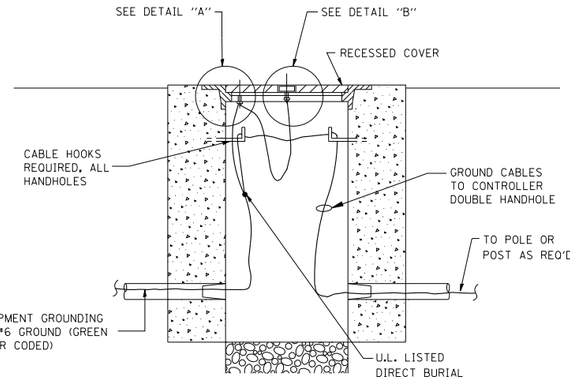


DETAIL "B"

NOTES:

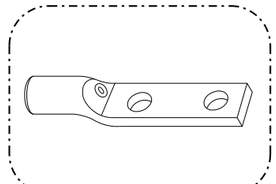
GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

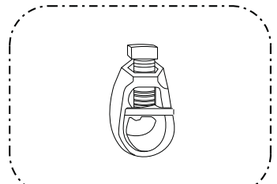


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



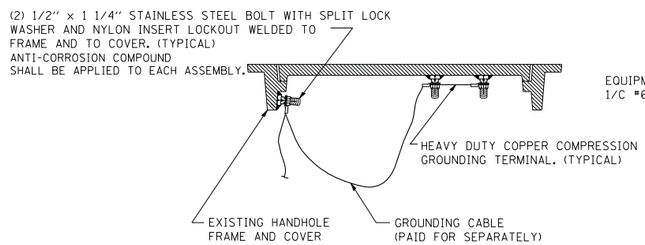
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

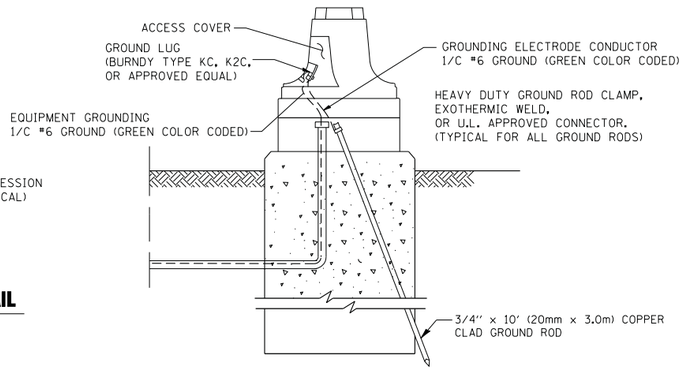
NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

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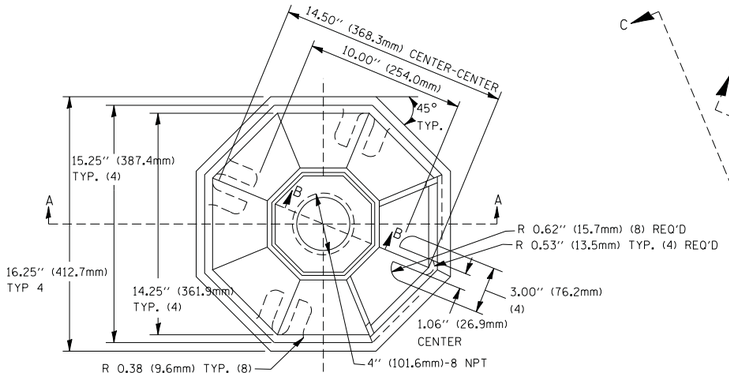
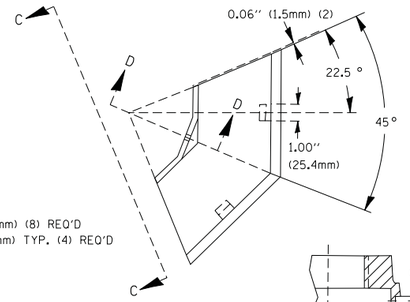
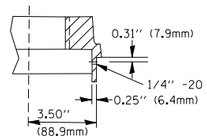
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

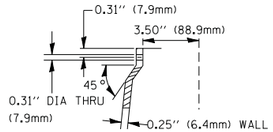


TOP VIEW

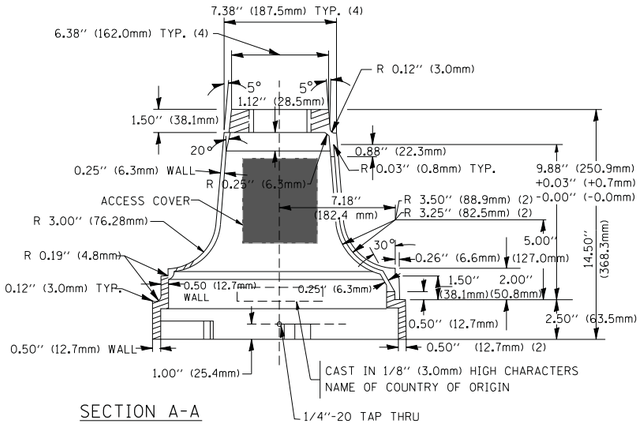




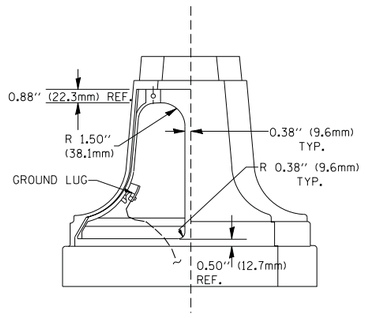
SECTION B-B



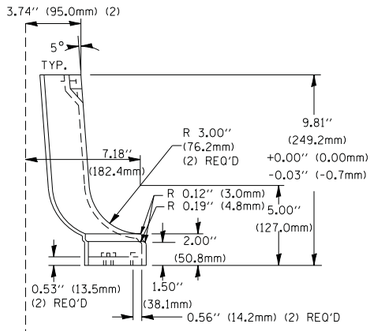
SECTION D-D



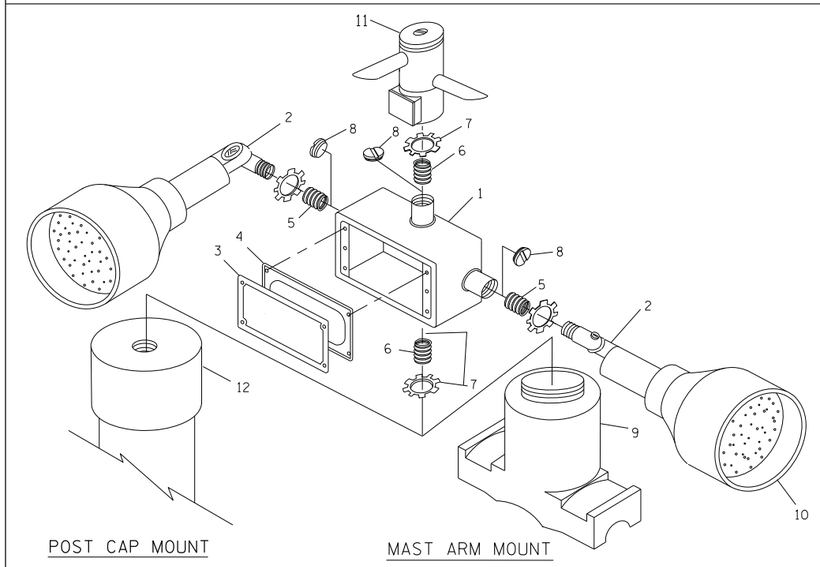
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



POST CAP MOUNT

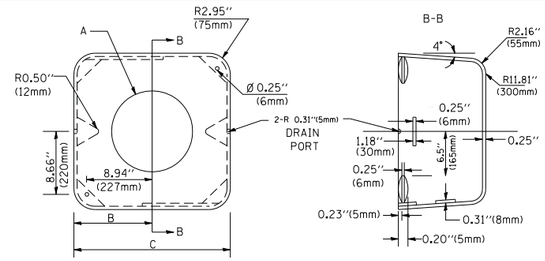
MAST ARM MOUNT

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾''(19 mm) CLOSE NIPPLE
7	¾''(19 mm) LOCKNUT
8	¾''(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- ''BAND-IT'' SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾''(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

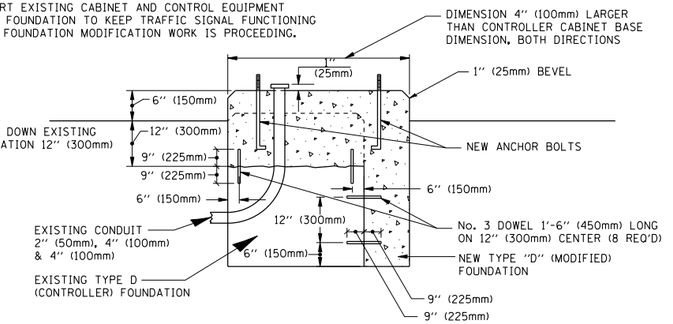
A	B	C	HEIGHT	WEIGHT
VARIES	9.5''(241mm)	19''(483mm)	7'' (178mm) - 12'' (300mm)	53 lbs (24kg)
VARIES	10.75''(273mm)	21.5''(546mm)	7'' (178mm) - 12'' (300mm)	68 lbs (31 kg)
VARIES	13.0''(330mm)	26''(660mm)	7'' (178mm) - 12'' (300mm)	81 lbs (37 kg)
VARIES	18.5''(470mm)	37''(940mm)	7'' (178mm) - 12'' (300mm)	126 lbs (57 kg)

SHROUD

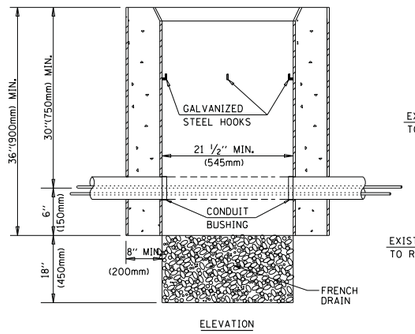
NOTES:

1. DIMENSION ''A'' IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

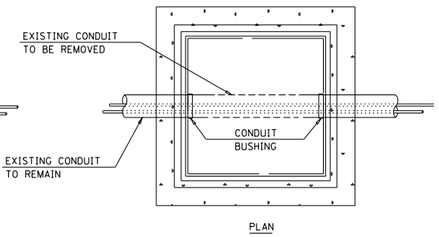
NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE ''D'' FOUNDATION



ELEVATION



PLAN

NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

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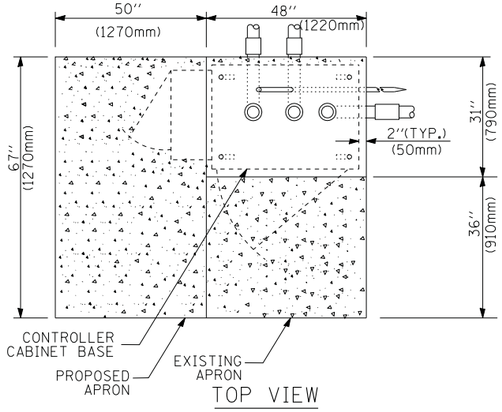
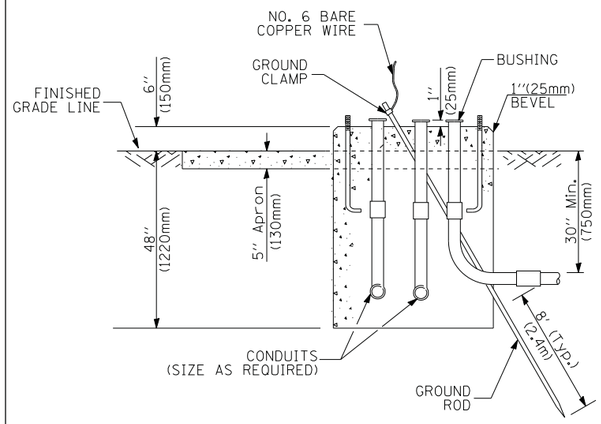
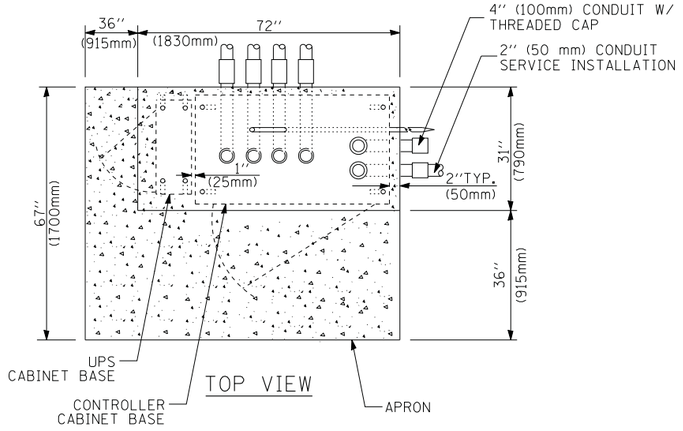
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



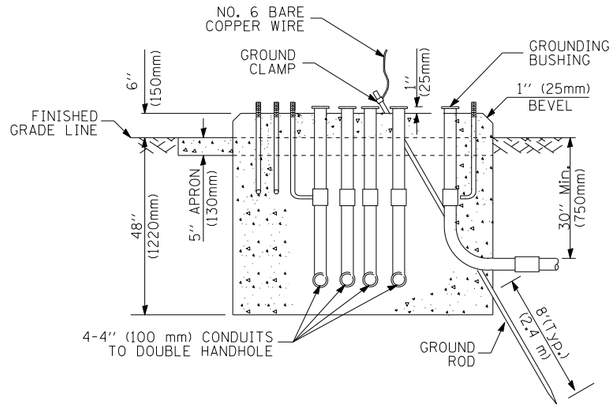
TOP VIEW



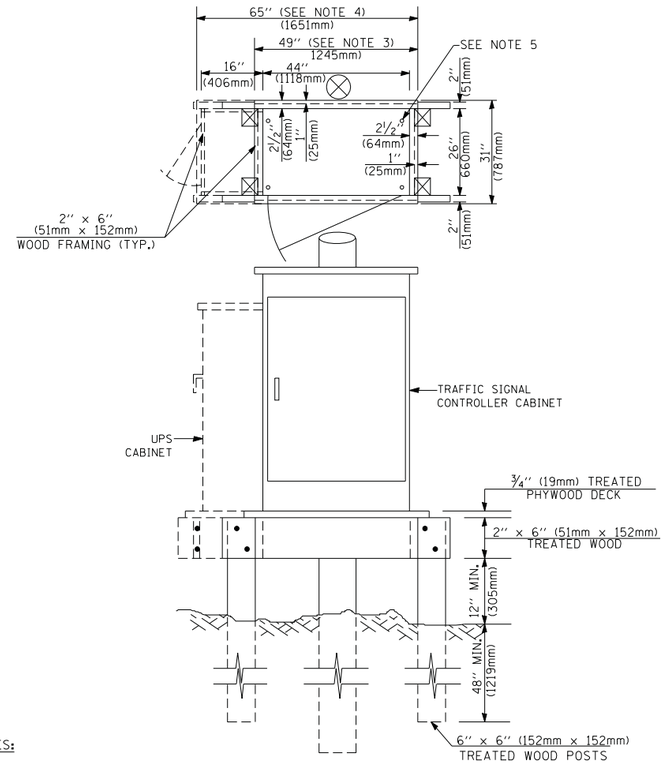
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



TOP VIEW



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26'' x 44'' (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16'' x 25'' (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0'' (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0'' (1.2m)
TYPE D - CONTROLLER	4'-0'' (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0'' (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0'' (3.0 m)	30'' (750mm)	24'' (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6'' (4.1 m)	30'' (750mm)	24'' (600mm)	8	6(19)
	11'-0'' (3.4 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4.0 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4.6 m)	36'' (900mm)	30'' (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0'' (6.4 m)	42'' (1060mm)	36'' (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0'' (7.6 m)	42'' (1060mm)	36'' (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36'' (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42'' (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

FILE NAME = c:\pw_work\PWIDOT\KANTHAPHIXAYBC\d0112644\traffic_legend_v7.dgn	USER NAME = kanthaphixaybc	DESIGNED - DAG	REVISED -
		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	412
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET		B C	B C
COMMUNICATIONS CABINET	R CC	ECC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◀Y ◀G	R Y G ◀Y ◀G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G ◀Y ◀G "P"	R Y G ◀Y ◀G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		I	I

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		I	I
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

FILE NAME = c:\pw_work\PWIDOT\KANTHAPHIXAYBC\d0112644\traffic_legend_v7.dgn	USER NAME = kanthaphixaybc	DESIGNED - DAG/BCK	REVISED -
		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	413
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

RELOCATED CABINET
(SEE TRAFFIC SIGNAL PLANS)

UNDERGROUND CONDUIT
GS, 2" DIA (680')
(FOR FUTURE USE)

EXISTING ACCESS CONTROL

RAMP F

PROPOSED ℄ RAMP F

INSET MATCHLINE

147th STREET

I 57

RAMP E

PROPOSED ℄ RAMP E

INSET MATCHLINE

EXISTING SURVEILLANCE CABINET J25

UNDERGROUND CONDUIT
GS, 2" DIA (680')

JB1(E)

JA1(E)

4108+44

REBUILD EXISTING HANDHOLE, SPECIAL

INDUCTION LOOP (CENTERED ON RAMP)

POLYETHYLENE DUCT 1¼" (12')

ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR (15')

ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 4/C, TWISTED, SHIELDED (309')

ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR (95')

POLYETHYLENE DUCT 1¼" (15')

4407+22

INDUCTION LOOP (CENTERED ON RAMP)

EXISTING CABINET J28 TO REMAIN

EXITING SURVEILLANCE LOOPS ON RAMPS J AND F TO REMAIN

PROPOSED ℄ RAMP K

RAMP K

PROPOSED ACCESS CONTROL

EXISTING ACCESS CONTROL

PROPOSED ℄ RAMP J

RAMP J

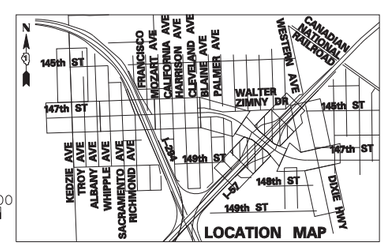
PM LINE 4
SOLID WHITE (TYP)

3230+00 3225+00 3220+00 4105+00 4110+00 4205+00 4115+00 4200+00 4195+00

1285+00 1290+00 1295+00

3655+00 3660+00 3665+00 4410+00 4405+00 4400+00 4310+00

SCALE: 1" = 50'-0"



TYLIN INTERNATIONAL	USER NAME =	DESIGNED - BES	REVISED -
		DRAWN - BES	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

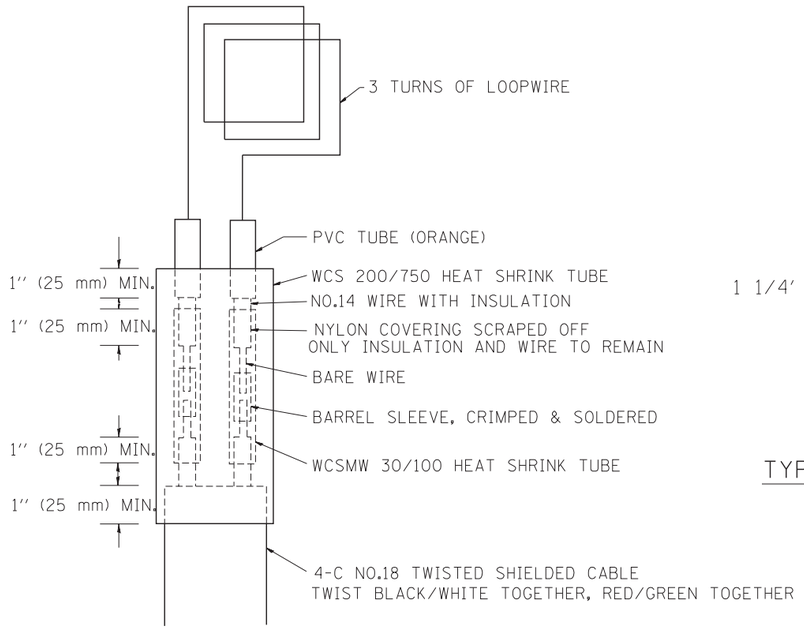
147TH STREET PROJECT
SURVEILLANCE PLAN

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	414
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

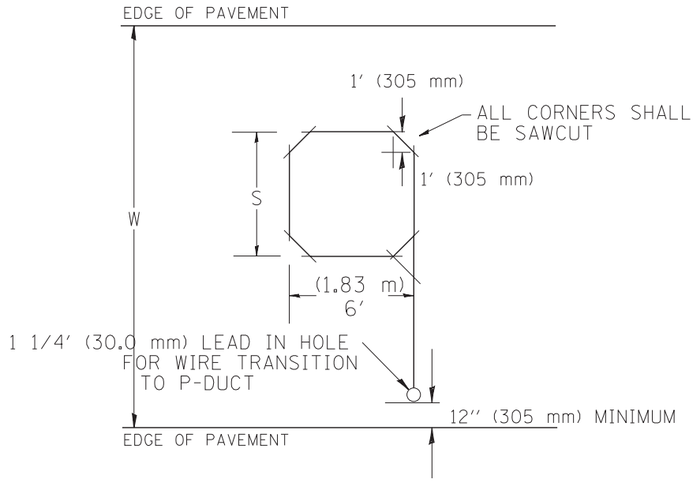
P:\602540(57-294)\Road\P10_147th\P10_SURV_SHT01.dgn

P:\602540(57-294)\Road\P10_147thNP10_SURV_SHT01.dgn 5/22/2012 3:57:05 PM

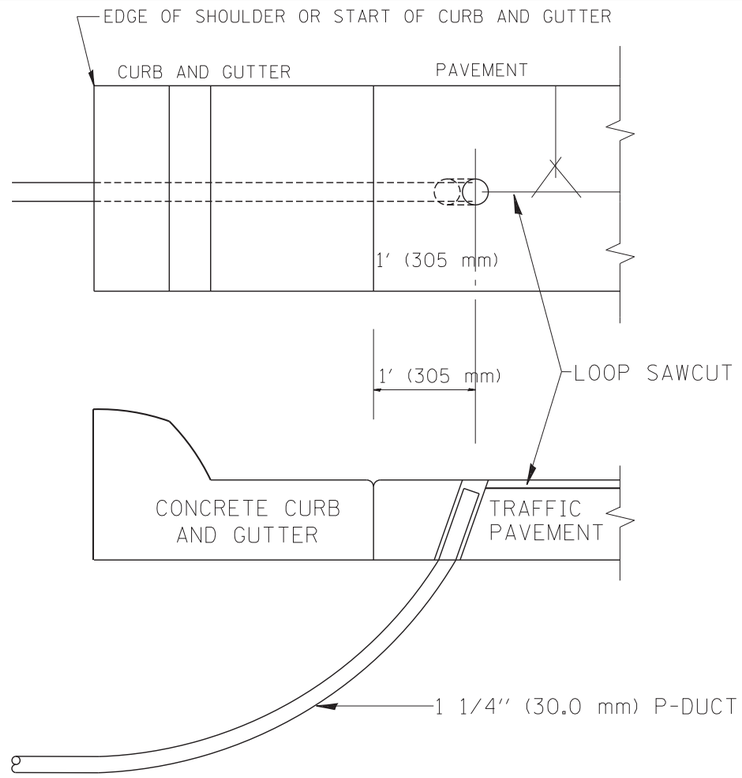


MINIMUM 1'' (25 mm) HEAT SHRINK TUBING OVERLAP
ON WIRE, PVC & SHIELDED CABLE TO FORM WATER TIGHT SEAL

LOOP SPLICING REQUIREMENTS



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



CURB AND GUTTER LOOP LEAD-IN
TRANSITION DETAIL

TABLE 1	
WIDTH (W)	WIDTH (S)
12' (3.7 m)	8' (2.5 m)
13' (4.0 m)	9' (2.8 m)
14' (4.3 m)	10' (3.1 m)
15' (4.6 m)	11' (3.4 m)
16' (4.9 m)	12' (3.7 m)
17' (5.2 m)	13. (4.0 m)
18' (5.5 m)	14' (4.3 m)
19' (5.8 m)	15' (4.6 m)
20' (6.1 m)	18' (4.9 m)
21' (6.4 m)	17' (5.2 m)
22' (6.7 m)	18' (5.5 m)
23' (7.0 m)	19' (5.8 m)
24' (7.3 m)	20' (6.1 m)
25' (7.6 m)	21' (6.4 m)

NOTES

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

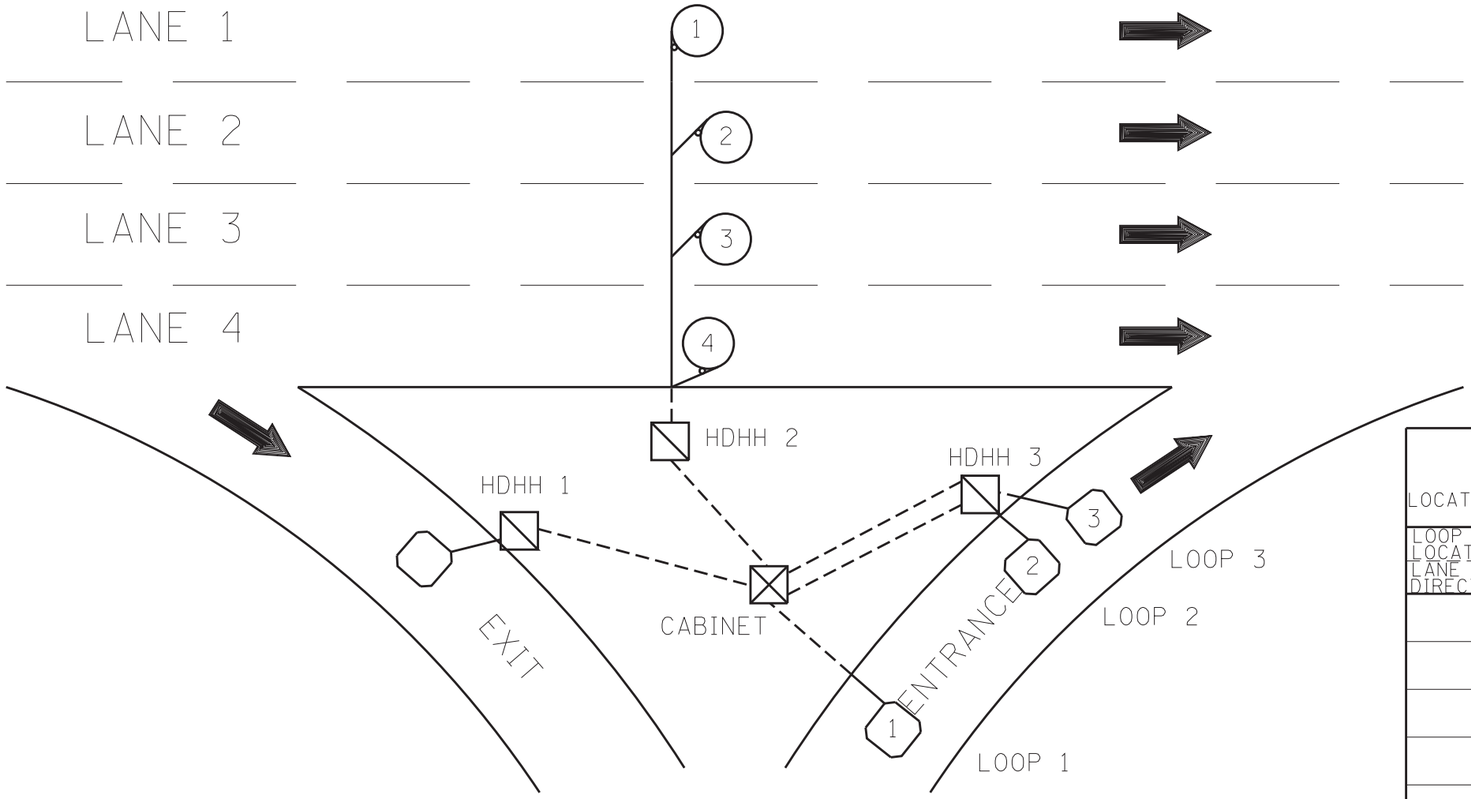
FILE NAME = c:\Projects\TSC\TYPICALS\TSCTYP08.dgn	USER NAME = mezag	DESIGNED - R.L.	REVISED - 6/94
		DRAWN - G.M.	REVISED - 11/95
	PLOT SCALE = 50.1573 '/ in.	CHECKED - R.L.	REVISED - 05/96
	PLOT DATE = 8/17/2011	DATE - 6-22-94	REVISED - 10/96

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

RECTANGULAR INDUCTION LOOP
TYPICAL

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	415
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SIZE
2.5'' (63.5 mm) X 1.75'' (44.45 mm)

SUGGESTED TAG
PANDUIT
#MP25OW175-C
OR EQUIVALENT

LOOP ANALYZER

LOCATION _____ DATE _____

LOOP LOCATION LANE DIRECTION	LOOP WIRE MARKED AND CODED	LOOP SIZE	FREQ. INDUCTANCE	INSULATION	LOOP RESISTANCE

HDHH 1 EXAMPLE

IB-EB EXIT
CCW IN/
TO CABINET #____

HDHH 2 EXAMPLE

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

HDHH 3 EXAMPLE

IB-EB ENT.
LOOP #2
CW IN/

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

FILE NAME = c:\Projects\TSC\TYPICALS\TSCTYP08.dgn	USER NAME = mezag	DESIGNED - R.L.	REVISED - 6/94
		DRAWN - G.M.	REVISED - 10/96
	PLOT SCALE = 100.3146 '/ in.	CHECKED - R.L.	REVISED -
	PLOT DATE = 8/17/2011	DATE - 6-27-94	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

LOOP STATUS REPORT

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

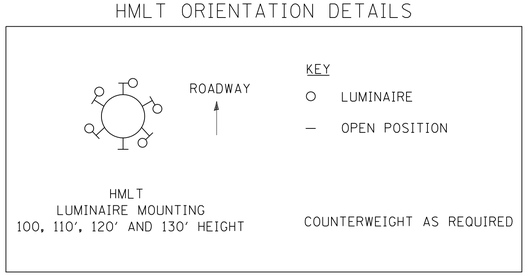
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	416
			CONTRACT NO.	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SYSTEMS CENTER (TY-1TSC-418#7)

LEGEND

- PROPOSED LIGHTING UNIT 47.5′ M.H., 12′ M.A., WITH 400W, 240V HPS LUMINAIRE WITH TRANSFORMER BASE BREAKAWAY DEVICE
- PROPOSED LIGHTING UNIT 47.5′ M.H., 6′ M.A., WITH 400W, 240V HPS LUMINAIRE WITH TRANSFORMER BASE BREAKAWAY DEVICE
- PROPOSED COMBINATION LIGHTING UNIT 45′ M.H., 12′ M.A., WITH 400W, 240V HPS LUMINAIRE
- PROPOSED COMBINATION LIGHTING UNIT 45′ M.H., 6′ M.A., WITH 400W, 240V HPS LUMINAIRE
- TEMPORARY LIGHTING UNIT 60′ WOOD POLE, 50′ M.H., 15′ M.A., WITH 400W, 240V HPS LUMINAIRE
- EXISTING LIGHTING UNIT TO BE REMOVED AND SALVAGED
- EXISTING LIGHTING UNIT TO REMAIN IN PLACE
- PROPOSED HIGH MAST LIGHT TOWER AS SPECIFIED IN HIGH MAST LIGHT TOWER DATA TABLE 400W HPS LUMINAIRES (NUMBER PER PLANS)
- EXISTING UNDERPASS LUMINAIRE TO REMAIN IN PLACE
- UNDERGROUND RIGID GALVANIZED STEEL CONDUIT (RGC) SIZE AS INDICATED
- UNIT DUCT, AS SPECIFIED IN PLANS
- EXISTING CABLE AND CONDUIT TO REMAIN IN PLACE
- AERIAL CABLE, AS SPECIFIED IN PLANS
- PROPOSED LIGHTING CONTROLLER CABINET, SINGLE DOOR, CONSOLE TYPE, 240/480V, SINGLE PHASE
- PROPOSED LIGHTING CONTROLLER CABINET, RADIO CONTROL, DUPLEX CONSOLE TYPE 240/480V, SINGLE PHASE
- EXISTING LIGHTING CONTROLLER CABINET
- PROPOSED ELECTRIC SERVICE TRANSFORMER BY COMED ON EXISTING OR PROPOSED UTILITY WOOD POLE
- PROPOSED HANDHOLE
- EXISTING HANDHOLE
- GROUND ROD, 5/8″ X 10 FT
- WOOD POLE, SIZE AS NOTED
- EXISTING COMED TRANSFORMER

HMLT ORIENTATION DETAILS



CALL-OUT SAMPLES

DEFINITION	EXAMPLE
CKT. NO. LOCATION SET BACK-FROM BACK OF CURB (AS NOTED ON THE PLANS)	MZA1 STA. 591+85 SET BACK 7 FT
HC A 1 POLE NUMBER CIRCUIT NUMBER LIGHTING CONTROL CABINET	
CONDUIT SIZE TYPE, LENGTH	3″ DIA. RGC, 50 FT
CIRCUITS CONDUCTORS RACEWAY	CKT. MZAB 3-1/C#8, 1/C#10 GND, 1″ DIA. UNIT DUCT
CONTROLLER DESIGNATION LOCATION DESCRIPTION	PROPOSED LIGHTING CONTROLLER ″MZ″ STA. 590+95, 51 FT LT 1-PHASE, 240/480V

HMLT DATA TABLE

LIGHT TOWER	STATION	OFFSET	POLE HEIGHT	TOP OF FOUNDATION ELEVATION
JAB2	1280+49 (I-57)	174.96 FT LT	100 FT	609.50
JCD3	1280+56 (I-57)	202.41 FT RT	100 FT	607.90
JCD1	1284+36 (I-57)	158.54 FT RT	100 FT	609.70
JAB1	1284+41 (I-57)	150.15 FT LT	100 FT	608.60
JGH1	1288+41 (I-57)	155.93 FT RT	100 FT	609.90
JEF1	1288+16 (I-57)	151.86 FT LT	100 FT	609.70
JEF2	1291+68 (I-57)	146.3 FT LT	100 FT	609.40
JGH2	1291+71 (I-57)	154.8 FT RT	100 FT	609.40
JIJ2	1054+95 (147TH)	138.06 FT RT	100 FT	602.50
JOP2	4401+27 (RAMP K)	72.24 FT RT	100 FT	603.00

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DIA.	DIAMETER
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
FT	FEET OR FOOT
FND MET	FOUNDATION METAL
FU	FUSE
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HMLT	HIGH MAST LIGHT TOWER
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
M	METER
M.A.	MAST ARM
M.H.	MOUNTING HEIGHT
NO. #	NUMBER
RGC	RIGID GALVANIZED CONDUIT
RGS	RIGID GALVANIZED STEEL
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
UD	UNIT DUCT
V	VOLT
W	WATT
WP	WOOD POLE
XFMR	TRANSFORMER

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS.
3. ALL NEW CONDUITS, UNIT DUCTS, DIRECT BURIAL CABLES, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL CONDITIONS (LATEST EDITION).
5. THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
6. ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
7. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30″ DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
8. BREAKAWAY DEVICE, TRANSFORMER BASE, FOR 47.5′ LIGHT POLES SHALL BE INSTALLED ON ALL GROUND MOUNTED POLES WITH 15″ BOLT CIRCLE ON 24″ DIA. FOUNDATION AS SHOWN IN THE PLANS.
9. WHEREVER TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 20 FEET OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
10. LIGHT POLE SETBACKS ARE MEASURED FROM BACK OF CURB (OR EDGE OF TRAVELED PAVEMENT IN NON-CURBED AREAS) TO FACE OF POLE.
11. THE CONTRACTOR SHALL CONTACT THE ELECTRICAL FIELD OFFICE AT (708) 524-2145 TO ARRANGE FOR LOCATES OF EXISTING IDOT UNDERGROUND CABLES AND CONDUITS.
12. ALL WOOD POLES TO BE USED ON THE IMPROVEMENT WILL BE FURNISHED FROM DEPARTMENT STOCK AND WILL REMAIN THE PROPERTY OF THE DEPARTMENT. THE POLES SHALL BE RETURNED TO THE DEPARTMENT'S STORAGE FACILITY AT THE CONCLUSION OF THE CONTRACT. THE COST OF THIS WORK IS INCLUDED IN THE PRICE OF THE ITEM ″REMOVAL OF TEMPORARY LIGHTING UNIT.″

LIGHTING SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	3986
HANDHOLE	EACH	1
UNIT DUCT, 600V, 3-1C NO.2, 1/C NO.4 GROUND, (XLP-TYPE USE), 1 1/2" DIA.POLYETHYLENE	FOOT	14108
UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	9039
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C 350MCM	FOOT	1602
AERIAL CABLE, 3-1/C NO.1/0, WITH MESSENGER WIRE	FOOT	1068
AERIAL CABLE, 3-1/C NO. 2 WITH MESSENGER WIRE	FOOT	16788
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	192
LUMINAIRE, SODIUM VAPOR, HIGH MAST, HORIZONTAL MOUNT, 400 WATT	EACH	68
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 6 FT. MAST ARM	EACH	64
LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 12 FT. MAST ARM	EACH	20
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	753
LIGHT TOWER FOUNDATION, 48" DIAMETER	FOOT	161
BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	84
REMOVAL OF TEMPORARY LIGHTING UNIT	EACH	97
REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	85
REMOVAL OF POLE FOUNDATION	EACH	73
REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	2
REMOVE EXISTING HANDHOLE	EACH	1
LIGHT TOWER, SERVICE PAD, SPECIAL	EACH	10
TEMPORARY LIGHTING CONTROLLER	EACH	1
LIGHT TOWER, 100 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 12	EACH	10
LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	45
RELOCATE EXISTING LIGHTING CONTROLLER	EACH	2
LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	94
MAINTENANCE OF LIGHTING SYSTEM	CAL MO	25
LIGHTING CONTROLLER, RADIO CONTROL, DUPLEX CONSOLE TYPE WITH SCADA	EACH	1
MAST ARM, STREET LIGHTING 15 FT.	EACH	96
TEMPORARY WOOD POLE, 60 FOOT, CLASS 4 (INSTALL ONLY)	EACH	86
UNIT DUCT, 600V, 5-1C NO. 2, 1/C NO.4 GROUND, (XLP-TYPE USE), 2" DIA. POLYETHYLENE	FOOT	660

E-01

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

USER NAME = rswanson	DESIGNED - RDP	REVISED -
	DRAWN - PS	REVISED -
PLOT SCALE = NONE	CHECKED - RAS	REVISED -
PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
LIGHTING GENERAL NOTES AND LEGEND

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	417
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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N

ZAE7
STA. 1005+92
SET BACK 2.5 FT

ZAF6
STA. 1006+22
SET BACK 4.5 FT

KEDZIE AVE

3" DIA.
RGC, 79 FT

3" DIA.
RGC, 37 FT

ZAE6
STA. 1007+01
SET BACK 2.5 FT

ZAF4
STA. 1009+72
SET BACK 6.0 FT

ZAE5
STA. 1009+08
SET BACK 2.9 FT

ZAF5
STA. 1007+93
SET BACK 2.7 FT

3" DIA.
RGC, 76 FT

TROY AVE

3" DIA.
RGC, 43 FT

ZAE4
STA. 1010+37
SET BACK 4.9 FT

3" DIA.
RGC, 188 FT

EXIST. R.O.W.

ZAF3
STA. 1012+41
SET BACK 2.9 FT

ALBANY AVE

3" DIA.
RGC, 43 FT

ZAE3
STA. 1013+47
SET BACK 4.5 FT

3" DIA.
RGC, 48 FT

ZAF2
STA. 1014+34
SET BACK 3.6 FT

3" DIA.
RGC, 49 FT

CKTS: ZAE & ZAF
3-1/C#4, 1/C#6 GND,
1¼" DIA. UNIT DUCT
(TYP.)

WHIPPLE AVE

3" DIA.
RGC, 48 FT

ZAE2
STA. 1016+95
SET BACK 3.6 FT

147TH STREET

1010+00

1015+00

MATCHLINE STA. 1018+68
SEE SHEET E-03

ZAG5
STA. 1007+81
SET BACK 2.6 FT

PROPOSED
R.O.W. (TYP.)

ZAH4
STA. 1007+81
SET BACK 2.6 FT

3" DIA.
RGC, 79 FT

ZAG6
STA. 1006+24
SET BACK 2.7 FT

ZAH5
STA. 1005+74
SET BACK 3.3 FT

CKTS: ZAG & ZAH
3-1/C#4, 1/C#6 GND,
1¼" DIA. UNIT DUCT
(TYP.)

ZAH3
STA. 1010+37
SET BACK 3.0 FT

EXIST. R.O.W.

3" DIA.
RGC, 48 FT

ZAG4
STA. 1009+73
SET BACK 3.0 FT

ZAG3
STA. 1012+39
SET BACK 5.8 FT

3" DIA.
RGC, 48 FT

ZAH2
STA. 1013+03
SET BACK 5.8 FT

ZAG2
STA. 1014+34
SET BACK 3.6 FT

3" DIA.
RGC, 52 FT

3" DIA.
RGC, 48 FT

ZAH1
STA. 1016+95
SET BACK 3.5 FT

0 50 100
SCALE: 1" = 50'-0"

E-02

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		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

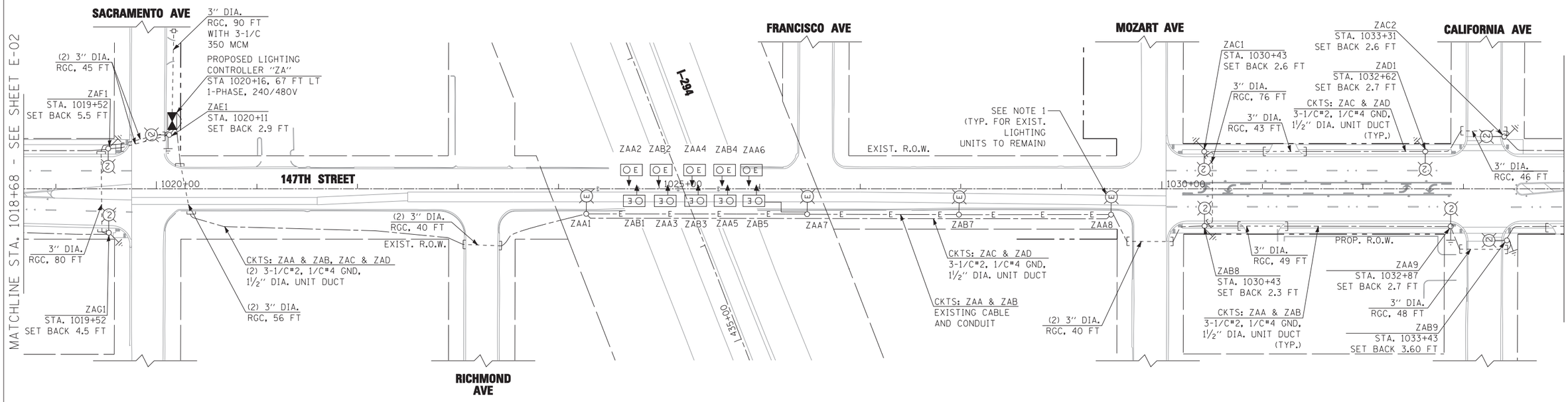
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

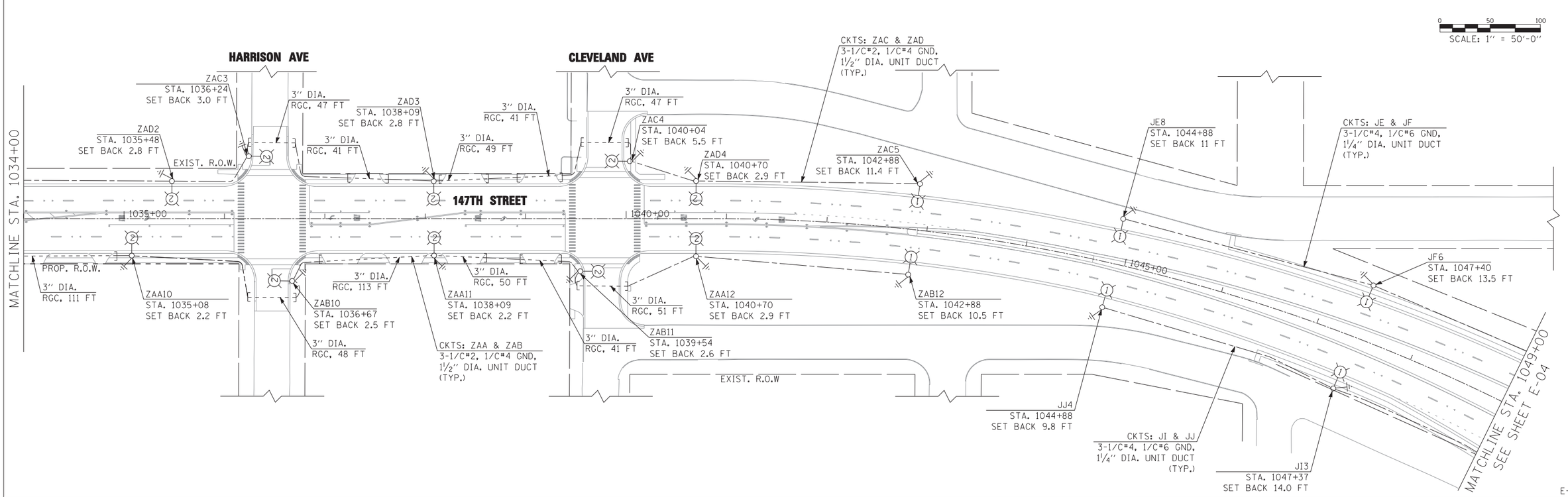
147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 1 OF 6 SHEETS | STA. 1005+36 TO STA. 1018+68

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	418
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES:
1. EXISTING LIGHTING UNITS POWERED FROM CONTROLLER "J" THAT WILL BE MOVED TO CONTROLLER "ZA" SHALL BE PROVIDED WITH NEW IDENTIFICATION DECALS. THE COST OF THE NEW DECALS AND REMOVAL OF THE EXISTING DECALS IS INCLUDED IN THE PRICE OF THE ITEM "MAINTENANCE OF LIGHTING SYSTEM."





SCALE: 1" = 50'-0"

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 2 OF 6 SHEETS | STA. 1018+68 TO STA. 1049+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	419
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

E-03

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NOTES:
1. REFER TO TRAFFIC SIGNAL PLANS FOR LOCATIONS OF COMBINATION POLES.
2. CONTROLLER FOUNDATION SHALL BE PER DISTRICT ONE DETAIL BE-205.

SEE SHEET E-07
MATCHLINE STA. 4113+56

SEE SHEET E-07
MATCHLINE STA. 1289+60

SEE SHEET E-07
MATCHLINE STA. 4402+37

MATCHLINE STA. 1049+00
SEE SHEET E-03

MATCHLINE STA. 1064+00
SEE SHEET E-05

CKTS: JE & JF
3-1/C#4, 1/C#6 GND,
1¼" DIA. UNIT DUCT
(TYP.)

JF5
STA. 1051+69
SET BACK 13.9 FT

JE5
STA. 1053+71
SET BACK 13.1 FT

JE6
STA. 1049+54
SET BACK 13.1 FT

EXIST. R.O.W

3" DIA.
RGC, 67 FT

JF4
COMBINATION POLE
(SEE NOTE 1)

JE4
STA. 1056+35
SET BACK 24.8 FT

RAMP E

JEF1
STA. 1288+16
151.86 FT LT

147TH STREET

1050+00

1055+00

1060+00

JM3 JN3
JM2 JN2
JM1 JN1
JL2 JK2
JL1 JK1
JL3

3" DIA.
RGC, 58 FT

JGH1
STA. 1288+41
155.9 FT RT

JP1
COMBINATION POLE
(SEE NOTE 1)

JOP2
STA. 4401+27
72.24 FT RT

RAMP K

JI3
STA. 1051+71
SET BACK 18.6 FT

JJ1
STA. 1053+71
SET BACK 27.7 FT

JJ3
STA. 1049+55
SET BACK 4.0 FT

CKTS: JI & JJ
3-1/C#4, 1/C#6 GND,
1¼" DIA. UNIT DUCT
(TYP.)

EXIST. R.O.W

JIJ2
STA. 1054+95
138.06 FT RT

3" DIA.
RGC, 48 FT

CKTS: JA & JB
3-1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

JI1
COMBINATION POLE
(SEE NOTE 1)

JAB1
STA. 1284+41
150.15 FT LT

(3) 3" DIA.
RGC, 133 FT

CKTS: JK,JL,JM & JN
(2) 3-1/C#4, 1/C#6 GND,
1¼" DIA. UNIT DUCT
TO UNDERPASS LIGHTING
JUNCTION BOX

JO1
STA. 1062+38
SET BACK 17.6 FT

EXISTING
LIGHTING
CONTROLLER "J"
(RELOCATED)-
SEE NOTE 2

JR1
COMBINATION POLE
(SEE NOTE 1)

3" DIA.
RGC, 70 FT

1285+00

I-57

JCD1
STA. 1284+36
158.54 FT RT

RAMP F

RAMP J

3" DIA.
RGC, 376 FT
WITH 3-1/C
350 MCM

EXISTING SERVICE TRANSFORMER

MATCHLINE STA. 1280+30

1280+00

CKTS: JA & JB
3-1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

I-57

CKTS: JC & JD
3-1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

JB3

JD1

EXIST. R.O.W

EXIST. R.O.W

3" DIA.
RGC, 21 FT

JAB2
STA. 1280+49
174.96 FT LT

CKTS: JC & JD
3-1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

3" DIA.
RGC, 23 FT

JCD3
STA. 1280+56
202.41 FT RT

MATCHLINE STA. 1280+30

0 50 100
SCALE: 1" = 50'-0"

E-04

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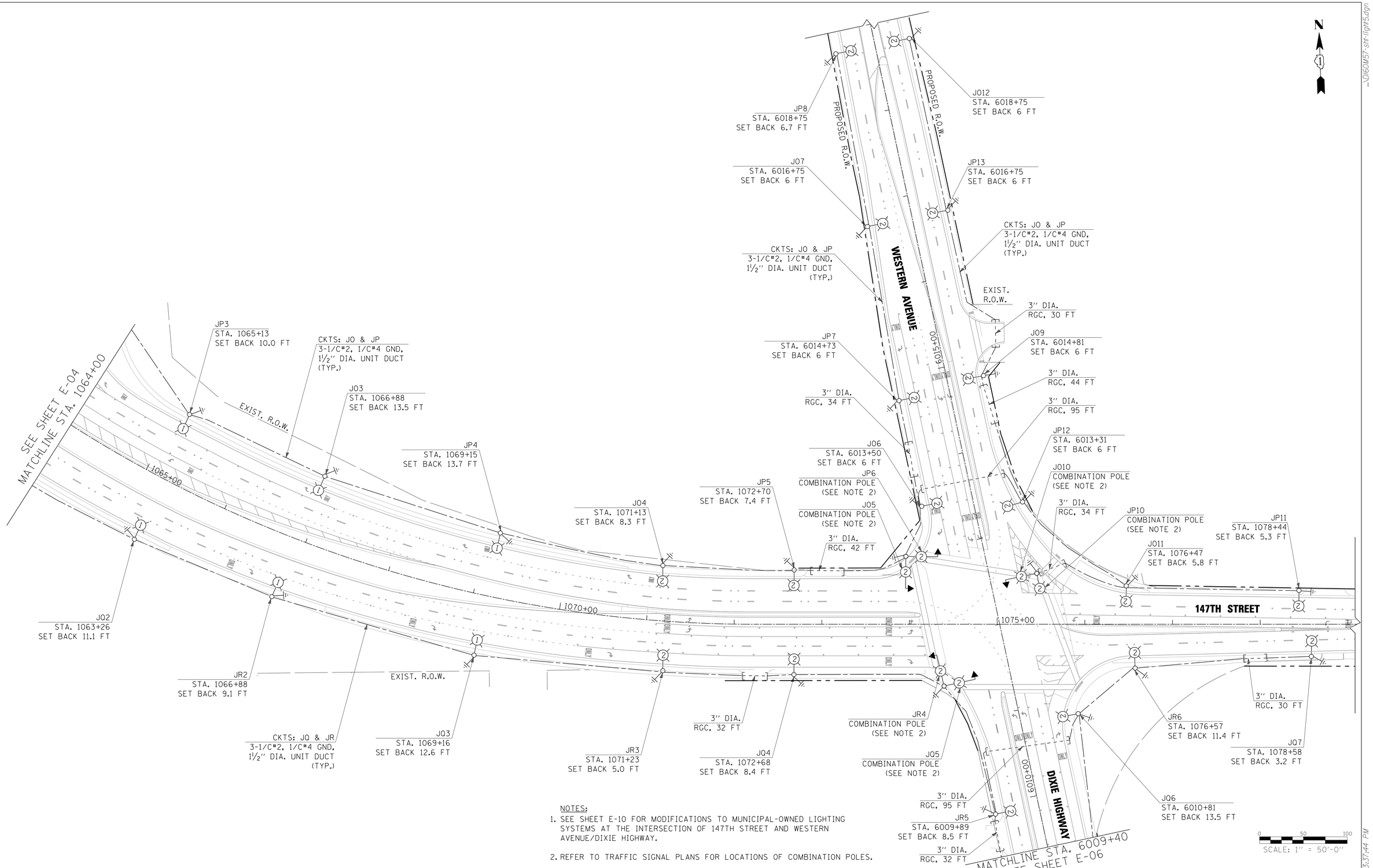
EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 3 OF 6 SHEETS | STA. 1049+00 | TO STA. 1064+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	420
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE SHEET E-10 FOR MODIFICATIONS TO MUNICIPAL-OWNED LIGHTING SYSTEMS AT THE INTERSECTION OF 147TH STREET AND WESTERN AVENUE/DIXIE HIGHWAY.
2. REFER TO TRAFFIC SIGNAL PLANS FOR LOCATIONS OF COMBINATION POLES.

