

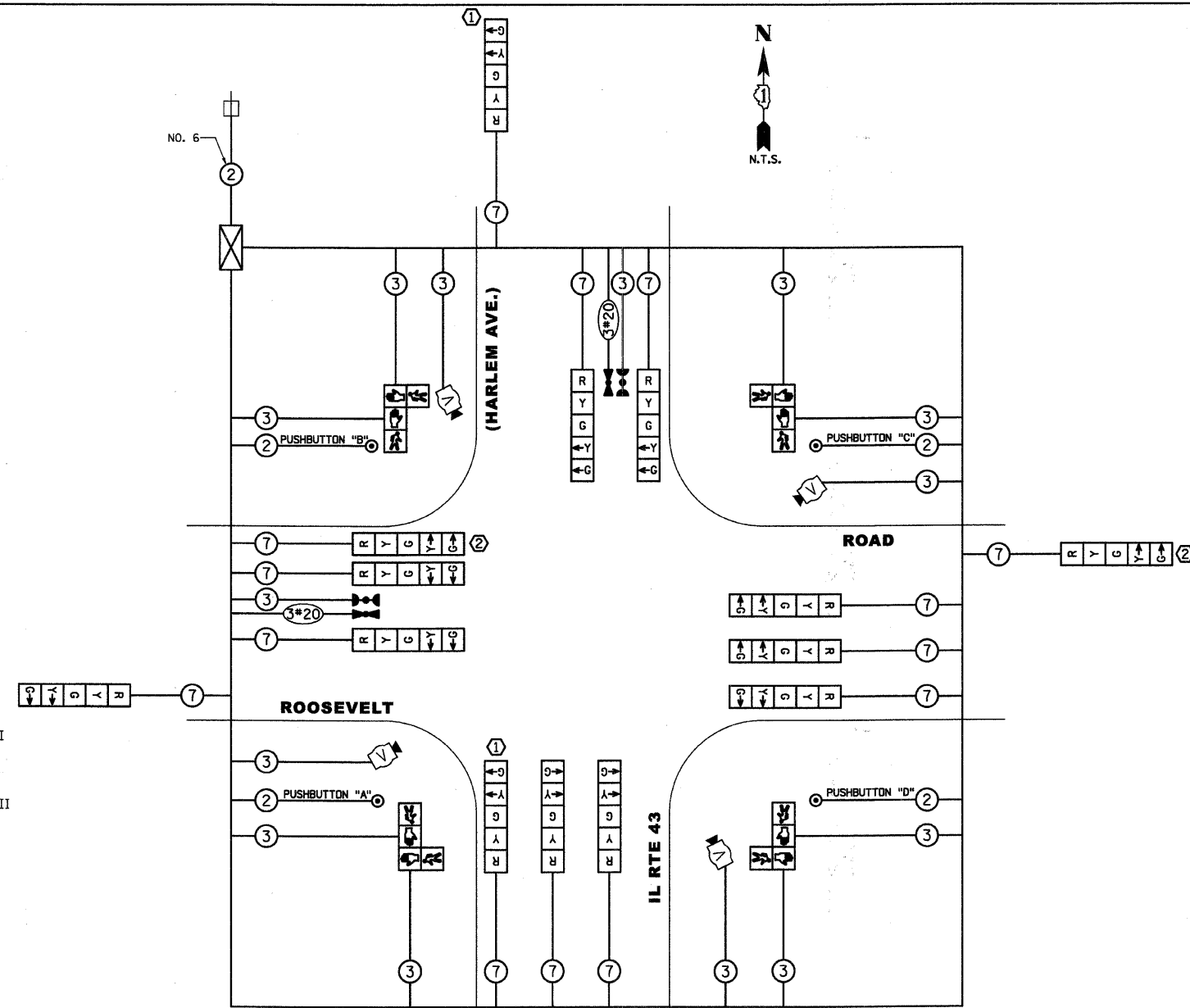
- NOTES FOR TEMPORARY TRAFFIC SIGNALS
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
  2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
  3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
  4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
  5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
  6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

- CONSTRUCTION NOTES:
- ① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED DURING THE STAGE I AND STAGE III TEMPORARY CONTROLLER SEQUENCE PHASES.
  - ② THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED DURING THE STAGE II AND STAGE III TEMPORARY CONTROLLER SEQUENCE PHASES.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE EXISTING SIGNAL HEADS SHALL BE BAGGED AND DISABLED UNTIL THE TEMPORARY TRAFFIC SIGNAL IS TURNED OFF.

FILE NAME = DIRTE38-shr-ta08.dgn	USER NAME = IDOT	DESIGNED - TM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION ROOSEVELT ROAD AT HARLEM AVE. (ILL RTE 43)</b>	F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 201	
	PLOT SCALE = 20,0000' / IN.	DRAWN - JR	REVISED -			SCALE: 1" = 20'	SHEET NO. 8 OF 27 SHEETS	STA. TO STA.	CONTRACT NO. 63432		
	PLOT DATE = 3/11/2010	CHECKED - JB	REVISED -			ILLINOIS FED. AID PROJECT					
		DATE -	REVISED -								



**CONSTRUCTION NOTES:**

- ① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED DURING THE STAGE I AND STAGE III TEMPORARY CONTROLLER SEQUENCE PHASES.
- ② THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED DURING THE STAGE II AND STAGE III TEMPORARY CONTROLLER SEQUENCE PHASES.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

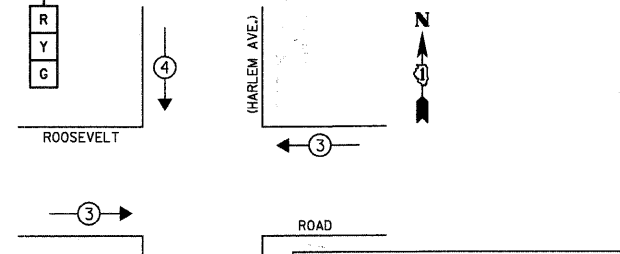
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE X INCAND. LED X % OPERATION			
SIGNAL (RED)	15	- 17	0.50	127.5	
(YELLOW)	15	- 25	0.25	93.8	
(GREEN)	15	- 15	0.25	56.3	
ARROW	24	- 12	0.10	28.8	
PED. SIGNAL	8	- 25	1.00	200.0	
CONTROLLER	1	- 100	1.00	100.0	

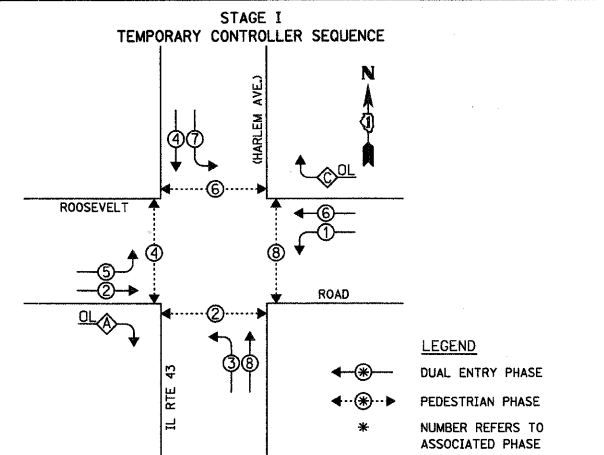
ENERGY COSTS TO: TOTAL = 606.3  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY: CONTACT: MIKE BELL  
 PHONE: (708) 410-5314  
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
C - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

**TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**



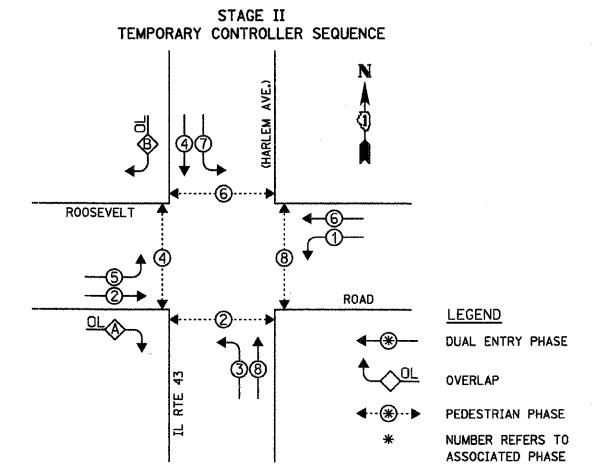
PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	←	↓	↑



STAGE I TEMPORARY PHASE DESIGNATION DIAGRAM

**RIGHT TURN OVERLAP PHASE DESIGNATION**

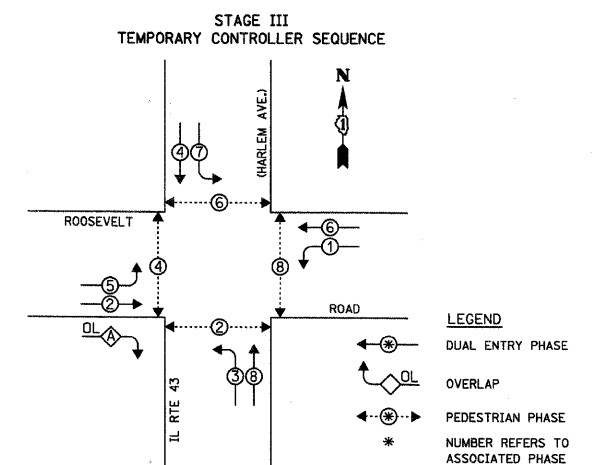
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2 + 3	
C	= 6 + 7	



STAGE II TEMPORARY PHASE DESIGNATION DIAGRAM

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2 + 3	
B	= 4 + 5	

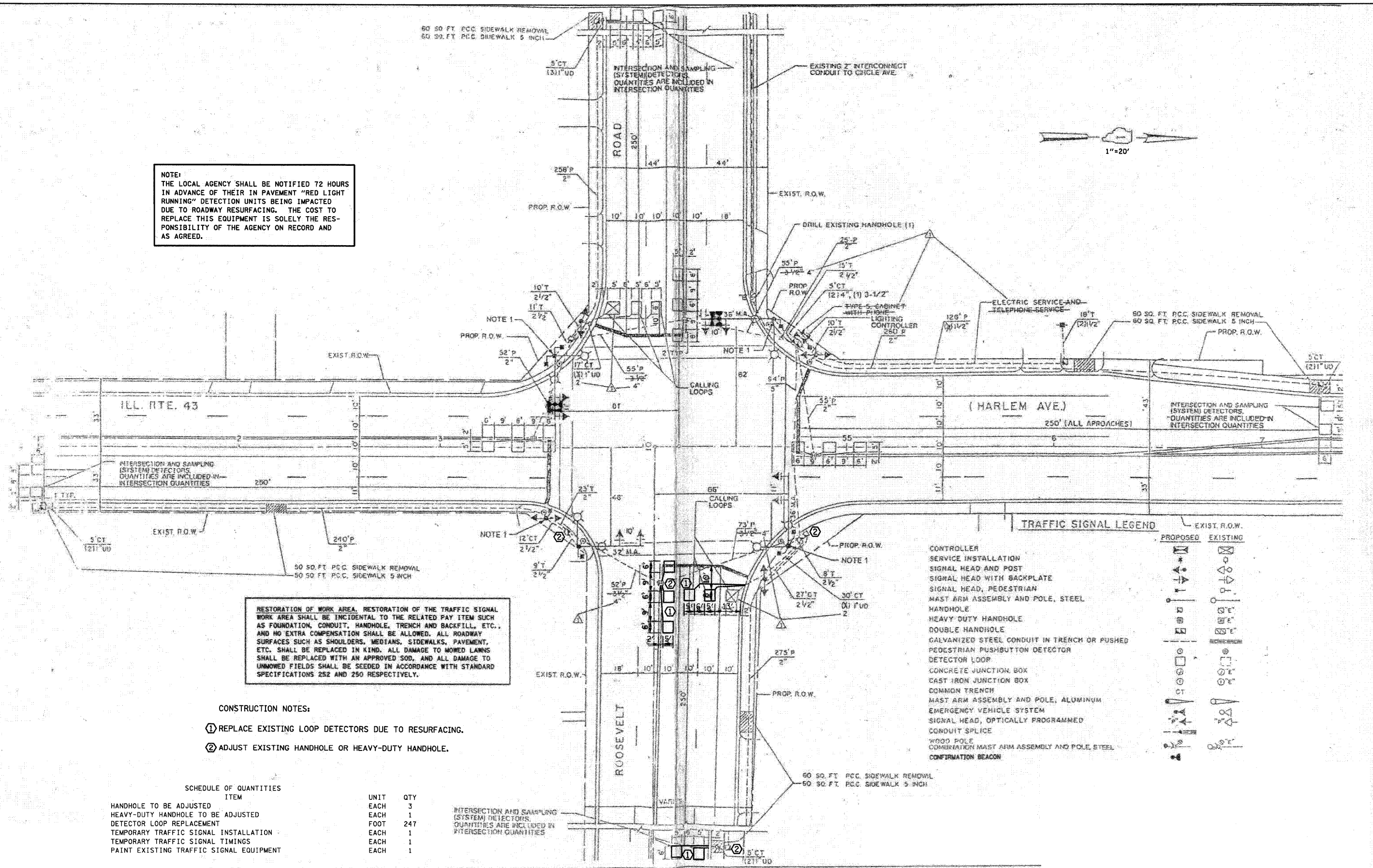


STAGE III TEMPORARY PHASE DESIGNATION DIAGRAM

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2 + 3	

**NOTE:**  
 THE LOCAL AGENCY SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF THEIR IN PAVEMENT "RED LIGHT RUNNING" DETECTION UNITS BEING IMPACTED DUE TO ROADWAY RESURFACING. THE COST TO REPLACE THIS EQUIPMENT IS SOLELY THE RESPONSIBILITY OF THE AGENCY ON RECORD AND AS AGREED.



**RESTORATION OF WORK AREA.** RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOG, AND ALL DAMAGE TO UNKNOWN FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

- CONSTRUCTION NOTES:**
- ① REPLACE EXISTING LOOP DETECTORS DUE TO RESURFACING.
  - ② ADJUST EXISTING HANDHOLE OR HEAVY-DUTY HANDHOLE.

**SCHEDULE OF QUANTITIES**

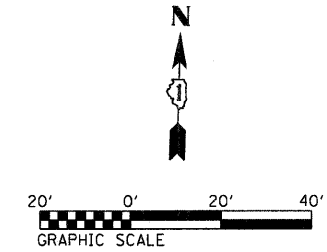
ITEM	UNIT	QTY
HANDHOLE TO BE ADJUSTED	EACH	3
HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	1
DETECTOR LOOP REPLACEMENT	FOOT	247
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING
CONTROLLER SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD AND POST	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CONCRETE JUNCTION BOX	[Symbol]	[Symbol]
EAST IRON JUNCTION BOX	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM	[Symbol]	[Symbol]
SIGNAL HEAD, OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]

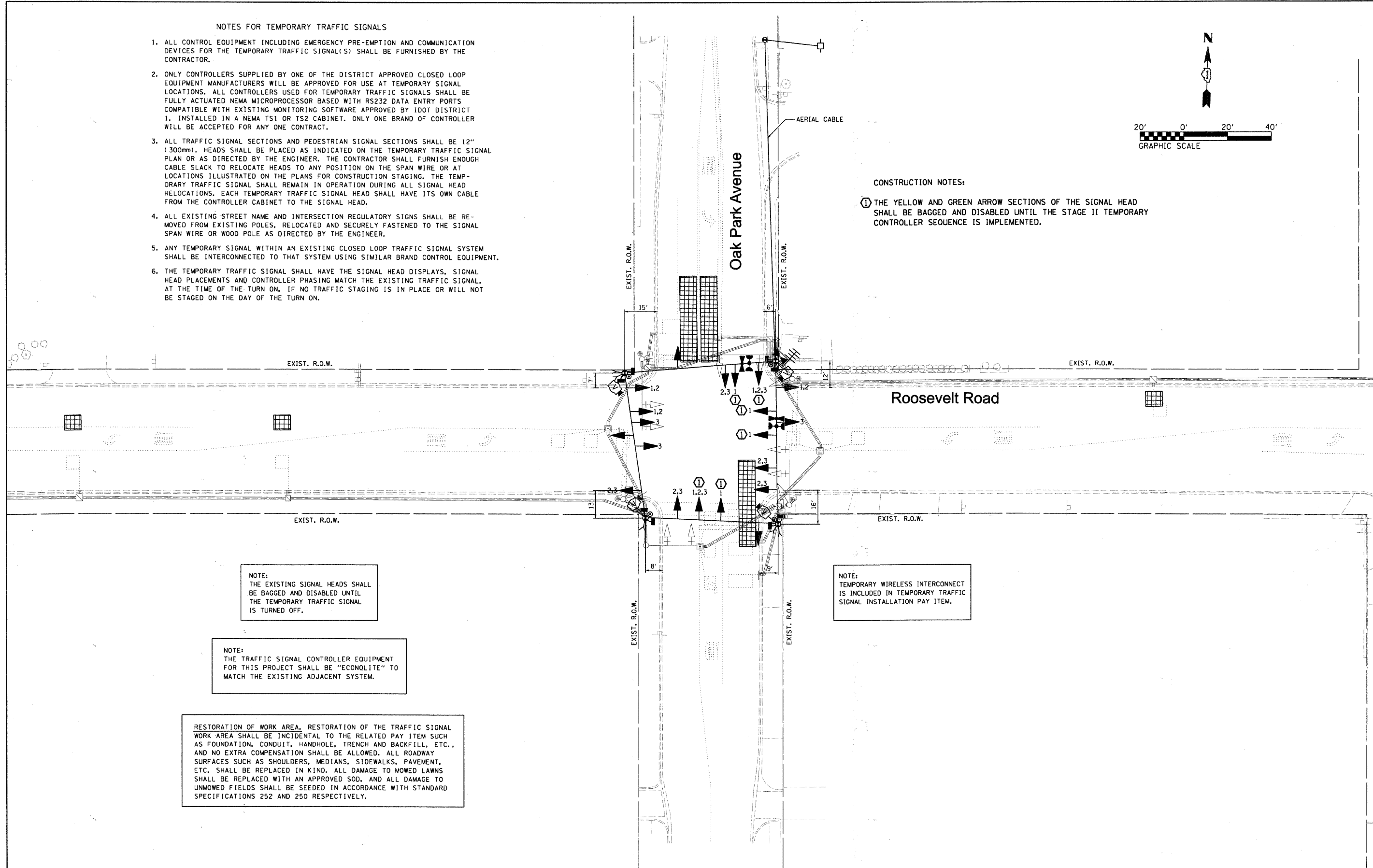
NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON. IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



CONSTRUCTION NOTES:

- ① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED UNTIL THE STAGE II TEMPORARY CONTROLLER SEQUENCE IS IMPLEMENTED.



NOTE:  
THE EXISTING SIGNAL HEADS SHALL BE BAGGED AND DISABLED UNTIL THE TEMPORARY TRAFFIC SIGNAL IS TURNED OFF.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE:  
TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

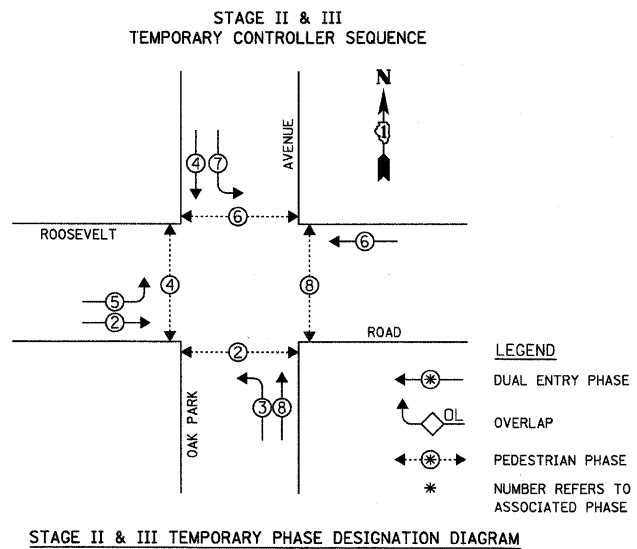
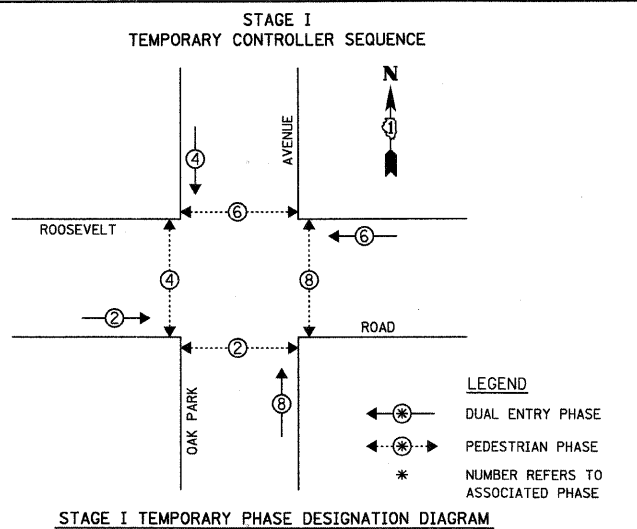
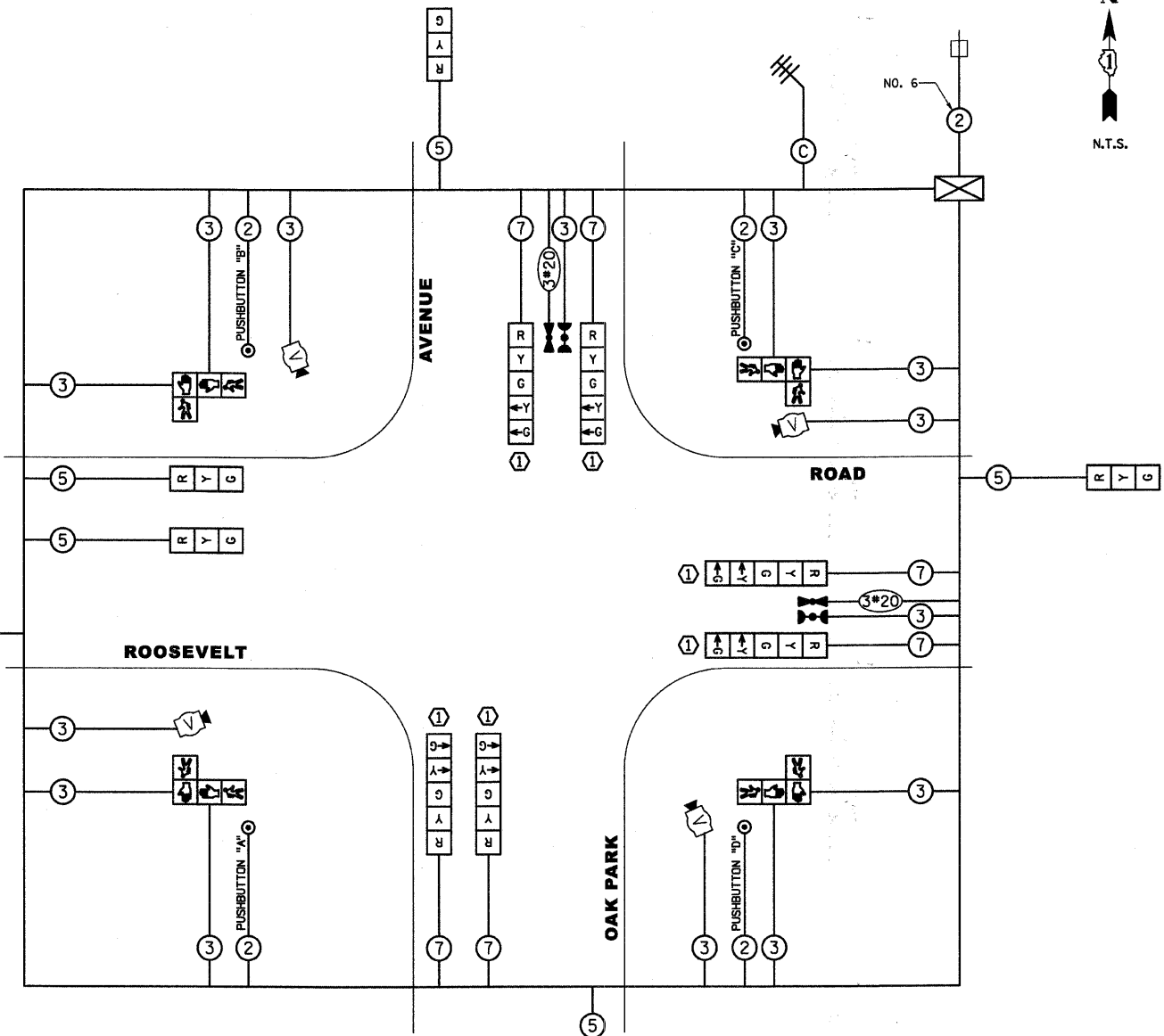
FILE NAME = DIRTE38-aht-ts1.dgn	USER NAME = IDOT	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY TRAFFIC SIGNAL INSTALLATION ROOSEVELT ROAD AT OAK PARK AVENUE</b>	F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 204		
PLOT SCALE = 20.0000' / IN.	CHECKED - JB	REVISED -	REVISED -			SCALE: 1" = 20'	SHEET NO. 11 OF 27 SHEETS	STA. TO STA.	CONTRACT NO. 63432			
PLOT DATE = 3/11/2010	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT						



**CONSTRUCTION NOTES:**

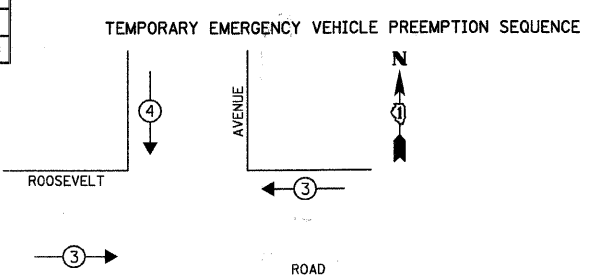
① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED UNTIL THE STAGE II TEMPORARY CONTROLLER SEQUENCE IS IMPLEMENTED.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	←	↓	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	12	-	17	0.50	102.0
(YELLOW)	12	-	25	0.25	75.0
(GREEN)	12	-	15	0.25	45.0
ARROW	12	-	12	0.10	14.4
PED. SIGNAL	8	-	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
<b>TOTAL =</b>					<b>536.4</b>

ENERGY COSTS TO: TOTAL = 536.4

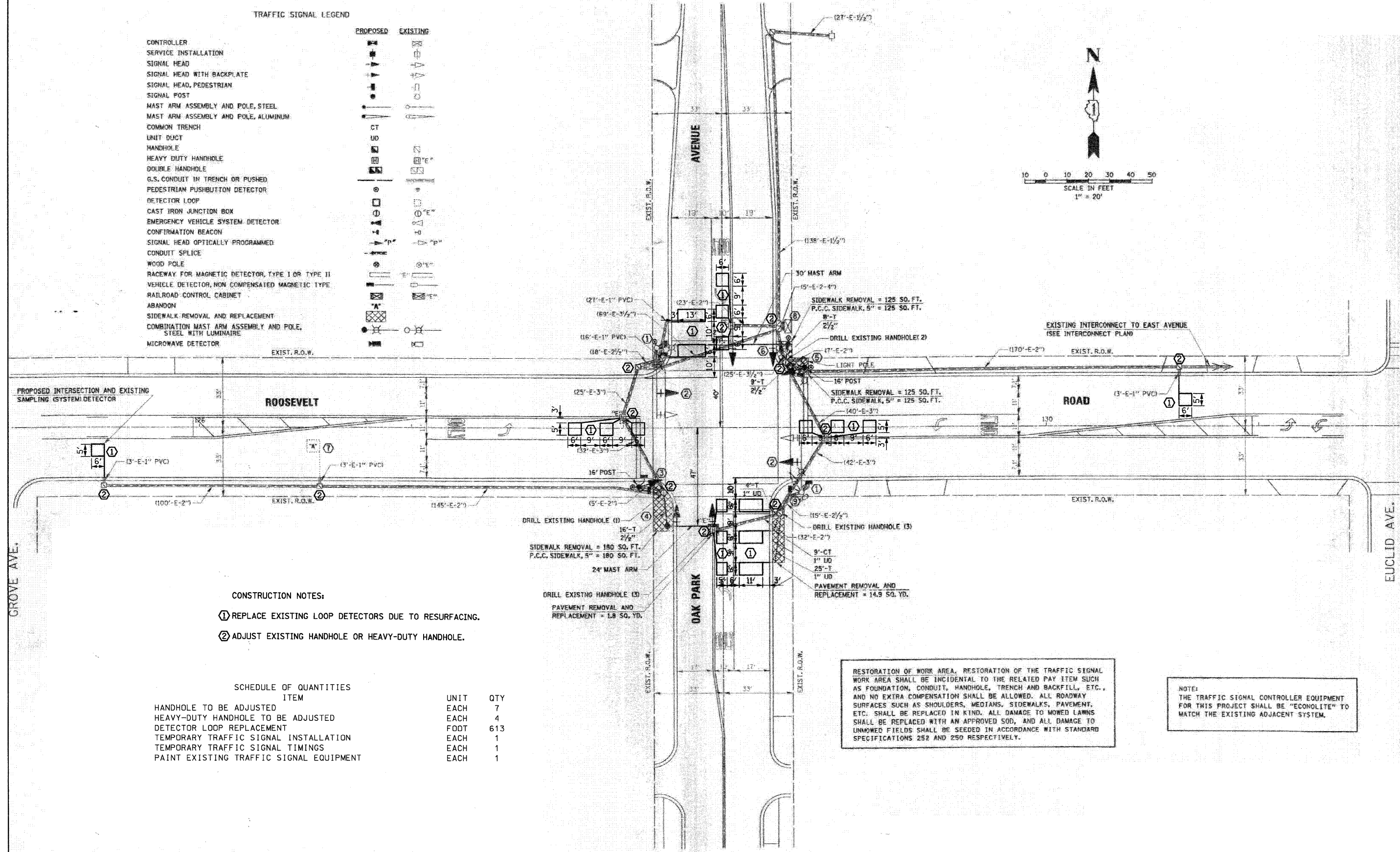
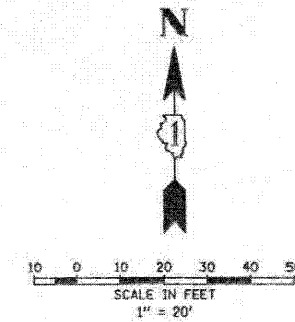
**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY: CONTACT: MIKE BELL  
 PHONE: (708) 410-5314  
 COMPANY: COMED

TYPE	DEPTH (FT.)	DEPTH (M)	CABLE SLACK	LENGTH (FT.)	LENGTH (M)	VERTICAL	LENGTH (FT.)
A - POST	4	(1.2)	HANDHOLE	6.5	(2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4	(1.2)	DOUBLE HANDHOLE	13	(4.0)	MAST ARM (L) POLE	20'±L-2'±
C - M. ARM POLE			SIGNAL POST	2	(1.0)	(6m±L-0.6m)±	
	24" (600mm)	10 (3.0)	CONTROLLER CAB.	1	(0.5)	BRACKET MOUNTED	13 (4.0)
	30" (750mm)	15 (4.6)	FIBER OPTIC	13	(4.0)	PED. PUSHBUTTON	4 (1.2)
			ELECTRIC SERVICE	1	(0.5)	ELECTRIC SERVICE	13.5 (4.1)
			GROUND CABLE	1	(0.5)	SERVICE TO GROUND	13.5 (4.1)
						POST MOUNTED	6 (1.8)

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ABANDON		
SIDEWALK REMOVAL AND REPLACEMENT		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
MICROWAVE DETECTOR		



- CONSTRUCTION NOTES:
- ① REPLACE EXISTING LOOP DETECTORS DUE TO RESURFACING.
  - ② ADJUST EXISTING HANDHOLE OR HEAVY-DUTY HANDHOLE.

SCHEDULE OF QUANTITIES

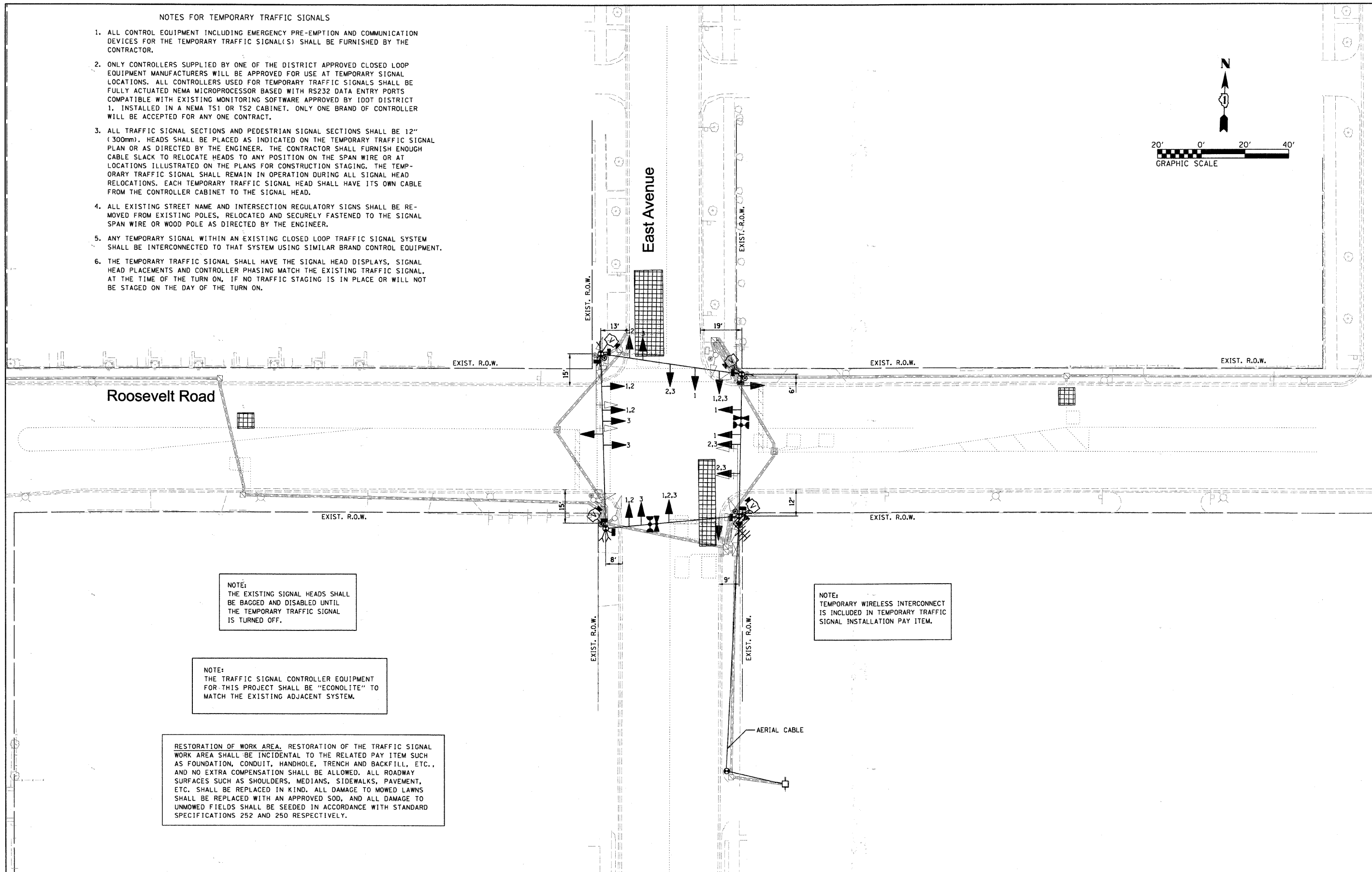
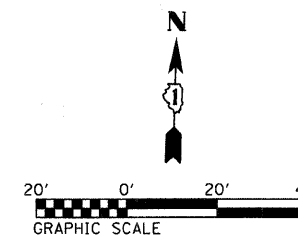
ITEM	UNIT	QTY
HANDHOLE TO BE ADJUSTED	EACH	7
HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	4
DETECTOR LOOP REPLACEMENT	FOOT	613
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL. AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



NOTE:  
THE EXISTING SIGNAL HEADS SHALL BE BAGGED AND DISABLED UNTIL THE TEMPORARY TRAFFIC SIGNAL IS TURNED OFF.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

FILE NAME =	DIRTE38-eh-t-ta14.dgn
-------------	-----------------------

USER NAME =	IDCT
PLOT SCALE =	20.0000' / IN.
PLOT DATE =	3/11/2018

DESIGNED -	REVISIONS
DRAWN -	REVISIONS
CHECKED - JB	REVISIONS
DATE -	REVISIONS

REVISIONS	REVISIONS
REVISIONS	REVISIONS
REVISIONS	REVISIONS
REVISIONS	REVISIONS

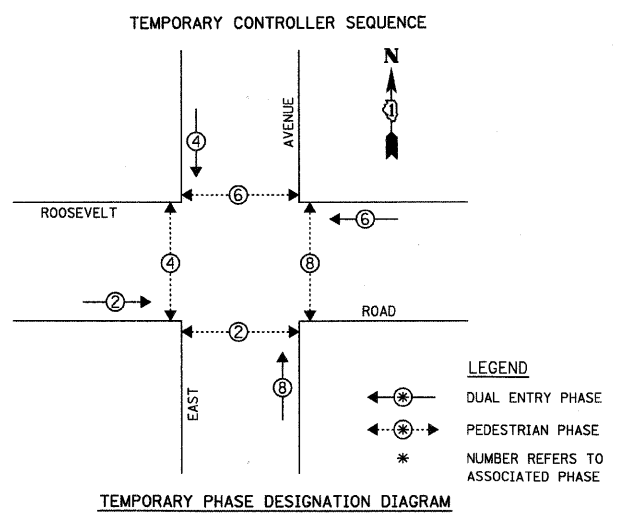
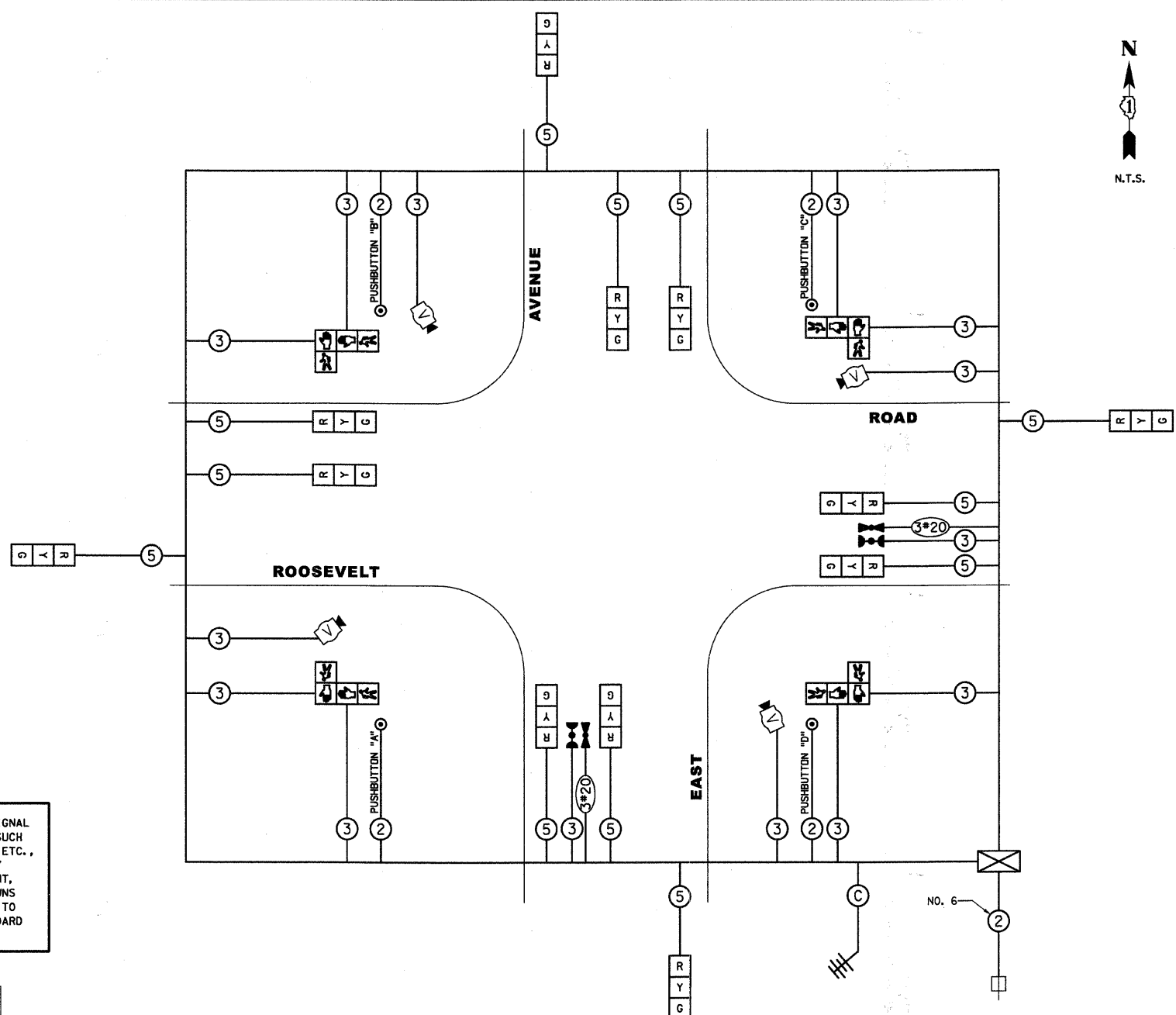
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION  
ROOSEVELT ROAD AT EAST AVENUE**

SCALE: 1" = 20'    SHEET NO. 14 OF 27 SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	207
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	

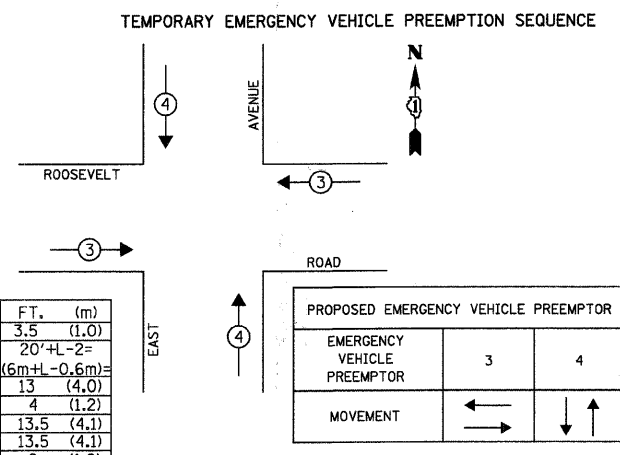
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	12	-	17	0.50	102.0
(YELLOW)	12	-	25	0.25	75.0
(GREEN)	12	-	15	0.25	45.0
ARROW	-	-	12	0.10	-
PED. SIGNAL	8	-	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0
TOTAL =					522.0

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

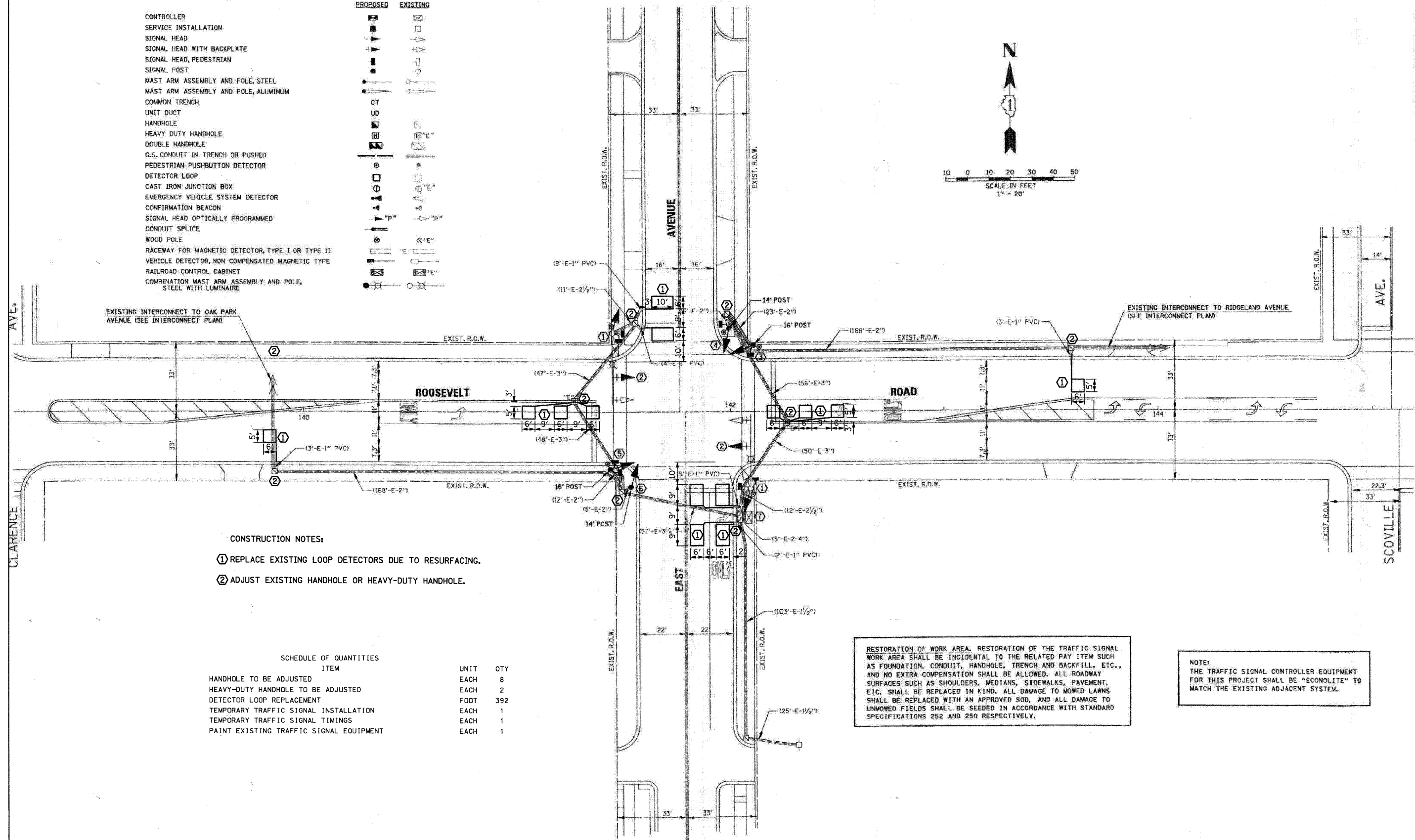
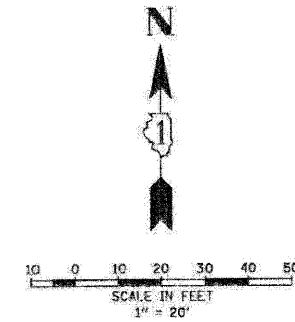


ENERGY COSTS TO: TOTAL = 522.0  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY: CONTACT: MIKE BELL  
 PHONE: (708) 410-5314  
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'HL-2'=(6m+L-0.6m)
C - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		



- CONSTRUCTION NOTES:
- ① REPLACE EXISTING LOOP DETECTORS DUE TO RESURFACING.
  - ② ADJUST EXISTING HANDHOLE OR HEAVY-DUTY HANDHOLE.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QTY
HANDHOLE TO BE ADJUSTED	EACH	8
HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	2
DETECTOR LOOP REPLACEMENT	FOOT	392
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = DIRTE38-ph1-tsl6.dgn	USER NAME = IDCT
PLOT SCALE = 22.0000 / IN.	CHECKED - JB
PLOT DATE = 3/11/2012	DATE -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED - JB	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN  
ROOSEVELT ROAD AT EAST AVENUE**

SCALE: 1" = 20' SHEET NO. 16 OF 27 SHEETS STA. TO STA.