E-05

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 4 OF 6 SHEETS | STA. 1064+00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	421
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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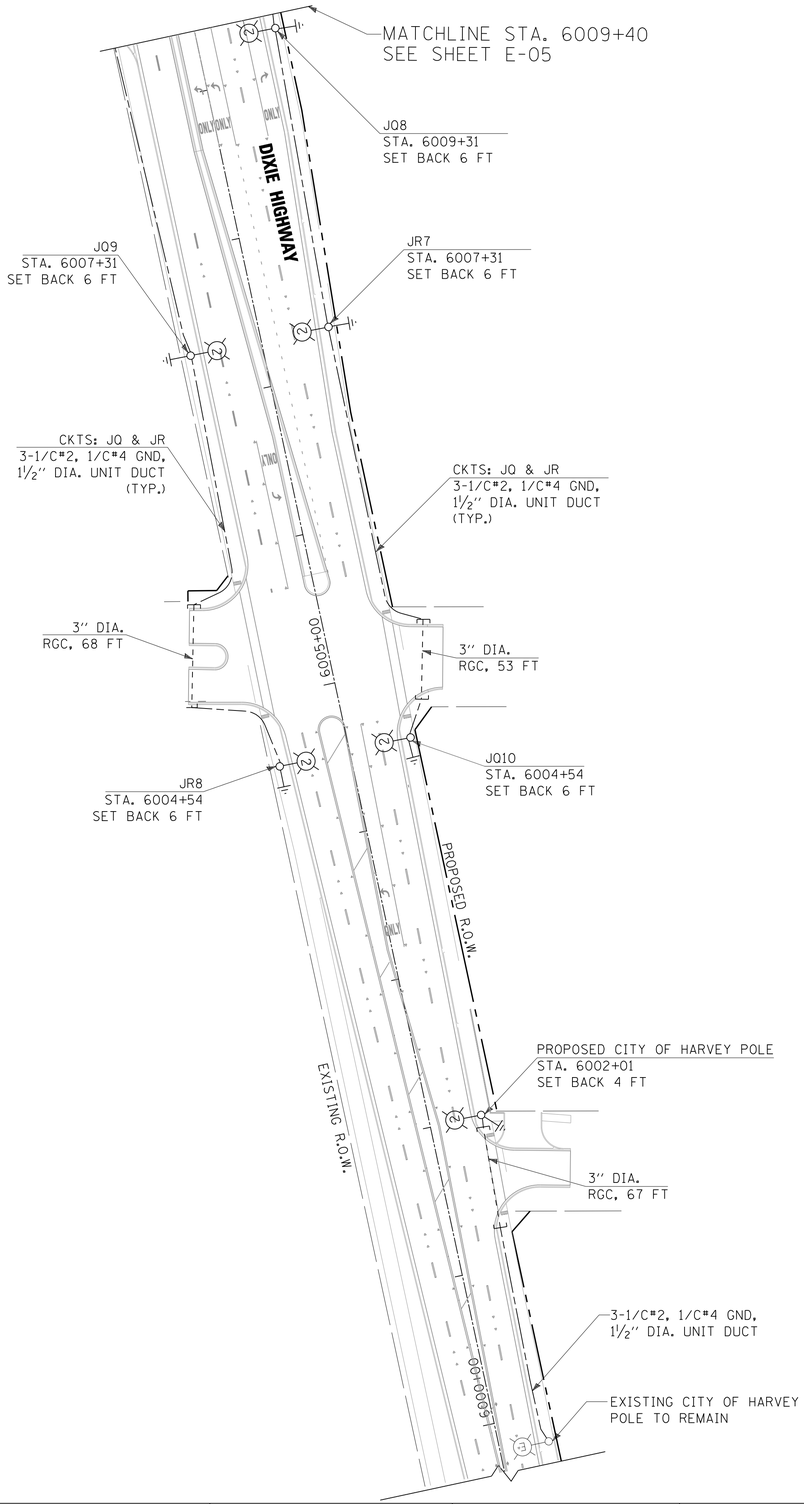

N

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0 50 100
SCALE: 1" = 50'-0"

E-06

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EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 5 OF 6 SHEETS | STA. 5999+67 TO STA. 6023+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	422
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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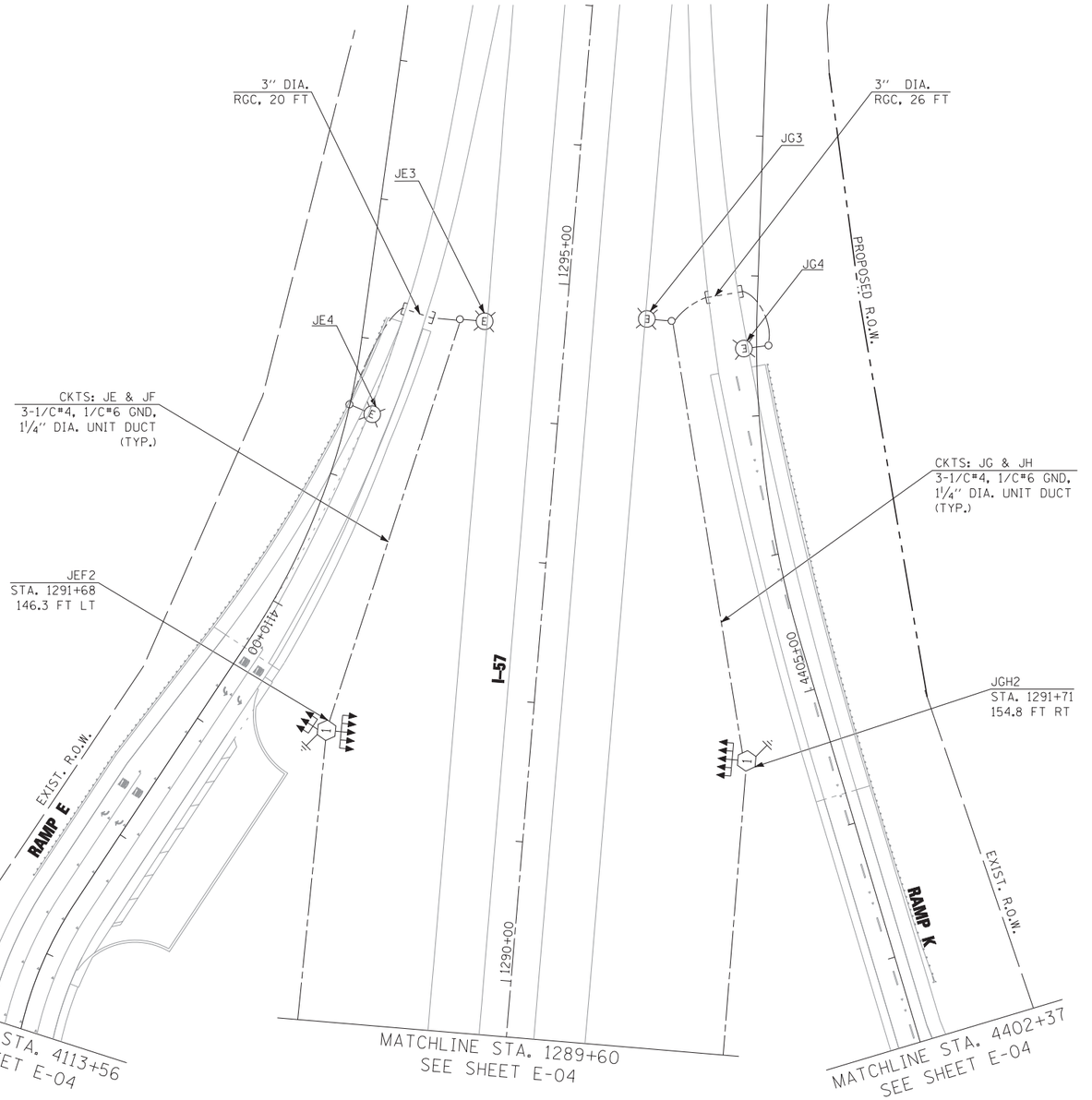

0 50 100

SCALE: 1" = 50'-0"

E-07

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
PROPOSED LIGHTING PLAN

SCALE: 1"=50' | SHEET NO. 6 OF 6 SHEETS | STA. 1289+60 TO STA. 1297+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	423
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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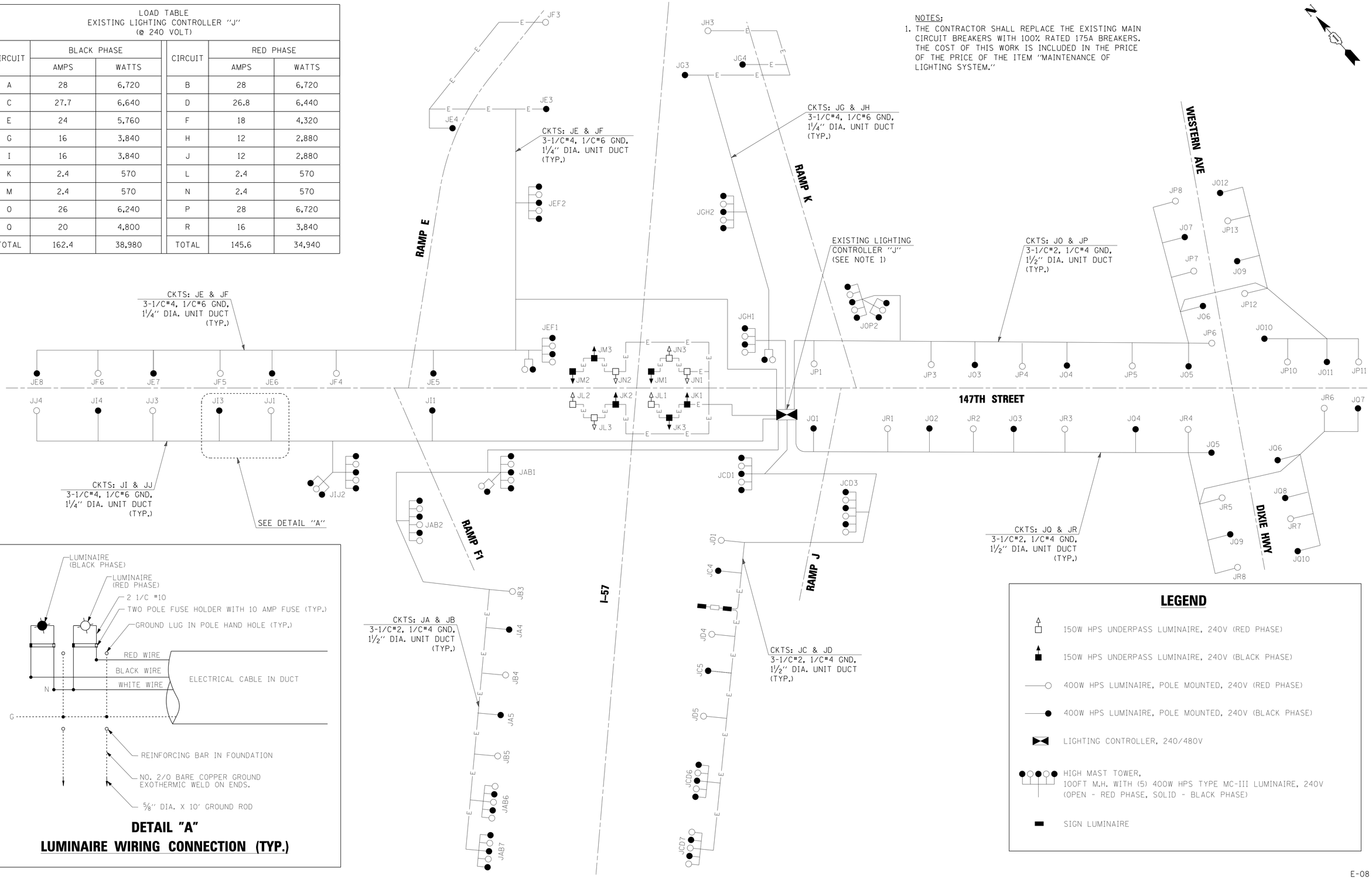
LOAD TABLE EXISTING LIGHTING CONTROLLER "J" (@ 240 VOLT)					
CIRCUIT	BLACK PHASE		CIRCUIT	RED PHASE	
	AMPS	WATTS		AMPS	WATTS
A	28	6,720	B	28	6,720
C	27.7	6,640	D	26.8	6,440
E	24	5,760	F	18	4,320
G	16	3,840	H	12	2,880
I	16	3,840	J	12	2,880
K	2.4	570	L	2.4	570
M	2.4	570	N	2.4	570
O	26	6,240	P	28	6,720
Q	20	4,800	R	16	3,840
TOTAL	162.4	38,980	TOTAL	145.6	34,940

NOTES:
1. THE CONTRACTOR SHALL REPLACE THE EXISTING MAIN CIRCUIT BREAKERS WITH 100% RATED 175A BREAKERS. THE COST OF THIS WORK IS INCLUDED IN THE PRICE OF THE PRICE OF THE ITEM "MAINTENANCE OF LIGHTING SYSTEM."



DETAIL "A"
LUMINAIRE WIRING CONNECTION (TYP.)

LEGEND

- 150W HPS UNDERPASS LUMINAIRE, 240V (RED PHASE)
- 150W HPS UNDERPASS LUMINAIRE, 240V (BLACK PHASE)
- 400W HPS LUMINAIRE, POLE MOUNTED, 240V (RED PHASE)
- 400W HPS LUMINAIRE, POLE MOUNTED, 240V (BLACK PHASE)
- LIGHTING CONTROLLER, 240/480V
- HIGH MAST TOWER, 100FT M.H. WITH (5) 400W HPS TYPE MC-III LUMINAIRE, 240V (OPEN - RED PHASE, SOLID - BLACK PHASE)
- SIGN LUMINAIRE

E-08

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

USER NAME = rswanson	DESIGNED - RDP	REVISED -
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PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
SINGLE LINE DIAGRAM – CONTROLLER "J"

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	424
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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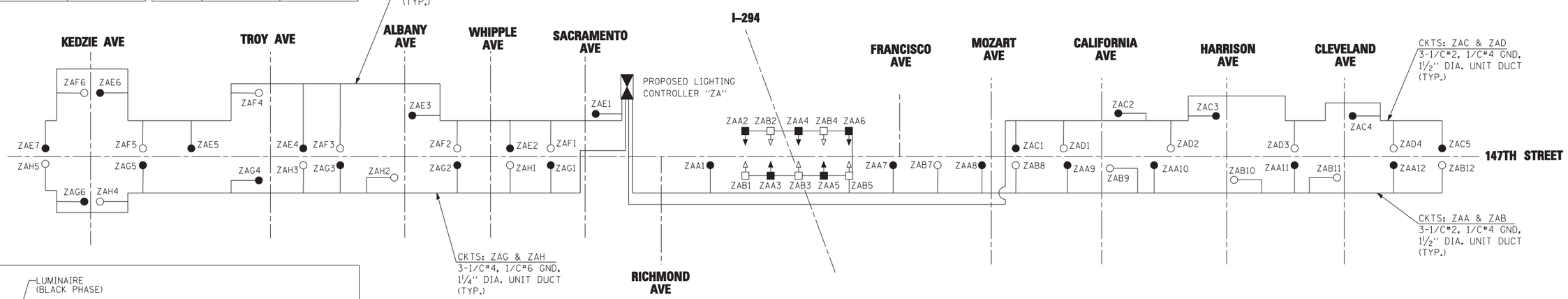
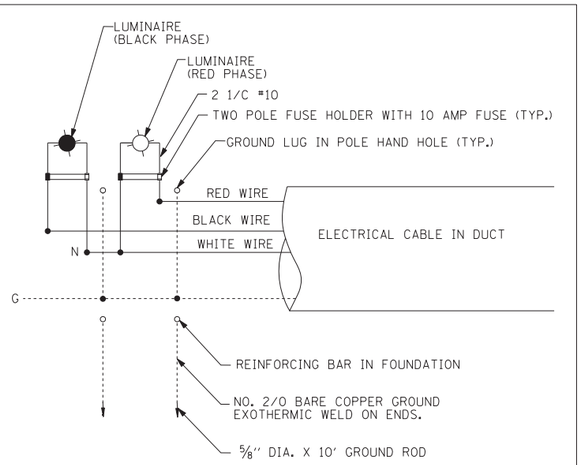
LOAD TABLE PROPOSED LIGHTING CONTROLLER "ZA" (@ 240 VOLT)					
CIRCUIT	BLACK PHASE		CIRCUIT	RED PHASE	
	AMPS	WATTS		AMPS	WATTS
A	17.8	4,260	B	17.8	4,260
C	10.0	2,400	D	8.0	1,920
E	14.0	3,360	F	12.0	2,880
G	12.0	2,880	H	10.0	2,400
I	0.0	SPARE	J	0.0	SPARE
K	0.0	SPARE	L	0.0	SPARE
M	0.0	SPARE	N	0.0	SPARE
O	0.0	SPARE	P	0.0	SPARE
Q	0.0	SPARE	R	0.0	SPARE
S	0.0	SPARE	T	0.0	SPARE
U	0.0	SPARE	V	0.0	SPARE
W	0.0	SPARE	X	0.0	SPARE
TOTAL	53.8	12,900	TOTAL	47.8	11,460





LUMINAIRE WIRING CONNECTION (TYP.)

LEGEND

- 100W HPS UNDERPASS LUMINAIRE, 240V (RED PHASE)
- 100W HPS UNDERPASS LUMINAIRE, 240V (BLACK PHASE)
- 400W HPS LUMINAIRE, POLE MOUNTED, 240V (RED PHASE)
- 400W HPS LUMINAIRE, POLE MOUNTED, 240V (BLACK PHASE)
- LIGHTING CONTROLLER, 240/480V
- HIGH MAST TOWER,
  100FT M.H. WITH (5) 400W HPS TYPE MC-III LUMINAIRES, 240V
  (OPEN - RED PHASE, SOLID - BLACK PHASE)
- SIGN LUMINAIRE

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

USER NAME = rswanson	DESIGNED - RDP	REVISED -
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PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
SINGLE LINE DIAGRAM – CONTROLLER "ZA"

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	425
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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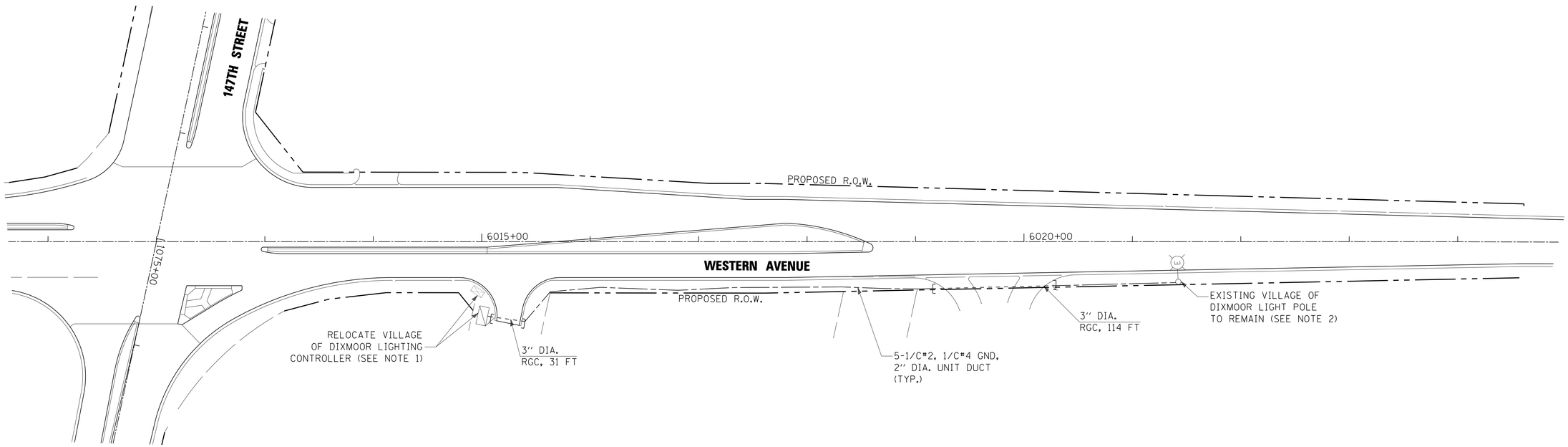
NOTES:

1. RELOCATE EXISTING VILLAGE OF DIXMOOR LIGHTING CONTROLLER TO NEW CONCRETE FOUNDATION. SET BACK OF RELOCATED CONTROLLER SHALL BE 12 FT. SPLICE NEW 3" RGC TO EXISTING SERVICE CONDUIT AND REMOVE AND REINSTALL EXISTING SERVICE CABLE TO NEW FOUNDATION. REMOVE EXISTING CONCRETE FOUNDATION.

2. SPLICE NEW CONDUCTORS TO EXISTING CONDUCTORS TO REMAIN AT BASE OF LIGHT POLE. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE NEW UNIT DUCT.

3. RELOCATION MUST BE COORDINATED WITH THE VILLAGE OF DIXMOOR SUCH THAT THE LIGHTING SYSTEM IS NOT INOPERATIVE FOR ANY NIGHTTIME PERIOD.



0 50 100
SCALE: 1" = 50'-0"

E-10

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
MUNICIPAL LIGHTING RECIRCUITING PLAN

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 6010+64 TO STA. 6023+90

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	426
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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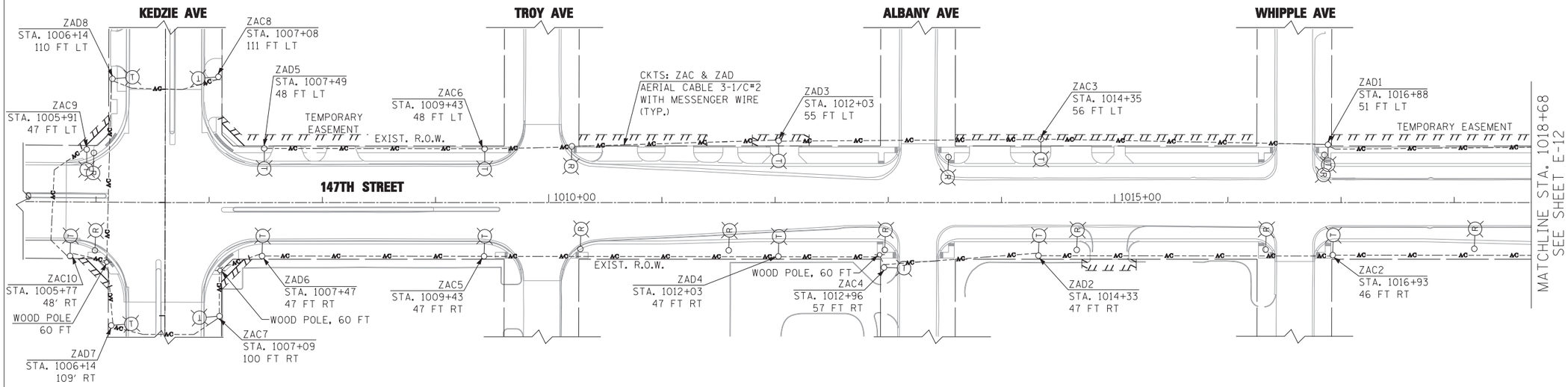

SCALE: 1" = 50'-0"

E-11

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
TEMPORARY LIGHTING AND REMOVAL PLAN

SCALE: 1"=50' | SHEET NO. 1 OF 6 SHEETS | STA. 1005+36 TO STA. 1018+68

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	427
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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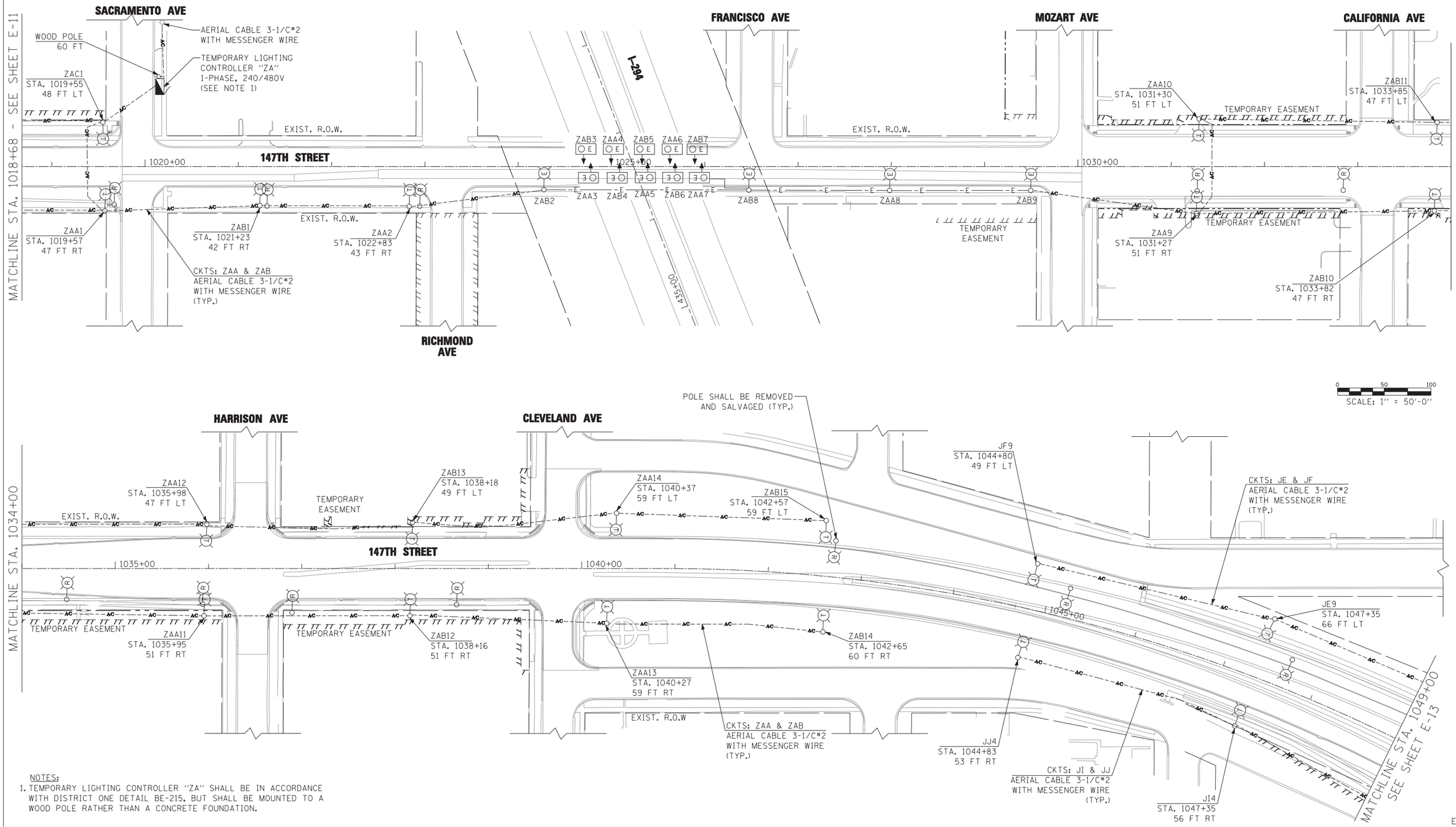

NOTES:
1. TEMPORARY LIGHTING CONTROLLER "ZA" SHALL BE IN ACCORDANCE WITH DISTRICT ONE DETAIL BE-215, BUT SHALL BE MOUNTED TO A WOOD POLE RATHER THAN A CONCRETE FOUNDATION.

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
TEMPORARY LIGHTING AND REMOVAL PLAN

SCALE: 1"=50' | SHEET NO. 2 OF 6 SHEETS | STA. 1018+68 TO STA. 1049+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	428
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

E-12

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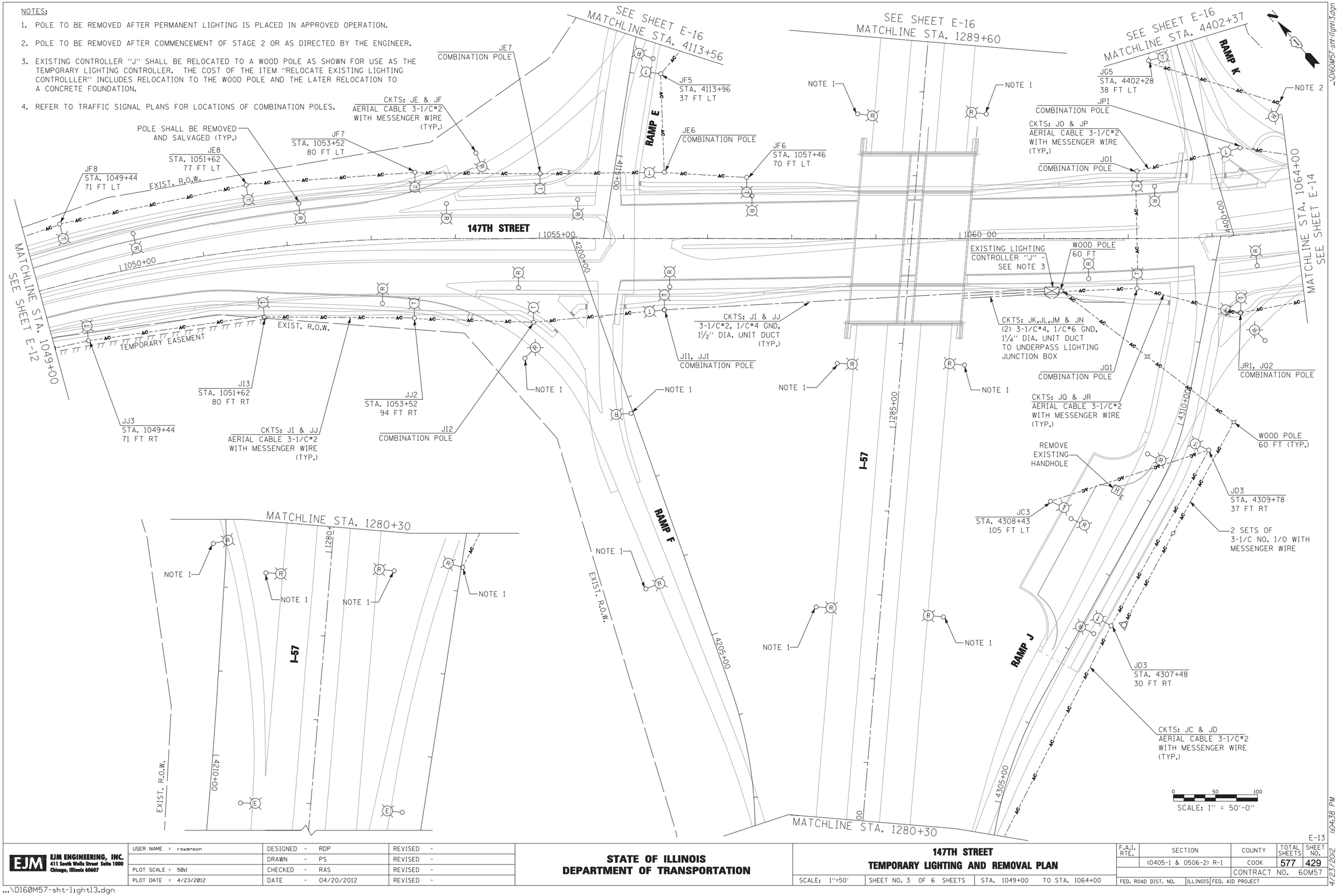
NOTES:

1. POLE TO BE REMOVED AFTER PERMANENT LIGHTING IS PLACED IN APPROVED OPERATION.
2. POLE TO BE REMOVED AFTER COMMENCEMENT OF STAGE 2 OR AS DIRECTED BY THE ENGINEER.
3. EXISTING CONTROLLER "J" SHALL BE RELOCATED TO A WOOD POLE AS SHOWN FOR USE AS THE TEMPORARY LIGHTING CONTROLLER. THE COST OF THE ITEM "RELOCATE EXISTING LIGHTING CONTROLLLER" INCLUDES RELOCATION TO THE WOOD POLE AND THE LATER RELOCATION TO A CONCRETE FOUNDATION.
4. REFER TO TRAFFIC SIGNAL PLANS FOR LOCATIONS OF COMBINATION POLES.



EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
TEMPORARY LIGHTING AND REMOVAL PLAN

SCALE: 1"=50' | SHEET NO. 3 OF 6 SHEETS | STA. 1049+00 TO STA. 1064+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	429
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

E-13

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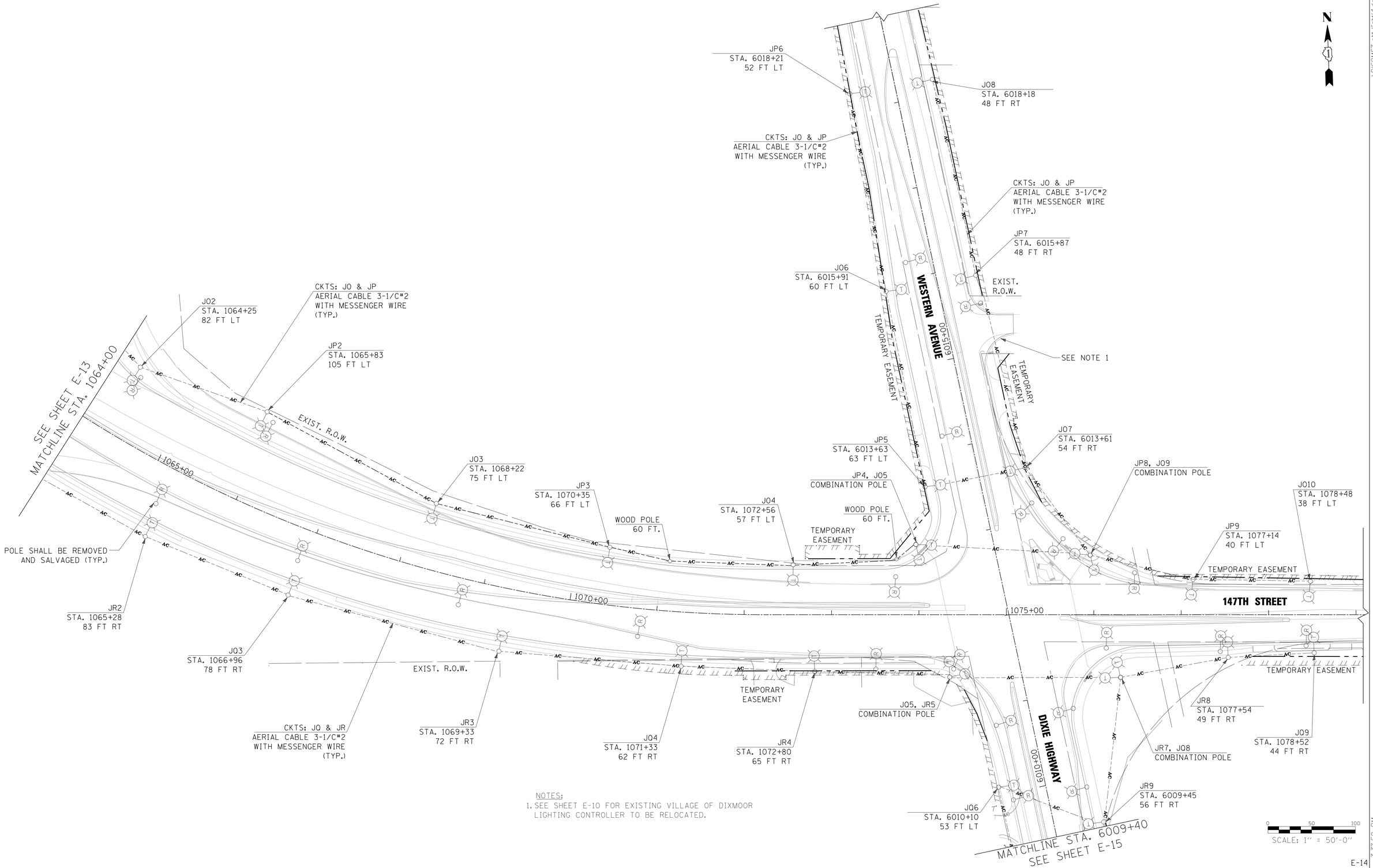

NOTES:
1. SEE SHEET E-10 FOR EXISTING VILLAGE OF DIXMOOR LIGHTING CONTROLLER TO BE RELOCATED.

E-14

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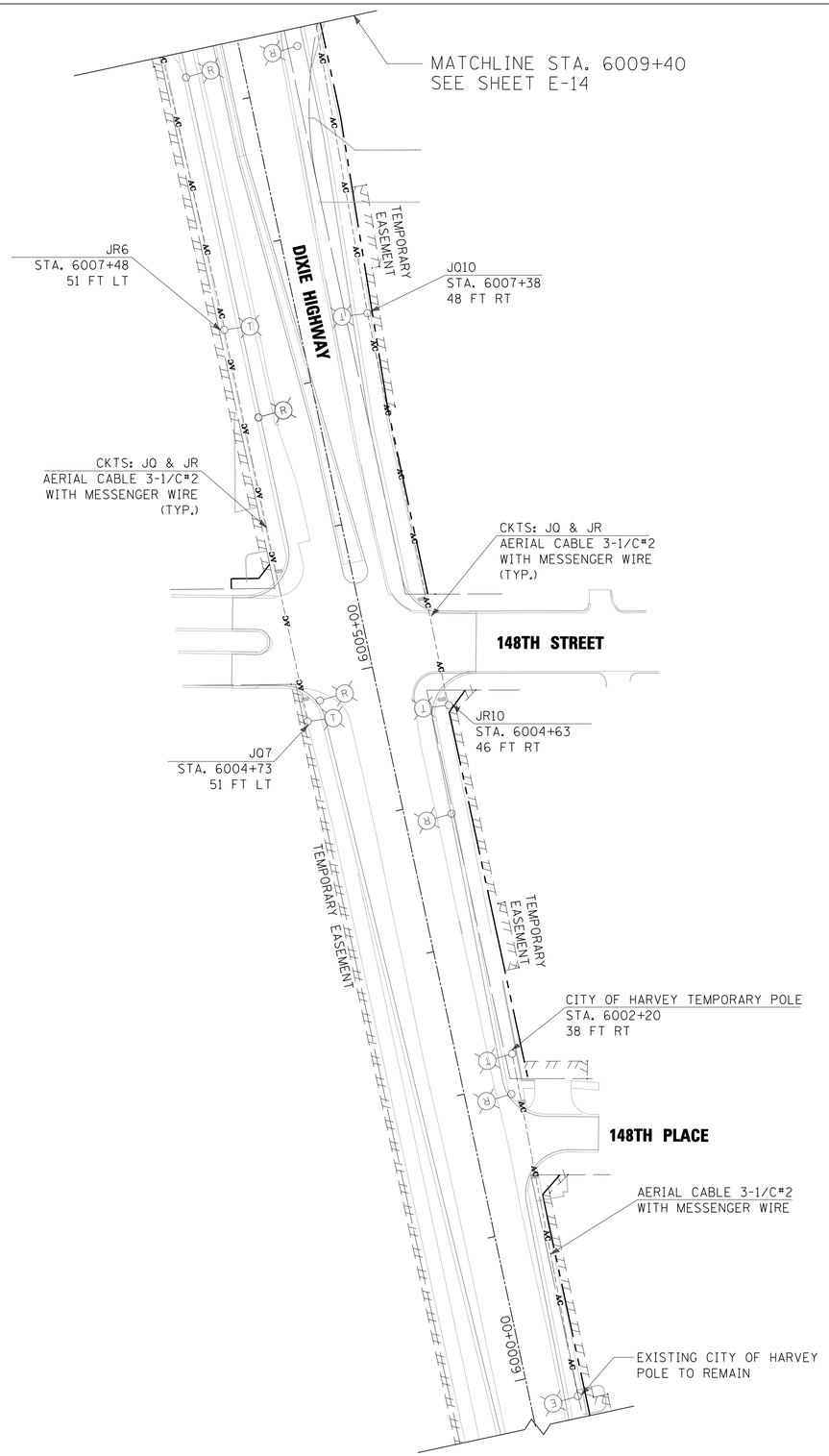
EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
TEMPORARY LIGHTING AND REMOVAL PLAN

SCALE: 1"=50' | SHEET NO. 4 OF 6 SHEETS | STA. 1064+00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	430
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



N

0 50 100

SCALE: 1'' = 50'-0''

E-15

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -
	PLOT DATE = 6/28/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
TEMPORARY LIGHTING AND REMOVAL PLAN

SCALE: 1''=50' | SHEET NO. 5 OF 6 SHEETS | STA. 1064+00 TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	431
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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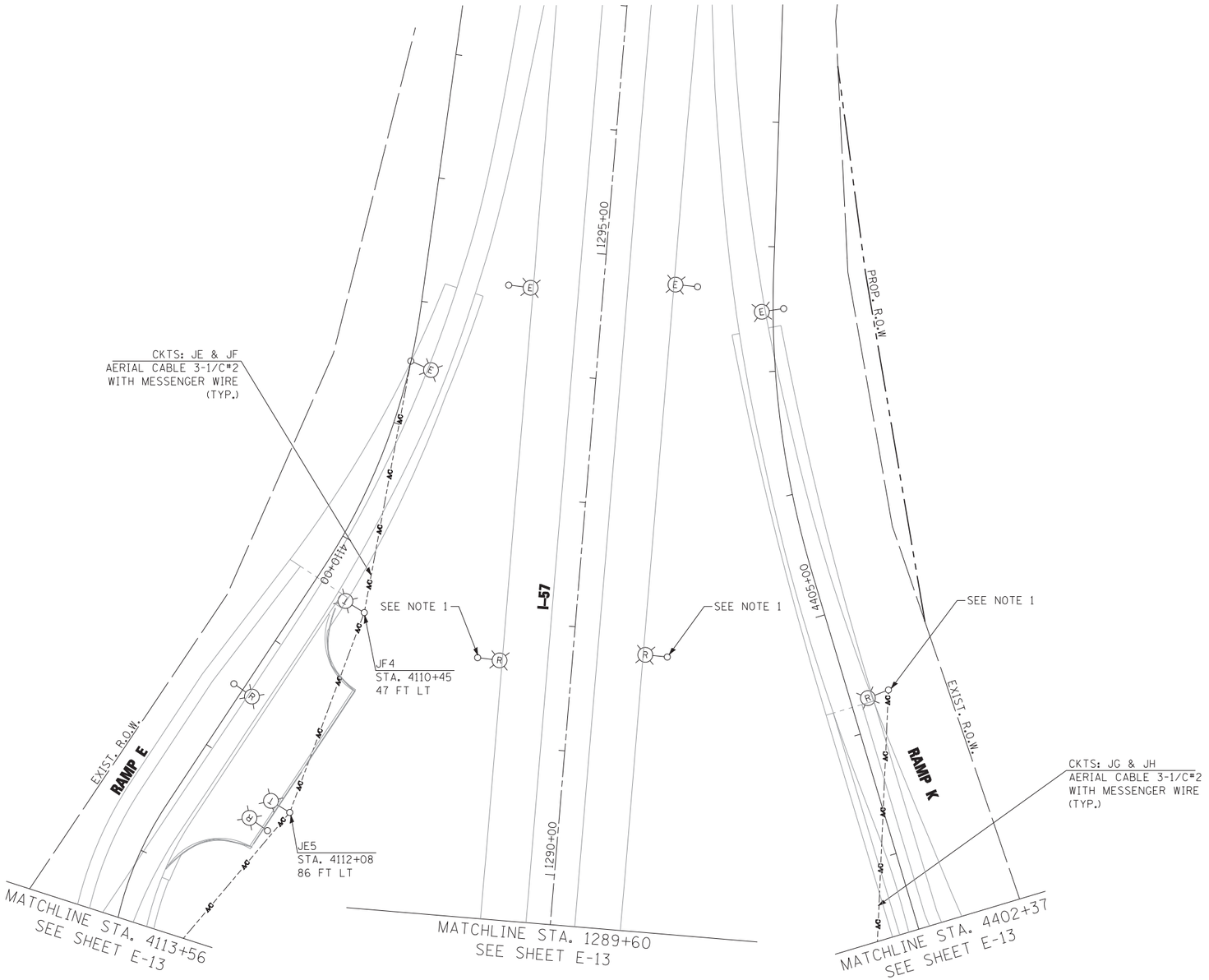
NOTES:
1. POLE TO BE REMOVED AFTER HIGH MAST TOWERS JEF2 AND JGH2 HAVE BEEN PLACED IN OPERATION.



SCALE: 1'' = 50'-0''

E-16

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	147TH STREET TEMPORARY LIGHTING AND REMOVAL PLAN	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - PS	REVISED -				(0405-1 & 0506-2) R-1	COOK	577	432
	PLOT SCALE = 50:1	CHECKED - RAS	REVISED -					CONTRACT NO. 60M57		
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -		SCALE: 1''=50' SHEET NO. 6 OF 6 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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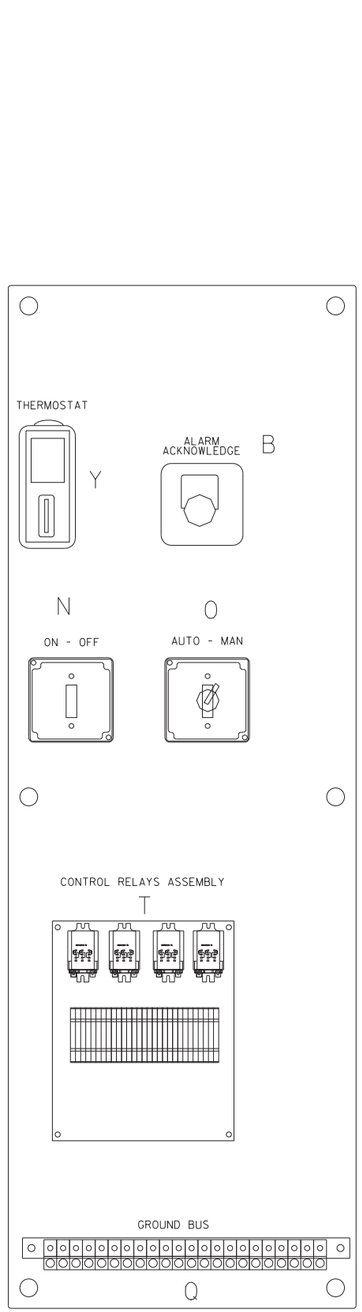
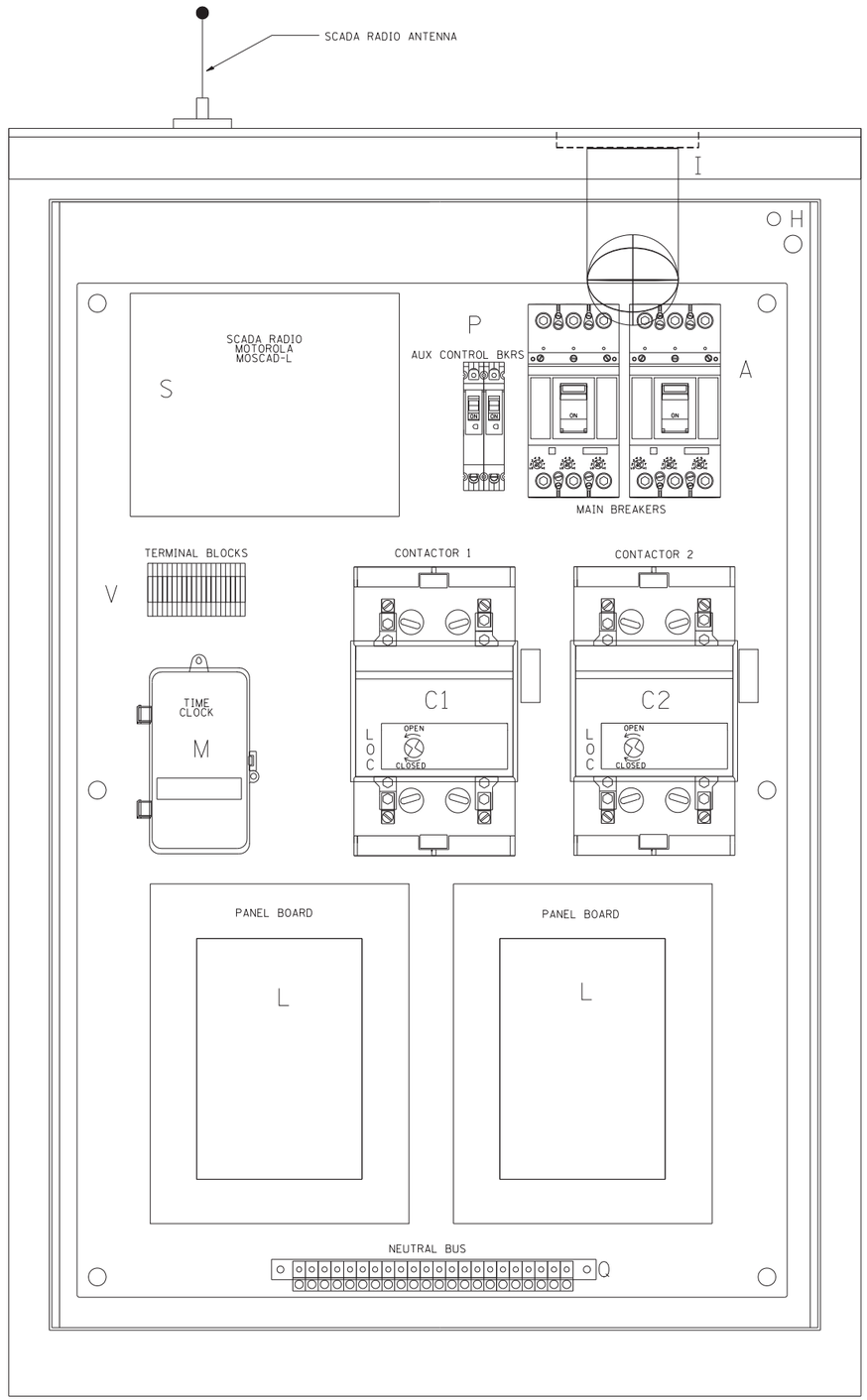
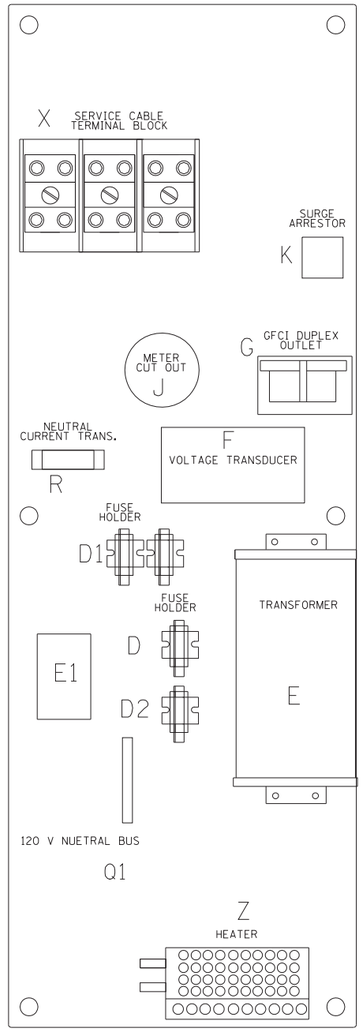


LEFT SIDE PANEL





RIGHT SIDE PANEL

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2 *	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-20 FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK-½ FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK-2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA 240/120 - 24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER WITH COVERED TERMINALS
G	1	20 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KS11BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE OR APPROVED EQUAL
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 #6 AND 8 #12 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA MOSCAD-L RADIO, 240 V
T *	1	CONTROL RELAY ASSEMBLEY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4). QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X *	1	620 AMP SLPICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

* TERMINALS SHALL BE COVERED WITH CLEAR PLEXIGLASS SHEET

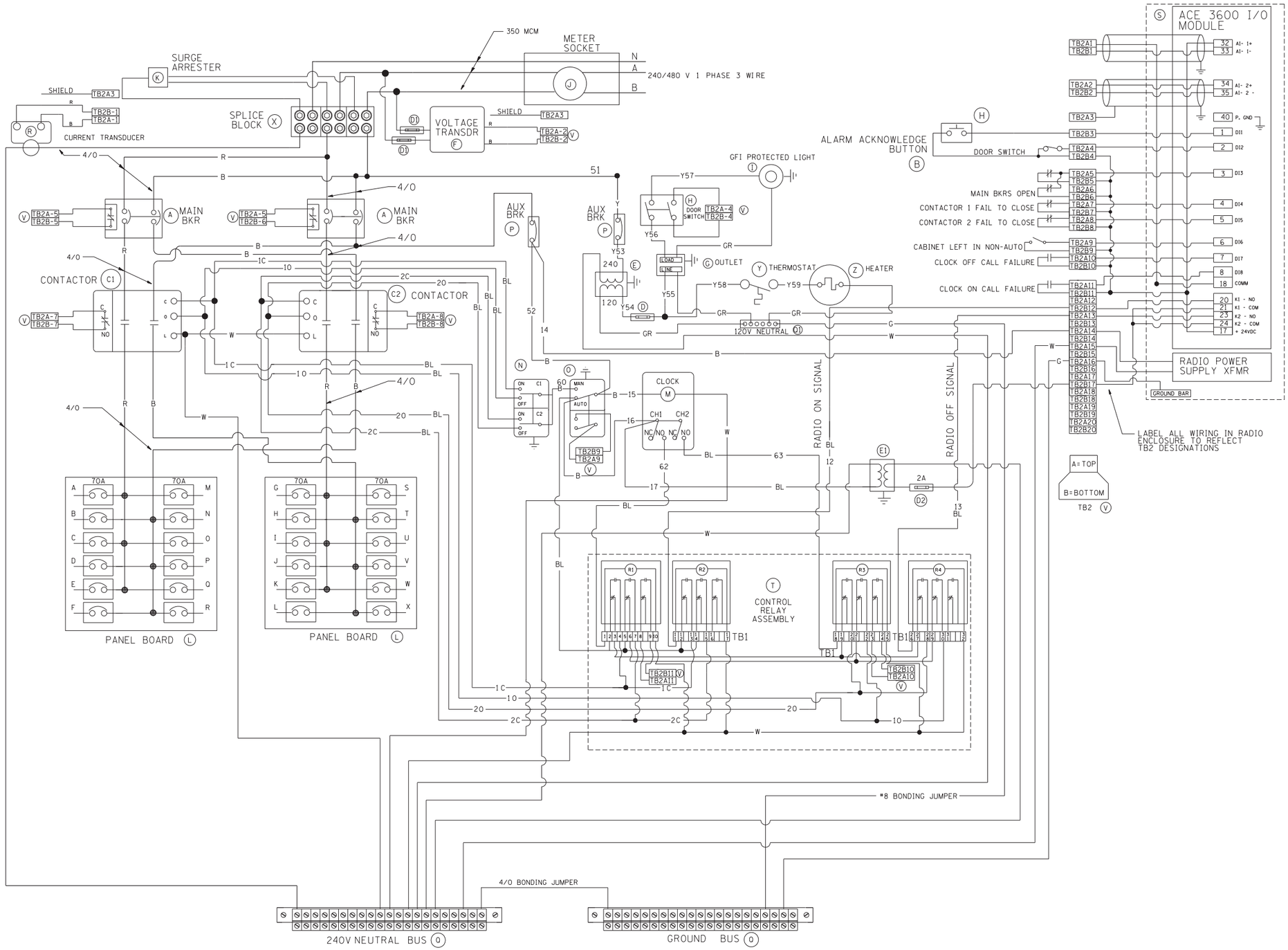
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, RADIO CONTROL
DUPLEX TYPE WITH SCADA

SCALE: NONE | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	433
	BE-205	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

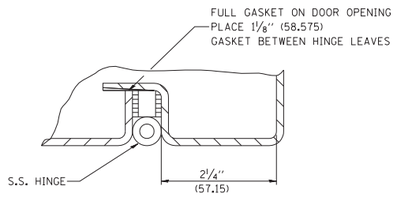


BILL OF MATERIALS

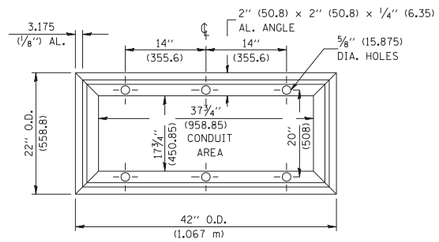
ITEM *	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-20A FUSE
D1	2	FINGERSAFE FUSE HOLDER WITH KTK-½ FUSE
D2	1	FINGERSAFE FUSE HOLDER WITH KTK- 2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA 240/120-24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER
G	1	15 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH A-20GQ-B7-K
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 9001KS11BH13, 2 POSITION SWITCH IN 9001KY1 ENCLOSURE
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
Q1	1	COPPER NEUTRAL BUS WITH 1 1/0 AND #6 CONDUCTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA ACE 3600
T	1	CONTROL RELAY ASSEMBLEY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACX-15) (R1, R2, R3, R4) . QTY 32 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X	1	620 AMP SLPICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

*

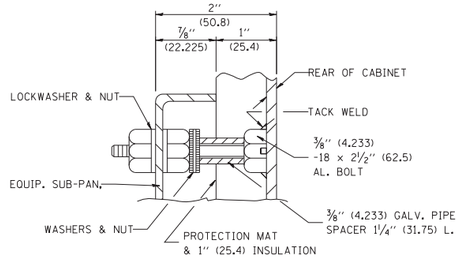
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER, RADIO CONTROL DUPLEX TYPE WITH SCADA		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000 ' / IN.	DRAWN -	REVISED - R. TOMSONS 05-11-09					(0405-1 & 0506-2) R-1	COOK	577	434
	PLOT DATE = 5/11/2009	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 2 OF 4 SHEETS STA. TO STA.		BE-205	CONTRACT NO. 60M57		
		DATE -	REVISED -				FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



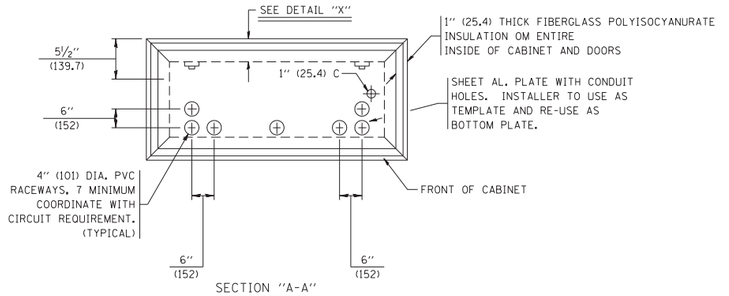
DETAIL "Y"



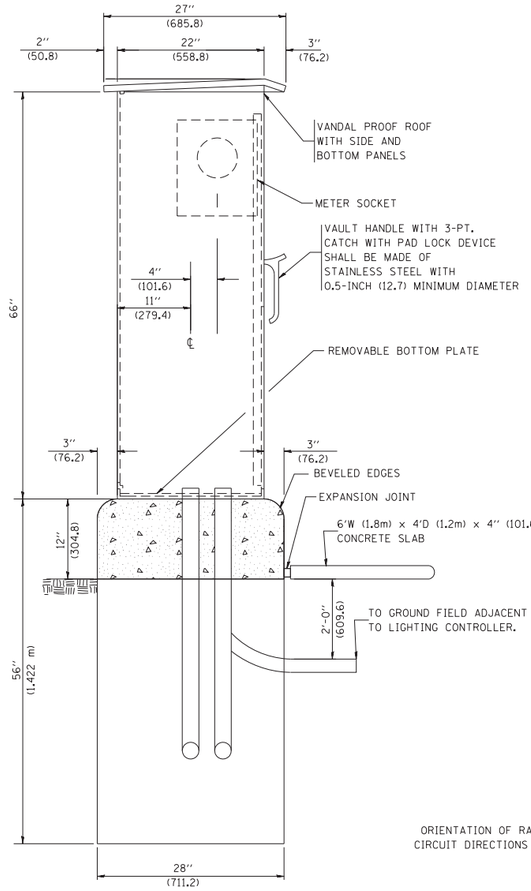
BASE MTG. DETAIL



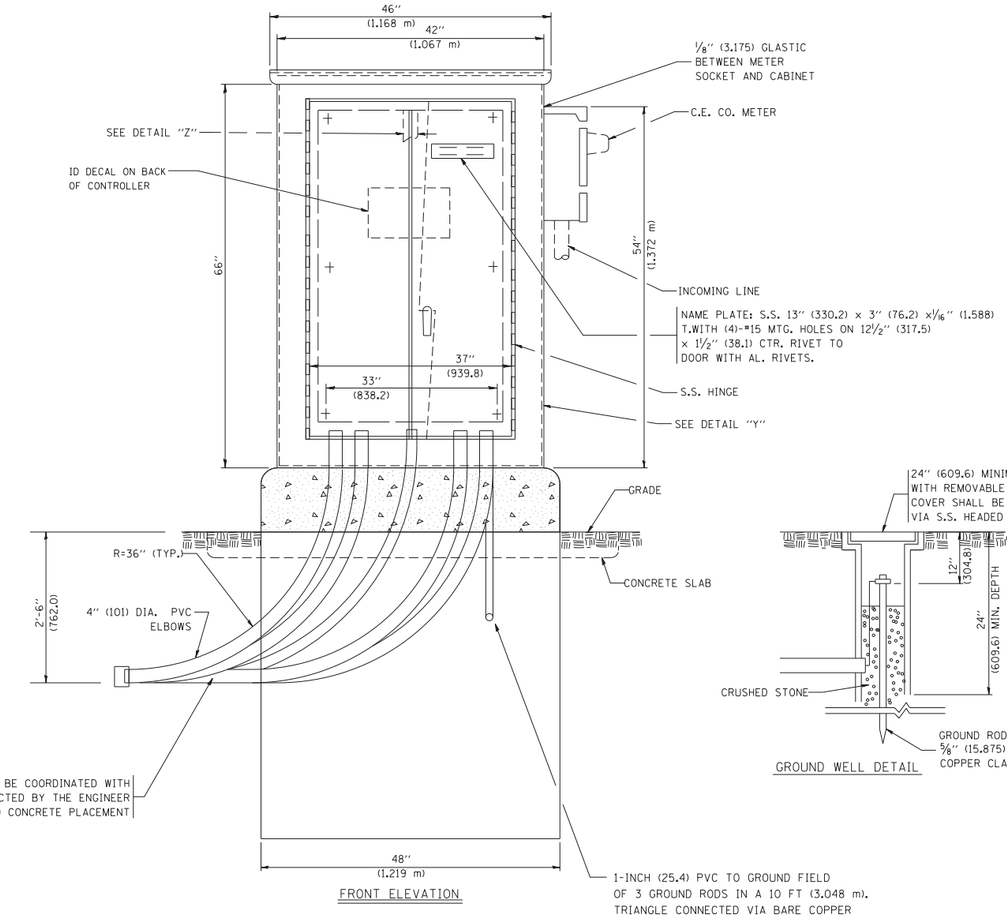
DETAIL "X"



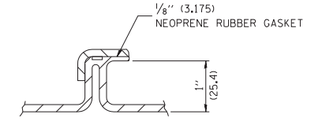
SECTION "A-A"



LEFT SIDE ELEVATION

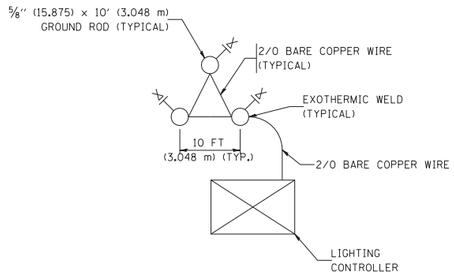


FRONT ELEVATION



DETAIL "Z"

GROUND WELL DETAIL



GROUND FIELD DETAIL
(N.T.S.)