F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 209
CONTRACT NO. 63432			[ILLINOIS] FED. AID PROJECT	





**CONSTRUCTION NOTES:**

① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED UNTIL THE STAGE II TEMPORARY CONTROLLER SEQUENCE IS IMPLEMENTED.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

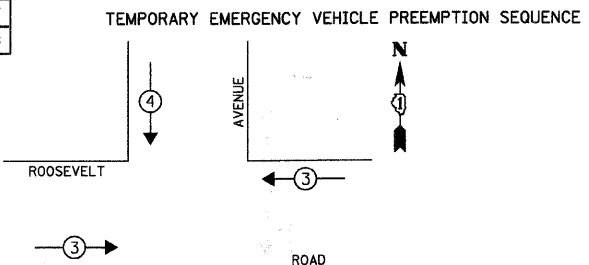
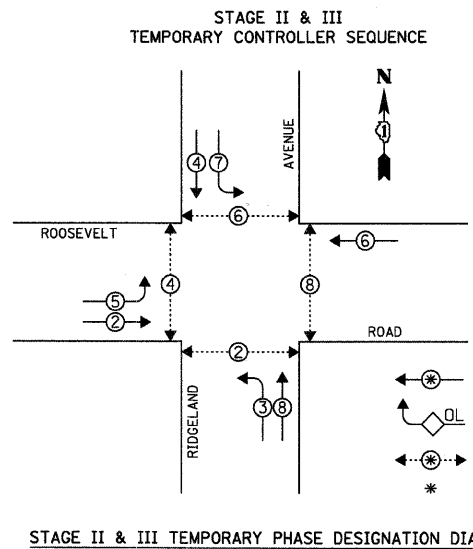
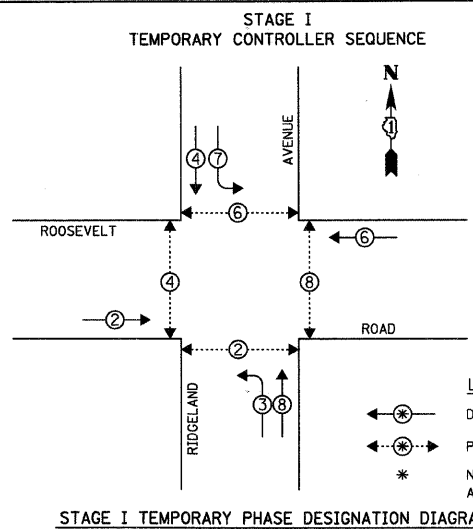
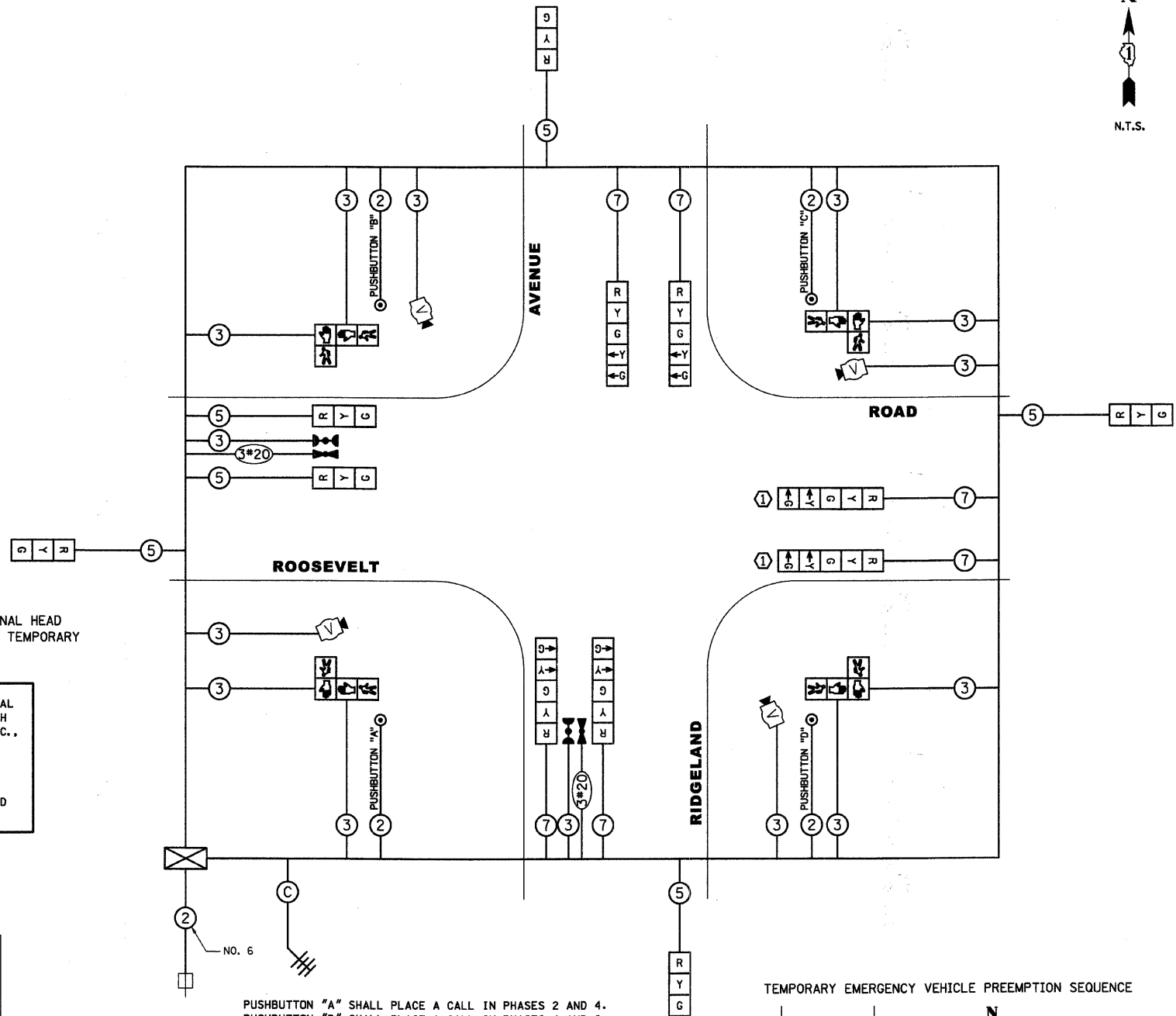
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	12	-	17	0.50	102.0
(YELLOW)	12	-	25	0.25	75.0
(GREEN)	12	-	15	0.25	45.0
ARROW	12	-	12	0.10	14.4
PED. SIGNAL	8	-	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0

ENERGY COSTS TO: TOTAL = 536.4  
**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY: CONTACT: MIKE BELL  
 PHONE: (708) 410-5314  
 COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
C - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

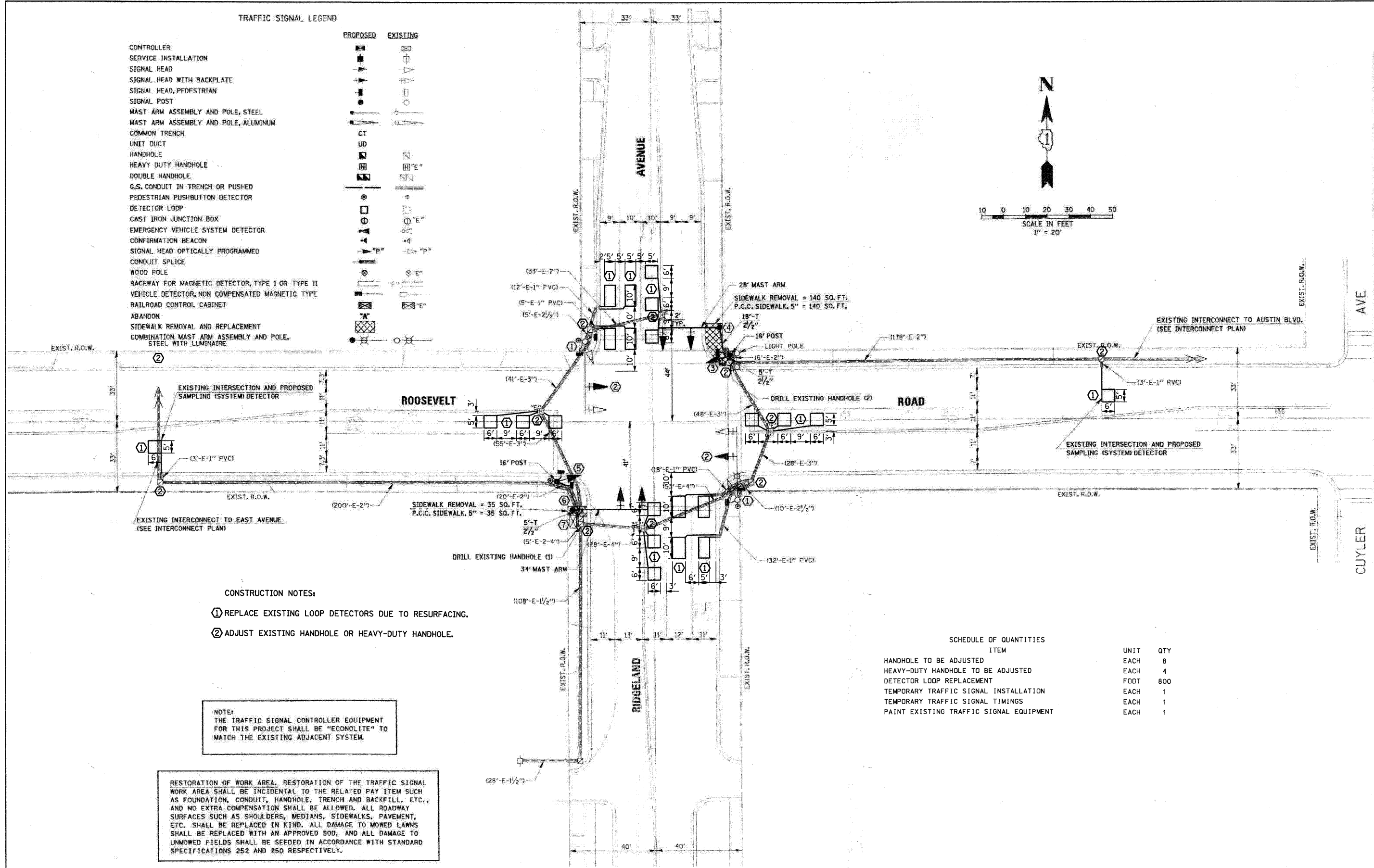
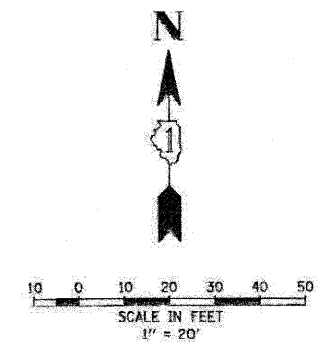
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.



PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
ABANDON	[Symbol]	[Symbol]
SIDEWALK REMOVAL AND REPLACEMENT	[Symbol]	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	[Symbol]	[Symbol]



- CONSTRUCTION NOTES:
- ① REPLACE EXISTING LOOP DETECTORS DUE TO RESURFACING.
  - ② ADJUST EXISTING HANDHOLE OR HEAVY-DUTY HANDHOLE.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

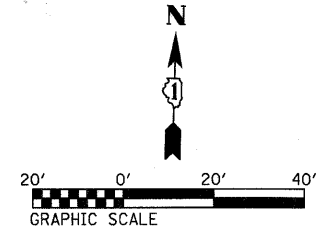
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 259 RESPECTIVELY.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QTY
HANDHOLE TO BE ADJUSTED	EACH	8
HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	4
DETECTOR LOOP REPLACEMENT	FOOT	800
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

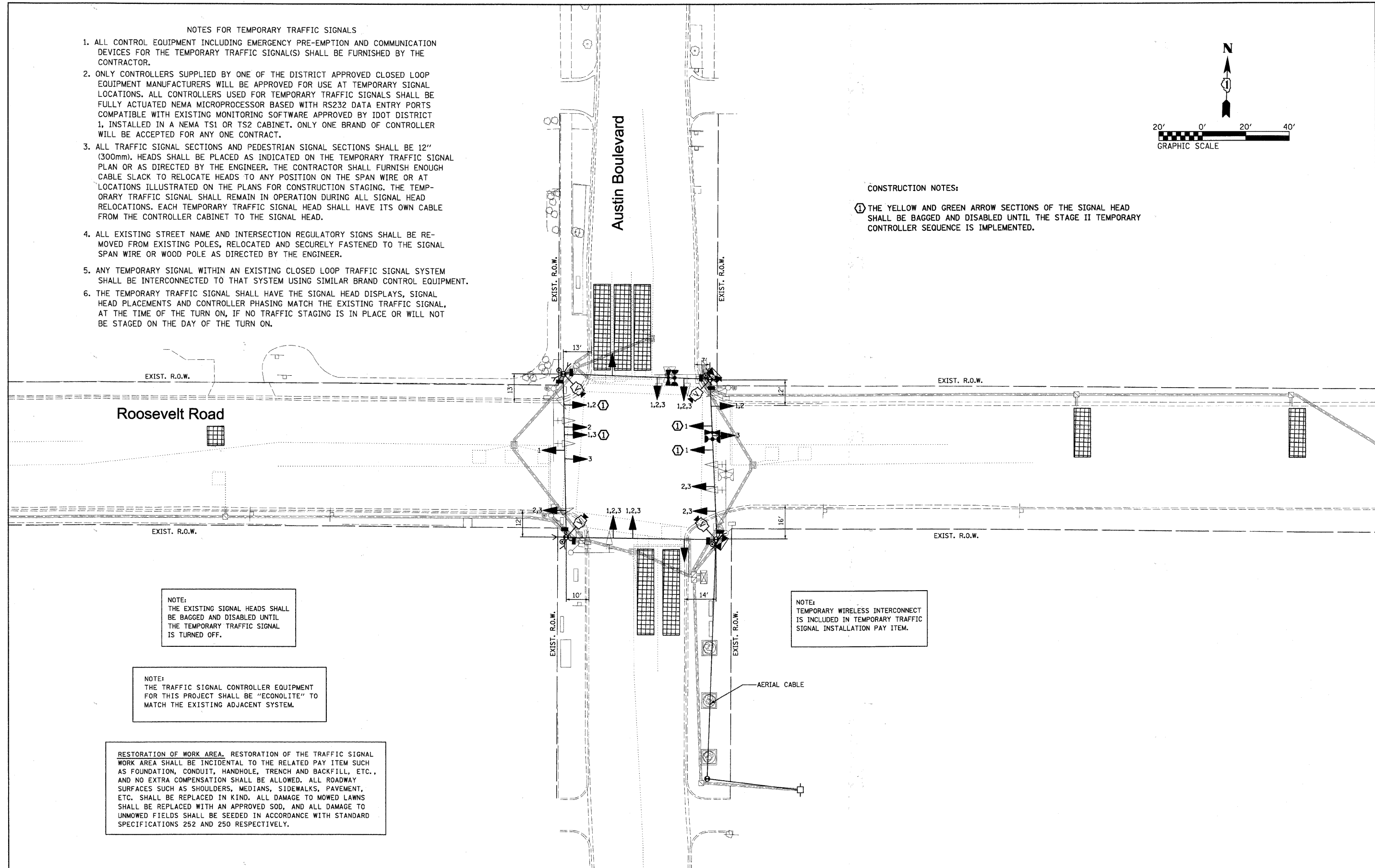
NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" (300mm). HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



CONSTRUCTION NOTES:

- ① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED UNTIL THE STAGE II TEMPORARY CONTROLLER SEQUENCE IS IMPLEMENTED.



NOTE:  
THE EXISTING SIGNAL HEADS SHALL BE BAGGED AND DISABLED UNTIL THE TEMPORARY TRAFFIC SIGNAL IS TURNED OFF.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

FILE NAME = DIRTE38-shr-ts20.dgn

USER NAME = IDCT  
PLOT SCALE = 20.0000' / IN.  
PLOT DATE = 3/11/2018

DESIGNED -  
DRAWN -  
CHECKED - JB  
DATE -

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION  
ROOSEVELT ROAD AT AUSTIN BOULEVARD  
SCALE: 1" = 20'  
SHEET NO. 20 OF 27 SHEETS  
STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	213
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				

**CONSTRUCTION NOTES:**

① THE YELLOW AND GREEN ARROW SECTIONS OF THE SIGNAL HEAD SHALL BE BAGGED AND DISABLED UNTIL THE STAGE II TEMPORARY CONTROLLER SEQUENCE IS IMPLEMENTED.

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	-	17	0.50	102.0
(YELLOW)	12	-	25	0.25	75.0
(GREEN)	12	-	15	0.25	45.0
ARROW	12	-	12	0.10	14.4
PED. SIGNAL	8	-	25	1.00	200.0
CONTROLLER	1	-	100	1.00	100.0

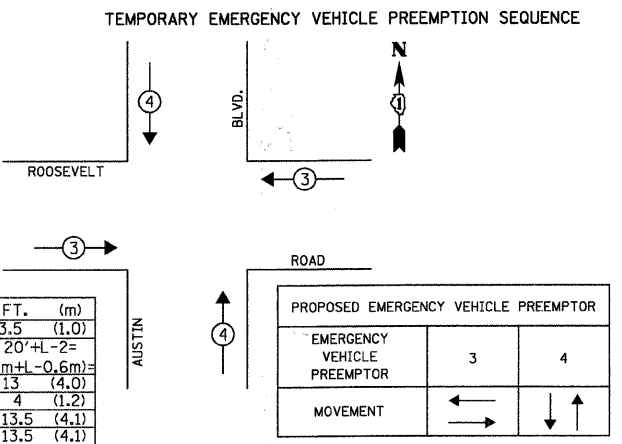
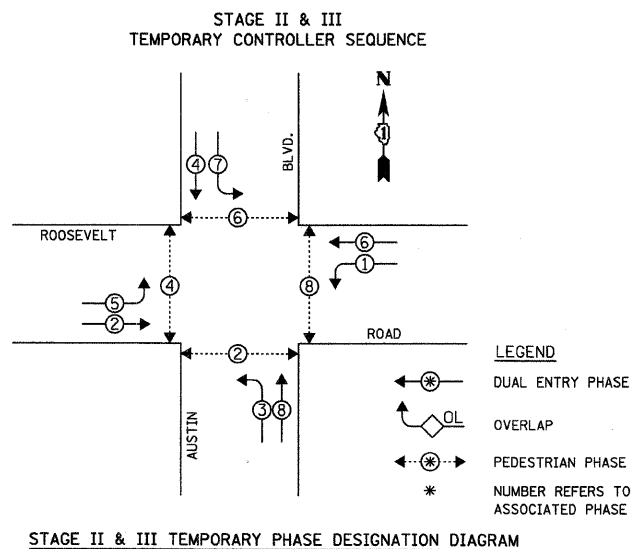
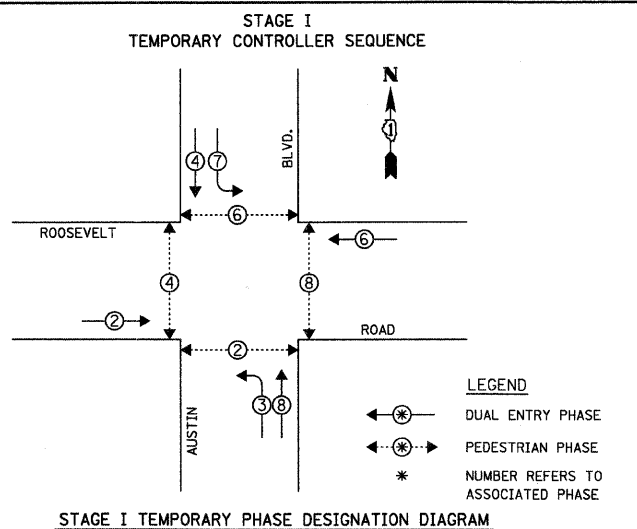
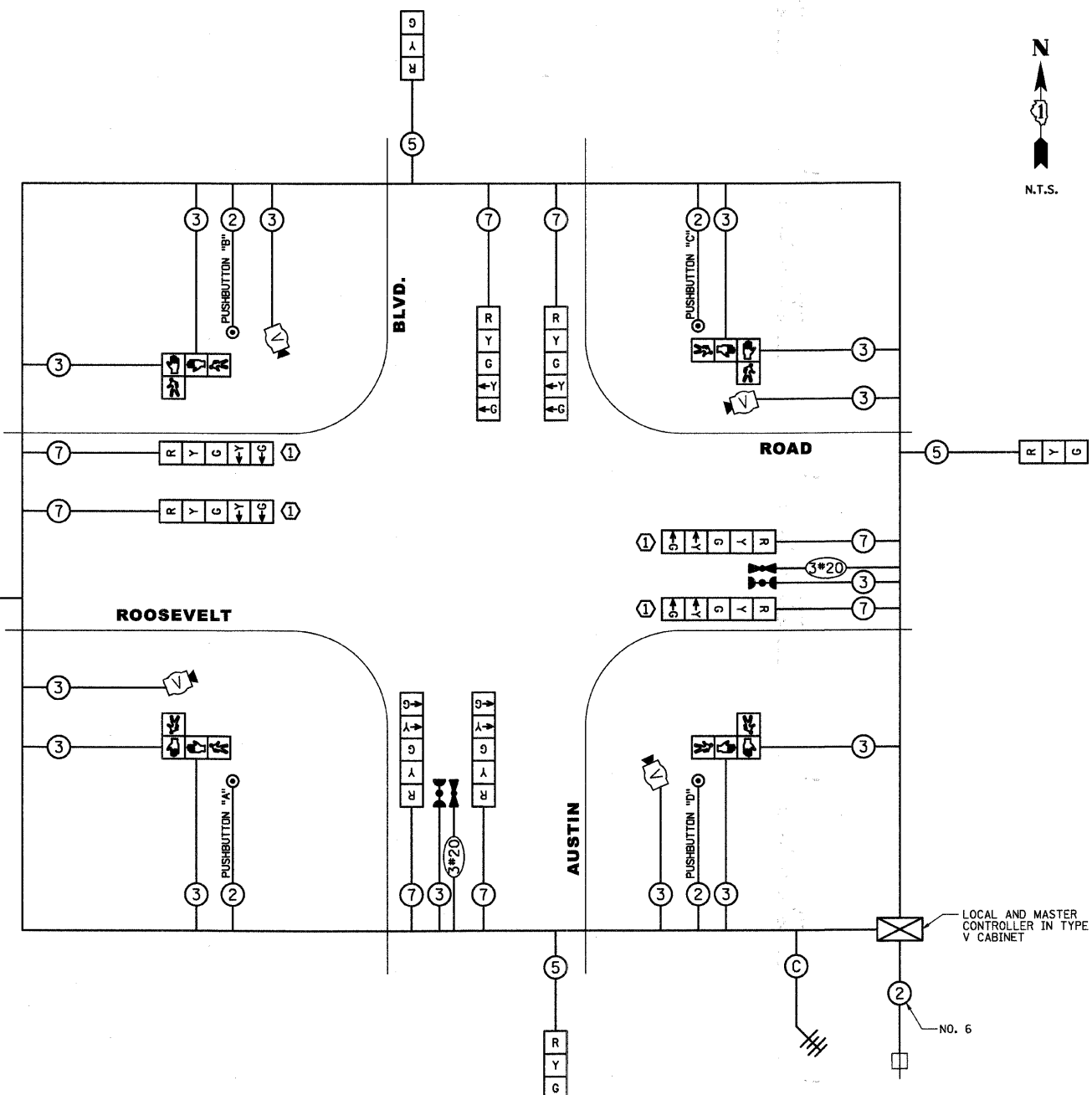
ENERGY COSTS TO: TOTAL = 536.4  
**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF HIGHWAY/DISTRICT 1  
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY: CONTACT: MIKE BELL  
 PHONE: (708) 410-5314  
 COMPANY: COMED

FILE NAME = DIRTE38-shr-ts21.dgn	USER NAME = IDOT	DESIGNED -	REVISED -
PLOT SCALE = 20,000 / IN.	CHECKED - JB	REVISIONS	
PLOT DATE = 3/11/2018	DATE -		

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±L-2=
C - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m±L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.



**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CABLE PLAN ROOSEVELT ROAD AT AUSTIN BLVD.**

SCALE: N.T.S. SHEET NO. 21 OF 27 SHEETS STA. TO STA.

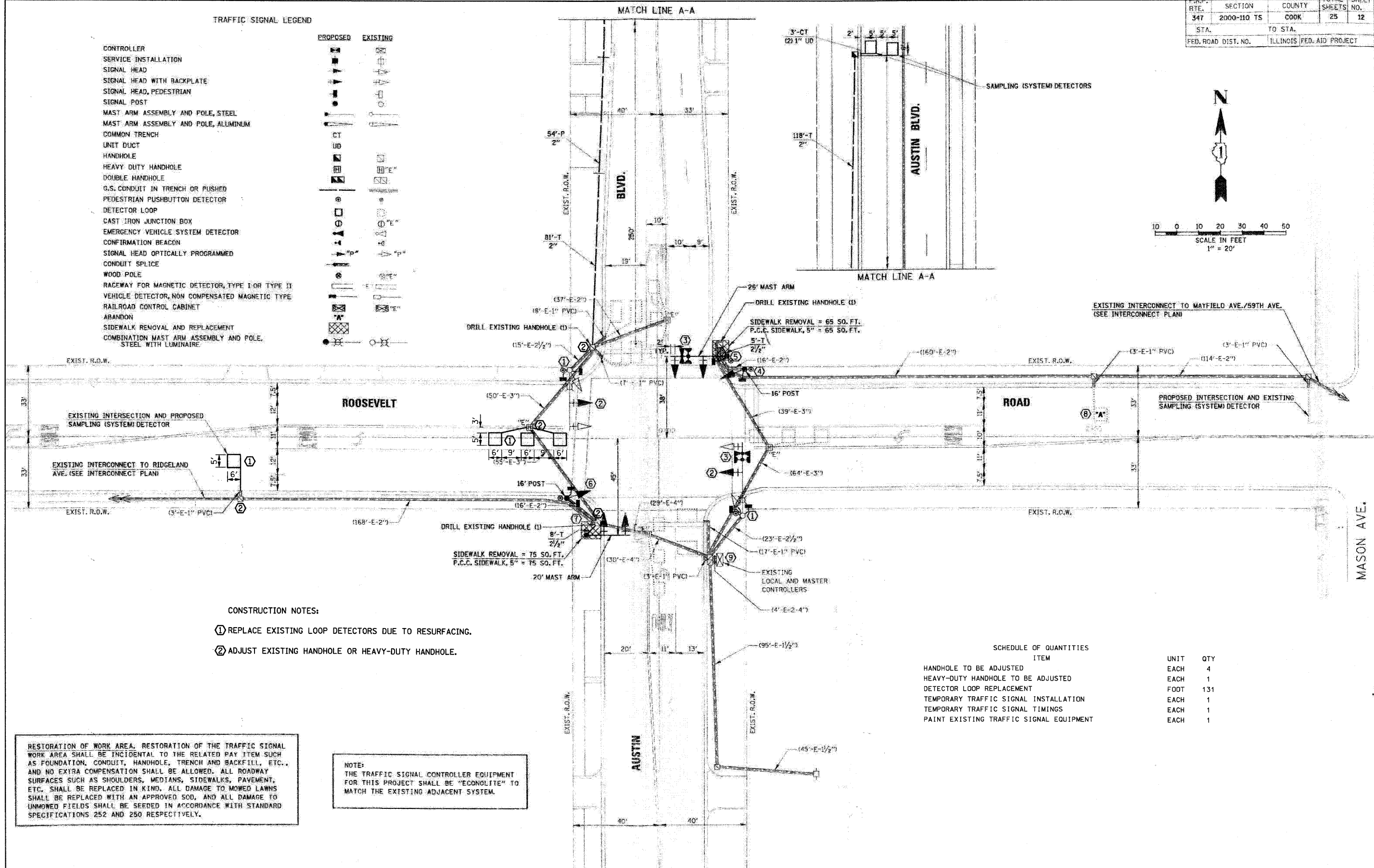
F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 214
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	



RTE.	SECTION	COUNTY	SHEETS	NO.
347	2000-110 TS	COOK	25	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
ABANDON	[Symbol]	[Symbol]
SIDEWALK REMOVAL AND REPLACEMENT	[Symbol]	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	[Symbol]	[Symbol]



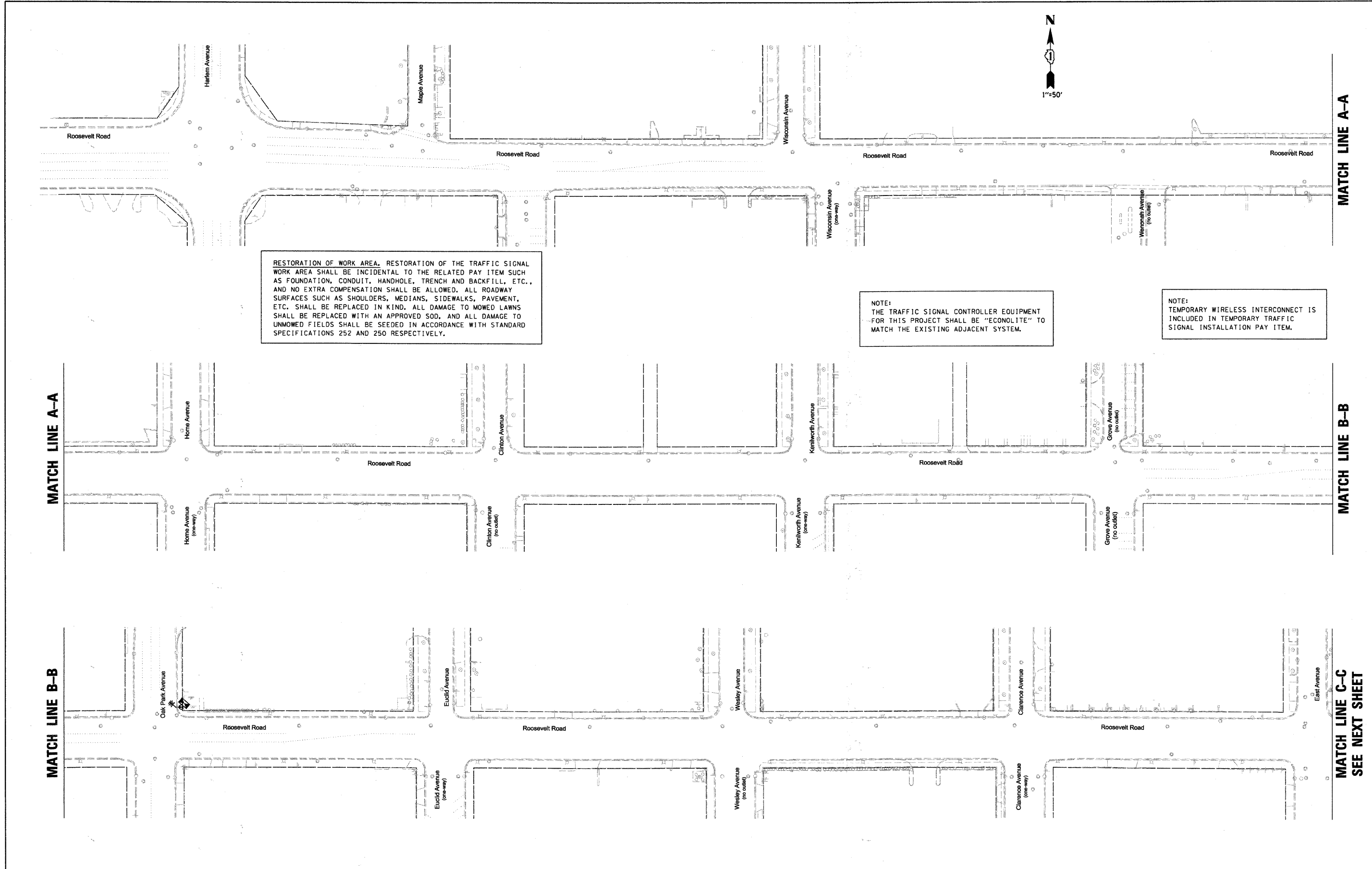
- CONSTRUCTION NOTES:
- ① REPLACE EXISTING LOOP DETECTORS DUE TO RESURFACING.
  - ② ADJUST EXISTING HANDHOLE OR HEAVY-DUTY HANDHOLE.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QTY
HANDHOLE TO BE ADJUSTED	EACH	4
HEAVY-DUTY HANDHOLE TO BE ADJUSTED	EACH	1
DETECTOR LOOP REPLACEMENT	FOOT	131
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
PAINT EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOO, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE: TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

FILE NAME = DIRTE38-sh-t-ts23.dgn	USER NAME = IDOT	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY INTERCONNECT PLAN ROOSEVELT ROAD FROM HARLEM AVE. TO AUSTIN BLVD.</b>			F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 216
	PLOT SCALE = 50.0000' / 1" IN.	CHECKED - JB	REVISED -		SCALE: 1" = 50'	SHEET NO. 23 OF 27 SHEETS	STA. TO STA.	CONTRACT NO. 63432				
	PLOT DATE = 3/11/2018	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

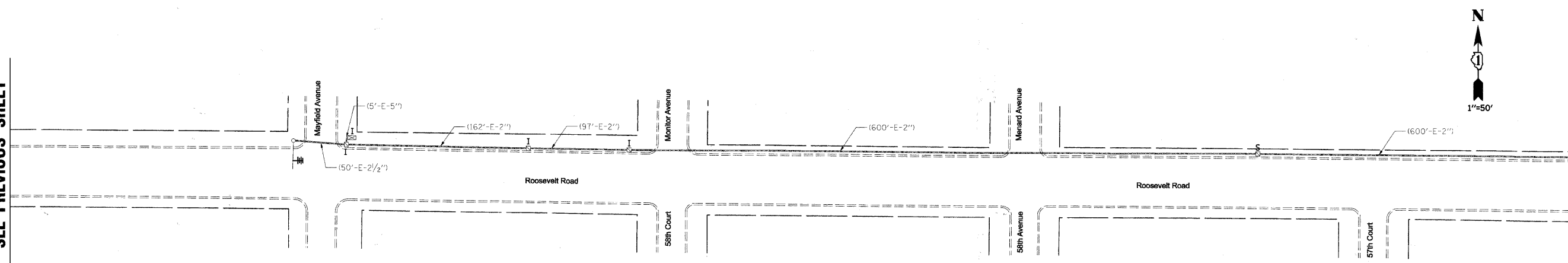
MATCH LINE A-A

MATCH LINE B-B

MATCH LINE C-C  
SEE NEXT SHEET



MATCH LINE F-F  
SEE PREVIOUS SHEET



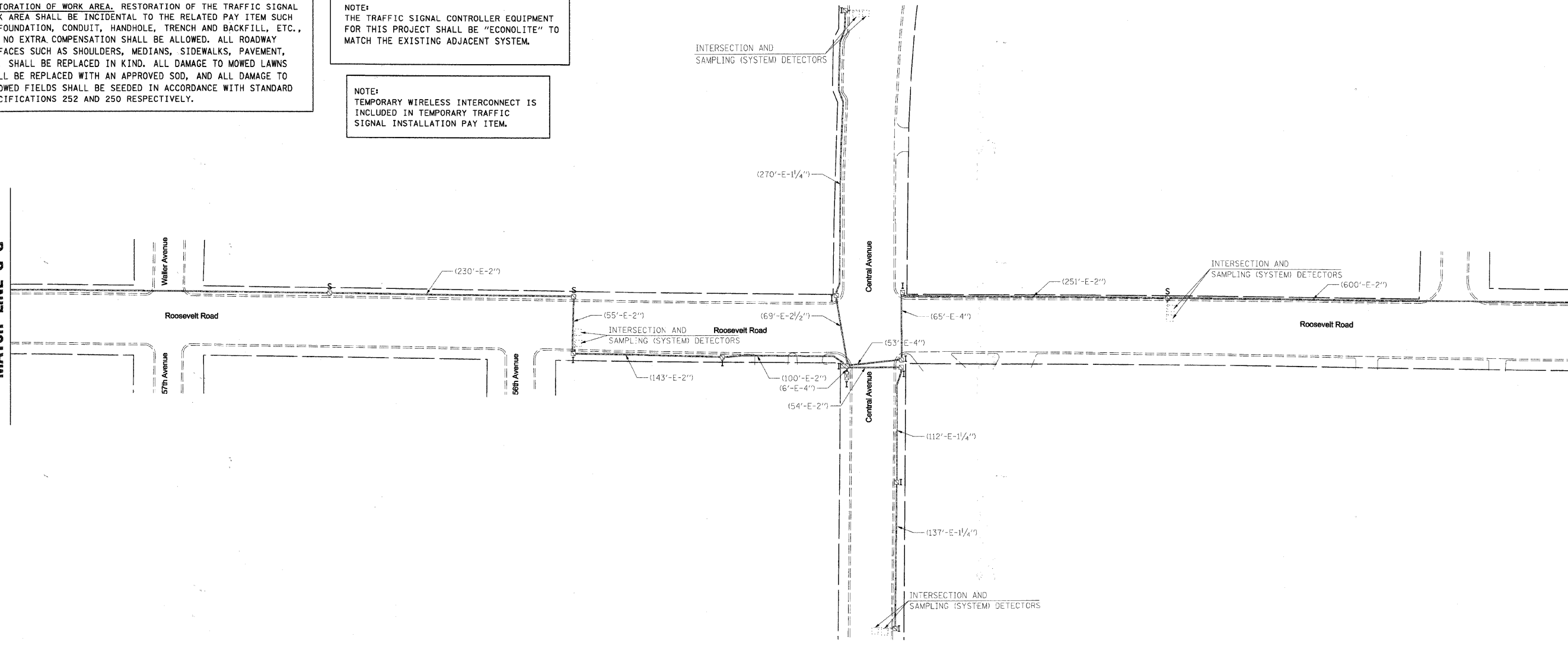
MATCH LINE G-G

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE:  
TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

MATCH LINE G-G



MATCH LINE H-H  
SEE NEXT SHEET

FILE NAME = DIRTE98-shc-ta25.dgn	USER NAME = IDOT	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

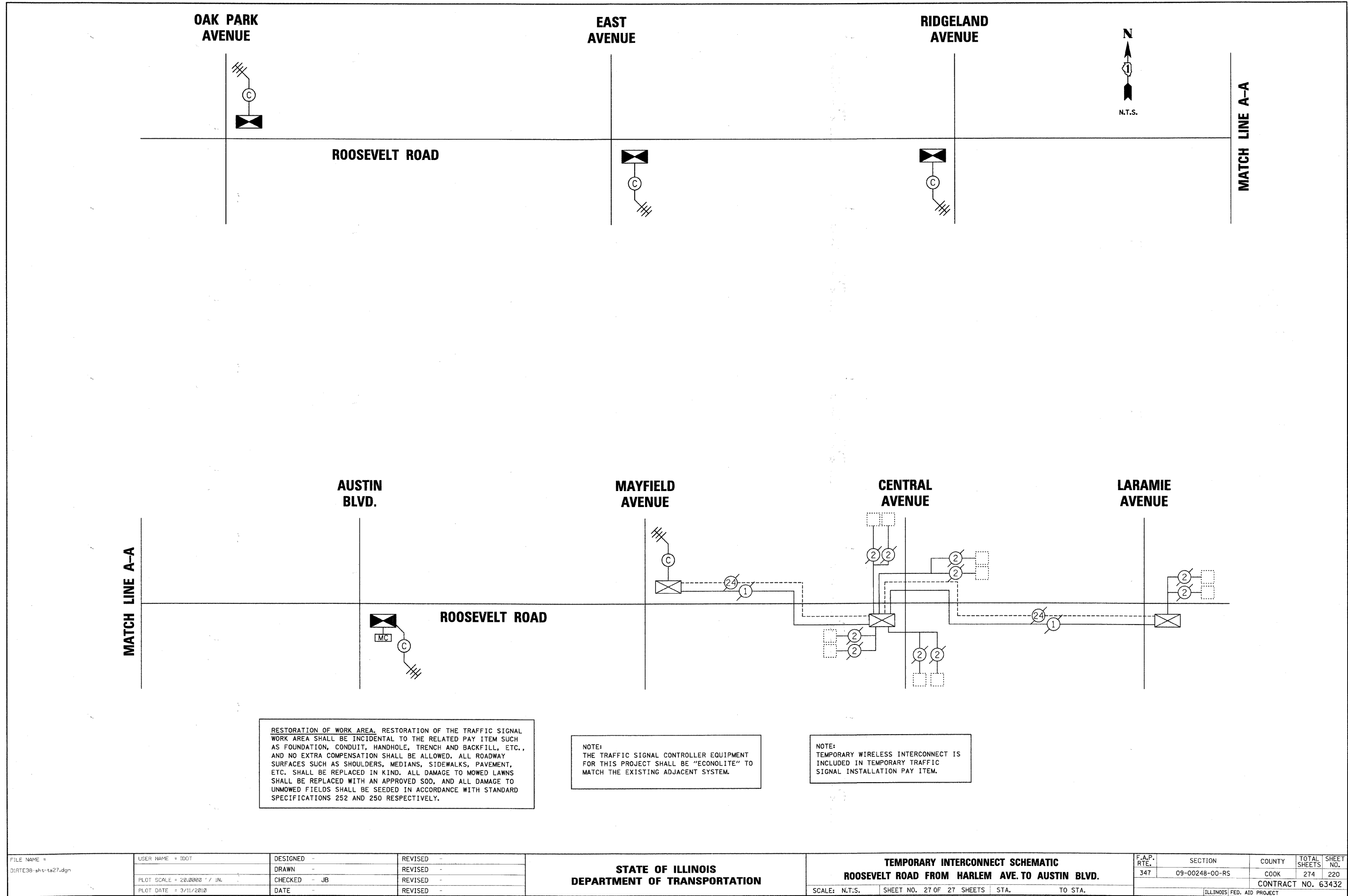
**TEMPORARY INTERCONNECT PLAN  
ROOSEVELT ROAD FROM HARLEM AVE. TO AUSTIN BLVD.**

SCALE: 1" = 50'    SHEET NO. 25 OF 27 SHEETS    STA.    TO STA.

F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 218
			CONTRACT NO. 63432	
ILLINOIS FED. AID PROJECT				







RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE:  
TEMPORARY WIRELESS INTERCONNECT IS INCLUDED IN TEMPORARY TRAFFIC SIGNAL INSTALLATION PAY ITEM.

FILE NAME = DIRTE38-shc-ta27.dgn	USER NAME = IDOT	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY INTERCONNECT SCHEMATIC ROOSEVELT ROAD FROM HARLEM AVE. TO AUSTIN BLVD.</b>	F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 220	
PLOT SCALE = 20,0000' / IN.	CHECKED = JB	DATE =	REVISED =			SCALE: N.T.S.	SHEET NO. 27 OF 27 SHEETS	STA. TO STA.	CONTRACT NO. 63432		
PLOT DATE = 3/11/2010	DATE =	REVISED =	REVISED =			ILLINOIS FED. AID PROJECT					

# ELECTRICAL NOTES

## PART 1: GENERAL

### A. DESCRIPTION

Provide all requirements and criteria for safety and reliability to furnish and install complete operating electrical system, including materials, labor, necessary equipment as herein specified. Comply with local codes, National Electrical Code, IDOT, and all applicable codes and standards. The equipment and installation shall conform with the standard specifications for road and bridge construction of the Illinois Department Of Transportation including latest revision and supplemental specifications, as well as the special Provisions.

### B. Scope of Work

- Contractor shall furnish, install, and test complete street lighting system with all lighting poles, luminaries, foundations, lighting control cabinet, conduits, hangers, supports, devices, wiring, etc., required for a complete and operational installation. After installation, contractor shall completely test all components in compliance with IDOT standards to ensure complete functional installation.
- The work shall be performed in accordance with the rules and regulations set forth in the local governing code. The work shall also meet the laws and ordinance required by those agencies having jurisdiction.
- Contractor shall visit the site and make himself thoroughly familiar with existing conditions. Prior to submitting the proposal, include any relocation and/or alternations to the existing electrical system, components or equipment required to accommodate the new construction.
- Contractor shall obtain all permits required to perform his work. Prepare and submit to the authorities any and all data, drawings and details required for approval before commencing the installation.
- Maintain existing street lighting system operation during construction until new construction of street lighting system is completed. Maintain existing lighting as temporary lighting during the construction period. Remove same upon completion of the project.
- Contractor shall coordinate work with all trades and avoid conflicts and delays.
- Notify the engineer in writing of any discrepancies between the existing conditions and the new work. Lack of notification shall indicate that no discrepancies or conflicts exist.
- All light poles shall be non-breakaway type.
- Contractor shall coordinate work with utility companies, including electric, water, gas, sewer, cable, etc.
- Rigid Steel Conduit shall be pushed under street or driveway and extended 3'-0" on each side.
- As part of this work Owner shall have first salvage rights to any item removed as part of this project. Dispose of all others. Any unused equipment or wiring will not be allowed to be abandoned in place.
- Red tape or marking shall be 10" below grade to mark electrical conduit routing.
- After construction of new system remove old lighting poles, foundation and wiring. Abandon in place the conduit system.
- The contractor shall be responsible for damage incurred by him in any area of the project such as pavement, driveways, and sidewalks and shall restore them to their original condition as directed by the engineer. Landscaped areas shall be restored and damaged plant materials replaced to the satisfaction of the engineer.
- Lighting poles shall be located to provide unobstructed access to pedestrians meeting ADA requirements.
- Contractor is responsible to identify all underground and overhead utility conflicts and ensure adequate clearances between utilities and new lighting system.

### C. Guarantee

- Guarantee in writing all electrical equipment for a period of one year following date of substantial completion. State the additional amount for a five year full guarantee and full maintenance contract of electrical system.
- All apparatus shall be built and installed so as to deliver its full rated capacity at the efficiency for which it was designed.

### D. Construction Phase Submittals

Submit shop drawings to the engineer for approval. Prepare and provide the engineer with a complete set of circled "record" drawings at project completion. Such drawings shall be submitted on a clear and legible reproducible form.

## PART 2: PRODUCTS

### A. Quality Level

All material and equipment used for this project shall be UL listed and approved for the intended applications unless otherwise noted.














### B. Material

- Unit duct shall be Type MC 600 volt, EPR rated insulation, PVC jacket, Steel interlock armor, copper conductors and color coded.
- Site lighting branch circuits shall be #4 AWG minimum, unless otherwise noted. Control wiring shall be #14 AWG minimum.

## PART 3: EXECUTION

- Provide a complete properly operating system for each item of equipment called for under this notes. Install in accord with the equipment manufacturer's instructions, the best industry practices and under competent supervision at all time.
- Prior to inspection to determine substantial completion the contractor shall operate all electrical system to demonstrate that the installation and performance of the system conform to the requirements specified above and on the drawings.

### LEGEND




-  Existing street light
-  Proposed handhole
-  Proposed 27'-0" street light 250W Metal Halide at 240V with 3' pedant arm at 27' high for roadway, & 70W Metal Halide at 240V with 1' pedant arm at 15' high for sidewalk.
-  Proposed 30'-0" street light 250W Metal Halide at 240V with 3' pedant arm at 30' high for roadway, & 70W Metal Halide at 240V with 1' pedant arm at 15' high for sidewalk.
-  Controller, 100A, 240/480V, 1PH, 3W
-  Conduit, pushed, rigid galvanized steel 3'-0" below grade, extend 3'-0" on each side of the curb
-  3" galvanized steel conduit 3'-0" below grade
-  Unit duct (Refer to plan for exact size)
-  Existing street light to be removed (light pole and foundation)
-  Fixture type
-  Proposed vandal proof receptacle (Weatherproof and Ground Fault Interrupter) UL listed, corrosion resistant and cover NEC 406.B.B.2c compliant
-  Ground Rod
-  Weatherproof, corrosion resistant cabinet. Refer to detail for more information.

## ELECTRICAL LOAD SCHEDULE

PANEL	CIRCUIT NUMBER	SIZE OF BREAKER	NO. OF LTG FIXTURE	RED PH. (AT 240V)	BLACK PH. (AT 240V)
A1 (BERWYN) 100A, 240/480V, 1PH, 3W	A	50A, 240V	(5) 340W	1700VA	1700VA
	B	50A, 240V	(5) 340W	1700VA	1700VA
	C	50A, 240V	(6) 340W	2040VA	2040VA
	D	50A, 240V	(6) 340W	2040VA	2040VA
	E,F,G,H	50A, 240V	SPARE	3740VA	3740VA
SUBTOTAL				7480VA*	15.6A
CABINET A1 TOTAL LOAD (480V, 1PH)					
A2 (BERWYN) 100A, 240/480V, 1PH, 3W	A	50A, 240V	(6) 340W	2040VA	1700VA
	B	50A, 240V	(5) 340W	1700VA	1700VA
	C	50A, 240V	(10) 340W	3400VA	3400VA
	D	50A, 240V	(11) 340W	3740VA	3740VA
	E,F,G,H	50A, 240V	SPARE	5440VA	5440VA
SUBTOTAL				10880VA	22.7A
CABINET A2 TOTAL LOAD (480V, 1PH)					
B1 (CICERO) 100A, 240/480V, 1PH, 3W	B	50A, 240V	SERVE EXISTING LIGHTING (EAST OF AUSTIN)	2700VA	2700VA
	C	50A, 240V	(4) 340W	1360VA	1360VA
	D	50A, 240V	(5) 340W	1700VA	1700VA
	E,F,G,H	50A, 240V	SPARE	1360VA	4400VA
	SUBTOTAL				5760VA
CABINET B1 TOTAL LOAD (480V, 1PH)					
C1 (OAK PARK) 100A, 240/480V, 1PH, 3W	A	50A, 240V	(5) 340W	1700VA	2040VA
	B	50A, 240V	(6) 340W	2040VA	2040VA
	C	50A, 240V	(6) 340W	2040VA	2040VA
	D	50A, 240V	(6) 340W	2040VA	2040VA
	E,F,G,H	50A, 240V	SPARE	3740VA	4080VA
SUBTOTAL				7820VA*	16.3A
CABINET C1 TOTAL LOAD (480V, 1PH)					
C2 (OAK PARK) 100A, 240/480V, 1PH, 3W	A	50A, 240V	(7) 340W	2380VA	2040VA
	B	50A, 240V	(6) 340W	2040VA	2040VA
	C	50A, 240V	(4) 340W	1360VA	1360VA
	D	50A, 240V	(4) 340W	1360VA	1360VA
	E,F,G,H	50A, 240V	SPARE	3740VA	3400VA
SUBTOTAL				7140VA*	14.9A
CABINET C2 TOTAL LOAD (480V, 1PH)					
C3 (OAK PARK) 100A, 240/480V, 1PH, 3W	A	50A, 240V	(5) 340W	1700VA	1700VA
	B	50A, 240V	(5) 340W	1700VA	1700VA
	C	50A, 240V	(5) 340W	1700VA	1700VA
	D	50A, 240V	(5) 340W	1700VA	1700VA
	E,F,G,H	50A, 240V	SPARE	3550VA	3400VA
SUBTOTAL				6950VA	14.5A
CABINET C3 TOTAL LOAD (480V, 1PH)					

\*120V RECEPTACLE LOAD IS INCLUDED

### Pole Identification

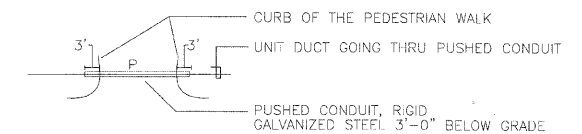
-  Control cabinet number
-  Circuit number
-  Pole number of the circuit

\*All poles shall be offset 1.9 ft from back of curb to centerline of pole, unless roadway has bump-outs.

\*All poles in bump-outs areas shall be offset from back of curb to centerline of pole as required to be inline with other poles.

\*All poles shall have the same offset from the roadway centerline to maintain visual alignment.

New foundation and poles shall be located away from any existing utilities. Contractor shall identify all utilities and dig by hand to expose utility lines. Final exact location of foundation and pole shall be coordinated and approved prior to installation.



**TYPICAL PUSHED CONDUIT DIAGRAM**  
N.T.S.  
REFER TO ELECTRICAL PLAN FOR EXACT LOCATION

## LIGHTING UNIT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS		INPUT WATTS	INPUT AMPS (240V)	POLE & BASE	MOUNTING	BALLAST	VOLT.	REMARKS
				NO.	TYPE							
F1	METAL HALIDE FIXTURE ON 27 FT. POLE WITH PEDESTRIAN ARM	STERNBERG-OMEGA	2-1527RFG/OD/70MHP/RO2H-L/OF/250MHP240/RO3H-L/MHP250/MOG/ED28-MHP70/MED/BK	1	250W METAL HALIDE (STREET LIGHT)	340	1.42	STRATFORD 22/30/A/RSS/DBA/RSB4/BK WITH STRATFORD BASE	(REFER TO DETAIL FOR EXACT MOUNTING OF FIXTURES)	CWA	240	OD SINGLE ARM FOR PEDESTRIAN OF SINGLE ARM FOR STREET
		ANTIQUE STREET LAMP	EM17RT-70M-MOD-GCF-SR2-240/EM25RT-250M-MOG-GCF-SR3-240/ANBK	1	70W METAL HALIDE (PEDESTRIAN)							
F2	METAL HALIDE FIXTURE ON 30 FT. POLE WITH PEDESTRIAN ARM	STERNBERG-OMEGA	2-1527RFG/OD/70MHP/RO2H-L/OF/250MHP240/RO3H-L/MHP250/MOG/ED28-MHP70/MED/BK	1	250W METAL HALIDE (STREET LIGHT)	340	1.42	STRATFORD 22/32/A/RSS/DBA/RSB4/BK WITH STRATFORD BASE	(REFER TO DETAIL FOR EXACT MOUNTING OF FIXTURES)	CWA	240	OD SINGLE ARM FOR PEDESTRIAN OF SINGLE ARM FOR STREET
		ANTIQUE STREET LAMP	EM17RT-70M-MOD-GCF-SR2-240/EM25RT-250M-MOG-GCF-SR3-240/ANBK	1	70W METAL HALIDE (PEDESTRIAN)							

**TERRA ENGINEERING LTD.**  
225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL NOTES, LEGEND AND ELECTRICAL LOAD SCHEDULE**

FILE NAME = DIRTE38-ahs-light81.dgn

USER NAME = IDOT

DESIGNED - EE

DRAWN - PY

CHECKED - JB

DATE - 3/11/2010

DESIGNED - EE

DRAWN - PY

CHECKED - JB

DATE - 3/11/2010

REVISED -

REVISED -

REVISED -

REVISED -

REVISED -

SCALE: 1" = 20' SHEET NO. 1 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	221
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				



Exp 11/30/2011  
For Elec. Sheets  
221 To 249

VOLTAGE DROP CALCULATION FOR CABINET A1					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF HOME AND ROOSEVELT		
CABINET	A1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	267FT	2	0.321/1000	1.122V
4	1.42A	263FT	2	0.321/1000	0.959V
3	1.42A	255FT	2	0.321/1000	0.697V
2	1.42A	233FT	2	0.321/1000	0.425V
1	1.42A	245FT	2	0.321/1000	0.223V
TOTAL					3.522V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.734%					

VOLTAGE DROP CALCULATION FOR CABINET A2					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF EAST AND ROOSEVELT		
CABINET	A2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	66FT	2	0.321/1000	0.361V
5	1.42A	261FT	2	0.321/1000	1.190V
4	1.42A	270FT	2	0.321/1000	0.985V
3	1.42A	249FT	2	0.321/1000	0.681V
2	1.42A	279FT	2	0.321/1000	0.509V
1	1.42A	208FT	2	0.321/1000	0.190V
TOTAL					3.915V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.816%					

VOLTAGE DROP CALCULATION FOR CABINET B1					
PROJECT	ROOSEVELT ROAD	LOCATION	SW OF AUSTIN AND ROOSEVELT		
CABINET	B1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
4	1.42A	368FT	2	0.321/1000	1.342V
3	1.42A	279FT	2	0.321/1000	0.763V
2	1.42A	254FT	2	0.321/1000	0.463V
1	1.42A	244FT	2	0.321/1000	0.222V
TOTAL					2.791V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.581%					

VOLTAGE DROP CALCULATION FOR CABINET A1					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF HOME AND ROOSEVELT		
CABINET	A1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	B	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	129FT	2	0.321/1000	0.589V
4	1.42A	288FT	2	0.321/1000	1.050V
3	1.42A	242FT	2	0.321/1000	0.682V
2	1.42A	237FT	2	0.321/1000	0.432V
1	1.42A	241FT	2	0.321/1000	0.219V
TOTAL					2.952V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.615%					

VOLTAGE DROP CALCULATION FOR CABINET A2					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF EAST AND ROOSEVELT		
CABINET	A2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	B	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	197FT	2	0.321/1000	0.898V
4	1.42A	260FT	2	0.321/1000	0.948V
3	1.42A	278FT	2	0.321/1000	0.760V
2	1.42A	260FT	2	0.321/1000	0.474V
1	1.42A	258FT	2	0.321/1000	0.235V
TOTAL					3.316V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.691%					

VOLTAGE DROP CALCULATION FOR CABINET B1					
PROJECT	ROOSEVELT ROAD	LOCATION	SW OF AUSTIN AND ROOSEVELT		
CABINET	B1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	233FT	2	0.321/1000	1.062V
4	1.42A	277FT	2	0.321/1000	1.010V
3	1.42A	248FT	2	0.321/1000	0.678V
2	1.42A	274FT	2	0.321/1000	0.500V
1	1.42A	263FT	2	0.321/1000	0.240V
TOTAL					2.490V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.727%					

VOLTAGE DROP CALCULATION FOR CABINET A1					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF HOME AND ROOSEVELT		
CABINET	A1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	26FT	2	0.321/1000	0.142V
5	1.42A	226FT	2	0.321/1000	1.030V
4	1.42A	243FT	2	0.321/1000	0.886V
3	1.42A	239FT	2	0.321/1000	0.654V
2	1.42A	248FT	2	0.321/1000	0.452V
1	1.42A	276FT	2	0.321/1000	0.252V
TOTAL					3.416V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.712%					

VOLTAGE DROP CALCULATION FOR CABINET A2					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF EAST AND ROOSEVELT		
CABINET	A2	CABLE SIZE	3-1/C NO.2 & 1-1/C NO.4		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
10	1.42A	232FT	2	0.201/1000	1.324V
9	1.42A	243FT	2	0.201/1000	1.248V
8	1.42A	273FT	2	0.201/1000	1.247V
7	1.42A	272FT	2	0.201/1000	1.087V
6	1.42A	245FT	2	0.201/1000	0.839V
5	1.42A	154FT	2	0.201/1000	0.440V
4	1.42A	265FT	2	0.201/1000	0.605V
3	1.42A	266FT	2	0.201/1000	0.456V
2	1.42A	272FT	2	0.201/1000	0.311V
1	1.42A	258FT	2	0.201/1000	0.147V
TOTAL					7.703V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =1.605%					

EXISTING TRAFFIC CABINET AT AUSTIN & ROOSEVELT

VOLTAGE DROP CALCULATION FOR CABINET BA					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF AUSTIN AND ROOSEVELT		
CABINET	BA	CABLE SIZE	2-1/C NO.6 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	120V	LUMINAIRE VOLTAGE	120V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
1	3.33A	130FT	2	0.510/1000	0.44V
TOTAL					0.44V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.36%					

VOLTAGE DROP CALCULATION FOR CABINET A1					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF HOME AND ROOSEVELT		
CABINET	A1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	139FT	2	0.321/1000	0.760V
5	1.42A	243FT	2	0.321/1000	1.108V
4	1.42A	227FT	2	0.321/1000	0.828V
3	1.42A	239FT	2	0.321/1000	0.654V
2	1.42A	248FT	2	0.321/1000	0.452V
1	1.42A	276FT	2	0.321/1000	0.252V
TOTAL					4.053V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =0.844%					

VOLTAGE DROP CALCULATION FOR CABINET A2					
PROJECT	ROOSEVELT ROAD	LOCATION	SE OF EAST AND ROOSEVELT		
CABINET	A2	CABLE SIZE	3-1/C NO.2 & 1-1/C NO.4		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
11	1.42A	74FT	2	0.201/1000	0.464V
10	1.42A	259FT	2	0.201/1000	1.478V
9	1.42A	268FT	2	0.201/1000	1.377V
8	1.42A	280FT	2	0.201/1000	1.279V
7	1.42A	240FT	2	0.201/1000	0.959V
6	1.42A	220FT	2	0.201/1000	0.754V
5	1.42A	200FT	2	0.201/1000	0.571V
4	1.42A	269FT	2	0.201/1000	0.614V
3	1.42A	264FT	2	0.201/1000	0.452V
2	1.42A	272FT	2	0.201/1000	0.311V
1	1.42A	265FT	2	0.201/1000	0.151V
TOTAL					8.410V
TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE =1.752%					

Highway Lighting Voltage Drop Calculations

$$V_d = 2(D) (I) (R)$$

$V_d$  = Voltage Drop  
 $D$  = Length of cable  
 $2$  = Multiplier; since current leaves and returns  
 $I$  = Total current in segment  
 $R$  = DC Resistance of the cable

$$\%V_d = \frac{V_d}{480} (100)$$

**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

VOLTAGE DROP CALCULATION FOR CABINETS

FILE NAME = DIRTE38-shr-light2.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -	SCALE: 1" = 20' SHEET NO. 2 OF 29 SHEETS STA. TO STA.	F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 222	CONTRACT NO. 63432	ILLINOIS FED. AID PROJECT
	PLOT SCALE = 8,2000' / IN.	CHECKED - JB	REVISED -								
	PLOT DATE = 3/11/2010	DATE -	REVISED -								

VOLTAGE DROP CALCULATION FOR CABINET C1					
PROJECT	ROOSEVELT ROAD	LOCATION	NE OF HOME AND ROOSEVELT		
CABINET	C1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	192FT	2	0.321/1000	0.875V
4	1.42A	265FT	2	0.321/1000	0.966V
3	1.42A	260FT	2	0.321/1000	0.711V
2	1.42A	231FT	2	0.321/1000	0.421V
1	1.42A	238FT	2	0.321/1000	0.217V
TOTAL					3.191V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.665%

VOLTAGE DROP CALCULATION FOR CABINET C1					
PROJECT	ROOSEVELT ROAD	LOCATION	NE OF HOME AND ROOSEVELT		
CABINET	C1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	B	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	58FT	2	0.321/1000	0.317V
5	1.42A	261FT	2	0.321/1000	1.190V
4	1.42A	266FT	2	0.321/1000	0.970V
3	1.42A	248FT	2	0.321/1000	0.678V
2	1.42A	233FT	2	0.321/1000	0.425V
1	1.42A	255FT	2	0.321/1000	0.232V
TOTAL					3.812V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.794%

VOLTAGE DROP CALCULATION FOR CABINET C1					
PROJECT	ROOSEVELT ROAD	LOCATION	NE OF HOME AND ROOSEVELT		
CABINET	C1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	62FT	2	0.321/1000	0.339V
5	1.42A	235FT	2	0.321/1000	1.071V
4	1.42A	240FT	2	0.321/1000	0.875V
3	1.42A	238FT	2	0.321/1000	0.651V
2	1.42A	241FT	2	0.321/1000	0.439V
1	1.42A	288FT	2	0.321/1000	0.263V
TOTAL					3.638V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.758%

VOLTAGE DROP CALCULATION FOR CABINET C1					
PROJECT	ROOSEVELT ROAD	LOCATION	NE OF HOME AND ROOSEVELT		
CABINET	C1	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	182FT	2	0.321/1000	1.000V
5	1.42A	235FT	2	0.321/1000	1.071V
4	1.42A	238FT	2	0.321/1000	0.868V
3	1.42A	240FT	2	0.321/1000	0.656V
2	1.42A	247FT	2	0.321/1000	0.450V
1	1.42A	67FT	2	0.321/1000	0.061V
TOTAL					4.102V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.855%

VOLTAGE DROP CALCULATION FOR CABINET C2					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF SCOVILLE AND ROOSEVELT		
CABINET	C2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
7	1.42A	20FT	2	0.321/1000	0.128V
6	1.42A	264FT	2	0.321/1000	1.444V
5	1.42A	276FT	2	0.321/1000	1.258V
4	1.42A	260FT	2	0.321/1000	0.948V
3	1.42A	268FT	2	0.321/1000	0.733V
2	1.42A	268FT	2	0.321/1000	0.489V
1	1.42A	258FT	2	0.321/1000	0.235V
TOTAL					5.235V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=1.091%

VOLTAGE DROP CALCULATION FOR CABINET C2					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF SCOVILLE AND ROOSEVELT		
CABINET	C2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	B	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
6	1.42A	148FT	2	0.321/1000	0.810V
5	1.42A	282FT	2	0.321/1000	1.285V
4	1.42A	258FT	2	0.321/1000	0.941V
3	1.42A	271FT	2	0.321/1000	0.741V
2	1.42A	272FT	2	0.321/1000	0.496V
1	1.42A	253FT	2	0.321/1000	0.231V
TOTAL					4.504V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.938%

VOLTAGE DROP CALCULATION FOR CABINET C2					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF SCOVILLE AND ROOSEVELT		
CABINET	C2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
4	1.42A	25FT	2	0.321/1000	0.456V
3	1.42A	269FT	2	0.321/1000	0.736V
2	1.42A	276FT	2	0.321/1000	0.503V
1	1.42A	241FT	2	0.321/1000	0.220V
TOTAL					1.914V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.399%

VOLTAGE DROP CALCULATION FOR CABINET C2					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF SCOVILLE AND ROOSEVELT		
CABINET	C2	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
4	1.42A	255FT	2	0.321/1000	0.923V
3	1.42A	277FT	2	0.321/1000	0.758V
2	1.42A	259FT	2	0.321/1000	0.472V
1	1.42A	287FT	2	0.321/1000	0.262V
TOTAL					2.421V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.504%

VOLTAGE DROP CALCULATION FOR CABINET C3					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF LOMBARD AND ROOSEVELT		
CABINET	C3	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	A	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	77FT	2	0.321/1000	0.351V
4	1.42A	265FT	2	0.321/1000	0.968V
3	1.42A	266FT	2	0.321/1000	0.727V
2	1.42A	269FT	2	0.321/1000	0.490V
1	1.42A	260FT	2	0.321/1000	0.237V
TOTAL					2.772V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.578%

VOLTAGE DROP CALCULATION FOR CABINET C3					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF LOMBARD AND ROOSEVELT		
CABINET	C3	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	B	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	217FT	2	0.321/1000	0.989V
4	1.42A	240FT	2	0.321/1000	0.875V
3	1.42A	300FT	2	0.321/1000	0.820V
2	1.42A	250FT	2	0.321/1000	0.456V
1	1.42A	258FT	2	0.321/1000	0.235V
TOTAL					3.376V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.703%

VOLTAGE DROP CALCULATION FOR CABINET C3					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF LOMBARD AND ROOSEVELT		
CABINET	C3	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	C	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	198FT	2	0.321/1000	0.903V
4	1.42A	254FT	2	0.321/1000	0.926V
3	1.42A	288FT	2	0.321/1000	0.788V
2	1.42A	260FT	2	0.321/1000	0.474V
1	1.42A	250FT	2	0.321/1000	0.277V
TOTAL					3.318V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.691%

VOLTAGE DROP CALCULATION FOR CABINET C3					
PROJECT	ROOSEVELT ROAD	LOCATION	NW OF LOMBARD AND ROOSEVELT		
CABINET	C3	CABLE SIZE	3-1/C NO.4 & 1-1/C NO.6		
CIRCUIT	D	CONDUCTOR	COPPER		
SYSTEM VOLTAGE	480V	LUMINAIRE VOLTAGE	240V		
NO. OF LUMINAIRES	CURRENT/LUMINAIRE	DISTANCE	2X	RESISTIVITY	VOLTAGE DROP
5	1.42A	71FT	2	0.321/1000	0.324V
4	1.42A	260FT	2	0.321/1000	0.948V
3	1.42A	246FT	2	0.321/1000	0.673V
2	1.42A	293FT	2	0.321/1000	0.534V
1	1.42A	250FT	2	0.321/1000	0.228V
TOTAL					2.707V

TOTAL VOLTAGE DROP/ SYSTEM VOLTAGE  
=0.564%

Highway Lighting Voltage Drop Calculations

$$V_d = 2(D)(I)(R)$$

$V_d$  = Voltage Drop  
D = Length of cable  
2 = Multiplier, since current leaves and returns  
I = Total current in segment  
R = DC Resistance of the cable

$$\%V_d = \frac{V_d}{480} (100)$$

FILE NAME = DIRTE38-shc-light23.dgn	USER NAME = :DOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -

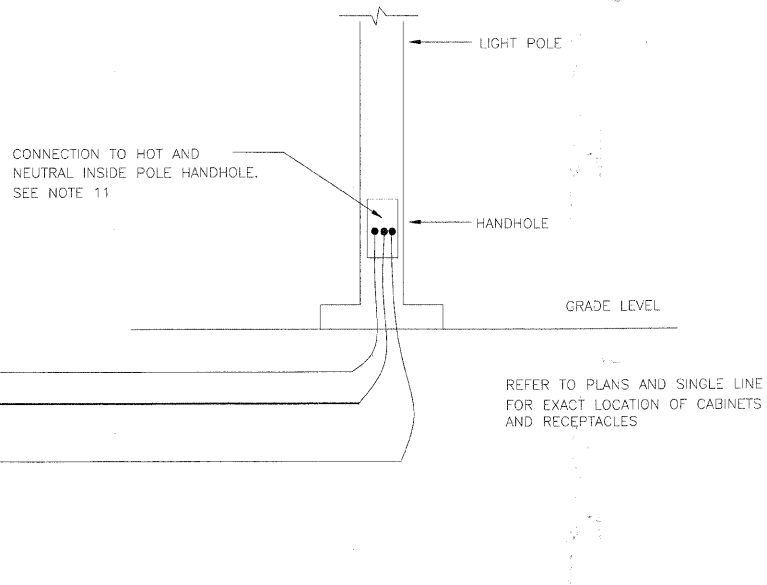
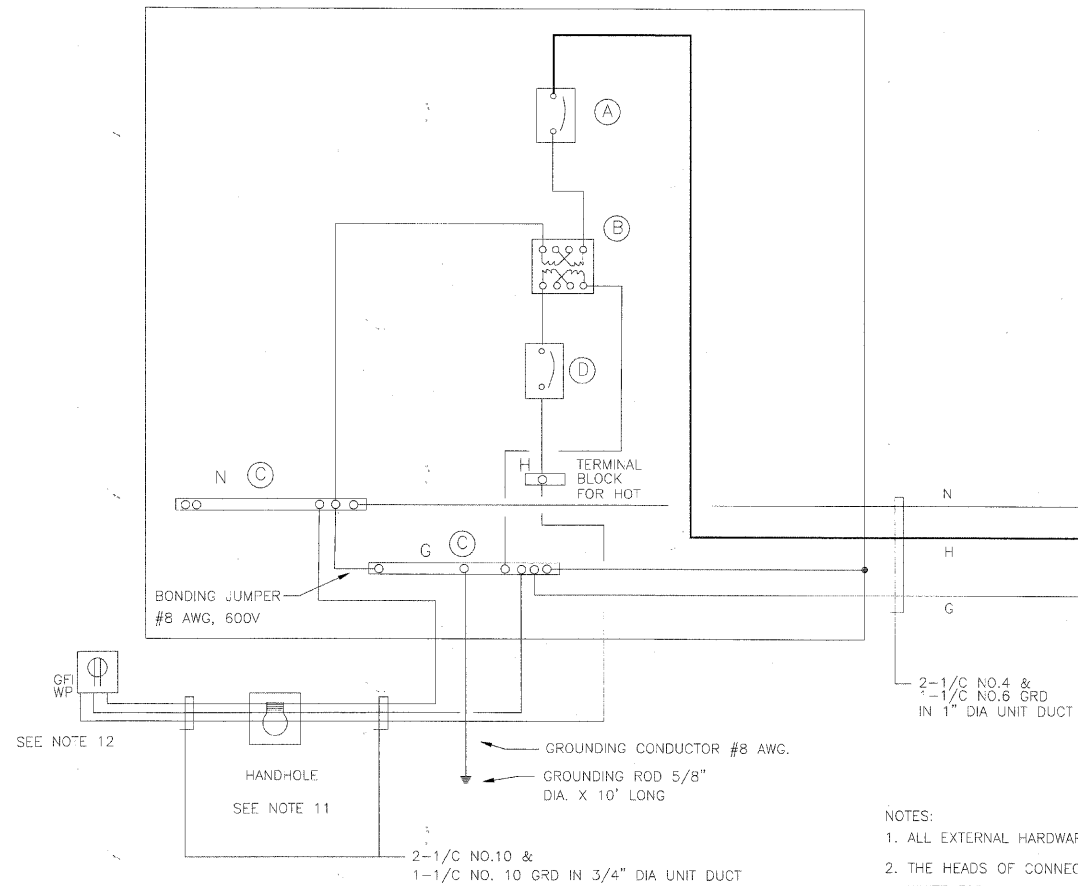
**TERRA** ENGINEERING LTD.  
225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

VOLTAGE DROP CALCULATION FOR CABINETS

SCALE: 1" = 20' SHEET NO. 3 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	223
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	



ITEM	QUANTITY	MAIN CIRCUIT, 1 POLE, 240 VOLT
A	1	MAIN CIRCUIT, 1 POLE, 240 VOLT 5AMP,FRAME. 5AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
B	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240X480/120X240 VOLT, 60 HZ. TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
C	2	COPPER GROUND BUS 1/4" X 1" X 6" LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS
D	1	BRANCH CIRCUIT, 1 POLE, 120 VOLT 20AMP,FRAME. 20AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 120 VOLT.

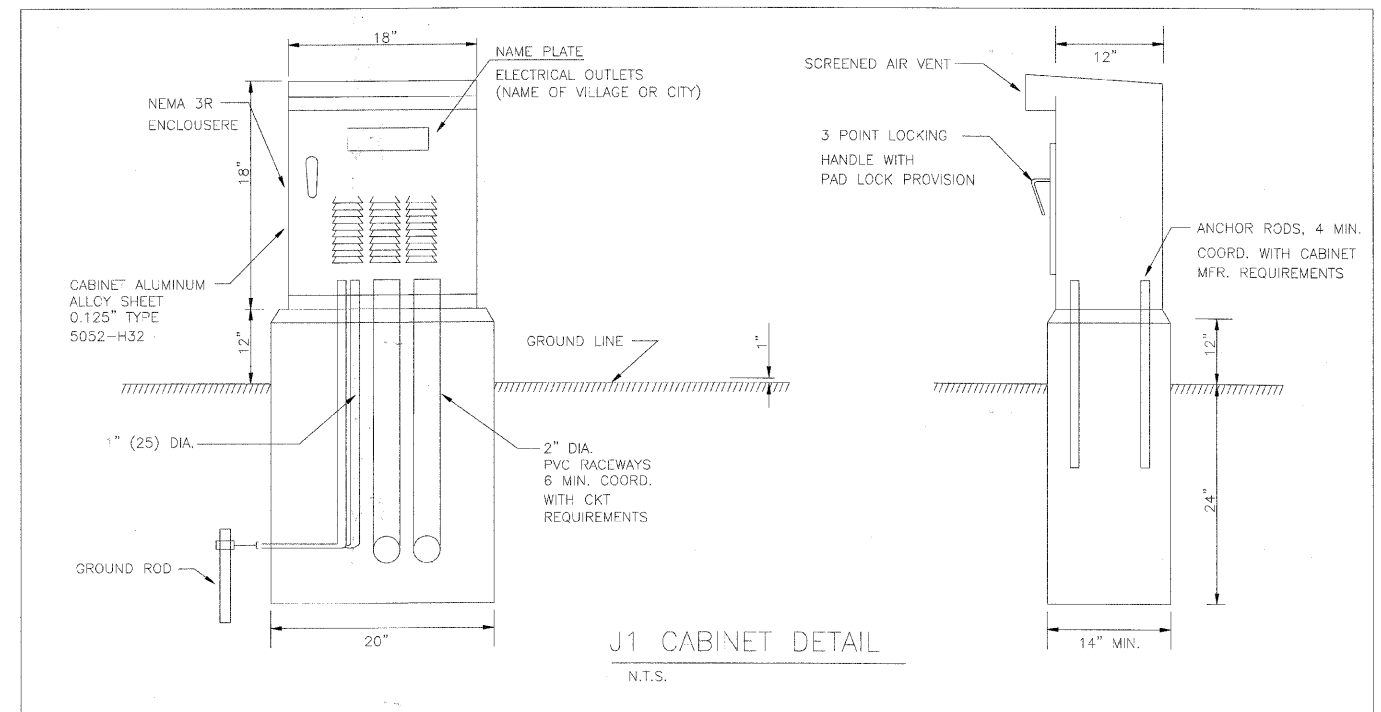
**WIRING DIAGRAM FOR J1 CABINET  
FOR ONE RECEPTACLE**

N.T.S.  
REFER TO LANDSCAPE PLAN FOR EXACT LOCATION OF CABINET, HANDHOLE, AND RECEPTACLE.  
FINAL LOCATION TO BE COORDINATED WITH LANDSCAPE ARCHITECT.

**LEGEND**

- Proposed handhole
- Proposed vandal proof receptacle (Weatherproof and Ground Fault Interrupter)  
UL listed, corrosion resistant and cover NEC 406.8.B.2a compliant
- Ground Rod

- NOTES:
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
  - THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
  - ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED  
R = RED BL = BLUE W = WHITE FOR NEUTRAL  
B = BLACK Y = YELLOW G = GREEN FOR GROUND
  - PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
  - ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
  - FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
  - DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
  - DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
  - DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE P.I.N.
  - CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
  - ALL CONNECTIONS SHALL BE ABOVE GROUND (NO UNDERGROUND SPLICING)
  - REFER TO LANDSCAPE PLANS FOR EXACT LOCATION OF RECEPTACLE ENCLOSURE.  
RECEPTABLES ENCLOSURE SHALL NOT BE INSTALLED ON THE SIDEWALK OR AT GRADE LEVELS CAUSING SAFETY HAZARDS OR OBSTRUCTIONS TO PEDESTRIANS.



**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

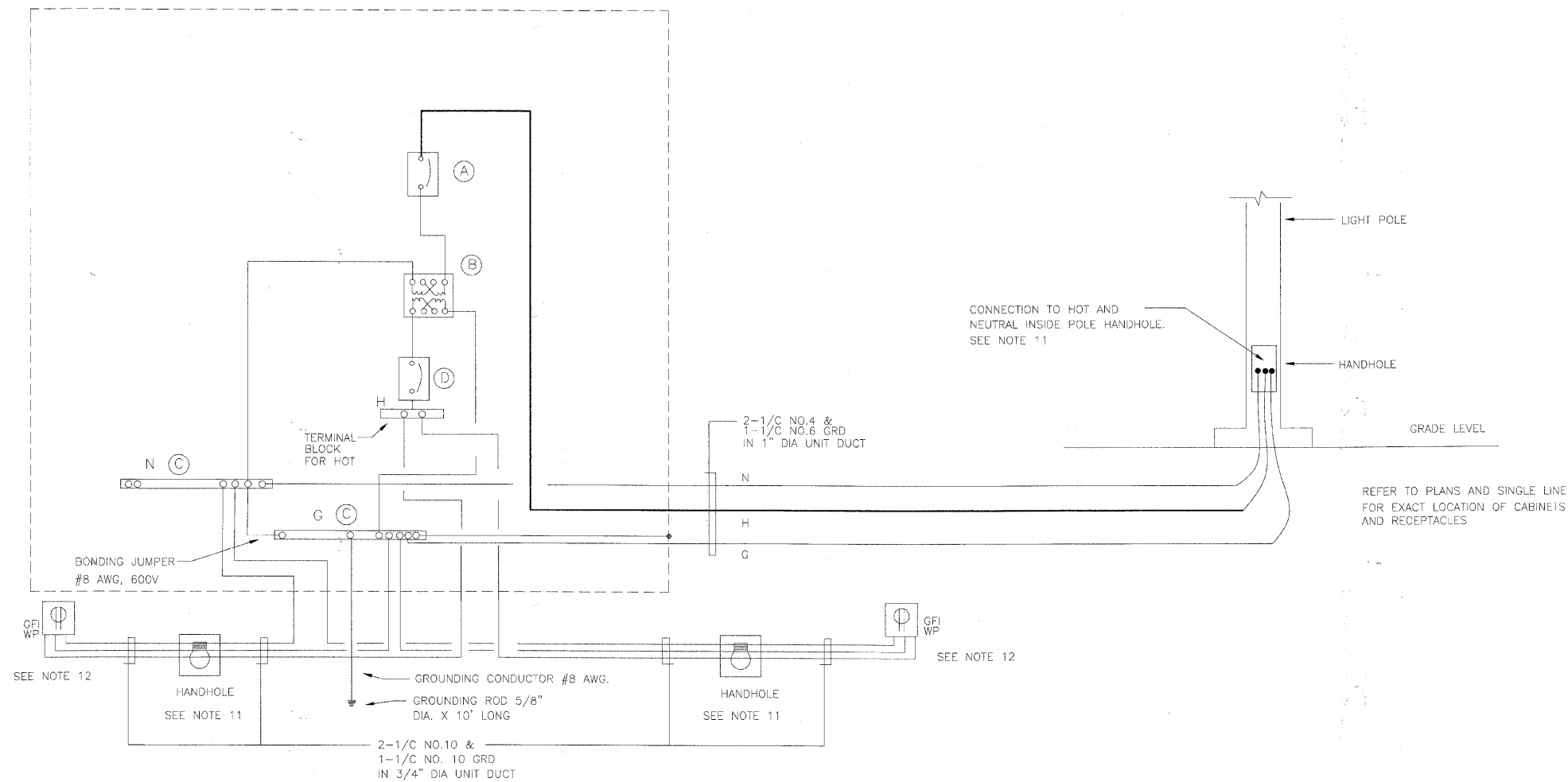
**WIRING DIAGRAM FOR RECEPTACLE CABINET FOR ONE RECEPTACLE**

FILE NAME = DIRTE38-shr-light84.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -
	PLOT SCALE = 20.0000 1 / IN.		
	PLOT DATE = 3/11/2018		

SCALE: 1" = 20' SHEET NO. 4 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	224
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				








**WIRING DIAGRAM FOR J1 CABINET  
FOR TWO RECEPTACLE**

N.T.S.  
REFER TO LANDSCAPE PLAN FOR EXACT LOCATION OF CABINET, HANDHOLE, AND RECEPTACLE.  
FINAL LOCATION TO BE COORDINATED WITH LANDSCAPE ARCHITECT.

ITEM	QUANTITY	MAIN CIRCUIT, 1 POLE, 240 VOLT
A	1	MAIN CIRCUIT, 1 POLE, 240 VOLT 5AMP, FRAME. 5AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
B	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240X480/120X240 VOLT, 60 HZ. TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
C	2	COPPER GROUND BUS 1/4" X 1" X 6" LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS
D	1	BRANCH CIRCUIT, 1 POLE, 120 VOLT 20AMP, FRAME. 20AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 120 VOLT.

**LEGEND**

-  Proposed handhole
-  Proposed vandal proof receptacle (Weatherproof and Ground Fault Interrupter)  
UL listed, corrosion resistant and cover NEC 406.8.B.2a compliant
-  Ground Rod

- NOTES:
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
  - THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
  - ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED  
R = RED BL = BLUE W = WHITE FOR NEUTRAL  
B = BLACK Y = YELLOW G = GREEN FOR GROUND
  - PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
  - ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
  - FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
  - DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
  - DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
  - DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
  - CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
  - ALL CONNECTIONS SHALL BE ABOVE GROUND (NO UNDERGROUND SPLICING)
  - REFER TO LANDSCAPE PLANS FOR EXACT LOCATION OF RECEPTACLE ENCLOSURE. RECEPTACLES ENCLOSURE SHALL NOT BE INSTALLED ON THE SIDEWALK OR AT GRADE LEVELS CAUSING SAFETY HAZARDS OR OBSTRUCTIONS TO PEDESTRIANS.

**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WIRING DIAGRAM FOR RECEPTACLE CABINET FOR TWO RECEPTACLES**

FILE NAME = 219  
DIRTE38-shr-11ght05.dgn

USER NAME = IDDT

DESIGNED - EE

REVISED -

DRAWN - PY

REVISED -

PLOT SCALE = 20.0000' / IN.

CHECKED - JB

REVISED -

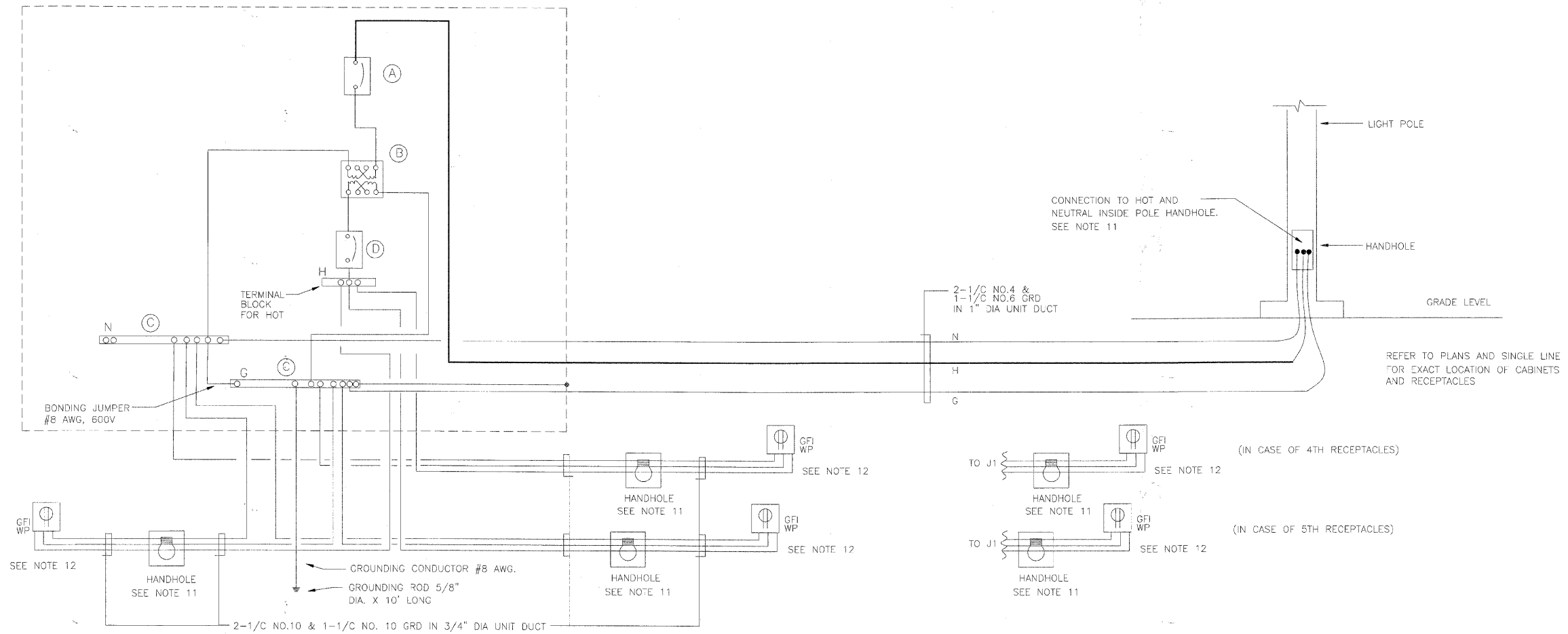
PLOT DATE = 3/11/2010

DATE -

REVISED -

SCALE: 1" = 20' SHEET NO. 5 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	225
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



**WIRING DIAGRAM FOR J1 CABINET  
FOR THREE OR MORE RECEPTACLES**

N.T.S.  
REFER TO LANDSCAPE PLAN FOR EXACT LOCATION OF CABINET, HANDHOLE, AND RECEPTACLE.  
FINAL LOCATION TO BE COORDINATED WITH LANDSCAPE ARCHITECT.

ITEM	QUANTITY	MAIN CIRCUIT, 1 POLE, 240 VOLT
A	1	MAIN CIRCUIT, 1 POLE, 240 VOLT 5AMP FRAME, 5AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
B	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240X480/120X240 VOLT, 60 HZ. TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 240 VOLT.
C	2	COPPER GROUND BUS 1/4" X 1" X 6" LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS
D	1	BRANCH CIRCUIT, 1 POLE, 120 VOLT 20AMP FRAME, 20AMP NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 120 VOLT.

**LEGEND**

- Proposed handhole
- Proposed vandal proof receptacle (Weatherproof and Ground Fault Interrupter)  
UL listed, corrosion resistant and cover NEC 406.8.B.2a compliant
- Ground Rod

**NOTES:**

1. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
2. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
3. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED  
R = RED BL = BLUE W = WHITE FOR NEUTRAL  
B = BLACK Y = YELLOW G = GREEN FOR GROUND
4. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
5. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
6. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
7. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
8. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
9. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
11. ALL CONNECTIONS SHALL BE ABOVE GROUND (NO UNDERGROUND SPLICING)
12. REFER TO LANDSCAPE PLANS FOR EXACT LOCATION OF RECEPTACLE ENCLOSURE. RECEPTACLES ENCLOSURE SHALL NOT BE INSTALLED ON THE SIDEWALK OR AT GRADE LEVELS CAUSING SAFETY HAZARDS OR OBSTRUCTIONS TO PEDESTRIANS.

**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WIRING DIAGRAM FOR RECEPTACLE CABINET FOR THREE RECEPTACLES**

FILE NAME = DIRTE38-shr-light06.dgn

USER NAME = IDDT

DESIGNED - EE

REVISED -

PLOT SCALE = 28,0000 1 / IN.

DRAWN - PY

REVISED -

PLOT DATE = 3/11/2018

CHECKED - JB

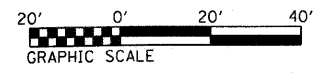
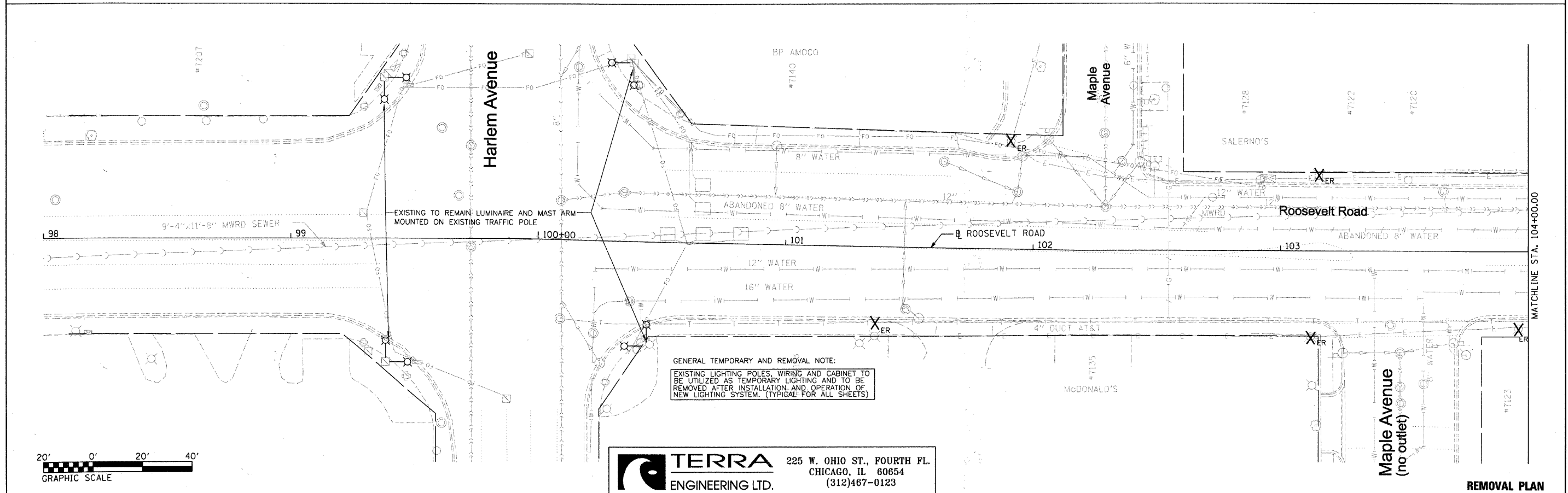
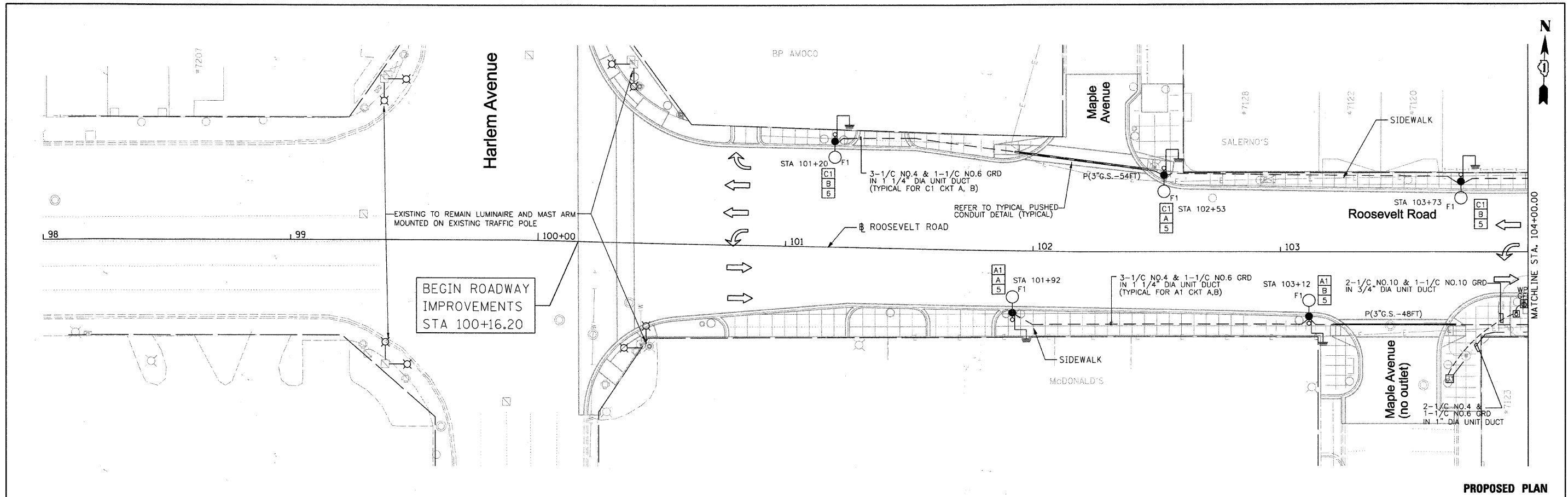
REVISED -

DATE -

REVISED -

SCALE: 1" = 20' SHEET NO. 6 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	226
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	



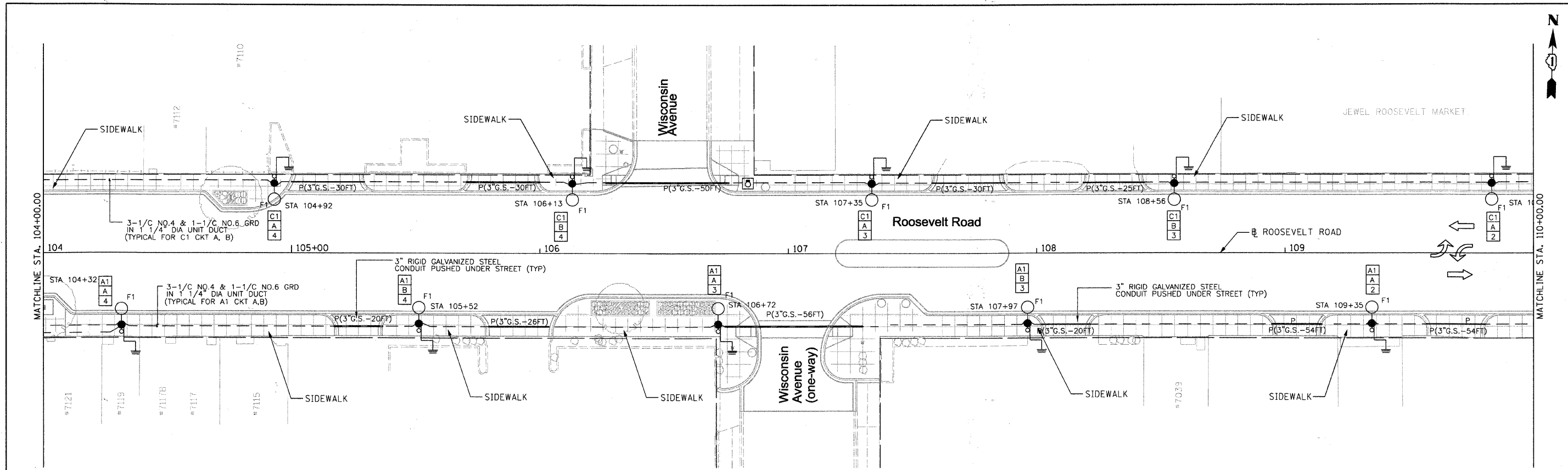
**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

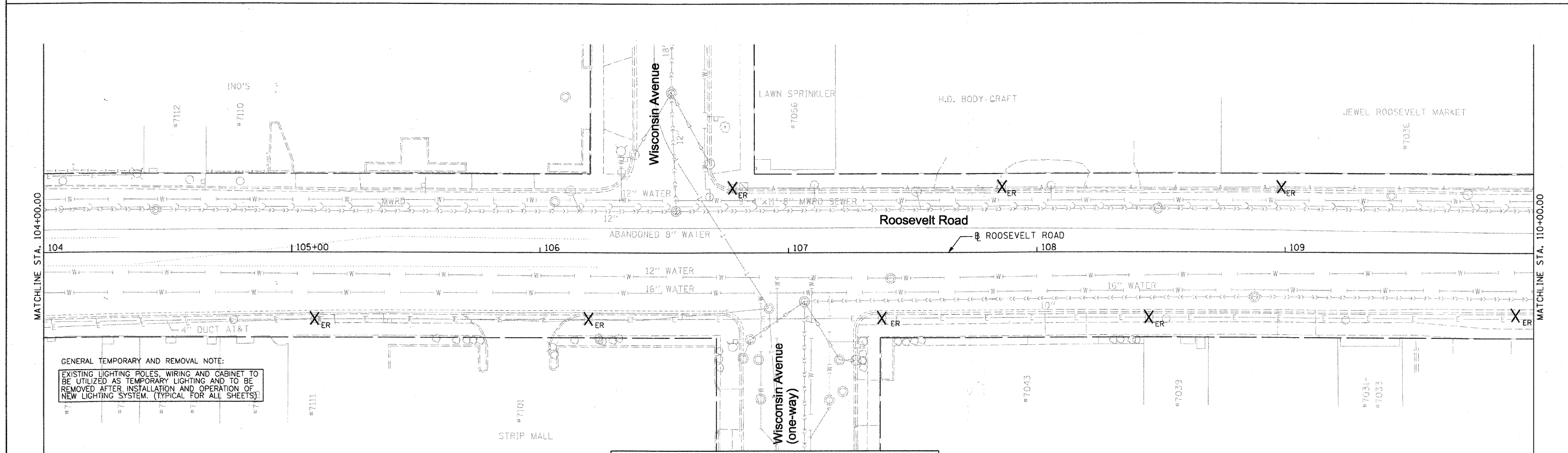
FILE NAME = DIRTE38-shr-light87.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20,000% / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2010	DATE -	REVISED -

<b>LIGHTING INSTALLATION AND REMOVAL PLAN</b>		F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 227
SCALE: 1" = 20'	SHEET NO. 7 OF 29 SHEETS	STA. 99+92.79 TO STA. 104+00.00		CONTRACT NO. 63432		
ILLINOIS FED. AID PROJECT						

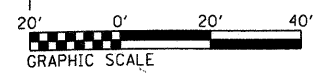
<b>REMOVAL PLAN</b>						
F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 227	CONTRACT NO. 63432	
ILLINOIS FED. AID PROJECT						



**PROPOSED PLAN**



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

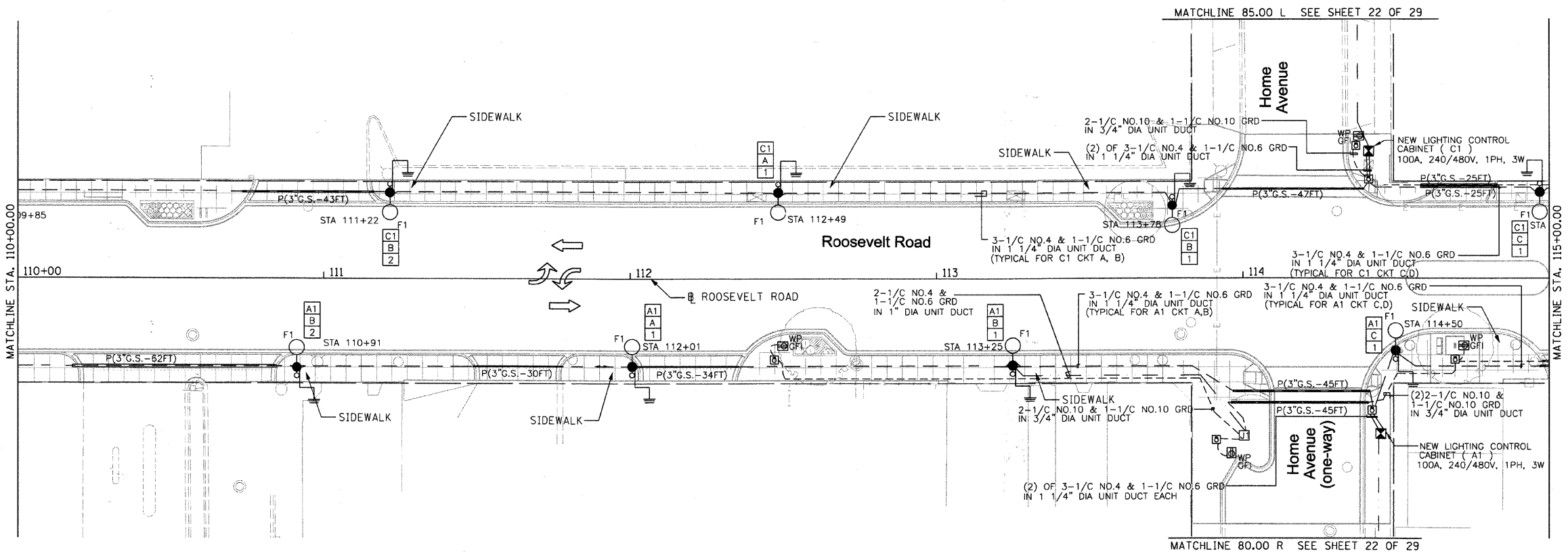
**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 8 OF 29 SHEETS STA. 104+00.00 TO STA. 110+00.00

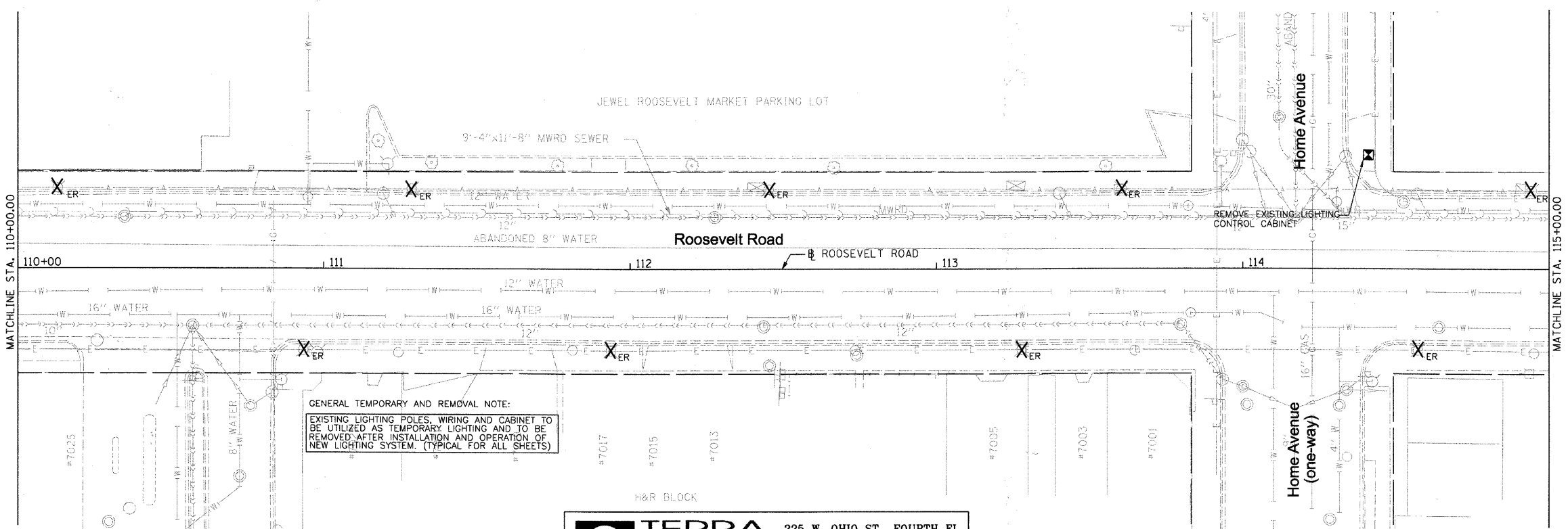
**REMOVAL PLAN**

FILE NAME = DIRTE38-shr-light88.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
	PLOT SCALE = 20.0000' / IN.	DRAWN - PY	REVISED -
	PLOT DATE = 3/11/2018	CHECKED - JB	REVISED -
		DATE -	REVISED -

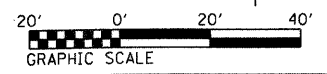
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	228
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



**PROPOSED PLAN**



**REMOVAL PLAN**



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)

**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

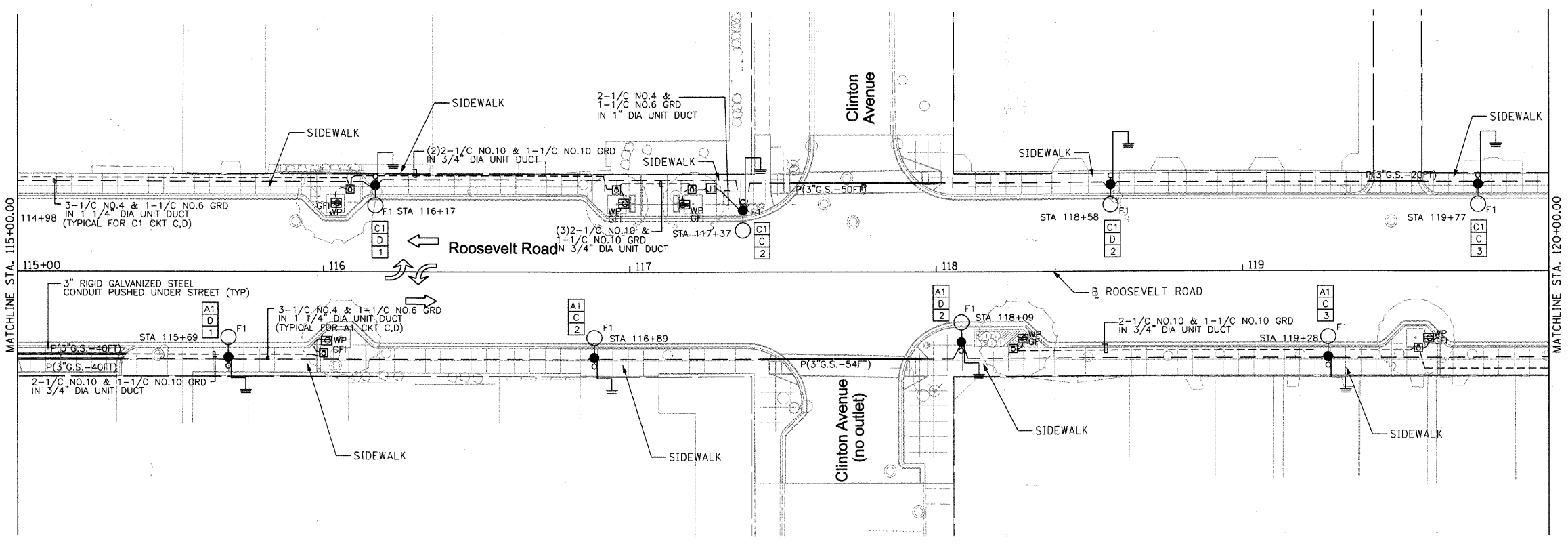
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