THE CONTRACTOR SHALL
VERIFY EXACT LOCATION
WITH THE ENGINEER

FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, RADIO CONTROL
DUPLEX TYPE WITH SCADA

SCALE: NONE | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	435
	BE-205	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
8. METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
10. ALL DEVICES SHALL BE FRONT REMOVABLE.
11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
12. SET LATITUDE TO 42 DEGREES. SET CH.1 TO 23 MINUTES AFTER ASTRONOMICAL SUNSET, 50 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +28 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH A SIGNAL LENGTH OF 7 SECONDS.)
13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
16. ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW, SCADA WIRING SHALL BE #18.
17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

    R - RED Y - YELLOW
    B - BLACK W - WHITE
    BL- BLUE G - GREEN
    G - GREY

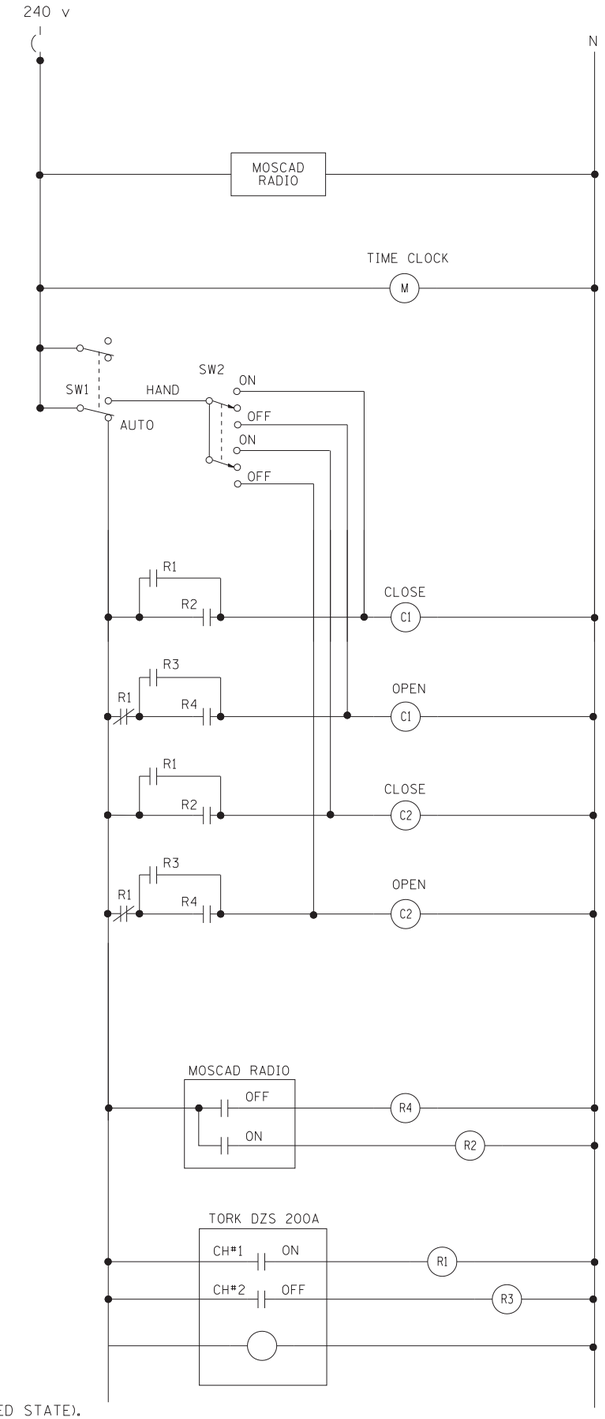
19. MOSCAD I/O WIRING SHALL BE:

    DIGITAL INPUT (DI) WIRING SHALL BE #18 MTW PURPLE.

    ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.

    AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.

20. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
21. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
22. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



CONTROL CIRCUIT LADDER LOGIC DIAGRAM

MOSCAD I/O ASSIGNMENTS		
TERM	MOSCAD DESTINATION	DESCRIPTION OF INPUT
1	DIGITAL INPUT 1	ALARM KNOWLEDGE
2	DIGITAL INPUT 2	DOOR OPEN
3	DIGITAL INPUT 3	MAIN(S) BREAKER OPEN
4	DIGITAL INPUT 4	CONTACTOR 1 OPEN
5	DIGITAL INPUT 5	CONTACTOR 2 OPEN
6	DIGITAL INPUT 6	CABINET IN NON-AUTO
7	DIGITAL INPUT 7	BACK-UP CLOCK OFF CALL
8	DIGITAL INPUT 8	BACK-UP CLOCK ON CALL
17	24 V+	24+VDC
18	DI COMMON	COMMON
21	K1 C	K1 COMMON
22	K1 NO	LIGHTS ON CALL
24	K2 C	K2 COMMON
25	K2 NO	LIGHTS OFF CALL
32	ANALOG INPUT 1 (+)	CABINET NEUTRAL CURRENT
33	ANALOG INPUT 1 (-)	CABINET NEUTRAL CURRENT
34	ANALOG INPUT 2 (+)	CABINET SERVICE VOLTAGE
35	ANALOG INPUT 2 (-)	CABINET SERVICE VOLTAGE
40	P. GROUND	GROUND

ALL ANALOG INPUTS WILL BE 4-20 MA ONLY. DIGITAL OUTPUT RELAYS WILL BE ELECTRICALLY ENERGIZED AND MOMENTARILY HELD

MIXED I/O MODULE MODEL NUMBER V436

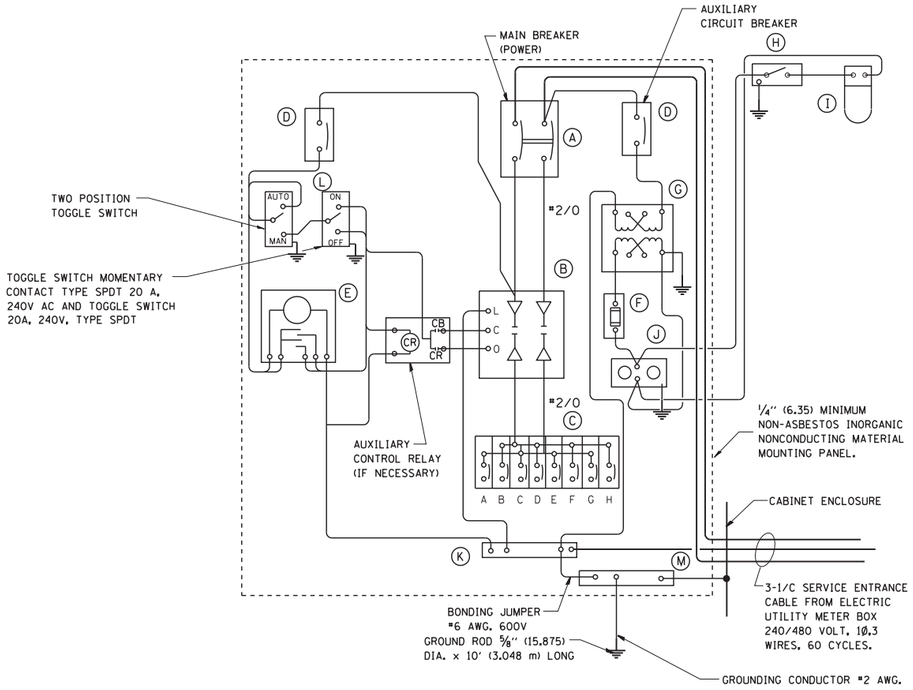
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\be205.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-19-04
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, RADIO CONTROL
DUPLEX TYPE WITH SCADA

SCALE: NONE | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	436
	BE-205	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

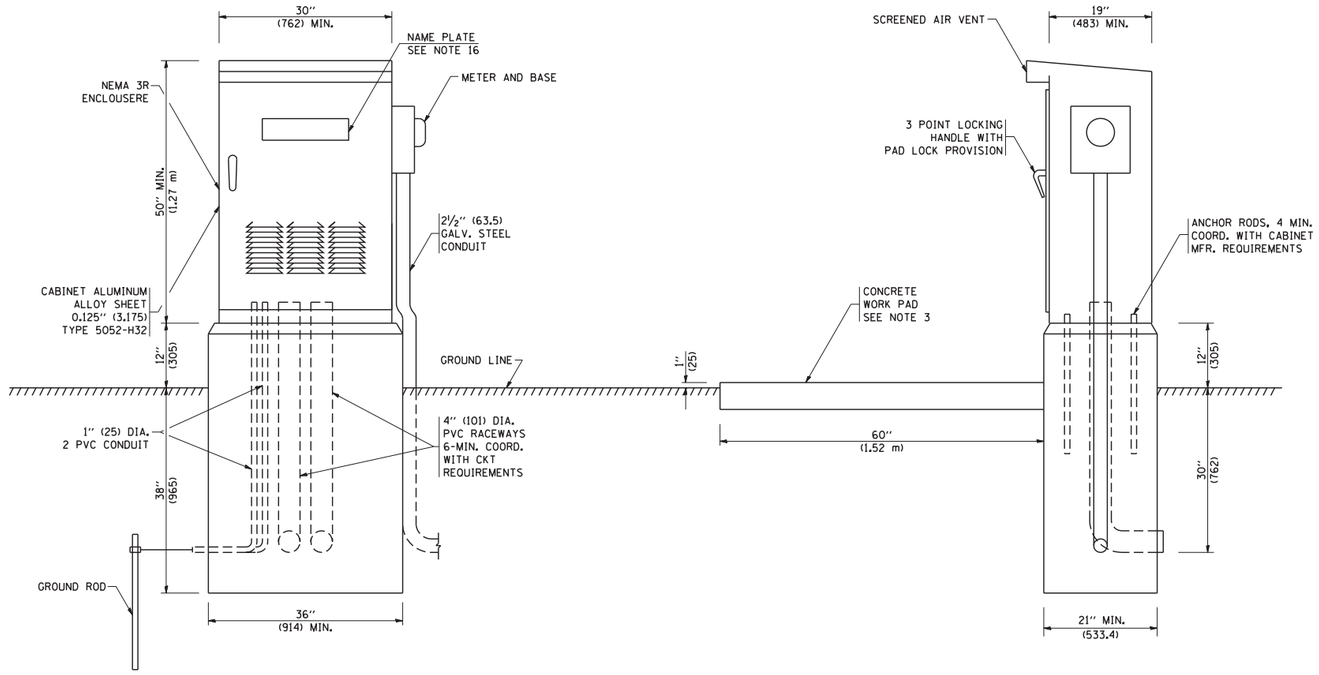


PANEL WIRING DIAGRAM

PANEL EQUIPMENT

BILL OF MATERIAL

ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME , 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 Hz.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BOX.
M	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS



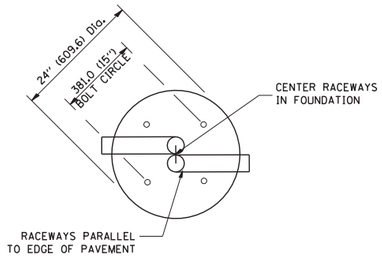
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
3. IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) x 60" (18.288 m) x 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
12. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
    R = RED BL = BLUE W = WHITE
    B = BLACK Y = YELLOW G = GREEN
13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
14. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
16. 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

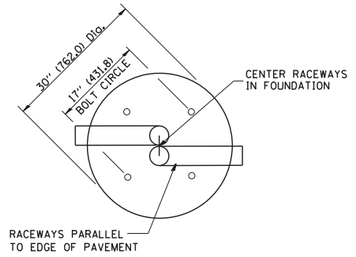
FILE NAME = W:\diststd\22x34\be215.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-20-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER SINGLE DOOR	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				(0405-1 & 0506-2) R-1	COOK	577	437
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -				BE-215	CONTRACT NO. 60M57		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

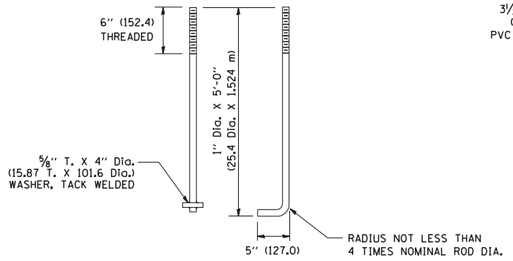
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND Ø = 34°	9'-0" (2.74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



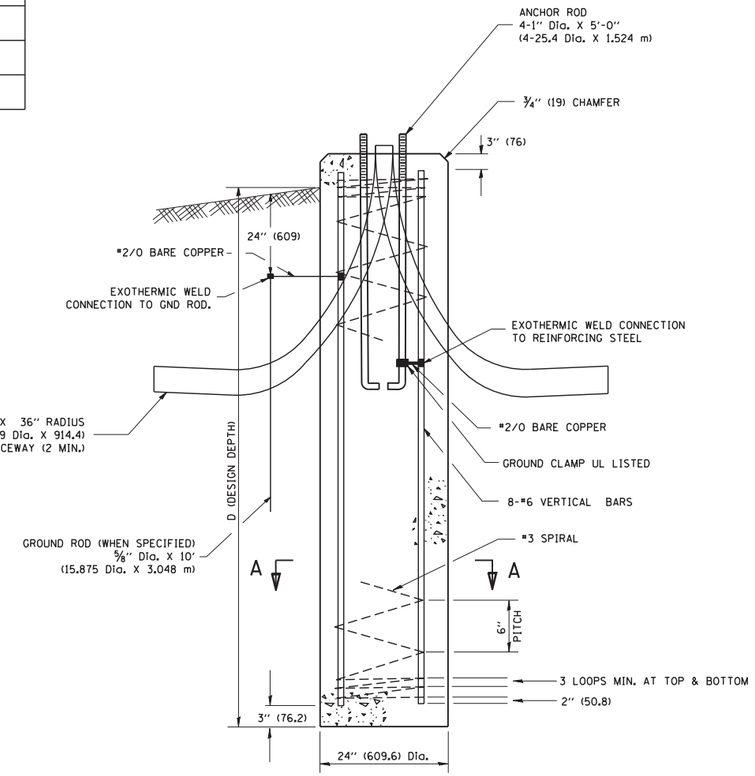
TOP VIEW



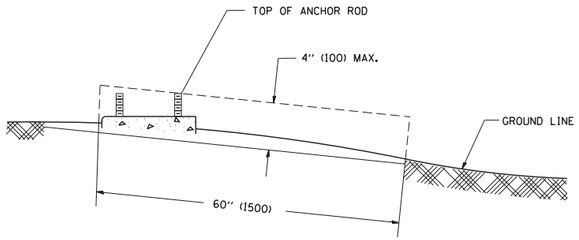
TOP VIEW



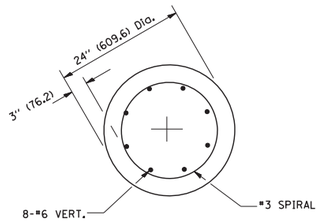
ANCHOR ROD DETAIL



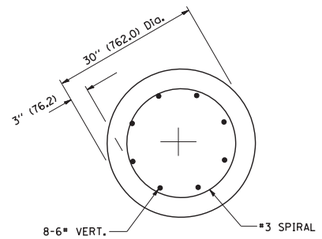
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

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

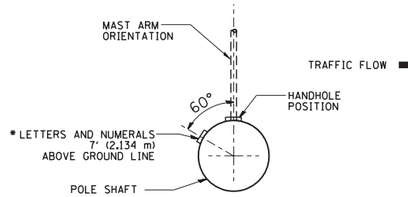
FILE NAME = W:\diststd\22x34\be301.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 04-22-02
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

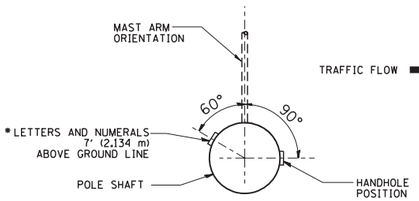
LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE

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

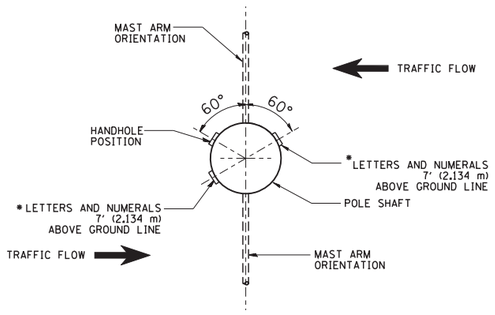
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	438
	BE-301	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



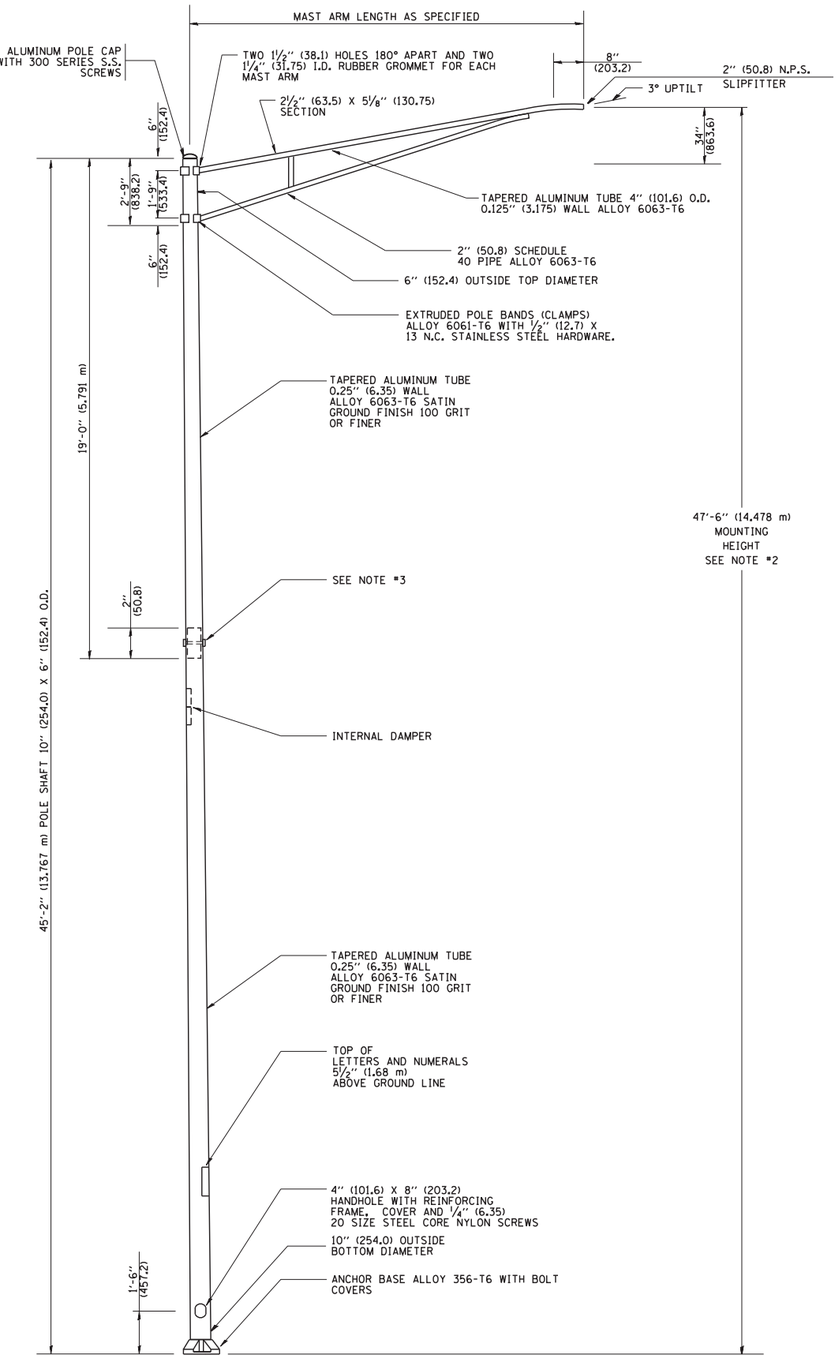
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

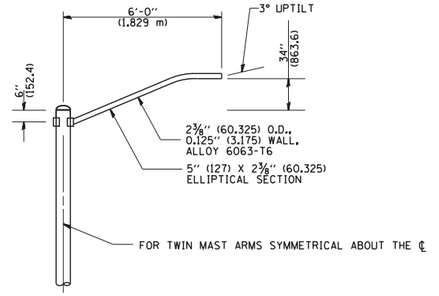


POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



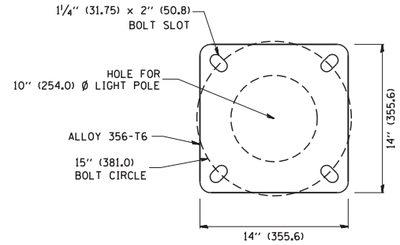


6' (1.8 m) SINGLE MEMBER MAST ARM

(N.T.S.)

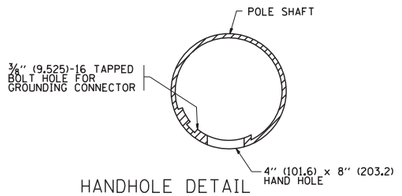
NOTES:

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



LIGHT POLE BASE PLATE DETAIL

15 INCH (381.0) BOLT CIRCLE

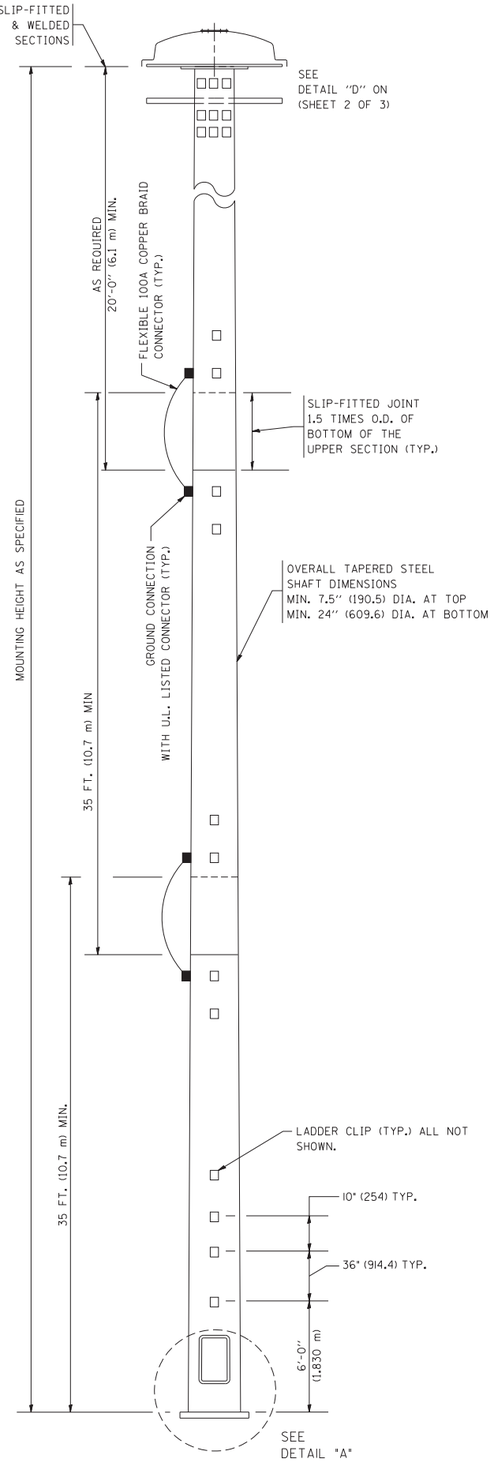


HANDHOLE DETAIL

(N.T.S.)

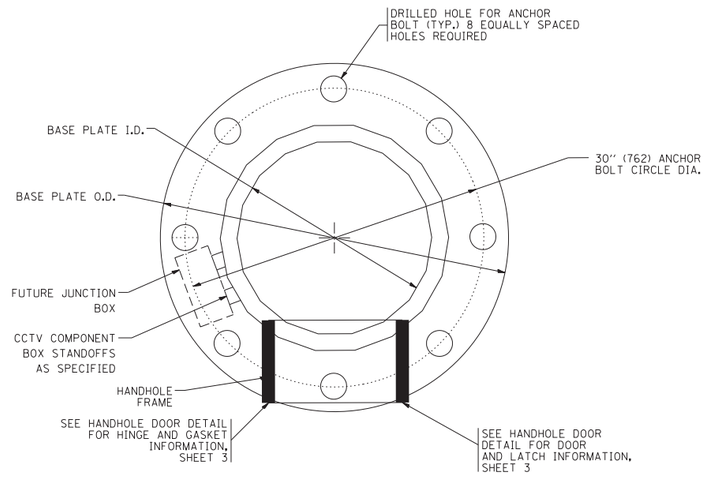
E-23

FILE NAME = W:\diststd\22x34\be400.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. TOMSONS 09-06-00	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ALUMINUM LIGHT POLE 47'-6" (14.478 m) MOUNTING HEIGHT**		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. TOMSONS 09-03-03					(0405-1 & 0506-2) R-1	COOK	577	439
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -					**BE-400**	CONTRACT NO. 60M57		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DETAIL- "A"

3 CABLE LOWERING & SUPPORT MECHANISM SHOWN.



SECTION - A-A

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE DESIGN SHALL BE BASED UPON AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" CURRENT AT THE TIME THE PROJECT IS ADVERTISED AND A TOTAL COMBINED LUMINAIRE WEIGHT OF 720 LBS. (326 kg) AND HAVING A TOTAL PROJECTED AREA OF 24 SQ. FT. (7.3 sq. m).
3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI (345 K PA) ACCORDING TO AASHTO M 223 (ASTM A 572 GR50)
4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.
5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS. CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 36 INCH) (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG. THE TOP INSIDE EDGE SHALL BE CHAMFERED.
6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.
7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) AND THEN PAINTED AS SPECIFIED. THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED.
9. THE FINISH COAT SHALL BE ANSI 70, SKY GREY COLOR SAMPLE TO BE SUBMITTED FOR APROVAL. ON LIGHT TOWERS DESIGNED FOR A CCTV CAMERA TO BE INSTALLED. THE TOP SECTION OR 30 FT. WHICH EVER IS GREATER OF THE TOWER SHAFT SHALL BE PAINTED FLAT BLACK. OTHER SECTIONS SHALL BE ANSI 70, SKY GREY.
10. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.
11. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED 1/8 IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.
12. PVC CONDUIT WILL NOT BE ALLOWED FOR ANY LIGHT TOWER COMPONENT.
13. COUNTER WEIGHTS TO BE INCLUDED AS A PART OF THE LIGHT TOWER PAY ITEM.

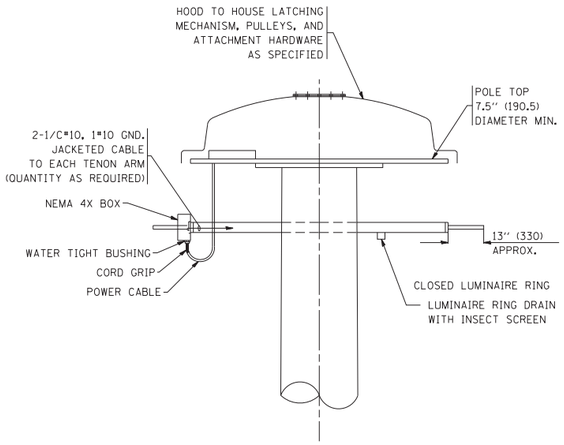
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108364\be500.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-04-03
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-02-09
	PLOT DATE = 9/21/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

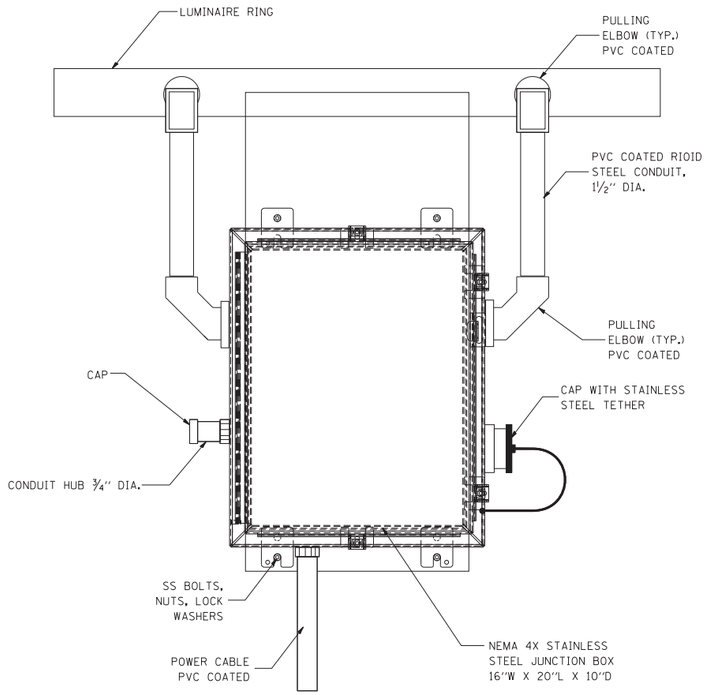
HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m)

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

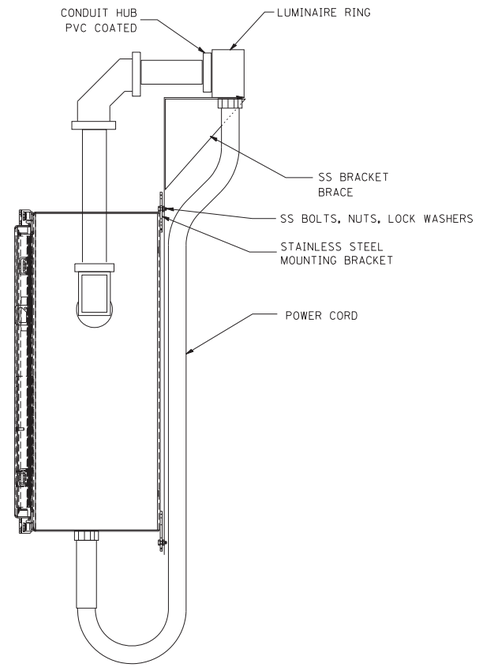
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	440
	BE-500	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



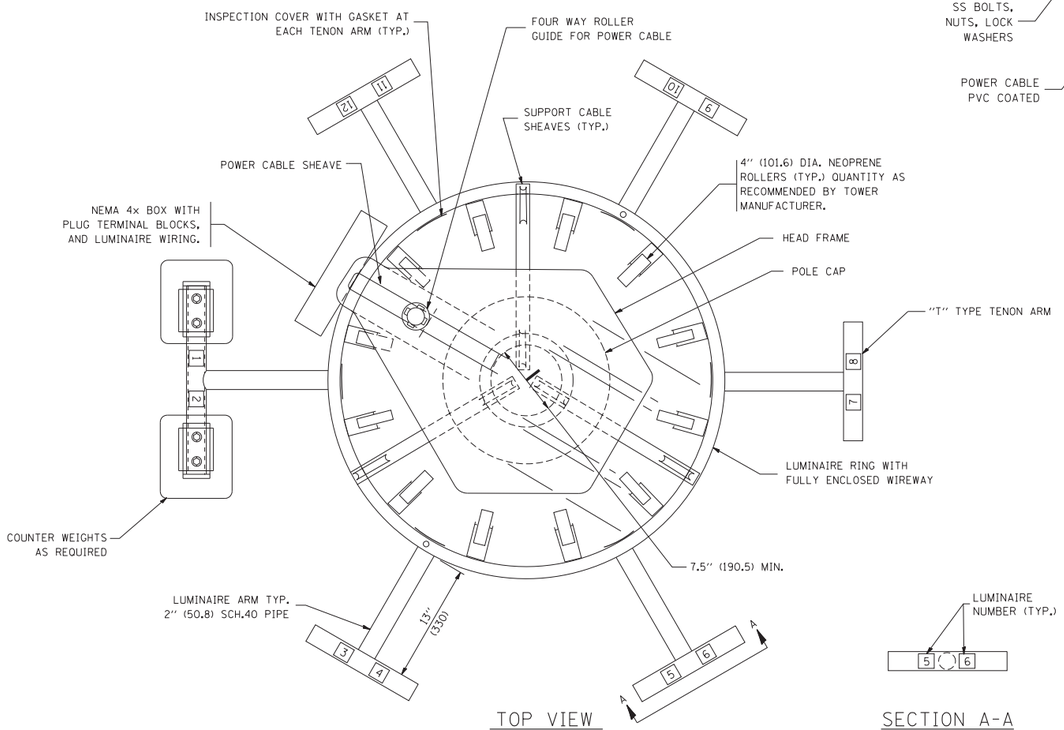
DETAIL-"D"



FRONT VIEW
N.T.S.



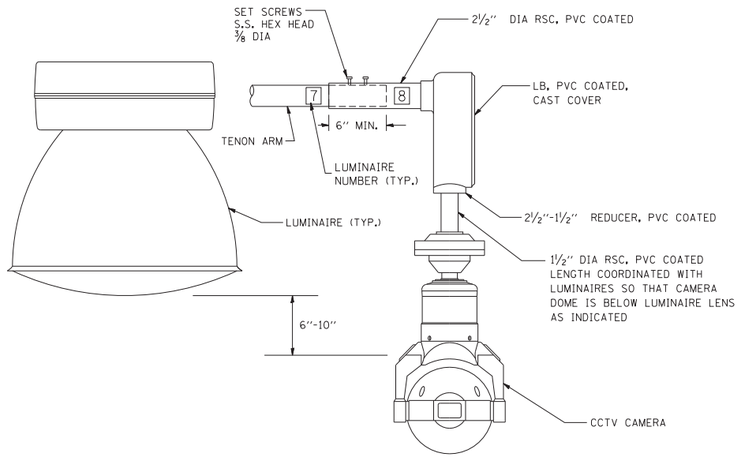
SIDE VIEW
N.T.S.



TOP VIEW

SECTION A-A

LUMINAIRE RING TERMINAL BOX



CCTV CAMERA MOUNTING DETAIL

NOTES:

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

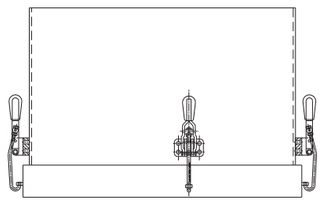
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108364\be500.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 08-04-03
		DRAWN -	REVISED - R. TOMSONS 05-11-09
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-02-09
	PLOT DATE = 9/21/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

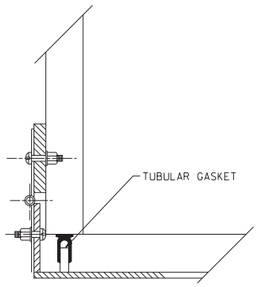
HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m)

SCALE: NONE | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

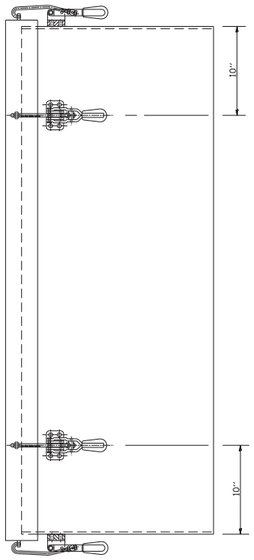
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	441
	BE-500	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



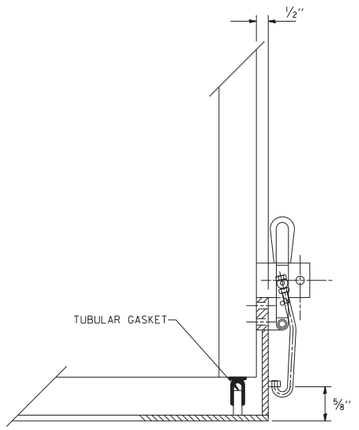
TOP VIEW



HINGE DETAIL

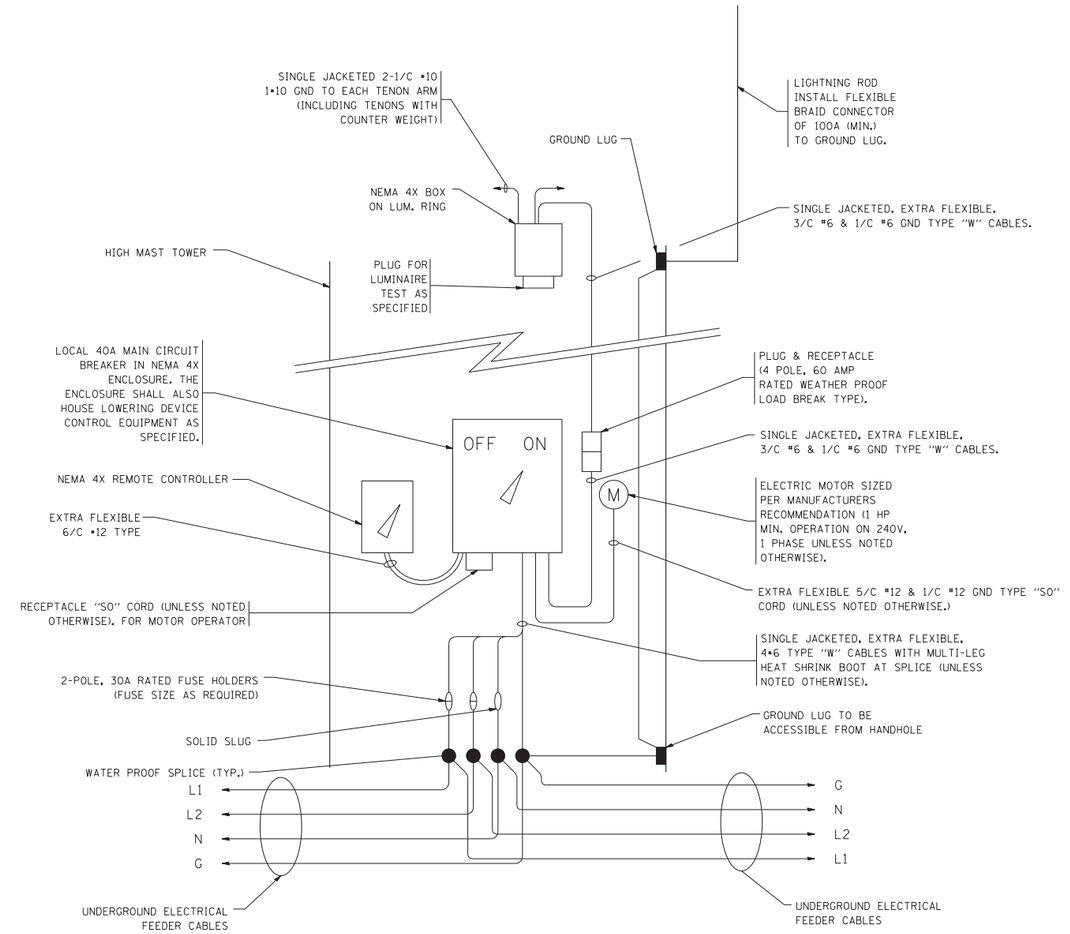


SIDE VIEW

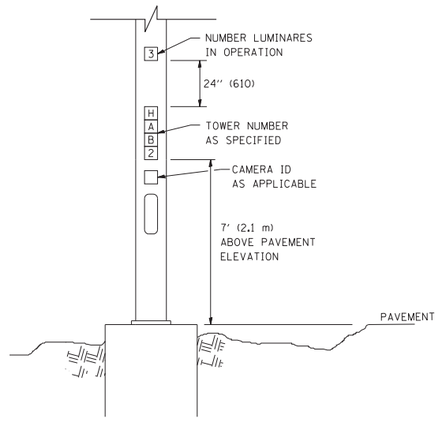


LATCH DETAIL

HANDHOLE DOOR DETAILS



HIGH MAST POLE WIRING DIAGRAM



LIGHT TOWER NUMBERING DETAIL

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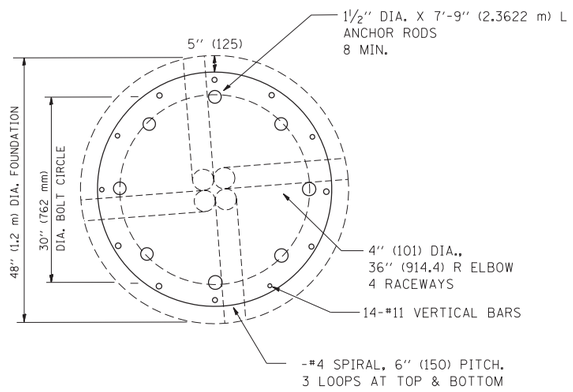
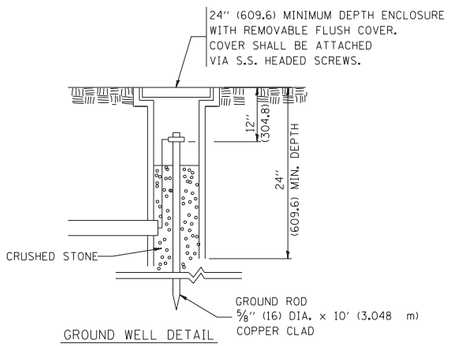
		DRAWN -	REVISED - R. TOMSONS 05-11-09				(0405-1 & 0506-2) R-1	COOK	577	442
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-02-09				**BE-500**	CONTRACT NO. 60M57		
	PLOT DATE = 9/21/2010	DATE -	REVISED -		SCALE: NONE SHEET NO. 3 OF 3 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

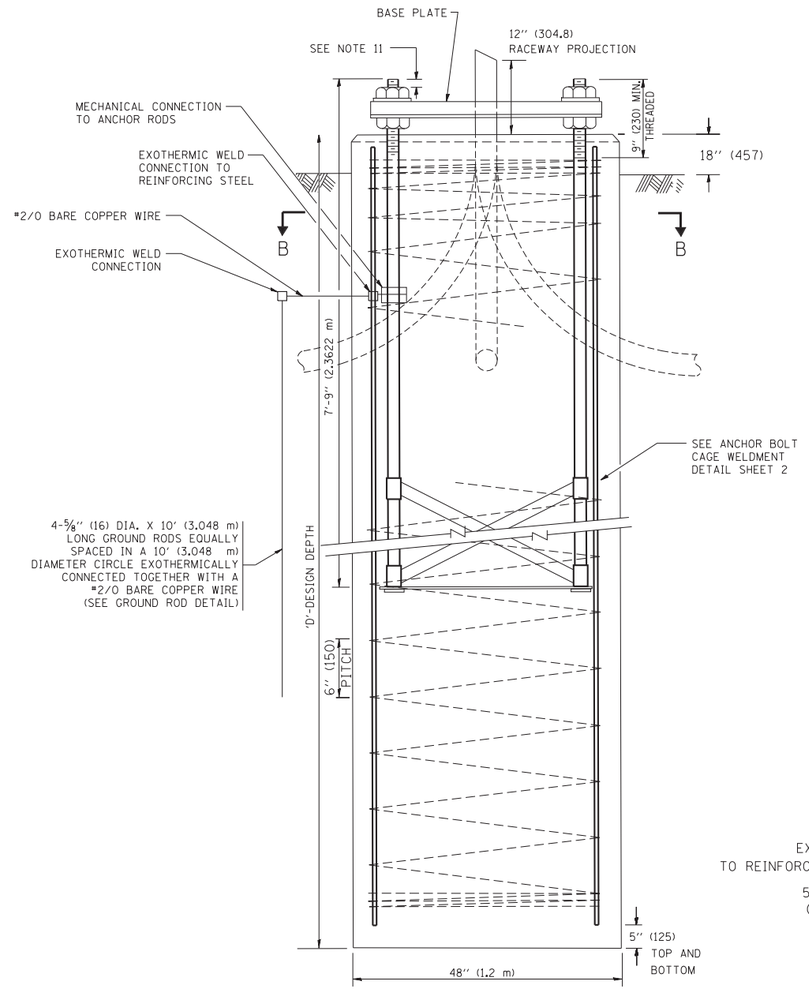
SHAFT LENGTH (D) TABLE				
SOIL CONSISTENCY		AVERAGE STRENGTH	LIGHT TOWER MOUNTING HEIGHT	
		Qu In tsf (Qu In kPa)	100 FT. (30 m)	110 FT. (34 m)
COHESIVE	SOFT	<0.5 (<50)	22′-6″ (6.9 m)	24′-0″ (7.2 m)
	MEDIUM	0.5 TO 1 (50 TO 100)	18′-6″ (6.9 m)	19′-0″ (5.8 m)
	STIFF	1 TO 2 (100 TO 200)	15′-6″ (4.7 m)	16′-0″ (5.5 m)
	VERY STIFF	2 TO 4 (200 TO 400)	13′-6″ (4.1 m)	14′-0″ (4.2 m)
	HARD	>4 (>400)	12′-0″ (3.6 m)	12′-6″ (3.7 m)
GRANULAR		N In BLOWS/FT. (N in BLOWS/0.3m)		
	VERY LOOSE	<5 (<5)	18′-0″ (5.4 m)	18′-6″ (5.6 m)
	LOOSE	5 TO 10 (5 TO 10)	16′-6″ (4.9 m)	17′-0″ (5.1 m)
	MEDIUM	10 TO 25 (10 TO 25)	15′-6″ (5.2 m)	16′-0″ (5.9 m)
	DENSE	25 TO 50 (25 TO 50)	15′-0″ (4.5 m)	15′-6″ (4.6 m)
	VERY DENSE	>50 (>50)	14′-0″ (4.2 m)	14′-6″ (4.4 m)



SECTION-B-B



GROUND WELL DETAIL



FOUNDATION ELEVATION

DESIGN NOTES

(1) ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

(2) THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.

(3) THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.

(4) THE TOP OF THE FOUNDATION TO 18" (450) BELOW GRADE SHALL BE FORMED.

(5) SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.

(6) THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.

(7) 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 1006.9.

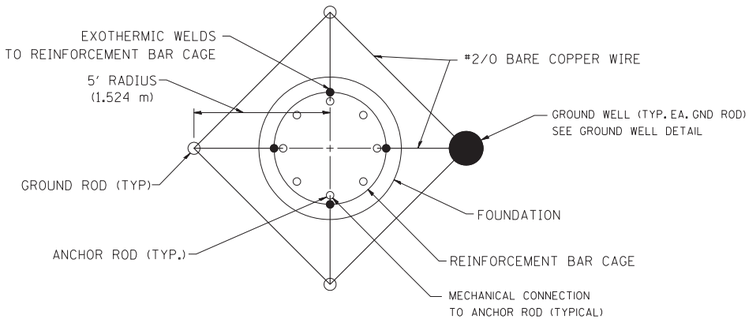
(8) ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED FOR APPROVAL WITH TOWER MANUFACTURER REQUIREMENTS.

(9) REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10

(10) TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.

(11) A MINIMUM OF THREE FULL THREADS SHALL REMAIN EXPOSED AFTER LIGHT TOWER IN INSTALLED.

(12) ALL GROUNDING INDICATED IN THE PLANS SHALL BE INCLUDED IN THE COST OF THE LIGHT TOWER FOUNDATION AND SHALL NOT BE PAID FOR SEPARATELY.



GROUND ROD DETAIL

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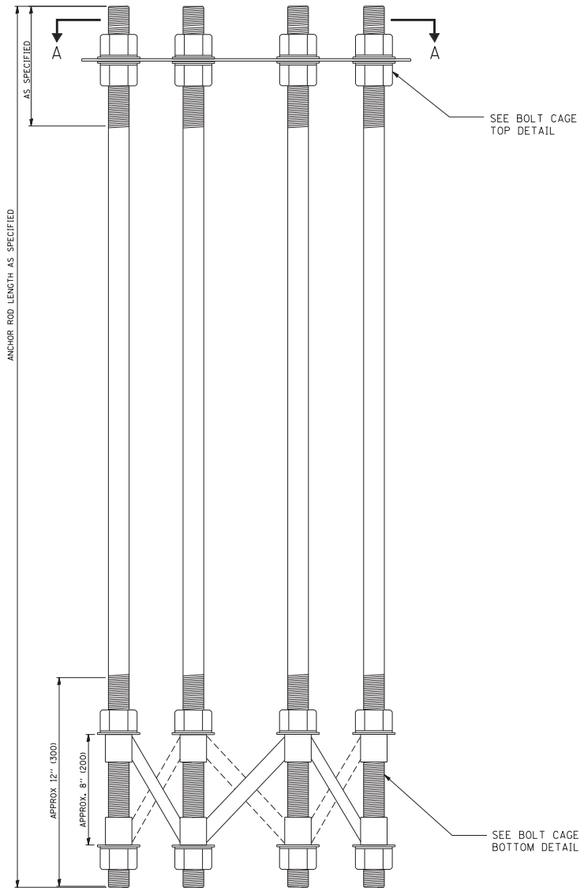
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-02-10
	PLOT DATE = 9/21/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

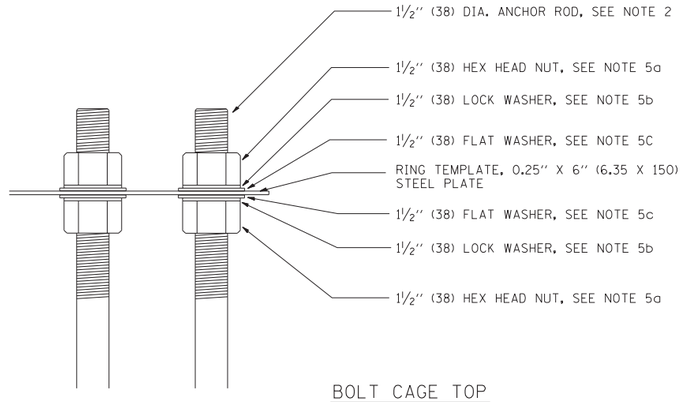
HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m) FOUNDATION DETAIL

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

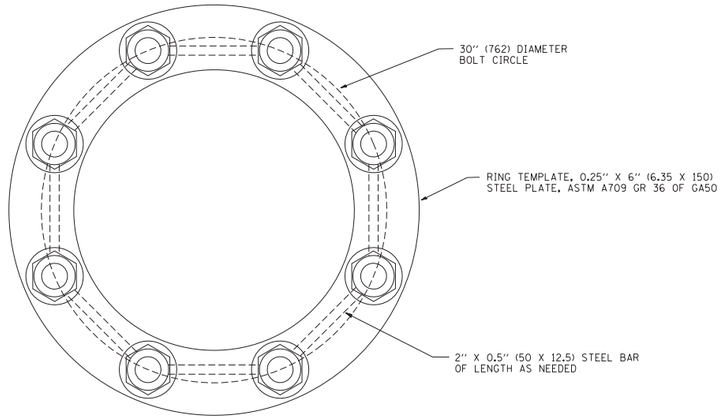
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	443
	BE-501	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



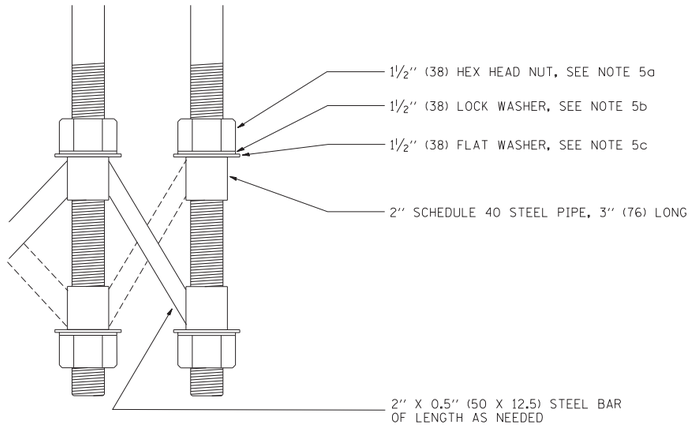
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A-A



BOLT CAGE BOTTOM

NOTES

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

2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO 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) 1.5 (38) HEX HEAD NUTS
      AASHTO M291, GRADE C, C3, D ,DH OR DH3
      HOT DIPPED GALVANIZED AASHTO M 232

   b) 1.5 (38) HELICAL LOCK WASHERS
      ANSI/ASME B18.21.1
      I.D. 1.504 - 1.524
      O.D. 2.159 MAX.
      WIDTH 0.292 MIN.
      THICKNESS 0.375 MIN.
      HARDNESS 26-45 ROCKWELL C
      HOT DIPED GALVANIZED AASHTO M232

   c) 1.5 (38) FLAT WASHERS
      AASHTO M293
      O.D. 2.75
      I.D. 1.56
      THICKNESS 0.16 - 0.25
      HARDNESS 26-45 ROCKWELL C.
      HOT DIPED 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.

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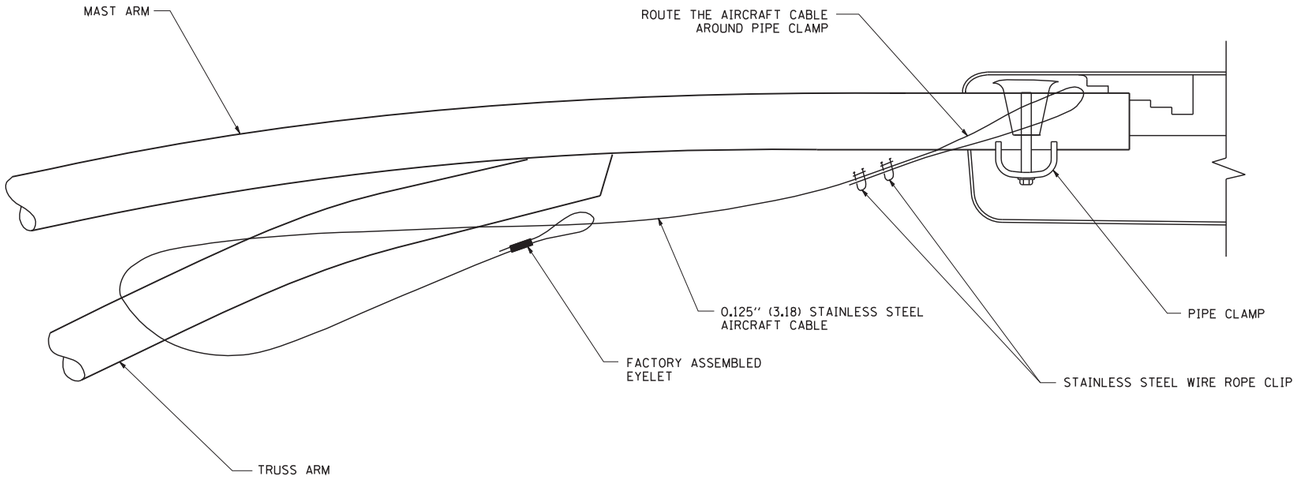
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. TOMSONS 09-02-10
	PLOT DATE = 9/21/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m) FOUNDATION DETAIL

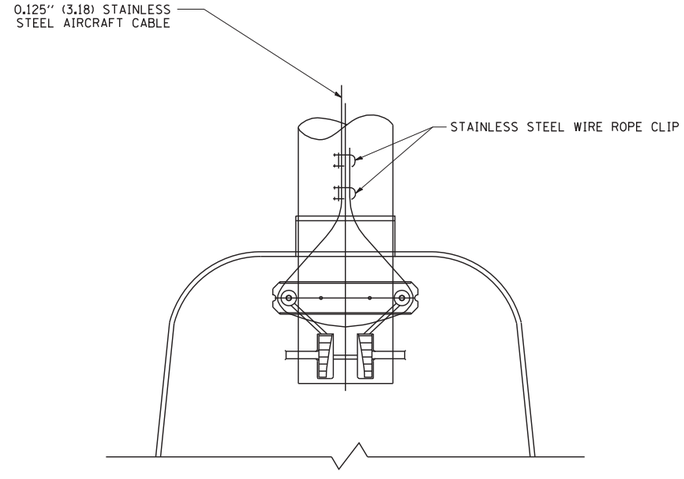
SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	444
	BE-501	CONTRACT NO. 60M57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



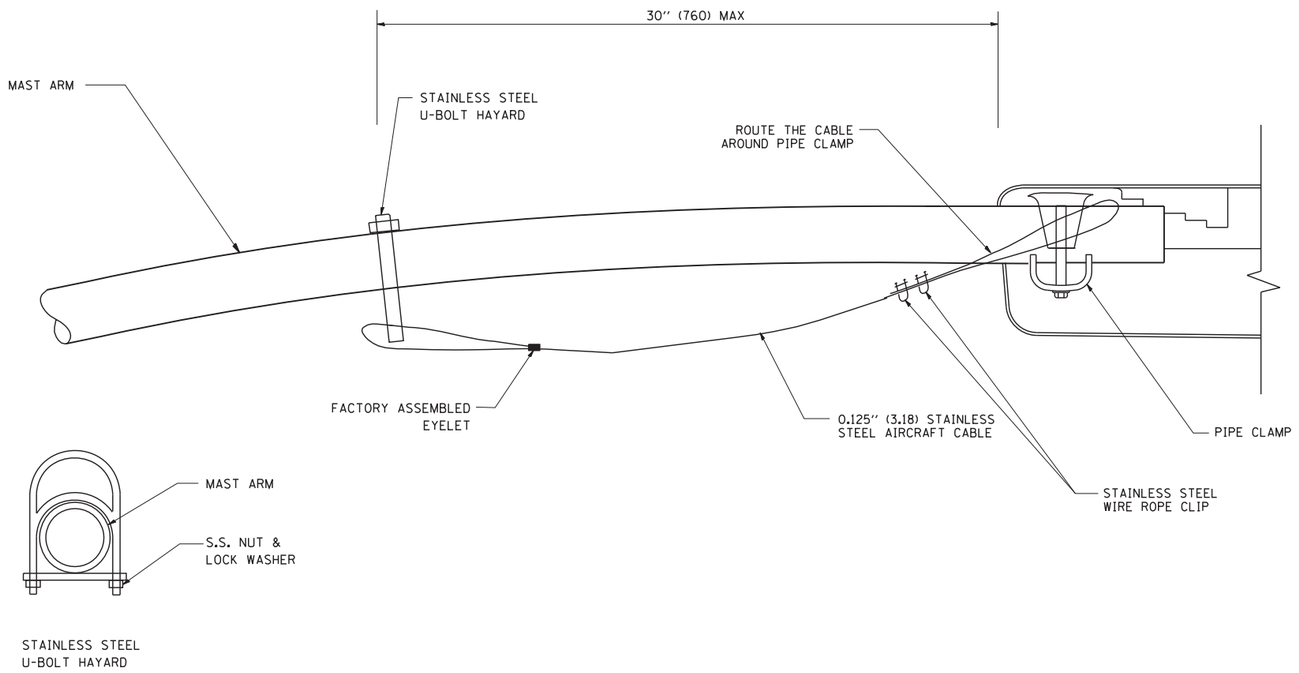
SIDE VIEW (TRUSS ARM)

N.T.S.