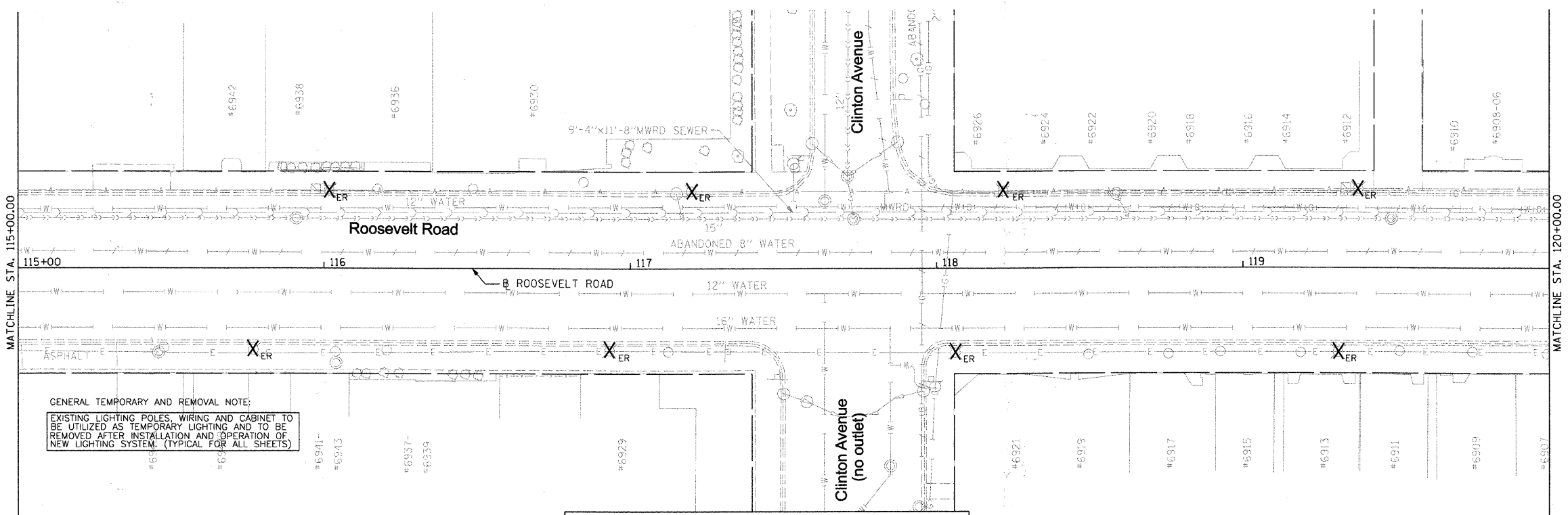
SCALE: 1" = 20' SHEET NO. 9 OF 29 SHEETS STA. 110+00.00 TO STA. 115+00.00

FILE NAME = DIRTE38-ahc-light09.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000' / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2010	DATE -	REVISED -

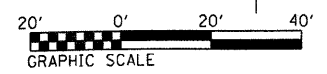
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	229
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



**PROPOSED PLAN**



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

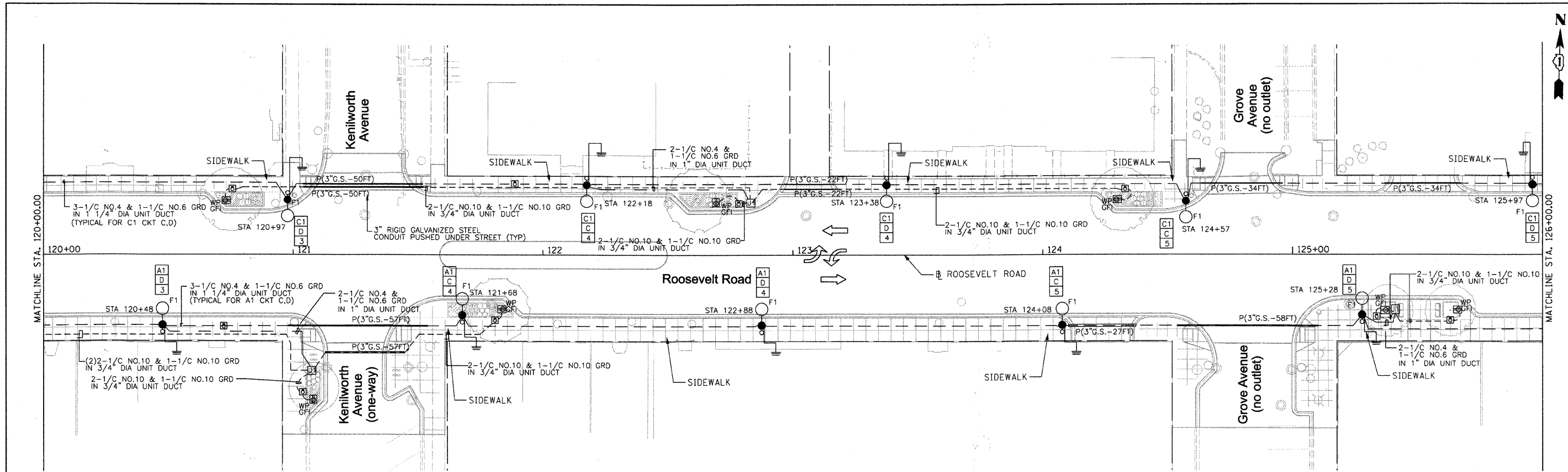
SCALE: 1" = 20' SHEET NO. 10 OF 29 SHEETS STA. 115+00.00 TO STA. 120+00.00

**REMOVAL PLAN**

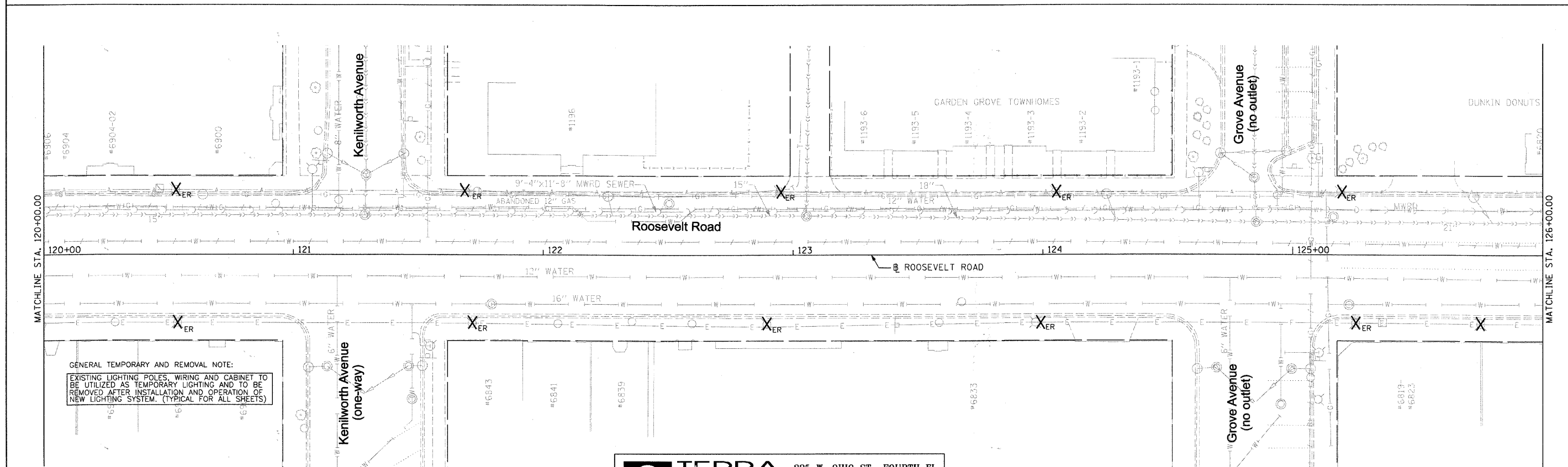
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	230
			CONTRACT NO. 63432	
ILLINOIS FED. AID PROJECT				

FILE NAME = DIRTE30-shr-light10.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000' / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2010	DATE -	REVISED -

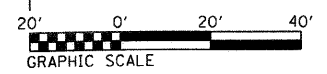




**PROPOSED PLAN**



**GENERAL TEMPORARY AND REMOVAL NOTE:**  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

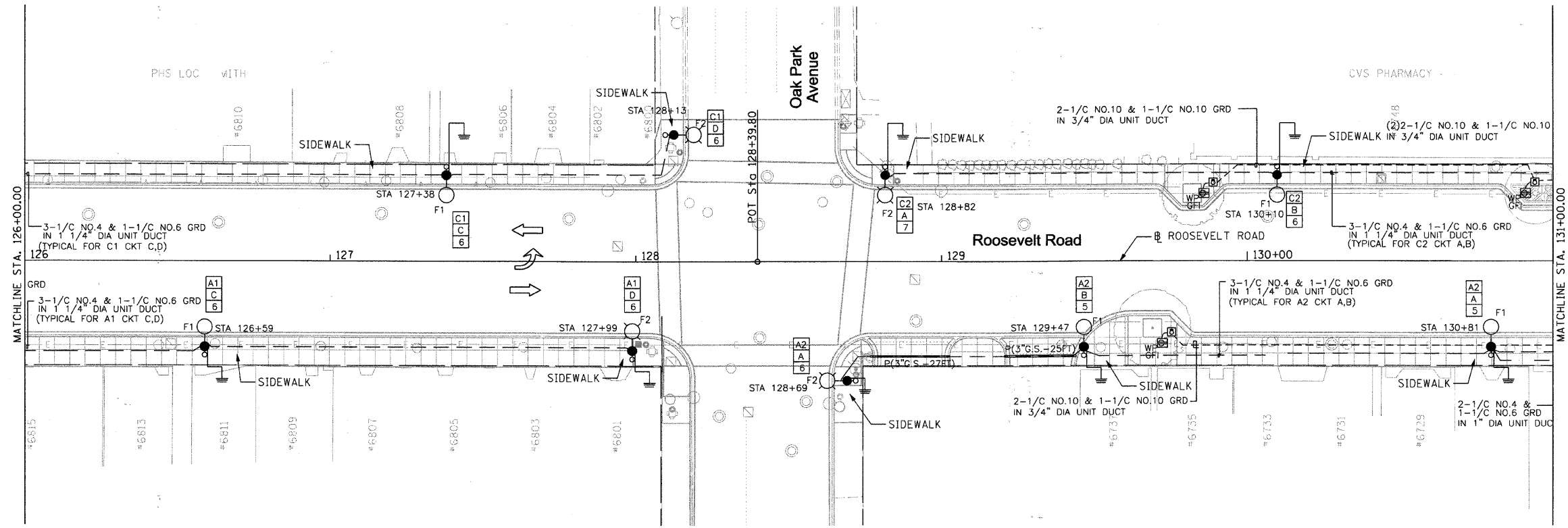
**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 11 OF 29 SHEETS STA. 120+00.00 TO STA. 126+00.00

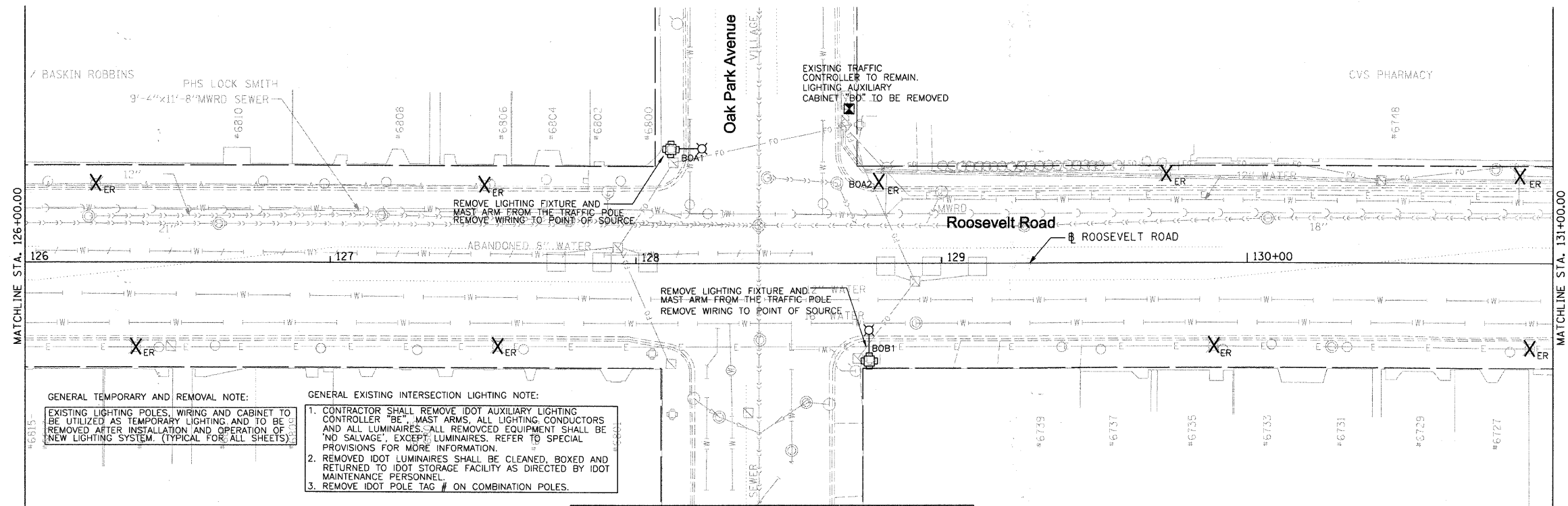
**REMOVAL PLAN**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	231
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				

FILE NAME = DIRTE38-sht-light11.dgn	USER NAME = IDGT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000 1/ IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2018	DATE -	REVISED -

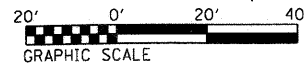


PROPOSED PLAN



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)

GENERAL EXISTING INTERSECTION LIGHTING NOTE:  
 1. CONTRACTOR SHALL REMOVE IDOT AUXILIARY LIGHTING CONTROLLER "BE", MAST ARMS, ALL LIGHTING CONDUCTORS AND ALL LUMINAIRES. ALL REMOVED EQUIPMENT SHALL BE "NO SALVAGE", EXCEPT LUMINAIRES. REFER TO SPECIAL PROVISIONS FOR MORE INFORMATION.  
 2. REMOVED IDOT LUMINAIRES SHALL BE CLEANED, BOXED AND RETURNED TO IDOT STORAGE FACILITY AS DIRECTED BY IDOT MAINTENANCE PERSONNEL.  
 3. REMOVE IDOT POLE TAG # ON COMBINATION POLES.



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 12 OF 29 SHEETS STA. 126+00.00 TO STA. 131+00.00

REMOVAL PLAN

FILE NAME = DIRTE38-shr-light12.dgn

USER NAME = IDOT

DESIGNED - EE

REVISED -

PLDT SCALE = 20.0000 "/ IN.

DRAWN - PY

REVISED -

PLDT DATE = 3/11/2012

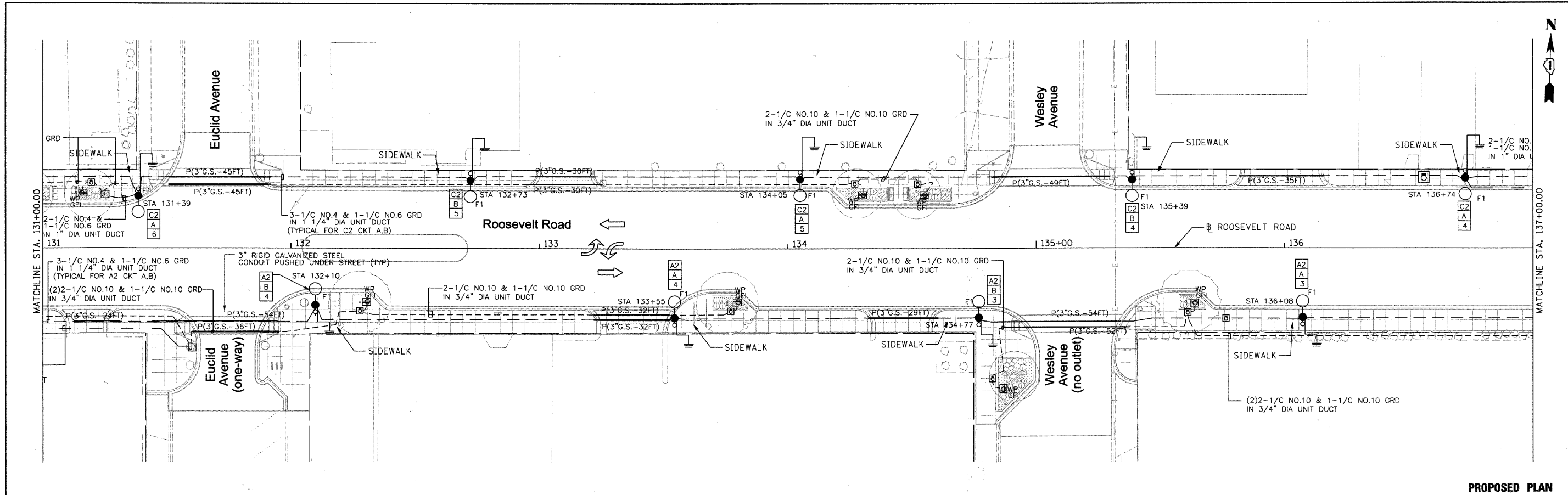
CHECKED - JB

REVISED -

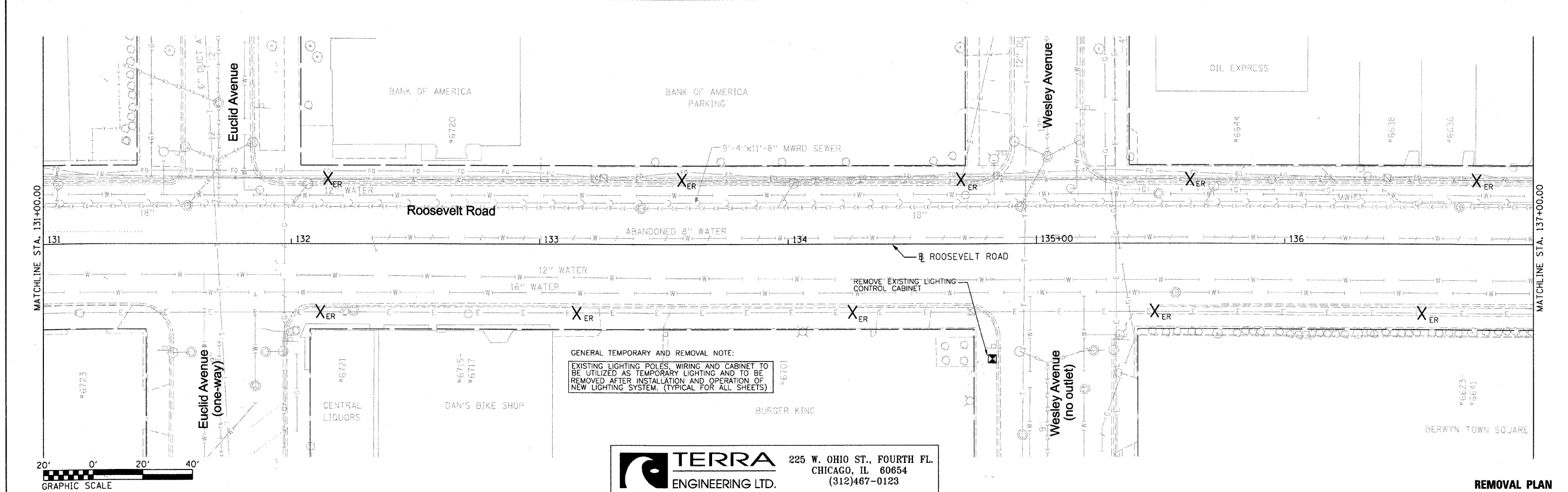
DATE -

REVISED -

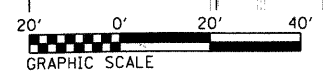
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	232
			CONTRACT NO. 63432	
ILLINOIS FED. AID PROJECT				



PROPOSED PLAN



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

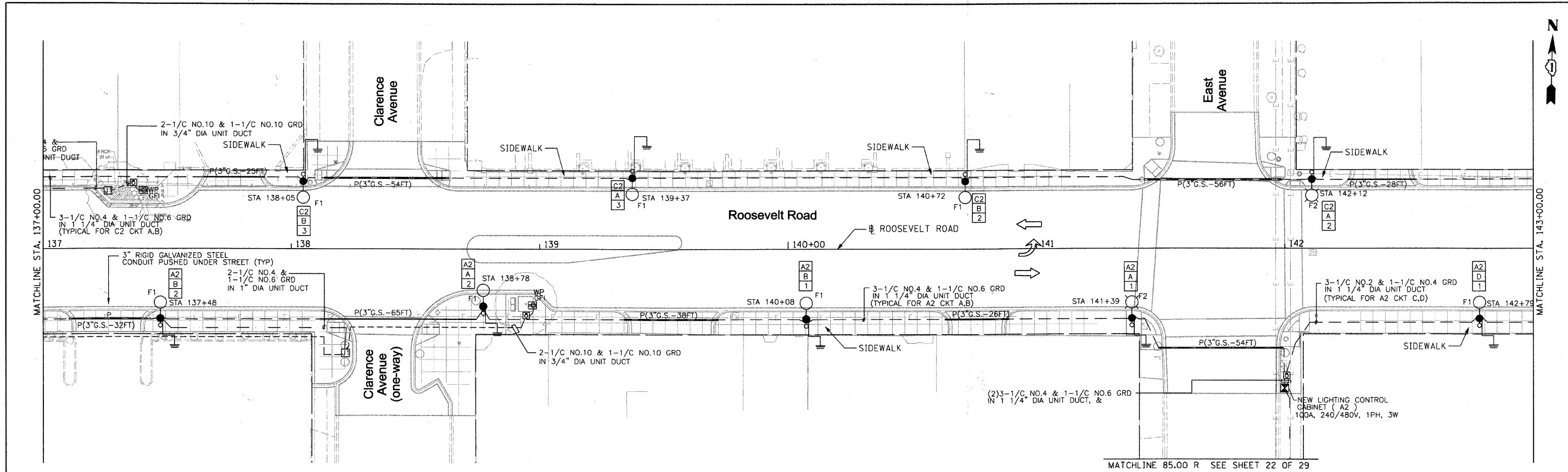
**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 13 OF 29 SHEETS STA. 131+00.00 TO STA. 137+00.00

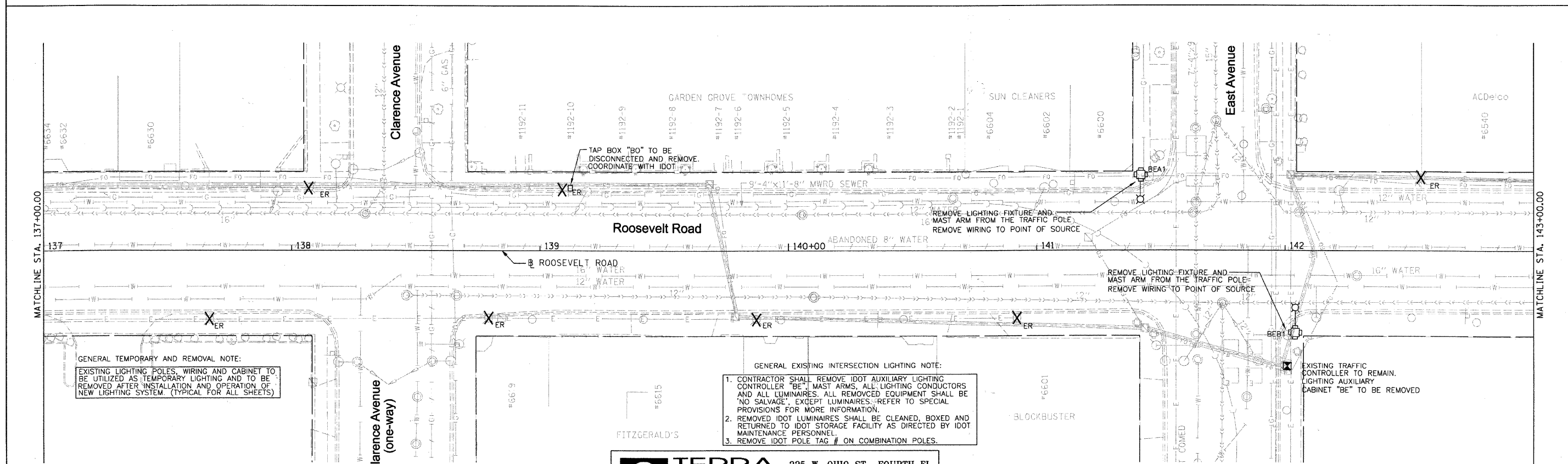
**REMOVAL PLAN**

FILE NAME = DIRTE38-shr-light13.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000 / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2010	DATE -	REVISED -

F.A.P. RTEL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	233
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



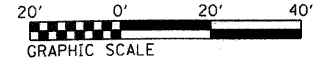
PROPOSED PLAN



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)

GENERAL EXISTING INTERSECTION LIGHTING NOTE:  
 1. CONTRACTOR SHALL REMOVE IDOT AUXILIARY LIGHTING CONTROLLER "BE", MAST ARMS, ALL LIGHTING CONDUCTORS AND ALL LUMINAIRES. ALL REMOVED EQUIPMENT SHALL BE "NO SALVAGE", EXCEPT LUMINAIRES. REFER TO SPECIAL PROVISIONS FOR MORE INFORMATION.  
 2. REMOVED IDOT LUMINAIRES SHALL BE CLEANED, BOXED AND RETURNED TO IDOT STORAGE FACILITY AS DIRECTED BY IDOT MAINTENANCE PERSONNEL.  
 3. REMOVE IDOT POLE TAG # ON COMBINATION POLES.

EXISTING TRAFFIC CONTROLLER TO REMAIN. LIGHTING AUXILIARY CABINET "BE" TO BE REMOVED



**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

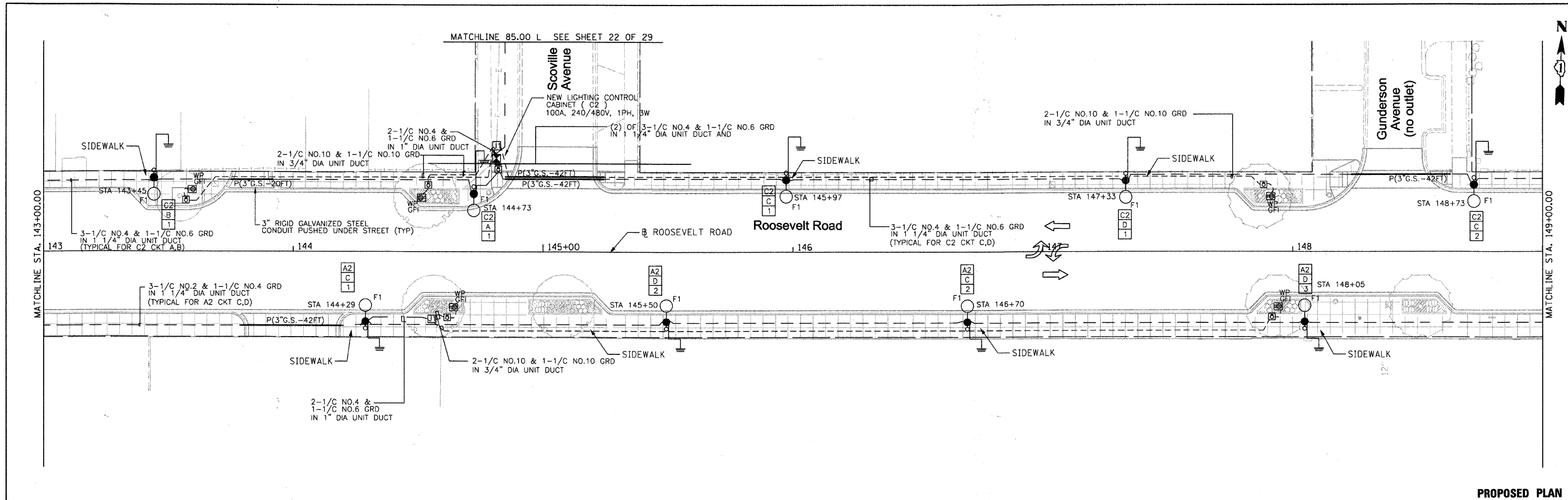
LIGHTING INSTALLATION AND REMOVAL PLAN

SCALE: 1" = 20' SHEET NO. 14 OF 29 SHEETS STA. 137+00.00 TO STA. 143+00.00

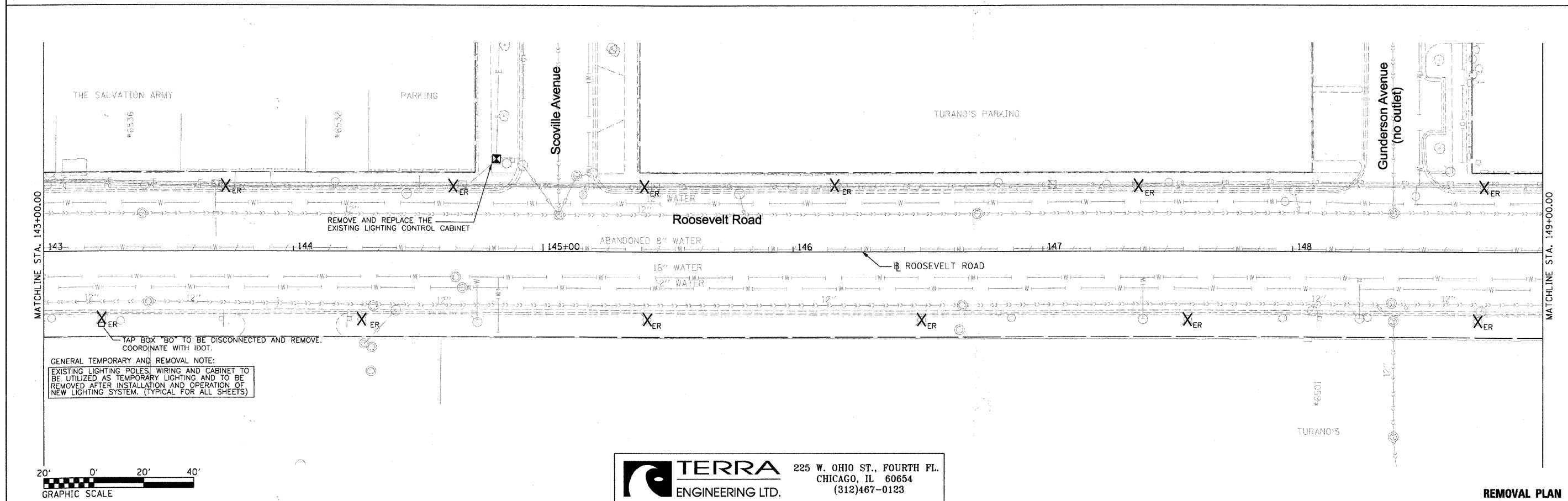
REMOVAL PLAN

FILE NAME = DIRTE38-shr-light14.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20,0000' / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2018	DATE -	REVISED -

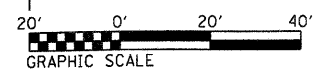
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	234
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



PROPOSED PLAN



REMOVAL PLAN



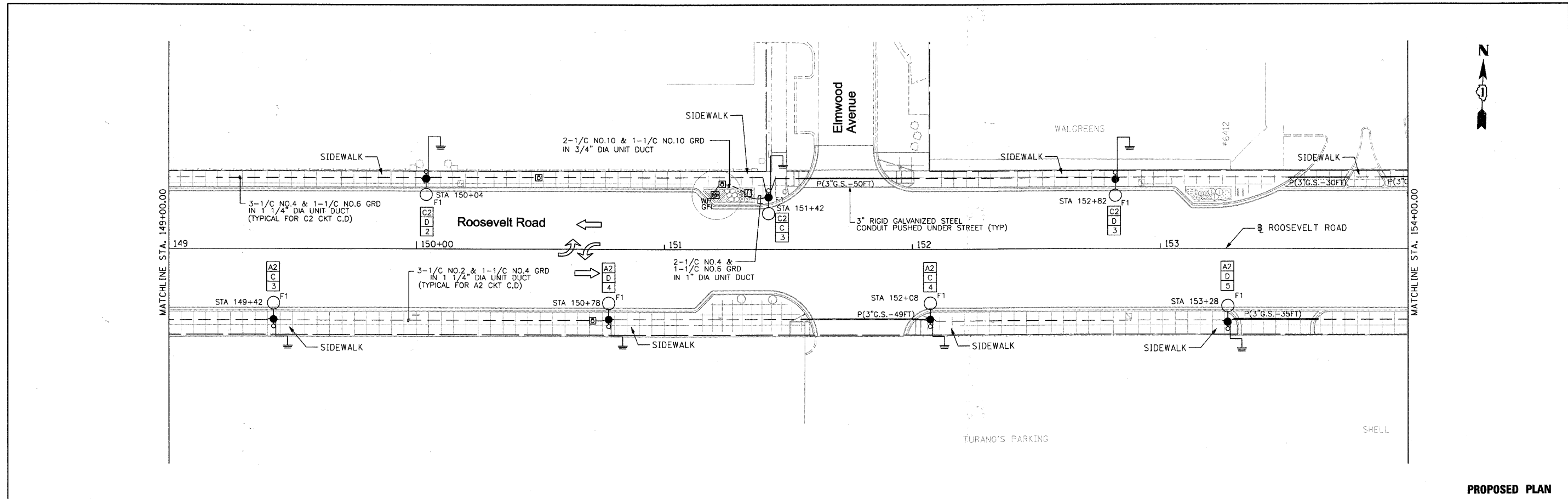
**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

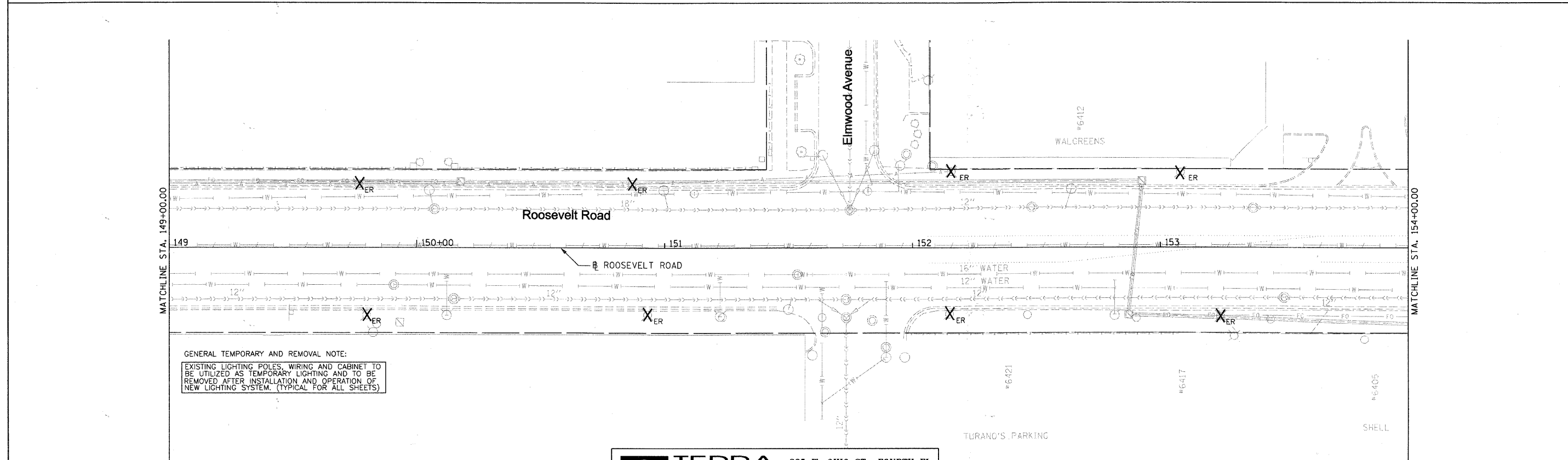
**LIGHTING INSTALLATION AND REMOVAL PLAN**  
SCALE: 1" = 20' SHEET NO. 15 OF 29 SHEETS STA. 143+00.00 TO STA. 149+00.00

FILE NAME = DIRTE38-shr-light15.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000 / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2018	DATE -	REVISED -

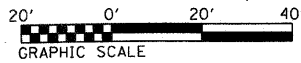
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	235
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



PROPOSED PLAN



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION AND REMOVAL PLAN**

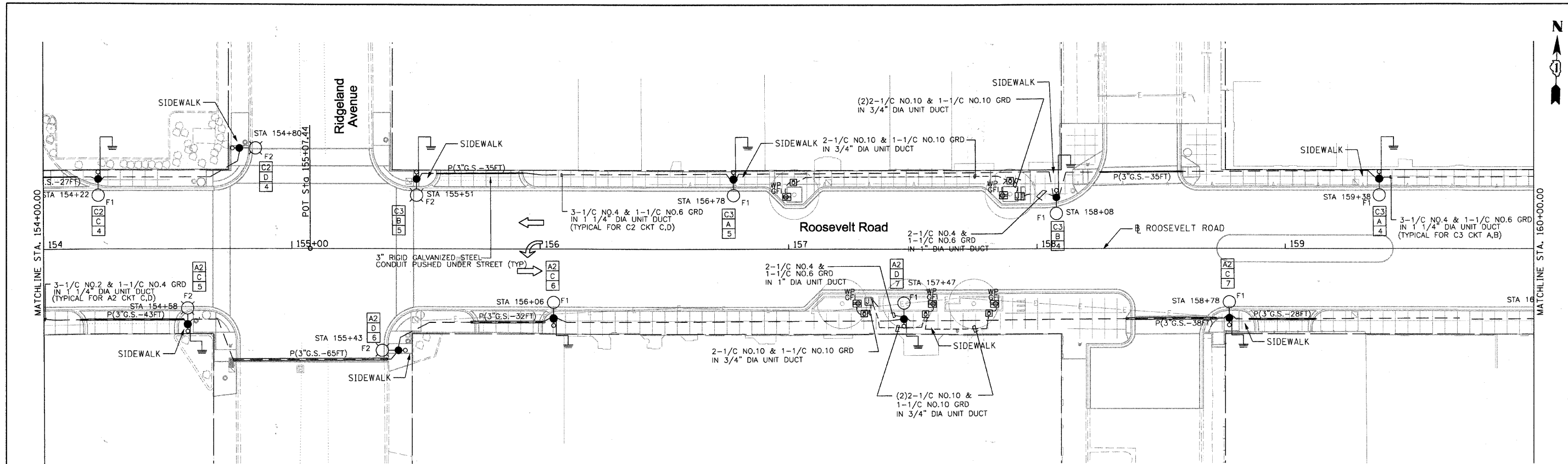
SCALE: 1" = 20' SHEET NO. 16 OF 29 SHEETS STA. 149+00.00 TO STA. 154+00.00

FILE NAME = DIRTE38-shr-light16.dgn	USER NAME = IDDT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -
			REVISED -

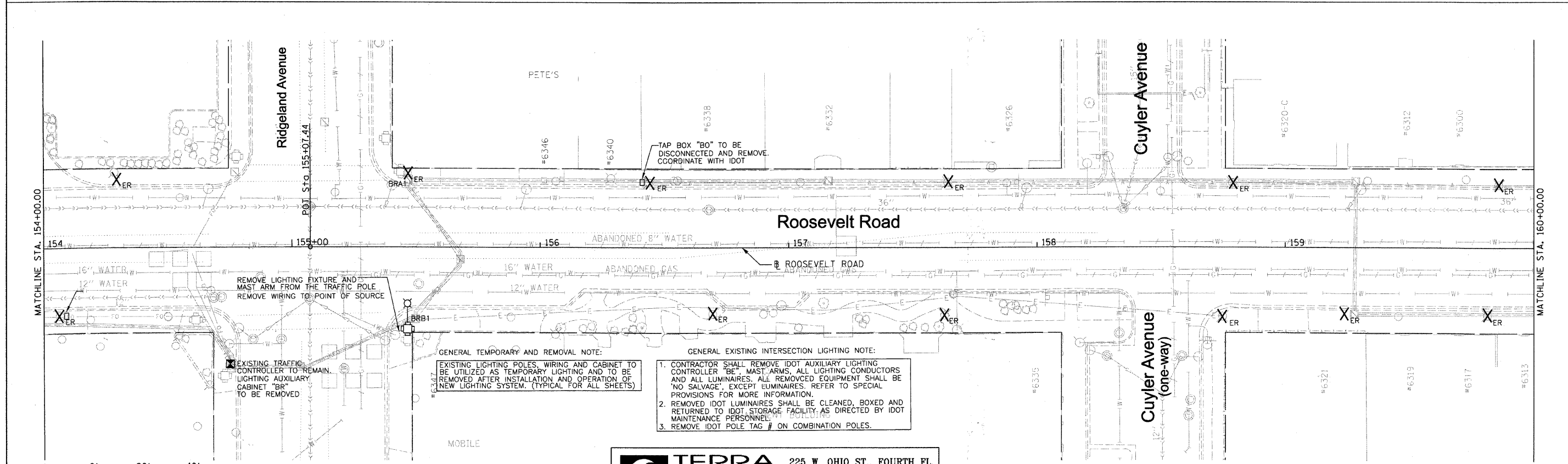
F.A.P. RTE. 347		SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 236
CONTRACT NO. 63432					ILLINOIS FED. AID PROJECT

REMOVAL PLAN

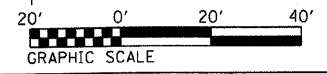




**PROPOSED PLAN**



**REMOVAL PLAN**



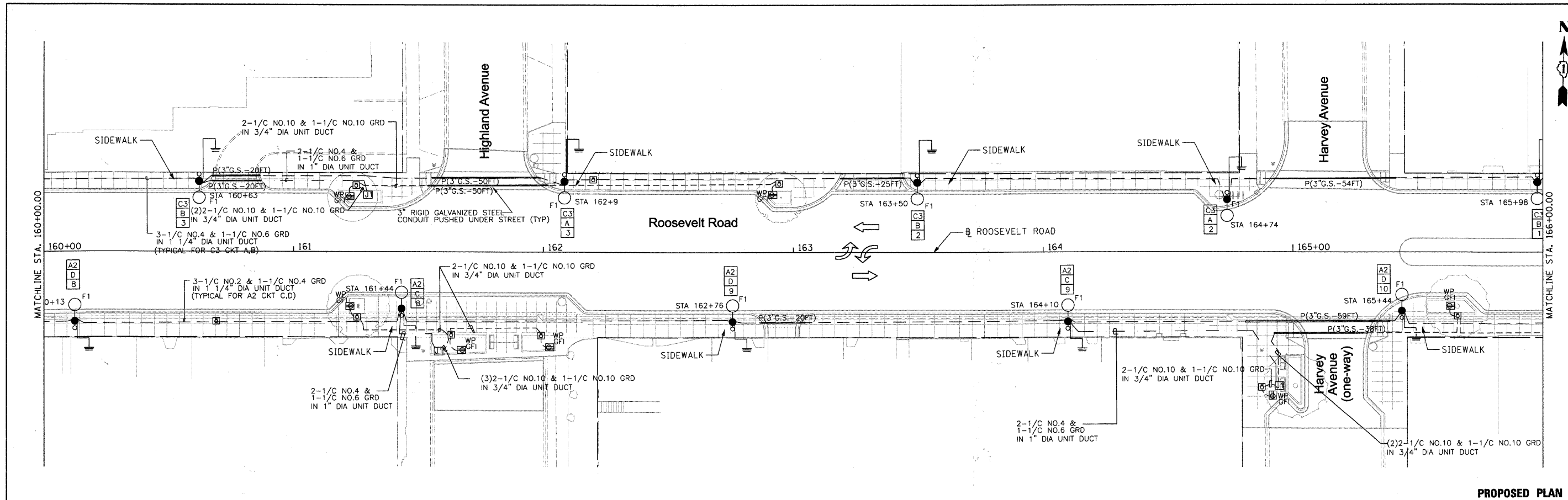
FILE NAME - DIR\E38-sht-light17.dgn	USER NAME - IDOT	DESIGNED - EE	REVISED -
	PLT SCALE = 20,000' / IN.	DRAWN - PY	REVISED -
	PLT DATE = 3/11/2018	CHECKED - JB	REVISED -
		DATE -	REVISED -

**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

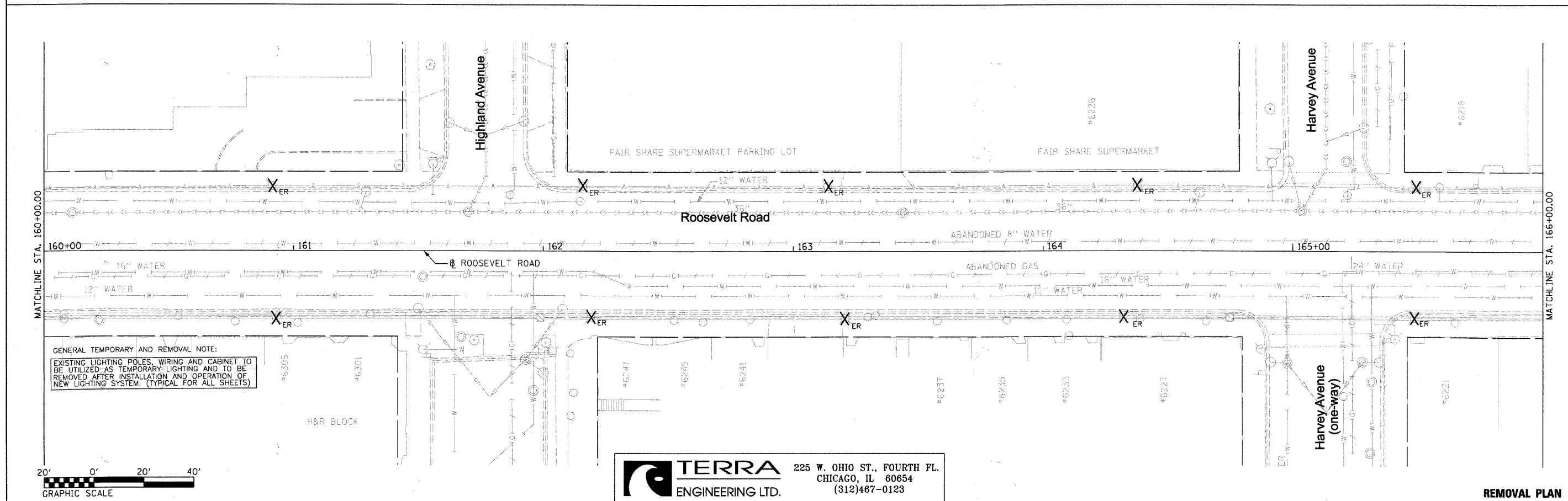
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**  
 SCALE: 1" = 20' SHEET NO. 17 OF 29 SHEETS STA. 154+00.00 TO STA. 160+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
347	09-00248-00-RS	COOK	274 237
			CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT			

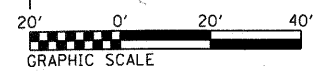


PROPOSED PLAN



REMOVAL PLAN

GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

LIGHTING INSTALLATION AND REMOVAL PLAN  
 SCALE: 1" = 20' SHEET NO. 18 OF 29 SHEETS STA. 160+00.00 TO STA. 166+00.00

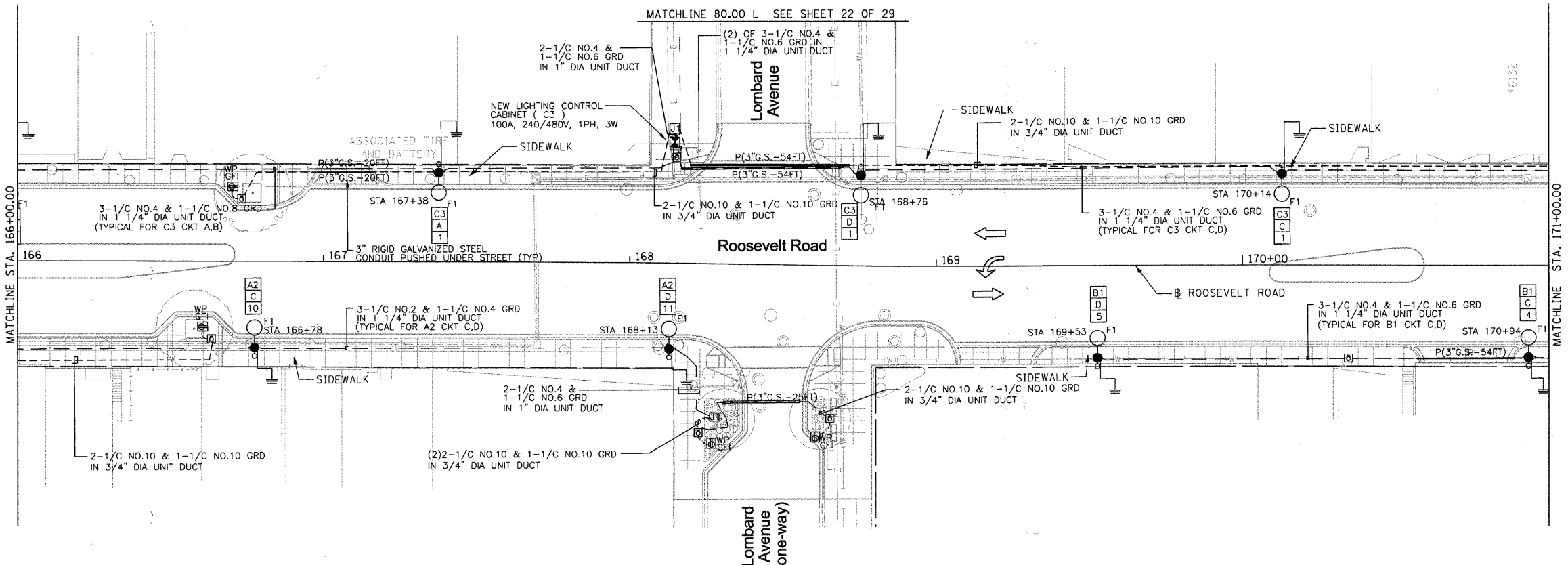
FILE NAME = DIRTE38-shr-light18.dgn  
 USER NAME = IDGT  
 DESIGNED - EE  
 DRAWN - PY  
 CHECKED - JB  
 DATE -