BOTTOM VIEW

N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

N.T.S.

NOTES:

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

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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LUMINAIRE SAFETY CABLE ASSEMBLY

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	445
	BE-701	CONTRACT NO.		
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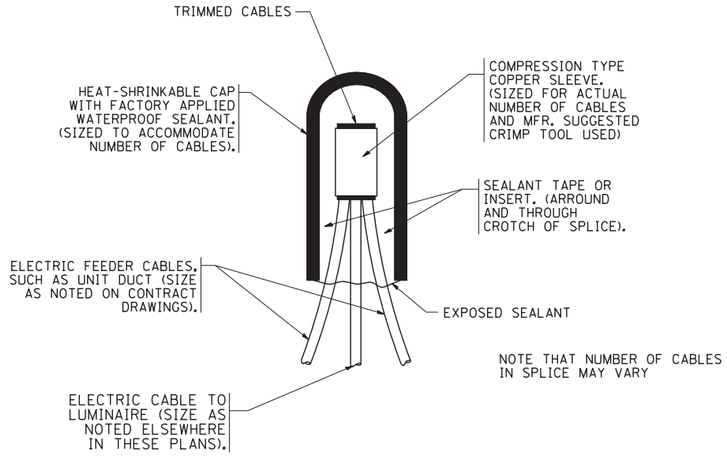

TYPICAL SPLICE DETAIL

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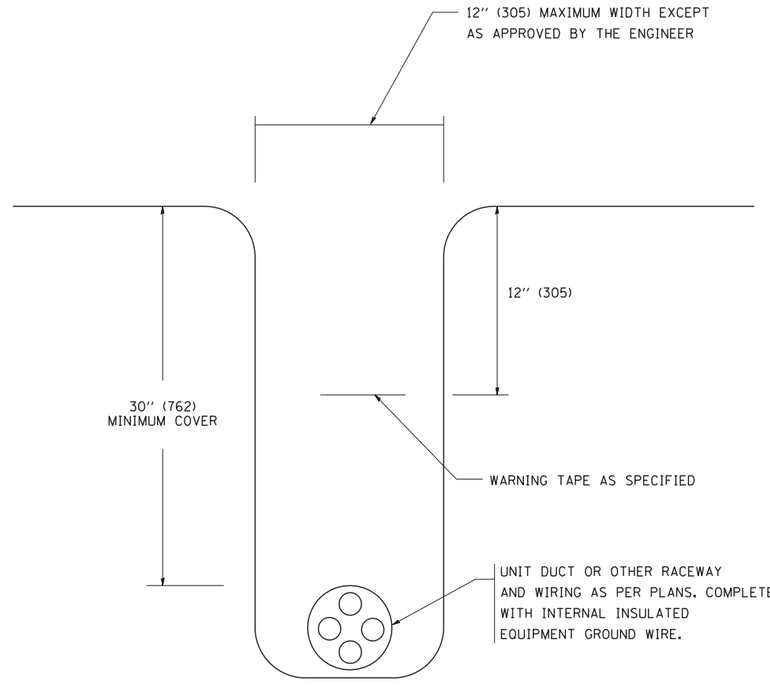

TYPICAL WIRING IN TRENCH DETAIL

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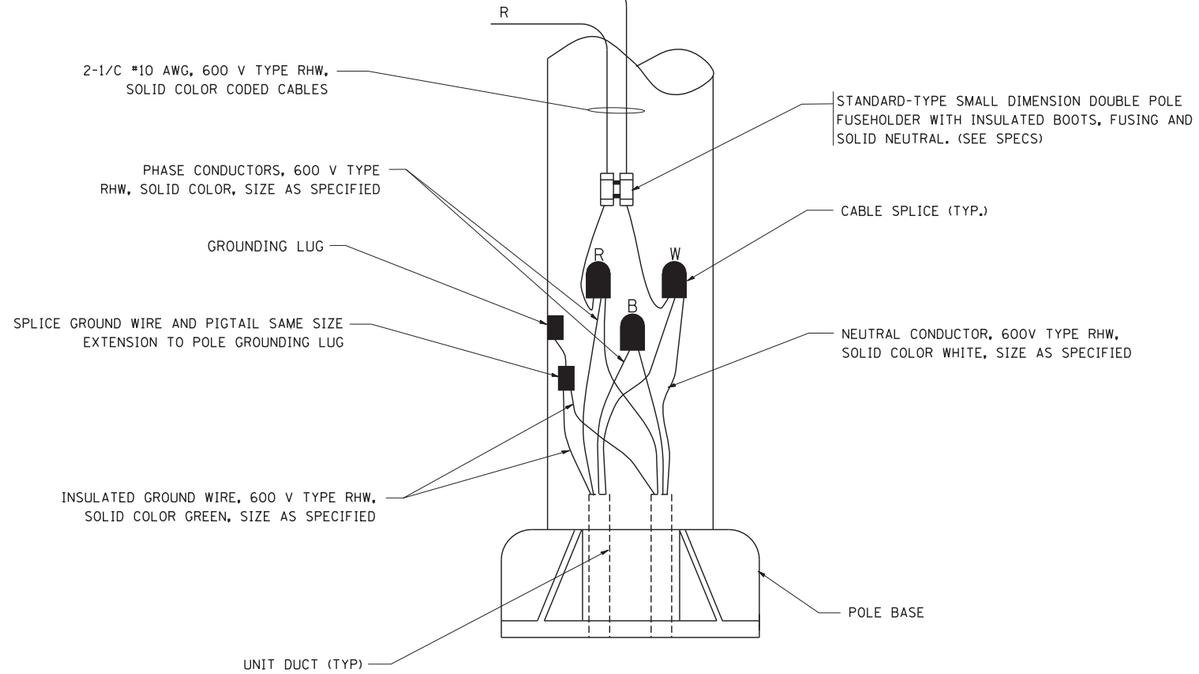

POLE WIRING DETAIL

N.T.S.

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		DRAWN -	REVISED -						(0405-1 & 0506-2) R-1	COOK	577 / 446
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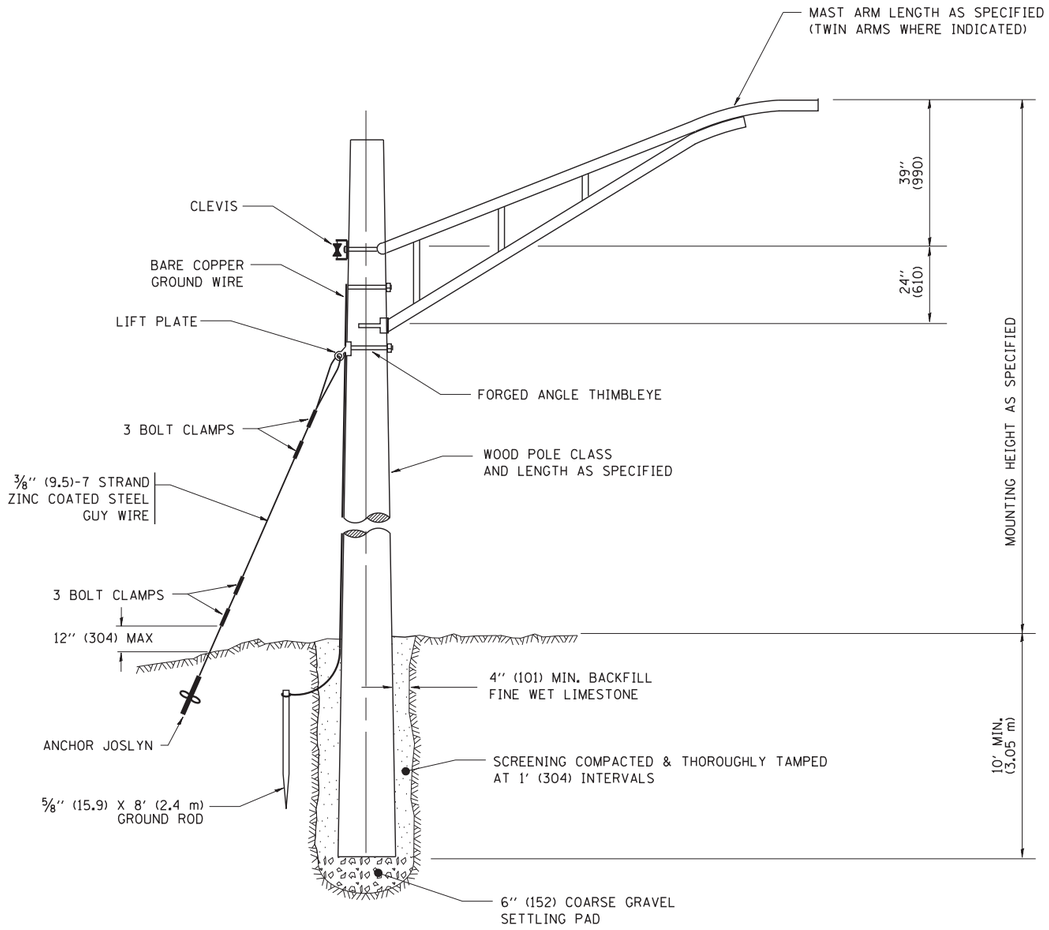
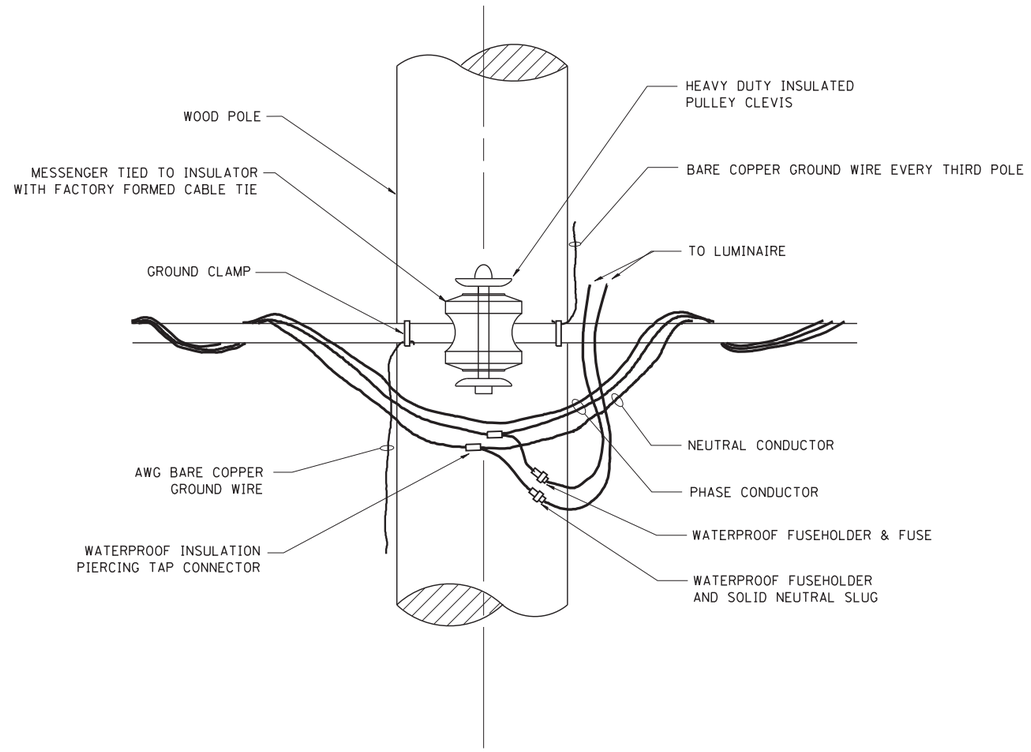
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

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

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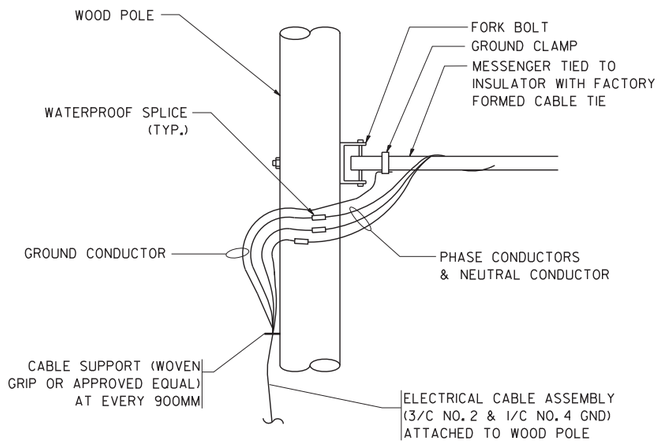
		DRAWN -	REVISED -						(0405-1 & 0506-2)	COOK	577	447
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -						BE-800	CONTRACT NO. 60M57		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



AERIAL CABLE CONNECTION DETAIL

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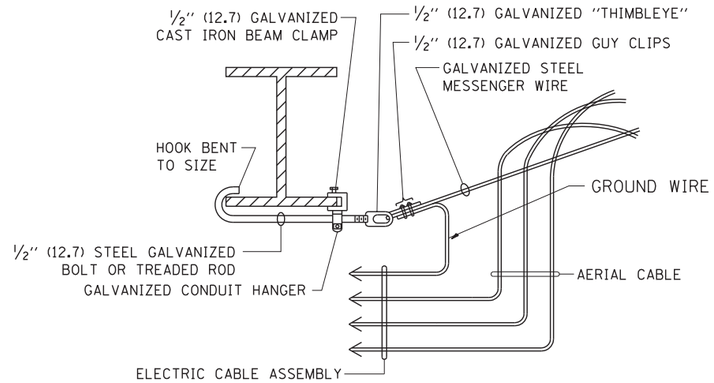
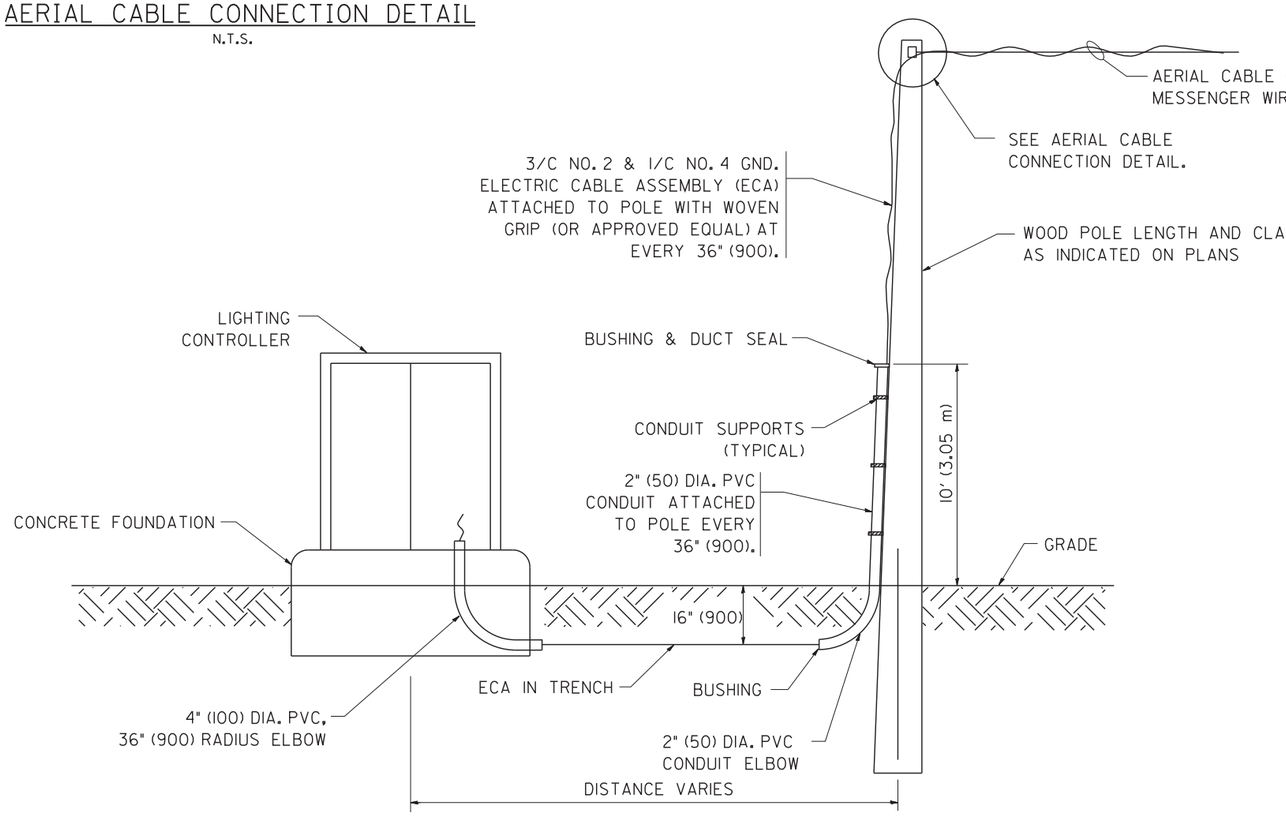


AERIAL CABLE ATTACHED TO STRUCTURE

NOT TO SCALE



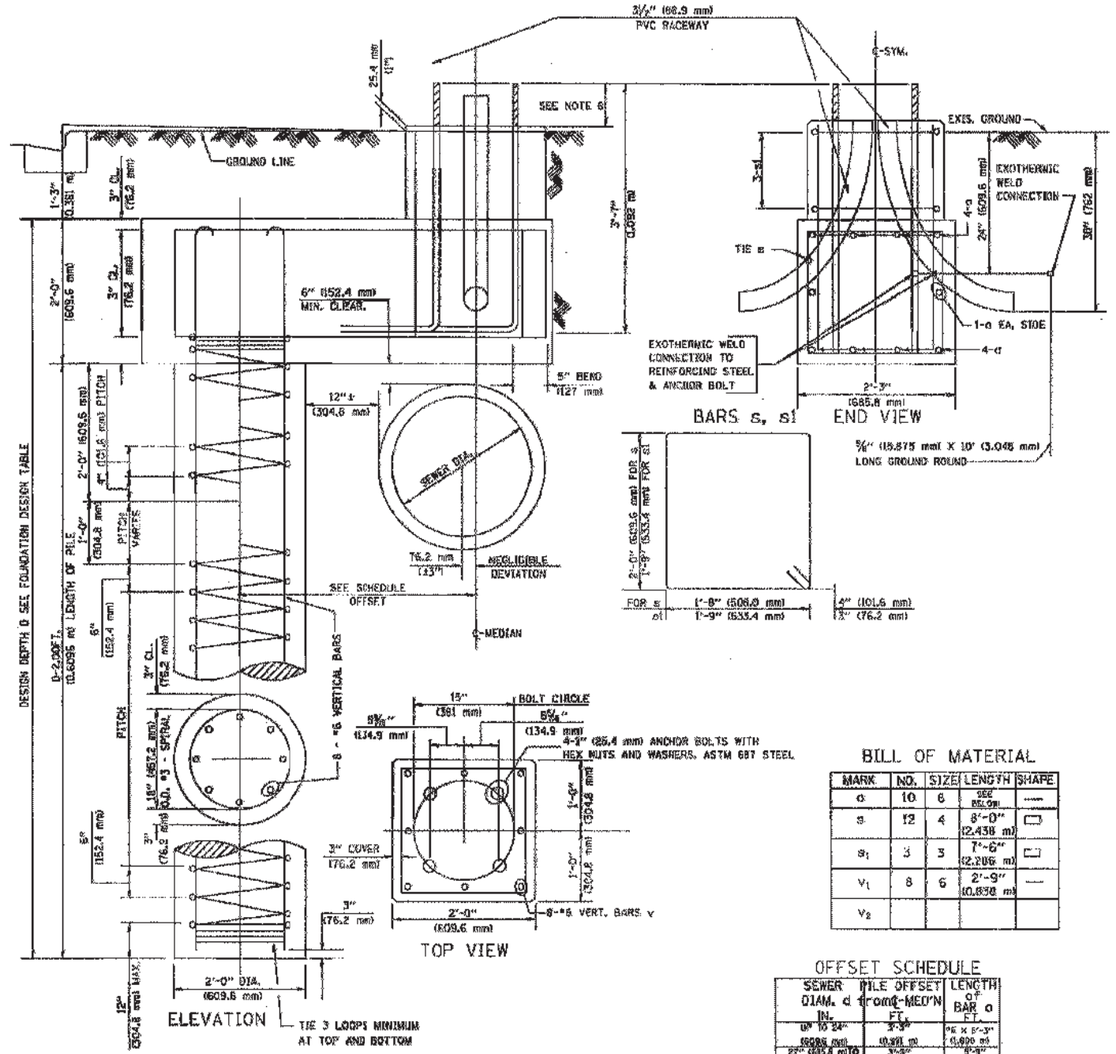
WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL

N.T.S.

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.

FILE NAME = W:\diststd\22x34\be801.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AERIAL CABLE INSTALLATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				(0405-1 & 0506-2) R-1	COOK	577	448
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -				BE-801	CONTRACT NO. 60M57		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE DETAIL	———
s	12	4	8'-0" (2.438 m)	▭
s_1	3	3	7'-6" (2.286 m)	▭
v_1	8	6	2'-9" (0.838 m)	——
v_2				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from ℄-MED'N FT.	LENGTH OF BAR a FT.
0" TO 24" (609.6 mm)	2'-3" (0.991 m)	7'-6" x 8'-3" (2.286 m)
27" (685.8 mm) TO 36" (914.4 mm)	3'-3" (1.143 m)	8'-3" (2.769 m)
42" (1066.8 mm) TO 48" (1219.2 mm)	4'-3" (1.372 m)	8'-6" (3.061 m)
54" (1371.6 mm) TO 60" (1524.0 mm)	5'-0" (1.524 m)	9'-0" (2.134 m)
66" (1676.4 mm) TO 72" (1828.8 mm)	5'-6" (1.676 m)	9'-6" (2.896 m)

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
			SINGLE ARM		TWIN ARM	
	SINGLE ARM D	TWIN ARM D	VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-#6X12'-6" (3.810 m)	#3X122' (37.186 m)	8-#6X14'-3" (4.343 m)	#3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-#6X9'-0" (2.743 m)	#3X90' (27.432 m)	8-#6X10'-0" (3.048 m)	#3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-#6X6'-6" (1.981 m)	#3X66' (20.112 m)	8-#6X7'-6" (2.286 m)	#3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)	8-#6X9'-6" (2.896 m)	#3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-#6X8'-0" (2.438 m)	#3X78' (23.774 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-#6X7'-6" (2.286 m)	#3X73' (22.250 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	(5'-0") 1.524 m	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

NOTES

1. THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
2. EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
3. THE ANCHOR SHALL BE A TACK WELDED TYPE BOLT OR HOOK TYPE BOLT. COLD BENDING OF THE HOOK BOLT WILL NOT BE ALLOWED.
4. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
5. THE ENTIRE LENGTH OF THE ANCHOR BOLTS AS WELL AS THE NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM DESIGNATION A 153.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 3" (76.2 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
7. RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
8. CONCRETE SHALL BE CLASS "X". CONCRETE FOUNDATION MUST BE CURED FOR TEN (10) DAYS BEFORE THE LIGHT STANDARD IS ERECTED.
9. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.

REVISIONS	
NAME	DATE
S. MANLEY	12-2-93
A. SANEORIN	12-26-34

ILLINOIS DEPARTMENT OF TRANSPORTATION

OFFSET FOUNDATION FOR 47'-6" LIGHT STANDARD

SCALE: NONE — DRAWN BY JKM

DATE 4/4/2008 — CHECKED BY

BE-6

E-33

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	USER NAME = rswanson	DESIGNED - RDP	REVISED -
		DRAWN - PS	REVISED -
	PLOT SCALE = NONE	CHECKED - RAS	REVISED -
	PLOT DATE = 4/23/2012	DATE - 04/20/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET
LIGHTING DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(0405-1 & 0506-2) R-1	COOK	577	449
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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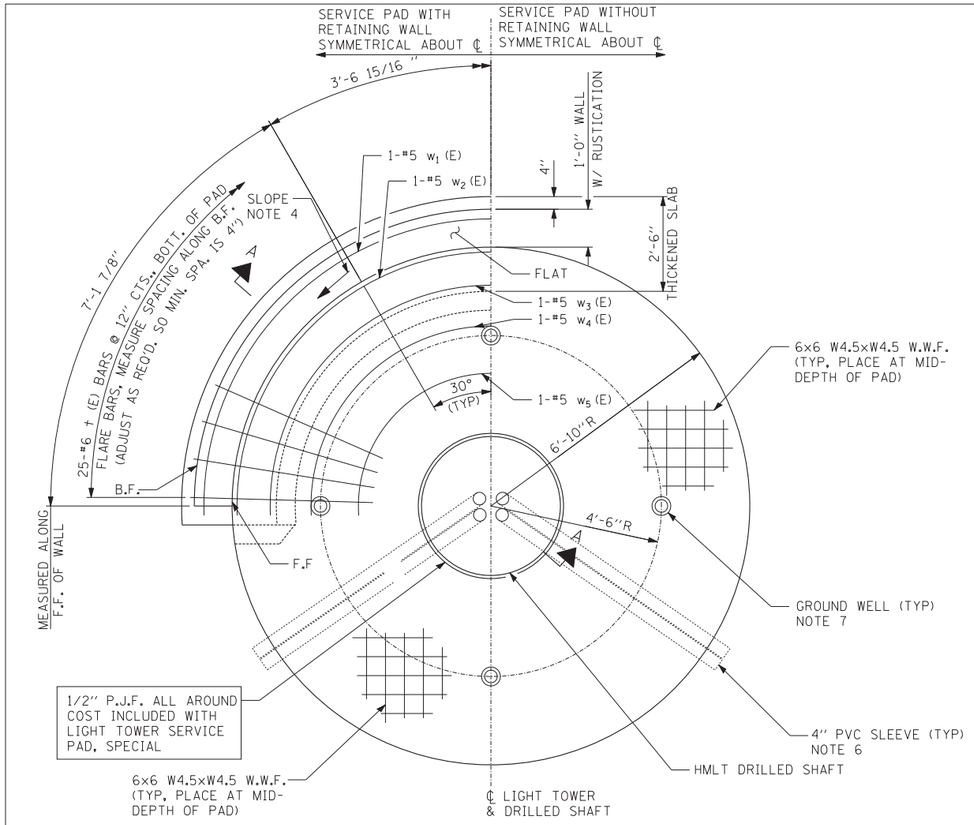
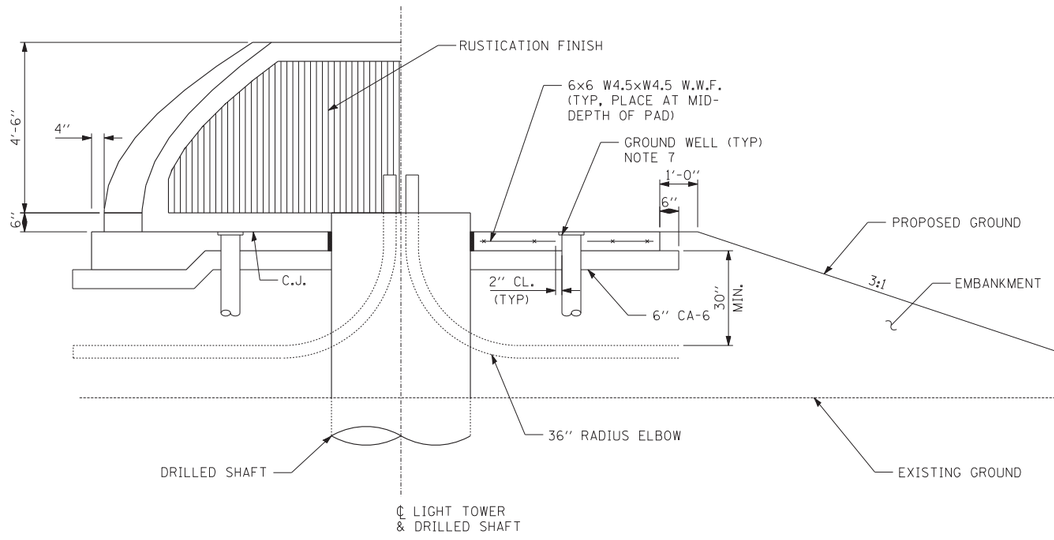
4/23/2012 10:44 PM



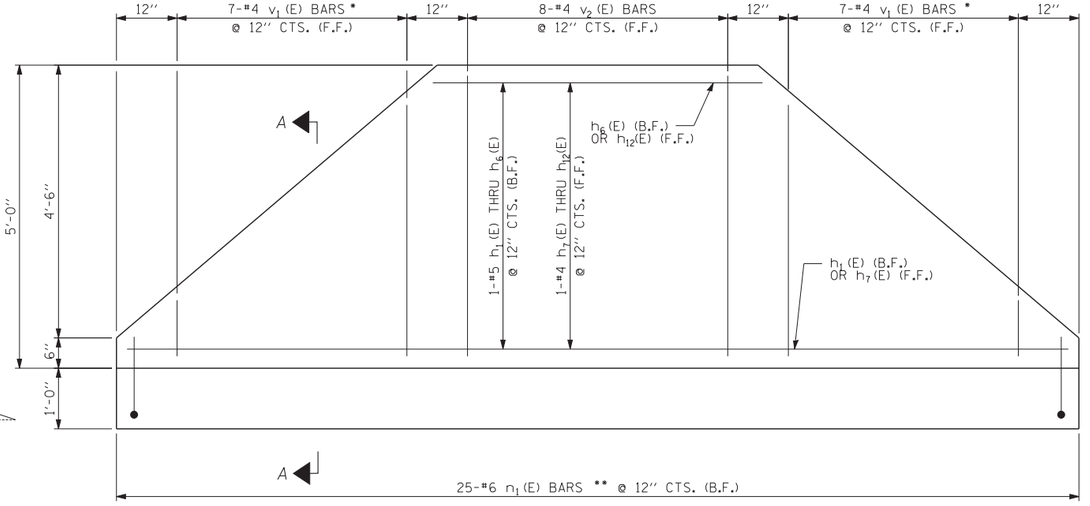
PLAN

PLACE BARS w_1 (E) THRU w_5 (E) @ 12'' CTS. BOTT. OF PAD



ELEVATION

(HMLT NOT SHOWN FOR CLARITY)



RETAINING WALL ELEVATION (PROJECTED)

(LOOKING AT F.F.)

NOTES

1. F.F. and B.F. denote Front Face and Back Face, respectively.
2. HMLT denotes High Mast Light Tower.
3. Refer to HMLT Service Pad, Special & Retaining Wall Details 2 for Bar Bending Diagrams, Bill of Material, Bar Sections and Details.
4. T/Wall slope is constant along the arc of any given radius.
5. Place horizontal tails of n (E) bars radially.
6. PVC sleeves must be extended 6 inches beyond the edge of the concrete pad (PVC sleeve shall be included in the cost of Light Tower Service Pad, Special)
7. Adjust service pad reinforcement to miss wells. Any necessary vertical adjustments shall be included in the cost of Light Tower Service Pad, Special.

LEFT OFFSET						
HMLT ID NUMBER	STATION	CONFIGURATION	TEMPORARY (T)/ PERMANENT(P)	EXIST. GROUND ELEVATION (ft)	TOP OF DRILLED SHAFT ELEVATION (ft)	EMBANKMENT (cu. yd.)
JAB 1	1284+41	PAD ON MOUND	T	605.98	608.60	18
JAB 2	1289+49	PAD W/WALL	P	610.20	609.50	0
JEF 1	1288+16	PAD ON MOUND	T	603.24	609.70	169
JEF 2	1291+68	PAD ON MOUND	P	608.00	609.40	1
JIJ 2	1054+95	PAD ON MOUND	P	601.45	602.50	-2 •
RIGHT OFFSET						
JGH 1	1288+41	PAD ON MOUND	T	603.94	609.90	139
JGH 2	1291+71	PAD ON MOUND	P	608.53	609.40	-3 •
JCD 1	1284+36	PAD ON MOUND	T	605.41	609.70	62
JCD 3	1280+56	PAD W/WALL	P	606.43	607.90	0
JOP 2	1288+79	PAD ON MOUND	P	601.94	603.00	-2 •

NOTE: Temporary denotes to be removed and replaced with Light Tower, Service Pad, Special during Construction Stage II final grading.

- • Denotes excavation surplus.

• CUT TO FIT. USE REMAINDER OF BARS AT OPPOSITE END OF WALL. SEE CUTTING DIAGRAM (DETAIL SHEET 2 OF 2)

•• CUT TO FIT WHERE NECESSARY, DISCARD EXCESS.

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - MI	REVISED -
		DRAWN - JG	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
HIGH MAST LIGHT TOWER SERVICE PAD & RETAINING WALL DETAILS

SCALE: | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	450
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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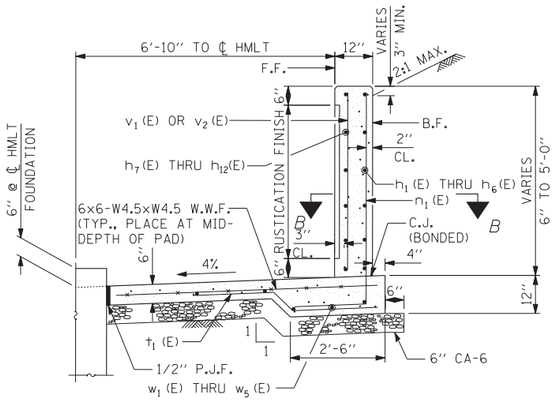
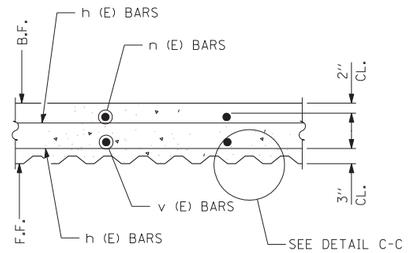
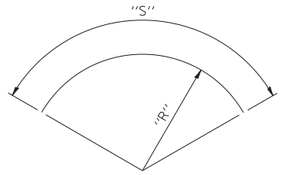


SECTION A-A



SECTION B-B



BAR	"R"	"S"
h_1(E)	7'-7"	23'-6"
h_2(E)	7'-7"	20'-10"
h_3(E)	7'-7"	17'-8"
h_4(E)	7'-7"	14'-6"
h_5(E)	7'-7"	11'-4"
h_6(E)	7'-7"	8'-2"
h_7(E)	7'-1 1/2"	22'-1"
h_8(E)	7'-1 1/2"	19'-7"
h_9(E)	7'-1 1/2"	16'-7"
h_{10}(E)	7'-1 1/2"	13'-7"
h_{11}(E)	7'-1 1/2"	10'-8"
h_{12}(E)	7'-1 1/2"	7'-8"
W_1(E)	7'-7"	24'-4"
W_2(E)	6'-8"	21'-7"
W_3(E)	5'-10"	18'-10"
W_4(E)	4'-9"	15'-5"
W_5(E)	3'-6"	11'-6"

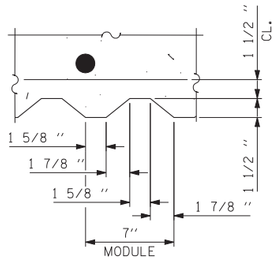
NOTE: "R" AND "S" MEASURED ALONG BAR ℄

BARS w_1(E) THRU w_5(E) & h_1(E) THRU h_{12}(E)

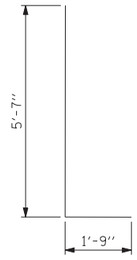
BAR	NO.	SIZE	LENGTH	SHAPE
h_1(E)	1	#5	23'-6"	
h_2(E)	1	#5	20'-10"	
h_3(E)	1	#5	17'-8"	
h_4(E)	1	#5	14'-6"	
h_5(E)	1	#5	11'-4"	
h_6(E)	1	#5	8'-2"	
h_7(E)	1	#4	22'-1"	
h_8(E)	1	#4	19'-7"	
h_9(E)	1	#4	16'-7"	
h_{10}(E)	1	#4	13'-7"	
h_{11}(E)	1	#4	10'-8"	
h_{12}(E)	1	#4	7'-8"	
n_1(E)	25	#6	7'-4"	
t_1(E)	25	#6	5'-1"	
v_1(E)	7	#4	5'-0"	
v_2(E)	8	#4	4'-8"	
W_1(E)	1	#5	24'-4"	
W_2(E)	1	#5	21'-7"	
W_3(E)	1	#5	18'-10"	
W_4(E)	1	#5	15'-5"	
W_5(E)	1	#5	11'-6"	

BILL OF MATERIAL

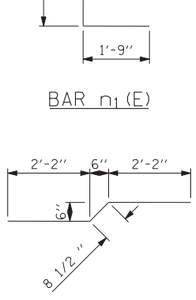
LIGHT TOWER, SERVICE PAD, SPECIAL WITH 5'-0" WALL



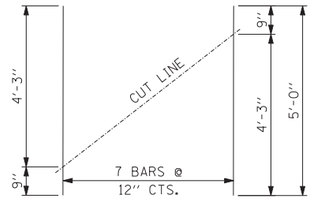
DETAIL C-C



BAR n_1(E)



BAR t_1(E)



ORDER v_1(E) BARS FULL LENGTH AND CUT TO FIT AS SHOWN.
USE REMAINDER OF BARS AS INDICATED ON PLANS.

CUTTING DIAGRAM

BARS v_1(E)

ITEM	UNIT	TOTAL
WELDED WIRE FABRIC	SQ. YD.	15
WELDED WIRE FABRIC, SPECIAL	SQ. YD.	8
STRUCTURE EXCAVATION	CU. YD.	9
STRUCTURE EXCAVATION, SPECIAL	CU. YD.	12
CONCRETE STRUCTURES	CU. YD.	5
CONCRETE STRUCTURES, SPECIAL	CU. YD.	7.7
REINFORCEMENT BARS, EPOXY COATED, SPECIAL	POUND	775
RUSTICATION FINISH, SPECIAL	SQ. FT.	55
PROTECTIVE COAT	SQ. YD.	16
PROTECTIVE COATING, SPECIAL	SQ. YD.	29
SUB-BASE GRANULAR MATERIAL, TYPE B 6"	SQ. YD.	11
SUB-BASE GRANULAR MATERIAL, TYPE B 6", SPECIAL	SQ. YD.	13

NOTE: STRUCTURE EXCAVATION ONLY APPLIES TO PERMANENT LIGHT TOWER SERVICE PADS AND LIGHT TOWER SERVICE PADS, SPECIAL. TEMPORARY LIGHT TOWER SERVICE PADS TO BE PLACED ON TEMPORARY FILL.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
LIGHT TOWER, SERVICE PAD	EACH	8
LIGHT TOWER, SERVICE PAD, SPECIAL	EACH	2

TOTAL BILL OF MATERIAL

1. F.F. and B.F. denote Front Face and Back Face respectively.
2. HMLT denotes High Mast Light Tower.
3. See IDOT Standard Drawing BE501 for additional High Mast Light Tower foundation and ground well details
4. Reinforcement Bars designated (e) shall be epoxy coated.
5. Refer to High Mast Light Tower Service Pad, Special & Retaining Wall Details 1 for location and orientation of conduit sleeves and grounding wells.
6. Contractor shall maintain integrity of adjacent pavement as may be required in excavating for HMLT service pad walls.
7. Provide Protective Coat to top, front face, exposed portion of back face, and ends of walls, and top and edges of pad.

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - MI	REVISED -
		DRAWN - JG	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
HIGH MAST LIGHT TOWER SERVICE PAD & RETAINING WALL DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	451
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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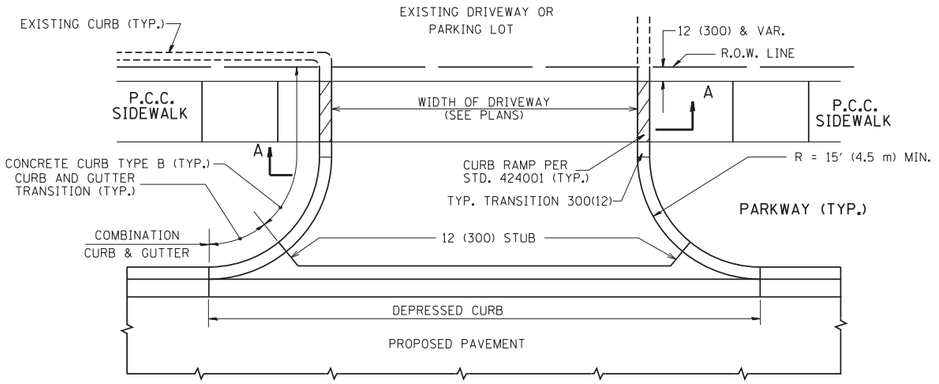
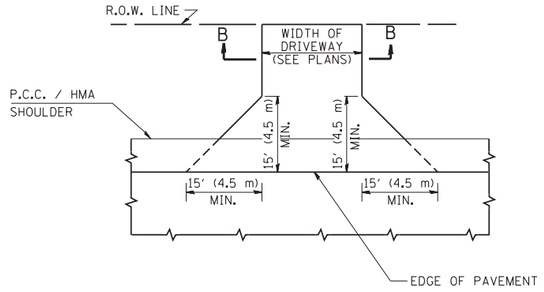
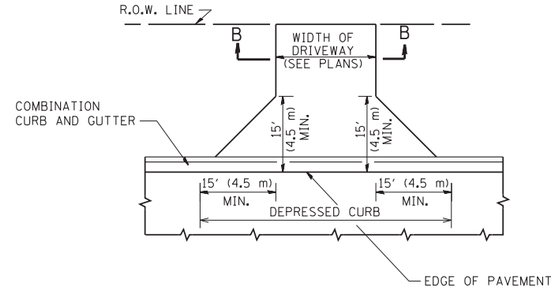


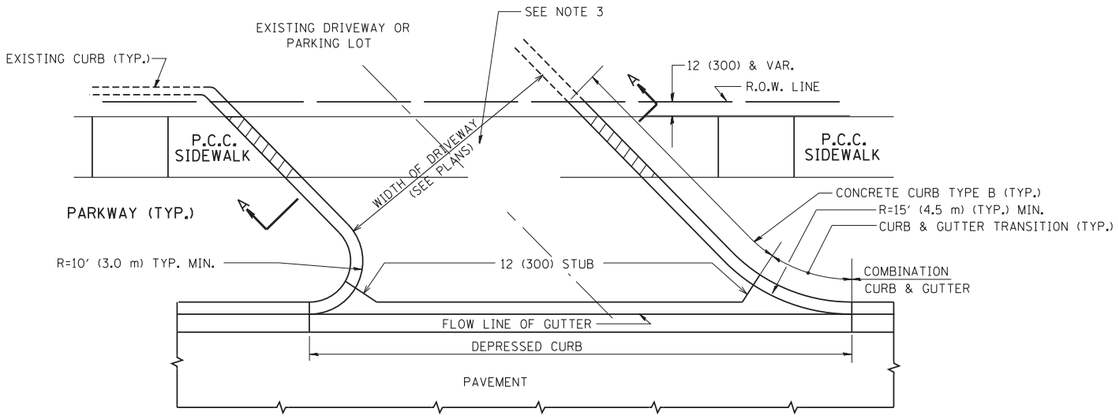
WITH CONCRETE CURB, TYPE B



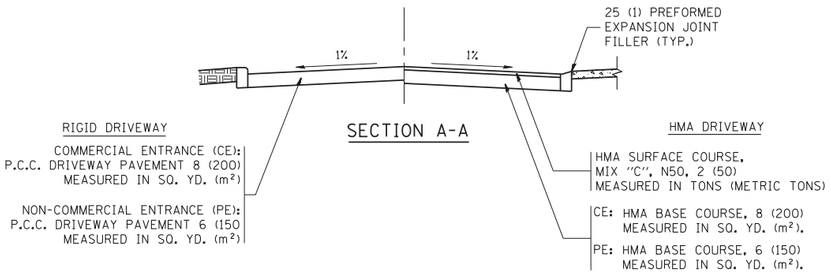
ADJACENT TO P.C.C. / HMA SHOULDER

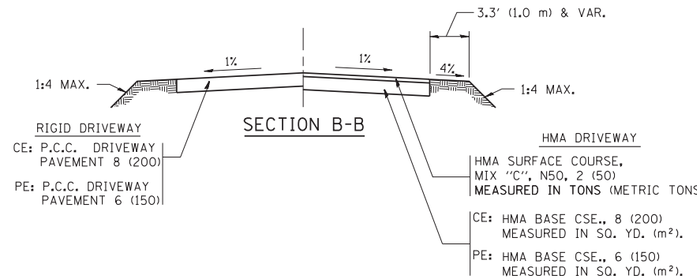


ADJACENT TO CURB AND GUTTER



WITH CONCRETE CURB, TYPE B





RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE,
MIX "C", N50, 2 (50)
MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200)
MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

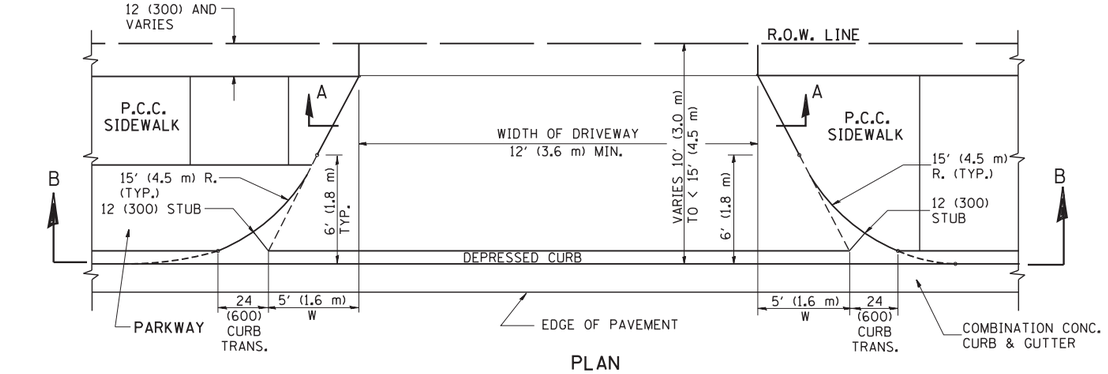
THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

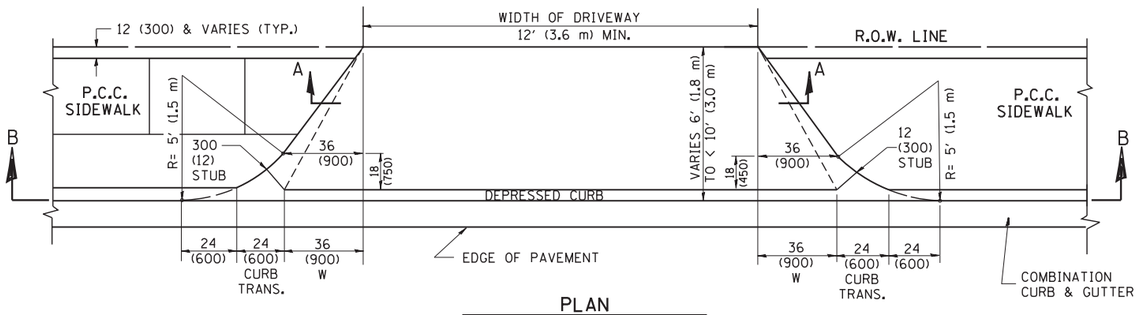
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

FILE NAME = c:\projects\diststd22x34\bd01.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - M. GOMEZ 04-06-01	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRIVEWAY DETAILS – DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - P. LaFLUER 04-15-03						577	452
	PLOT SCALE = 49.9999 ' / IN.	CHECKED -	REVISED - R. BORO 01-01-07				BD0156-07 (BD-01)	CONTRACT NO.		
	PLOT DATE = 6/12/2008	DATE - 11-04-95	REVISED - R. BORO 06-11-08		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



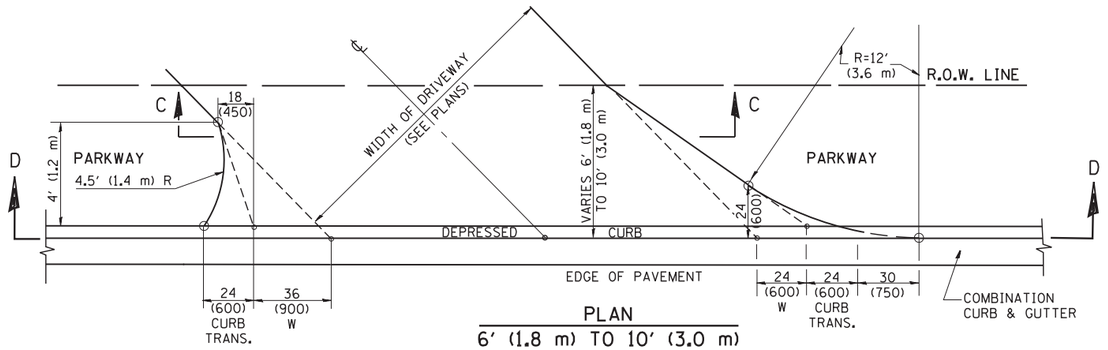
PLAN

10' (3.0 m) TO < 15' (4.5 m)



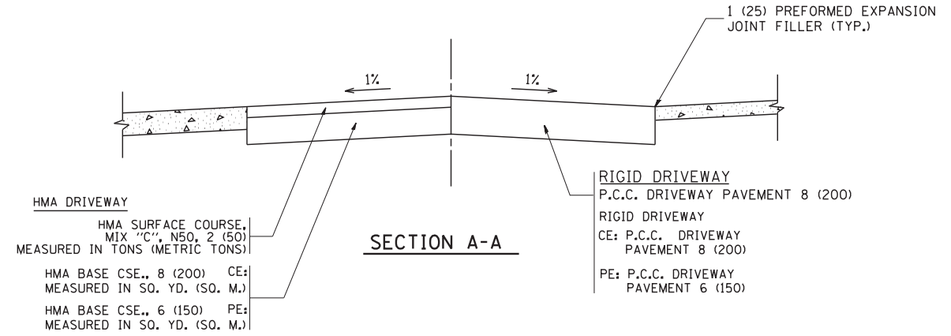
PLAN

6' (1.8 m) TO < 10' (3.0 m)

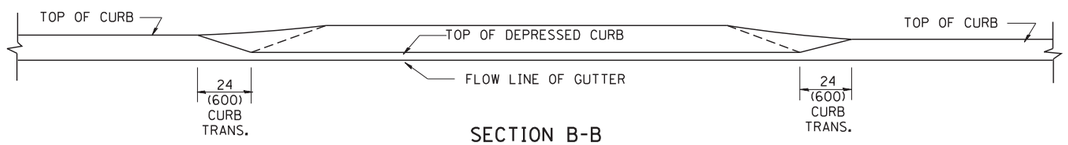


PLAN

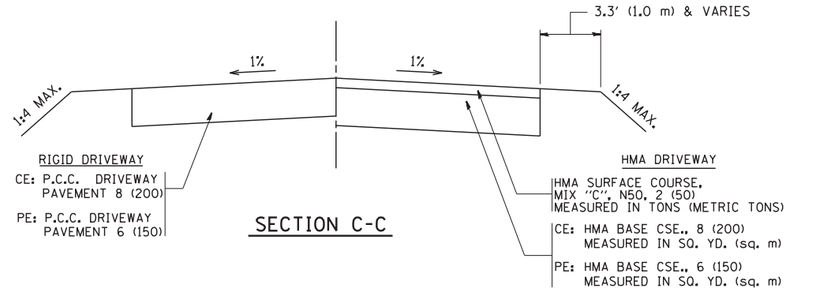
6' (1.8 m) TO 10' (3.0 m)



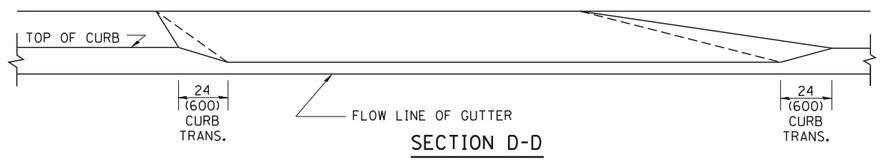
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

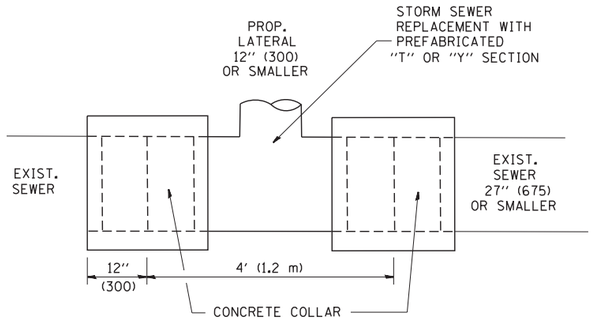
COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

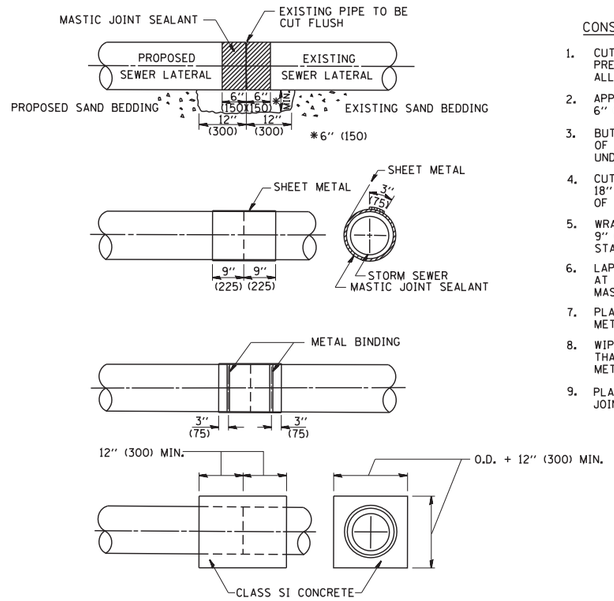
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

FILE NAME = W:\diststd\22x34\bd02.dgn	USER NAME = gaglianobt	DESIGNED - R. SHAH	REVISED - T. HOLTZ 04-08-97	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**DRIVEWAY DETAILS** **DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)**	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - M. GOMEZ 04-06-01						577	453
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - P. LaFLEUR 04-15-03				BD400-02 (BD-02)		CONTRACT NO.	
	PLOT DATE = 1/4/2008	DATE - 11-06-95	REVISED - R. BORO 01-01-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DETAIL "A"

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

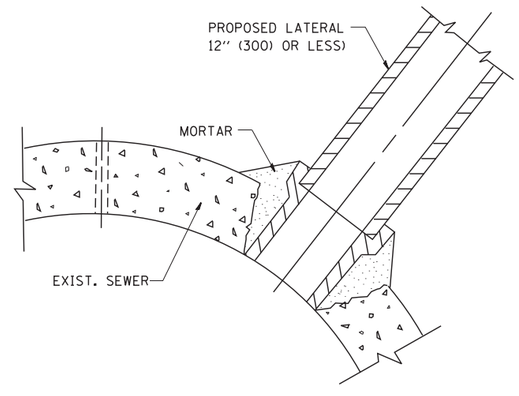


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".