DESIGNED - EE  
 DRAWN - PY  
 CHECKED - JB  
 DATE -

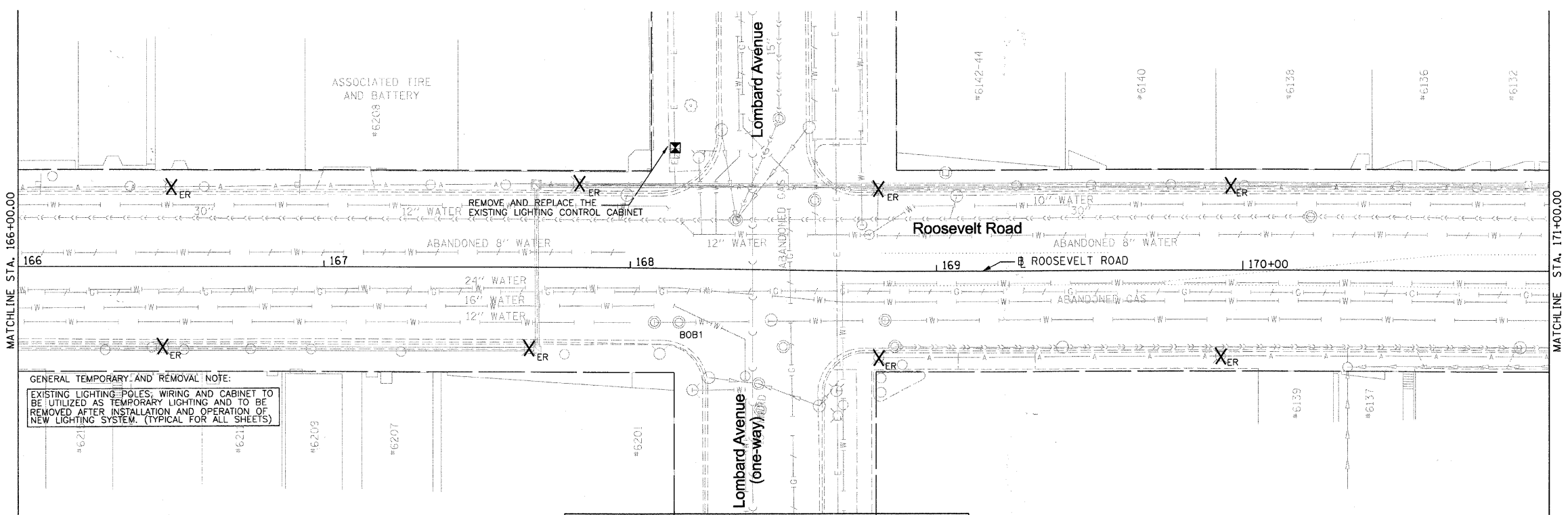
DESIGNED - EE  
 DRAWN - PY  
 CHECKED - JB  
 DATE -

DESIGNED - EE  
 DRAWN - PY  
 CHECKED - JB  
 DATE -

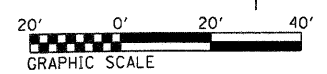
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	238
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	



**PROPOSED PLAN**



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

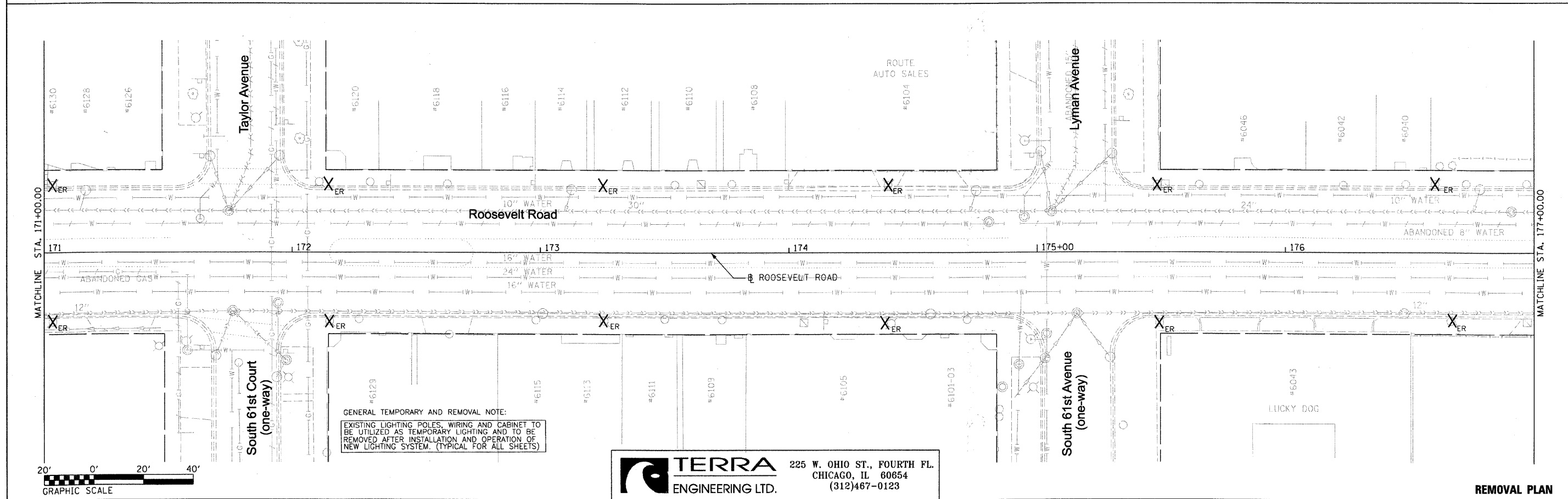
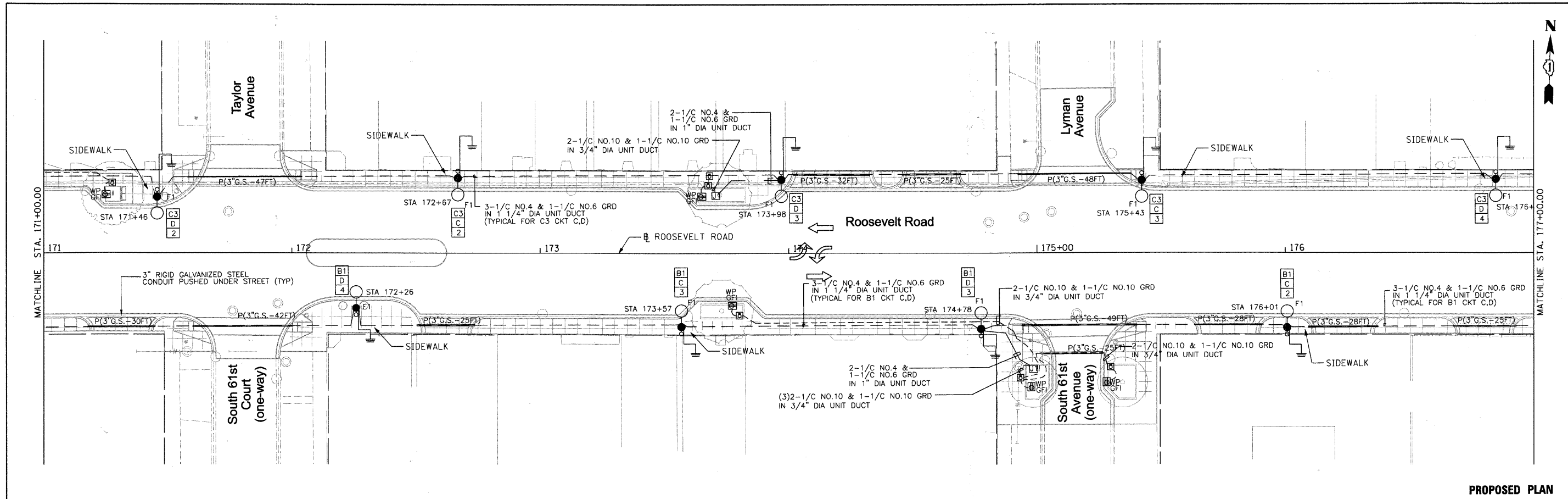
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

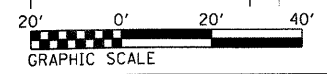
SCALE: 1" = 20' SHEET NO. 19 OF 29 SHEETS STA. 166+00.00 TO STA. 171+00.00

**REMOVAL PLAN**

FILE NAME = DIRTE30-shr-light19.dgn	USER NAME = IDCT	DESIGNED - EE	REVISED -	F.A.P. RTE. 347 SECTION 09-00248-00-RS COUNTY COOK TOTAL SHEETS 274 SHEET NO. 239 CONTRACT NO. 63432 ILLINOIS FED. AID PROJECT
PLOT SCALE = 22.0000" / IN.	CHECKED - JB	REVISED -	REVISED -	
PLOT DATE = 3/11/2018	DATE -	REVISED -	REVISED -	



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



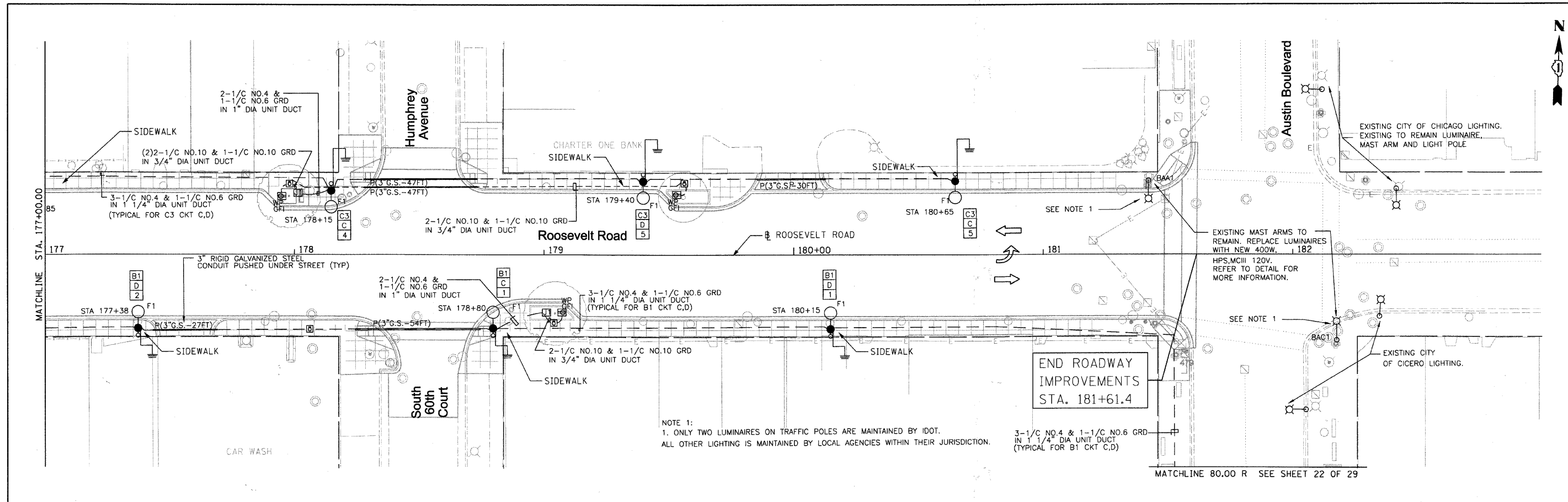
**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**  
 SCALE: 1" = 20' SHEET NO. 20 OF 29 SHEETS STA. 171+00.00 TO STA. 177+00.00

FILE NAME = DIRTE38-shr-light20.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
	PLOT SCALE = 20.0000' / IN.	DRAWN - PY	REVISED -
	PLOT DATE = 3/11/2018	CHECKED - JB	REVISED -
		DATE -	REVISED -

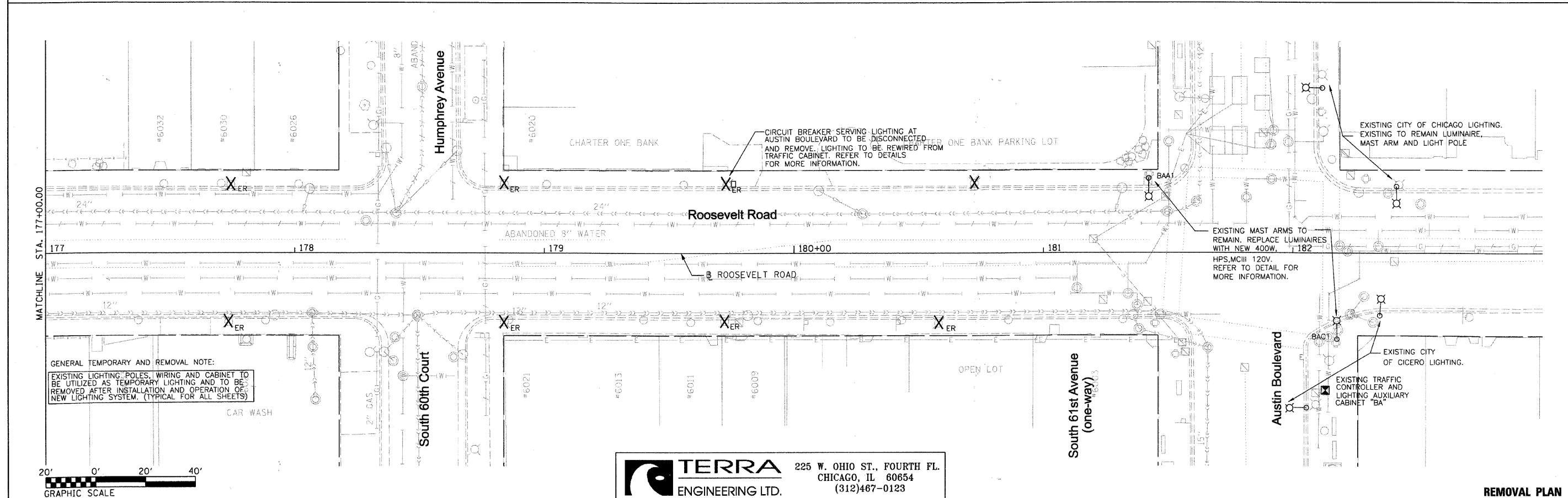
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	240
				CONTRACT NO. 63432
ILLINOIS FED. AID PROJECT				



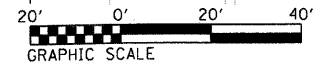
NOTE 1:  
 1. ONLY TWO LUMINAIRES ON TRAFFIC POLES ARE MAINTAINED BY IDOT.  
 ALL OTHER LIGHTING IS MAINTAINED BY LOCAL AGENCIES WITHIN THEIR JURISDICTION.

END ROADWAY  
 IMPROVEMENTS  
 STA. 181+61.4

MATCHLINE 80.00 R SEE SHEET 22 OF 29



GENERAL TEMPORARY AND REMOVAL NOTE:  
 EXISTING LIGHTING, POLES, WIRING AND CABINET TO BE UTILIZED AS TEMPORARY LIGHTING AND TO BE REMOVED AFTER INSTALLATION AND OPERATION OF NEW LIGHTING SYSTEM. (TYPICAL FOR ALL SHEETS)



**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

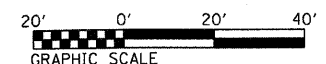
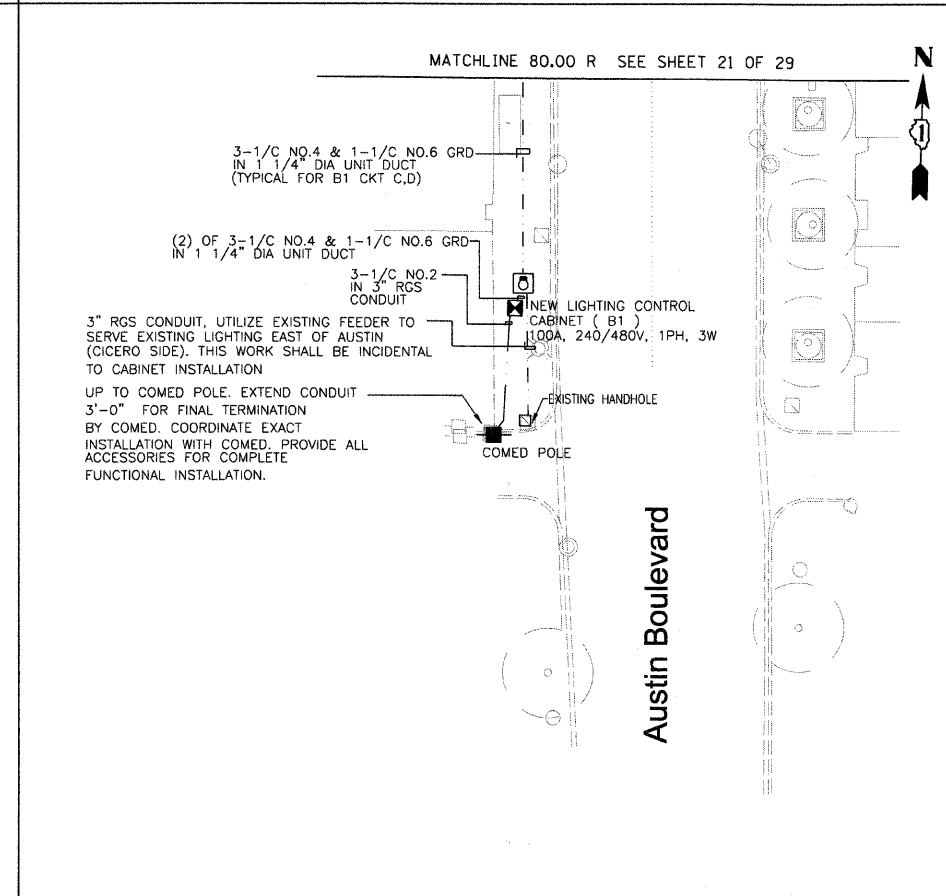
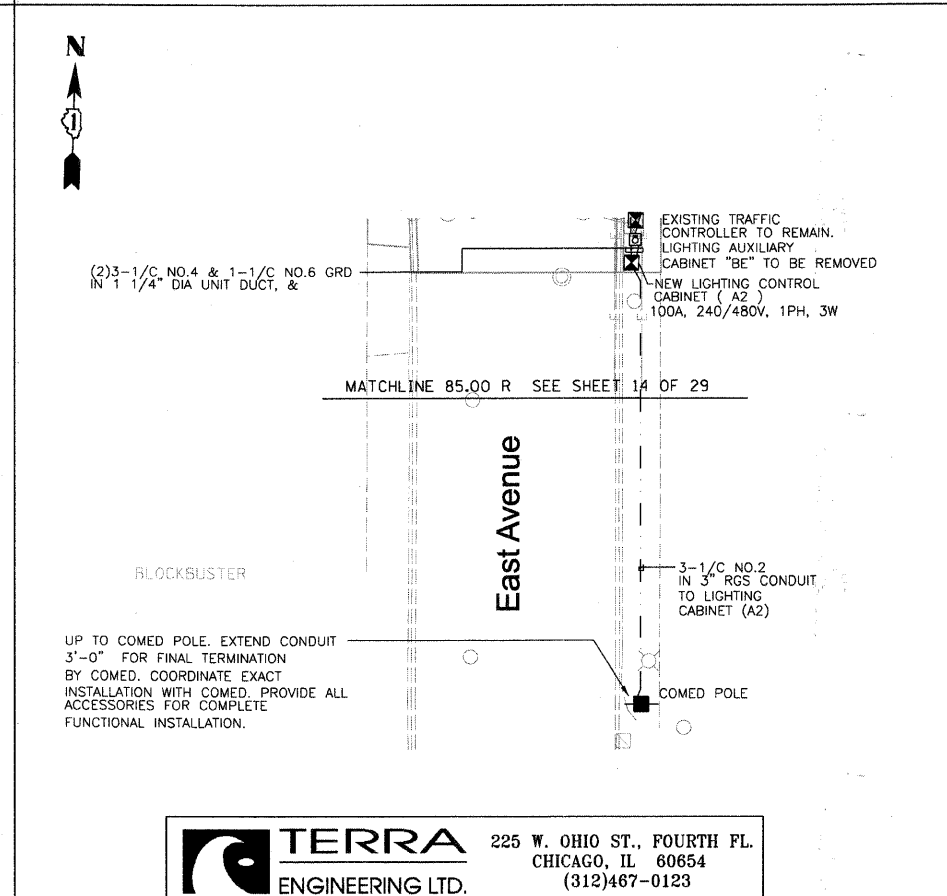
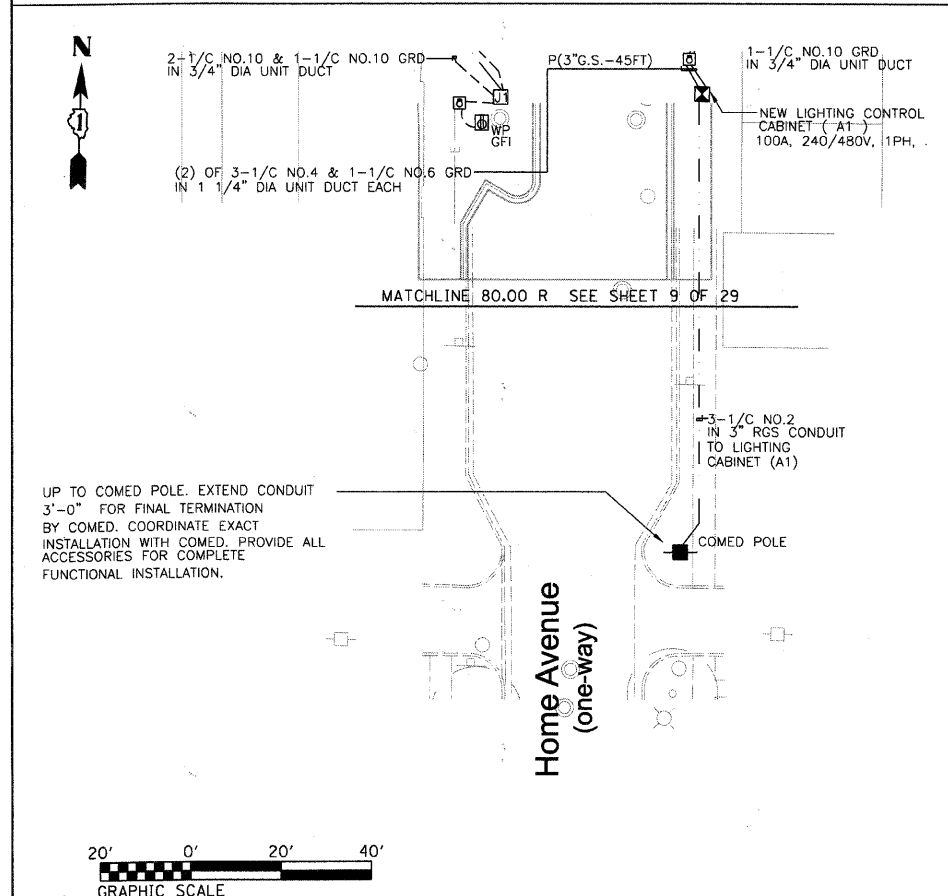
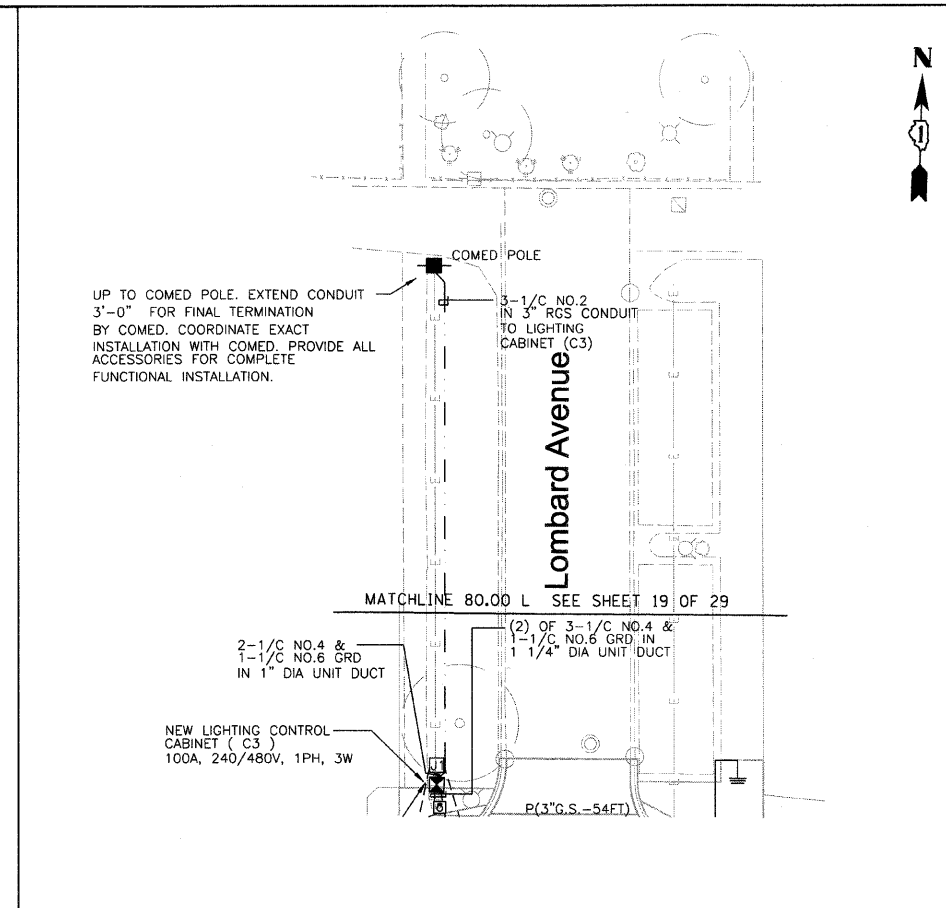
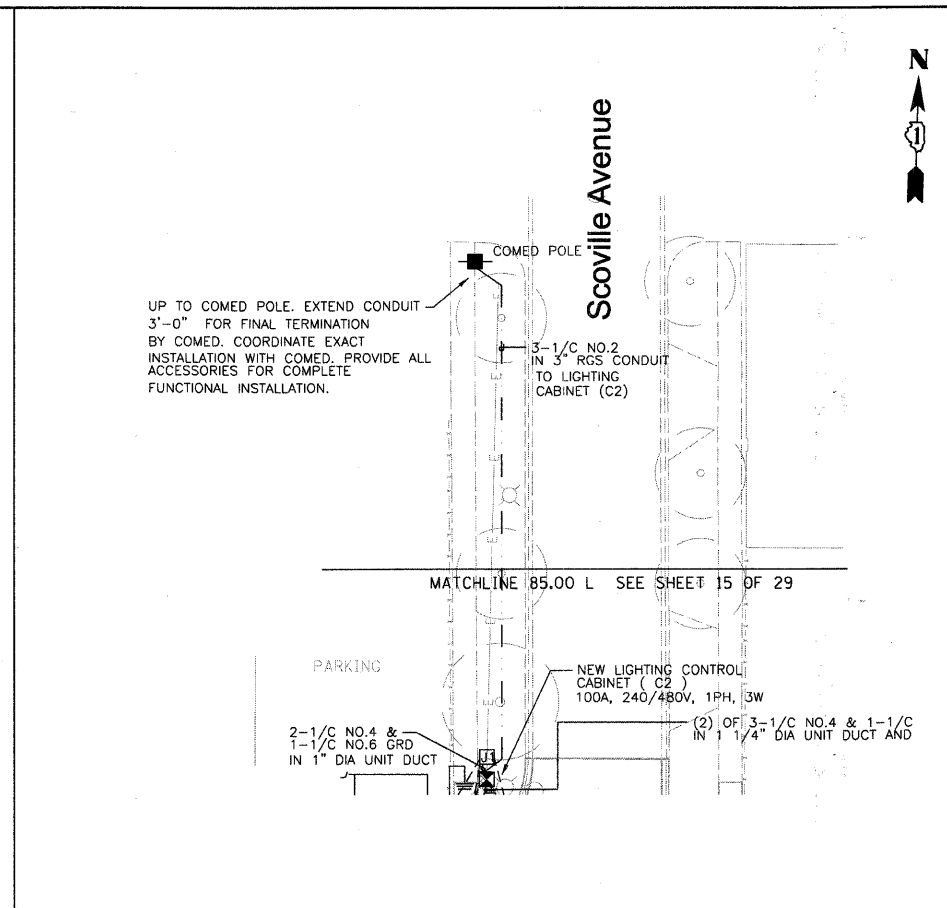
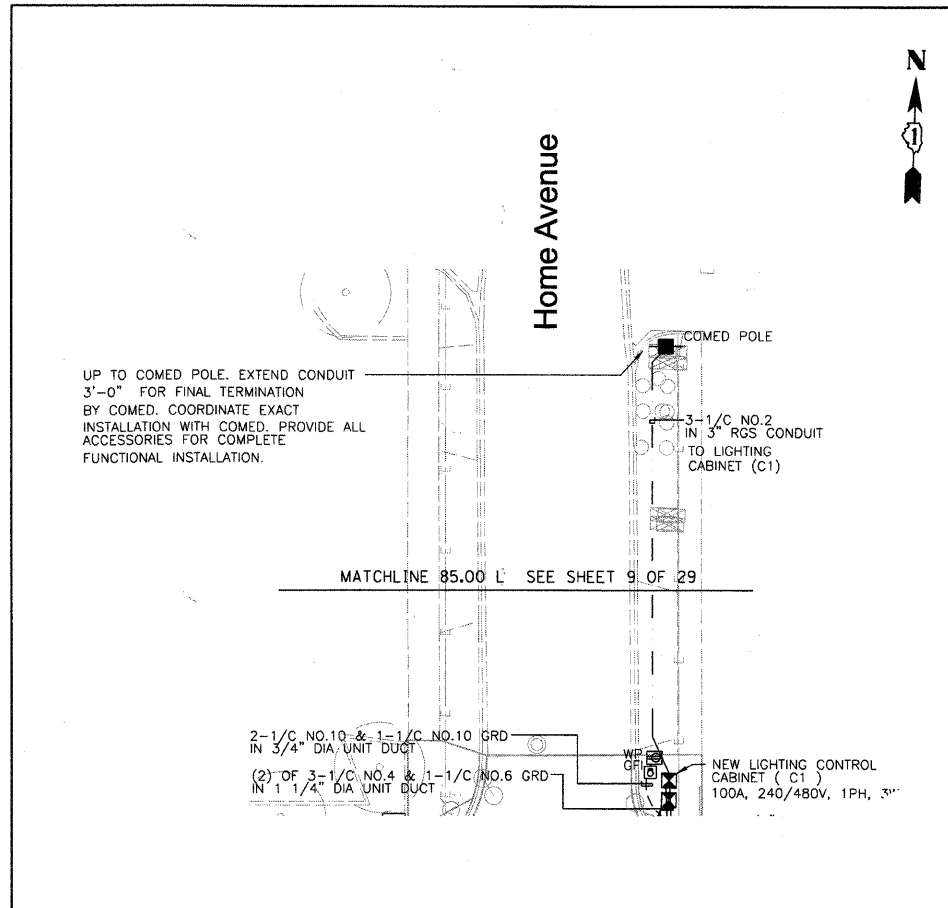
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**LIGHTING INSTALLATION AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 21 OF 29 SHEETS STA. 177+00.00 TO STA. 181+61.38

**REMOVAL PLAN**

FILE NAME = DIRTE38-sh1-light21.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -	F.A.P. R.T.E. 347 SECTION 09-00248-00-RS COUNTY COOK TOTAL SHEETS 274 SHEET NO. 241 CONTRACT NO. 63432 ILLINOIS FED. AID PROJECT
	PLOT SCALE = 20.0000' / IN.	CHECKED - JB	REVISED -	
	PLOT DATE = 3/11/2010	DATE -	REVISED -	



**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

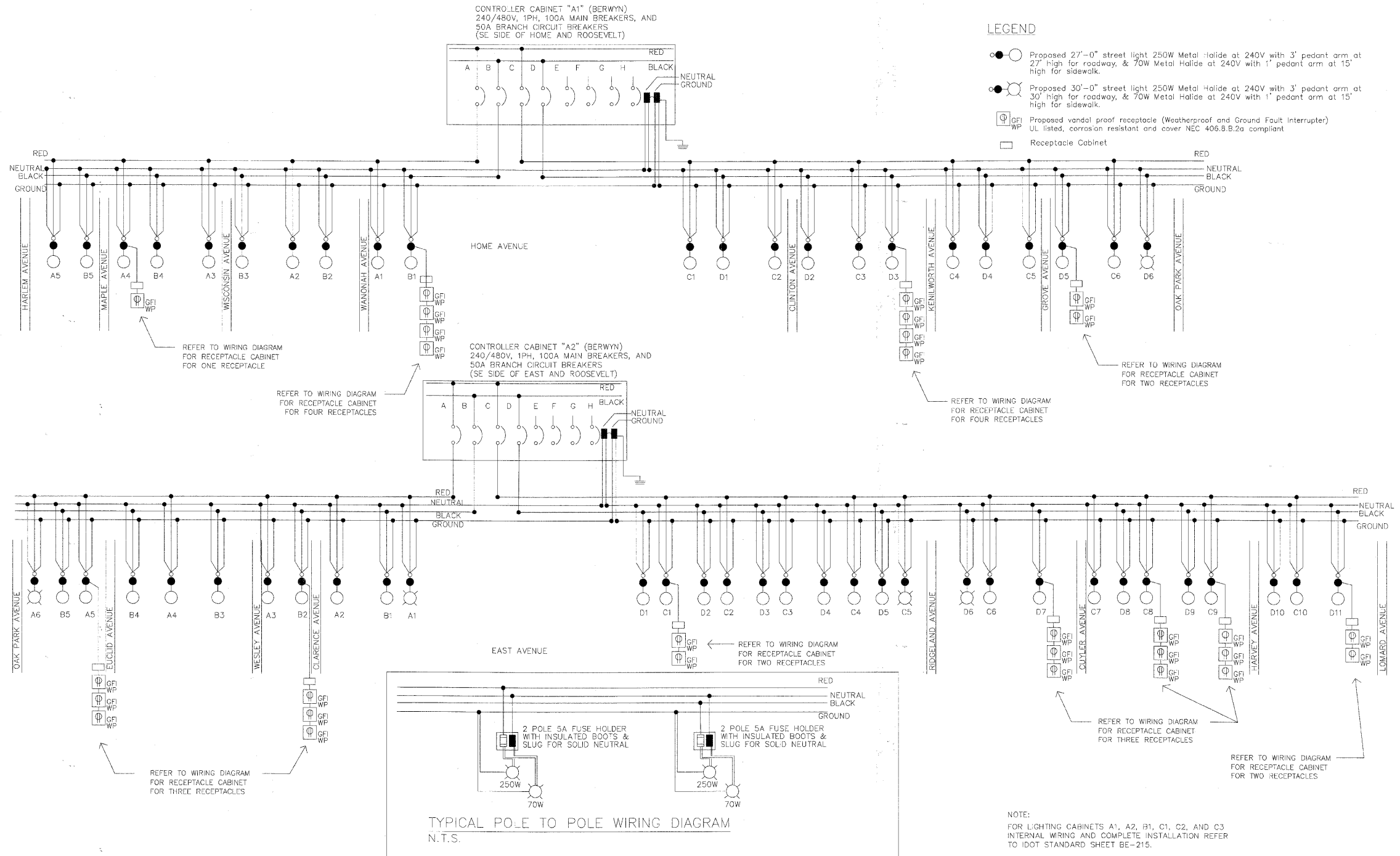
**LIGHTING INSTALLATION  
 AND REMOVAL PLAN**

FILE NAME = DIRTE38-sht-1lgh-t22.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20.0000' / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2010	DATE -	REVISED -

SCALE: 1" = 20' SHEET NO. 22 OF 29 SHEETS STA. TO STA.

F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 242
CONTRACT NO. 63432				ILLINOIS FED. AID PROJECT





**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

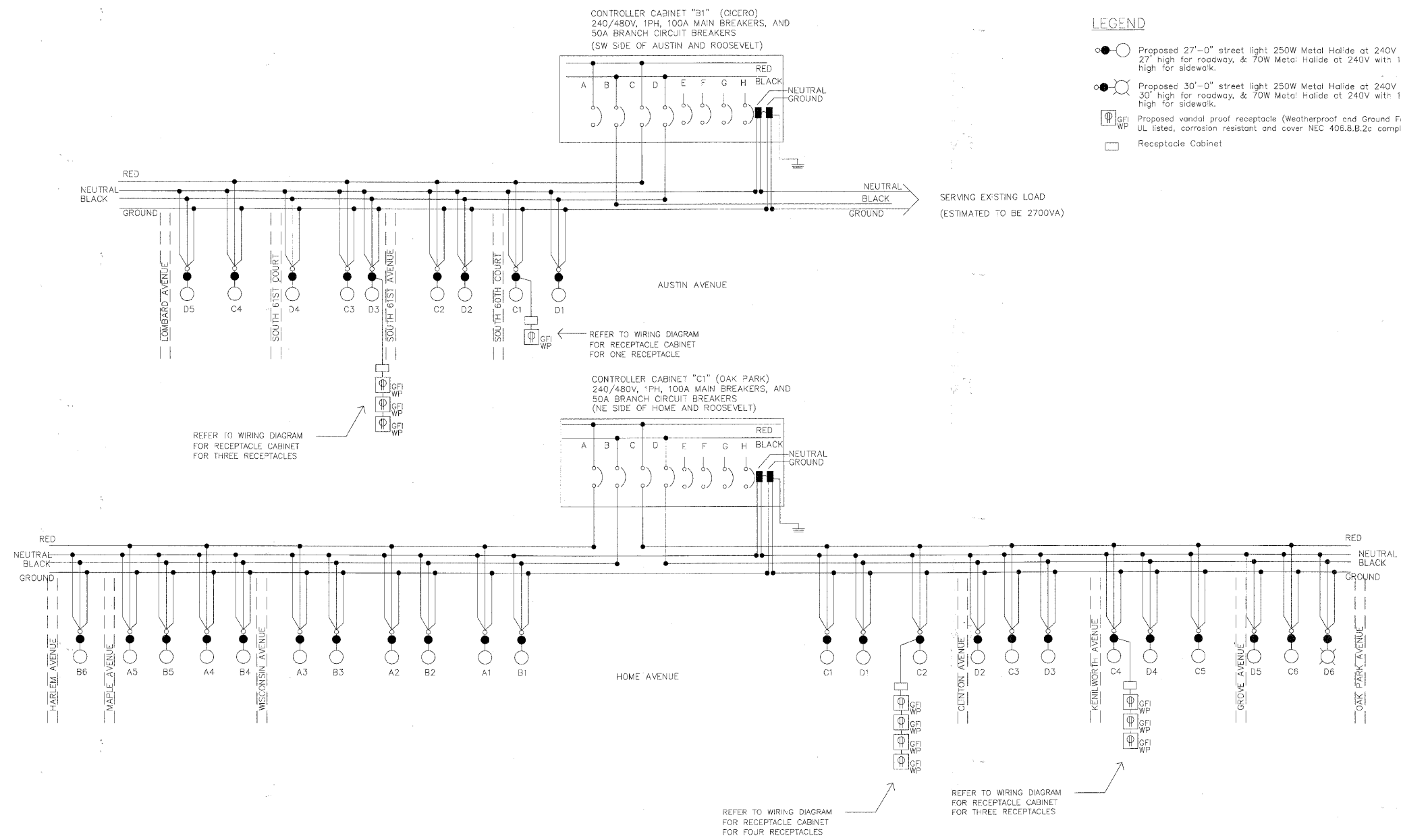
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL CABINET SIGNAL LINE DIAGRAM AND LEGEND**  
**(SHEET 1 OF 3)**

FILE NAME = DIRTE36-shvt-1ght23.dgn	USER NAME = IDCT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
	PLOT SCALE = 20,0000' / IN.	CHECKED - JB	REVISED -
	PLOT DATE = 3/11/2018	DATE	REVISED -

SCALE: 1" = 20' SHEET NO. 23 OF 29 SHEETS STA. TO STA.

F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 243
			CONTRACT NO. 63432	
ILLINOIS FED. AID PROJECT				



**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

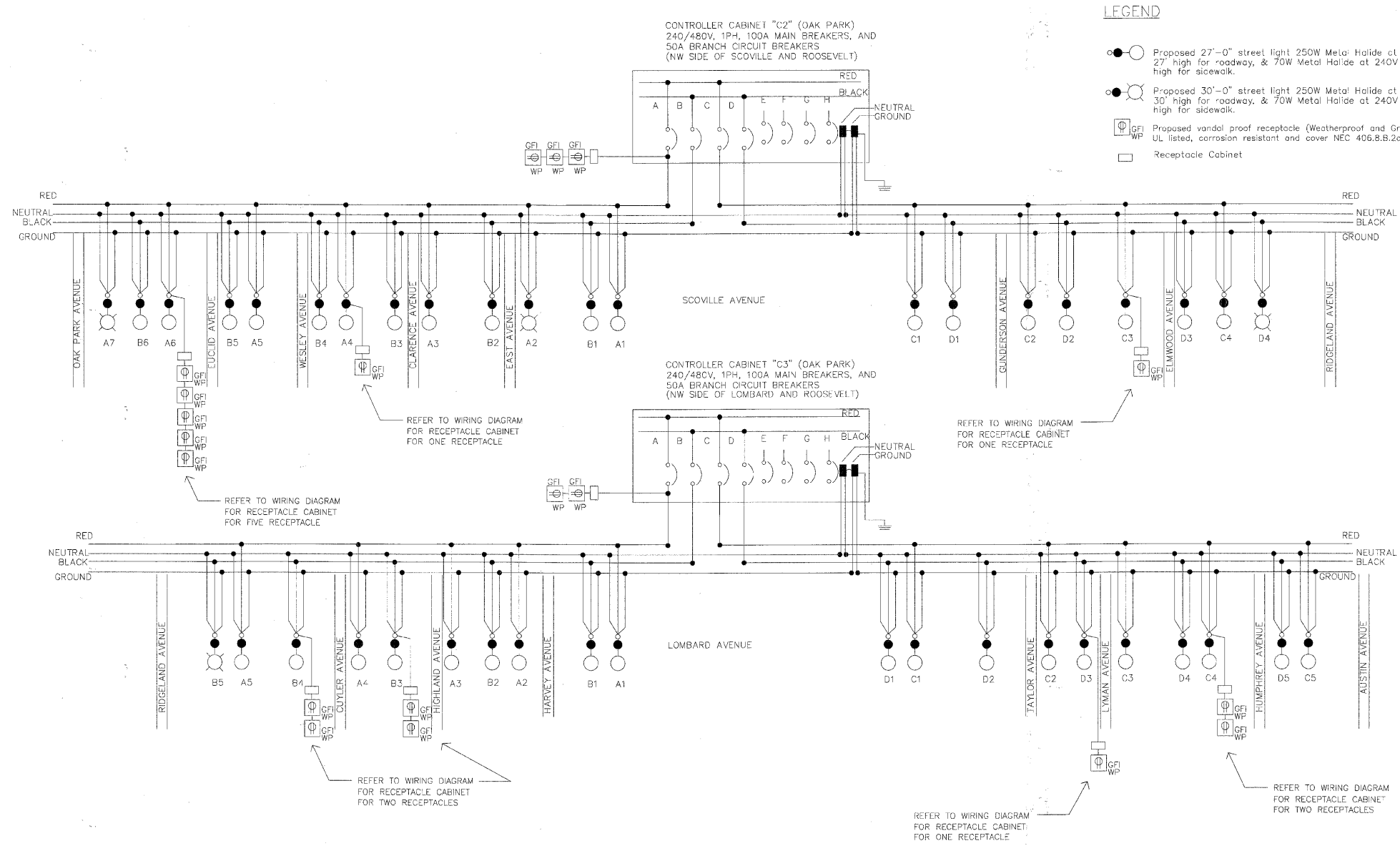
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL CABINET SIGNAL LINE DIAGRAM AND LEGEND (SHEET 2 OF 3)**

FILE NAME = DIRTE38-shv-1sht2.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -
	PLOT SCALE = 20.0000' / IN.		
	PLOT DATE = 3/11/2018		

SCALE: 1" = 20' SHEET NO. 24 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	244
CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT	



**LEGEND**

- Proposed 27'-0" street light 250W Metal Halide at 240V with 3' pedant arm at 27' high for roadway, & 70W Metal Halide at 240V with 1' pedant arm at 15' high for sidewalk.
- Proposed 30'-0" street light 250W Metal Halide at 240V with 3' pedant arm at 30' high for roadway, & 70W Metal Halide at 240V with 1' pedant arm at 15' high for sidewalk.
- Ⓜ Proposed vandal proof receptacle (Weatherproof and Ground Fault Interrupter) UL listed, corrosion resistant and cover NEC 406.8.B.2a compliant
- Receptacle Cabinet

**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

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

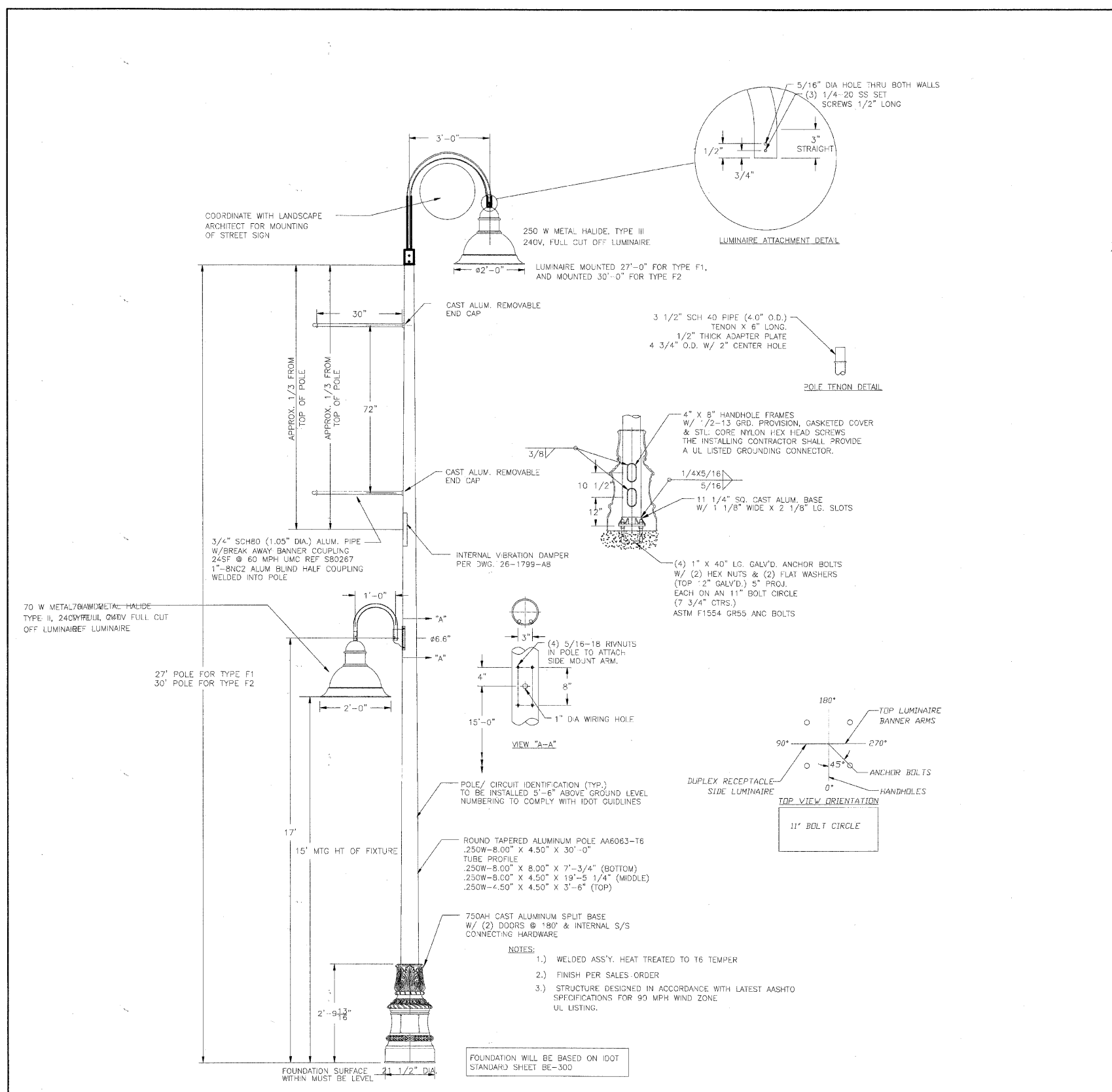
**ELECTRICAL CABINET SIGNAL LINE DIAGRAM AND LEGEND**  
**(SHEET 3 OF 3)**

SCALE: 1" = 20' SHEET NO. 25 OF 29 SHEETS STA. TO STA.

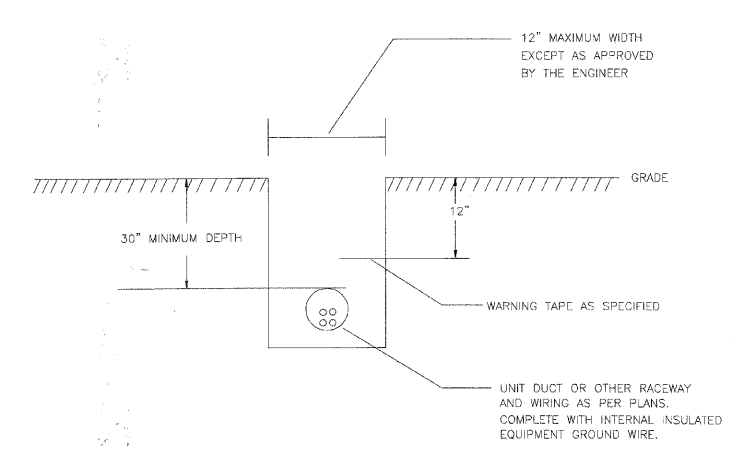
FILE NAME = DIRTE38-ah-t-1.sht25.dgn	USER NAME = IDDT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -

PLOT SCALE = 20.0000' / 1" =	
PLOT DATE = 3/11/2010	

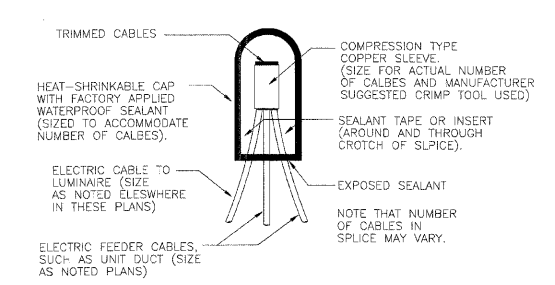
F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 245
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				



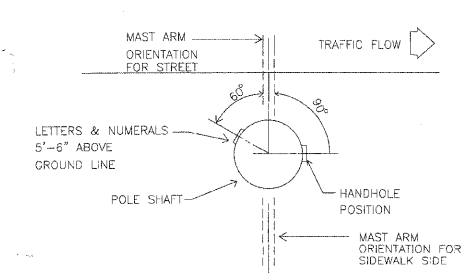
1 LIGHTING POLE MOUNTING DETAIL  
N.T.S.



2 TYPICAL WIRING IN TRENCH DETAIL  
N.T.S.



3 SPLICING ELECTRIC CABLES DETAIL  
N.T.S.



4 HANDHOLE AND POLE TAG ORIENTATION  
N.T.S.

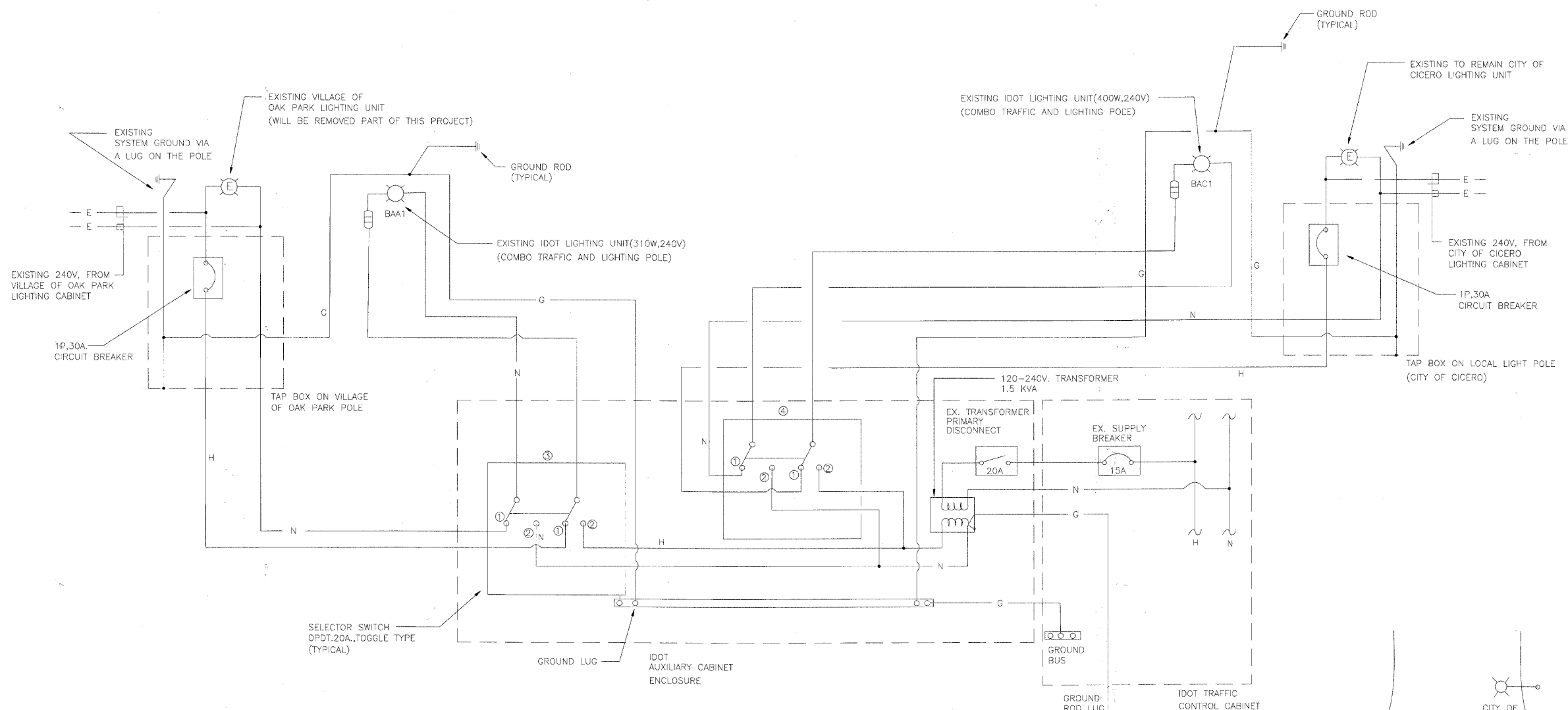
**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

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

FILE NAME = DIRTE38-stt-11ght26.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -
PLOT SCALE = 20.0000" / IN.			
PLOT DATE = 3/11/2010			

<b>LIGHTING POLE, WIRING IN TRENCH, SPLICING ELECTRICAL CABLES AND HANDHOLE DETAILS</b>		F.A.P. RTE. 347	SECTION 09-00248-00-RS	E-26	TOTAL SHEETS 274	SHEET NO. 246
SCALE: 1" = 20'	SHEET NO. 26 OF 29 SHEETS	STA.	TO STA.	CONTRACT NO. 63432		

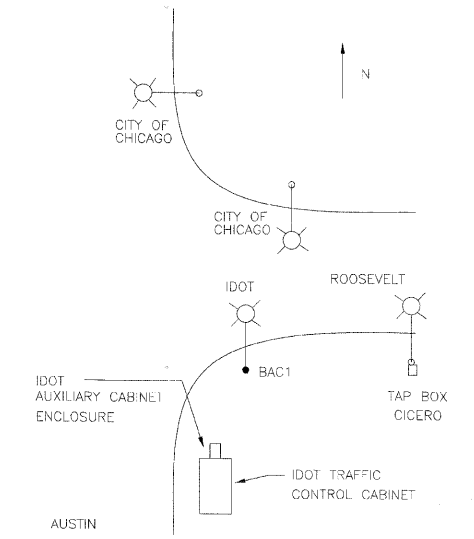
ILLINOIS FED. AID PROJECT	
---------------------------	--



- ① NORMAL: ON FROM VILLAGE OF OAK PARK OR CITY OF CICERO POWER SOURCE
- ② BYPASS: ON FROM IDOT TRAFFIC CABINET
- ③ SELECTOR SWITCH FOR DOT COMBO POLE BAA1
- ④ SELECTOR SWITCH FOR IDOT COMBO POLE BAC1

**AUSTIN INTERSECTION CABINET & WIRING DIAGRAM-EXISTING**  
N.T.S.

**INTERSECTION LAYOUT**  
N.T.S.



**TERRA ENGINEERING LTD.** 225 W. OHIO ST., FOURTH FL.  
CHICAGO, IL 60654  
(312)467-0123

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**AUSTIN CABINET WIRING DIAGRAM - EXISTING**

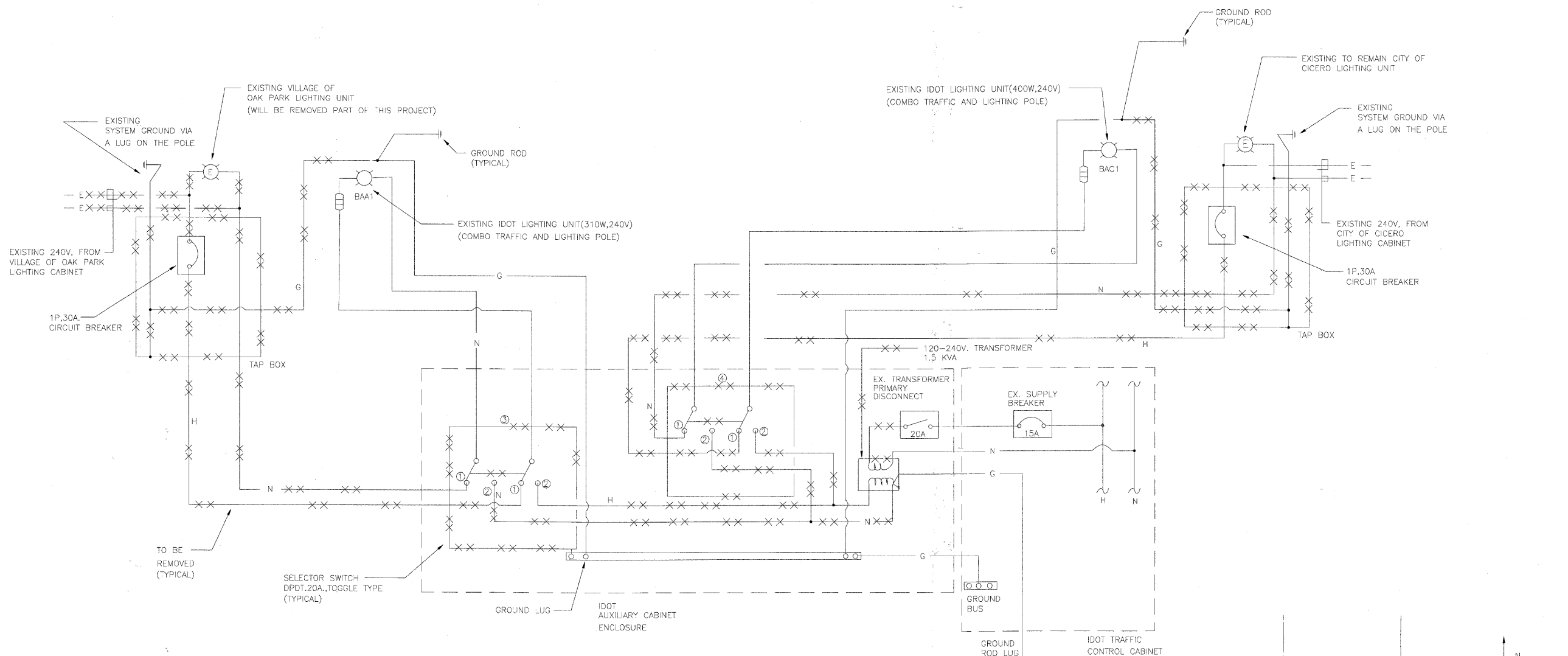
FILE NAME = DIRTE38-shv-light27.dgn
USER NAME = IDOT
PLOT SCALE = 20,0000' / IN.
PLOT DATE = 3/11/2018

DESIGNED - EE	REVISD -
DRAWN - PY	REVISD -
CHECKED - JB	REVISD -
DATE -	REVISD -

REVISD -	REVISD -
REVISD -	REVISD -
REVISD -	REVISD -
REVISD -	REVISD -

SCALE: 1" = 20'	SHEET NO. 27 OF 29 SHEETS	STA. TO STA.
-----------------	---------------------------	--------------

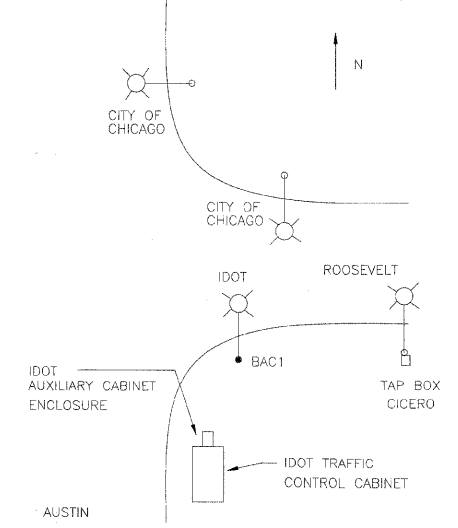
F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 247
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				



- ① NORMAL: ON FROM VILLAGE OF OAK PARK CABINET
- ② BYPASS: ON FROM IDOT TRAFFIC CABINET
- ③ SELECTOR SWITCH FOR IDOT COMBO POLE BAA1
- ④ SELECTOR SWITCH FOR IDOT COMBO POLE BAC1

AUSTIN INTERSECTION CABINET & WIRING DIAGRAM-REMOVAL  
N.T.S.

INTERSECTION LAYOUT  
N.T.S.



**TERRA** ENGINEERING LTD. 225 W. OHIO ST., FOURTH FL. CHICAGO, IL 60654 (312)467-0123

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

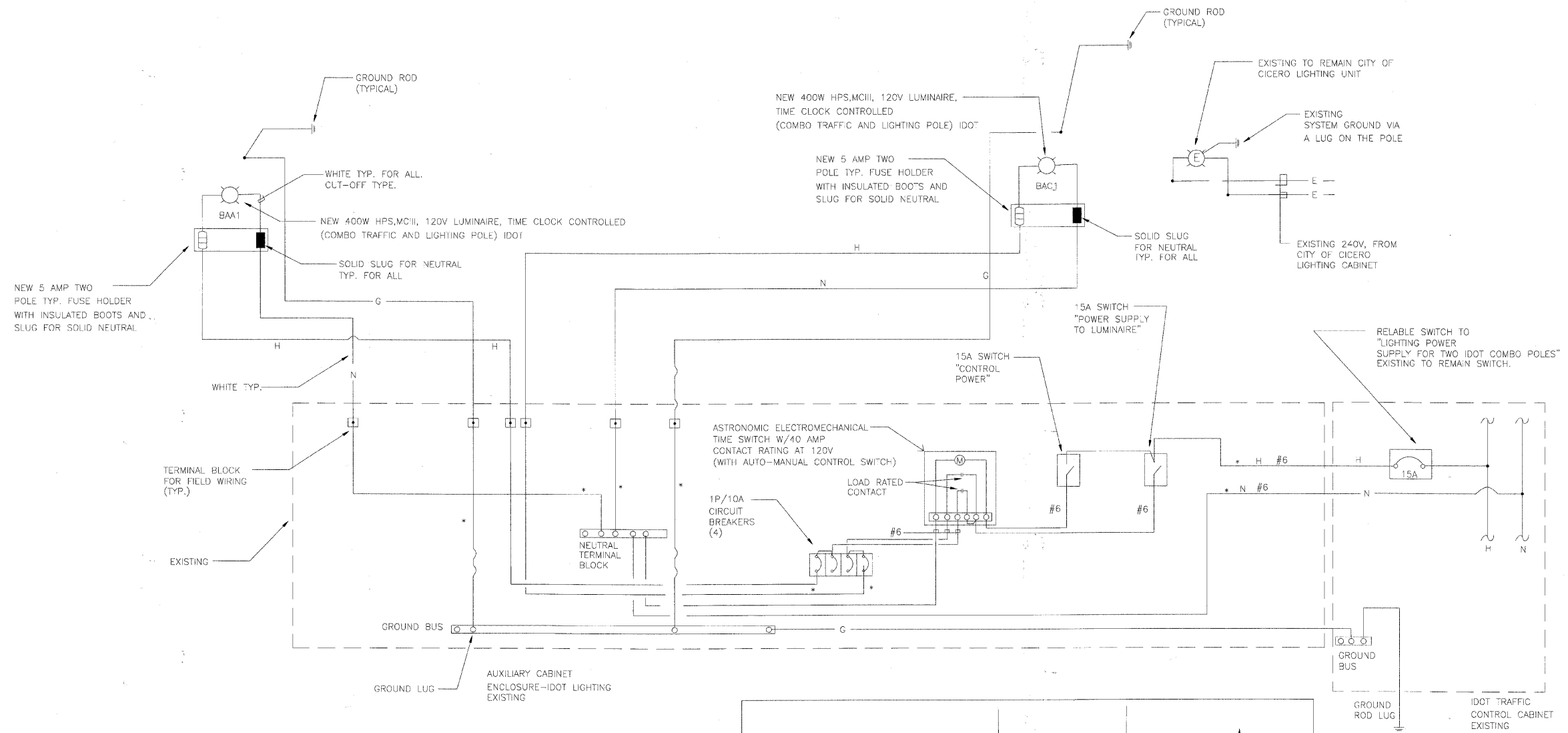
AUSTIN CABINET WIRING DIAGRAM - REMOVAL

FILE NAME = DIRTE38-shr-light28.dgn	USER NAME = IDOT	DESIGNED - EE	REVISED -
		DRAWN - PY	REVISED -
		CHECKED - JB	REVISED -
		DATE -	REVISED -

SCALE: 1" = 20' SHEET NO. 28 OF 29 SHEETS STA. TO STA.

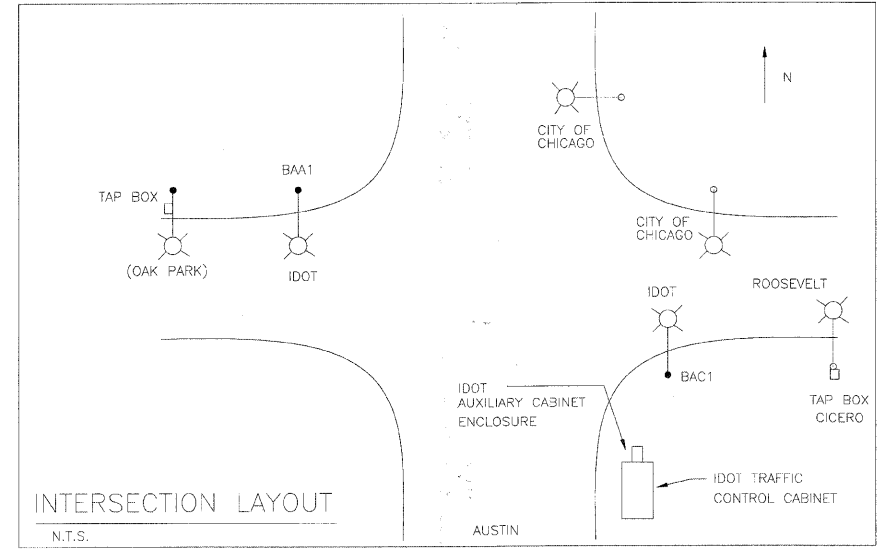
F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 248
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				





NOTES  
 \* UTILIZE ALL EXISTING WIRING.

**AUSTIN INTERSECTION CABINET & WIRING DIAGRAM-PROPOSED**  
 N.T.S.

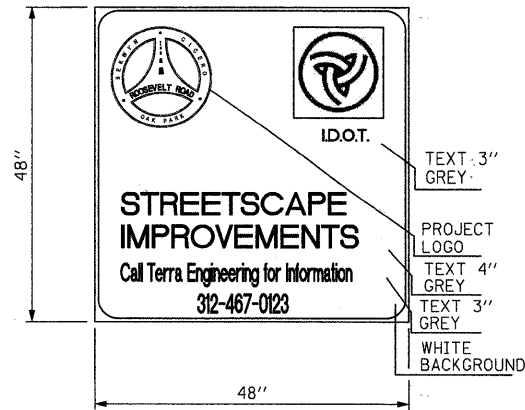


**TERRA ENGINEERING LTD.**  
 225 W. OHIO ST., FOURTH FL.  
 CHICAGO, IL 60654  
 (312)467-0123

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

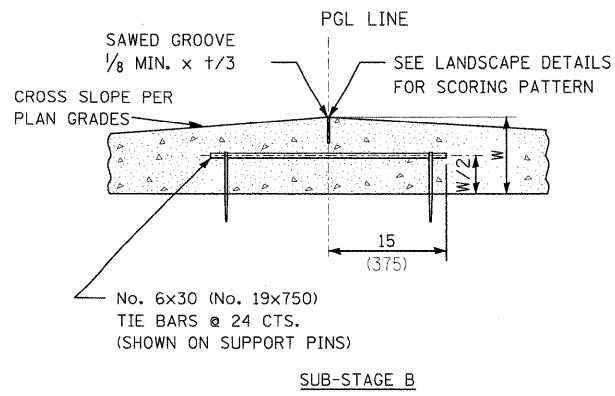
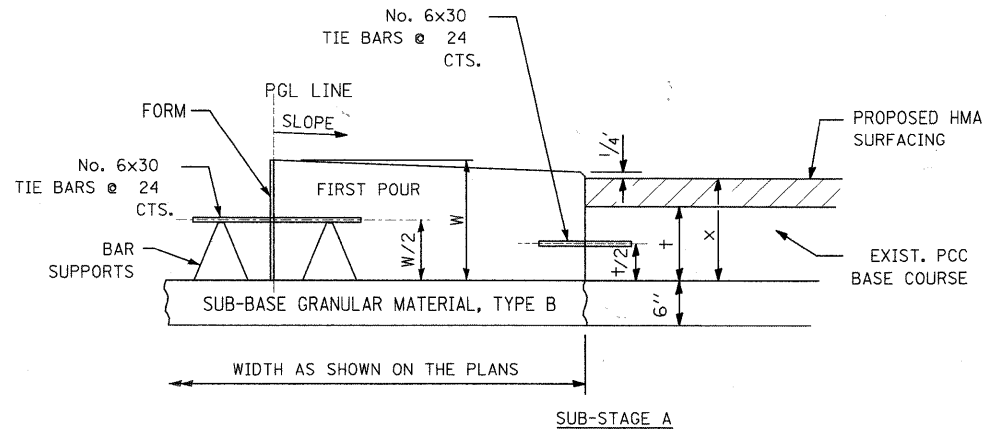
**AUSTIN WIRING CABINET DIAGRAM - PROPOSED**

FILE NAME = DIRTE38-shc-light29.dgn	USER NAME = IDOT	DESIGNED - EE	REVISD -	SCALE: 1" = 20'    SHEET NO. 29 OF 29 SHEETS    STA.    TO STA.	F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 249	
	PLOT SCALE = 20,0000' / IN.	DRAWN - PY	REVISD -		CONTRACT NO. 63432			ILLINOIS FED. AID PROJECT		
	PLOT DATE = 3/11/2010	CHECKED - JB	REVISD -							
		DATE -	REVISD -							



NOTE:  
MOUNT ALUMINUM SIGN ON STANDARD CONSTRUCTION SIGN FRAME (PER IDOT STANDARD) ACCORDING TO THE LOCATION SPECIFIED BY THE LOCATION PLAN.

① PROJECT SIGN  
SCALE: N.T.S.

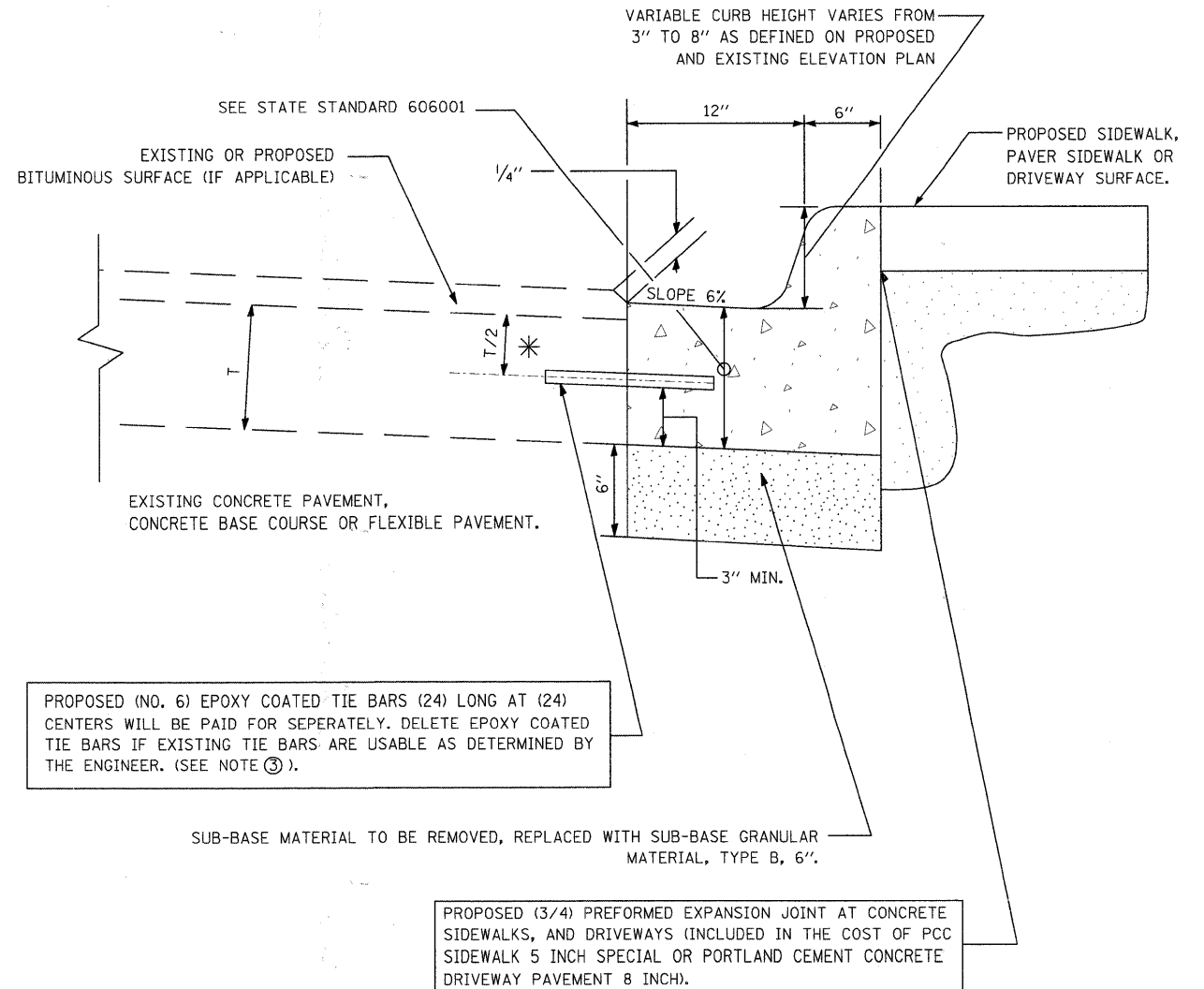


NOTE:  
THE DECORATIVE MEDIAN PAVING SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR PCC PAVEMENT SPECIAL.

② DECORATIVE MEDIAN PAVING  
SCALE: N.T.S.

GENERAL NOTES

X = PCC BASE COURSE PLUS HMA THICKNESS  
+ = PCC BASE COURSE THICKNESS  
W = PAVEMENT THICKNESS



PROPOSED (NO. 6) EPOXY COATED TIE BARS (24) LONG AT (24) CENTERS WILL BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

PROPOSED (3/4) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, AND DRIVEWAYS (INCLUDED IN THE COST OF PCC SIDEWALK 5 INCH SPECIAL OR PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT 8 INCH).

SUB-BASE MATERIAL TO BE REMOVED, REPLACED WITH SUB-BASE GRANULAR MATERIAL, TYPE B, 6\"/>

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR "COMBINATION CONCRETE CURB AND GUTTER (SPECIAL).

\* 3 INCHES MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

NOTES:

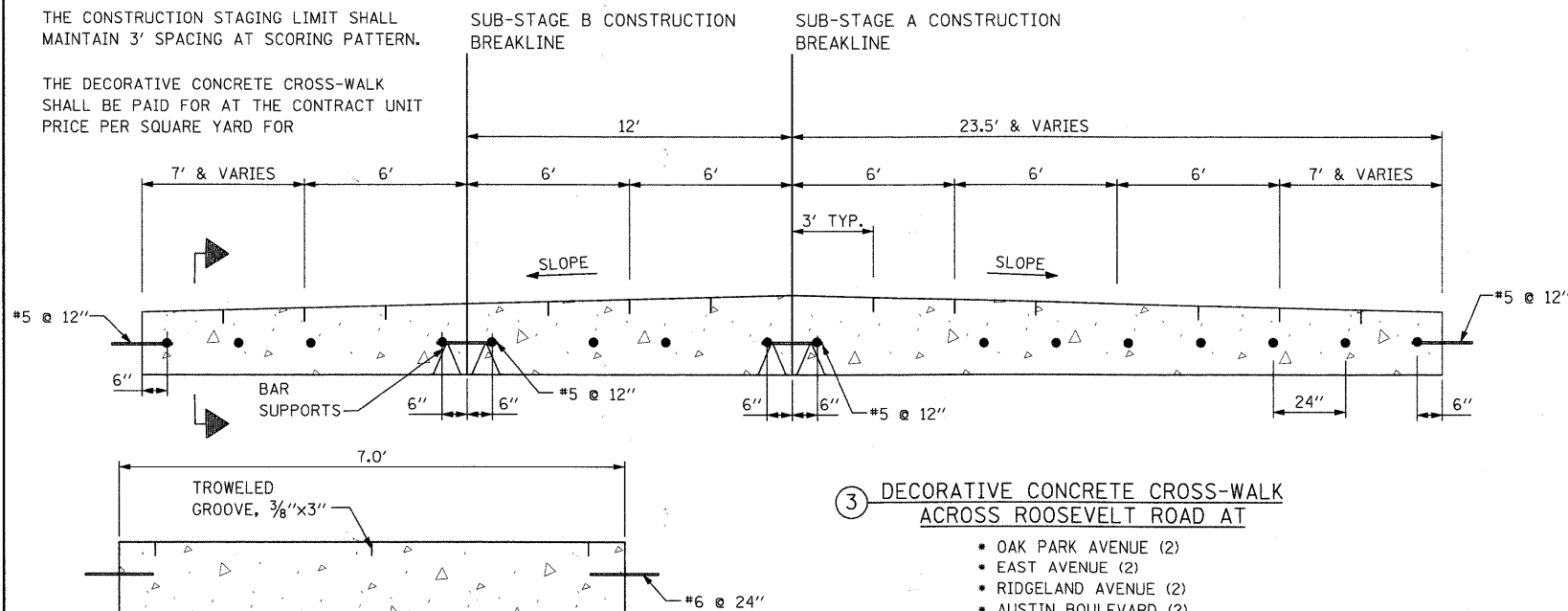
- ① COMBINATION CONCRETE CURB AND GUTTER (SPECIAL) SHALL TRANSITION TO MATCH THE SHAPE OF EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ② FOR COMBINATION CONCRETE CURB AND GUTTER (SPECIAL) ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ③ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF COMBINATION CURB AND GUTTER REMOVAL.
- ④ A MINIMUM CLEARANCE OF 2 INCHES SHALL BE MAINTAINED BETWEEN THE END OF THE TIE BAR AND BACK OF THE CURB.
- ⑤ CONSTRUCTION OF COMBINATION CURB AND GUTTER (SPECIAL) SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 606 OF THE STANDARD SPECIFICATIONS.
- ⑥ THE LOCATIONS OF COMBINATION CONCRETE CURB AND GUTTER (SPECIAL) SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.
- ⑦ DEPRESSED CURBS FOR DRIVEWAYS AND ALLEYS SHALL BE PER IDOT STANDARD 606001-04 AS DETAILED FOR B-6:12 CURB AND GUTTER
- ⑧ DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED SHALL BE PER IDOT STANDARD 606001-04 AS DETAILED FOR B-6:12 CURB AND GUTTER.

④ COMBINATION CONCRETE CURB AND GUTTER (SPECIAL)  
SCALE: N.T.S.

NOTES:

THE CONSTRUCTION STAGING LIMIT SHALL MAINTAIN 3' SPACING AT SCORING PATTERN.

THE DECORATIVE CONCRETE CROSS-WALK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR



③ DECORATIVE CONCRETE CROSS-WALK ACROSS ROOSEVELT ROAD AT

- OAK PARK AVENUE (2)
- EAST AVENUE (2)
- RIDGELAND AVENUE (2)
- AUSTIN BOULEVARD (2)

FILE NAME = DJRTE38-sht-detail1.dgn

USER NAME = IDOT  
PLOT SCALE = 10.00' / IN.  
PLOT DATE = 3/23/2010

DESIGNED - BB  
DRAWN - DA  
CHECKED - JB  
DATE

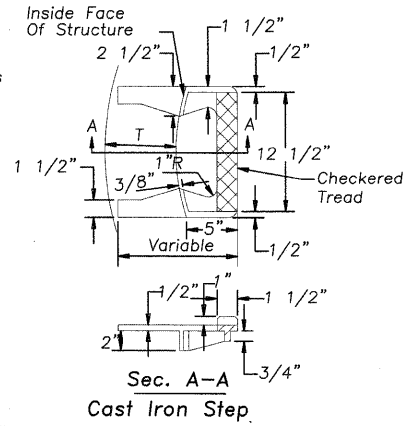
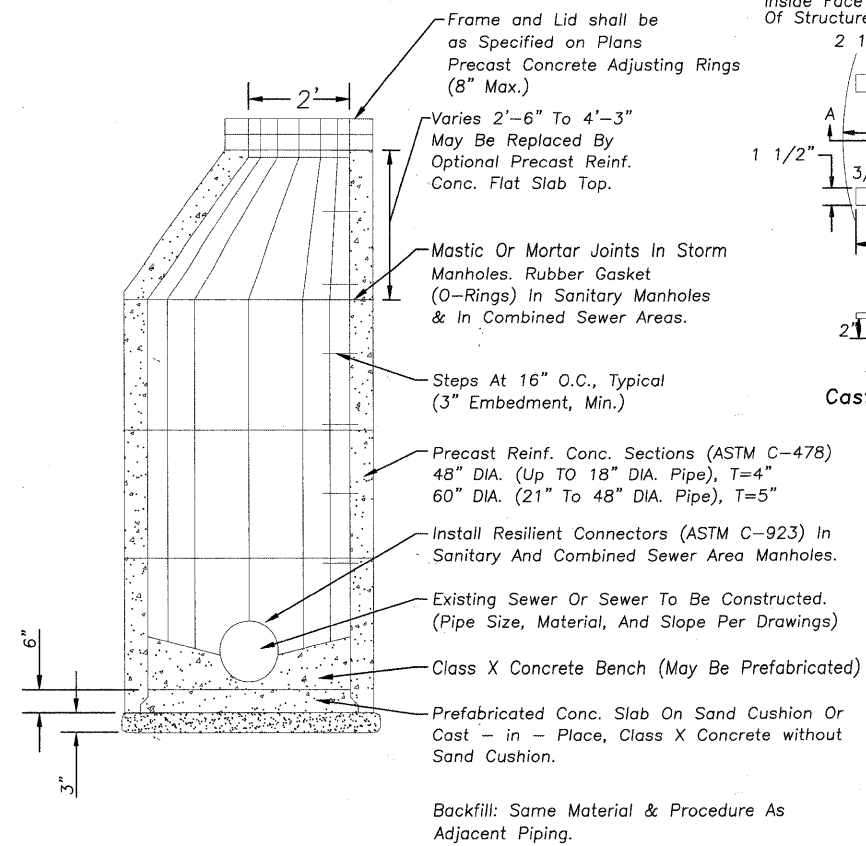
REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT SPECIFIC DETAILS

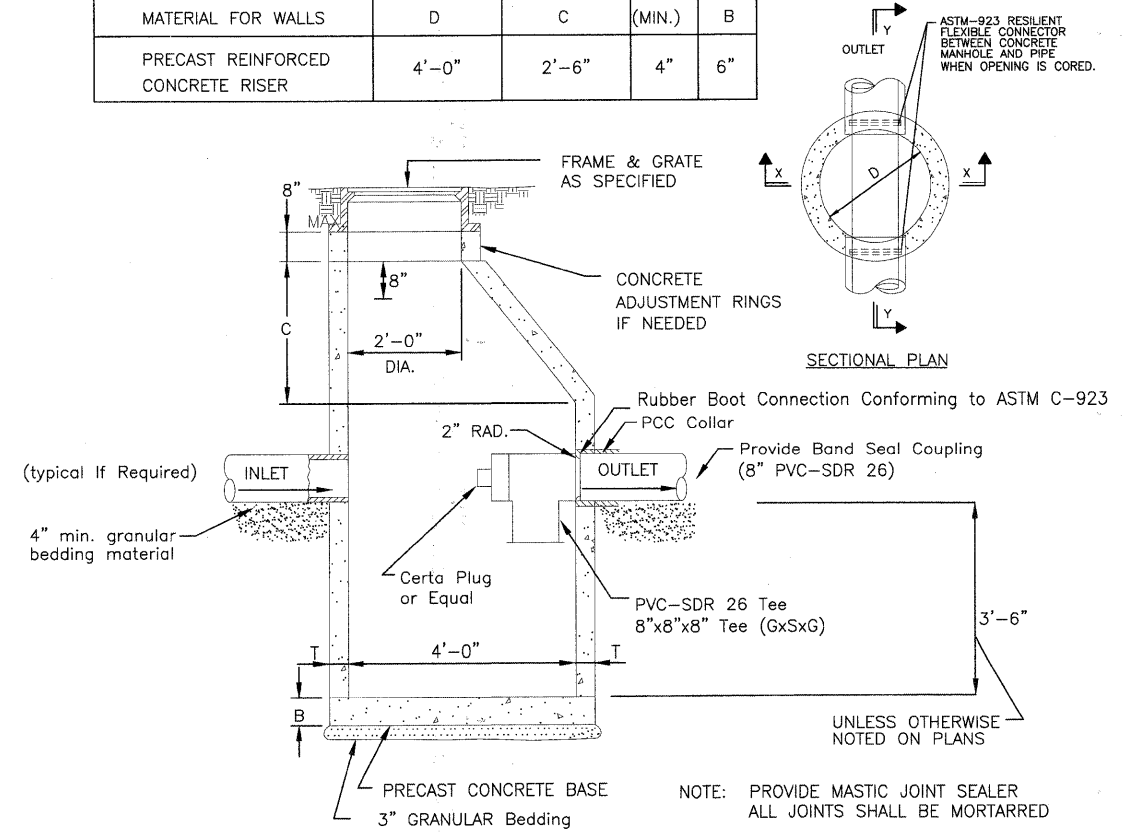
SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	250
CONTRACT NO. 63432				
ILLINOIS FED. AID PROJECT				

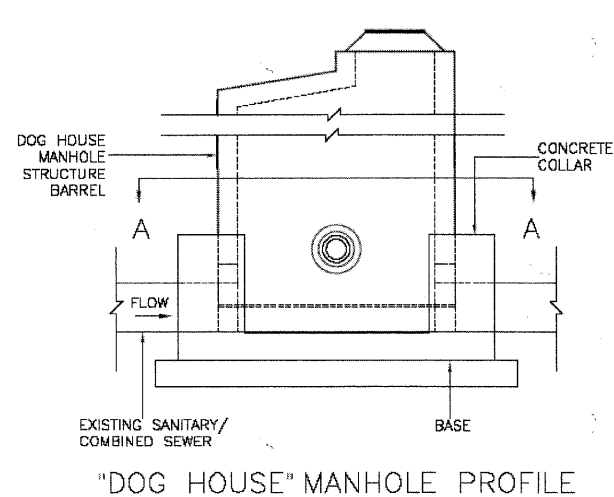


① TYPE A MANHOLE - 48"-60" DIA.  
FOR SANITARY AND COMBINED SEWER

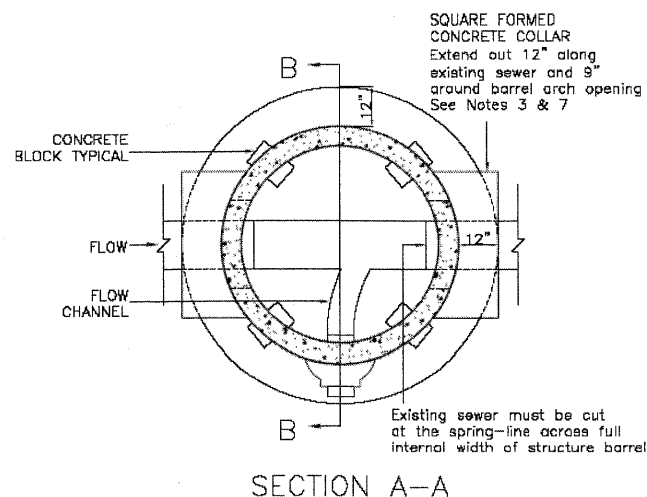
MATERIAL FOR WALLS	D	C	T (MIN.)	B
PRECAST REINFORCED CONCRETE RISER	4'-0"	2'-6"	4"	6"



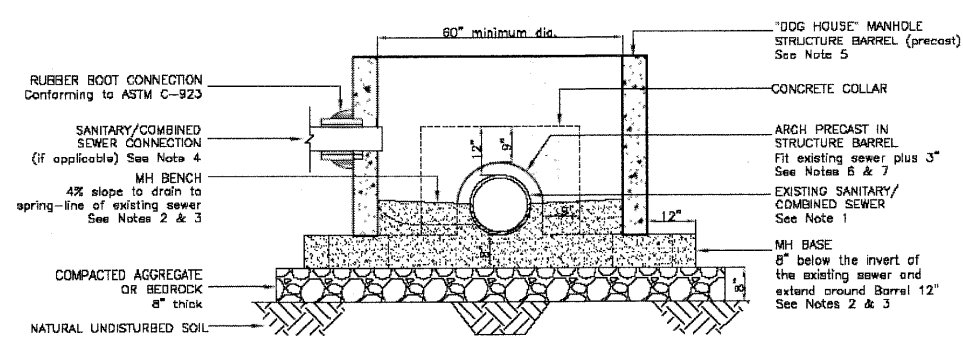
② STANDARD CATCH BASIN, TYPE A, (WITH FULL TRAP)  
N.T.S.



"DOG HOUSE" MANHOLE PROFILE



SECTION A-A



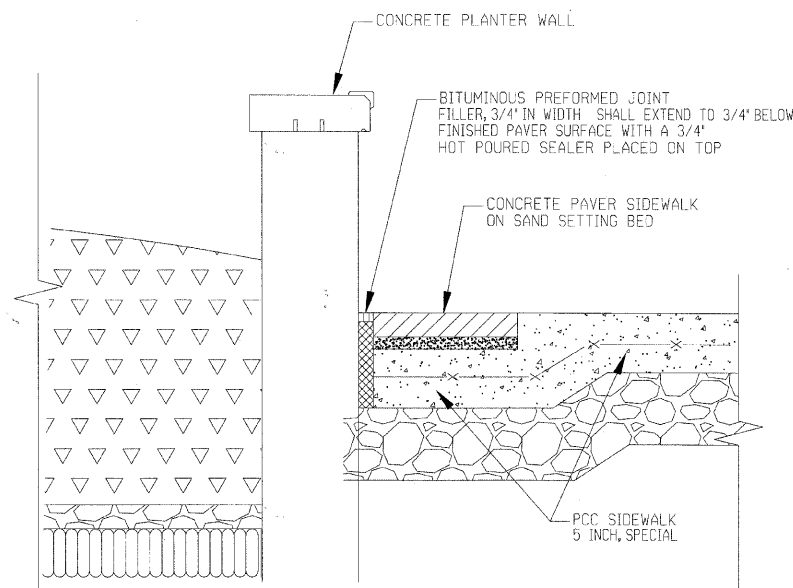
SECTION B-B

Notes:

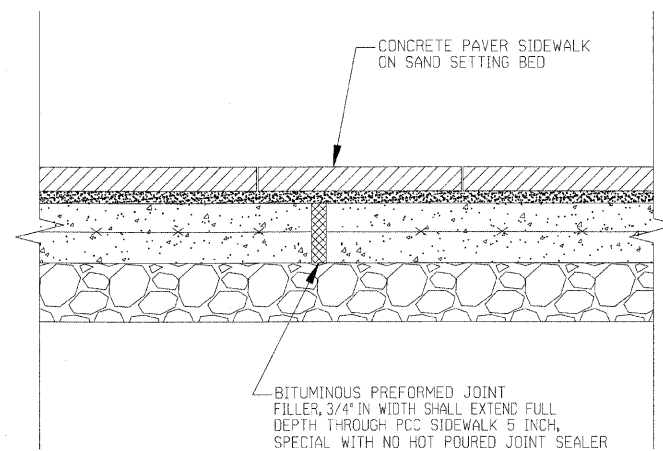
- Existing Sanitary or Combined Sewer must be 15" diameter or larger for "dog house" manhole use.
- Integral pour for base and bench. (No precast base)
- All poured-in-place concrete must be 4000 psi non-shrink mix.
- External drop connection must be provided if invert of connecting sewer is 24" or more above the invert of outlet. (See separate MWRD Standard Drop detail.)
- Manhole diameter minimum 60" - increases based on the existing sewer diameter.
- Concrete bonding agent must be applied to all interfaces of precast concrete surfaces with poured-in-place concrete.
- A curved internal arch form must be used during collar concrete fill. No brick, mortar, or debris is to be used in place of consolidated concrete.
- Debris must not be allowed to enter the sewer system at any time during construction.
- All dimensions noted are minimum allowed.
- The structure must not be backfilled for a minimum of 24 hours after construction.

③ "DOG HOUSE" MANHOLE  
ALTERNATIVE FOR NEW MH CONSTRUCTION ON / CONNECTING TO EXISTING LIVE SEWERS

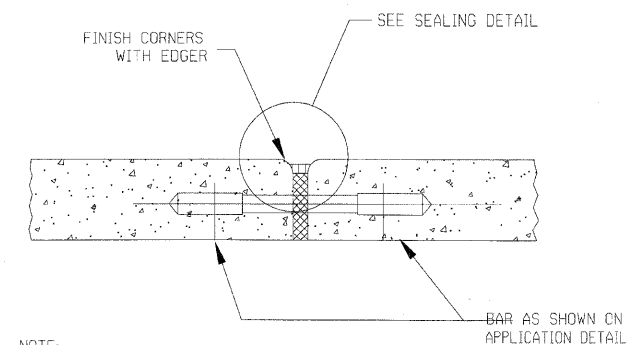




BITUMINOUS PREFORMED JOINT FILLER  
(AT CONCRETE PLANTER WALL AND PLANTER CURB)

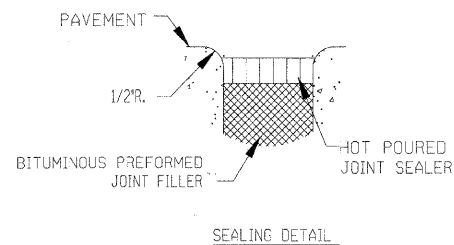


BITUMINOUS PREFORMED JOINT FILLER  
(FOR PCC SIDEWALK 5 INCH, SPECIAL)  
(BELOW CONCRETE PAVER SIDEWALK)



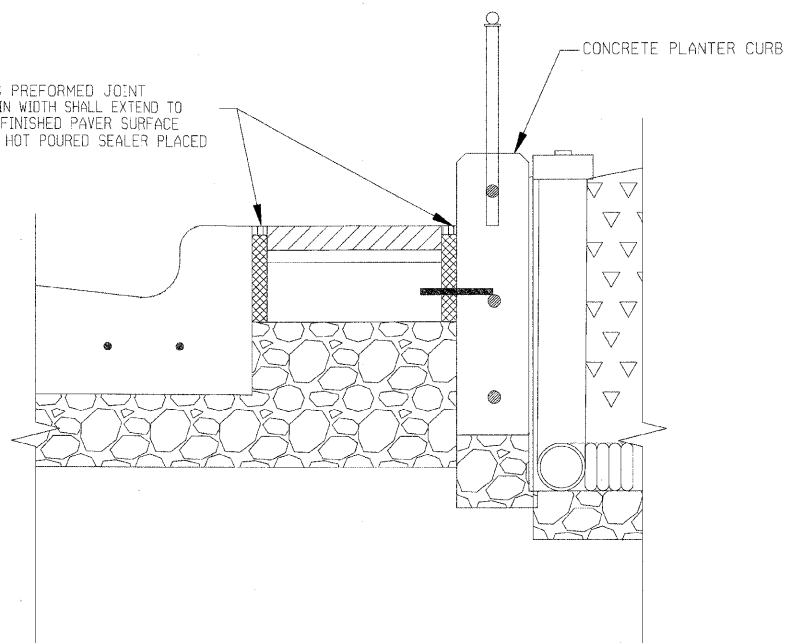
NOTE:  
PROVIDE BITUMINOUS PREFORMED JOINT FILLER EVERY 40 MAX., AND AT LOCATIONS SHOWN ON PLANS.

BITUMINOUS PREFORMED JOINT FILLER  
(FOR PCC SIDEWALK 5 INCH, SPECIAL AND )  
(PORTLAND CEMENT CONCRETE PAVEMENT (SPECIAL))

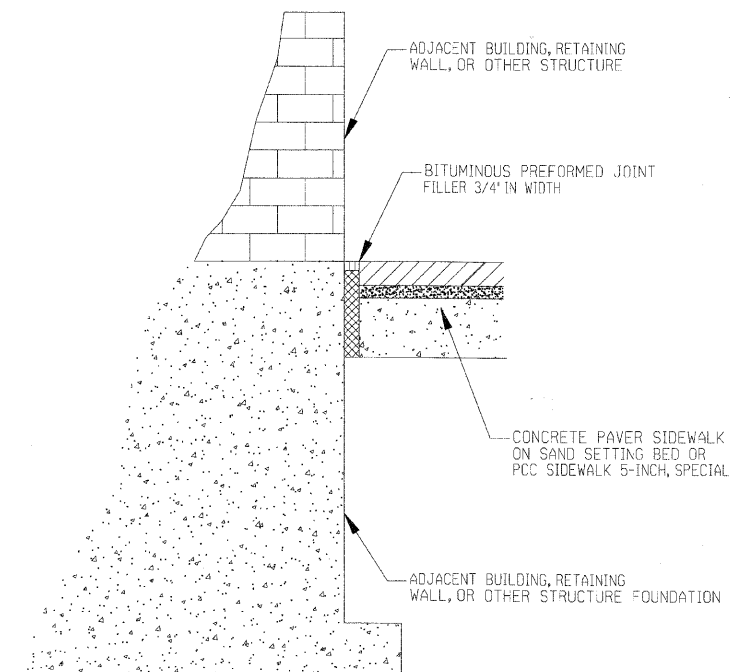


SEALING DETAIL

BITUMINOUS PREFORMED JOINT FILLER, 3/4" IN WIDTH SHALL EXTEND TO 3/4" BELOW FINISHED PAVER SURFACE WITH A 3/4" HOT POURED SEALER PLACED ON TOP

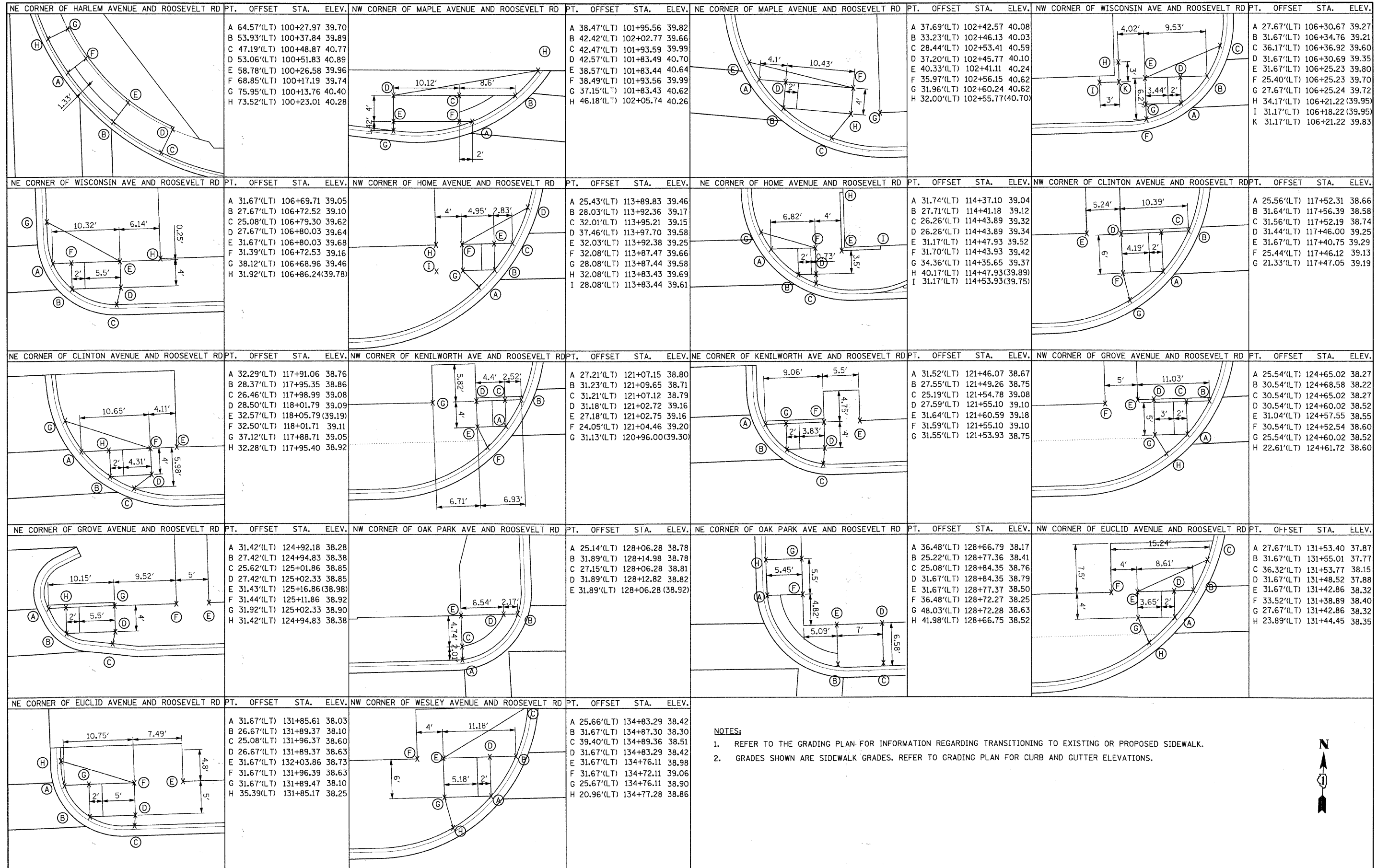


BITUMINOUS PREFORMED JOINT FILLER  
(AT PLANTER CURB AND COMBINATION CONCRETE CURB AND GUTTER)



BITUMINOUS PREFORMED JOINT FILLER  
(AT PLANTER CURB AND COMBINATION CONCRETE CURB AND GUTTER)

FILE NAME = DIRTE30-shd-details04.dgn	USER NAME = IDOT	DESIGNED - BB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROJECT SPECIFIC DETAILS</b>				F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 253
	PLOT SCALE = 1/8" = 1' / IN.	DRAWN - DA	REVISED -		SCALE: NTS	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 63432		
	PLOT DATE = 3/11/2010	CHECKED - JB	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE -	REVISED -										



- NOTES:**
- REFER TO THE GRADING PLAN FOR INFORMATION REGARDING TRANSITIONING TO EXISTING OR PROPOSED SIDEWALK.
  - GRADES SHOWN ARE SIDEWALK GRADES. REFER TO GRADING PLAN FOR CURB AND GUTTER ELEVATIONS.