B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

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

GENERAL

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

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

BASIS OF PAYMENT

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

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

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

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

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

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		DRAWN -	REVISED - R. SHAH 09-09-94
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER

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

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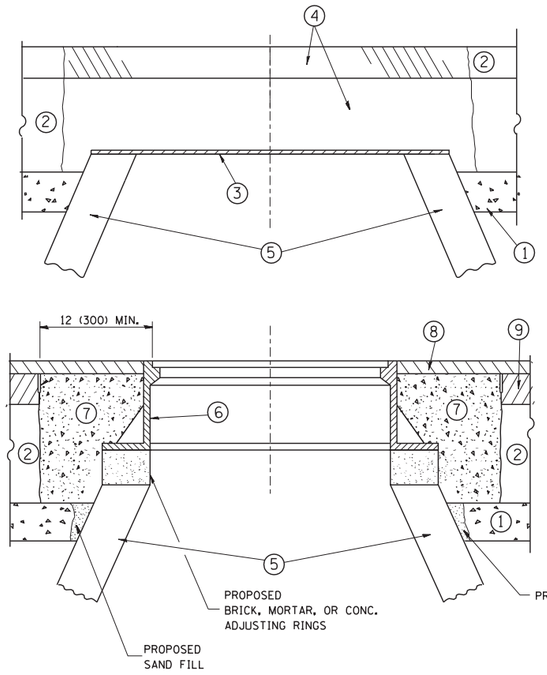
	BD500-01 (BD-7)	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.

B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.

C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.

D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1½ (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.

B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.

C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

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

NOTES:

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

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

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

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

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

LOCATION OF STRUCTURES:

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

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

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

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - R. WIEDEMAN 05-14-04
	PLOT DATE = 1/4/2008	DATE - 10-25-94	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

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

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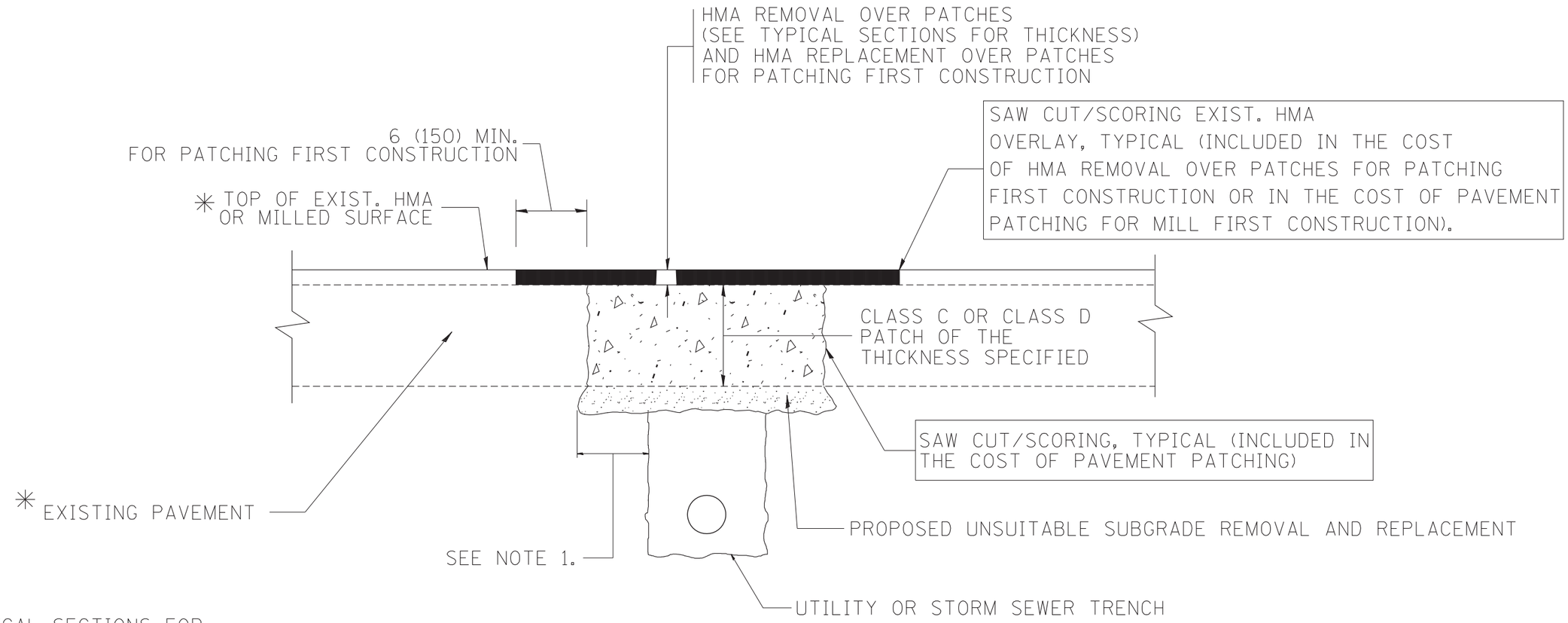
	BD600-03 (BD-8)		CONTRACT NO.	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



✳ SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

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

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

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

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

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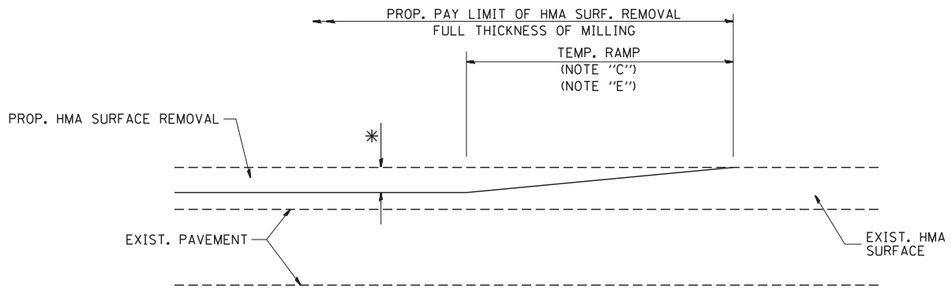
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

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

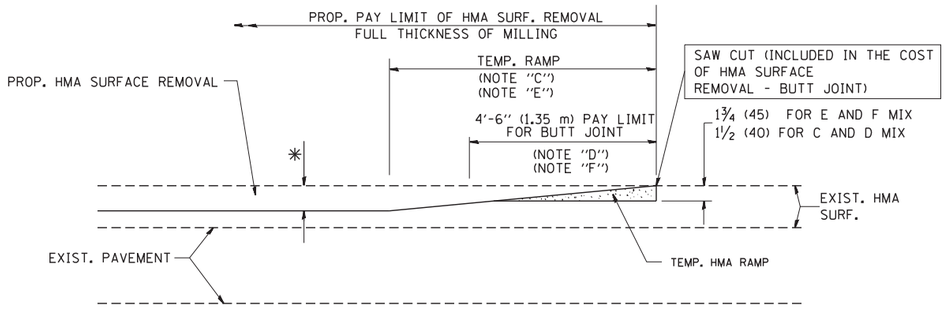
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	456
	BD400-04 (BD-22)	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

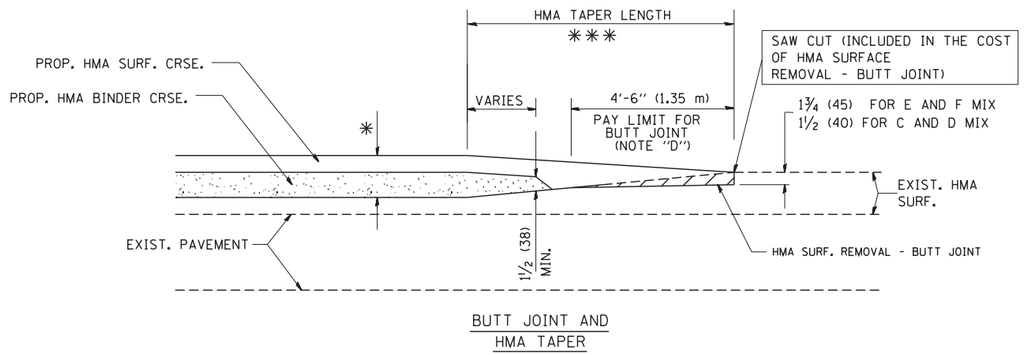


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

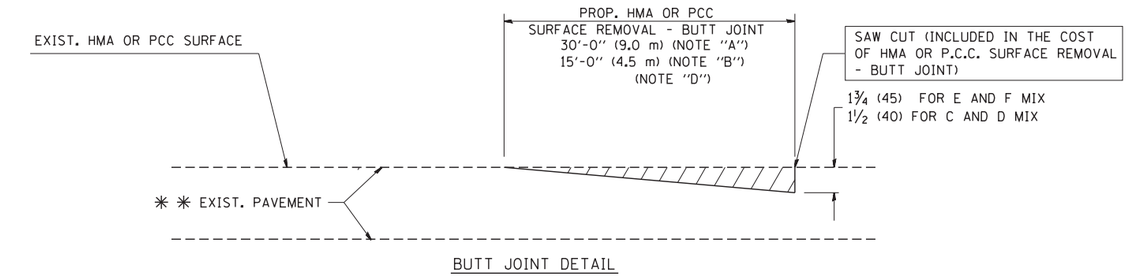
OPTION 2

TYPICAL TEMPORARY RAMP

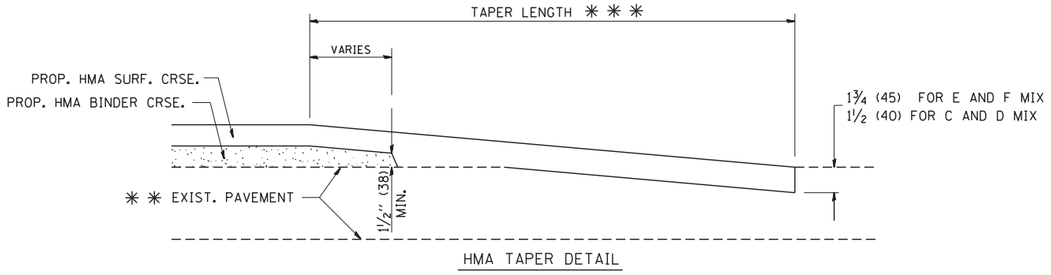


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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

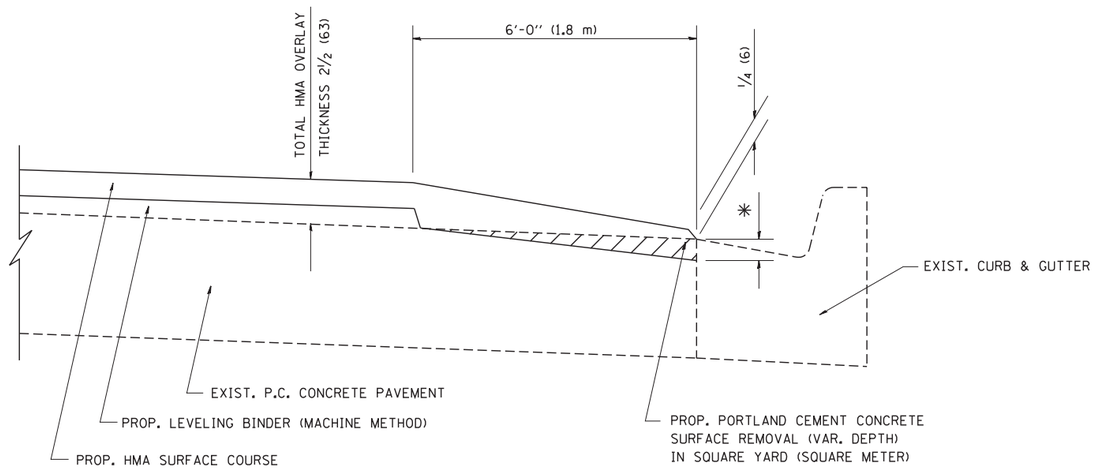
FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	457
	BD400-05 BD32		CONTRACT NO.	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



HMA TAPER AT EDGE OF P.C.C PAVEMENT

HMA SURFACE		LEVELING BINDER	
MIX	THICKNESS	THICKNESS	* MILLING AT GUTTER FLAG
C OR D	1½ (38)	1 (25)	1¼ (33)
F	1¾ (44)	¾ (19)	1½ (38)

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

FILE NAME = W:\diststd\22x34\bd33.dgn	USER NAME = gaglianobt	DESIGNED - R. SHAH	REVISED - R. SHAH 10-25-94
		DRAWN - JIS	REVISED - A. ABBAS 05-05-99
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - A. ABBAS	REVISED - E. GOMEZ 12-21-00
	PLOT DATE = 1/4/2008	DATE - 09-10-94	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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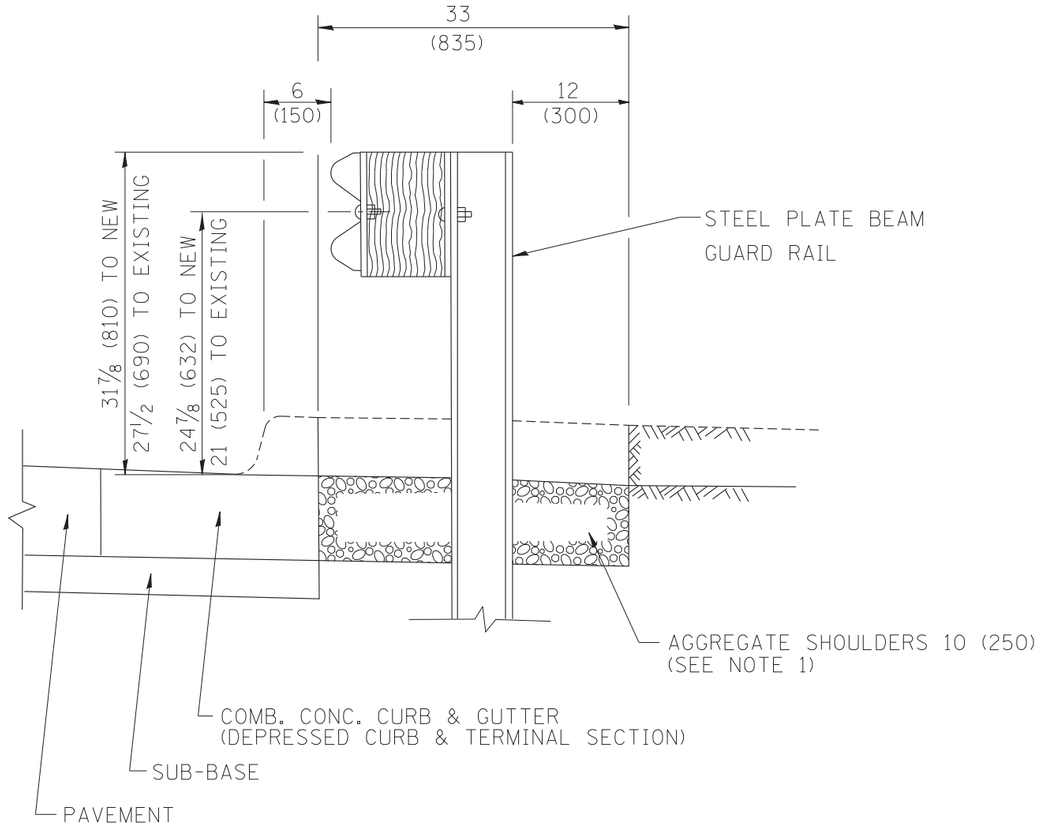
	BD400-06 (BD33)	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

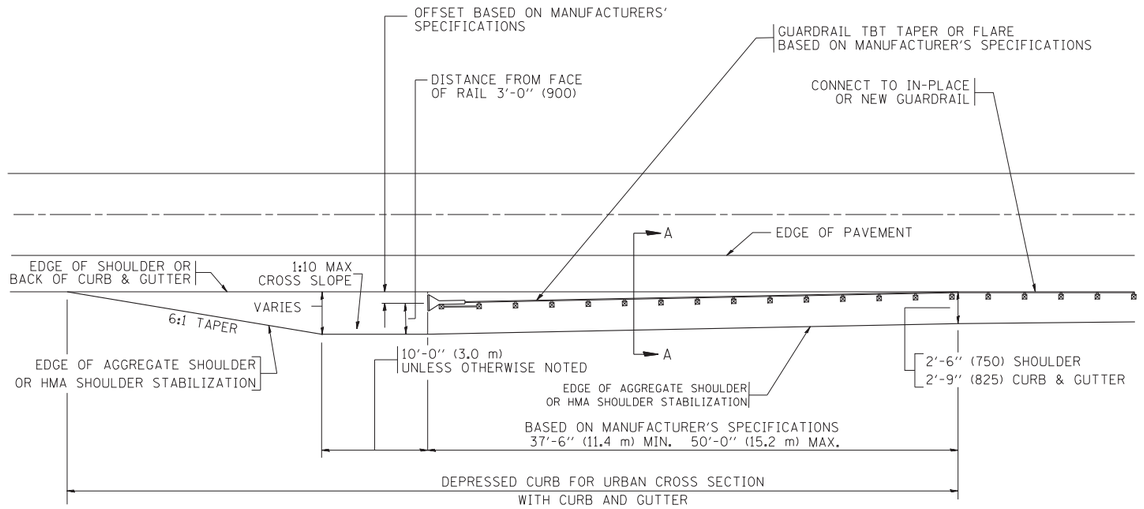


SECTION A-A

NOTES:
1. THE AGGREGATE SHOULDER, 10'' OR HMA SHOULDER, 6'' (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
2. ''EXISTING'' GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER

[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR ''HOT-MIX ASPHALT SHOULDERS 6'' (150 mm)''.

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL

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

FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\bd34.dgn	USER NAME = drivakosgn	DESIGNED - M. DE YONG	REVISED - E. GOMEZ 08-28-00
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 49.9999 '/ IN.	CHECKED -	REVISED - R. BORO 12-08-2008
	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL.

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

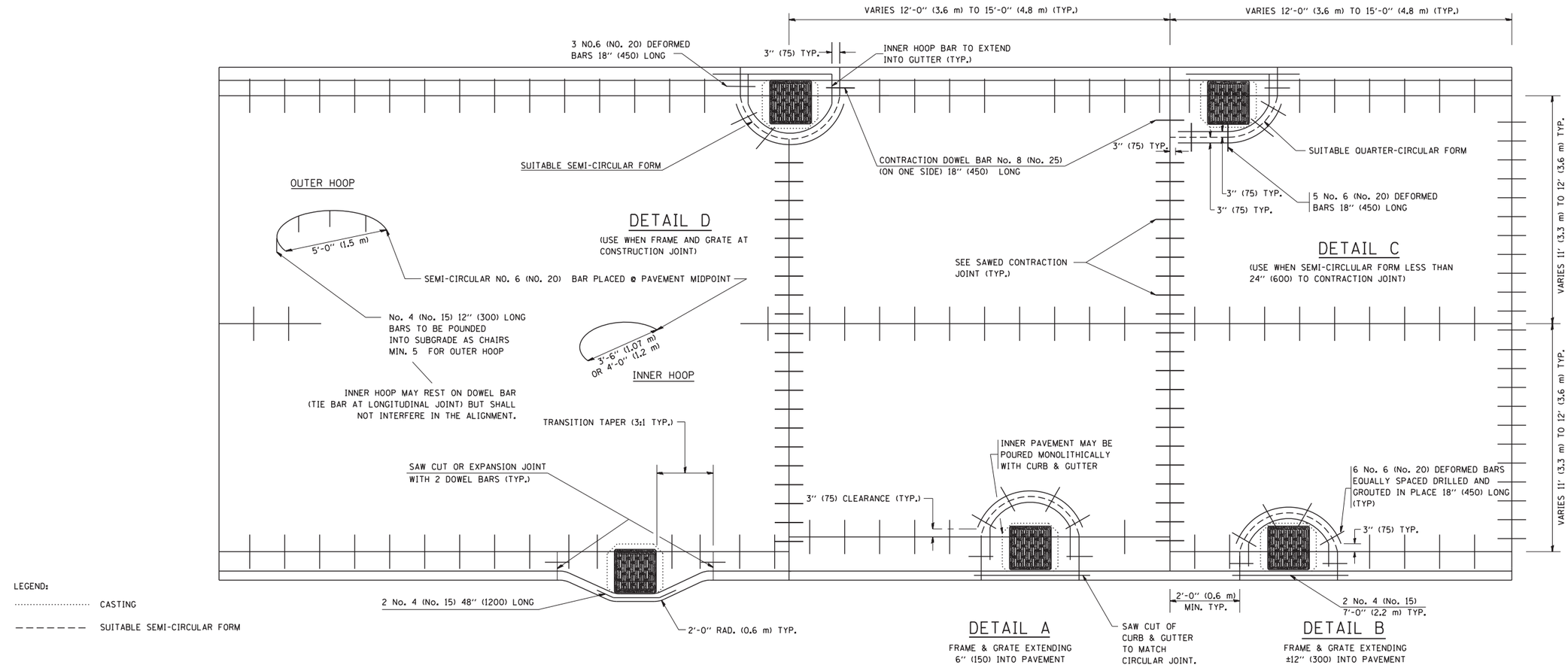
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	459
	BD600-10 (BD 34)	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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

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

NOTES :

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



TRANSITION CURB & AND GUTTER INTO PARKWAY
(PREFERRED BECAUSE PAVING OF MAINLINE NOT AFFECTED.)

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS) UNLESS OTHERWISE NOTED

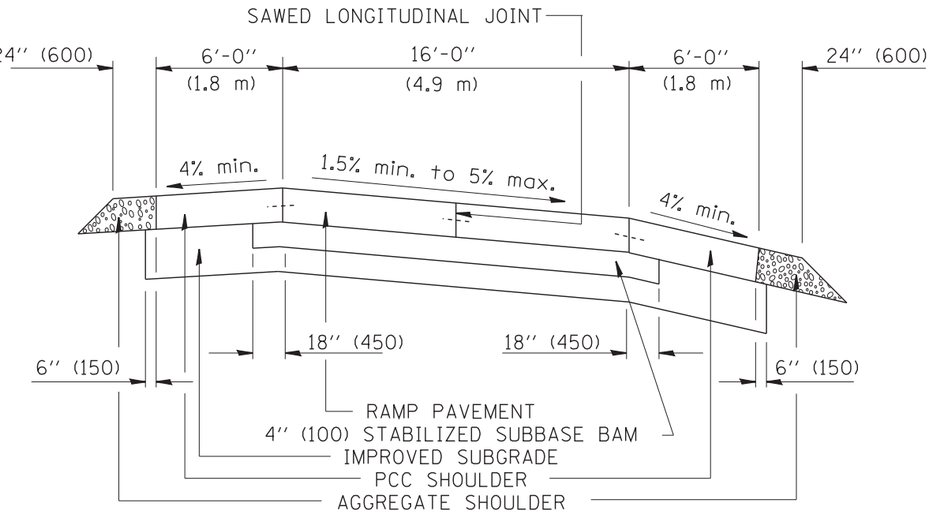
FILE NAME = W:\diststd\22x34\bd48.dgn	USER NAME = gaglianobt	DESIGNED - A. ABBAS	REVISED - T. MATOUSEK 08-28-00
		DRAWN - TOM MATOUSEK	REVISED - T. MATOUSEK 10-02-00
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - A. ABBAS	REVISED - T. MATOUSEK 04-25-02
	PLOT DATE = 1/4/2008	DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

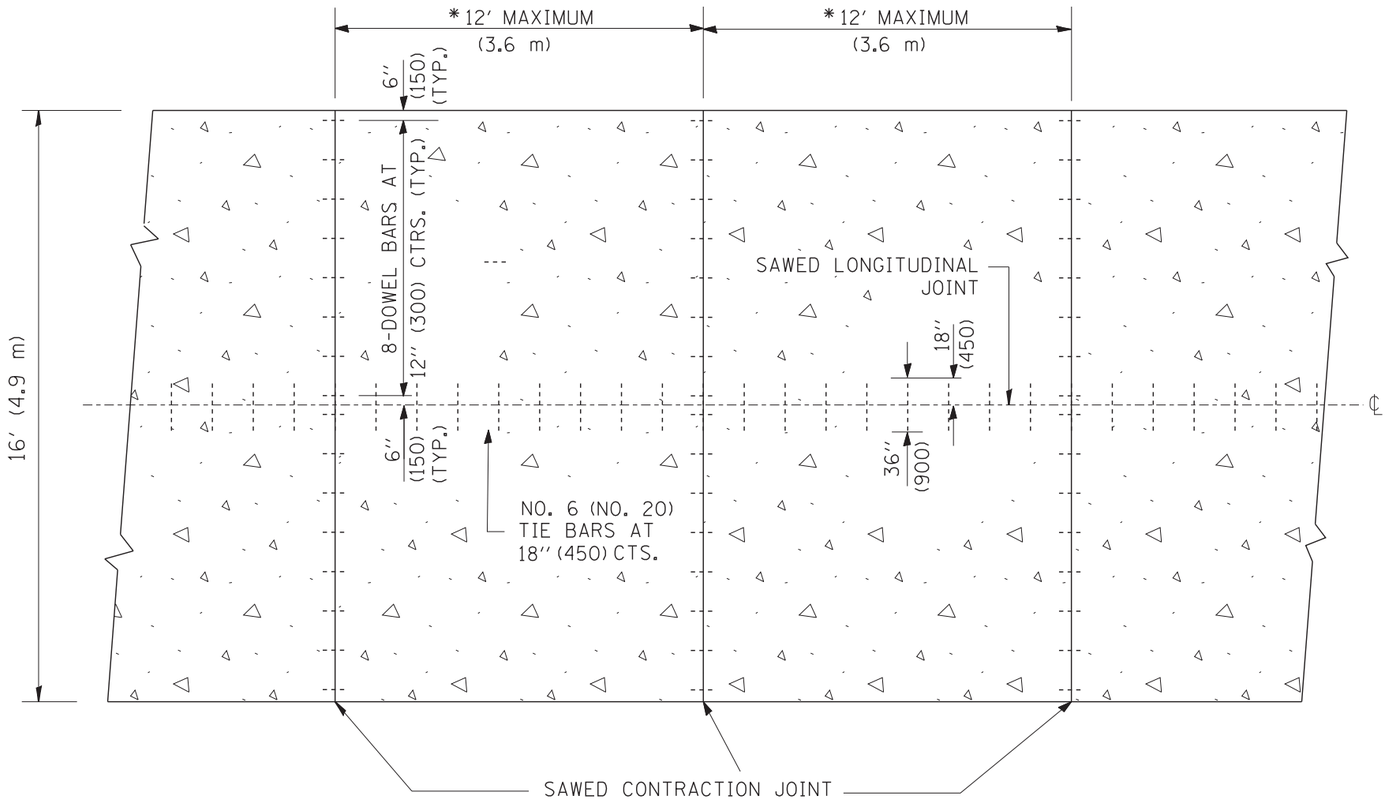
PCC PAVEMENT ROUNDOUTS AT CURB AND GUTTER

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	460
	BD-48	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SECTION

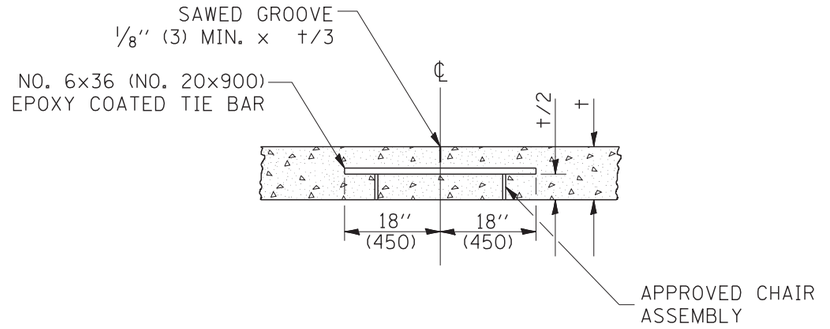


PLAN

NOTES:

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

2. ALL BARS TO BE EPOXY COATED.



SAWED LONGITUDINAL JOINT

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS) UNLESS OTHERWISE NOTED

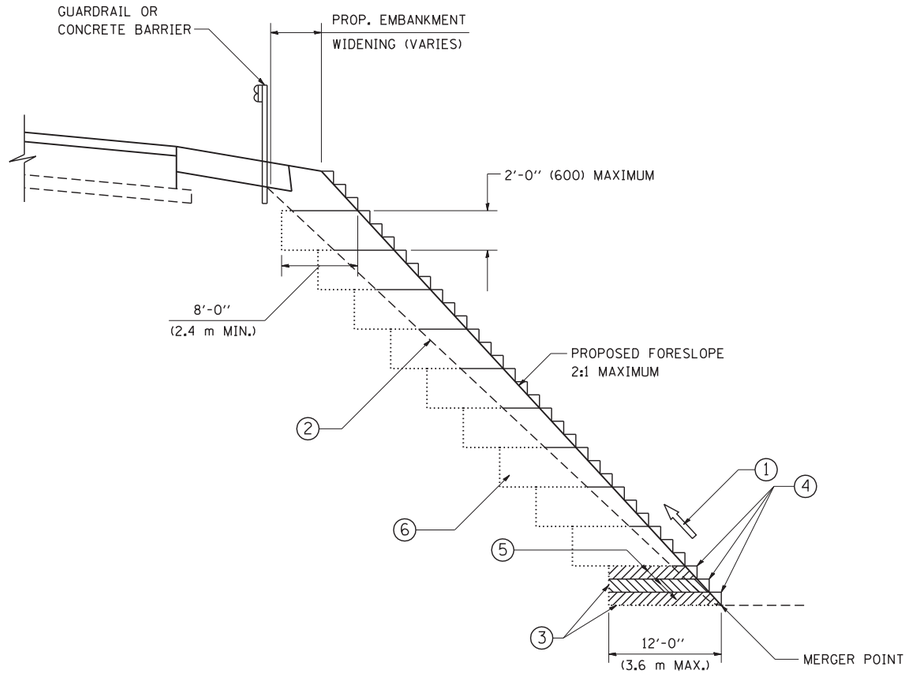
FILE NAME = W:\diststd\22x34\bd49.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -
		DRAWN - TOM MATOUSEK	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - A. ABBAS	REVISED -
	PLOT DATE = 1/4/2008	DATE - 10-18-02	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL FOR CENTERLINE SAW CUT 16' (4.9 m) AND VARIABLE JOINTED PCC PAVEMENT FOR RAMPS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	461
	BD49	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

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

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

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		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

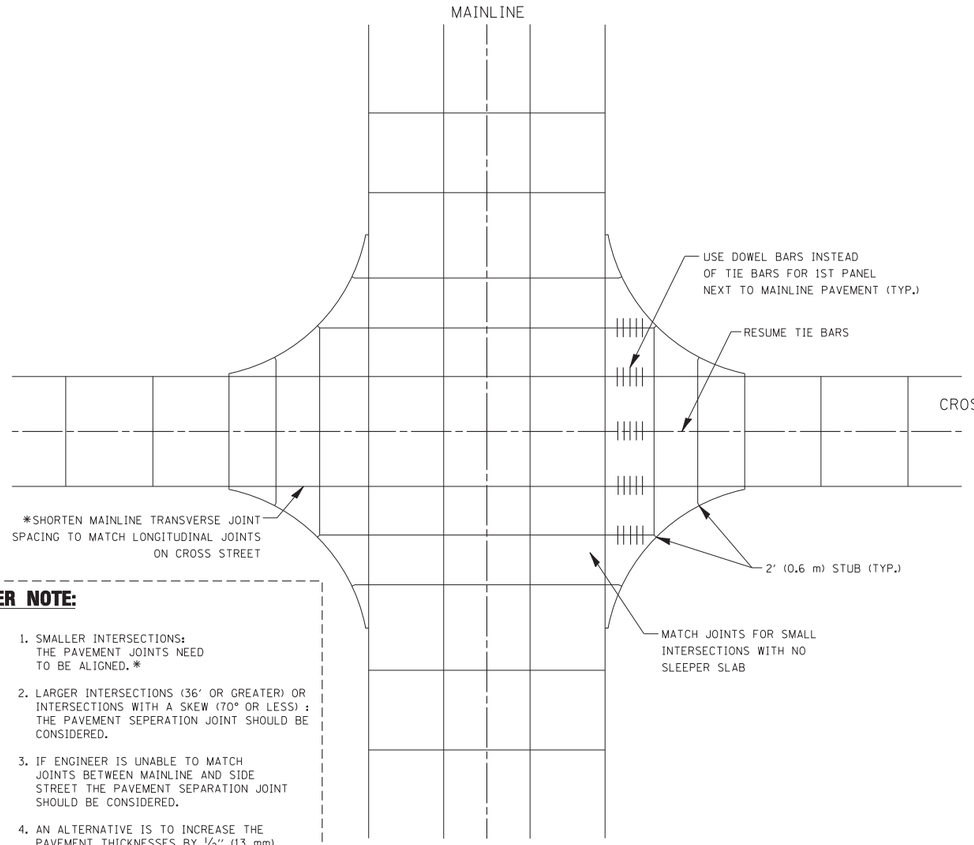
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	462
	BD-51	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

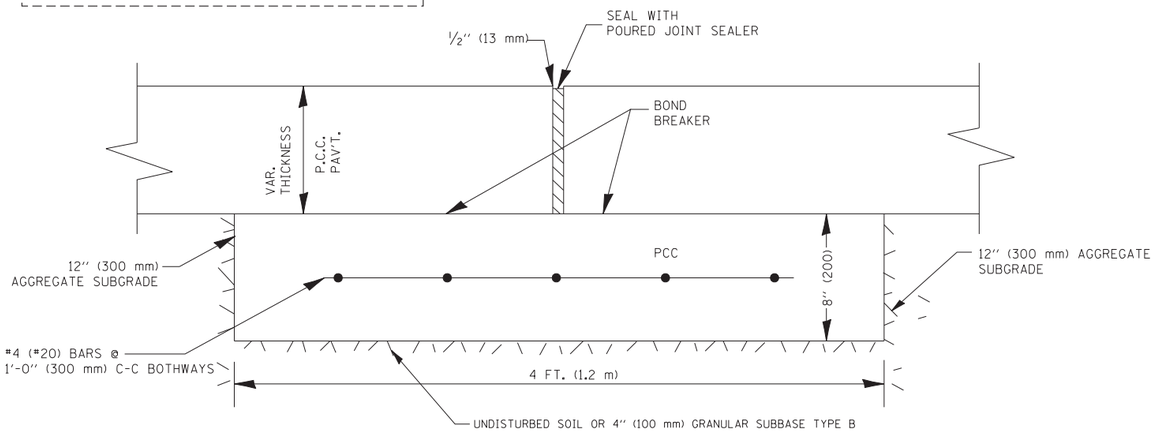
THE USE OF CROSS STREET PAVEMENT SEPARATION JOINTS FOR SKEWED OR LARGE INTERSECTIONS WHERE JOINTS MAY NOT MATCH



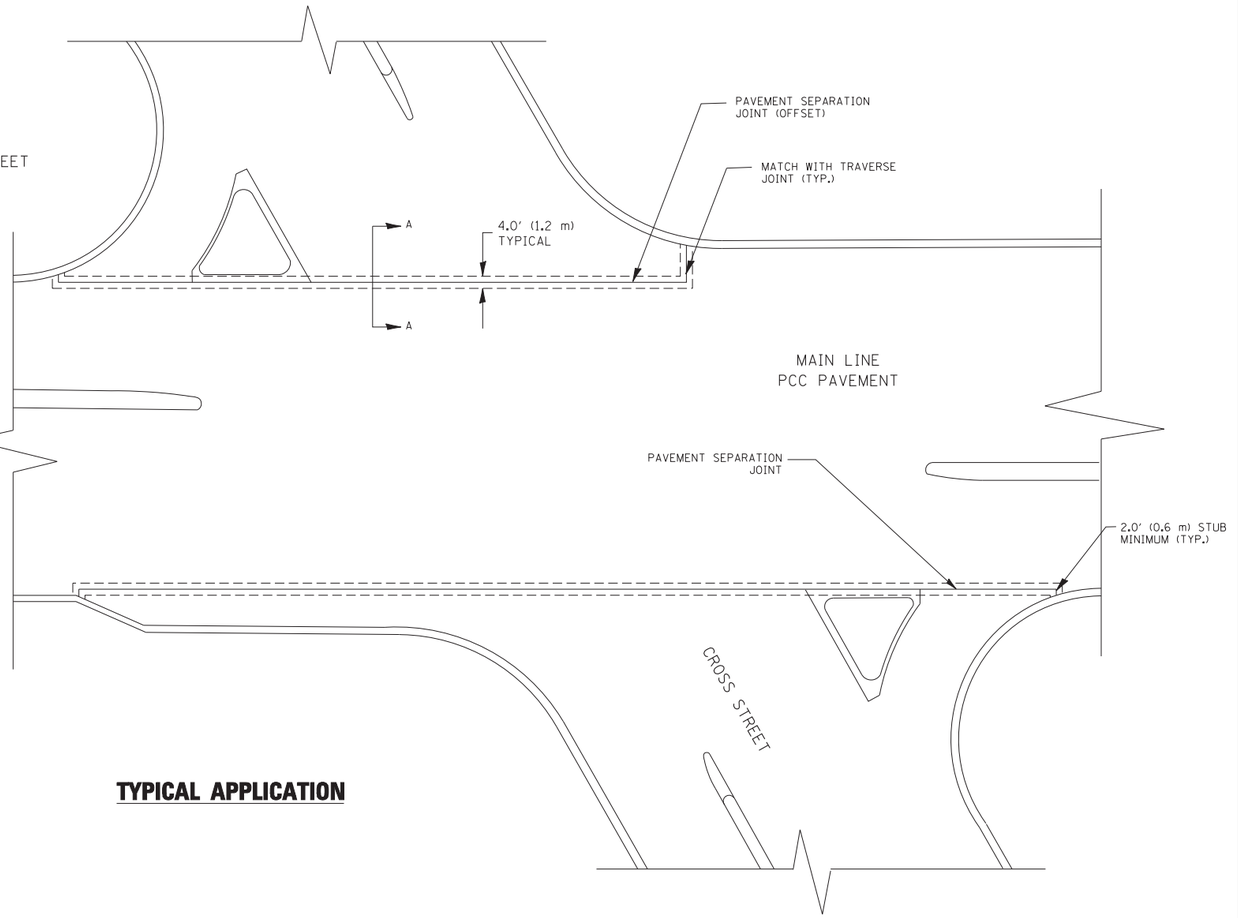
DESIGNER NOTE:

1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS) : THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPARATION JOINT SHOULD BE CONSIDERED.
4. AN ALTERNATIVE IS TO INCREASE THE PAVEMENT THICKNESSES BY ½" (13 mm) FOR THE LENGTH OF THE AFFECTED PANELS AT THE INTERSECTION.
5. FOR LARGE INTERSECTIONS (6 LANES OR MORE) WHERE JOINTS CAN BE MATCHED, USE #8 (25) DOWEL BARS INSTEAD OF #8 (25) TIE BARS AT EDGE OF MAINLINE PAVEMENT WHEN NO PAVEMENT SEPARATION JOINTS USED.

PLAN



PROPOSED SECTION A–A



TYPICAL APPLICATION

NOTE:

1. JOINT FILLER SHALL CONSIST OF A SHEET OF ½" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TO ARTICLE 1051.03 OF THE STANDARD SPECIFICATIONS.
2. THE JOINT SHALL BE SEALED WITH A HOT POUR JOINT SEALER CONFORMING TO ARTICLE 1050.02 OF THE STANDARD SPECIFICATIONS.
3. A SINGLE LAYER OF FELT ROOFING PAPER SHALL SERVE AS A BOND BREAKER.
4. JOINT SHALL CONTINUE THROUGH COMBINATION CURB & GUTTER OR PCC SHOULDER.
5. PAVEMENT SEPARATION JOINT IS TO BE PAID FOR AS "SLEEPER SLAB" AND IS TO BE MEASURED IN PLACE BY THE LINEAL FOOT.
6. BOND BREAKER AND ½" (13 mm) JOINT AND FILLER SHALL BE INCIDENTAL TO THE PAY ITEM "SLEEPER SLAB".

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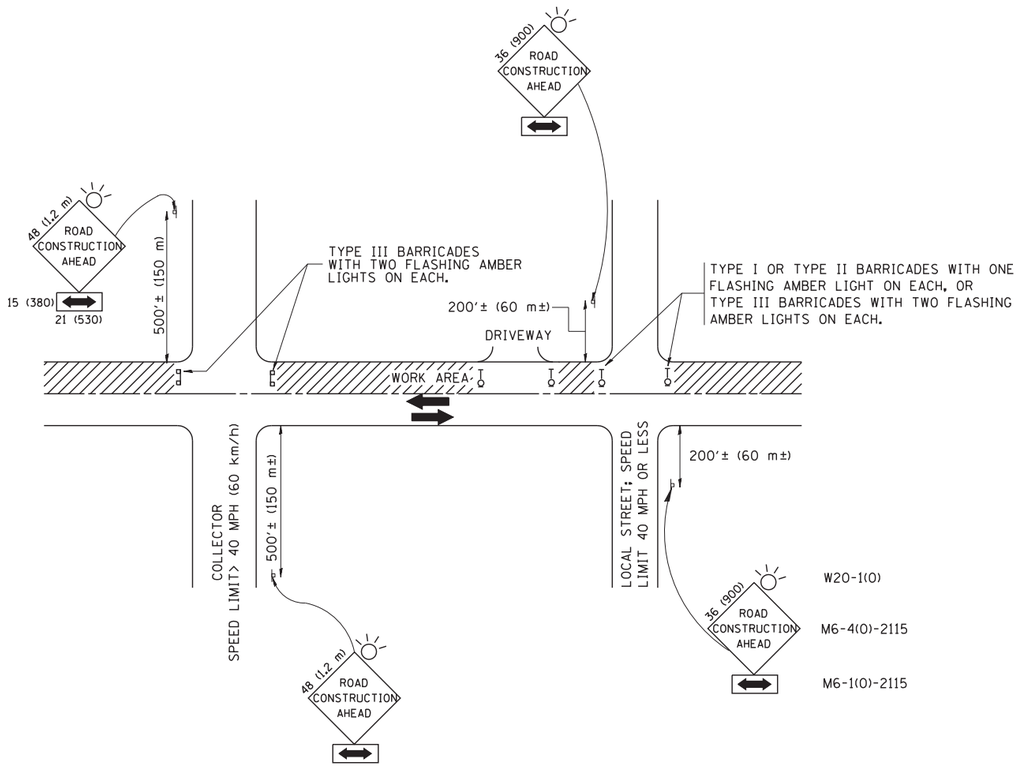
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 6/18/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	463
	BD52	CONTRACT NO.		
		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.

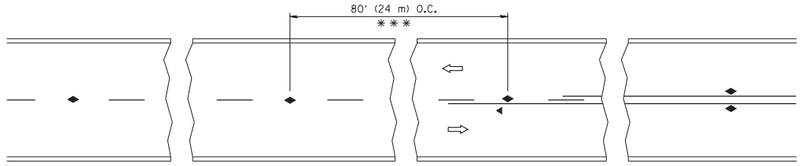
FILE NAME = W:\diststd\22x34\tc10.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

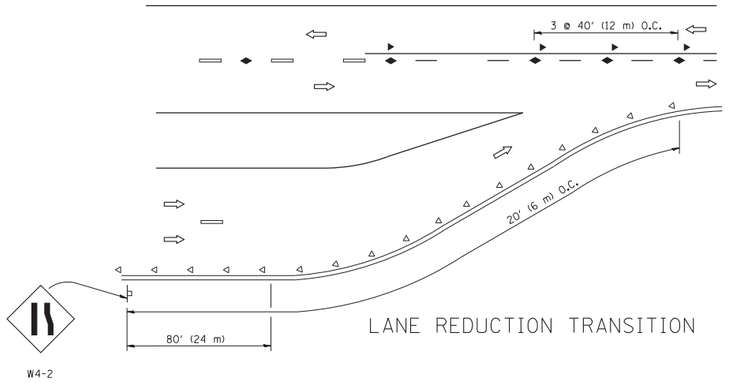
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	464
TC-10		CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

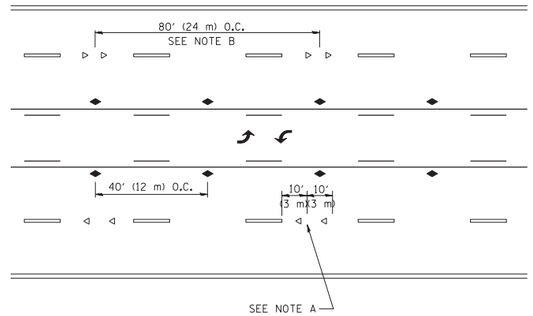


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

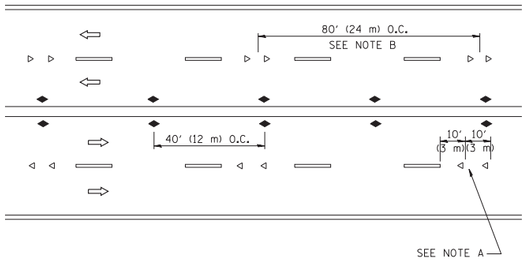
TWO-LANE/TWO-WAY



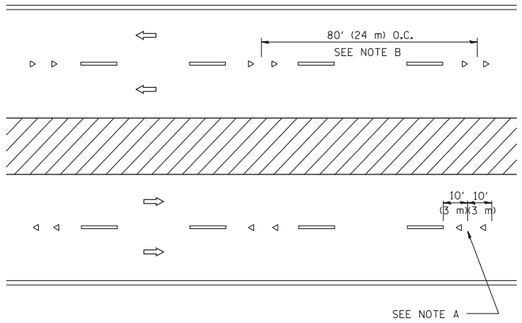
LANE REDUCTION TRANSITION



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

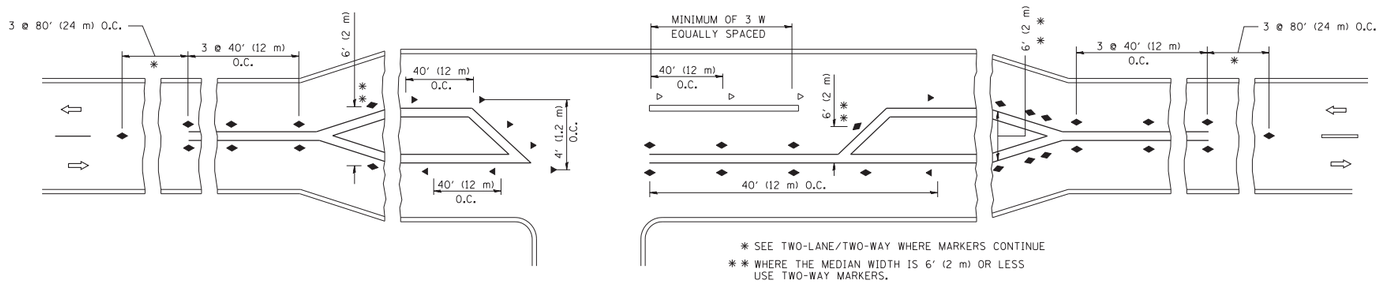
LANE MARKER NOTES

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 SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



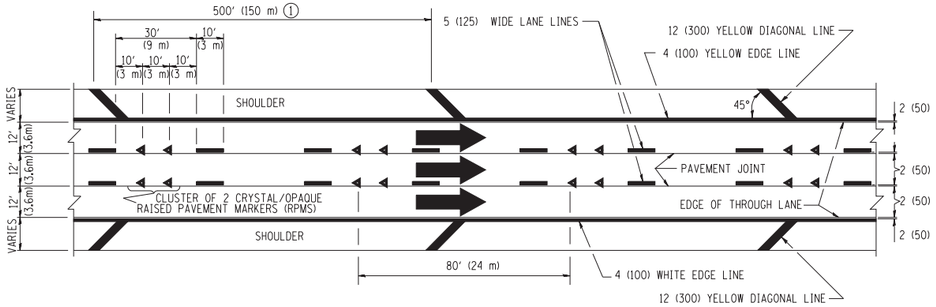
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

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

LEFT TURN

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

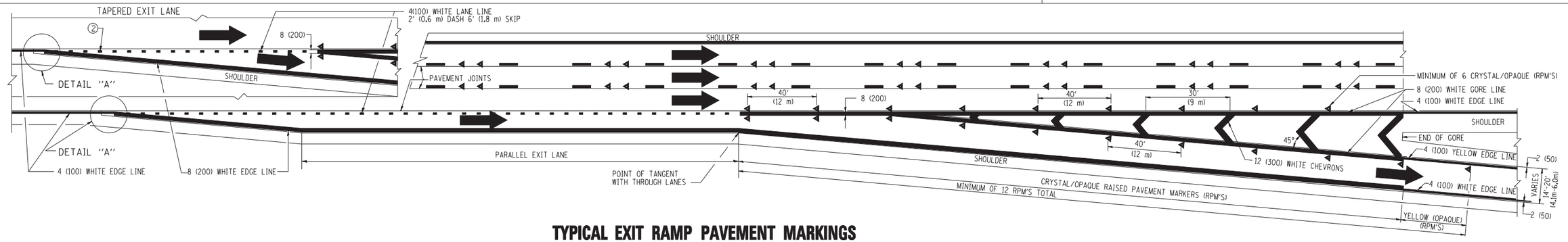
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108315\tc11.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.
	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09		F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO.
					TC-11 | CONTRACT NO.
					FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



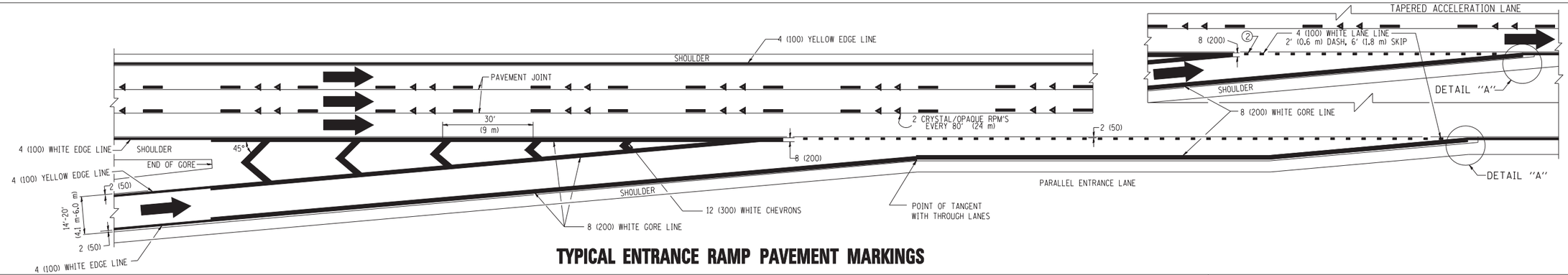
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

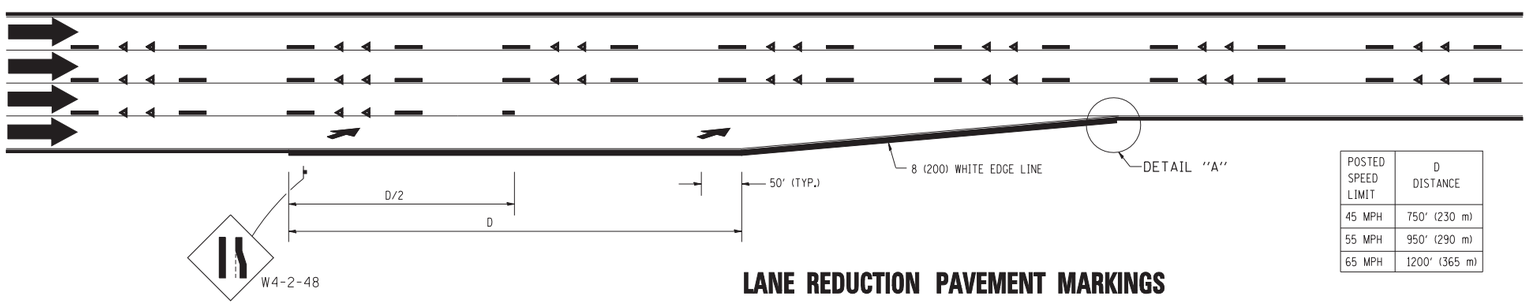
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT.
3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS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



TYPICAL EXIT RAMP PAVEMENT MARKINGS

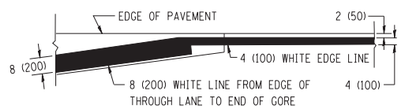


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



LANE REDUCTION PAVEMENT MARKINGS

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



DETAIL "A"

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.

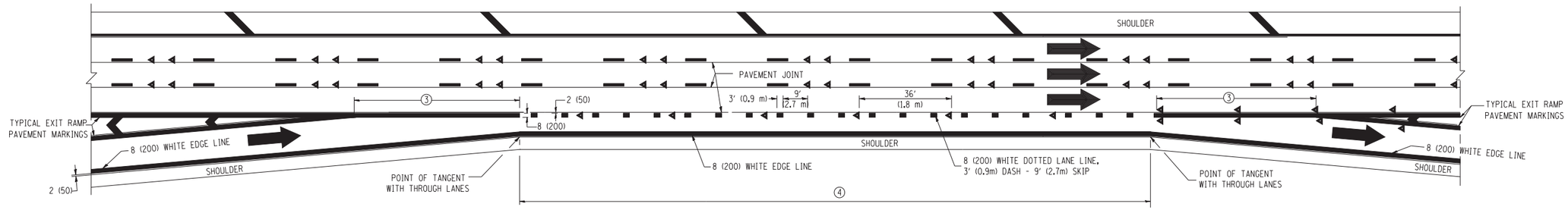
FILE NAME = c:\pw_work\PWIDOT\LEYSA\d0108315\tc12.dgn	USER NAME = leysa	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96
		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/22/2010	DATE - 01-90	REVISED - S.P.B. 01-10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

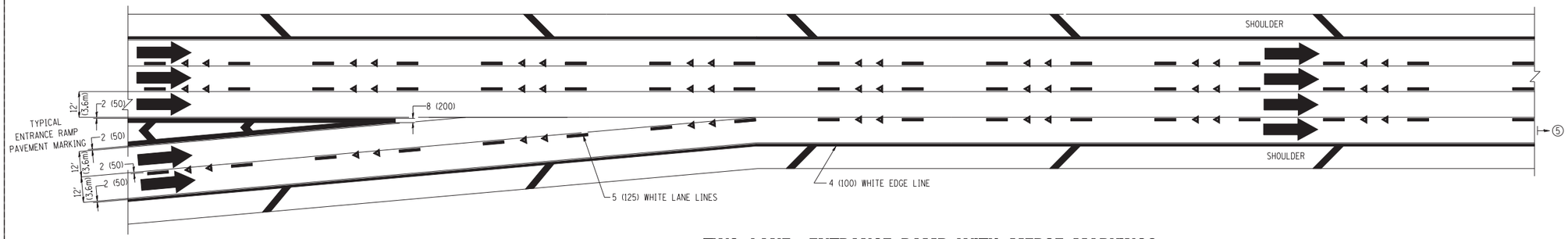
MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

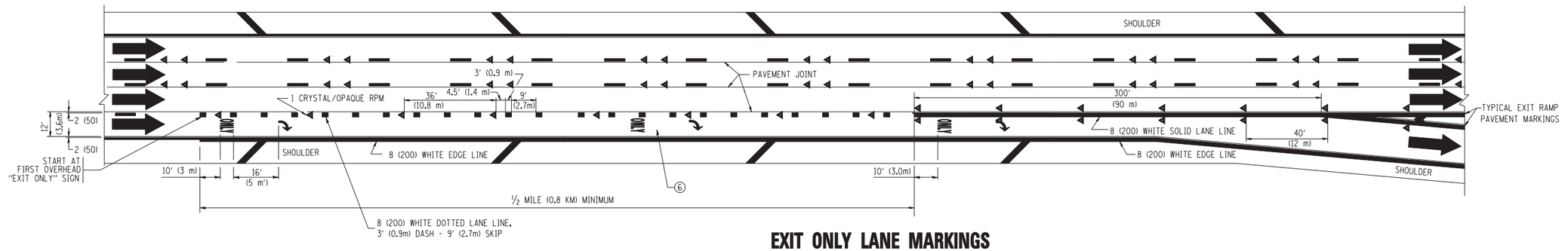
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	466
	TC-12	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



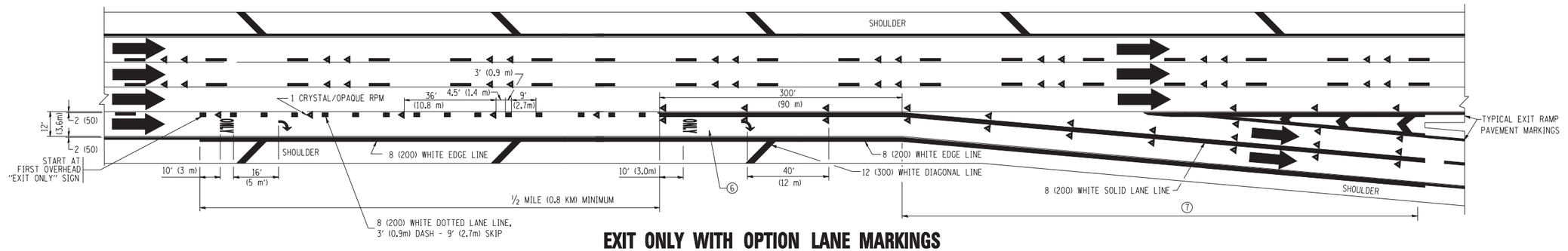
AUXILIARY LANE MARKINGS



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.

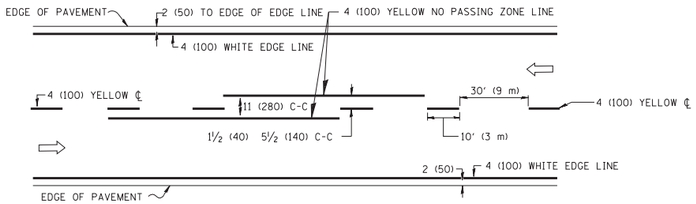
FILE NAME = c:\pw_work\PWIDOT\LEYSA\d0108315\tc12.dgn	USER NAME = leysa	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96
		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/22/2010	DATE - 01-90	REVISED - S.P.B. 01-10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

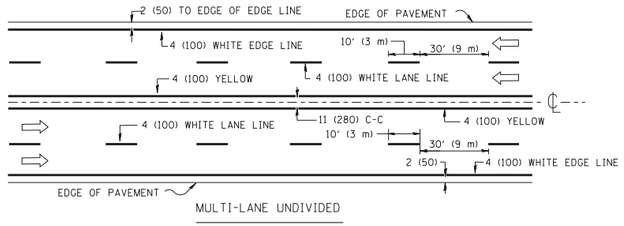
MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

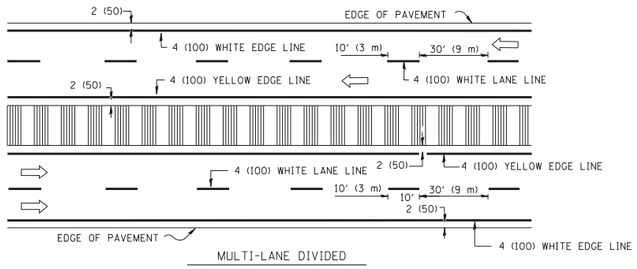
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	467
	TC-12	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



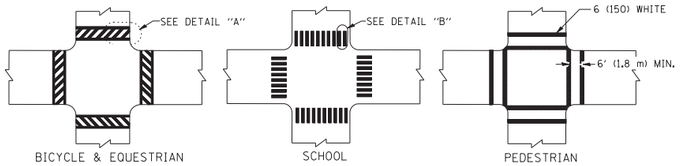
MULTI-LANE UNDIVIDED

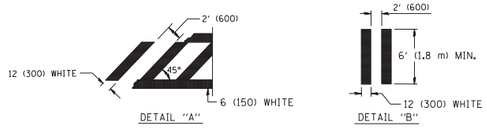


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

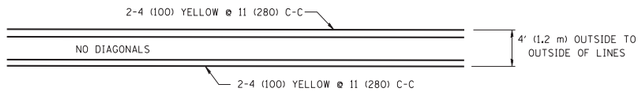
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

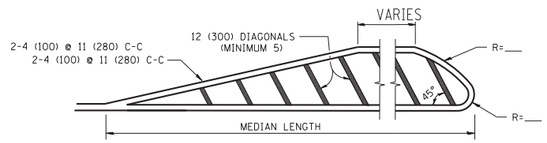




TYPICAL CROSSWALK MARKING



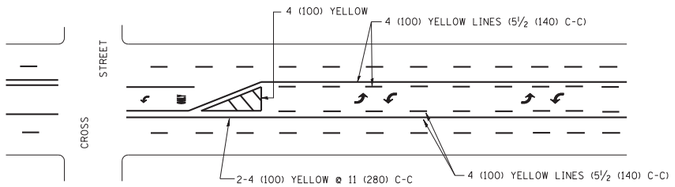
4' (1.2 m) WIDE MEDIANS ONLY



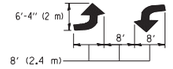
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

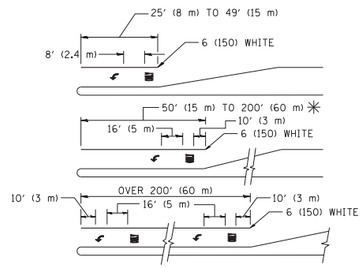


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

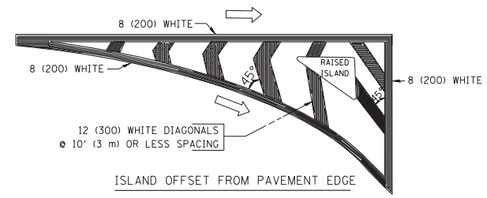


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

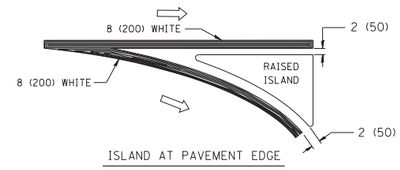
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



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 ø 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ø 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE 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 ø 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ø 6 (150) 12 (300) ø 45° 12 (300) ø 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 ø 4 (100) WITH 12 (300) DIAGONALS ø 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	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 ø 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" IS 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^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) ø 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.

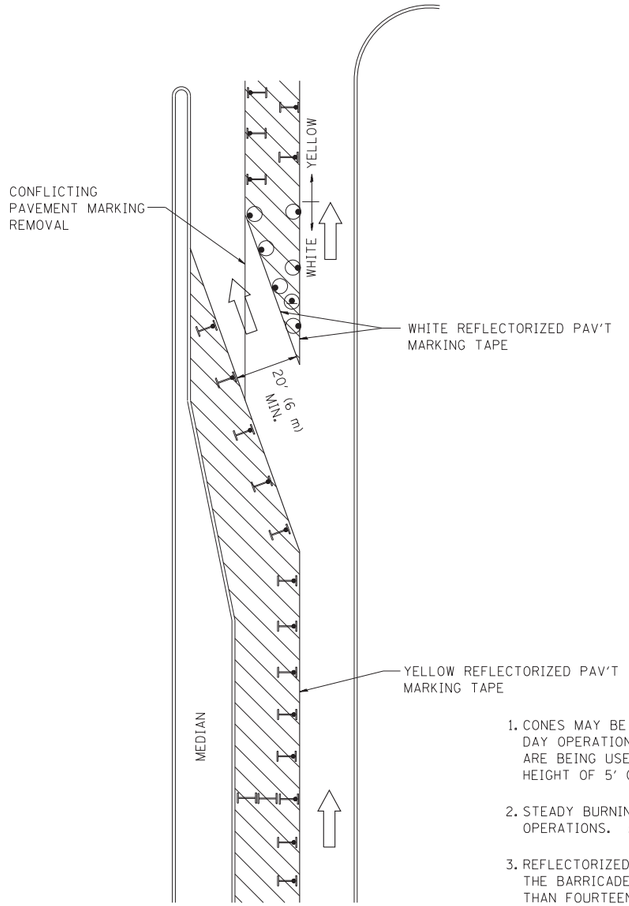
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108315\tc13.dgn	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
		DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

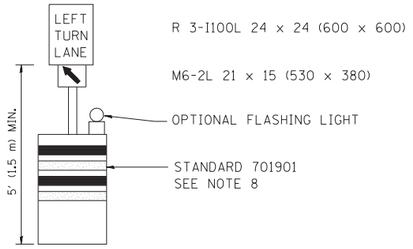
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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.
			577	468
	TC-13		CONTRACT NO.	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





GENERAL NOTES

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

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

LEGEND

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

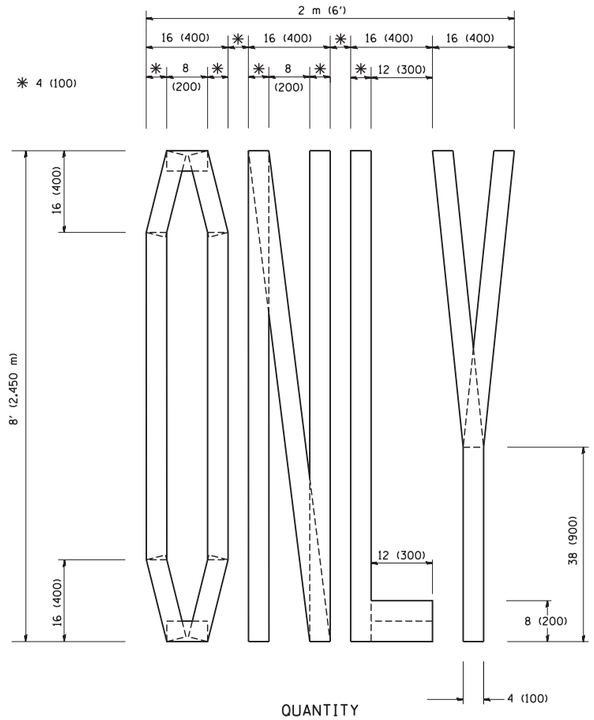
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\ta14.dgn	USER NAME = drivakosgn	REVISED -T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
	PLOT SCALE = 49.9999 '/ IN.	REVISED - A. HOUSEH 11-07-95	REVISED -
	PLOT DATE = 9/14/2009	REVISED -T. RAMMACHER 01-06-00	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

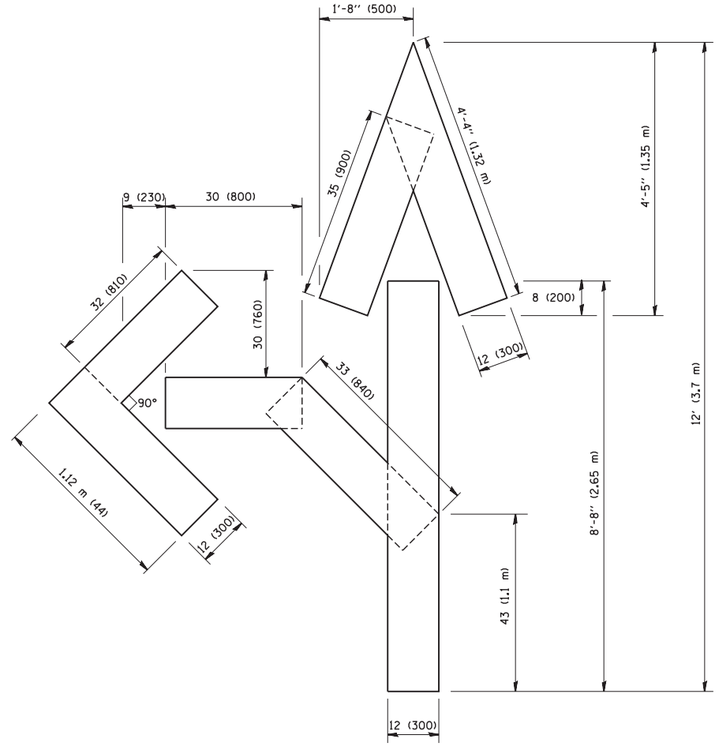
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)

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

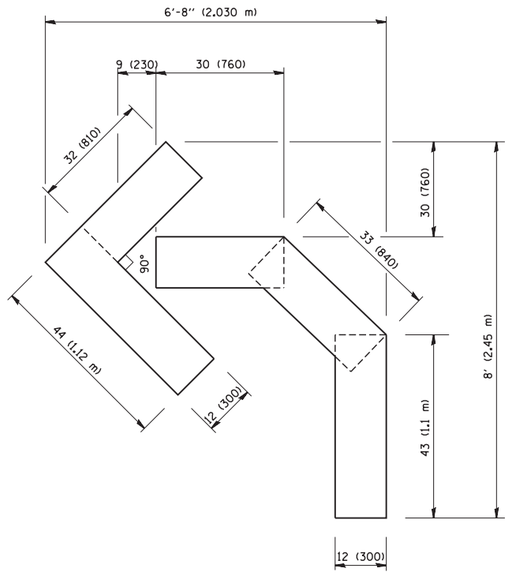
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	469
	TC-14	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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\tc16.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
		DRAWN -	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

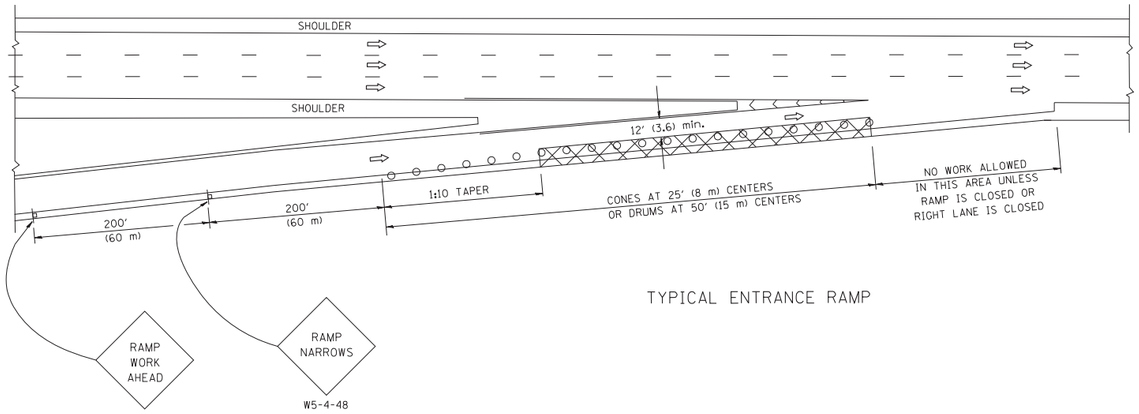
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

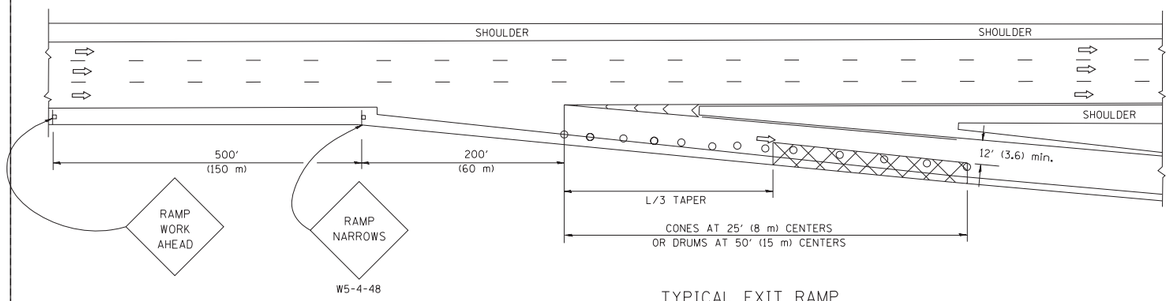
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	470
	TC-16		CONTRACT NO.	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

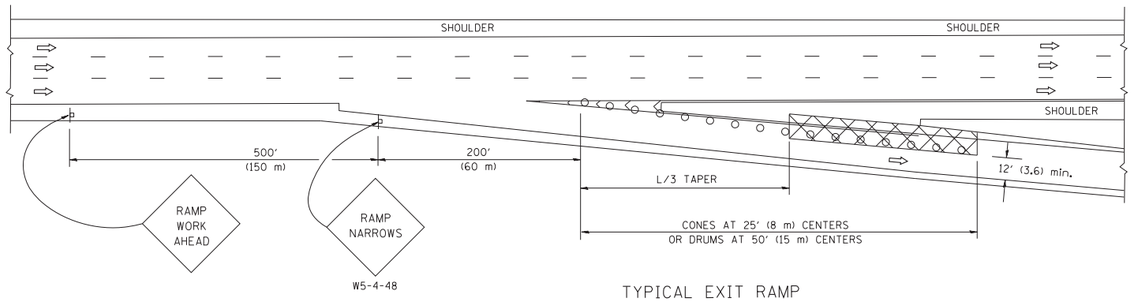
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

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

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

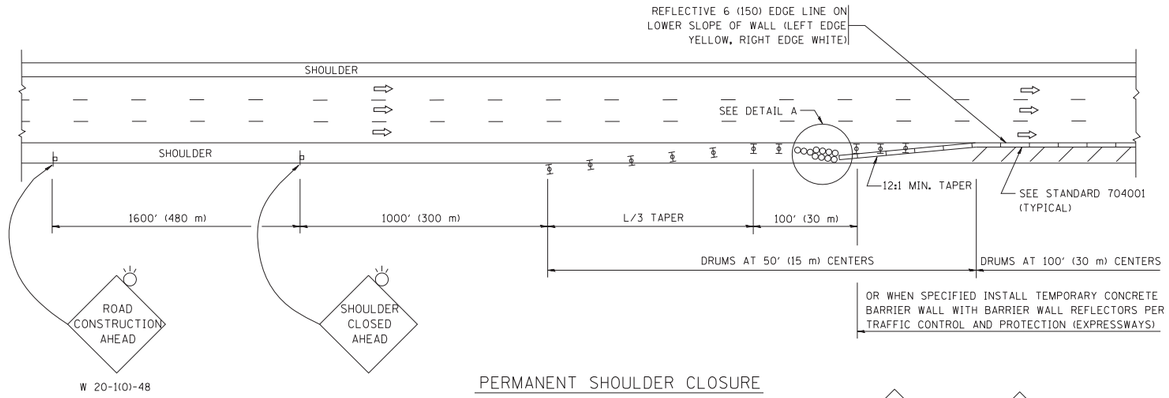
SPEED LIMIT	FORMULAS	
	METRIC	ENGLISH
45 mph (80 km/h) OR GREATER:	L=0.65(W)(S)	L=(W)(S)

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)

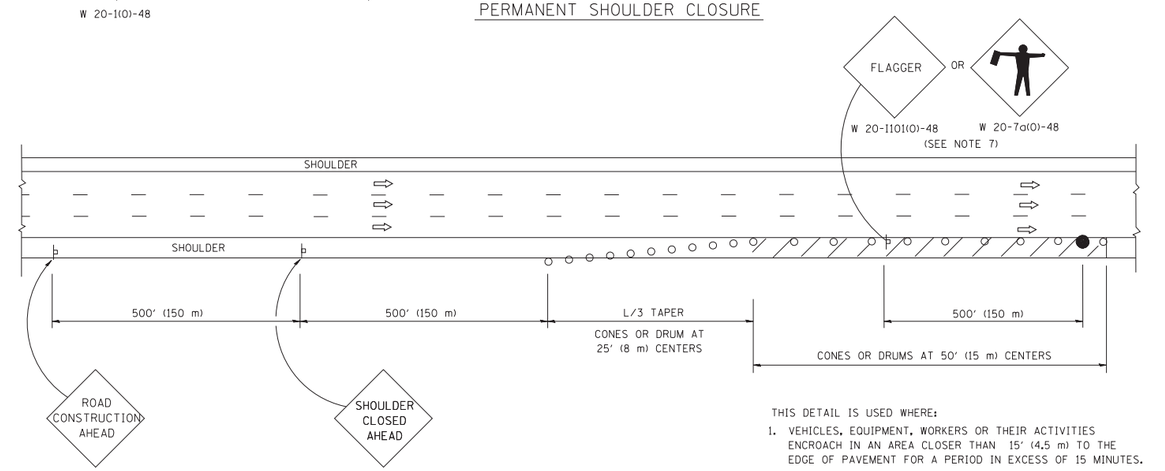
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENTUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
   a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
   b. THE WORK AVTIVITY 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.

SHOULDER CLOSURE DETAILS



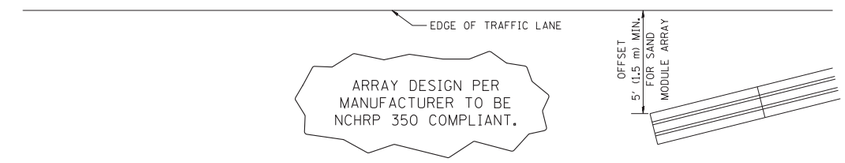
PERMANENT SHOULDER CLOSURE



THIS DETAIL IS USED WHERE:

1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

DAYTIME SHOULDER CLOSURE



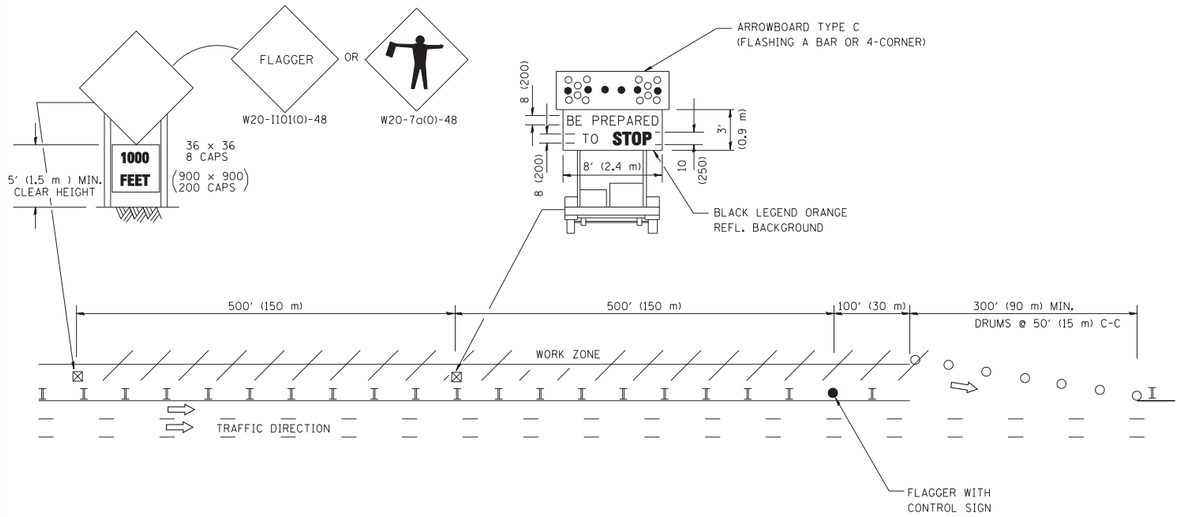
DETAIL "A"
IMPACT ATTENTUATOR, TEMPORARY
(SEE NOTE 5)

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

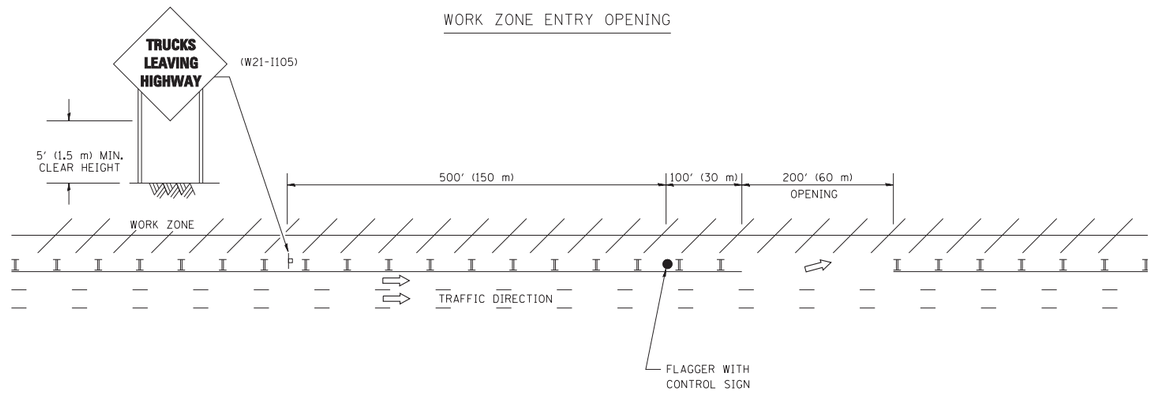
FILE NAME = W:\diststd\22x34\tc17.dgn	USER NAME = leyso	DESIGNED -	REVISED - 04-03	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES**	F.A. RTE.	SECTION / COUNTY / TOTAL SHEETS / SHEET NO.
		DRAWN - D.W.S.	REVISED - J.A.F. 12-06				577 / 471
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - S.P.B. 01-07				TC-17 / CONTRACT NO.
	PLOT DATE = 1/26/2010	DATE - 11-96	REVISED - S.P.B. 12-09		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS / FED. AID PROJECT

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN 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 EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\diststd\22x34\tc18.dgn	USER NAME = leysa	DESIGNED -	REVISED - J.A.F. 04-03
		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/26/2010	DATE -	REVISED - S.P.B. 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	472
	TC-18	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

ROUTE MARKERS

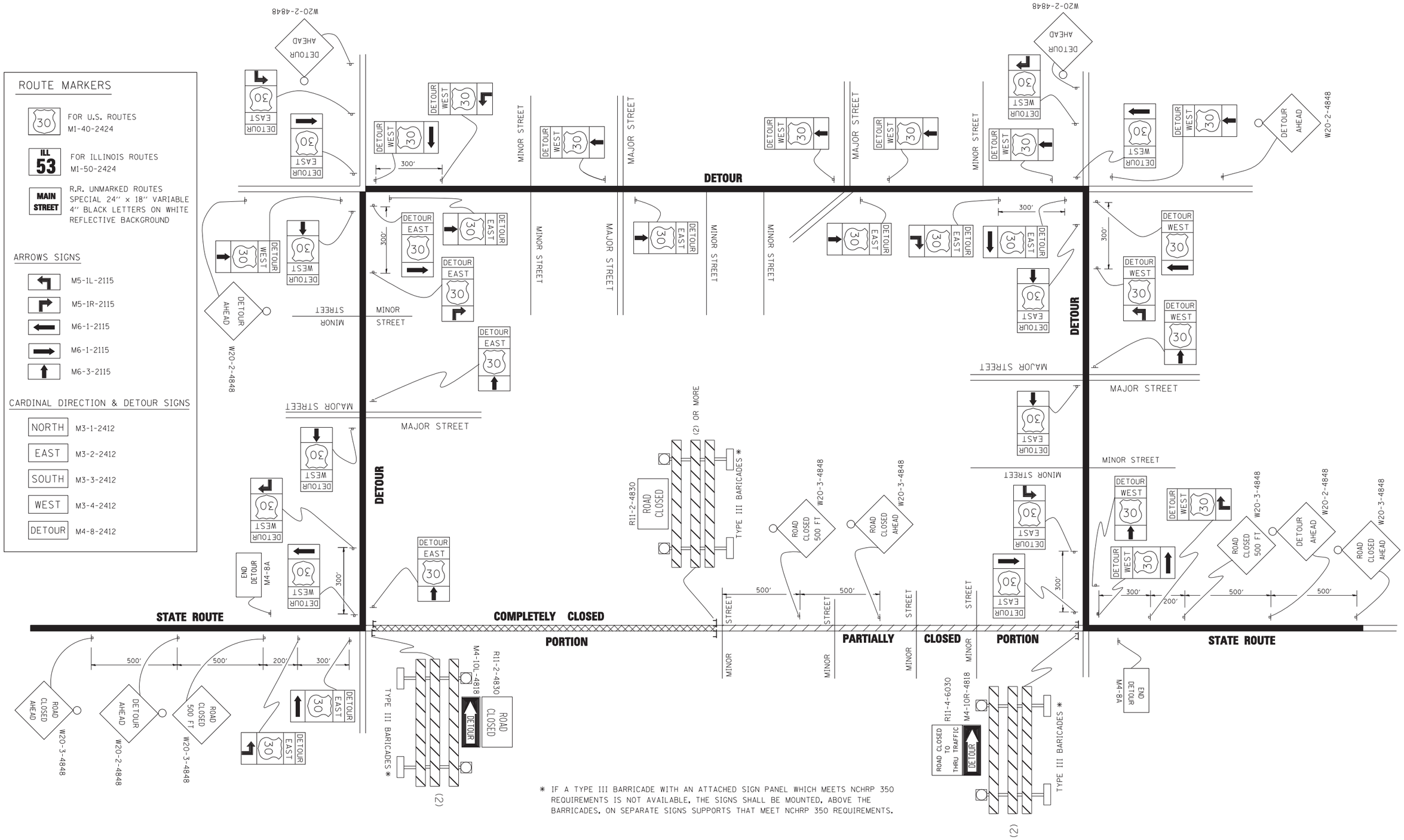
- 30 — FOR U.S. ROUTES M1-40-2424
- ILL 53 — FOR ILLINOIS ROUTES M1-50-2424
- MAIN STREET — R.R. UNMARKED ROUTES SPECIAL 24" x 18" VARIABLE 4" BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

ARROWS SIGNS

- M5-1L-2115
- M5-1R-2115
- M6-1-2115
- M6-1-2115
- M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

- NORTH M3-1-2412
- EAST M3-2-2412
- SOUTH M3-3-2412
- WEST M3-4-2412
- DETOUR M4-8-2412



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

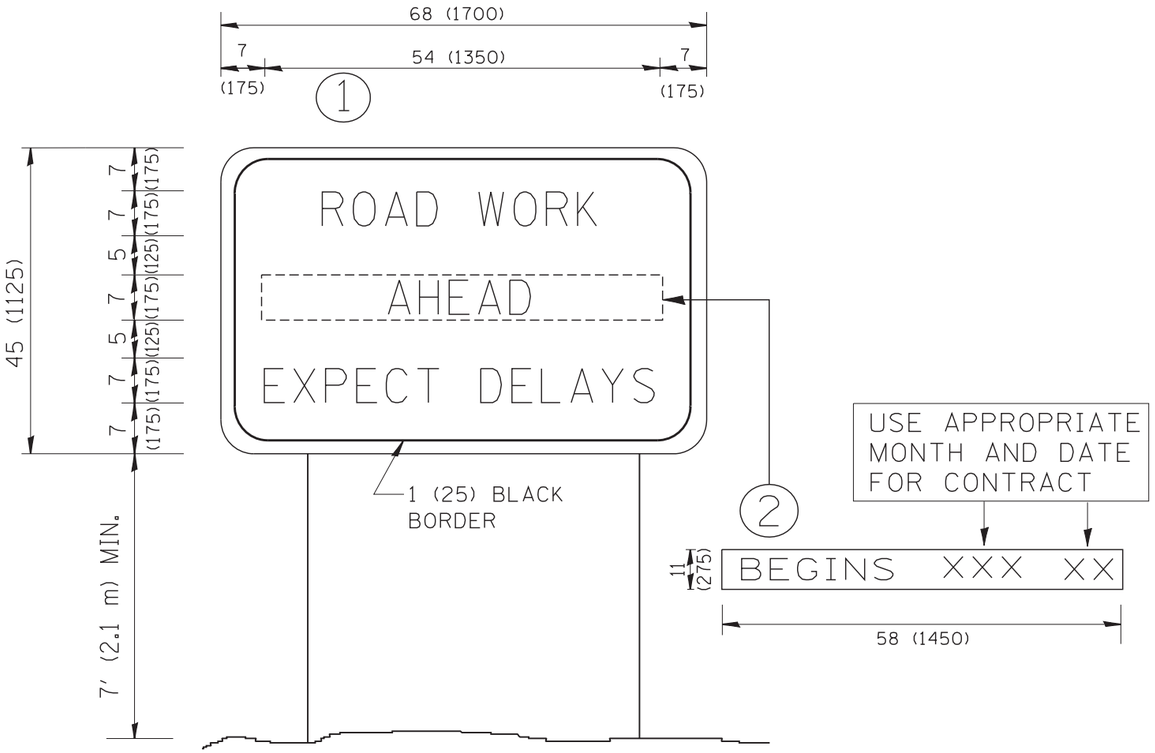
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\tc21.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - 10-18-02
		DRAWN -	REVISED - R. BORO 09-14-09
	PLOT SCALE = 49.9999 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/14/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING
FOR CLOSING STATE HIGHWAYS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	473
	TC-21	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

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

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

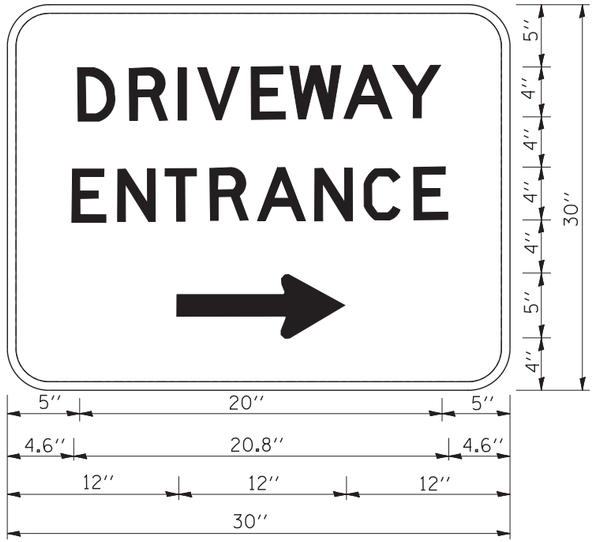
FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	474
	TC-22	CONTRACT NO.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



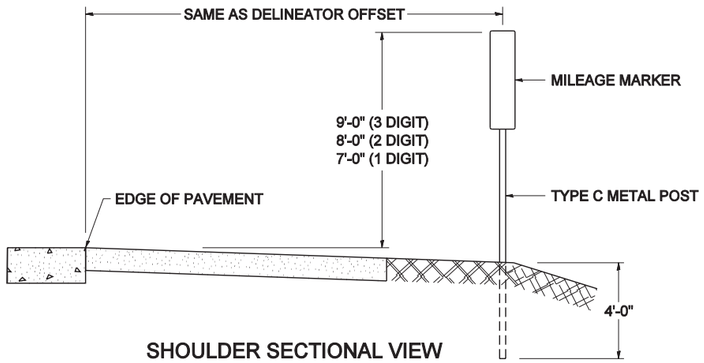
3.0'' RADIUS, 0.5'' BORDER, WHITE ON GREEN; REFLECTORIZED
''DRIVEWAY'' D; ''ENTRANCE'' D; STANDARD ARROW CUSTOM 12.0'' x 5.0''

NOTES:

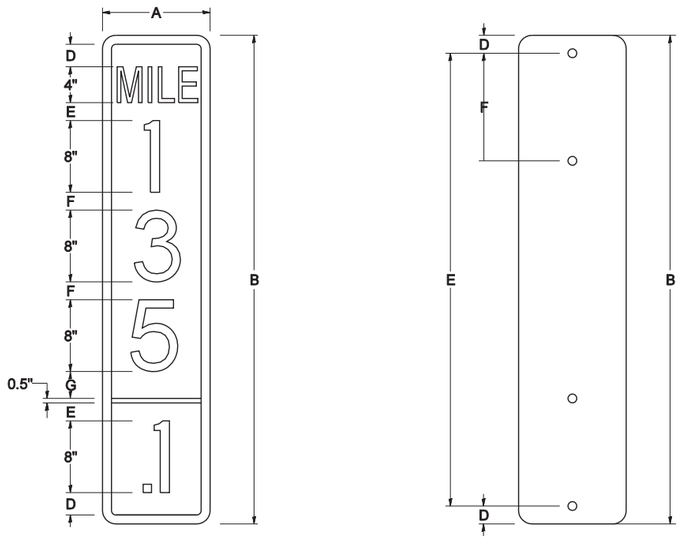
1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM ''TEMPORARY INFORMATION SIGNING''.

FILE NAME = W:\diststd\22x34\tc26.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRIVEWAY ENTRANCE SIGNING	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						577	475
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -				TC-26	CONTRACT NO.		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STANDARD DESIGN FOR MILE POST



SHOULDER SECTIONAL VIEW

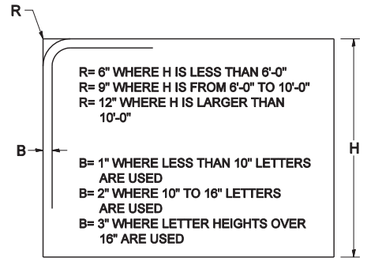


SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	DIGIT
12 x 24	12.0	24.0	1.5	1.5	1.5	N/A	1.5	1
12 x 36	12.0	36.0	1.5	2.0	2.0	2.0	1.5	2
12 x 48	12.0	48.0	1.5	2.5	2.0	2.0	2.5	3

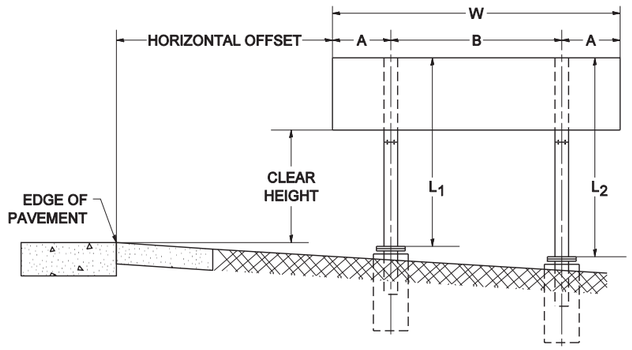
BLANK	A	B	C	D	E	F
B9-1224	12.0	24.0	1.5	2.0	20.0	N/A
B9-1236	12.0	36.0	1.5	2.0	32.0	12.0
B9-1248	12.0	48.0	1.5	2.0	44.0	12.0

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

BORDER AND RADIUS LAYOUT



MAJOR GUIDE SIGN LAYOUT

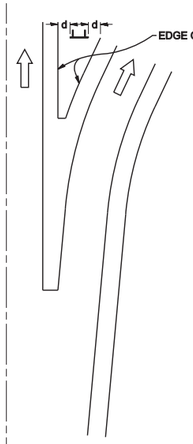


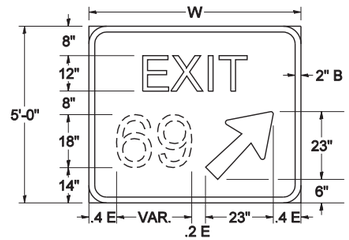
NUMBER OF STEEL SUPPORTS	A	B
2	.2 W	.6 W
3	.15 W	.35 W
4	.125 W	.25 W
5	.1 W	.2 W

"L_1 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

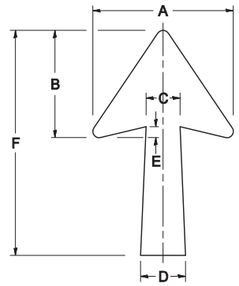




DIGITS	W	d
1 OR 2	6'-0"	2'-0"
3	7'-6"	1'-3"
4 OR 5	9'-0"	1'-0"

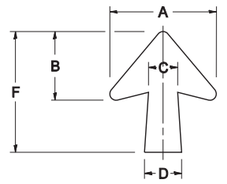
E= WIDTH - VAR. - 23"

STANDARD ARROWS FOR INTERSTATE GUIDE SIGNS



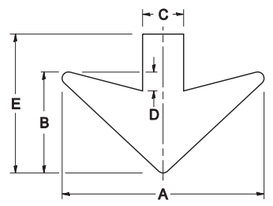
ARROW SYMBOL	A	B	C	D	E	F	R
24¼ x 15⅛	15⅛	11⁹⁄₁₆	3¾	5	1⁵⁄₁₆	24¼	⁵⁄₁₆
29¼ x 18¼	18¼	14	4½	6	1½	29¼	¾
35⅝ x 22¼	22¼	17	5⅜	7⅛	1¾	35⅝	1
18¼ x 11¼	11¼	8¾	3⅛	3⅞		18¼	

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
17¼ x 14¼	14¼	9¹⁵⁄₁₆	3⅜	4½	⁵⁄₁₆	17¼	¾
20¼ x 17¼	17¼	11¾	4⅜	5⅝	1½	20¼	
25 x 21⅞	21⅞	14¼	5	6¾	1¾	25	1
9⅜ x 8⅞	8⅞	5⅞	2⅝	2⁵⁄₁₆		9⅜	½

DOWN ARROWS



ARROW SYMBOL	A	B	C	D	E	R
16½ x 24	24	12	5	1½	16½	¾
22 x 32	32	16	6½	3	22	1

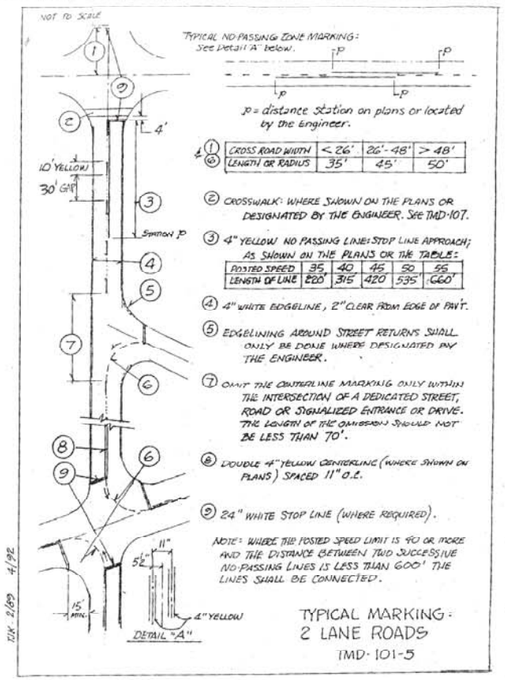
FILE NAME = tc27.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 02-04-2009
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/4/2009	DATE - 03-08-1984	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			577	476
	TC-27 (TS-2341-1)		CONTRACT NO.	
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



(2) CROSSWALK: WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER. SEE TMD-107.

(3) 4" YELLOW NO PASSING LINE: STOP LINE APPROACH; AS SHOWN ON THE PLANS OR THE TABLE:

POSTED SPEED	35	40	45	50	55
LENGTH OF LINE	200'	315'	420'	535'	660'

(4) 4" WHITE EDGELINE, 2" CLEAR FROM EDGE OF PAVT.

(5) EDGELINING AROUND STREET RETURNS SHALL ONLY BE DONE WHERE DESIGNATED BY THE ENGINEER.

(7) OMIT THE CENTERLINE MARKING ONLY WITHIN THE INTERSECTION OF A DEDICATED STREET, ROAD OR SIGNALIZED ENTRANCE OR DRIVE. THE LENGTH OF THE OMISSION SHOULD NOT BE LESS THAN 70'.

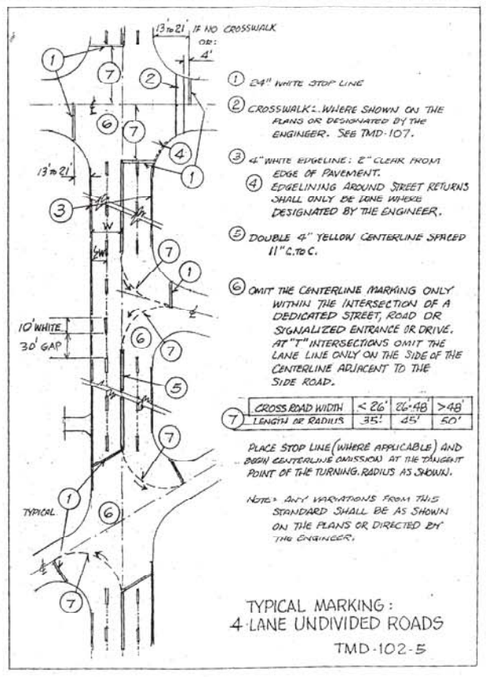
(8) DOUBLE 4" YELLOW CENTERLINE (WHERE SHOWN ON PLANS) SPACED 11" O.C.

(9) 24" WHITE STOP LINE (WHERE REQUIRED).

NOTE: WHERE THE POSTED SPEED LIMIT IS 50 OR MORE AND THE DISTANCE BETWEEN TWO SUCCESSIVE NO PASSING LINES IS LESS THAN 600' THE LINES SHALL BE CONNECTED.

TYPICAL MARKING: 2 LANE ROADS

TMD-101-5



(1) 24" WHITE STOP LINE

(2) CROSSWALK: WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER. SEE TMD-107.

(3) 4" WHITE EDGELINE: 2" CLEAR FROM EDGE OF PAVEMENT.

(4) EDGELINING AROUND STREET RETURNS SHALL ONLY BE DONE WHERE DESIGNATED BY THE ENGINEER.

(5) DOUBLE 4" YELLOW CENTERLINE SPACED 11" C. TO C.

(6) OMIT THE CENTERLINE MARKING ONLY WITHIN THE INTERSECTION OF A DEDICATED STREET, ROAD OR SIGNALIZED ENTRANCE OR DRIVE, AT "T" INTERSECTIONS OMIT THE LANE LINE ONLY ON THE SIDE OF THE CENTERLINE ADJACENT TO THE SIDE ROAD.

(7)

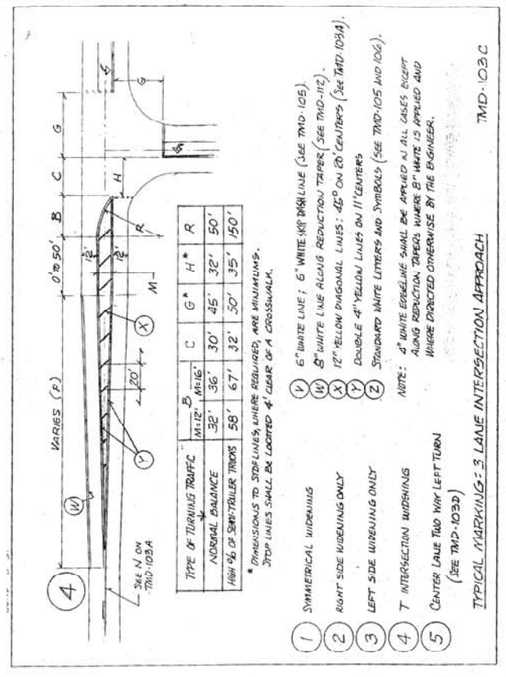
CROSS ROAD WIDTH	< 26'	26'-48'	> 48'
LENGTH OF RADIUS	35'	45'	50'

PLACE STOP LINE (WHERE APPLICABLE) AND BEGIN CENTERLINE OMISSION AT THE TANGENT POINT OF THE TURNING RADIUS AS SHOWN.

NOTE: ANY VARIATIONS FROM THIS STANDARD SHALL BE AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

TYPICAL MARKING: 4 LANE UNDIVIDED ROADS

TMD-102-5



TYPE OF TURNING TRAFFIC	B MIN.	C	G*	H*	R
NORMAL BALANCE	32'	36'	45'	32'	50'
HIGH % OF SEMI-TRAILER TRUCKS	58'	67'	30'	35'	150'

* DIMENSIONS TO STOP LINES, WHERE REQUIRED, ARE MINIMUMS. STOP LINES SHALL BE LOCATED 4' CLEAR OF A CROSSWALK.

(V) 6" WHITE LINE; 6' WHITE SKIP DASH LINE (SEE TMD-105)

(W) 8" WHITE LINE ALONG REDUCTION TAPERS (SEE TMD-112)

(X) (Y) 12" YELLOW DIAGONAL LINES: 45° ON 20' CENTERS (SEE TMD-103A). DOUBLE 4" YELLOW LINES ON 11" CENTERS

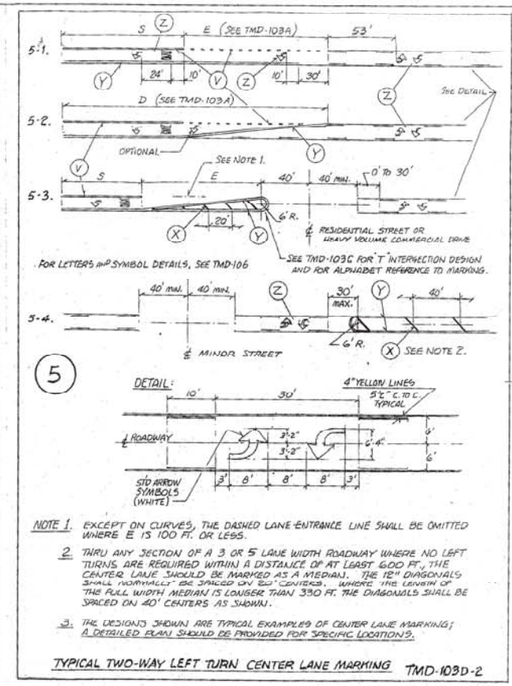
(Z) STANDARD WHITE LETTERS AND SYMBOLS (SEE TMD-105 AND 106).

NOTE: 4" WHITE EDGELINE SHALL BE APPLIED IN ALL CASES RIGHT ALONG REDUCTION TAPERS WHERE 8" WHITE IS APPLIED AND WHERE DIRECTED OTHERWISE BY THE ENGINEER.

SYMMETRICAL WIDENING	1
RIGHT SIDE WIDENING ONLY	2
LEFT SIDE WIDENING ONLY	3
T INTERSECTION WIDENING	4
CENTER LANE TWO WAY LEFT TURN (SEE TMD-103D)	5

TYPICAL MARKING: 3 LANE INTERSECTION APPROACH

TMD-103C



NOTE 1. EXCEPT ON CURVES, THE DASHED LANE ENTRANCE LINE SHALL BE OMITTED WHERE E IS 100 FT. OR LESS.

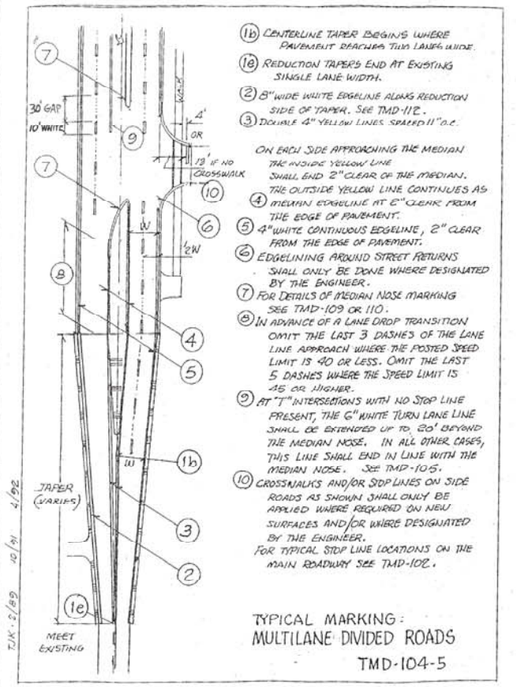
2. THRU ANY SECTION OF A 3 OR 5 LANE WIDTH ROADWAY WHERE NO LEFT TURNS ARE REQUIRED WITHIN A DISTANCE OF AT LEAST 600 FT., THE CENTER LANE SHOULD BE MARKED AS A MEDIAN. THE 12" DIAGONALS SHALL NORMALLY BE SPACED ON 20' CENTERS. WHERE THE LENGTH OF THE FULL WIDTH MEDIAN IS LONGER THAN 330 FT. THE DIAGONALS SHALL BE SPACED ON 40' CENTERS AS SHOWN.

3. THE DESIGNS SHOWN ARE TYPICAL EXAMPLES OF CENTER LANE MARKING; A DETAILED PLAN SHOULD BE PROVIDED FOR SPECIFIC LOCATIONS.

TYPICAL TWO-WAY LEFT TURN CENTER LANE MARKING TMD-103D-2

County Highway	Fiscal Year	Sheet No.	Total Sheets

Section



(1b) CENTERLINE TAPER BEGINS WHERE PAVEMENT REACHES TWO LANES WIDE.

(1a) REDUCTION TAPERS END AT EXISTING SINGLE LANE WIDTH.

(2) 8" WIDE WHITE EDGELINE ALONG REDUCTION SIDE OF TAPER. SEE TMD-112.

(3) DOUBLE 4" YELLOW LINES SPACED 11" O.C. ON EACH SIDE APPROACHING THE MEDIAN THE INSIDE YELLOW LINE SHALL END 2" CLEAR OF THE MEDIAN.

(4) THE OUTSIDE YELLOW LINE CONTINUES AS MEDIAN EDGELINE AT 6" CLEAR FROM THE EDGE OF PAVEMENT.

(5) 4" WHITE CONTINUOUS EDGELINE, 2" CLEAR FROM THE EDGE OF PAVEMENT.

(6) EDGELINING AROUND STREET RETURNS SHALL ONLY BE DONE WHERE DESIGNATED BY THE ENGINEER.

(7) FOR DETAILS OF MEDIAN NOSE MARKING SEE TMD-109 OR 110.

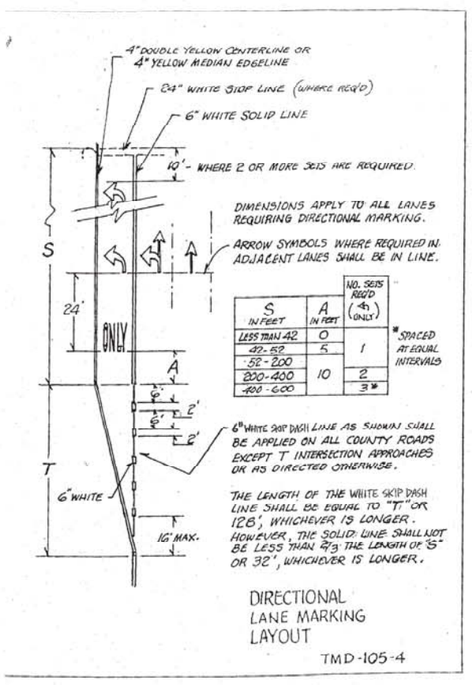
(8) IN ADVANCE OF A LANE DROP TRANSITION OMIT THE LAST 3 DASHES OF THE LANE LINE APPROACH WHERE THE POSTED SPEED LIMIT IS 40 OR LESS. OMIT THE LAST 5 DASHES WHERE THE SPEED LIMIT IS 45 OR HIGHER.

(9) AT "T" INTERSECTIONS WITH NO STOP LINE PRESENT, THE 6" WHITE TURN LANE LINE SHALL BE EXTENDED UP TO, 60' BEYOND THE MEDIAN NOSE. IN ALL OTHER CASES, THIS LINE SHALL END IN LINE WITH THE MEDIAN NOSE. SEE TMD-105.

(10) CROSSWALKS AND/OR STOP LINES ON SIDE ROADS AS SHOWN SHALL ONLY BE APPLIED WHERE REQUIRED ON NEW SURFACES AND/OR WHERE DESIGNATED BY THE ENGINEER. FOR TYPICAL STOP LINE LOCATIONS ON THE MAIN ROADWAY SEE TMD-102.

TYPICAL MARKING: MULTILANE DIVIDED ROADS

TMD-104-5



DIMENSIONS APPLY TO ALL LANES REQUIRING DIRECTIONAL MARKING.

ARROW SYMBOLS WHERE REQUIRED IN ADJACENT LANES SHALL BE IN LINE.

S IN FEET	A IN FEET	NO. SETS REQ'D (ONLY)
LESS THAN 42	0	
42'-52'	5	1
52'-200'	10	
200'-400'		2
400'-600'		3*

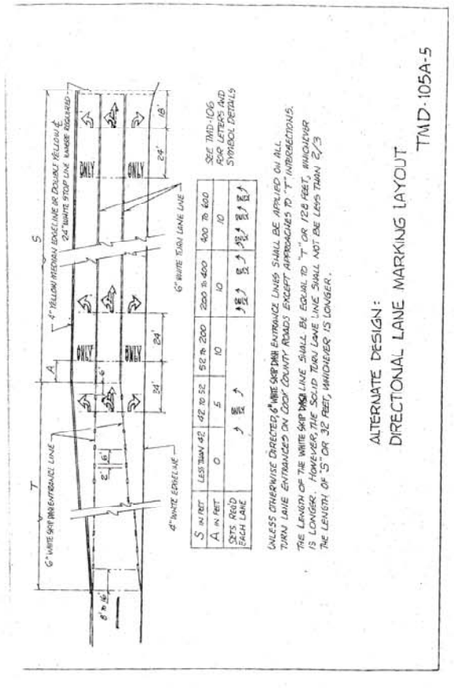
*SPACED AT EQUAL INTERVALS

6" WHITE SKIP DASH LINE AS SHOWN SHALL BE APPLIED ON ALL COUNTY ROADS EXCEPT T INTERSECTION APPROACHES OR AS DIRECTED OTHERWISE.

THE LENGTH OF THE WHITE SKIP DASH LINE SHALL BE EQUAL TO "T" OR 126', WHICHEVER IS LONGER. HOWEVER, THE SOLID LINE SHALL NOT BE LESS THAN 2/3 THE LENGTH OF "S" OR 32', WHICHEVER IS LONGER.

DIRECTIONAL LANE MARKING LAYOUT

TMD-105-4



S IN FEET	LESS THAN 42'	42' TO 52'	52' TO 200'	200' TO 400'	400' TO 600'
A IN FEET	0	5	10	10	10
SETS REQ'D EACH LANE		ONLY	ONLY	2*	3*

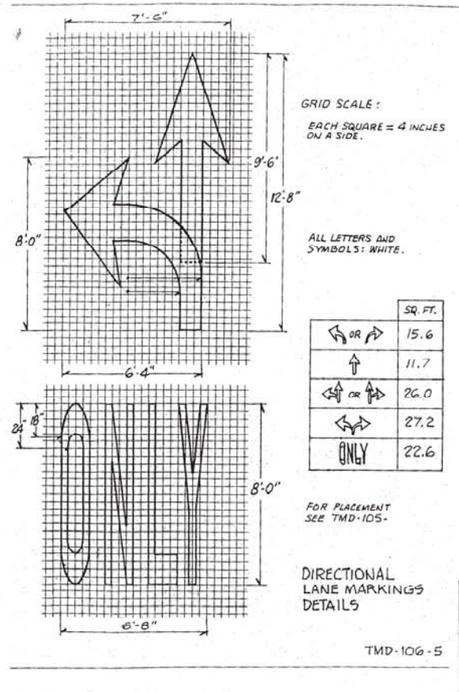
*SPACED AT EQUAL INTERVALS

UNLESS OTHERWISE DIRECTED, 6" WHITE SKIP DASH ENTRANCE LINES SHALL BE APPLIED ON ALL TURN LANE ENTRANCES ON COOK COUNTY ROADS EXCEPT APPROACHES TO "T" INTERSECTIONS.

THE LENGTH OF THE WHITE SKIP DASH LINE SHALL BE EQUAL TO "T" OR 126 FEET, WHICHEVER IS LONGER. HOWEVER, THE SOLID TURN LANE LINE SHALL NOT BE LESS THAN 2/3 THE LENGTH OF "S" OR 32 FEET, WHICHEVER IS LONGER.

ALTERNATE DESIGN: DIRECTIONAL LANE MARKING LAYOUT

TMD-105A-5



GRID SCALE: EACH SQUARE = 4 INCHES ON A SIDE.

ALL LETTERS AND SYMBOLS: WHITE.

	SQ. FT.
ONLY OR ONLY	15.6
ONLY	11.7
ONLY OR ONLY	26.0
ONLY	27.2
ONLY	22.6

FOR PLACEMENT SEE TMD-105.

DIRECTIONAL LANE MARKINGS DETAILS

TMD-106-5

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

PERMANENT PAVEMENT MARKING STANDARDS (SHEET 1 OF 2)

COMPUTED _____ APPROVED _____ 19____
DRAWN _____
CHECKED _____

DIRECTOR OF HIGHWAYS

TY-LIN INTERNATIONAL

USER NAME =	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
CCHD PERMANENT PAVEMENT MARKING STANDARD

SCALE: N.T.S | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	477
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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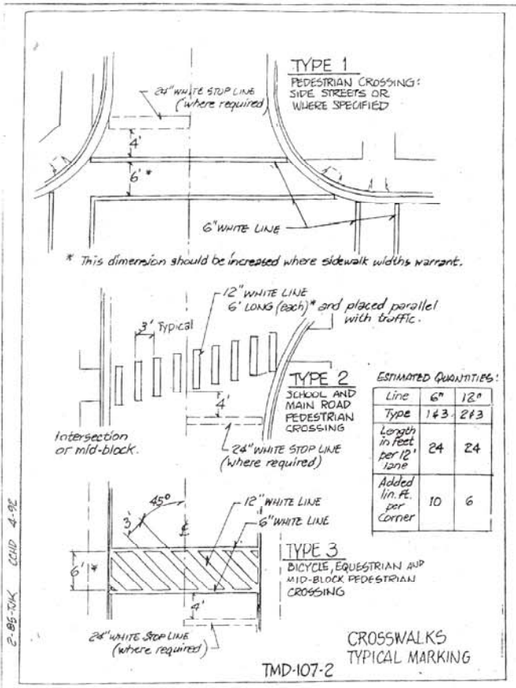
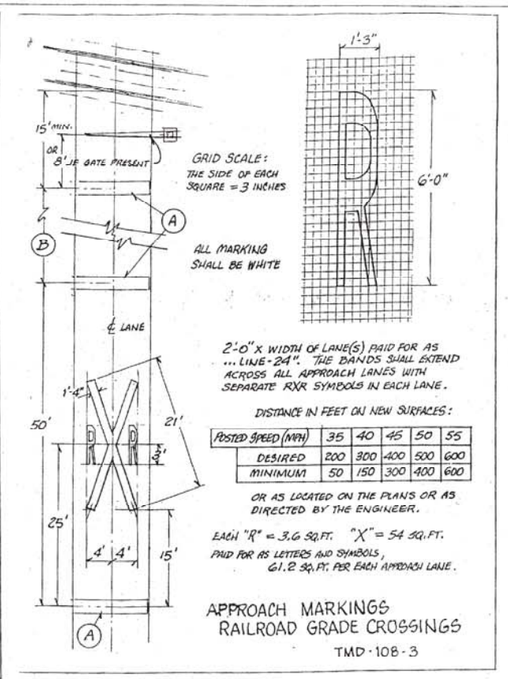
County Highway	Fiscal Year	Sheet No.	Total Sheets

Section



ESTIMATED QUANTITIES:

Line	6"	12"
Type	1&3	2&3
Length in feet per 12' lane	24	24
Added lin. ft. per Corner	10	6



POSTED SPEED (MPH)	35	40	45	50	55
DESIRED	200	300	400	500	600
MINIMUM	50	150	300	400	600

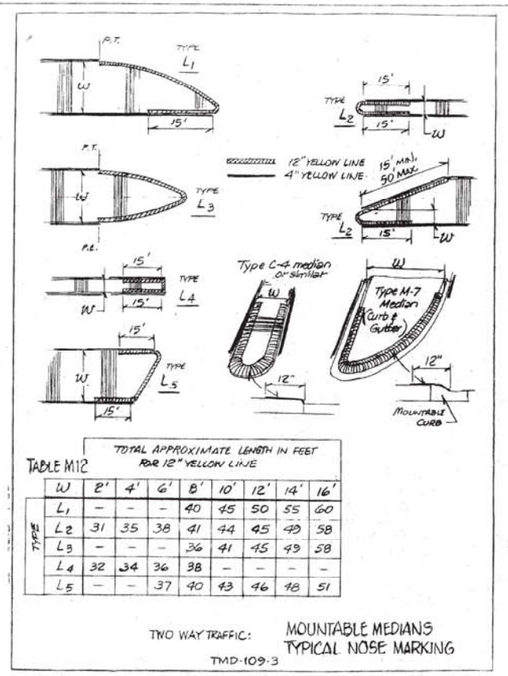


TABLE M12 — TOTAL APPROXIMATE LENGTH IN FEET FOR 12" YELLOW LINE

TYPE	W	2'	4'	6'	8'	10'	12'	14'	16'
	L1	–	–	–	40	45	50	55	60
	L2	31	35	38	41	44	49	50	54
	L3	–	–	–	36	41	45	49	58
	L4	32	34	36	38	–	–	–	–
	L5	–	–	37	40	43	46	48	51

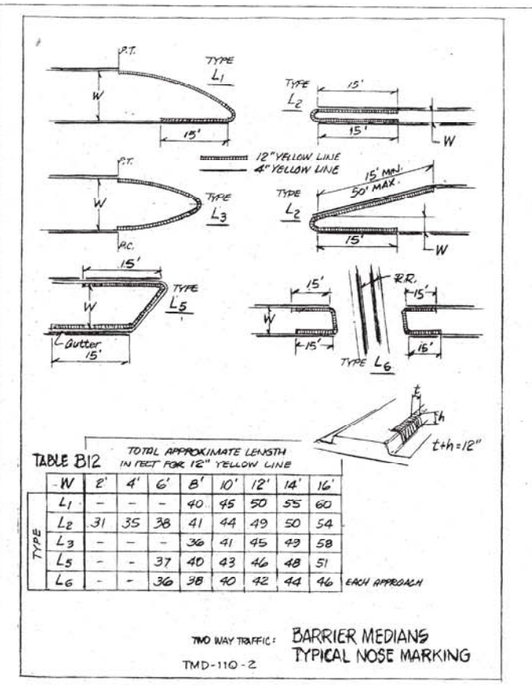
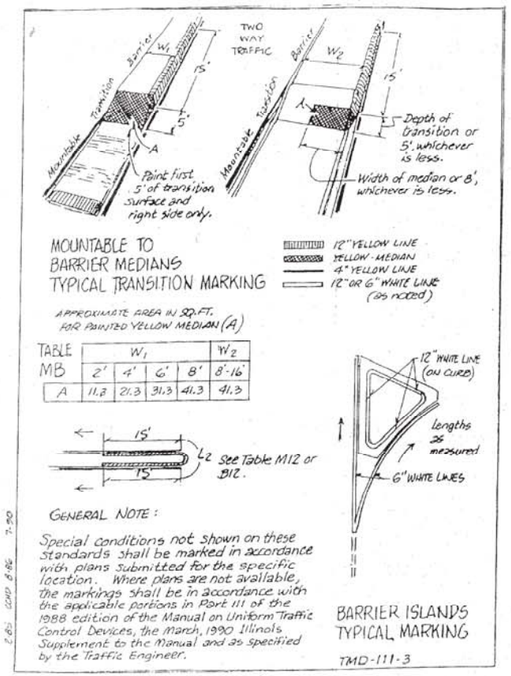
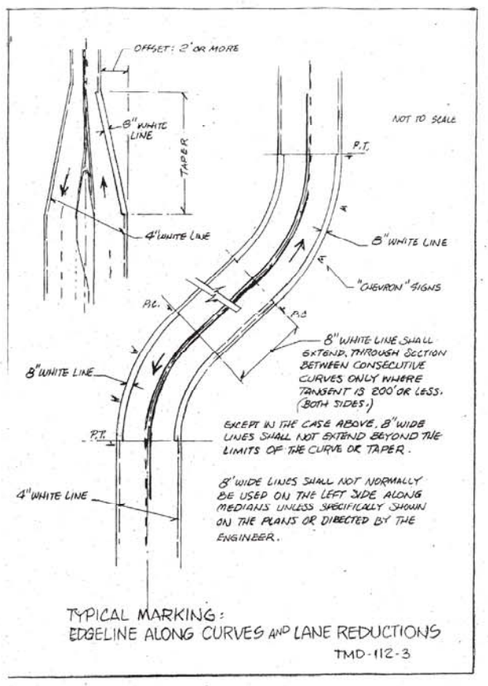


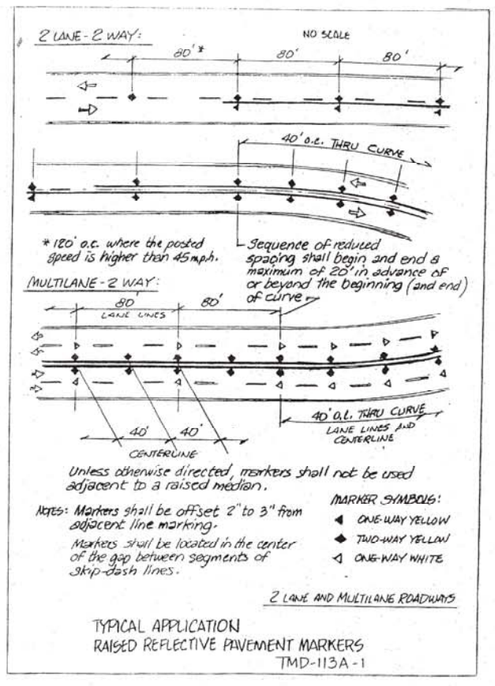
TABLE B12 — TOTAL APPROXIMATE LENGTH IN FEET FOR 12" YELLOW LINE

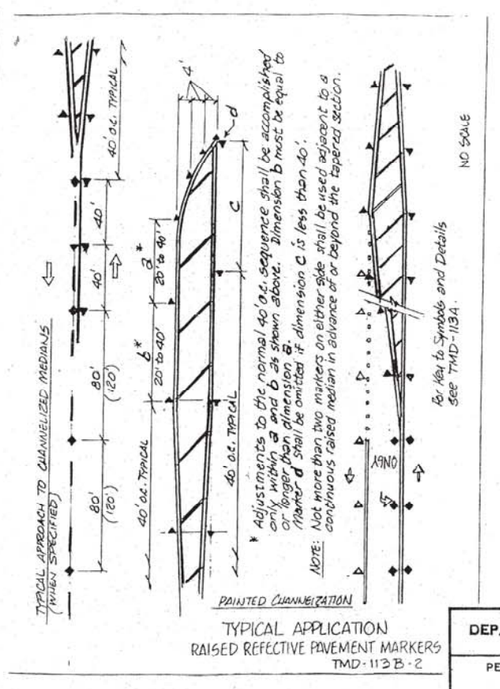
TYPE	W	2'	4'	6'	8'	10'	12'	14'	16'
	L1	–	–	–	40	45	50	55	60
	L2	31	35	38	41	44	49	50	54
	L3	–	–	–	36	41	45	49	58
	L5	–	–	37	40	43	46	48	51
	L6	–	–	36	38	40	42	44	46

EACH APPROACH









COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

PERMANENT PAVEMENT MARKING STANDARDS (SHEET 2 OF 2)

COMPUTED ____ APPROVED ____ 19__
DRAWN ____
CHECKED ____
(CHIEF ENGINEER OF HIGHWAYS)

TYLIN INTERNATIONAL			
USER NAME =	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE =	CHECKED -	REVISED -	
PLOT DATE =	DATE - 5/23/2012	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
CCHD PERMANENT PAVEMENT MARKING STANDARD

SCALE: N.T.S | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	478
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

2-85-CHK COND 4-92
2-85-CHK COND 7-90
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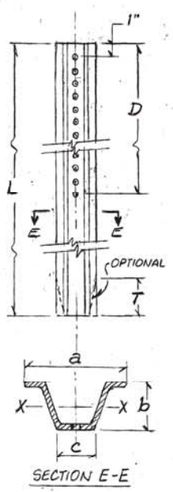
County Highway	Fiscal Year	Sheet No.	Total Sheets

Section



SECTION E-E

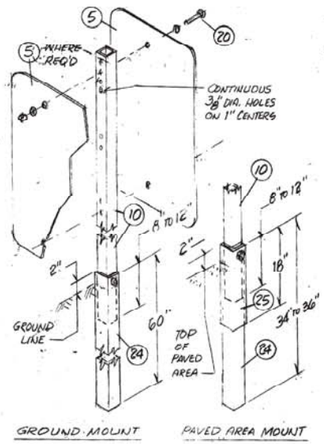
STEEL	TYPE A	TYPE B	TYPE C	
a	3 3/16"	3 3/16"	2"	MINIMUM
b	1 1/4"	1 1/8"	11/16"	MINIMUM
c	1 7/16"	1 1/2"	1"	MINIMUM
Sx-x IN³	0.223	0.341	–	NOMINAL
LBS/FT	2.00	3.00	1.12	NOMINAL
D	55 HOLES (MIN)		18 MIN.	
L	VARIABLE		7.0	
T	3"		1/4"	

ALUMINUM	TYPE A	TYPE B	
a	3 1/2"	4 5/8"	MINIMUM
b	1 5/8"	2 1/4"	MINIMUM
c	1 7/8"	2 3/8"	MINIMUM
Sx-x IN³	0.435	0.888	NOMINAL
LBS/FT	0.90	1.30	NOMINAL
D	55 HOLES (MIN)		
L	VARIABLE		
T	3"		

ALL HOLES ARE 3/8" DIA. ON 1" CENTERS.
NO Ssplices ALLOWED.
TYPE C USED FOR DELINEATORS WHEN SPECIFIED ON THE PLAN.

(7) METAL POST - TYPE A, B AND C

(1) SIGN PANEL: WIDER THAN 30" AND 24" OR MORE IN DEPTH.
(2) SIGN PANEL: VARIABLE X 18". 72" WIDE, MAXIMUM.
(3) SIGN PANEL: WIDER THAN 42". 2 OR MORE POSTS.
(4) SIGN PANEL: 6.5 SQ. FT. OR LARGER IN AREA (UNLESS OTHERWISE INDICATED ON THE PLAN). 2 POSTS.
(5) SIGN PANEL: LESS THAN 6.5 SQ. FT. IN AREA AND NOT WIDER THAN 30". SINGLE POST OR OTHER SUPPORT.
(6) SIGN PANEL: 36" MAX. "DIAMOND" ON SINGLE WOOD OR STEEL POST.
(8) ROUND POST OR POLE; LIGHT STANDARD OR TRAFFIC SIGNAL.
(9) TRAFFIC SIGNAL MAST ARM.

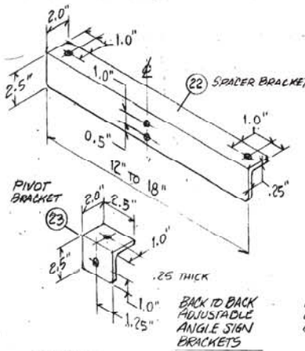


GROUND MOUNT PAVED AREA MOUNT

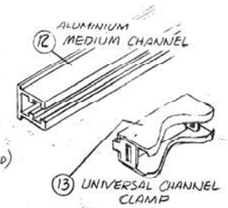
(10) TELESCOPING STEEL SIGN SUPPORT

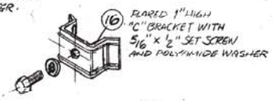
2" x 2" SQUARE TUBULAR TOP SECTION

(11) 4" x 6" WOOD SIGN SUPPORT.
(14) 3/4" WIDE X 0.030" THICK STAINLESS STEEL BAND, TYPE 201. (REGULAR BAND)
(15) STAINLESS STEEL BUCKLE, TYPE 201 TO FIT REGULAR BAND.
(17) 1/4" X 1 1/4" X 1" H.W.H. #3 SELF TAPPING SIGN SCREW WITH NEOPREAM WASHER.
(18) SIGN PANEL MOUNTING HOLES LOCATED AS PER DETAIL OR BLANK STANDARD, ALL HOLES WHERE CHANNELS ARE NOT USED SHALL BE 3/8" DIAMETER.
(19) 5/16" DIA. SQUARE HEAD BOLT, WASHER AND LOCKNUT.
(20) 5/16" DIA. HEX HEAD BOLT, NYLON WASHER, REG. WASHER AND LOCKNUT.
(21) NON SLIP WASHER.
(24) 2 1/4" X 2 1/4" BASE SECTION.
(25) 2 1/2" X 2 1/2" SLEEVE SECTION.

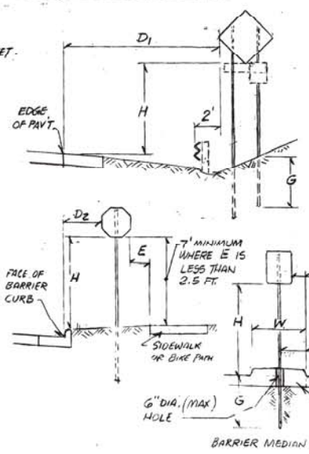


MATERIAL: STANDARD ALUMINUM ANGLE, 2" x 2 1/2" x 1/4"; AA 6061-T6





TYPICAL CLEARANCES



D1 NOT LESS THAN 12 FT. (6 FT. IF ALLOWED BY THE ENGINEER IN AREAS OF LIMITED SIGHT DISTANCE OR OTHER RESTRICTIONS).
D2 6 FT. OR MORE DESIRED. NOT LESS THAN 2 FT. WHERE 40 M.P.H. OR HIGHER IS POSTED. 1 FT. MIN. MAY BE ALLOWED IN AREAS OF 35 M.P.H. AND LOWER.
H NORMALLY NOT LESS THAN 7 FT. MAY BE 5 FT. MIN. IN RURAL AND FOREST PRESERVE AREAS WITH NO PARKING.
G METAL POSTS: TYPE A - 3 1/2 FT. MIN., TYPE B - 4 FT. MIN. 4" x 6" WOOD - 5 FT. MIN. FOR OTHER SUPPORTS SEE THE APPLICABLE SPECIFICATIONS.

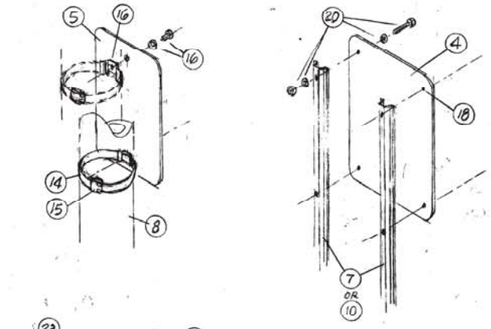
EXPLANATION OF SYMBOLS

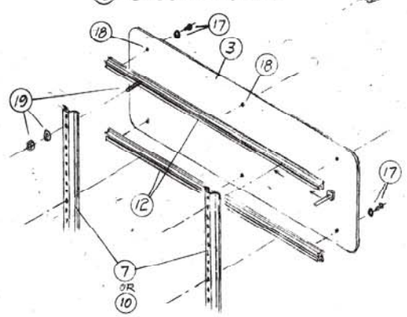
- METAL POST(S) - TYPE A.
- METAL POST(S) - TYPE B.
- METAL POST - TYPE B, SUPPORTING BACK TO BACK ADJUSTABLE ANGLE SIGNS.
- SIGN MOUNTED ON LIGHT STANDARD, TRAFFIC SIGNAL POST OR MAST ARM.
- OTHER SUPPORT TYPE AS SPECIFIED ON THE PLAN.
- EXISTING SIGN ASSEMBLY TO REMAIN IN PLACE, BE RE-ERECTED OR RELOCATED AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH ARTICLE 107.22 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- X EXISTING SIGN ASSEMBLY BEYOND THE CONSTRUCTION LIMITS TO BE REMOVED.

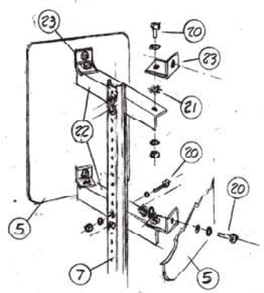
NOTE: EXCEPT FOR SIGNS SHOWN ▷ AND/OR OTHERWISE SPECIFIED, ALL EXISTING TRAFFIC SIGN ASSEMBLIES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED. SEE THE SPECIAL PROVISION.

GENERAL NOTES FOR SIGNING

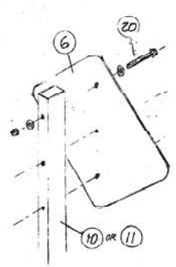
1. THE DESIGN OF ALL STANDARD TRAFFIC SIGNS SHALL CONFORM WITH THE STATE OF ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. (M.U.T.C.D.). SPECIAL AND VARIABLE MESSAGE SIGNS SHALL CONFORM WITH THE DETAILS AS SHOWN ON THE PLANS.
2. ALL SIGNS, SUPPORTS, MATERIAL AND RELATED WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE SPECIAL PROVISIONS AND THE PLANS.
3. SIGN SUPPORT LENGTHS SHALL BE DETERMINED AT THE SITE IN ACCORDANCE WITH THE CLEORANCES AND OFFSET LOCATIONS SHOWN
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ANY UNDERGROUND ELECTRIC CABLES, UTILITY LINES OR DRAINAGE STRUCTURES IN THE VICINITY BEFORE BEGINNING WORK. AN ASSEMBLY SHALL BE RELOCATED FROM THE STATION SHOWN ON THE PLAN WHERE NECESSARY TO AVOID DAMAGING ANY UNDERGROUND INSTALLATION.
5. WHERE METAL POSTS ARE SPECIFIED, 2 POSTS SHALL SUPPORT A SIGN PANEL ASSEMBLY HAVING A TOTAL AREA OF 6.5 SQ. FT. OR MORE. A 6 FT. X 2.5 FT. AND LARGER SIGN PANEL ASSEMBLY SHALL BE SUPPORTED WITH 3 POSTS.
6. THE TRAFFIC OPERATIONS DIVISION OF THE COOK COUNTY HIGHWAY DEPARTMENT SHALL BE NOTIFIED TEN (10) DAYS PRIOR TO THE ESTIMATED DATE OF THE INSTALLATION OF THE PERMANENT TRAFFIC CONTROL DEVICES.

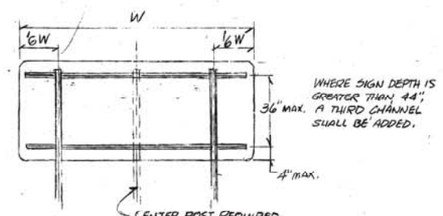






BACK TO BACK ADJUSTABLE ANGLE MOUNTING





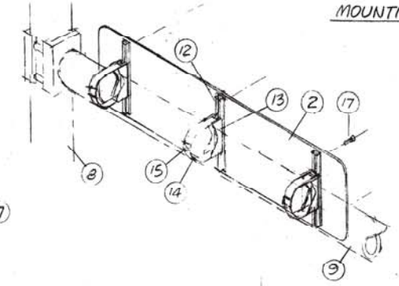
SIGN PANEL MOUNTING DETAILS

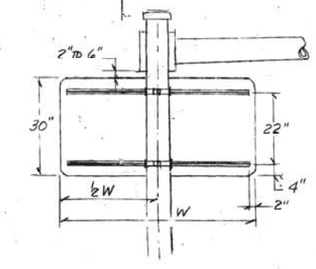
MOUNTING ASSEMBLY NOTES

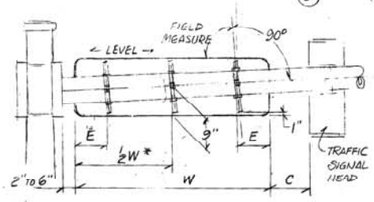
EXCEPT FOR NYLON AND NEOPREAM WASHERS WHERE INDICATED, ALL MOUNTING HARDWARE SHALL BE ZINC OR CADMIUM PLATED STEEL, ALUMINIUM OR STAINLESS STEEL. ALL BOLTS AND NUTS SHALL HAVE NATIONAL COURSE (UNC) THREAD.

SUPPORTING CHANNELS SHALL BE USED ON RECTANGULAR PANELS WIDER THAN 36" ON A SINGLE SUPPORT AND ON PANELS WIDER THAN 48" WHEN MOUNTED ON MORE THAN ONE POST, AND ON DIAMOND SHAPED 85 x 48" PANELS. CHANNELS MAY BE USED TO MOUNT 2 TYPE 1 ADJACENT SIGN PANELS.

MOUNTING METHODS AND MATERIAL OTHER THAN THAT SHOWN ARE ACCEPTABLE UPON THE APPROVAL OF THE ENGINEER AND WHERE COMPLETELY INTERCHANGEABLE WITH EXISTING INSTALLATIONS ON COUNTY AND STATE ROADWAYS.







INCHES:

W	42"*	48"*	54"*	60	66	72
E	8	10	11	10	11	12
C	.75 W OR MORE DESIRED; 1'-0" MINIMUM					

*NO CENTER MOUNTING REQ'D

TRAFFIC SIGN MOUNTING DETAILS

TRAFFIC DIVISION
COOK COUNTY HIGHWAY DEPARTMENT

STANDARD 304-2

REV. 3-21-91
DRAWN BY: TJK 12-15-89

APPROVED: 12-15-89: Charles D Tivey TRAFFIC ENGINEER

TY·LIN INTERNATIONAL	USER NAME =	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE =	CHECKED -	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
CCHD TRAFFIC SIGN MOUNTING DETAILS STANDARD

SCALE: N.T.S | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	479
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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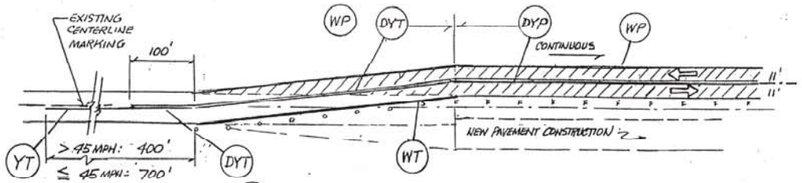
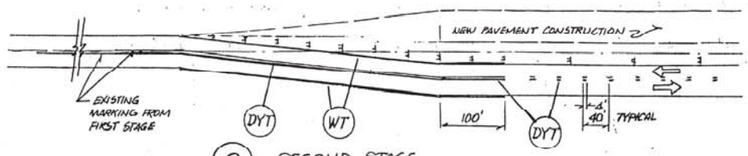
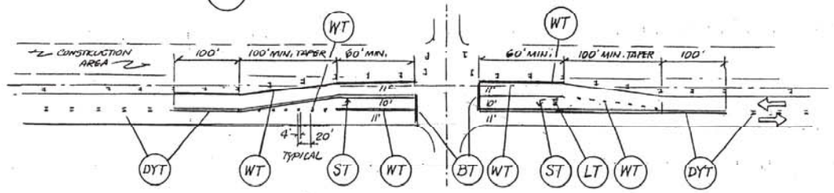


1 FIRST STAGE

NOT TO SCALE

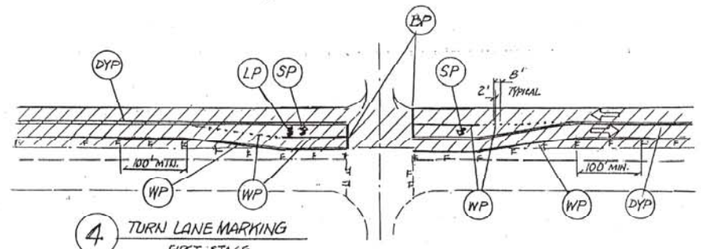


2 SECOND STAGE



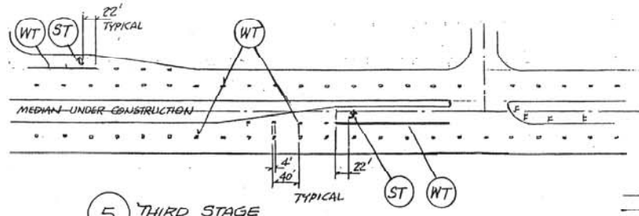
3 TURN LANE MARKING
SECOND STAGE

NOTE: FOR TURN LANE ENTRANCE TAPERS LONGER THAN 175' SEE DETAIL (8)

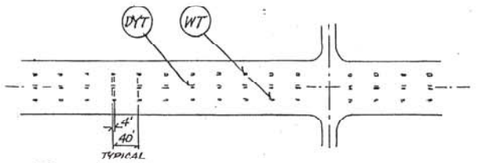


4 TURN LANE MARKING
FIRST STAGE

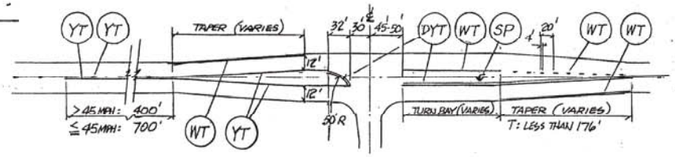
STORAGE AND TAPER LENGTHS SIMILAR TO DETAIL 3.



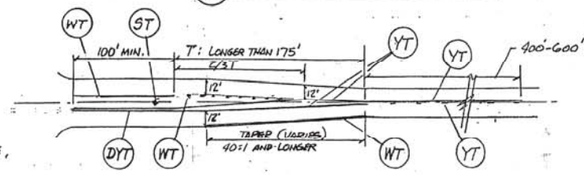
5 THIRD STAGE



6 FOUR LANE UNDIVIDED



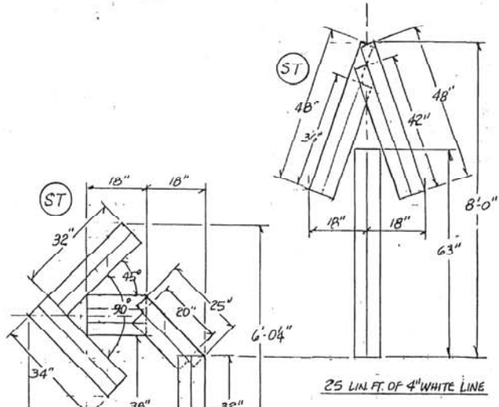
7 THREE LANE T INTERSECTION



8 THREE LANE APPROACH

LEGEND

- TEMPORARY PAVEMENT
- FINAL PAVEMENT
- (BP) STOP BAR: 12" WIDE (MIN.) WHITE, WHERE REQUIRED
- (BT) STOP BAR: 3-4" WHITE TAPE LINES, WHERE REQUIRED
- (YT) YELLOW TAPE LINE - 4"
- (WT) WHITE TAPE LINE - 4"
- (DYT) DOUBLE YELLOW TAPE LINES - 2 @ 4", SPACED 11" MIN. C. TO C.
- (ST) ARROW SYMBOL(S) FORMED WITH 4" WHITE TAPE LINE
- (LT) LETTERS: "ONLY" FORMED WITH 4" WHITE TAPE LINE
- (RT) RAILROAD CROSSING LETTERS AND SYMBOL FORMED WITH 4" WHITE TAPE,
- (YP) YELLOW PAINTED 4" LINE
- (WP) WHITE PAINTED 4" LINE
- (DYP) DOUBLE YELLOW PAINTED 4" LINES, 2 @ 4" WIDE SPACED 11" C. TO C.
- (SP) ARROW SYMBOL(S) PAINTED WHITE
- (LP) LETTERS: "ONLY" PAINTED WHITE



TEMPORARY LETTERS AND SYMBOLS FORMED WITH 4 INCH WIDE PAVEMENT MARKING TAPE

FOR PAINTED LETTERS AND SYMBOLS, SEE NOTE 4.

NOTES:

1. TEMPORARY MARKING FOR LANE CLOSURES AND BY-PASSES SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL STANDARD 2310, 2316, 2317, 2318 OR 2417, WHICHEVER IS APPLICABLE, AND WITH DETAILS (1) THRU (4) ON THIS SHEET.
2. THE PAVEMENT MARKING WORD "ONLY", FOR TEMPORARY APPLICATIONS, SHALL ONLY BE REQUIRED WITH THE TURN ARROW IN A LANE WHERE THE MANDATORY MOVEMENT IS NOT READILY APPARENT DUE TO THE ALIGNMENT AND WHERE DIRECTED BY THE ENGINEER. SEE DETAIL (3) AND (4).
3. WHITE EDGELINES (4" WHITE TAPE OR PAINT, AS APPROPRIATE) SHALL BE CONTINUOUS IF REQUIRED IN THE JUDGEMENT OF THE ENGINEER.
4. TEMPORARY PAINTED ARROW SYMBOLS, WORDS AND ADVANCE RAILROAD CROSSING MARKINGS SHALL CONFORM WITH THE STANDARD DESIGN AS SHOWN IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. 6' LETTERS AND TURN ARROWS MAY BE USED WHERE SPEEDS THRU THE MARKED AREA DO NOT EXCEED 40 M.P.H. QUANTITIES FOR THE PAINTED MARKINGS MAY BE DETERMINED FROM TABLE 500-1 IN THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.
5. REFER TO THE SIGNING AND FINAL MARKING PLANS FOR LOCATING TEMPORARY MARKINGS; RAILROAD APPROACHES, STOP LINES, CROSSWALKS, ETC.
6. REFER TO THE SPECIAL PROVISION FOR PAVEMENT MARKING TAPE AND FOR TRAFFIC PROTECTION.

TYPICAL TEMPORARY PAVEMENT MARKING APPLICATIONS DURING NORMAL CONSTRUCTION OR MAINTENANCE ACTIVITIES AND TRAFFIC GUIDANCE PRIOR TO PERMANENT PAVEMENT MARKING OPERATIONS.
THIS REFERENCE STANDARD IS NOT INTENDED AS A SUBSTITUTE FOR A SPECIFIC MAINTENANCE OF TRAFFIC PLAN FOR THIS PROJECT.
SEE THE CONSTRUCTION STAGING PLANS, TRAFFIC STANDARDS AND/OR PLAN GENERAL NOTES.

7. WHERE THE ITEM: PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS IS INCLUDED IN THE CONTRACT, THE DESIGN OF THE LETTERS AND ARROW SYMBOLS AND THE SQUARE FEET QUANTITIES FOR THIS ITEM SHALL BE THE SAME AS FOR PAINTED MARKINGS DESCRIBED IN NOTE 4.

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

STANDARD TTM-525
TYPICAL TEMPORARY PAVEMENT MARKING

COMPUTED
DRAWN TJK 6-90
CHECKED

APPROVED JUNE 19, 1990
Michael R. Kinney

County Highway	Fiscal Year	Sheet No.	Total Sheets

Revisions

USER NAME =	DESIGNED -		REVISED -
	DRAWN -		REVISED -
PLOT SCALE =	CHECKED -		REVISED -
PLOT DATE =	DATE - 5/23/2012		REVISED -

TYLIN INTERNATIONAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
CCHD TYPICAL TEMPORARY PAVEMENT MARKING STANDARD

SCALE: N.T.S | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	480
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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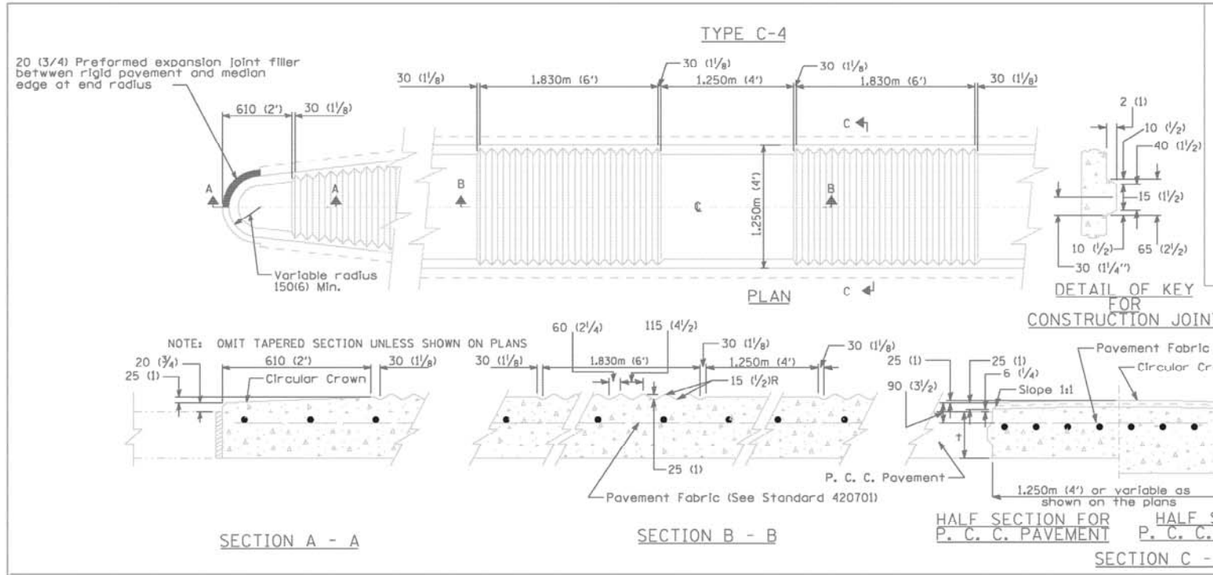
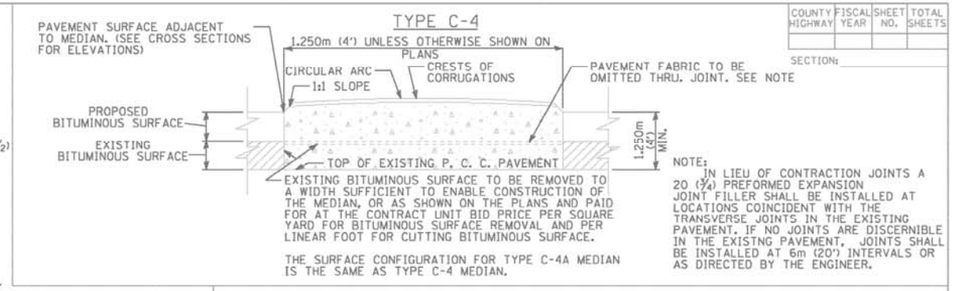
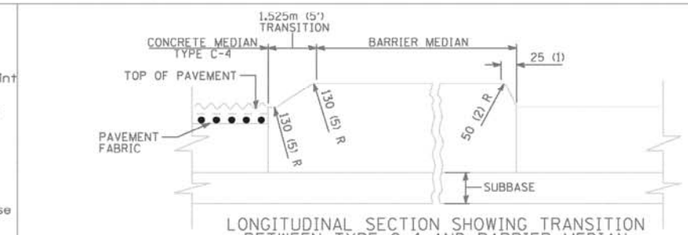


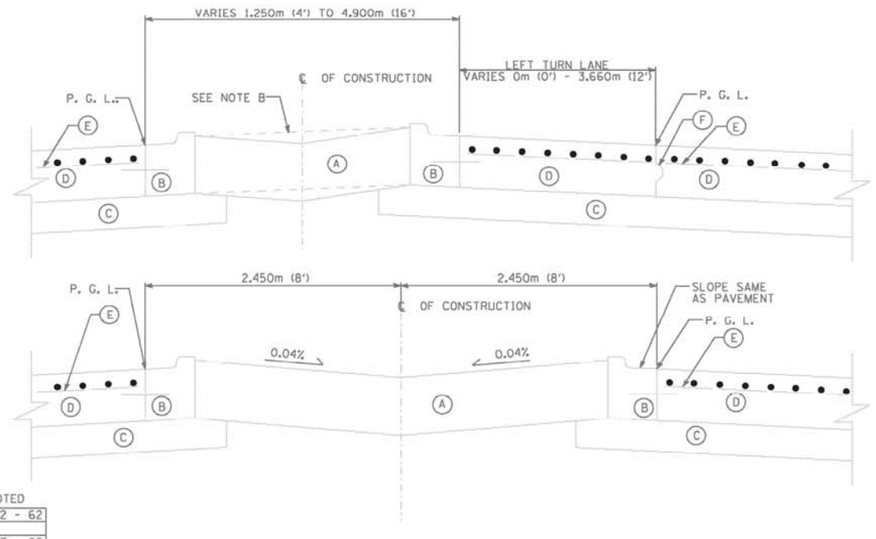


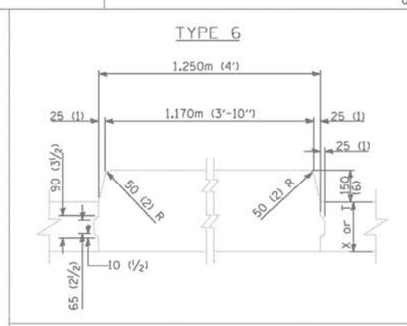
COUNTY HIGHWAY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

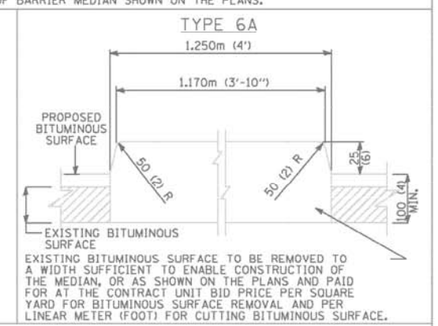
SECTION:



TRANSITIONAL AREA IS TO BE PAID FOR AS THE TYPE OF BARRIER MEDIAN SHOWN ON THE PLANS.







EXISTING BITUMINOUS SURFACE TO BE REMOVED TO A WIDTH SUFFICIENT TO ENABLE CONSTRUCTION OF THE MEDIAN, OR AS SHOWN ON THE PLANS AND PAID FOR AT THE CONTRACT UNIT BID PRICE PER SQUARE YARD FOR BITUMINOUS SURFACE REMOVAL AND PER LINEAR METER (FOOT) FOR CUTTING BITUMINOUS SURFACE.

NOT TO SCALE

ALL DIMENSIONS ARE MILLIMETERS (INCHES) EXECPT AS NOTED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTAION

PASSED May 29 1975

Engineer of Design Operations

APPROVED May 29 1975

Engineer of Design

REVISIONS	
ISSUED 12 - 12 - 62	
W. F.	8 - 27 - 68
W. F.	1 - 15 - 69
W. F.	10 - 1 - 69
D. W.	9 - 4 - 73
D. W.	10 - 31 - 74
D. W.	5 - 29 - 75
D. W.	7 - 15 - 77

Redrawn 8 - 27 - 68

NOTE B: AT LOCATIONS NOTED ON THE PLANS THE MEDIAN SURFACE SHALL BE A STRAIGHT LINE FROM TOP OF CURB TO TOP OF CURB.

TYPE M-7

(A) BITUMINOUS SHOULDERS, 305 (12)
(B) COMBINATION CONCRETE CURB AND GUTTER, TYPE M-5.30 (M-2.12)
(C) SUB-BASE GRANULAR MATERIAL, TYPE B 150 (6)
(D) PORTLAND CEMENT CONCRETE PAVEMENT 255 (10)
(E) PAVEMENT FABRIC
(F) CONSTRUCTION JOINT (FOR TYPE SEE PLANS)

GENERAL NOTES

Dimension "t" is equal to the adjacent Pavement edge thickness or Base Course edge thickness
Dimension "x" is equal to the adjacent Base Course edge thickness plus the Bituminous Surface edge thickness.

The cost of furnishing and placing Pavement Fabric in the median shall be included in the unit bid price per square foot for CONCRETE MEDIAN, TYPE C-4 and TYPE C-4A respectively.

EXPANSION JOINTS - Shall be of the type similar to that in the adjacent pavement except dowel bars will not be required.

CONTRACTION JOINTS - Shall be constructed and sealed in the same manner as the joints in the adjacent pavement, or shall be constructed with 20(3/4) preformed expansion joint filler conforming to full cross-section of the median. Dowel Bars are to be omitted in median joints.

The earth work shall be considered as being incidental to Earth Excavation.

Plan views of medians shown are typical. Median layout and radii shall be as shown on the plans.

Medians may vary in width as required on the plans, but regardless of any width variation shall be measured and paid for at the contract unit price per square foot for concrete median of the type specified.

The vertical edge dimension for Type C-4 Median shall be 250(10) when constructed adjacent to flexible pavement. Also, keyway shall be omitted and contraction joints shall be installed at 6m (20') intervals.

Contraction and expansion joints shall be installed in Type C-4 median in prolongation with joints in adjacent P. C. C. Pavement. For median adjacent to Bituminous Surface, contraction joints shall be installed at 6m (20') intervals.

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

DETAILS OF CONCRETE MEDIANS

COMPUTED CMB
DRAWN CMB
CHECKED SMV

APPROVED _____ 20__

CHIEF ENGINEER

TYLIN INTERNATIONAL	USER NAME =	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE =	CHECKED -	REVISED -
	PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
COOK COUNTY HIGHWAY DEPARTMENT
MEDIAN STANDARD DETAIL

SCALE: N.T.S. | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	481
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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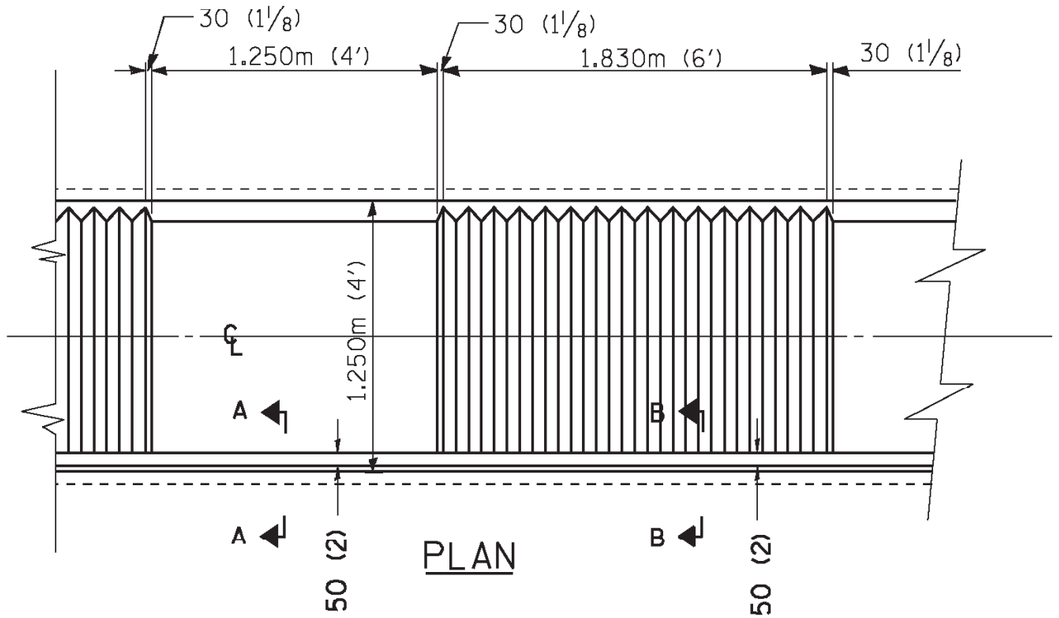
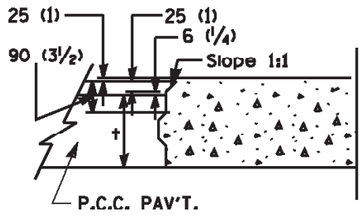
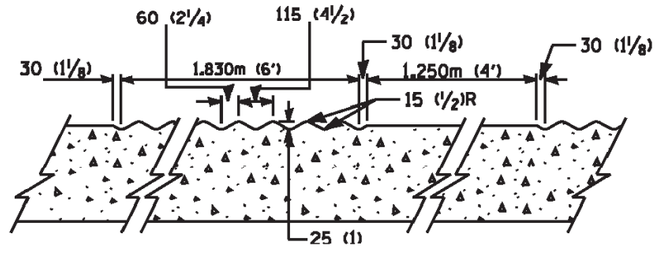
County Highway	Fiscal Year	Sheet No.	Total Sheets

Section: _____

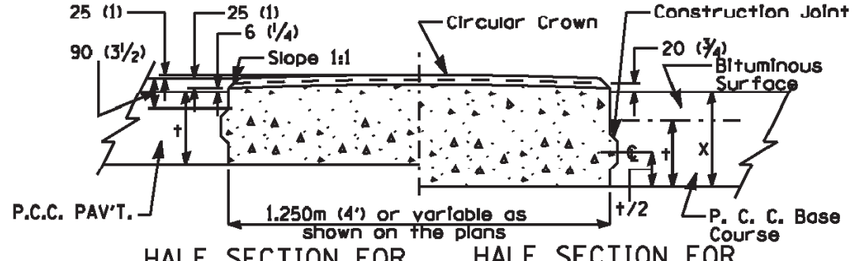




SECTION A - A



LONGITUDINAL SECTION



HALF SECTION FOR P. C. C. PAVEMENT

HALF SECTION FOR P. C. C. BASE COURSE

SECTION B - B

CONCRETE MEDIAN, TYPE C-4, MODIFIED

NOTE:
THE CONCRETE MEDIAN HAS BEEN MODIFIED, SUCH THAT THE CORRUGATED SECTIONS BEGIN 50mm (2) FROM THE EDGE OF THE MEDIAN (SEE NOTE A). THE MEDIAN SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ. FT. FOR CONCRETE MEDIAN, TYPE C-4, MODIFIED.

NOTE A:
THE EDGE OF MEDIAN IN QUESTION CORRESPONDS TO THE SIDE WHICH HAS AN EDGE OF PAVEMENT OR GRADE LINE HIGHER THAN THE EDGE OF MEDIAN.

REVISED 03-15-06 T.B.
REDRAWN 10-17-04 F.H.
REVISED 10-26-92 BY M.P.S.

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

CONCRETE MEDIAN, TYPE C-4, MODIFIED

Computed:
Drawn: F.H.
Checked: T.B.

TYLIN INTERNATIONAL

USER NAME =	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE - 5/23/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
COOK COUNTY HIGHWAY DEPARTMENT
MEDIAN STANDARD DETAIL

SCALE: N.T.S. | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	482
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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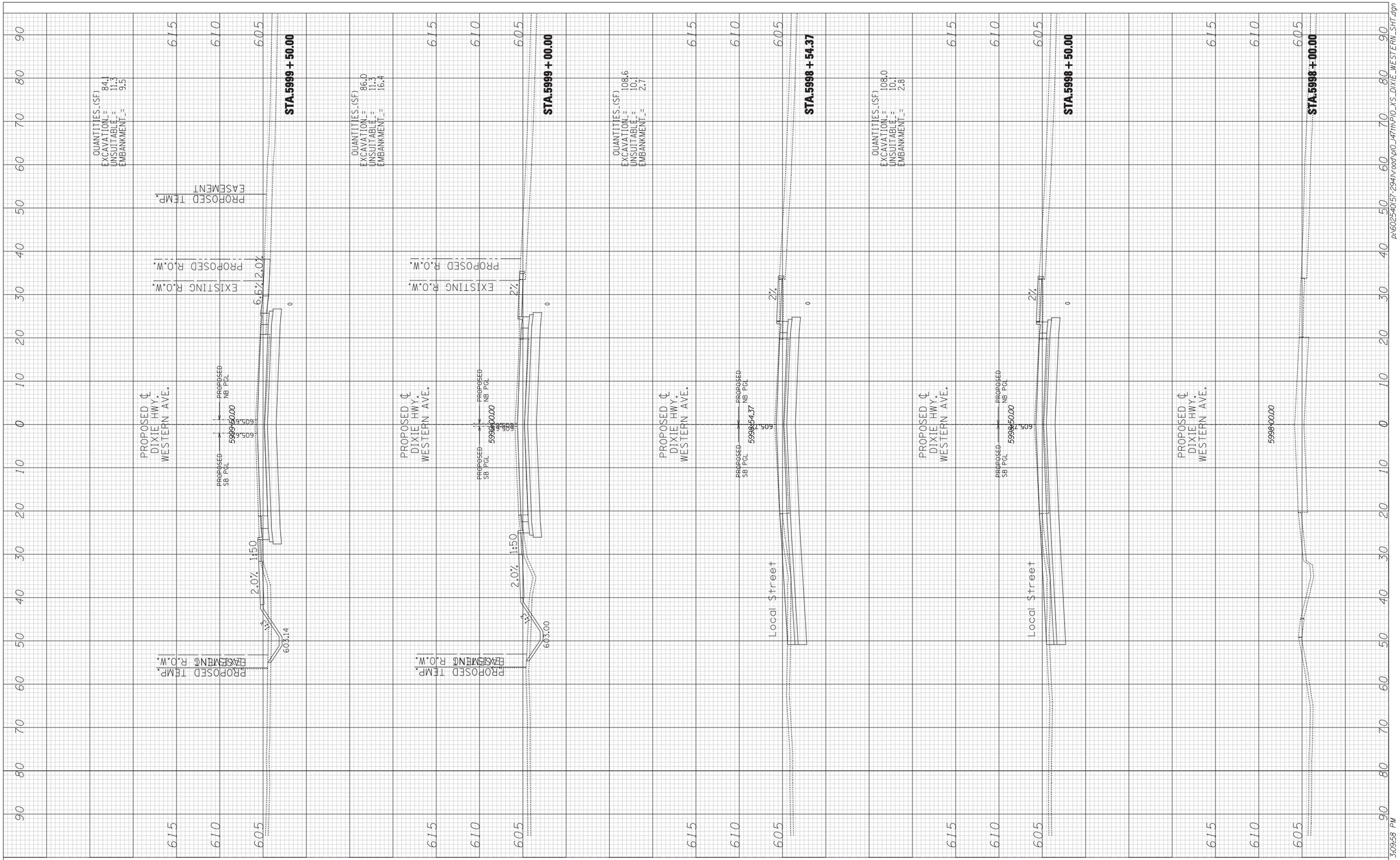
FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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



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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 5998+00.00 TO STA. 5999+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	483
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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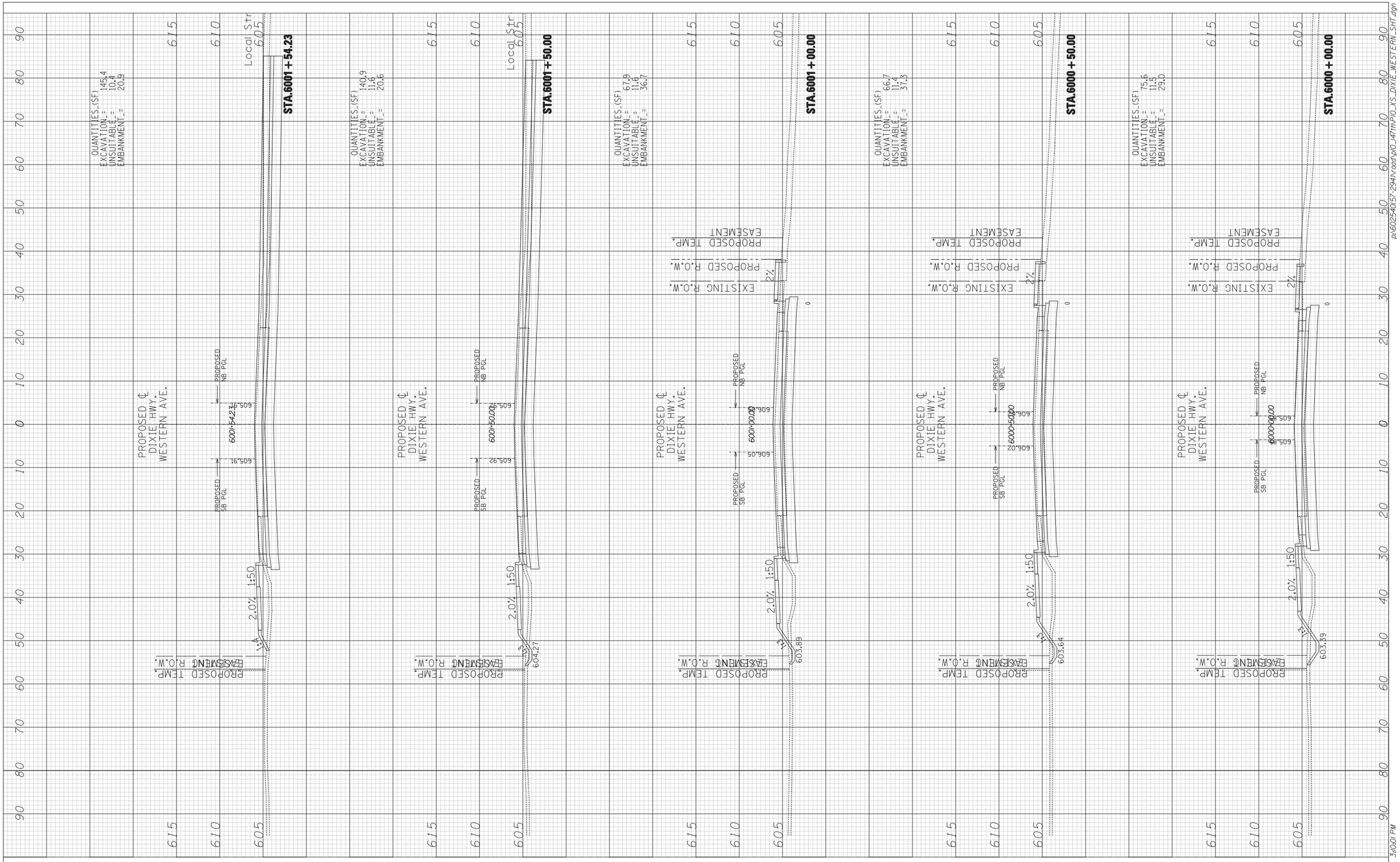
FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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



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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5" = 10' V | SHEET NO. OF SHEETS | STA. 6000+00.00 TO STA. 6001+54.23

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	484
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

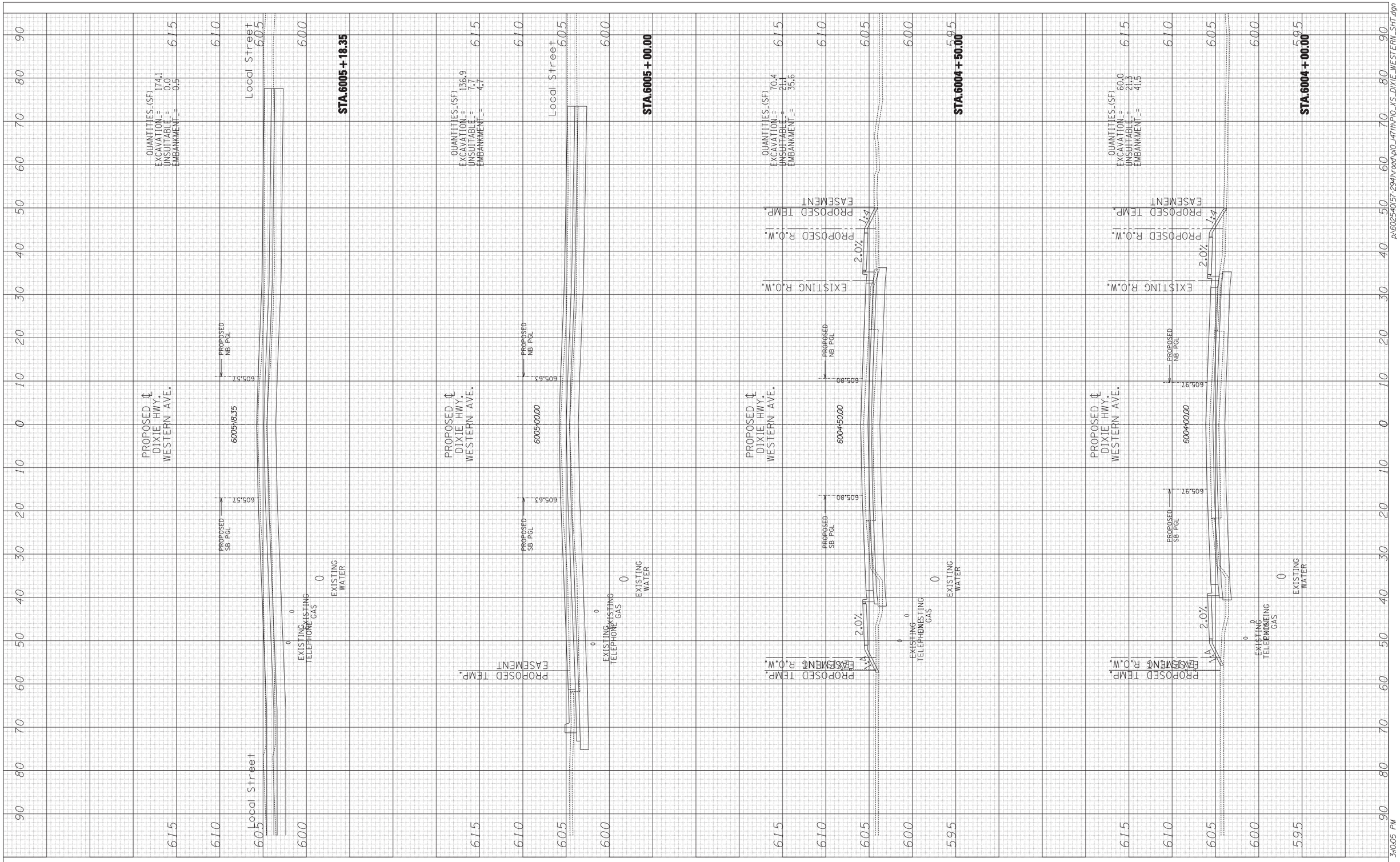
147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6002+00.00 TO STA. 6003+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	485
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5' V | SHEET NO. OF SHEETS | STA. 6004+00.00 TO STA. 6005+18.35

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	486
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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NOTE BOOK	PLOTTED		
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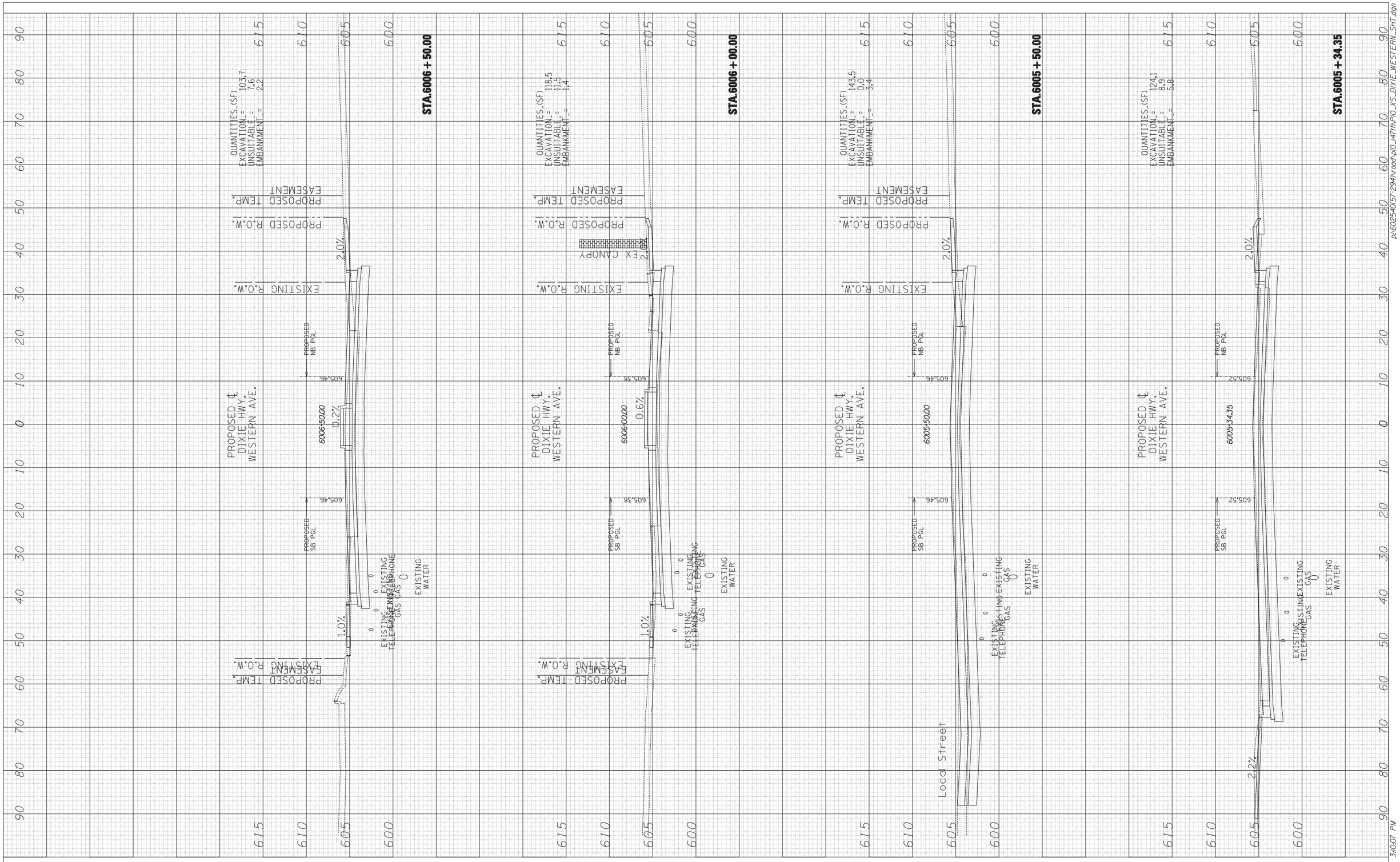

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TY·LIN INTERNATIONAL

USER NAME =	DESIGNED - JDF	REVISED -
	DRAWN - JDF	REVISED -
PLOT SCALE =	CHECKED - JPM	REVISED -
PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

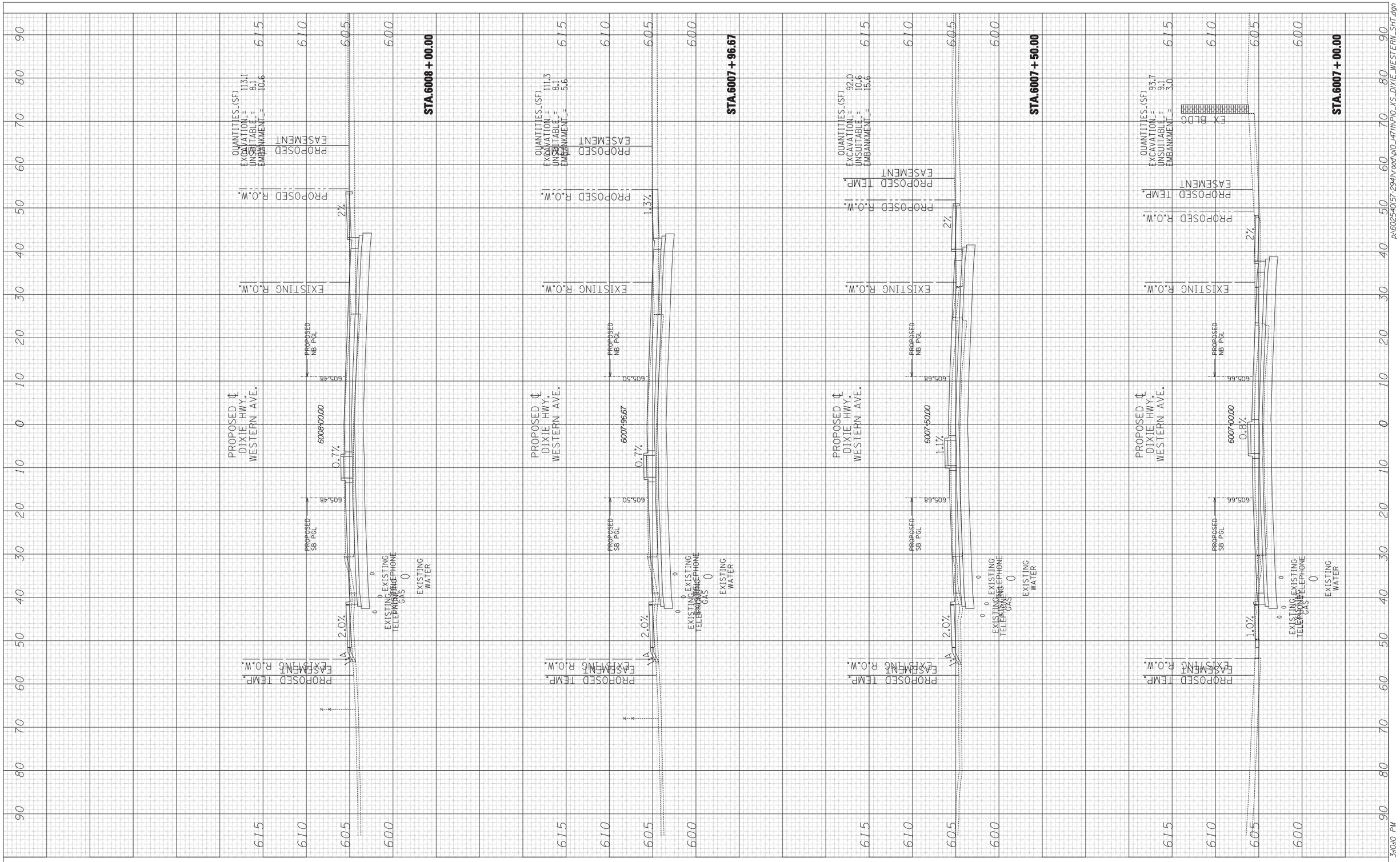
147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5" = 1" V | SHEET NO. OF SHEETS | STA. 6005+34.35 TO STA. 6006+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	487
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5' V | SHEET NO. OF SHEETS | STA. 6007+00.00 TO STA. 6008+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	488
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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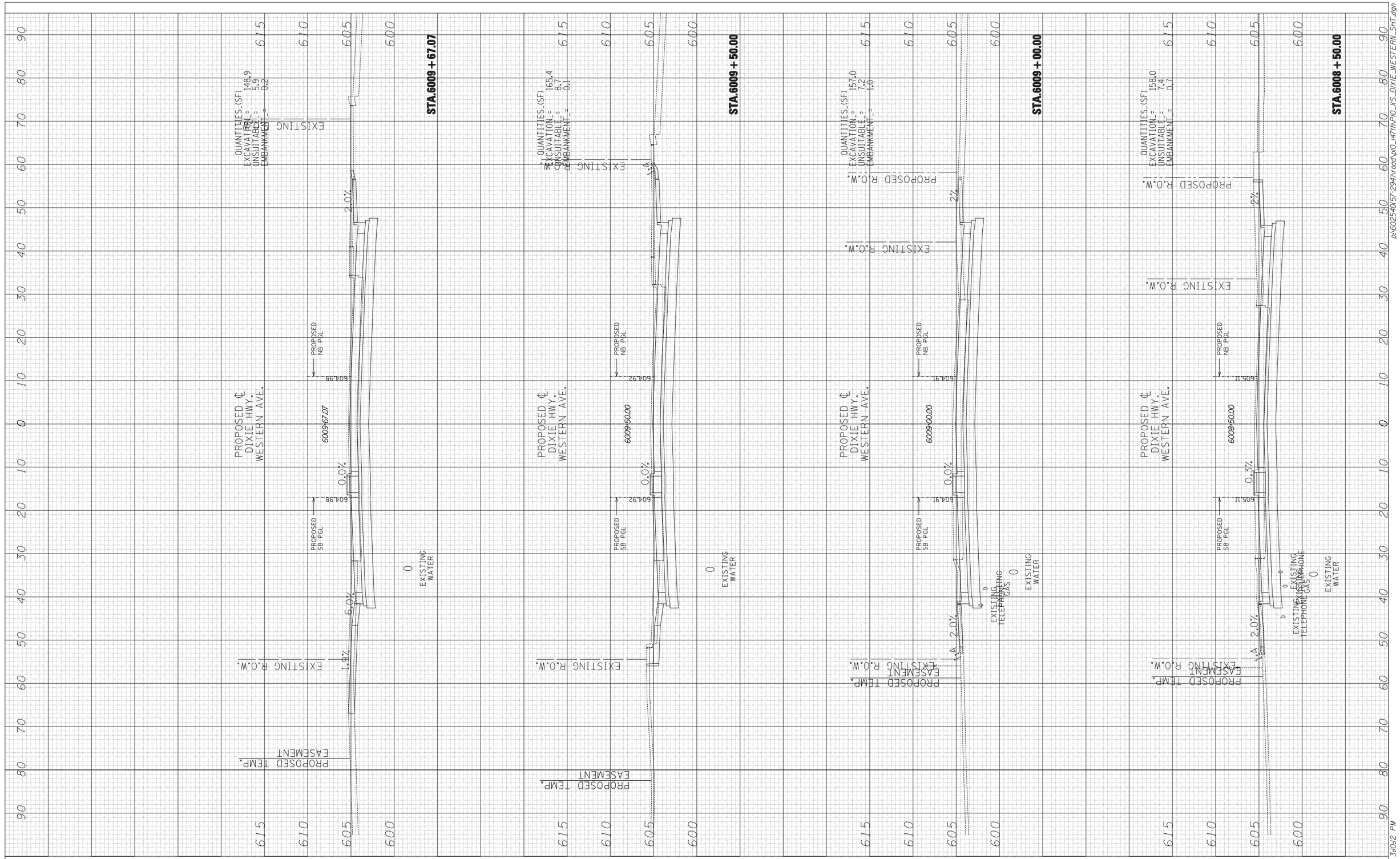
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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



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TY·LIN INTERNATIONAL

USER NAME =	DESIGNED - JDF	REVISED -
	DRAWN - JDF	REVISED -
PLOT SCALE =	CHECKED - JPM	REVISED -
PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

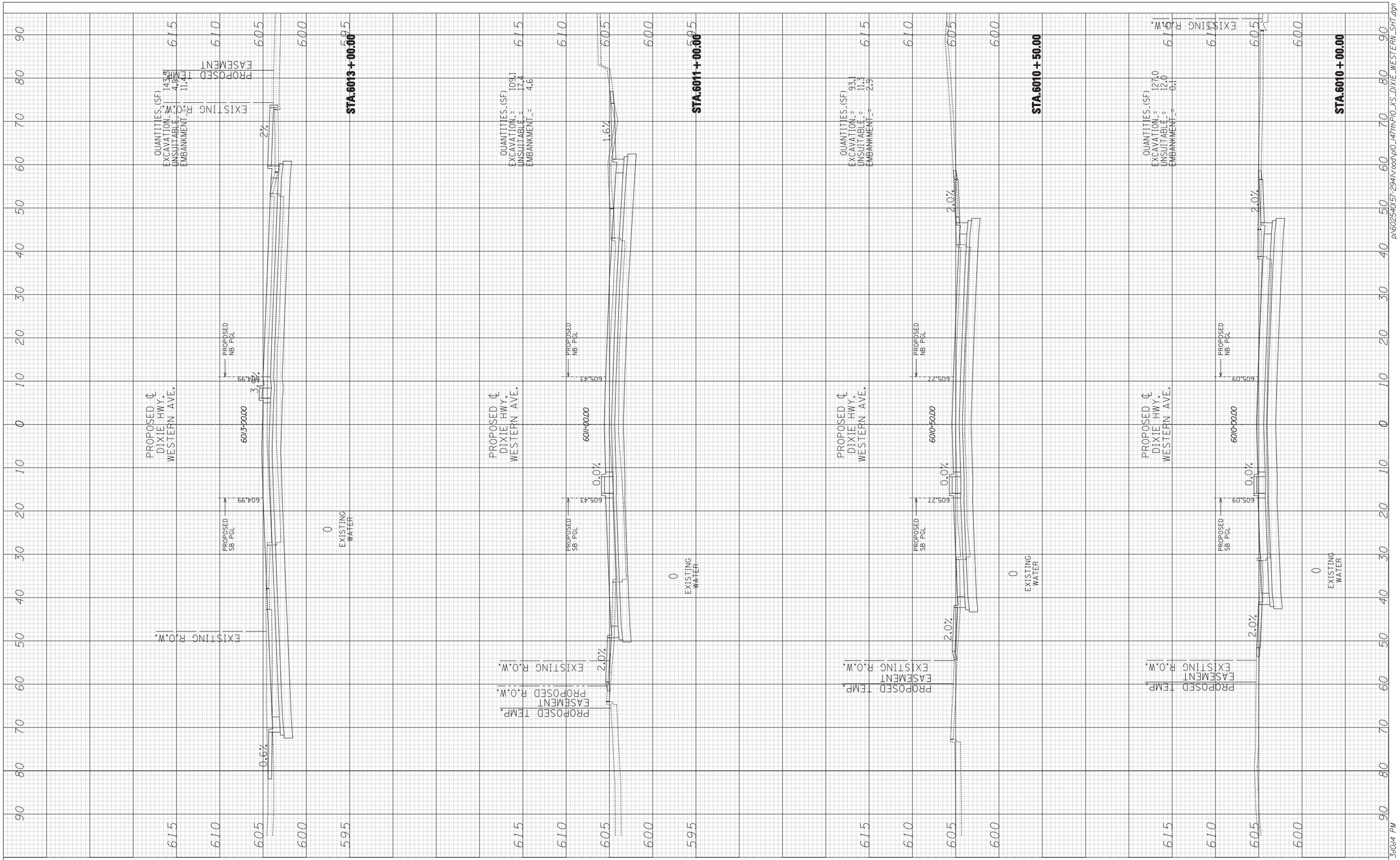
147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5' V | SHEET NO. OF SHEETS | STA. 6008+50.00 TO STA. 6009+67.07

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	489
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

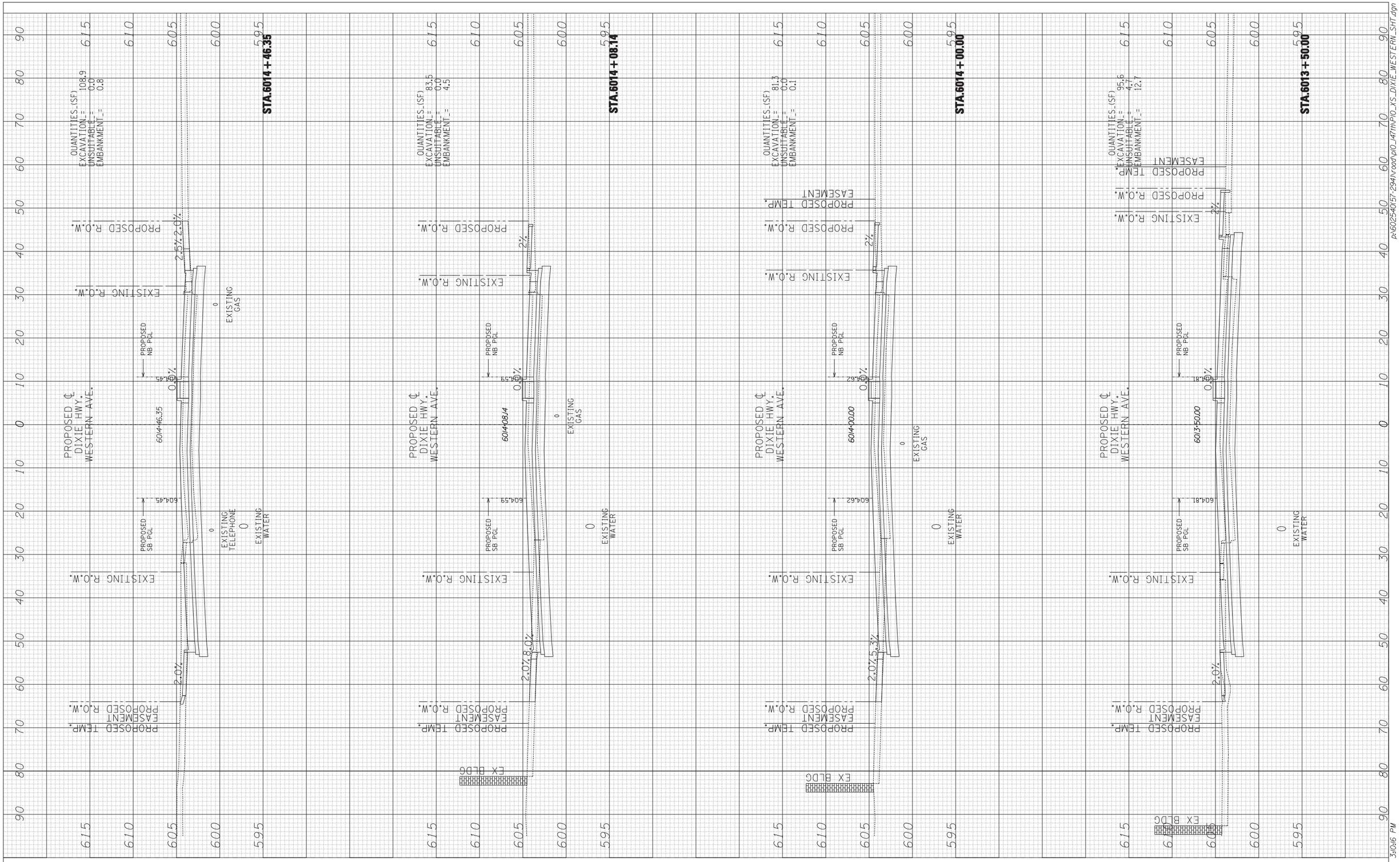
147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' V, 1" = 5' H | SHEET NO. OF SHEETS | STA. 6010+00.00 TO STA. 6013+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	490
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6013+50.00 TO STA. 6014+46.35

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	491
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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FINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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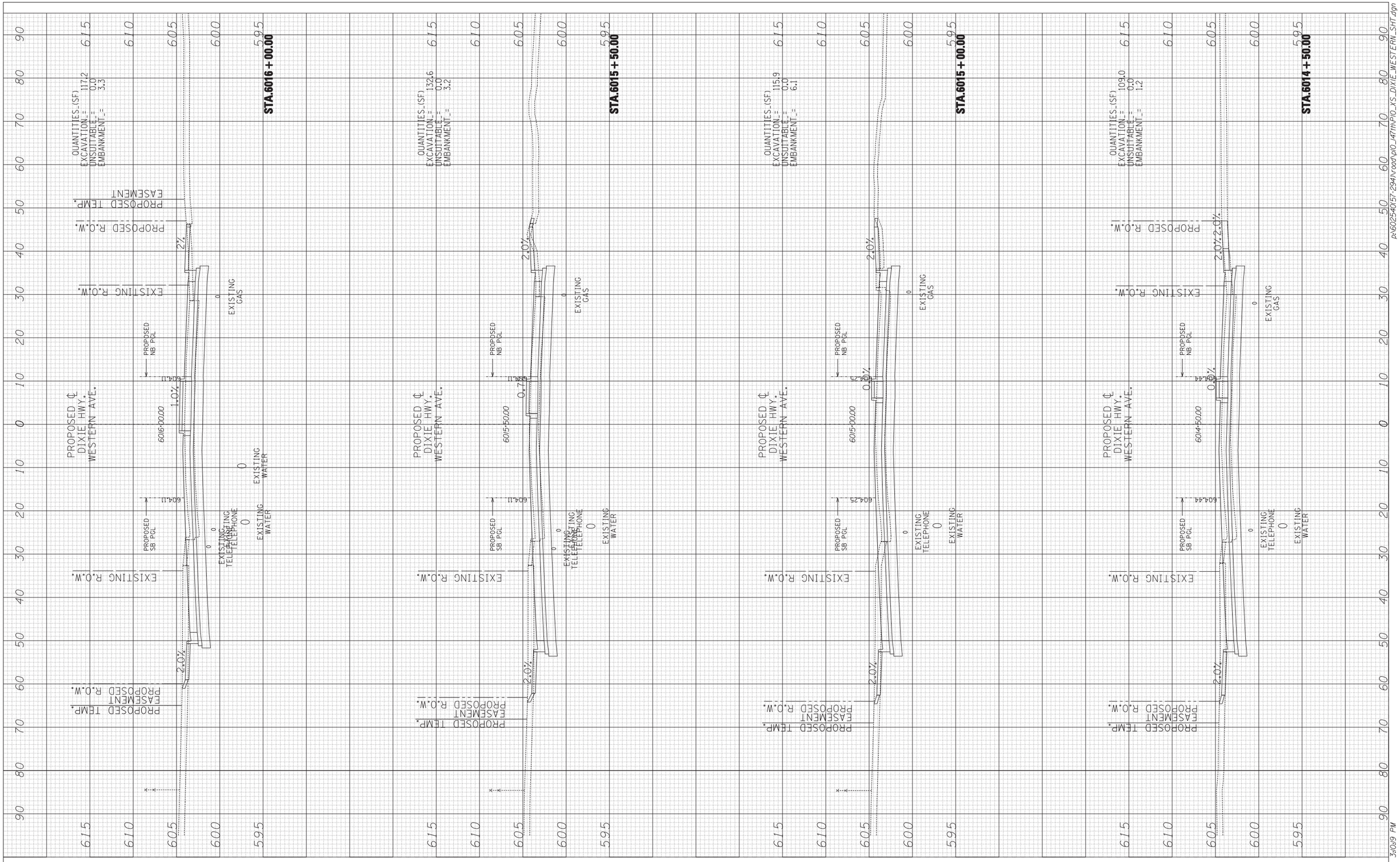
NO.	AREAS CHECKED		



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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5" V | SHEET NO. OF SHEETS | STA. 6014+50.00 TO STA. 6016+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	492
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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FINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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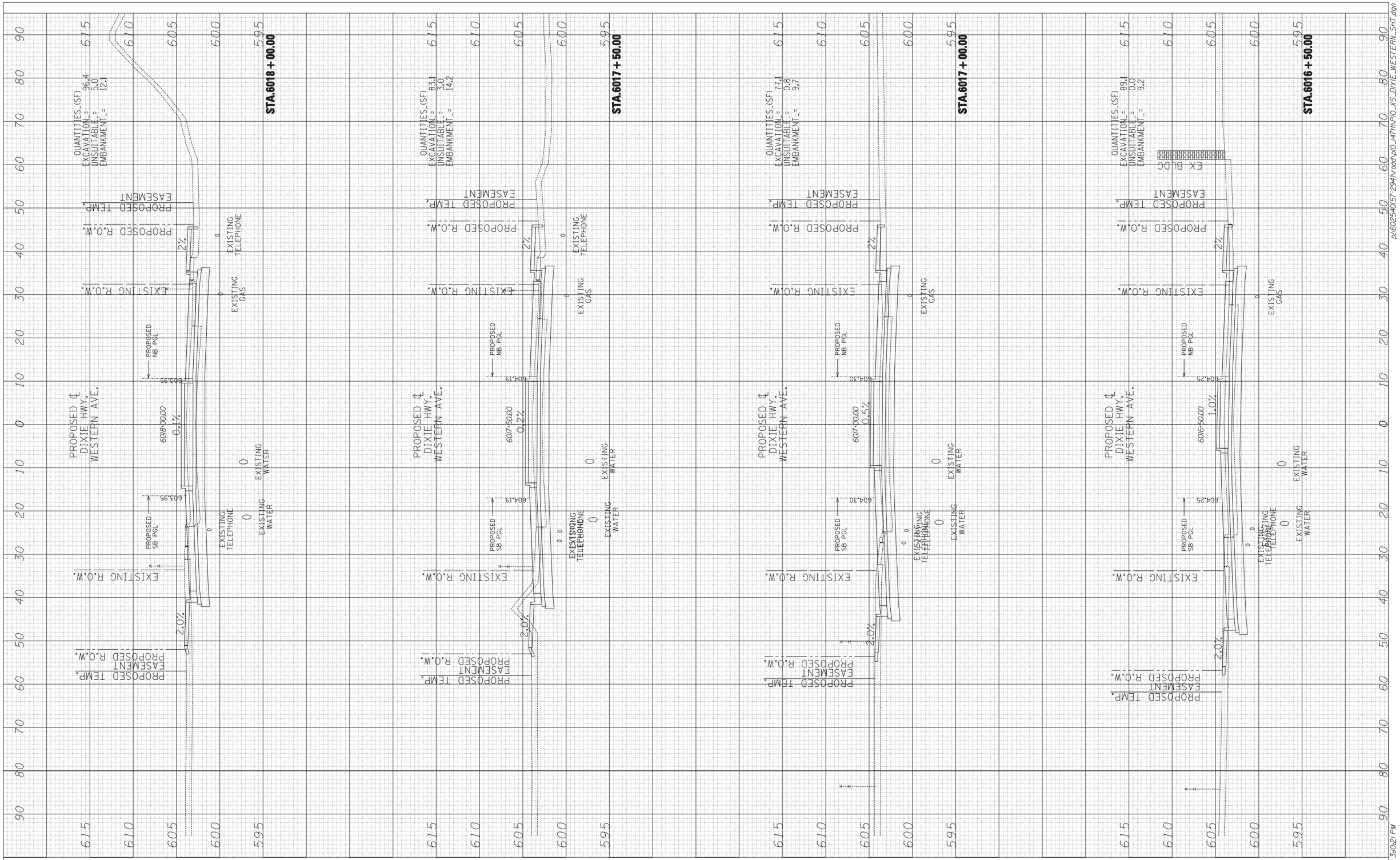
NO.	AREAS CHECKED		



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	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6016+50.00 TO STA. 6018+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	493
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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NO.	TEMPLATE		
	AREAS		
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ORIGINAL SURVEY	SURVEYED	BY	DATE
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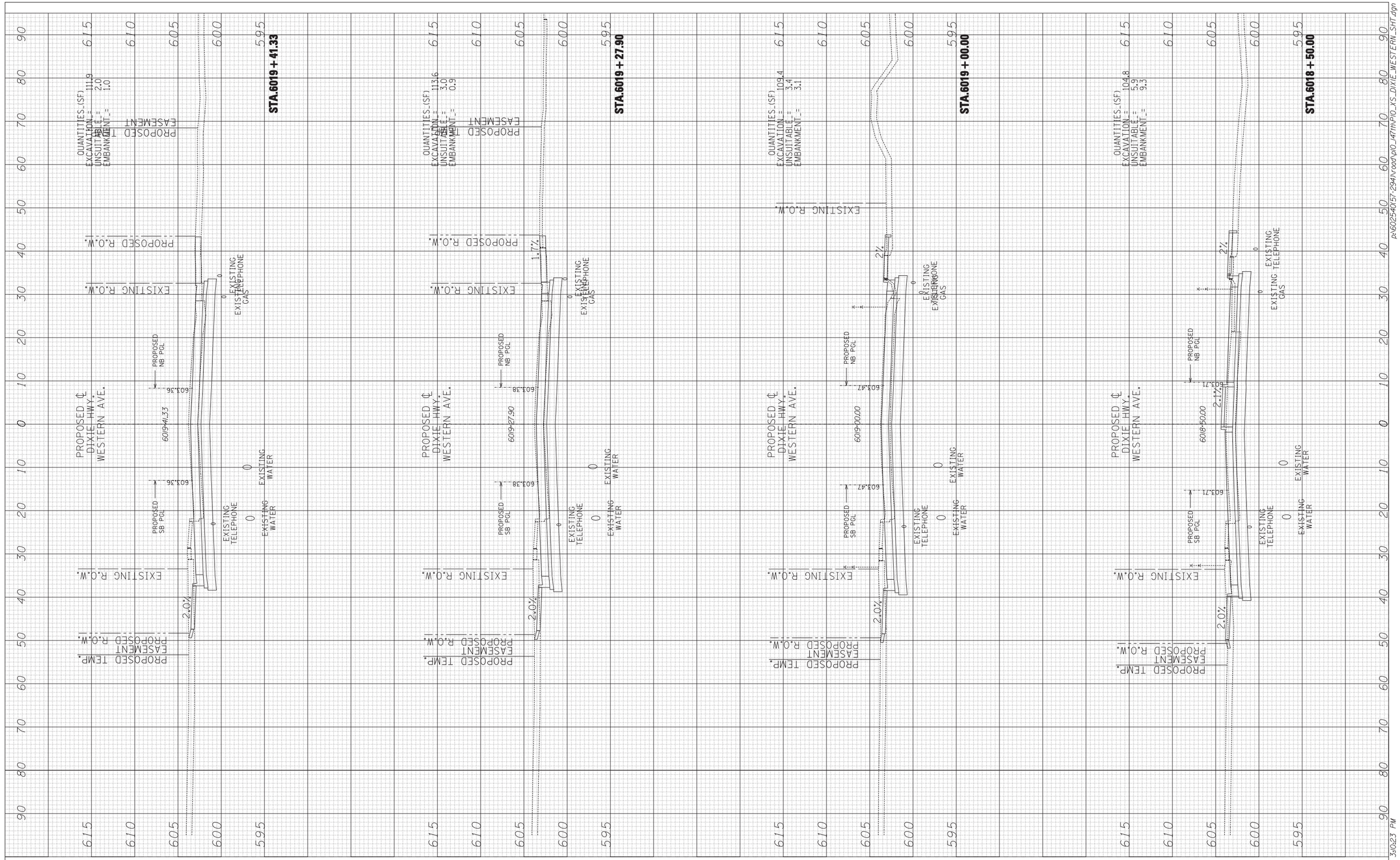
	AREAS		
	AREAS CHECKED		



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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6018+50.00 TO STA. 6019+41.33

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	494
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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NOTE BOOK	TEMPLATE		
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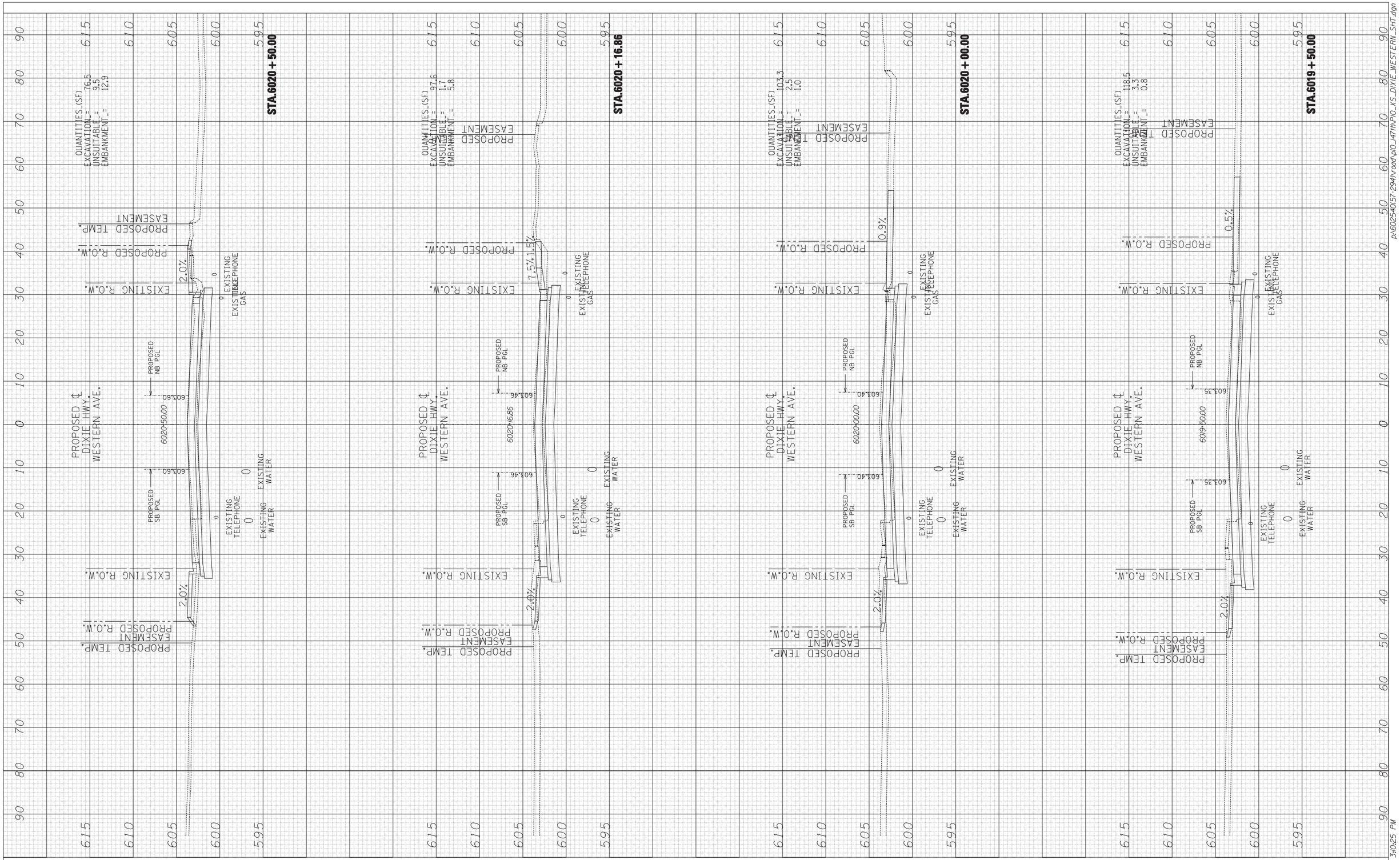
NO.	AREAS CHECKED		



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

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		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6019+50.00 TO STA. 6020+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	495
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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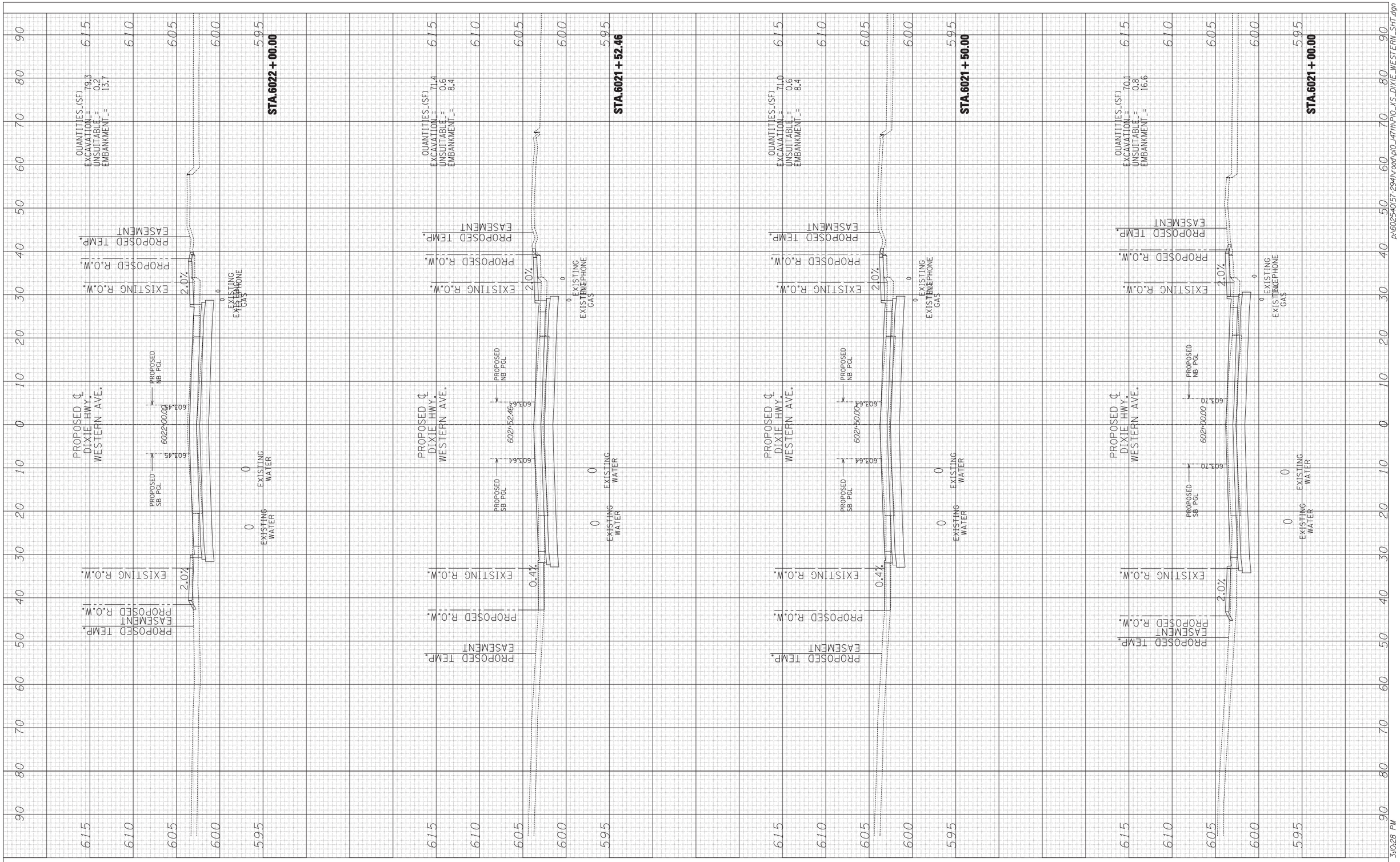
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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



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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6021+00.00 TO STA. 6022+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	496
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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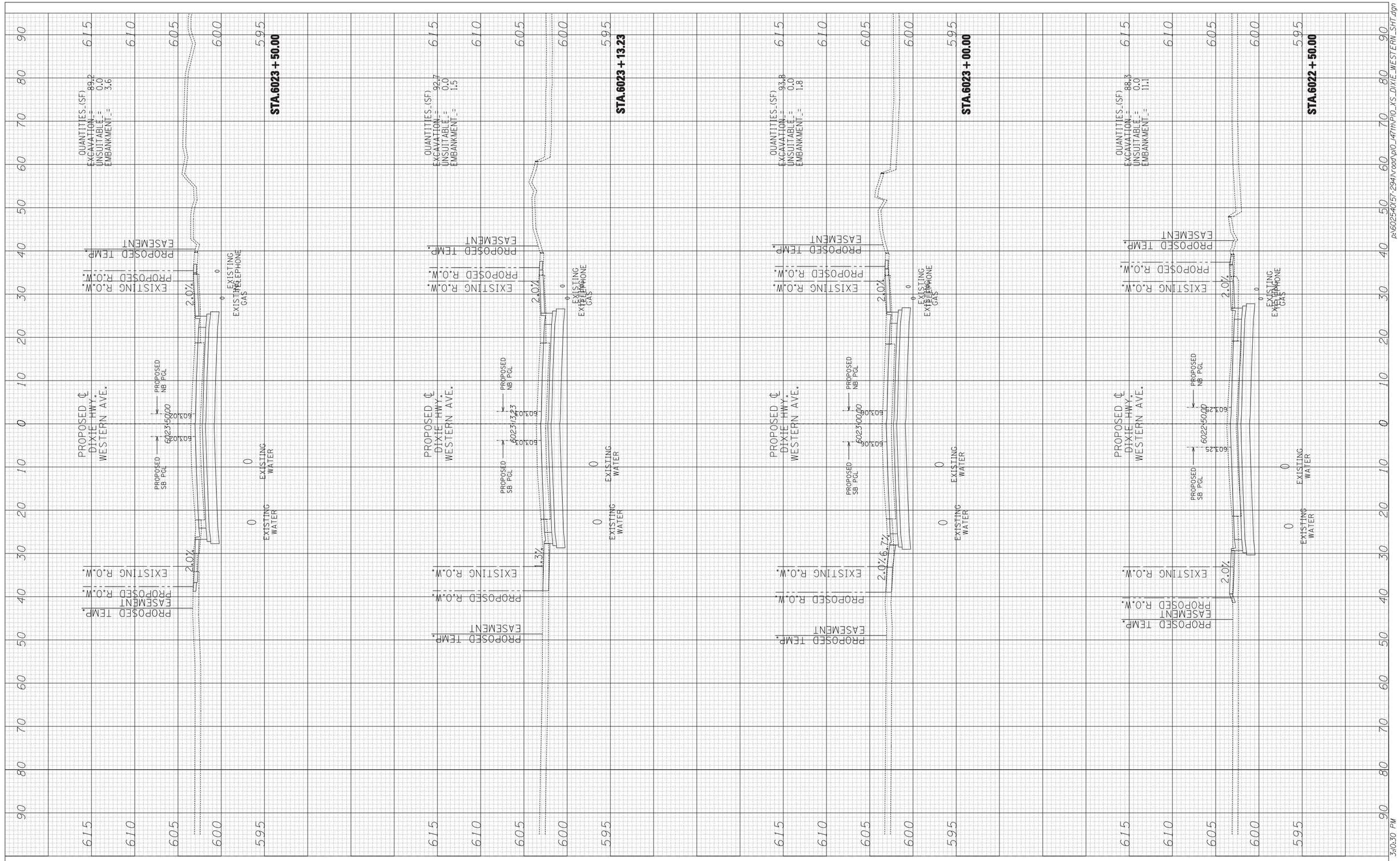

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
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	AREAS	
	AREAS CHECKED	

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

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TY·LIN INTERNATIONAL

USER NAME =	DESIGNED - JDF	REVISED -
	DRAWN - JDF	REVISED -
PLOT SCALE =	CHECKED - JPM	REVISED -
PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5" = 1" V | SHEET NO. OF SHEETS | STA. 6022+50.00 TO STA. 6023+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	497
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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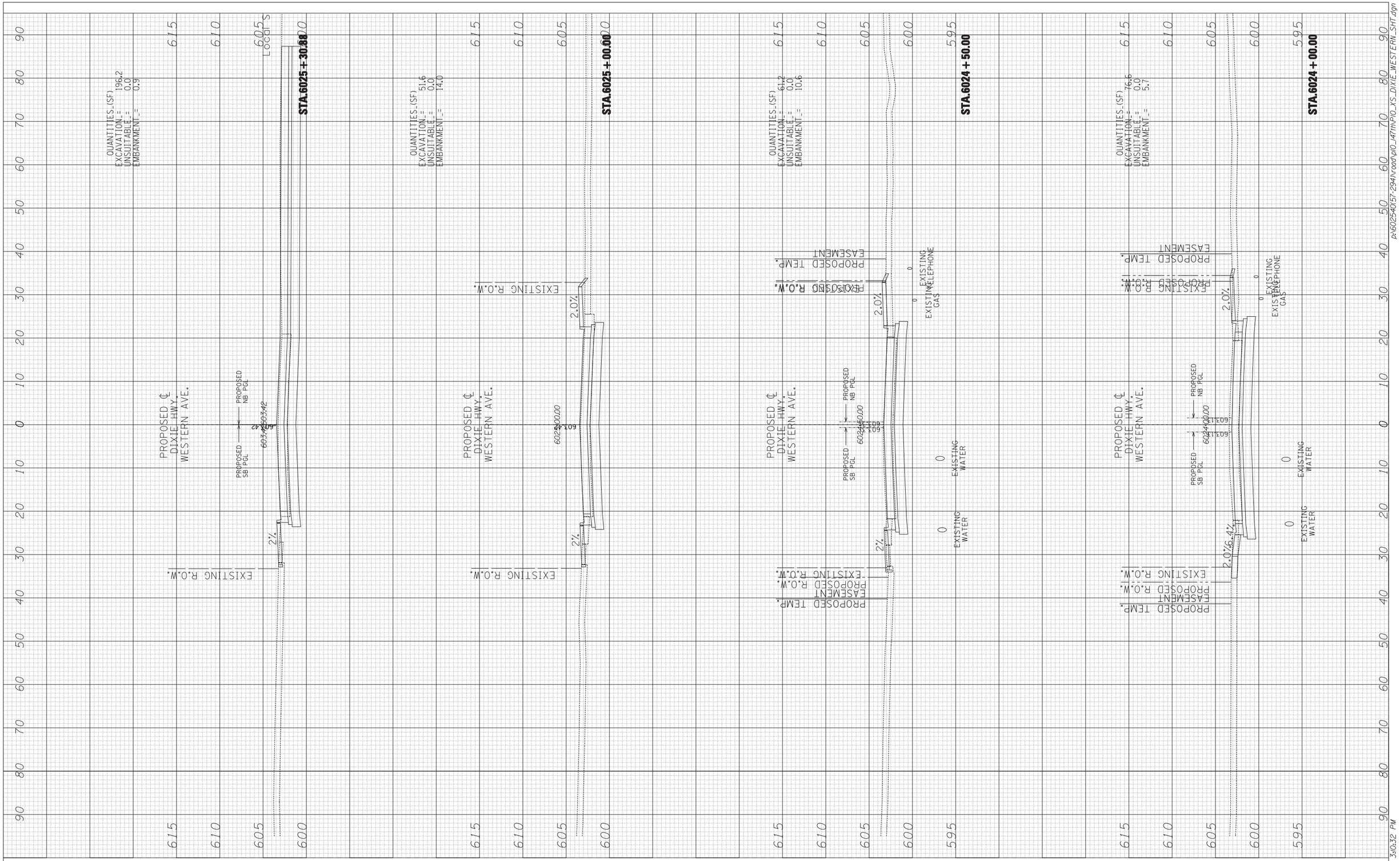
ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		



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TY·LIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED -
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	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 5" = 10' V | SHEET NO. OF SHEETS | STA. 6024+00.00 TO STA. 6025+30.88

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	498
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
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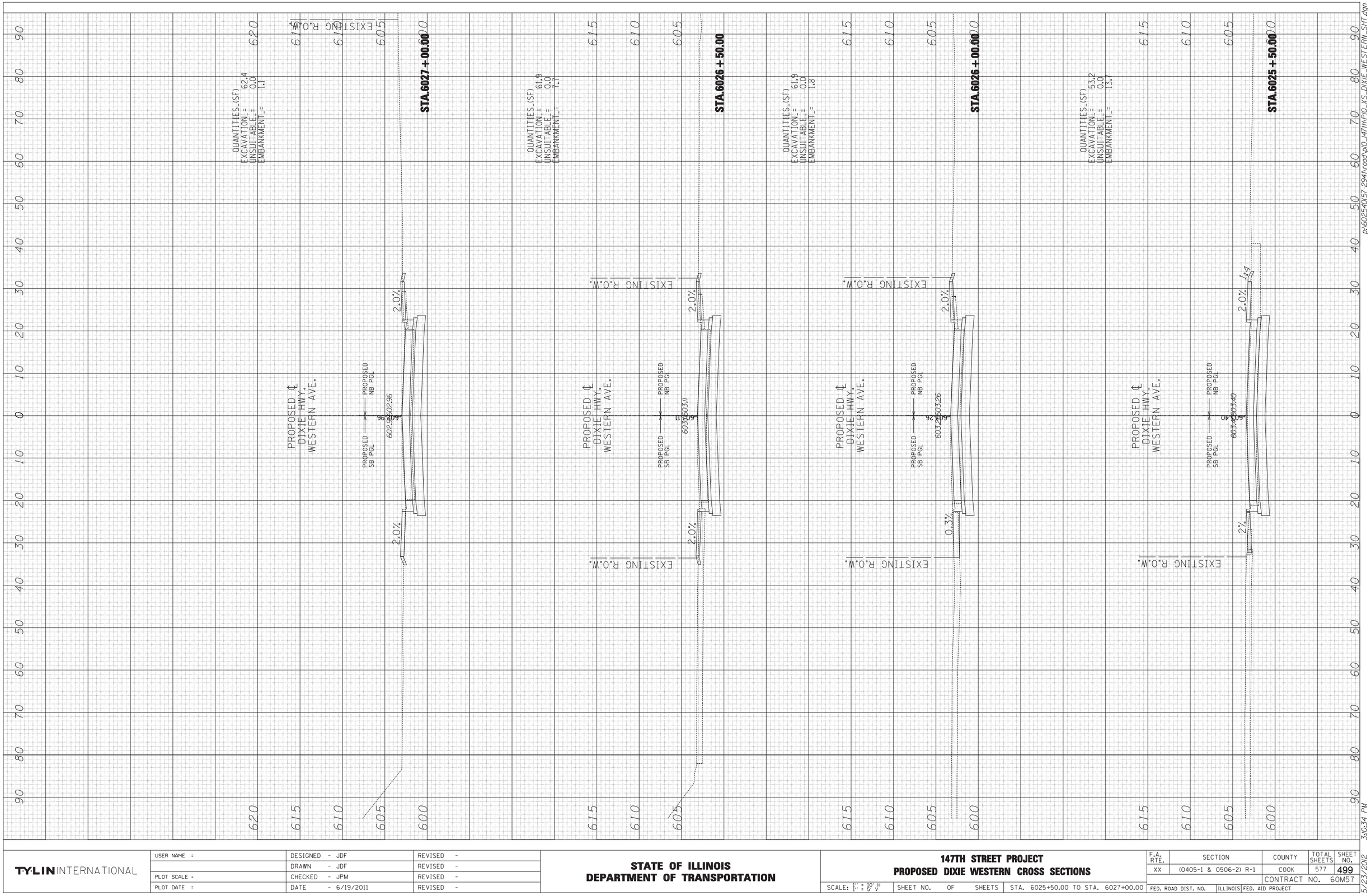

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

TYLIN INTERNATIONAL	USER NAME =	DESIGNED - JDF	REVISED -
		DRAWN - JDF	REVISED -
	PLOT SCALE =	CHECKED - JPM	REVISED -
	PLOT DATE =	DATE - 6/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

147TH STREET PROJECT
PROPOSED DIXIE WESTERN CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 6025+50.00 TO STA. 6027+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XX	(0405-1 & 0506-2) R-1	COOK	577	499
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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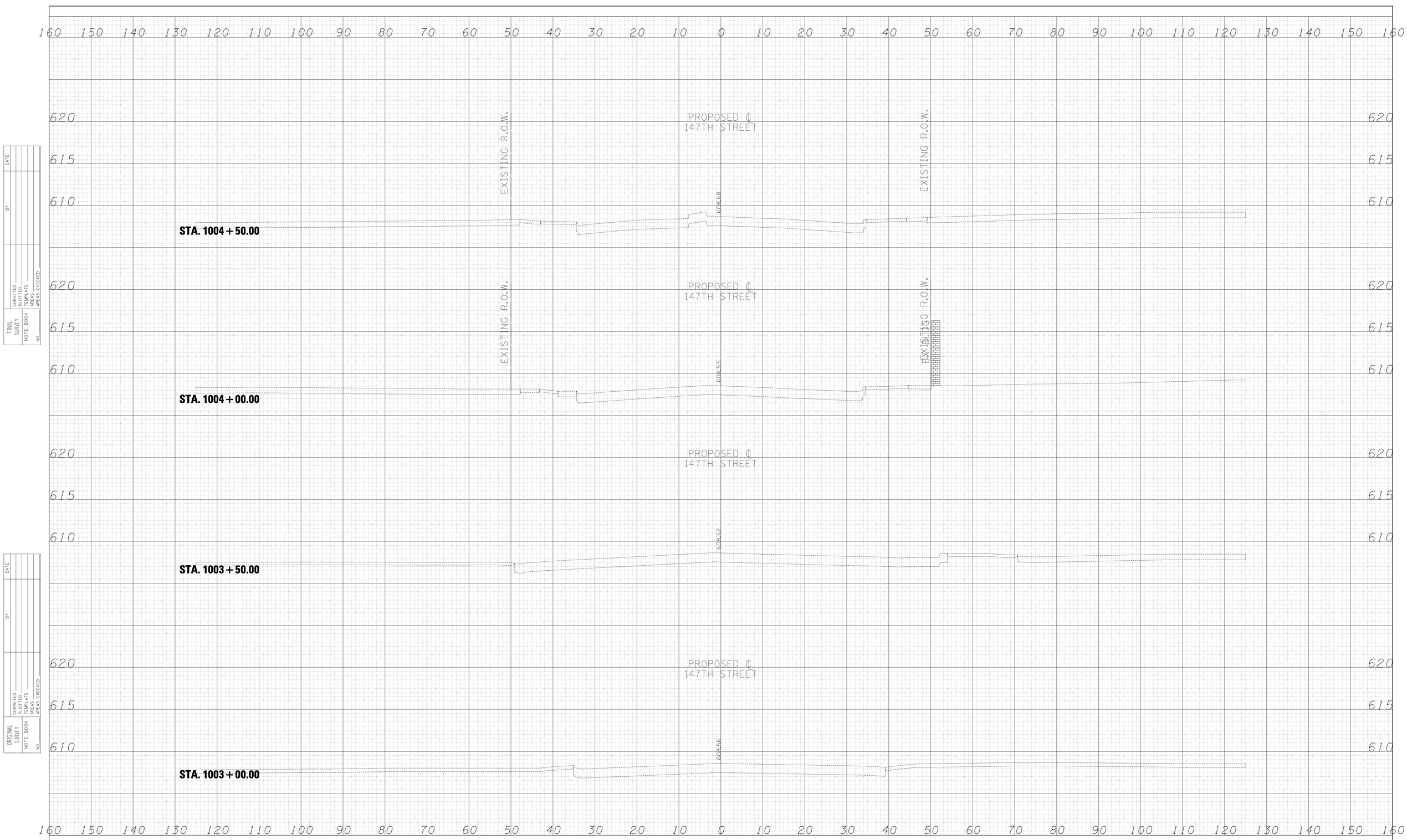

FINAL SURVEY

BY	DATE
SURVEYED	
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TEMPLATE	
AREAS	
AREAS CHECKED	

NOTE BOOK
NO.

ORIGINAL SURVEY

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	

NOTE BOOK
NO.

TY·LIN INTERNATIONAL

USER NAME =	DESIGNED - JPM	REVISED -
	DRAWN - JDF	REVISED -
PLOT SCALE =	CHECKED - JPM	REVISED -
PLOT DATE =	DATE - 2/24/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-294 AT I-57 INTERCHANGE PROJECT
PROPOSED 147TH STREET CROSS SECTIONS

SCALE: 1" = 10' H, 1" = 5' V | SHEET NO. OF SHEETS | STA. 1003+00.00 TO STA. 1004+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	577	500
		CONTRACT NO. 60M57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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