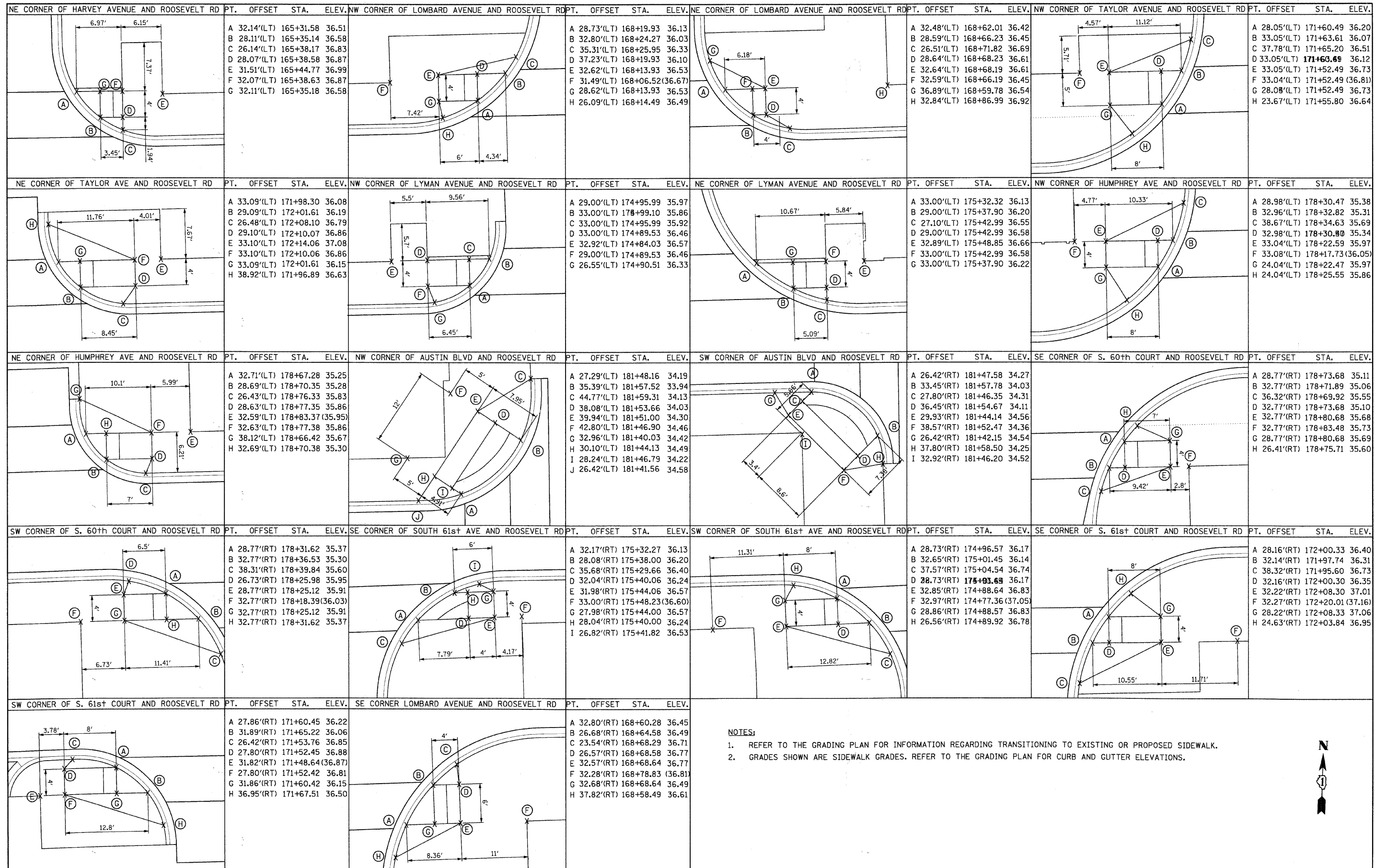


FILE NAME = DIRTE38-shd-data1a95.dgn	USER NAME = IDOT	DESIGNED - BB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROJECT SPECIFIC DETAILS ADA DETAILED CURB RAMP DESIGN DRAWINGS</b>			F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 254
PLOT SCALE =	CHECKED - JB	REVISED -	REVISED -		SCALE: NTS	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 63432				
PLOT DATE = 3/11/2010	DATE =	REVISED -	REVISED -		ILLINOIS FED. AID PROJECT							

	<p>PT. OFFSET STA. ELEV.</p> <p>A 36.25'(LT) 135+19.66 38.57  B 31.66'(LT) 135+21.66 38.14  C 31.66'(LT) 135+25.50 38.19  D 27.66'(LT) 135+25.50 38.19  E 25.33'(LT) 135+30.83 38.57  F 31.66'(LT) 135+31.50 38.70  G 27.66'(LT) 135+31.50 38.64  H 31.66'(LT) 135+36.66 38.83</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 35.25'(LT) 138+21.42 38.50  B 31.66'(LT) 138+19.00 38.30  C 31.66'(LT) 138+14.33 38.38  D 27.66'(LT) 138+14.33 38.38  E 26.00'(LT) 138+10.58 38.73  F 27.66'(LT) 138+ 9.58 38.80  G 27.66'(LT) 138+ 9.58 38.76  H 31.66'(LT) 138+ 6.50 38.87</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 34.33'(LT) 138+53.42 38.60  B 31.66'(LT) 138+54.83 38.43  C 31.66'(LT) 138+58.66 38.46  D 27.66'(LT) 138+58.66 38.46  E 25.50'(LT) 138+63.55 38.80  F 31.66'(LT) 138+64.00 38.90  G 27.66'(LT) 138+64.00 38.86  H 31.66'(LT) 138+70.92 38.97</p>	<p>PT. OFFSET STA. ELEV.</p> <p>A 26.08'(LT) 141+43.58 38.65  B 28.58'(LT) 141+48.00 38.67  C 31.42'(LT) 141+50.75 38.64  D 35.75'(LT) 141+53.25 38.83  E 33.25'(LT) 141+43.25 38.85  F 35.83'(LT) 141+46.33 38.85  G 30.92'(LT) 141+38.66 39.21</p>
	<p>PT. OFFSET STA. ELEV.</p> <p>A 35.00'(LT) 141+90.42 38.85  B 32.50'(LT) 141+94.42 38.66  C 32.50'(LT) 141+21.42 38.63  D 28.50'(LT) 141+94.42 38.66  E 26.58'(LT) 141+97.16 38.90  F 25.50'(LT) 142+00.16 38.63  G 25.16'(LT) 142+02.16 38.73  H 25.08'(LT) 142+06.16 38.70  I 25.08'(LT) 142+08.33 38.90  J 27.66'(LT) 142+06.16 38.73  K 27.66'(LT) 142+02.16 38.75  L 28.66'(LT) 142+00.16 38.70  M 32.66'(LT) 142+00.16 38.72  N 31.66'(LT) 142+04.16 38.78</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 31.58'(LT) 144+87.83 38.31  B 31.58'(LT) 144+83.83 38.40  C 25.58'(LT) 144+83.83 38.48  D 22.66'(LT) 144+80.58 38.70  E 31.58'(LT) 144+79.41 38.83  F 25.58'(LT) 144+79.41 38.75  G 31.58'(LT) 144+74.16 38.94</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 31.67'(LT) 145+21.58 38.47  B 31.67'(LT) 145+22.92 38.49  C 27.67'(LT) 145+22.92 38.51  D 25.08'(LT) 145+31.50 39.12  E 31.67'(LT) 145+32.75 39.08  F 27.67'(LT) 145+32.75 39.14  G 31.67'(LT) 145+37.83 39.16</p>	<p>PT. OFFSET STA. ELEV.</p> <p>A 36.33'(LT) 148+25.17 38.95  B 31.67'(LT) 148+26.00 38.58  C 31.67'(LT) 148+22.00 38.63  D 25.67'(LT) 148+22.00 38.63  E 20.92'(LT) 148+16.00 38.90  F 31.67'(LT) 148+15.00 39.04  G 25.67'(LT) 148+15.00 39.00  H 31.67'(LT) 148+08.00 39.12</p>
	<p>PT. OFFSET STA. ELEV.</p> <p>A 31.67'(LT) 148+54.92 38.51  B 31.67'(LT) 148+59.83 38.53  C 26.67'(LT) 148+59.83 38.45  D 25.25'(LT) 148+63.92 39.11  E 31.67'(LT) 148+63.92 39.15  F 26.67'(LT) 148+63.92 39.12  G 31.67'(LT) 148+69.75 39.22</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 31.58'(LT) 151+58.33 37.70  B 31.58'(LT) 151+54.33 37.75  C 25.58'(LT) 151+54.33 37.80  D 22.08'(LT) 151+50.25 38.24  E 31.58'(LT) 151+49.33 38.29  F 25.58'(LT) 151+49.33 38.24  G 31.58'(LT) 151+43.33 38.38</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 36.42'(LT) 151+86.50 38.06  B 31.75'(LT) 151+88.42 37.67  C 31.75'(LT) 151+93.67 37.70  D 26.75'(LT) 151+93.67 37.75  E 25.17'(LT) 151+98.41 38.08  F 31.83'(LT) 152+00.67 38.16  G 26.83'(LT) 152+00.67 38.13  H 31.83'(LT) 152+06.83 38.22</p>	<p>PT. OFFSET STA. ELEV.</p> <p>A 25.08'(LT) 154+62.33 37.55  B 25.08'(LT) 154+68.33 37.23  C 33.25'(LT) 154+83.08 37.29  D 41.33'(LT) 154+82.75 37.85  E 31.83'(LT) 154+62.33 37.70  F 31.33'(LT) 154+75.83 37.36  G 41.33'(LT) 154+75.83 M.E.</p>
	<p>PT. OFFSET STA. ELEV.</p> <p>A 41.33'(LT) 155+32.92 37.68  B 33.00'(LT) 155+34.75 37.18  C 24.83'(LT) 155+49.17 37.05  D 24.83'(LT) 155+51.33 37.25  E 41.33'(LT) 155+39.42 37.87  F 31.00'(LT) 155+39.42 37.25  G 31.00'(LT) 155+49.25 37.36  H 31.00'(LT) 155+51.33 37.38</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 39.33'(LT) 158+26.75 37.00  B 31.83'(LT) 158+24.75 37.15  C 31.83'(LT) 158+20.66 37.20  D 25.83'(LT) 158+20.66 37.33  E 22.05'(LT) 158+16.25 37.60  F 31.83'(LT) 158+14.50 37.55  G 25.83'(LT) 158+14.50 37.52  H 31.83'(LT) 158+09.50 37.60</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 37.33'(LT) 158+58.33 36.90  B 32.33'(LT) 158+58.33 36.80  C 32.33'(LT) 158+58.92 36.81  D 28.33'(LT) 158+58.92 36.88  E 25.00'(LT) 158+63.08 37.20  F 32.33'(LT) 158+65.75 37.30  G 33.29'(LT) 158+65.75 37.25  H 31.25'(LT) 158+74.42 37.38</p>	<p>PT. OFFSET STA. ELEV.</p> <p>A 34.00'(LT) 161+59.42 36.85  B 31.33'(LT) 161+58.33 36.71  C 31.33'(LT) 161+55.25 36.75  D 26.33'(LT) 161+55.25 36.93  E 23.17'(LT) 161+52.00 37.30  F 31.33'(LT) 161+50.75 37.31  G 26.33'(LT) 161+50.75 37.28  H 31.33'(LT) 161+45.50 37.35</p>
	<p>PT. OFFSET STA. ELEV.</p> <p>A 33.75'(LT) 161+95.25 36.62  B 31.17'(LT) 161+96.67 36.66  C 31.17'(LT) 162+00.75 36.73  D 27.17'(LT) 162+00.75 36.76  E 26.17'(LT) 162+03.50 37.05  F 31.17'(LT) 162+05.17 37.30  G 27.17'(LT) 162+05.17 37.20  H 31.17'(LT) 162+09.17 37.45</p>		<p>PT. OFFSET STA. ELEV.</p> <p>A 31.67'(LT) 164+92.92 36.36  B 31.67'(LT) 164+89.17 36.43  C 25.67'(LT) 164+89.17 36.50  D 24.58'(LT) 164+87.00 36.85  E 31.75'(LT) 164+85.75 37.05  F 26.75'(LT) 164+85.75 36.96  G 31.75'(LT) 164+78.58 37.12</p>	<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>REFER TO THE GRADING PLAN FOR INFORMATION REGARDING TRANSITIONING TO EXISTING OR PROPOSED SIDEWALK.</li> <li>GRADES SHOWN ARE SIDEWALK GRADES. REFER TO THE GRADING PLAN FOR CURB AND GUTTER ELEVATIONS.</li> </ol>		







PT.	OFFSET	STA.	ELEV.
A	32.14'(LT)	165+31.58	36.51
B	28.11'(LT)	165+35.14	36.58
C	26.14'(LT)	165+38.17	36.83
D	28.07'(LT)	165+38.58	36.87
E	31.51'(LT)	165+44.77	36.99
F	32.07'(LT)	165+38.63	36.87
G	32.11'(LT)	165+35.18	36.58

PT.	OFFSET	STA.	ELEV.
A	28.73'(LT)	168+19.93	36.13
B	32.80'(LT)	168+24.27	36.03
C	35.31'(LT)	168+25.95	36.33
D	37.23'(LT)	168+19.93	36.10
E	32.62'(LT)	168+13.93	36.53
F	31.49'(LT)	168+06.52(36.67)	
G	28.62'(LT)	168+13.93	36.53
H	26.09'(LT)	168+14.49	36.49

PT.	OFFSET	STA.	ELEV.
A	32.48'(LT)	168+62.01	36.42
B	28.59'(LT)	168+66.23	36.45
C	26.51'(LT)	168+71.82	36.69
D	28.64'(LT)	168+68.23	36.61
E	32.64'(LT)	168+68.19	36.61
F	32.59'(LT)	168+66.19	36.45
G	36.89'(LT)	168+59.78	36.54
H	32.84'(LT)	168+86.99	36.92

PT.	OFFSET	STA.	ELEV.
A	28.05'(LT)	171+60.49	36.20
B	33.05'(LT)	171+63.61	36.07
C	37.78'(LT)	171+65.20	36.51
D	33.05'(LT)	171+63.61	36.12
E	33.05'(LT)	171+52.49	36.73
F	33.04'(LT)	171+52.49	36.81
G	28.08'(LT)	171+52.49	36.73
H	23.67'(LT)	171+55.80	36.64

PT.	OFFSET	STA.	ELEV.
A	33.09'(LT)	171+98.30	36.08
B	29.09'(LT)	172+01.61	36.19
C	26.48'(LT)	172+08.10	36.79
D	29.10'(LT)	172+10.07	36.86
E	33.10'(LT)	172+14.06	37.08
F	33.10'(LT)	172+10.06	36.86
G	33.09'(LT)	172+01.61	36.15
H	38.92'(LT)	171+96.89	36.63

PT.	OFFSET	STA.	ELEV.
A	29.00'(LT)	174+95.99	35.97
B	33.00'(LT)	174+99.10	35.86
C	33.00'(LT)	174+95.99	35.92
D	33.00'(LT)	174+89.53	36.46
E	32.92'(LT)	174+84.03	36.57
F	29.00'(LT)	174+89.53	36.46
G	26.55'(LT)	174+90.51	36.33

PT.	OFFSET	STA.	ELEV.
A	33.00'(LT)	175+32.32	36.13
B	29.00'(LT)	175+37.90	36.20
C	27.10'(LT)	175+42.99	36.55
D	29.00'(LT)	175+42.99	36.58
E	32.89'(LT)	175+48.85	36.66
F	33.00'(LT)	175+42.99	36.58
G	33.00'(LT)	175+37.90	36.22

PT.	OFFSET	STA.	ELEV.
A	28.98'(LT)	178+30.47	35.38
B	32.96'(LT)	178+32.82	35.31
C	38.67'(LT)	178+34.63	35.69
D	32.98'(LT)	178+30.80	35.34
E	33.04'(LT)	178+22.59	35.97
F	33.08'(LT)	178+17.73(36.05)	
G	24.04'(LT)	178+22.47	35.97
H	24.04'(LT)	178+25.55	35.86

PT.	OFFSET	STA.	ELEV.
A	32.71'(LT)	178+67.28	35.25
B	28.69'(LT)	178+70.35	35.28
C	26.43'(LT)	178+76.33	35.83
D	28.63'(LT)	178+77.35	35.86
E	32.59'(LT)	178+83.37(35.95)	
F	32.63'(LT)	178+77.38	35.86
G	38.12'(LT)	178+66.42	35.67
H	32.69'(LT)	178+70.38	35.30

PT.	OFFSET	STA.	ELEV.
A	27.29'(LT)	181+48.16	34.19
B	35.39'(LT)	181+57.52	33.94
C	44.77'(LT)	181+59.31	34.13
D	38.08'(LT)	181+53.66	34.03
E	39.94'(LT)	181+51.00	34.30
F	42.80'(LT)	181+46.90	34.46
G	32.96'(LT)	181+40.03	34.42
H	30.10'(LT)	181+44.13	34.49
I	28.24'(LT)	181+46.79	34.22
J	26.42'(LT)	181+41.56	34.58

PT.	OFFSET	STA.	ELEV.
A	26.42'(RT)	181+47.58	34.27
B	33.45'(RT)	181+57.78	34.03
C	27.80'(RT)	181+46.35	34.31
D	36.45'(RT)	181+54.67	34.11
E	29.93'(RT)	181+44.14	34.56
F	38.57'(RT)	181+52.47	34.36
G	26.42'(RT)	181+42.15	34.54
H	37.80'(RT)	181+58.50	34.25
I	32.92'(RT)	181+46.20	34.52

PT.	OFFSET	STA.	ELEV.
A	28.77'(RT)	178+73.68	35.11
B	32.77'(RT)	178+71.89	35.06
C	36.32'(RT)	178+69.92	35.55
D	32.77'(RT)	178+73.68	35.10
E	32.77'(RT)	178+80.68	35.68
F	32.77'(RT)	178+83.48	35.73
G	28.77'(RT)	178+80.68	35.69
H	26.41'(RT)	178+75.71	35.60

PT.	OFFSET	STA.	ELEV.
A	28.77'(RT)	178+31.62	35.37
B	32.77'(RT)	178+36.53	35.30
C	38.31'(RT)	178+39.84	35.60
D	26.73'(RT)	178+25.98	35.95
E	28.77'(RT)	178+25.12	35.91
F	32.77'(RT)	178+18.39(36.03)	
G	32.77'(RT)	178+25.12	35.91
H	32.77'(RT)	178+31.62	35.37

PT.	OFFSET	STA.	ELEV.
A	32.17'(RT)	175+32.27	36.13
B	28.08'(RT)	175+38.00	36.20
C	35.68'(RT)	175+29.66	36.40
D	32.04'(RT)	175+40.06	36.24
E	31.98'(RT)	175+44.06	36.57
F	33.00'(RT)	175+48.23(36.60)	
G	27.98'(RT)	175+44.00	36.57
H	28.04'(RT)	175+40.00	36.24
I	26.82'(RT)	175+41.82	36.53

PT.	OFFSET	STA.	ELEV.
A	28.73'(RT)	174+96.57	36.17
B	32.65'(RT)	175+01.45	36.14
C	37.57'(RT)	175+04.54	36.74
D	28.73'(RT)	175+03.69	36.17
E	32.85'(RT)	174+88.64	36.83
F	32.97'(RT)	174+77.36(37.05)	
G	28.86'(RT)	174+88.57	36.83
H	26.56'(RT)	174+89.92	36.78

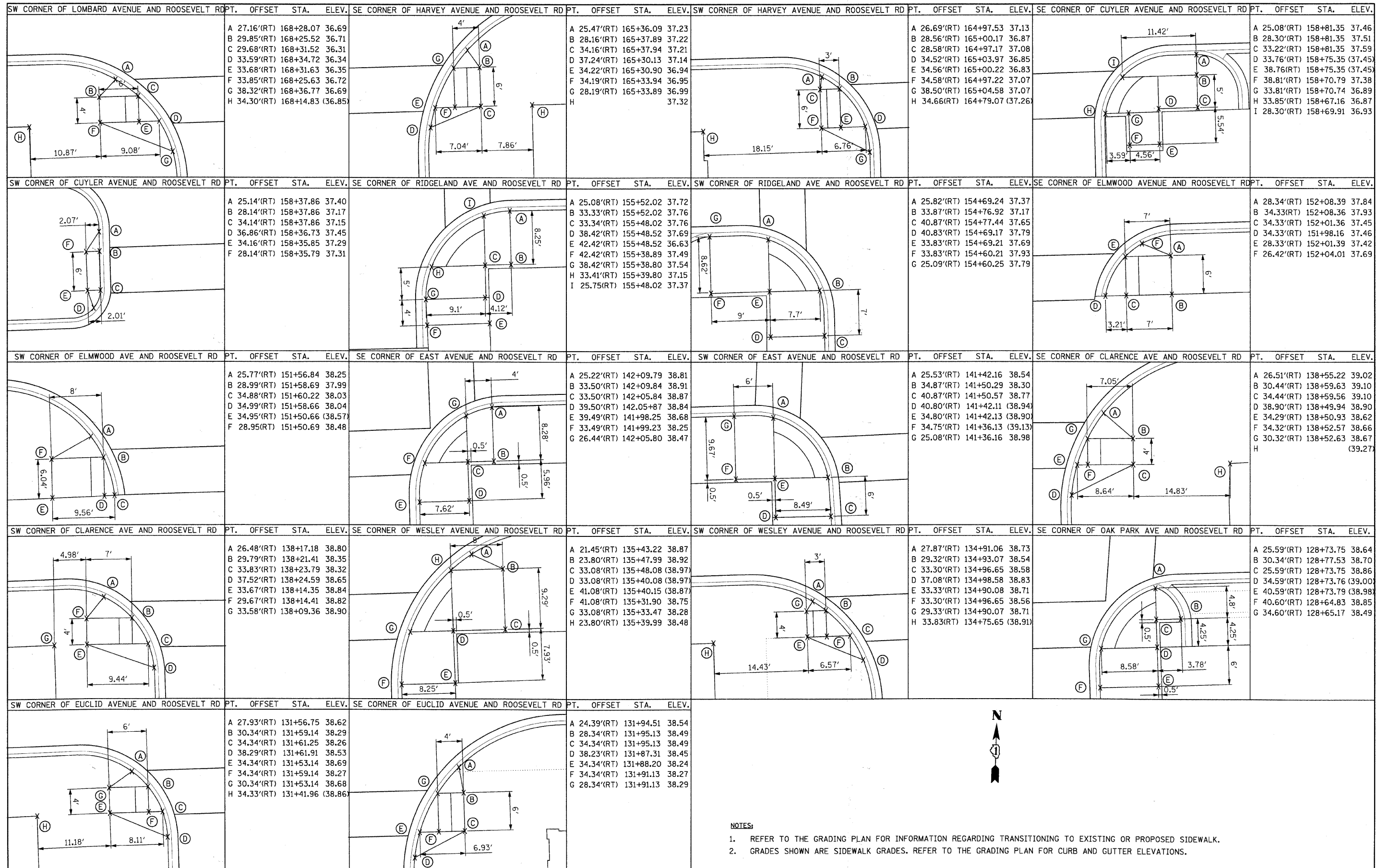
PT.	OFFSET	STA.	ELEV.
A	28.16'(RT)	172+00.33	36.40
B	32.14'(RT)	171+97.74	36.31
C	38.32'(RT)	171+95.60	36.73
D	32.16'(RT)	172+00.30	36.35
E	32.22'(RT)	172+08.30	37.01
F	32.27'(RT)	172+20.01(37.16)	
G	28.22'(RT)	172+08.33	37.06
H	24.63'(RT)	172+03.84	36.95

PT.	OFFSET	STA.	ELEV.
A	27.86'(RT)	171+60.45	36.22
B	31.89'(RT)	171+65.22	36.06
C	26.42'(RT)	171+53.76	36.85
D	27.80'(RT)	171+52.45	36.88
E	31.82'(RT)	171+48.64(36.87)	
F	27.80'(RT)	171+52.42	36.81
G	31.86'(RT)	171+60.42	36.15
H	36.95'(RT)	171+67.51	36.50

PT.	OFFSET	STA.	ELEV.
A	32.80'(RT)	168+60.28	36.45
B	26.68'(RT)	168+64.58	36.49
C	23.54'(RT)	168+68.29	36.71
D	26.57'(RT)	168+68.58	36.77
E	32.57'(RT)	168+68.64	36.77
F	32.28'(RT)	168+78.83(36.81)	
G	32.68'(RT)	168+68.64	36.49
H	37.82'(RT)	168+58.49	36.61

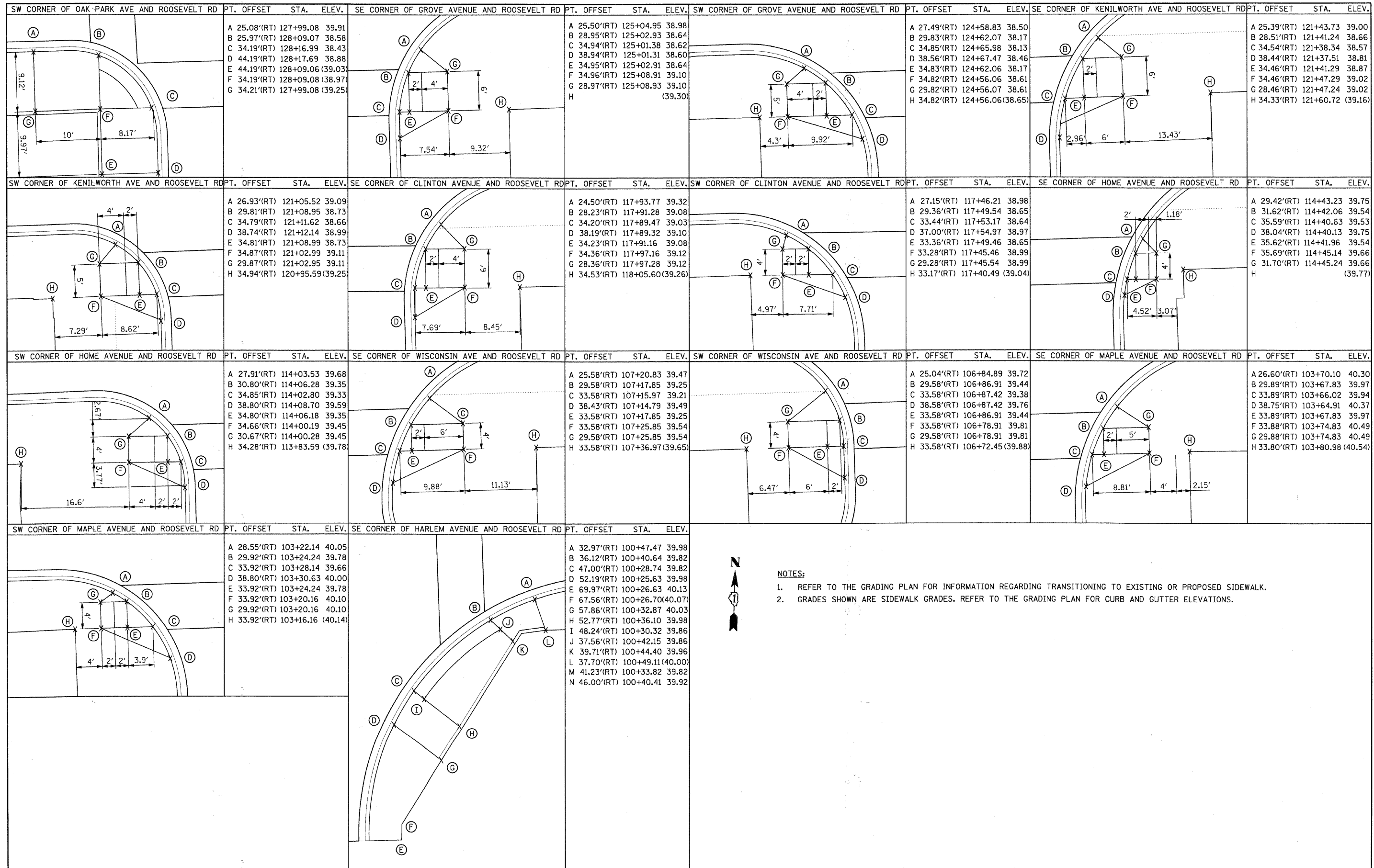
- NOTES:**
- REFER TO THE GRADING PLAN FOR INFORMATION REGARDING TRANSITIONING TO EXISTING OR PROPOSED SIDEWALK.
  - GRADES SHOWN ARE SIDEWALK GRADES. REFER TO THE GRADING PLAN FOR CURB AND GUTTER ELEVATIONS.





- NOTES:**
- REFER TO THE GRADING PLAN FOR INFORMATION REGARDING TRANSITIONING TO EXISTING OR PROPOSED SIDEWALK.
  - GRADES SHOWN ARE SIDEWALK GRADES. REFER TO THE GRADING PLAN FOR CURB AND GUTTER ELEVATIONS.

FILE NAME = DIRTE38-sh1-de1013a08.dgn	USER NAME = IDOT	DESIGNED - BB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROJECT SPECIFIC DETAILS ADA DETAILED CURB RAMP DESIGN DRAWINGS</b>			F.A.P. RTE. = 347	SECTION = 09-00248-00-RS	COUNTY = COOK	TOTAL SHEETS = 274	SHEET NO. = 257
	PLOT SCALE =	DRAWN - TM	REVISED -		SCALE: NTS	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 63432				
	PLOT DATE = 3/11/2018	CHECKED - JB	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									



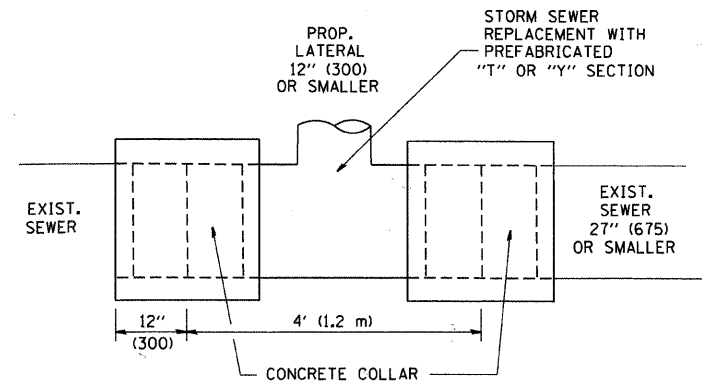
FILE NAME = DIRTE38-shd-detail1.dgn  
 USER NAME = IDOT  
 PLOT SCALE =  
 PLOT DATE = 3/11/2010

DESIGNED - BB  
 DRAWN - RP  
 CHECKED - JB  
 DATE -  
 REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

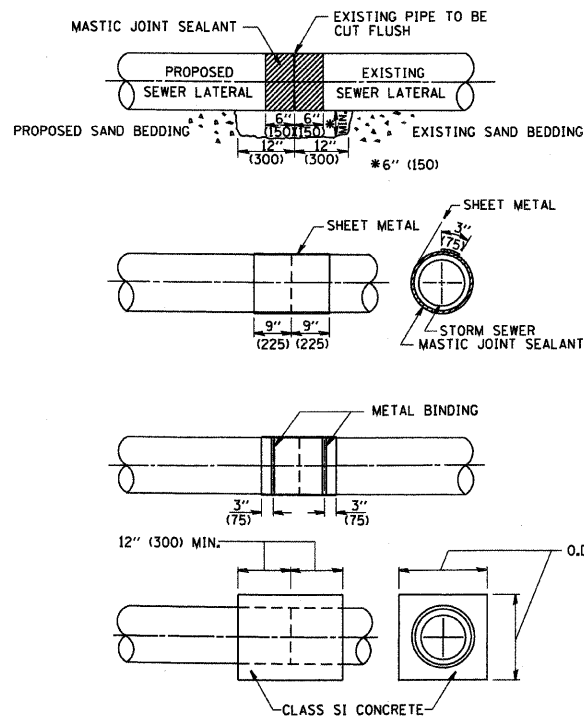
**PROJECT SPECIFIC DETAILS  
 ADA DETAILED CURB RAMP DESIGN DRAWINGS**  
 SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 258
ILLINOIS FED. AID PROJECT			CONTRACT NO. 63432	



DETAIL "A"

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

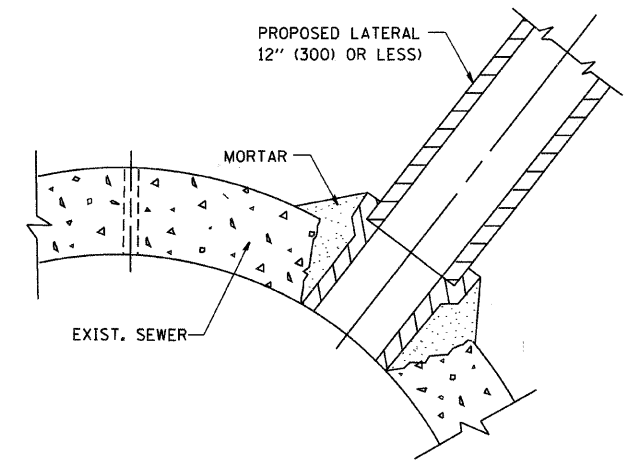


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

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

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

GENERAL

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

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

BASIS OF PAYMENT

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

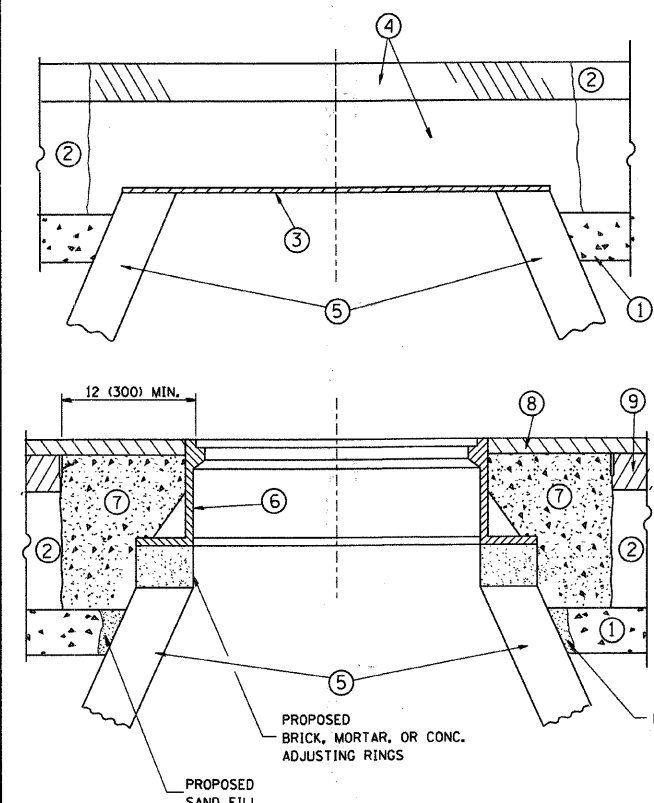
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

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

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

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

FILE NAME = W:\diststd\22x34\bd07.dgn	USER NAME = geglianobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - R. SHAH 09-09-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	347	09-00248-00-RS	COOK	274 259
		PLOT SCALE = 50,000 ' / IN.	CHECKED -		REVISED - R. SHAH 10-25-94			<b>BD500-01 (BD-7)</b>		CONTRACT NO.		
		PLOT DATE = 1/4/2008	DATE - 07-25-90		REVISED - R. SHAH 06-12-96			FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



**CONSTRUCTION PROCEDURES**

- STAGE 1 (BEFORE PAVEMENT MILLING)**
- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
  - B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
  - C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
  - D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.
- STAGE 2 (AFTER PAVEMENT MILLING)**
- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
  - B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
  - C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS 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:**

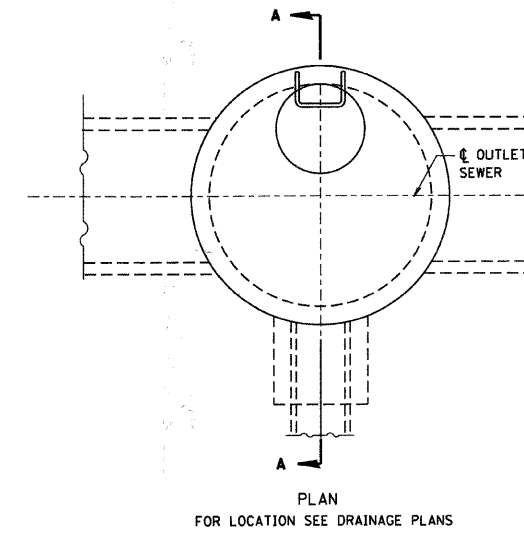
THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**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.

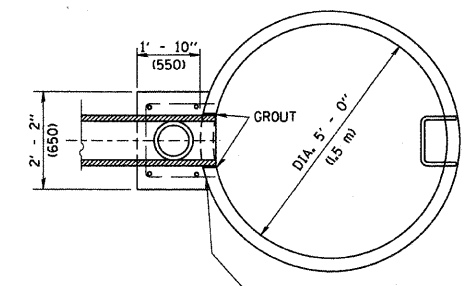
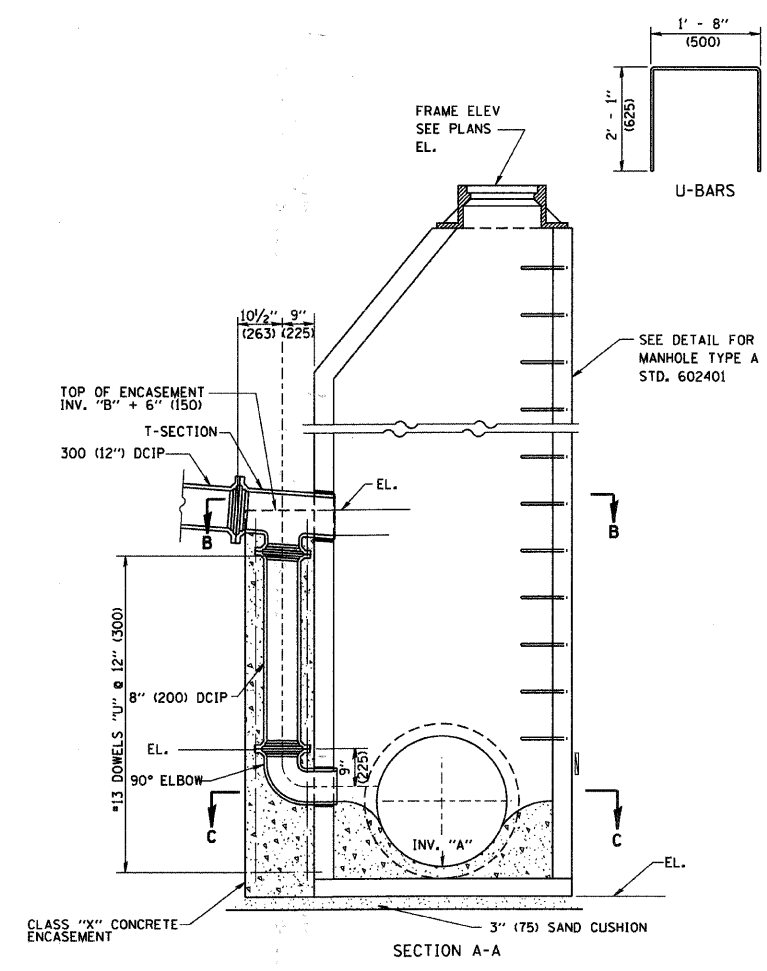
**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

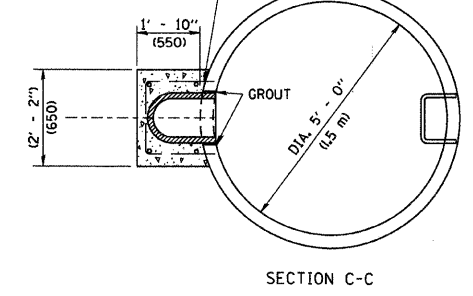
FILE NAME = W:\distatd\22x34\bd08.dgn	USER NAME = geglienebt	DESIGNED - R. SHAH	REVISED - R. SHAH 03-10-95	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING</b>		F.A.B. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - A. ABBAS 03-21-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	347	09-00248-00-RS	COOK	274	260
		CHECKED -	REVISED - R. WIEDEMAN 05-14-04					<b>BD600-03 (BD-8)</b>		<b>CONTRACT NO.</b>		
		DATE - 10-25-94	REVISED - R. BORO 01-01-07					FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



ENCASEMENT DETAILS	
DROP M.H. LOCATION STA., OFFSET	
INV. "A"	
INLET PIPE	
INV. "B"	
INV. "C"	
A	
B	
"V" BAR LENGTH	
NO. OF "U" BARS	
REINF. BARS	
CLASS "S1" CONC. CUBIC METER (CU. YD.)	



DRILL 1/4" (30) HOLE IN MANHOLE RISER WALLS, FILL WITH MORTAR AND INSERT DOWELS. (TYPICAL FOR ALL DOWELS)



- TYPE A1-1 MANHOLE WITH 1 DROP AND DEPTH UP TO 10' (3 m)
- TYPE A1-2 " " " " " FROM 10' TO 15' (3 m TO 1.5 m)
- TYPE A1-3 " " " " " FROM 15' TO 20' (1.5 m TO 6 m)
- TYPE A1-4 " " " " " OVER 20' (6 m)
  
- TYPE A2-1 MANHOLE WITH 2 DROPS AND DEPTH UP TO 10' (3 m)
- TYPE A2-2 " " " " " FROM 10' TO 15' (3 m TO 1.5 m)
- TYPE A2-3 " " " " " FROM 15' TO 20' (1.5 m TO 6 m)
- TYPE A2-4 " " " " " OVER 20' (6 m)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

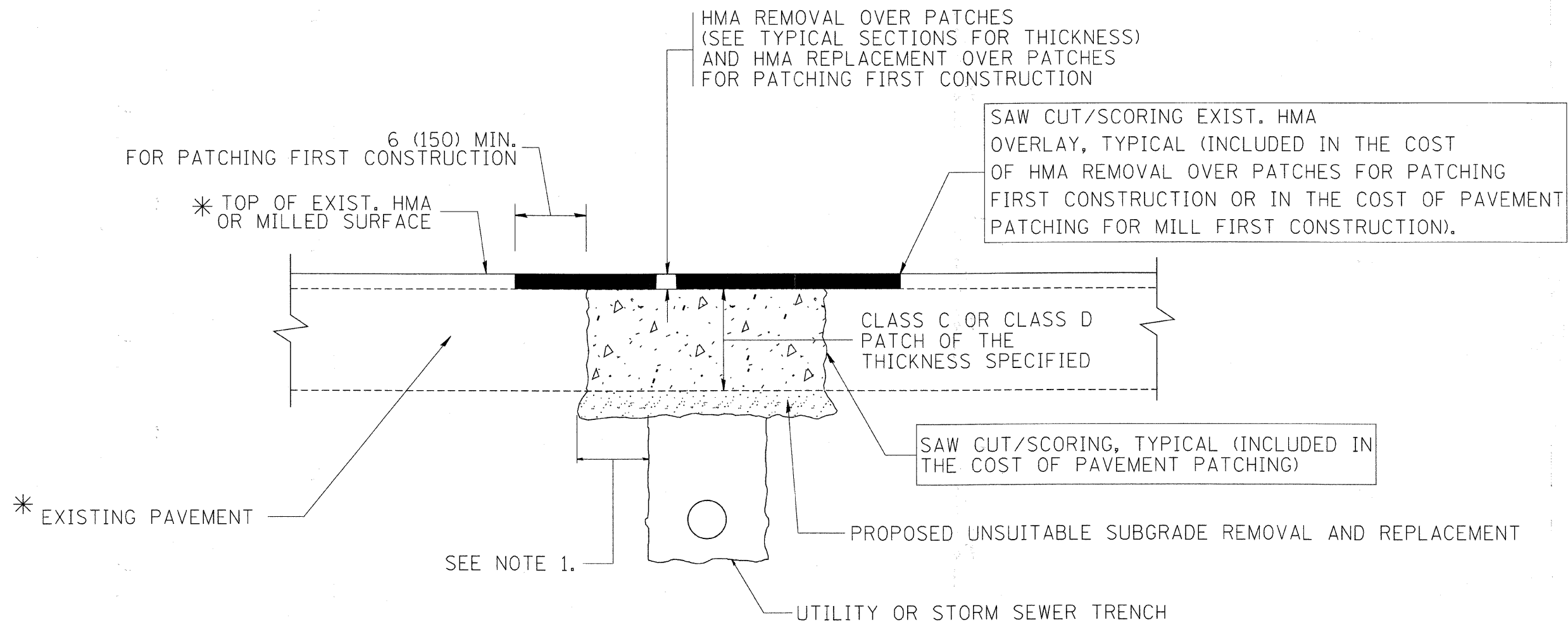
FILE NAME = W:\diststd\22x34\bd16.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -
PLOT SCALE = 60,000 / IN.	CHECKED -	REVISOR -	REVISOR -
PLOT DATE = 1/4/2008	DATE = 10-18-02	REVISOR -	REVISOR -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DROP MANHOLE DETAILS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	261
<b>BD600-05 (BD-16)</b>		<b>CONTRACT NO.</b>		
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

**NOTES:**

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

**SEQUENCE OF CONSTRUCTION (PATCHING FIRST)**

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

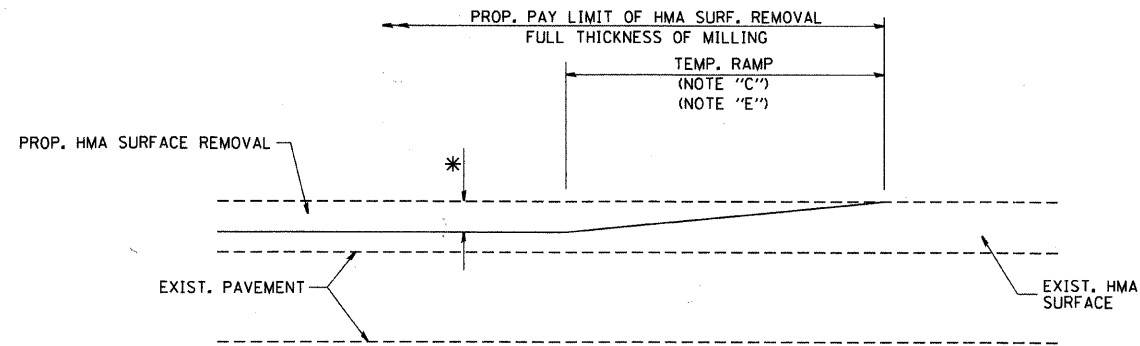
**SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

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

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

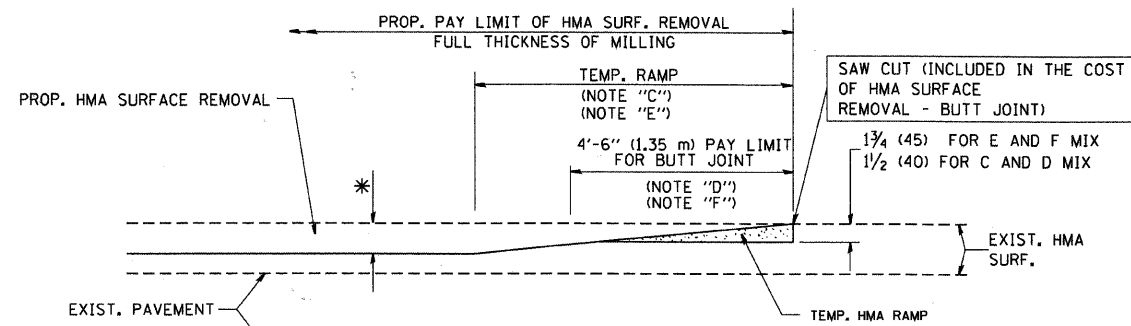
FILE NAME = c:\projects\dstsd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>		F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	347	09-00248-00-RS	COOK	274 262
		PLOT SCALE = 50.000' / IN.	CHECKED -		REVISED - R. BORO 09-04-07			<b>BD400-04 (BD-22)</b>		CONTRACT NO.		
		PLOT DATE = 10/27/2008	DATE - 10-25-94		REVISED - K. ENG 10-27-08			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





MILLED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

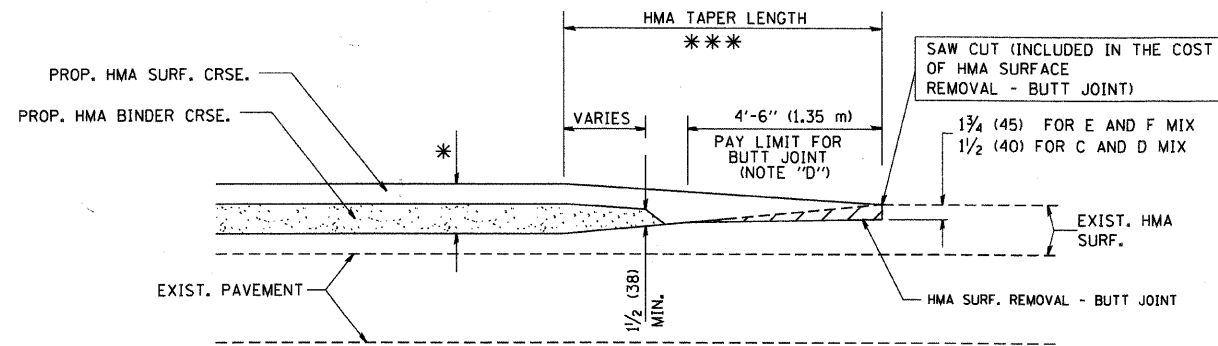
OPTION 1



HMA CONSTRUCTED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

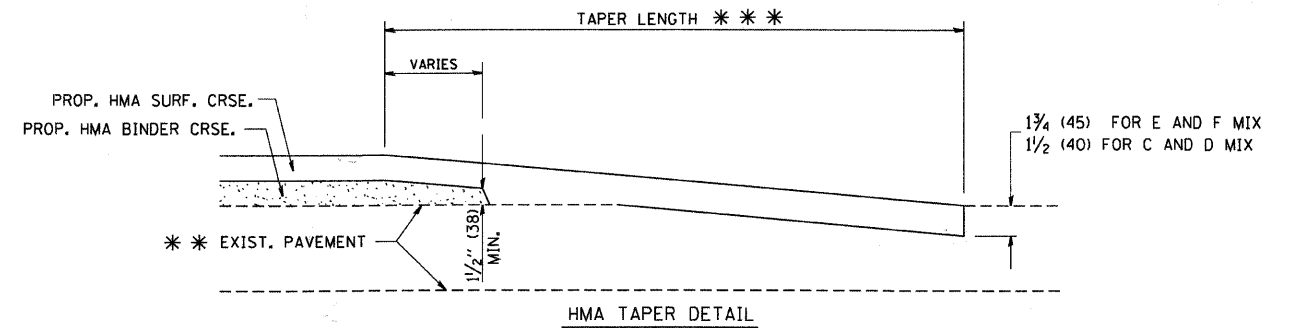
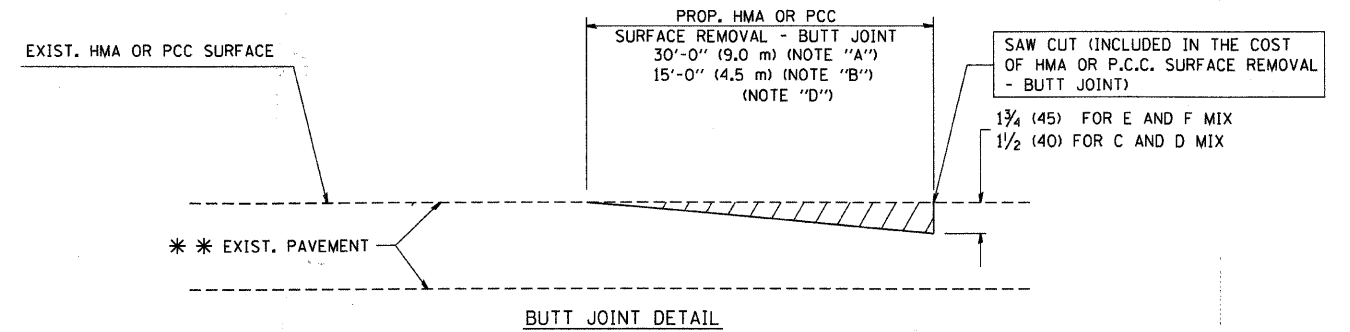
OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT AND  
HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER  
FOR MILLING AND RESURFACING



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.

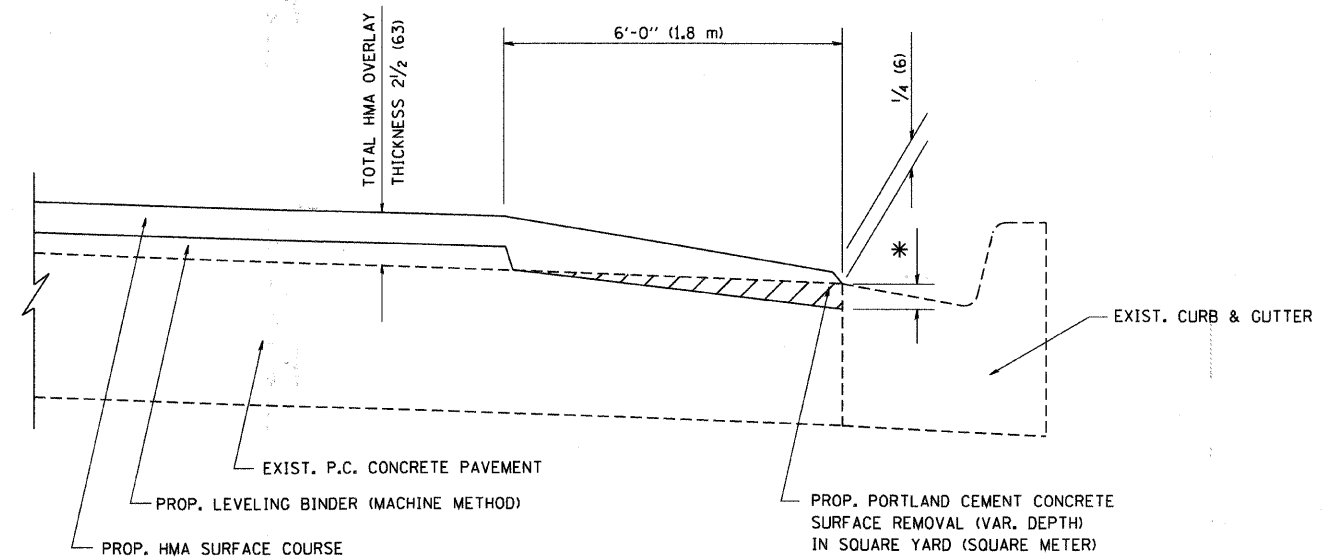
FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = goglianob	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
PLOT SCALE = 50,0000 / IN.		CHECKED -	REVISED - M. GOMEZ 04-06-01
PLOT DATE = 1/4/2008		DATE - 06-13-90	REVISED - R. BORO 01-01-07

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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	263
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 MIX	THICKNESS	LEVELING BINDER	
		THICKNESS	* MILLING AT GUTTER FLAG
C OR D	1 1/2 (38)	1 (25)	1/4 (33)
F	1 3/4 (44)	3/4 (19)	1/2 (38)

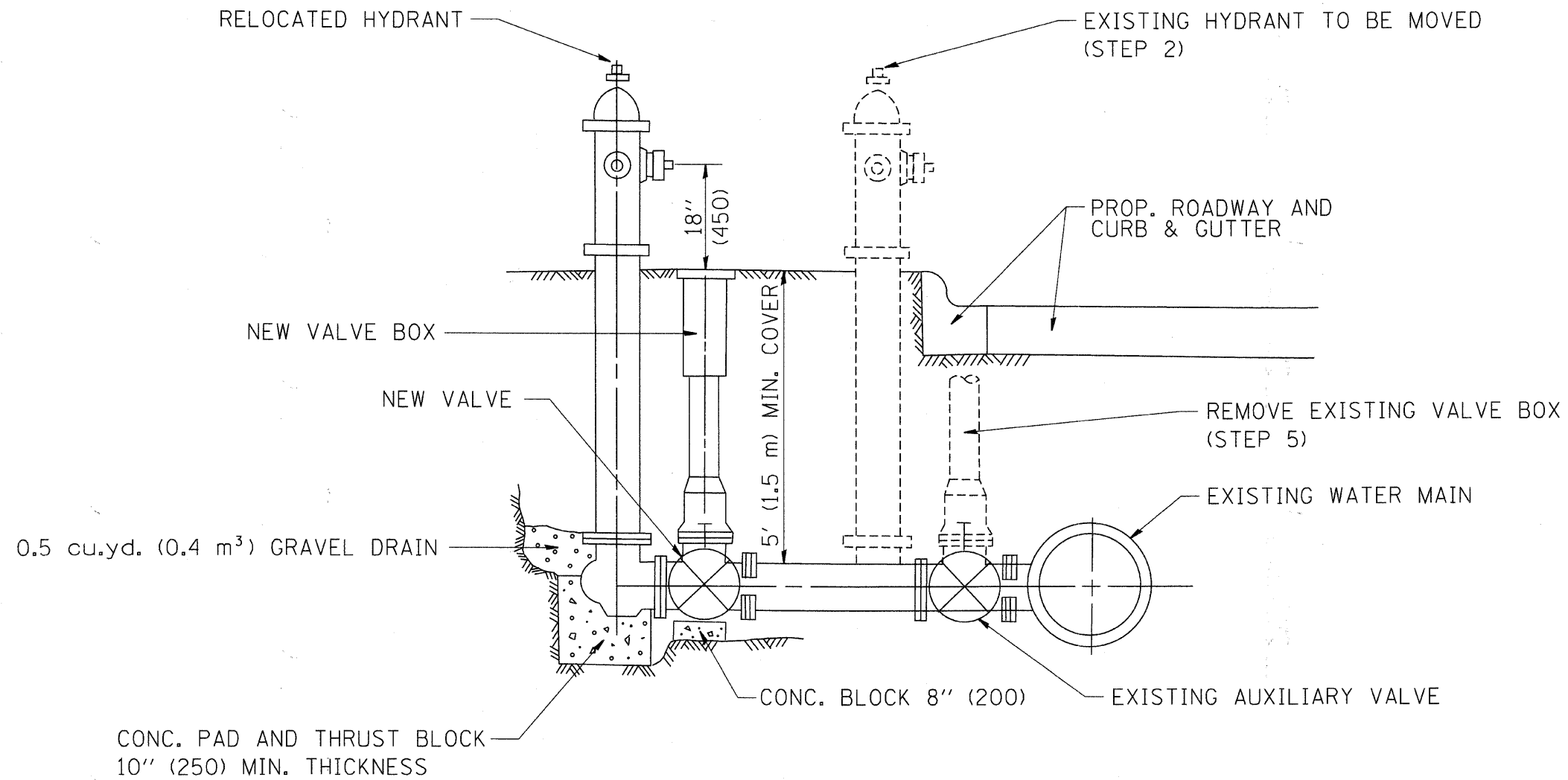
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd33.dgn	USER NAME = geglianobt	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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	264
BD400-06 (BD33)		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SEQUENCE OF CONSTRUCTION:

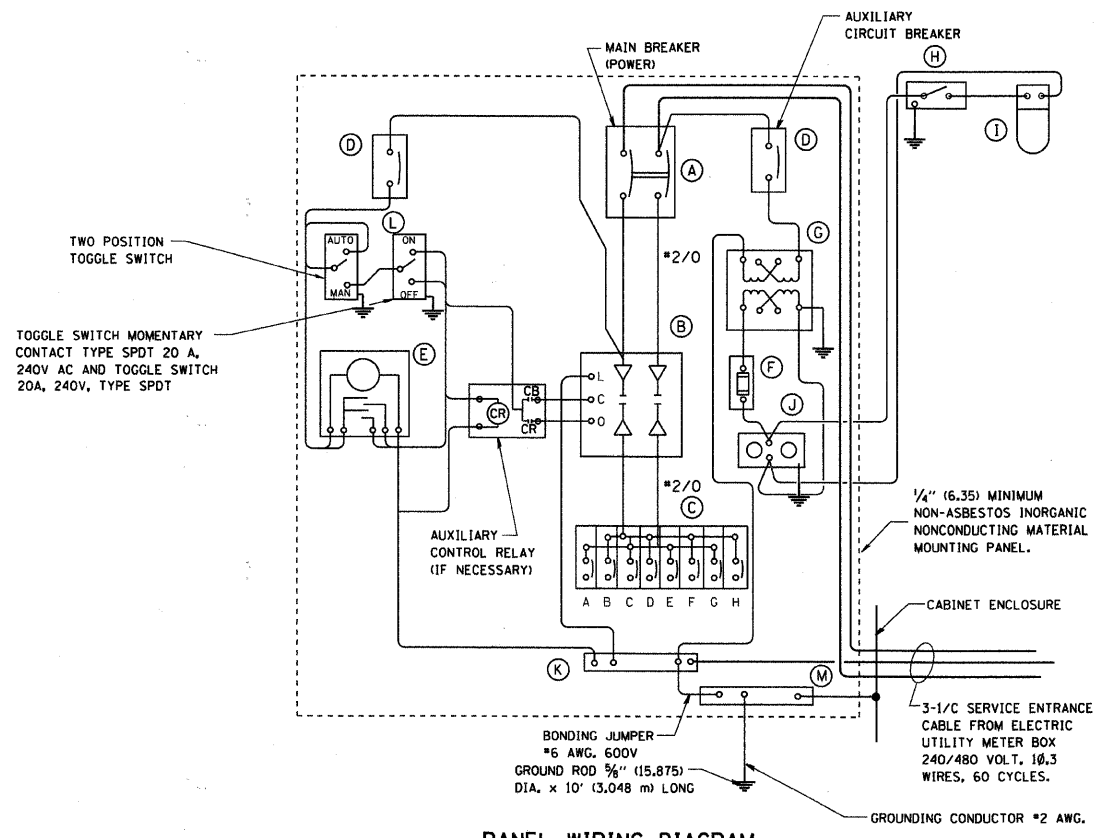
1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

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

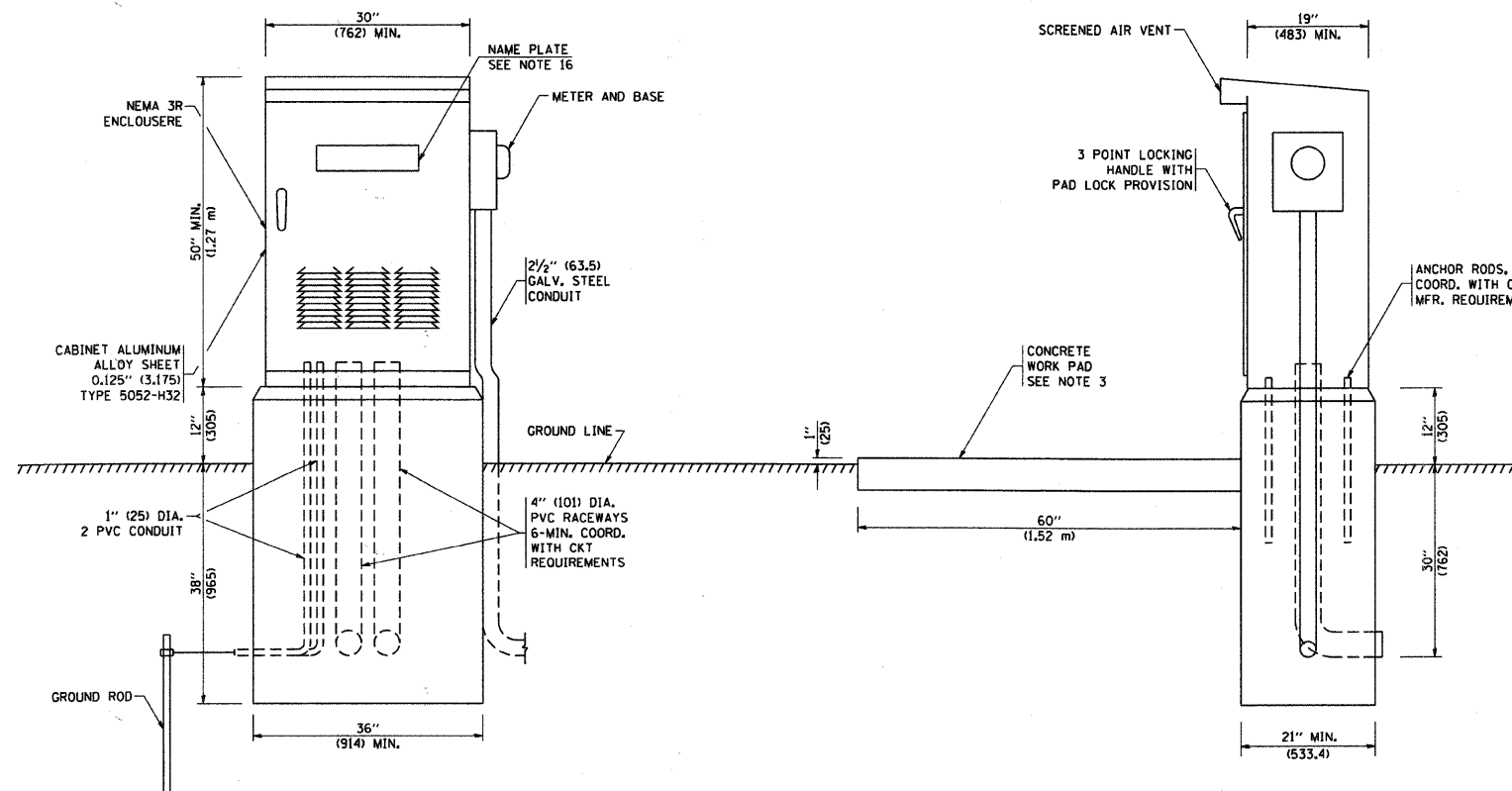
FILE NAME = W:\diststd\22x34\bd36.dgn	USER NAME = geglionobt	DESIGNED -	REVISED - R. SHAH 09-09-94	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FIRE HYDRANT TO BE MOVED</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED - R. SHAH 10-25-94		347	09-00248-00-RS	COOK	274	265				
	PLOT DATE = 1/4/2000	CHECKED -	REVISED -		<b>BD-36</b>				<b>CONTRACT NO.</b>				
		DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	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



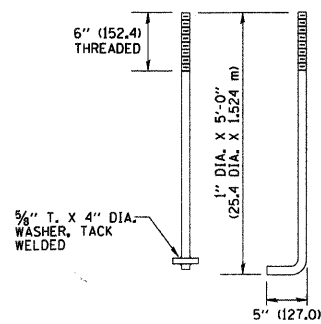
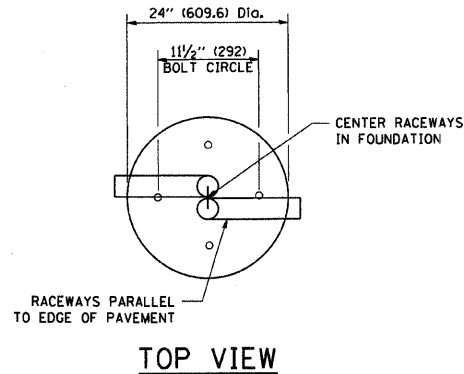
**NOTES:**

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- 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.
- DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
- ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
- CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.  
R = RED      BL = BLUE      W = WHITE  
B = BLACK    Y = YELLOW      G = GREEN
- PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

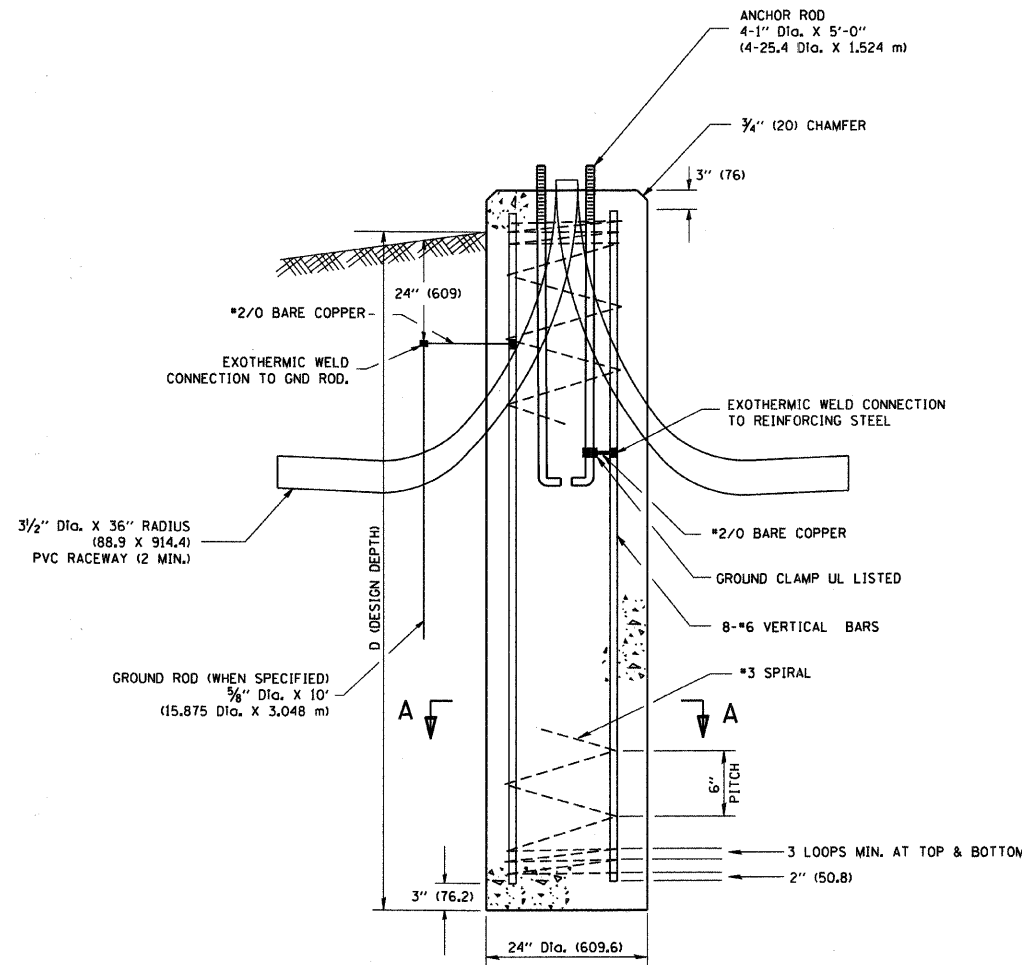
FILE NAME = W:\statsd\22x34\be215.dgn	USER NAME = gogliano	DESIGNED - DRAWN -	REVISED - 08-20-04 REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LIGHTING CONTROLLER SINGLE DOOR</b>	F.A.P. RTE. 347	SECTION 09-00248-00-RS	COUNTY COOK	TOTAL SHEETS 274	SHEET NO. 266
PLOT SCALE = 50.0000" / IN. PLOT DATE = 1/4/2008	CHECKED - DATE -	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS			STA.	TO STA.	<b>BE-215</b>		<b>CONTRACT NO.</b>

**LIGHT POLE FOUNDATION DEPTH TABLE**  
**30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT**

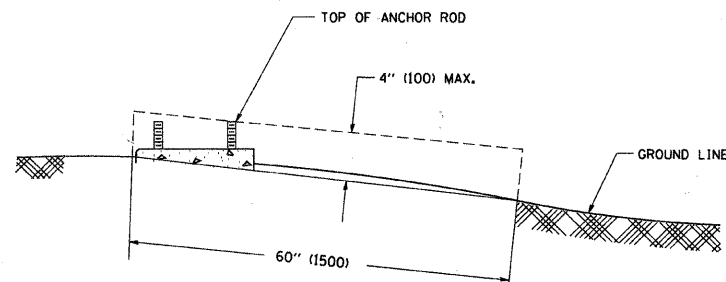
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY O <sub>u</sub> = 0.375 TON/SO. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY O <sub>u</sub> = 0.75 TON/SO. FT.	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY O <sub>u</sub> = 1.50 TON/SO. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND φ = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND φ = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)



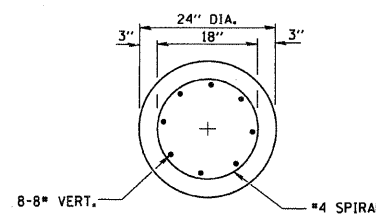
**ANCHOR BOLT DETAIL**



**FOUNDATION DETAIL**



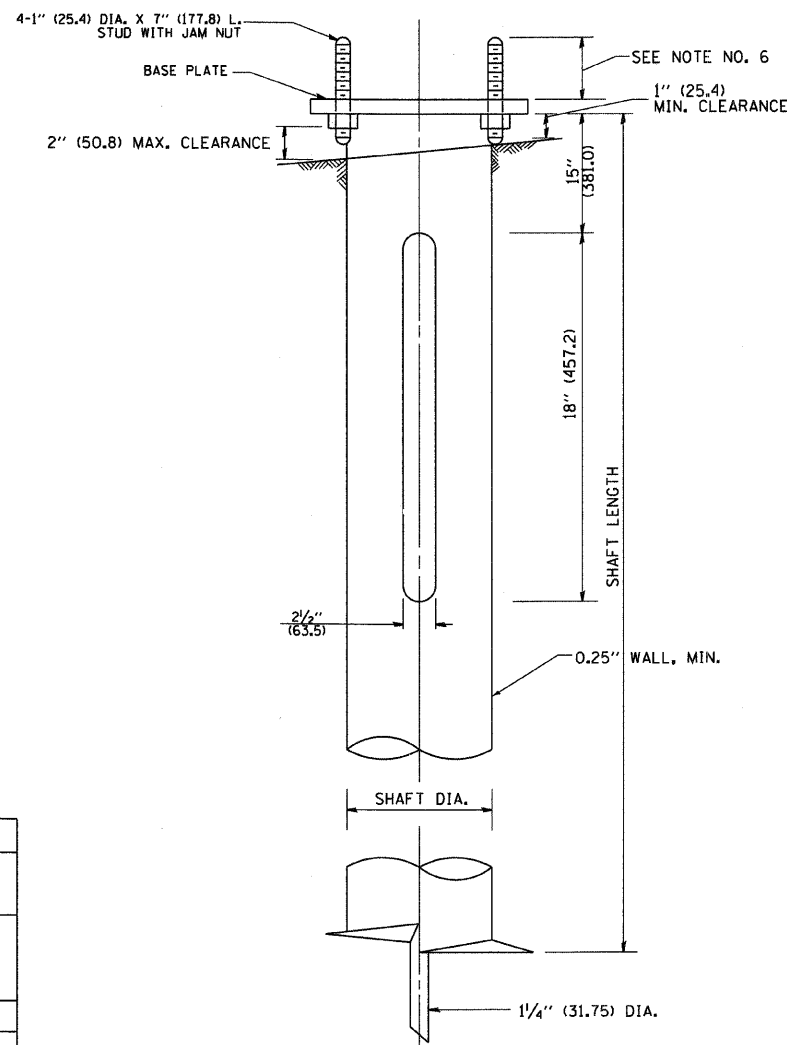
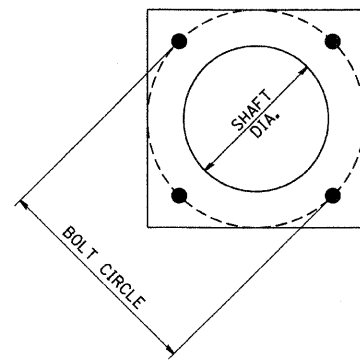
**FOUNDATION EXTENSION DETAIL**



**SECTION A-A**

**NOTES**

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



**HELIX FOUNDATION SIZE**

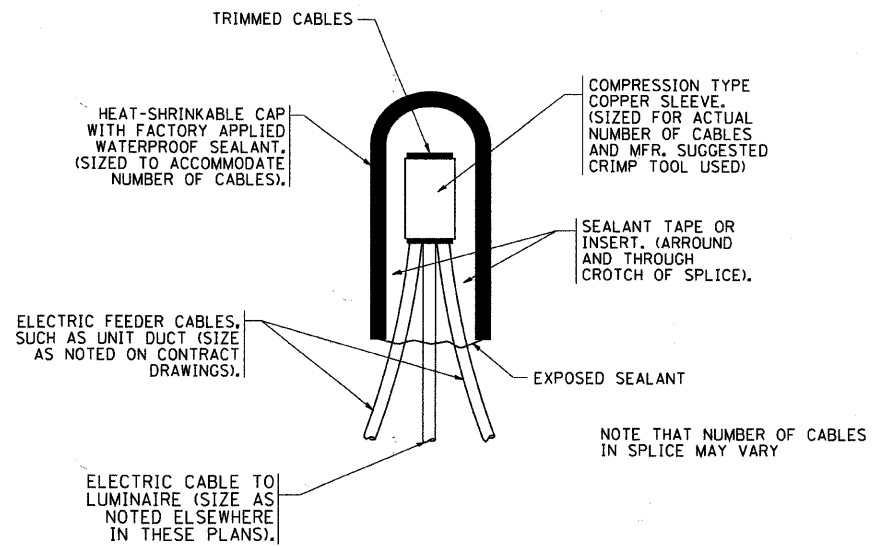
POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
31 FT.-35 FT.	1 1/2"	8 5/8"	6 FT.	12"x12"x1"
36 FT.-40 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
41 FT.-45 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1 1/4"

**METAL HELIX FOUNDATION MATERIALS**

ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

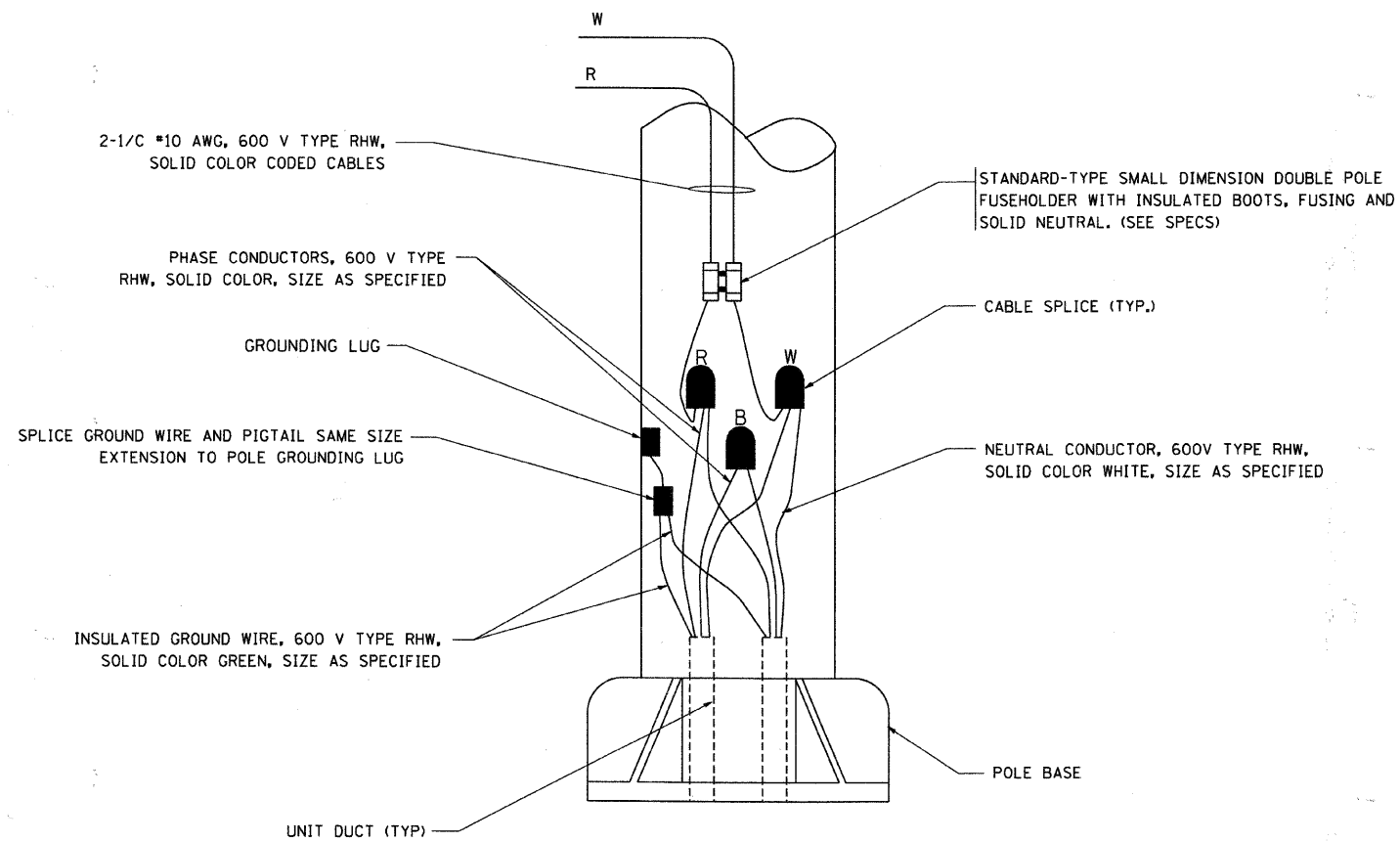
**NOTES:**

1. ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
3. ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
4. THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
5. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
7. ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
8. METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
9. THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
10. THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ( $\pm 1^\circ$ ) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC ( $\pm 0.188$ ) TO THE SHAFT AXIS.
11. THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC ( $\pm 0.125$ ) AND IN LINE ( $\pm 2^\circ$ ).
12. THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.



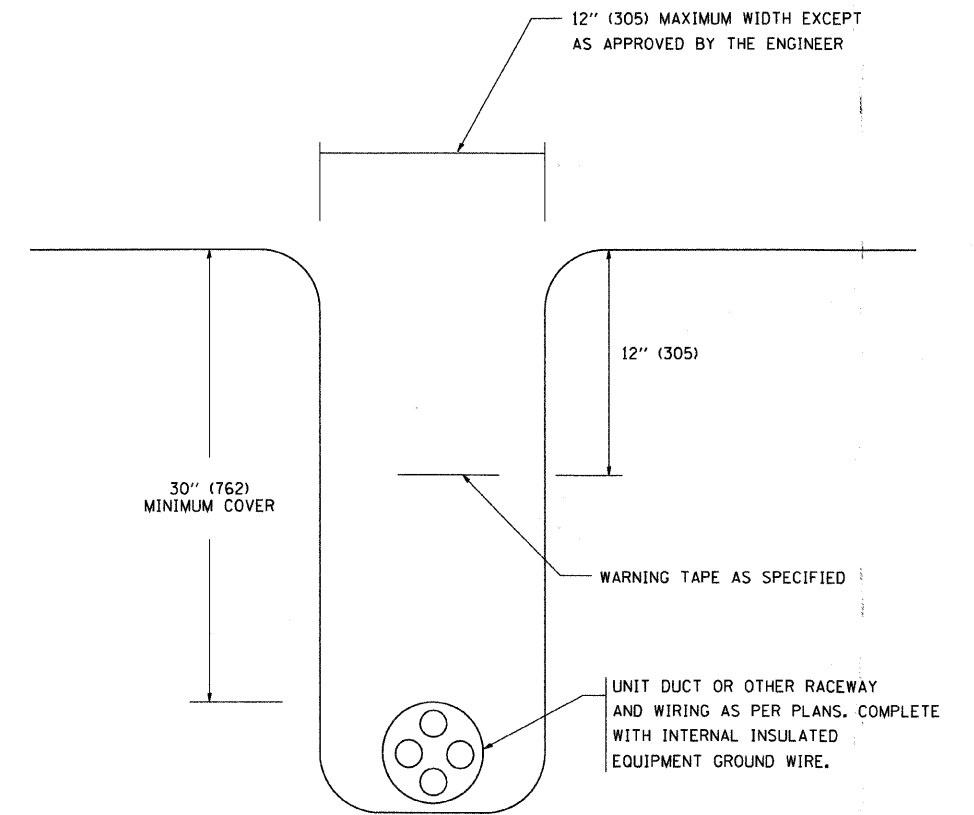
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

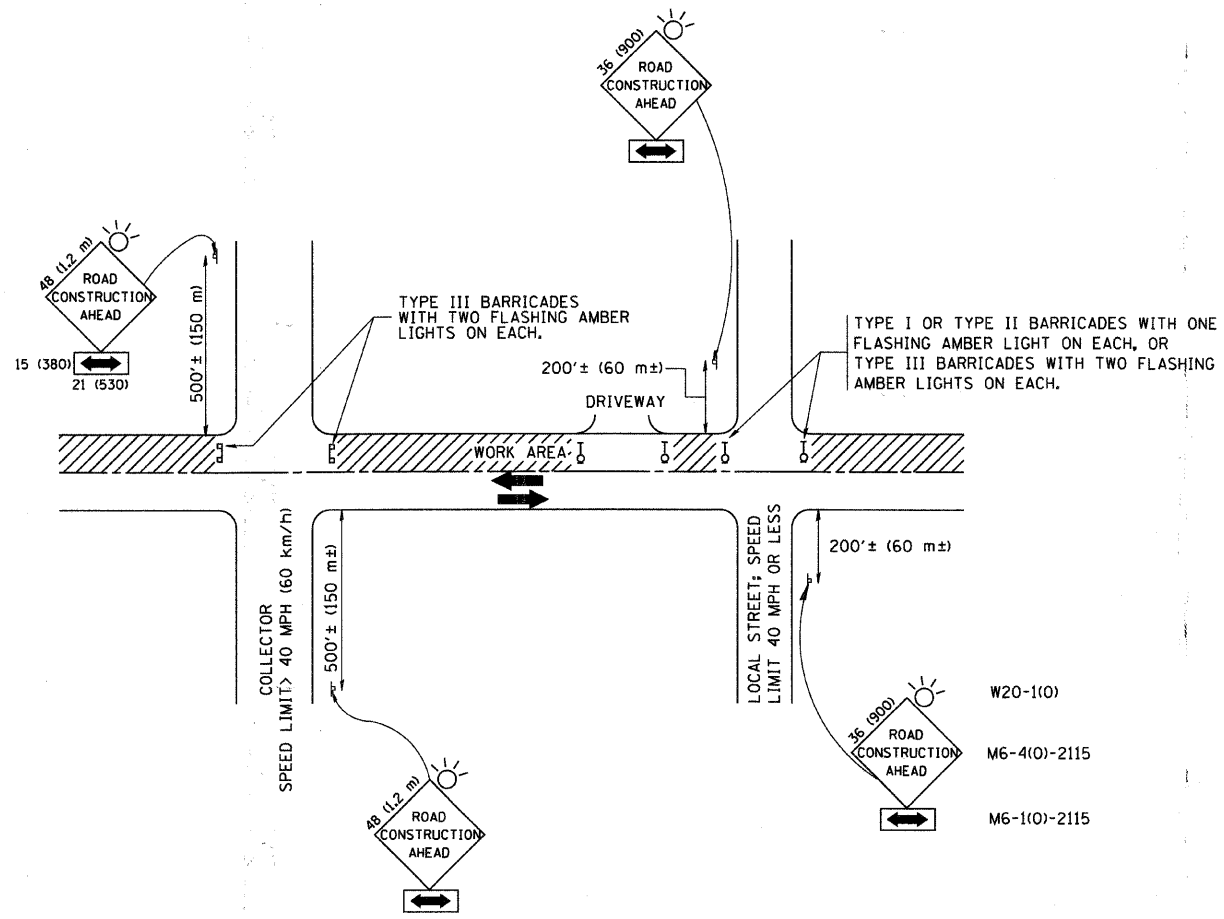


TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

FILE NAME = W:\diststd\22x34\be702.dgn	USER NAME = geglennob	DESIGNED -	REVISED - 08-08-03	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MISC. ELECTRICAL DETAILS SHEET A</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50,000' / IN.	DRAWN -	REVISED -		347	09-00248-00-RS	COOK	274	269			
	PLOT DATE = 1/4/2008	CHECKED -	REVISED -		<b>BE-702</b>			<b>CONTRACT NO.</b>				
		DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1   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 =	USER NAME = gegl1enobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
W:\diststd\22x34\tc10.dgn		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2000	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

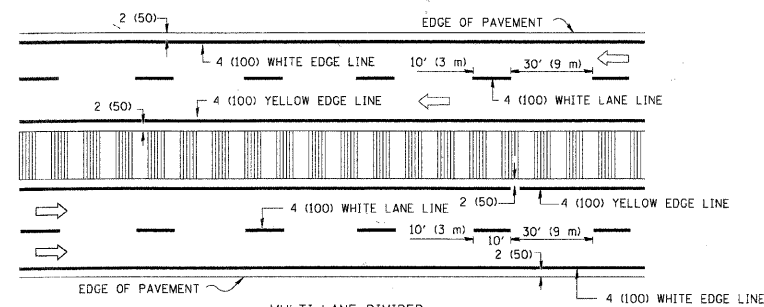
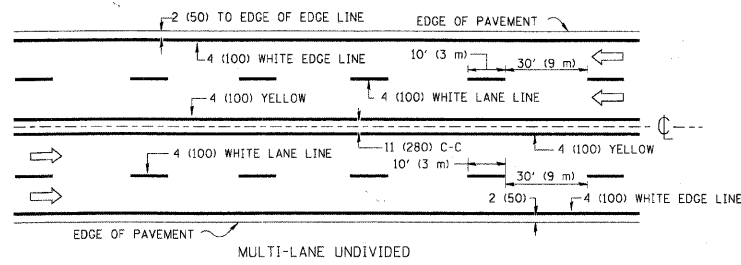
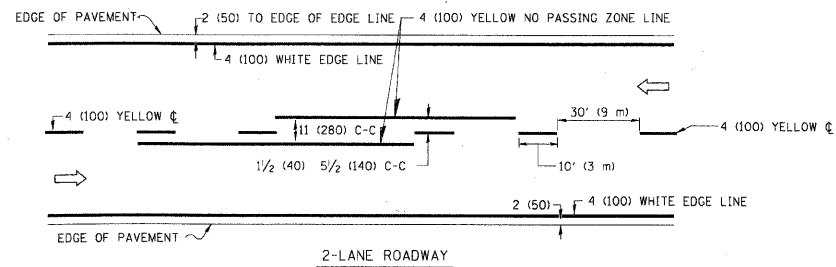
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

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

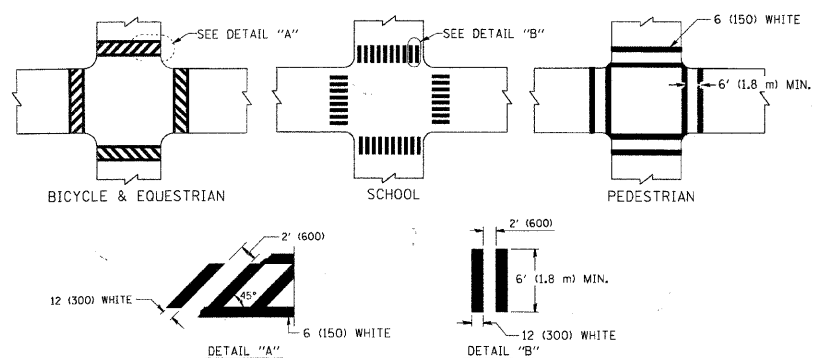
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	270
TC-10			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



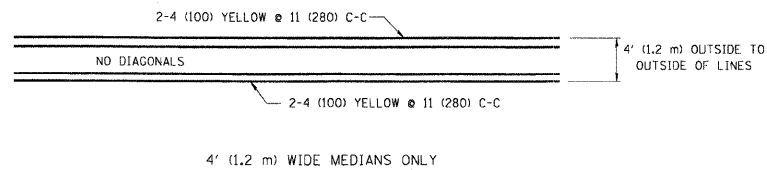


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

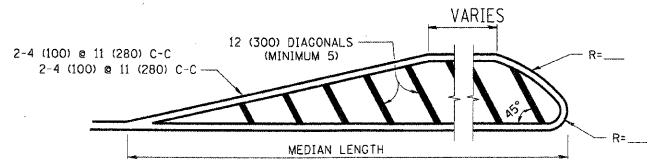
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



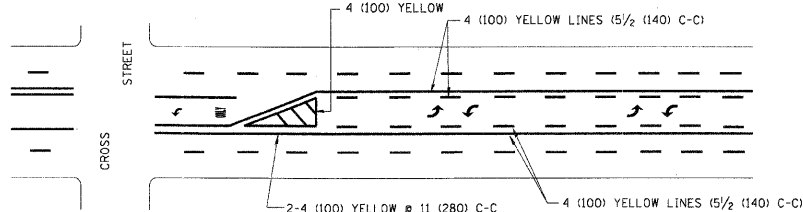
4' (1.2 m) WIDE MEDIANS ONLY



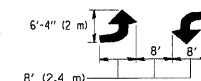
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

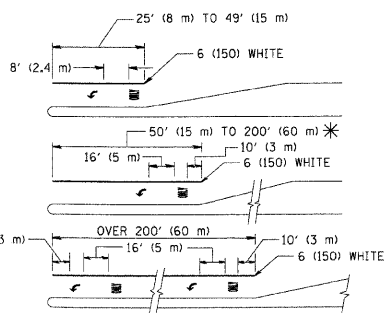


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

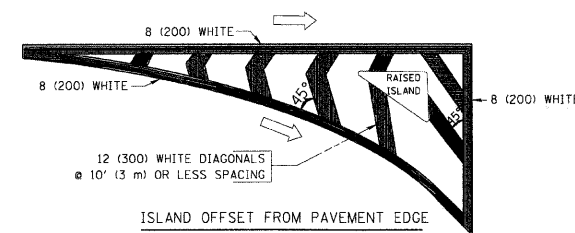


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

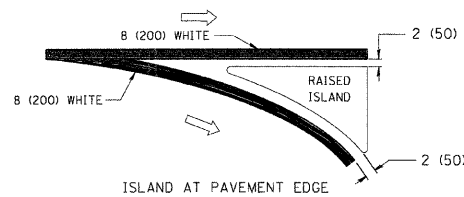
\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100)	SKIP-DASH	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
ON FREEWAYS	5 (125)	SKIP-DASH	WHITE	
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN)	2 @ 6 (150)	SOLID	WHITE	NOT LESS THAN 6' (1.8 m) APART
A. DIAGONALS (BIKE & EQUESTRIAN)	12 (300) @ 45°	SOLID	WHITE	2' (600) APART
B. LONGITUDINAL BARS (SCHOOL)	12 (300) @ 90°	SOLID	WHITE	2' (600) APART
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 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 <sup>2</sup> ) EACH "X"-54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

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

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

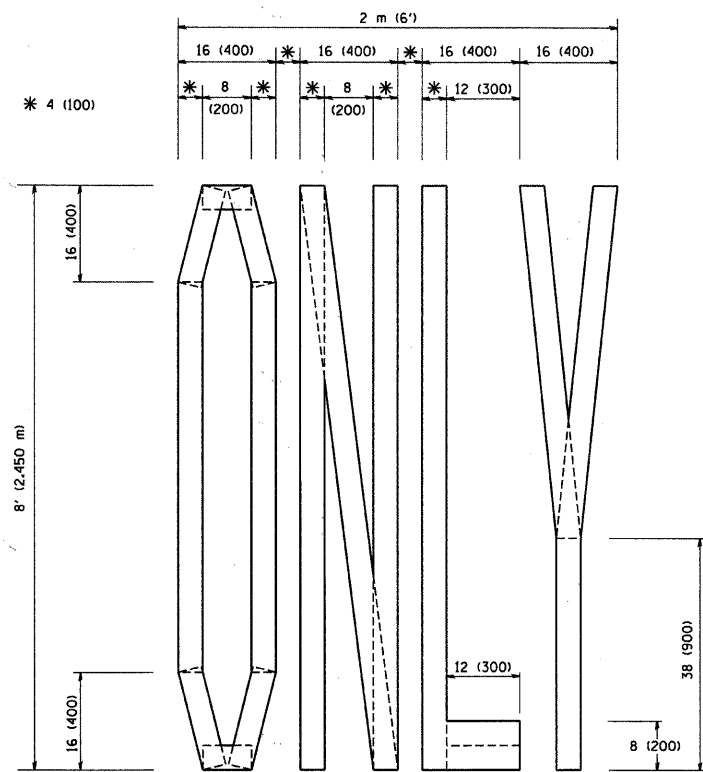
FILE NAME =	USER NAME = drvakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
ct:\pe_work\pav\drvakosgn\d0128315\to	3.dgn	DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50,000 / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

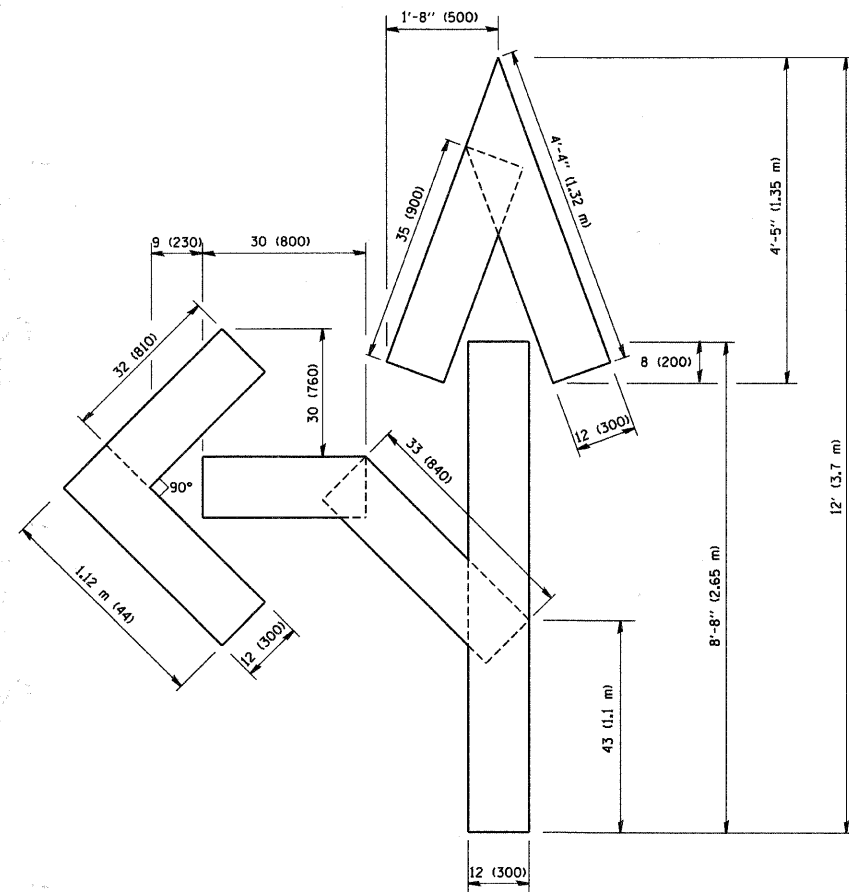
DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

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

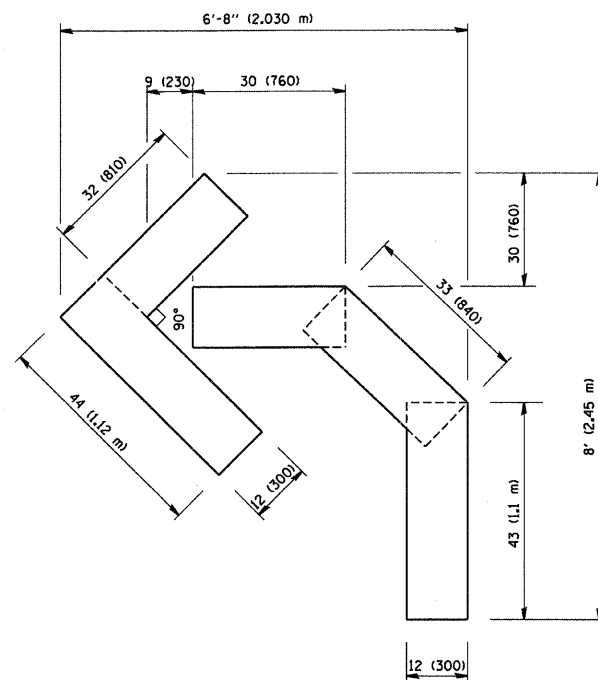
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	272
TC-13		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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.

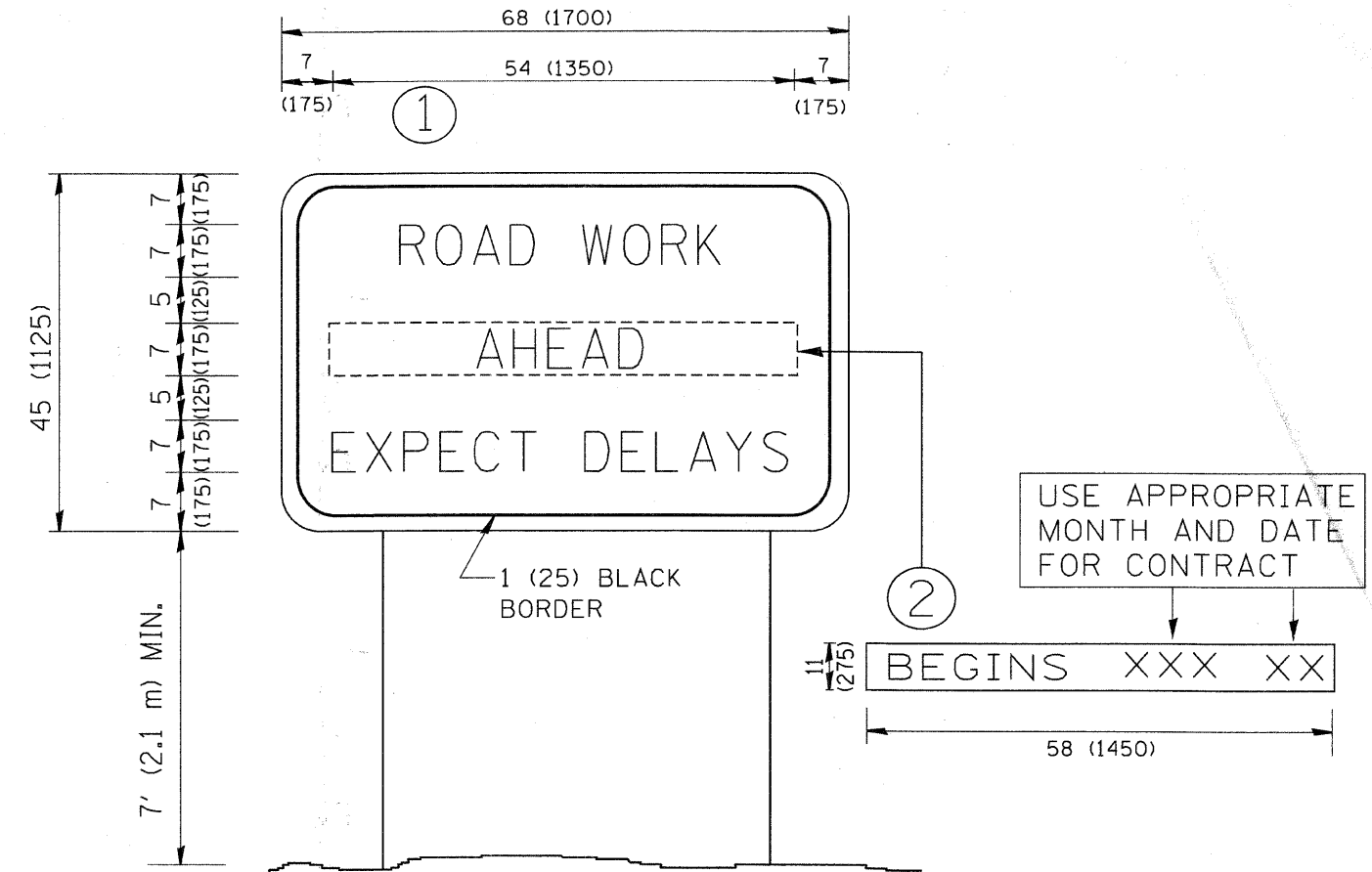
FILE NAME = M:\distata\22x34\16.dgn	USER NAME = geglennob	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 / IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

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.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	09-00248-00-RS	COOK	274	273
TC-16			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\to22.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED - R. MIRS 09-15-97	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ARTERIAL ROAD INFORMATION SIGN</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED - R. MIRS 12-11-97	347			09-00248-00-RS	COOK	274	274	
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99			<b>TC-22</b>		<b>CONTRACT NO.</b>		
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT