11-7-08 Letting, Item 031

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	C-91-378-08	DUPAGE	25	1
FED. ROAD DIST. NO. 1	ILLINOIS	CONTRACT NO. 63081		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL HIGHWAY

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY
FIBER OPTIC COMMUNICATIONS NETWORK

LEMONT ROAD
FAU 2615
97TH STREET/WESTGATE ROAD TO PLAINFIELD ROAD
AND
NAPERVILLE ROAD
FAP 0856
DANADA DRIVE TO ELM STREET

FEDERAL PROJECT NO.: CMM-8003(991)
SECTION 07-00232-05-TL
DUPAGE COUNTY
C-91-378-08

INDEX OF SHEETS

STANDARDS

701301-02 701601-05 701701-05 701801-03 701901
814006-01 857001 878001-06 880001 880006
886001 886006

PROJECT LOCATIONS

		GROSS LENGTH	NET LENGTH
LOCATION (1)	LEMONT ROAD – 83RD ST TO 97TH ST/WESTGATE RD	9600 FEET	9600 FEET
LOCATION (2)	NAPERVILLE ROAD – DANADA DR TO ELM ST	8200 FEET	8200 FEET
	TOTAL	17800 FEET	17800 FEET

0 50' 100' — 1"= 50'

0 50' 100' — 1"= 20'

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

CALL J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
800-893-0123

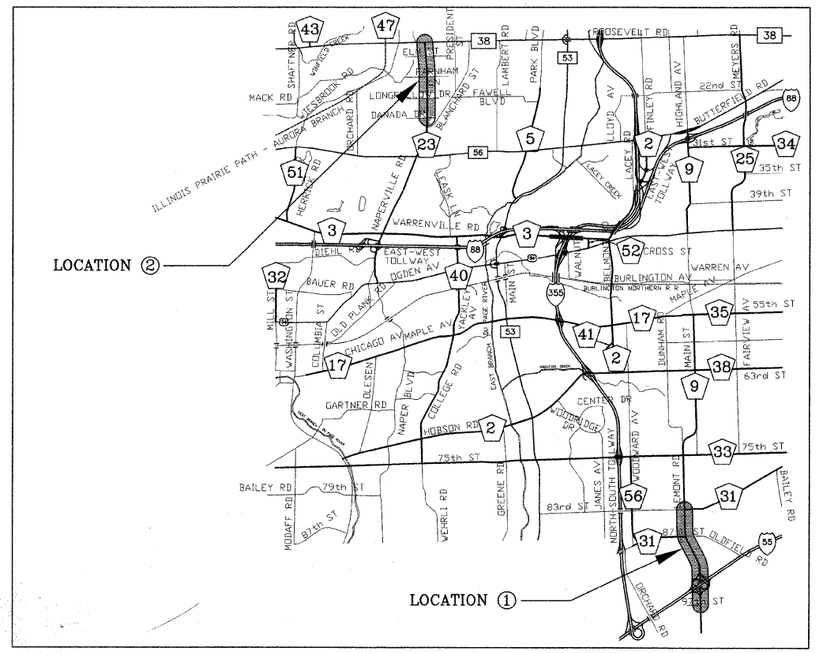
PLANS PREPARED BY
THOMAS HARDY P.E.
DUPAGE COUNTY DIVISION OF TRANSPORTATION

STATE OF ILLINOIS
THOMAS HARDY
ENGINEER
No. 062-056099
LICENSED PROFESSIONAL ENGINEER

Thomas Hardy 9-3-08

CONTRACT NO. 63081

FEDERAL AID COORDINATOR: MARILIN SOLOMON (847)–705–4407



LOCATION MAP
NOT TO SCALE

N

LOCATION OF SECTION INDICATED THUS: –

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED August 28 2008
Charles F. Fobanski
DUPAGE COUNTY, COUNTY ENGINEER

PASSED September 4 2008
Christopher Hoyt
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED REVIEW
SEPTEMBER 2008
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
9 & 23	2008	25	2
SEC. 07-00232-05-TL DUPAGE CO.			

SUMMARY OF QUANTITIES

				CONSTRUCTION CODE Y031-1F										
PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES	LEMONT ROAD INTERCONNECT	LEMONT RD & 97TH ST/WESTGATE RD	LEMONT RD & TIMBER TR/CHEESE RD	LEMONT RD & 87TH ST	LEMONT RD & 83RD ST	NAPERVILLE ROAD INTERCONNECT	NAPERVILLE RD & DANADA DR	NAPERVILLE RD & LONGFELLOW DR	NAPERVILLE RD & FARNHAM LN	NAPERVILLE RD & ELM ST	NAPERVILLE RD & ROOSEVELT RD
67100100	MOBILIZATION	L SUM	**1**											
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	**1**											
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	**1**											
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	**1**											
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	**9645**	6429					3216					
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	**4556**	1953					2603					
81400100	HANDHOLE	EACH	**27**	14					13					
81400200	HEAVY-DUTY HANDHOLE	EACH	**7**	7										
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	**9645**	6429					3216					
85000200	MAINTAINANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	**EACH**	**8**		1	1	1	1		1	1	1	1	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	**6**		1		1	1		1		1	1	
85700500	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	**2**			1					1			
86400100	TRANSCEIVER - FIBER OPTIC	EACH	**6**			1	1	1			1	1	1	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	**750**		750									
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	**18197**	10329					7868					
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	**18197**	10329					7868					
87900200	DRILL EXISTING HANDHOLE	*EACH*	**14**		1	2	2	1		1	2	2	2	1
88500100	INDUCTIVE LOOP DETECTOR	EACH	**2**		2									
88600100	DETECTOR LOOP, TYPE 1	FOOT	**180**		180									
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	**4**		1					1		1	1	
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	**1**		1									
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	**4**		1					1		1	1	
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	**1**		1									
X0325705	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM *LEVEL 2*	L SUM	**1**	0.5					0.5					

NOTE: FEDERAL CMAQ FUNDING 80%
DUPAGE COUNTY DIVISION OF TRANSPORTATION FUNDING 20%

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00232-05-TL	DU PAGE	25	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

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

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

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

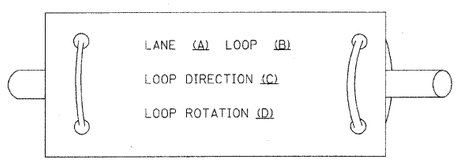
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

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

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

LOOP LEAD-IN CABLE TAG

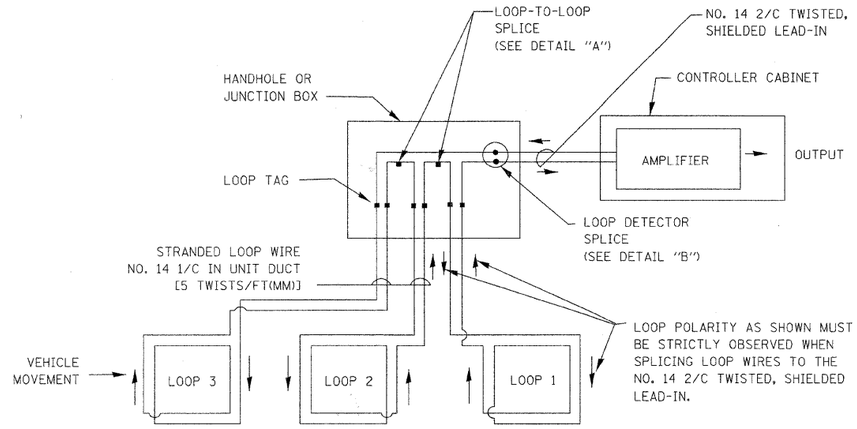


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

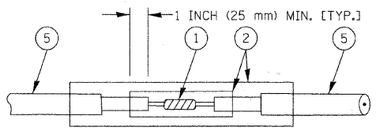
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

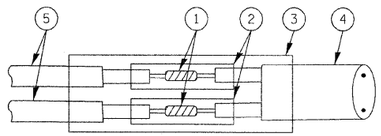


DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

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

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

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

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

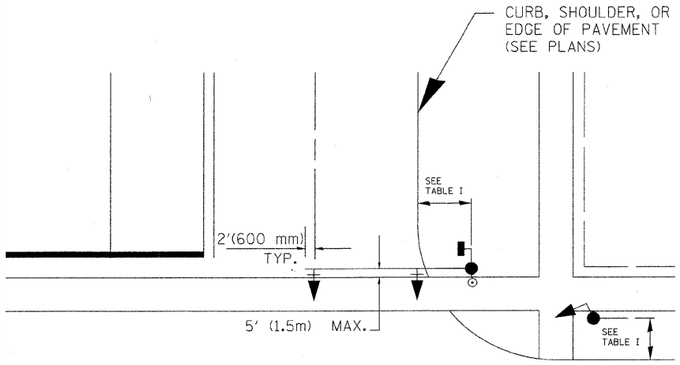
SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

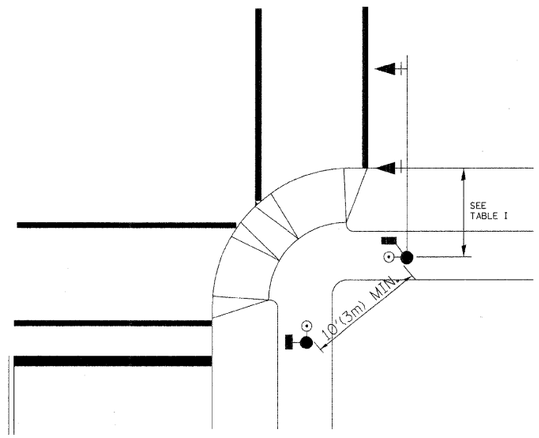
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00232-05-TL	DU PAGE	25	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION. EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

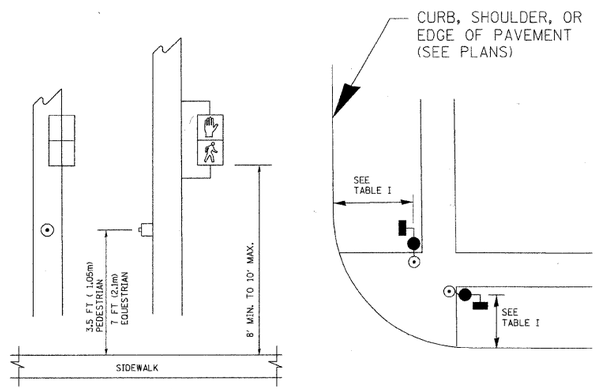


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

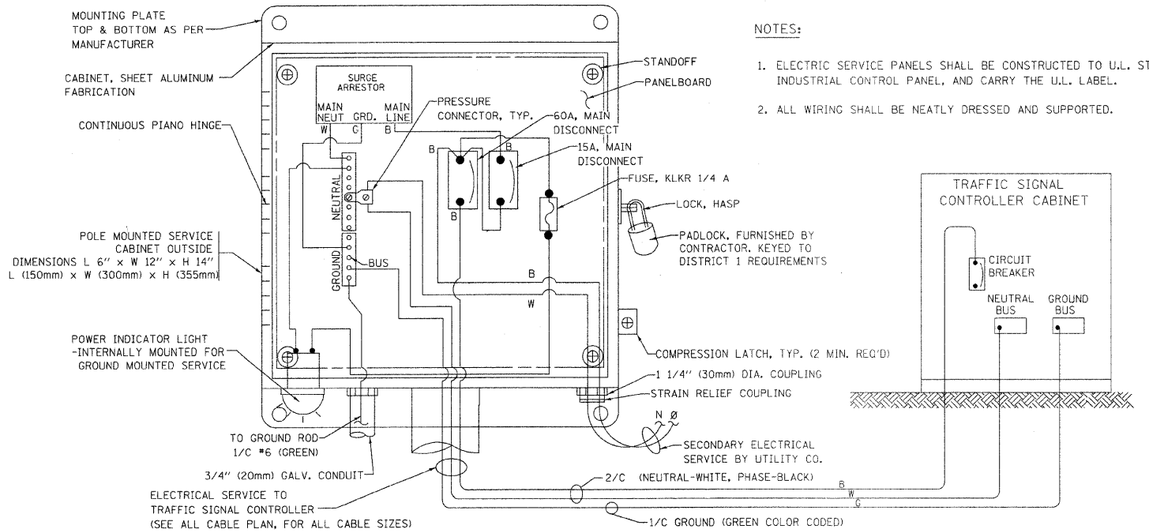
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. NONE
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

TS05

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00232-05-TL	DU PAGE	25	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



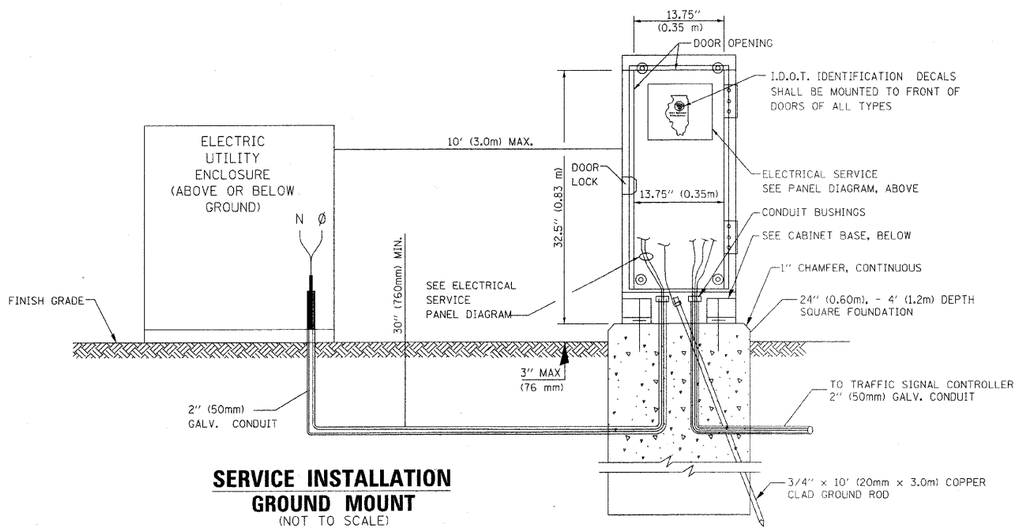
NOTES:

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

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

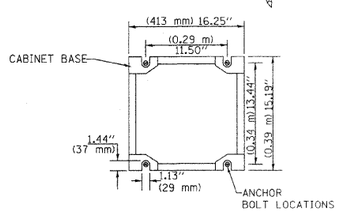
SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



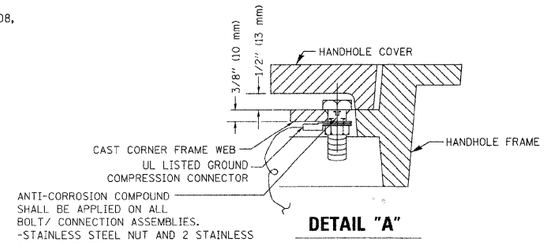
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

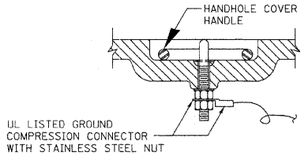


CABINET – BASE BOLT PATTERN

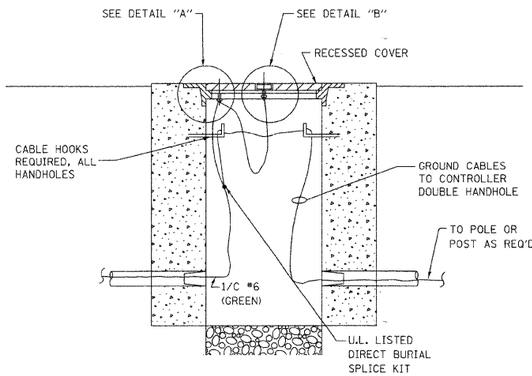
(NOT TO SCALE)



DETAIL "A"

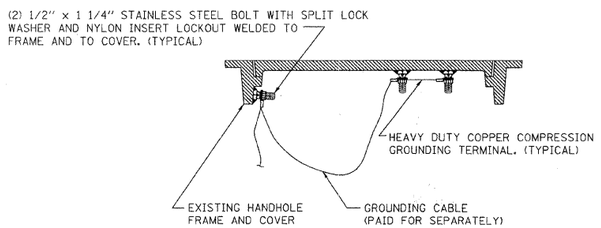


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



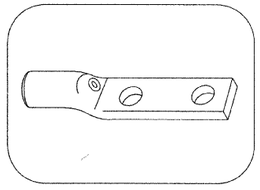
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

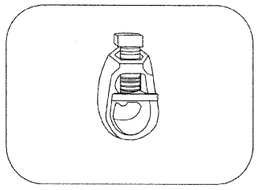
NOTES:

GROUNDING SYSTEM

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



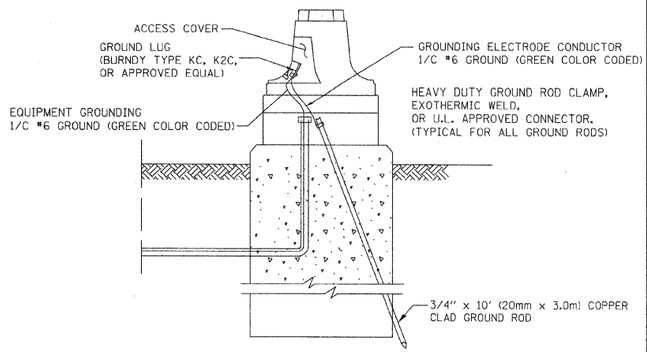
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

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



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS NAME	DATE

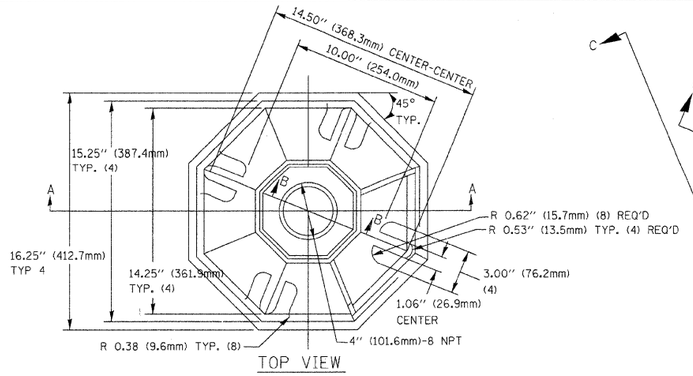
ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

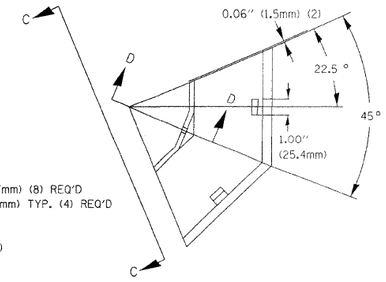
SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

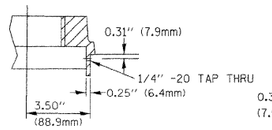
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

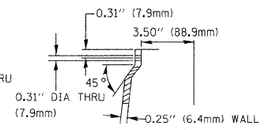


TOP VIEW

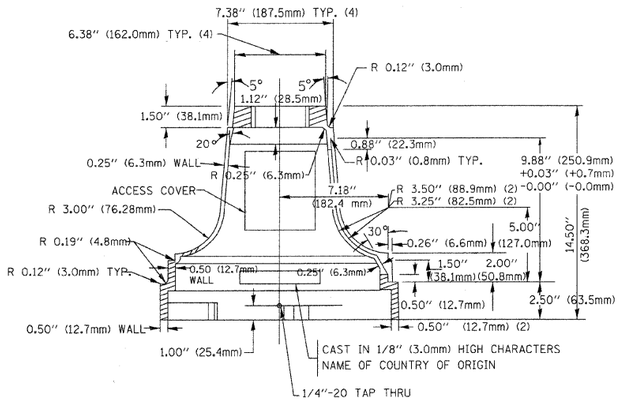




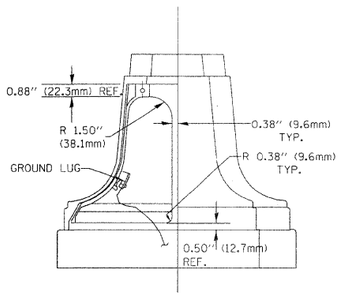
SECTION B-B



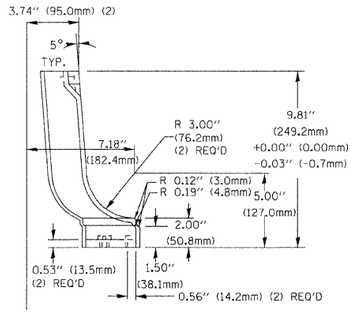
SECTION D-D



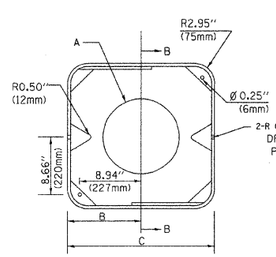
SECTION A-A

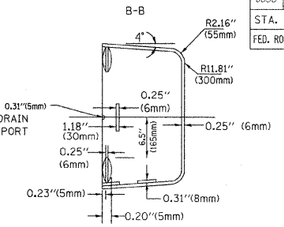


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A





F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0856	07-00232-05-TL	DU PAGE	25	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

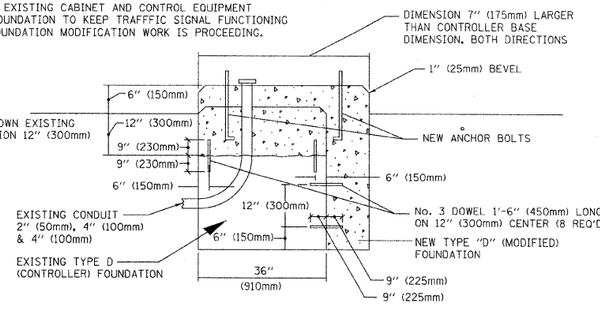
MATERIAL:

- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

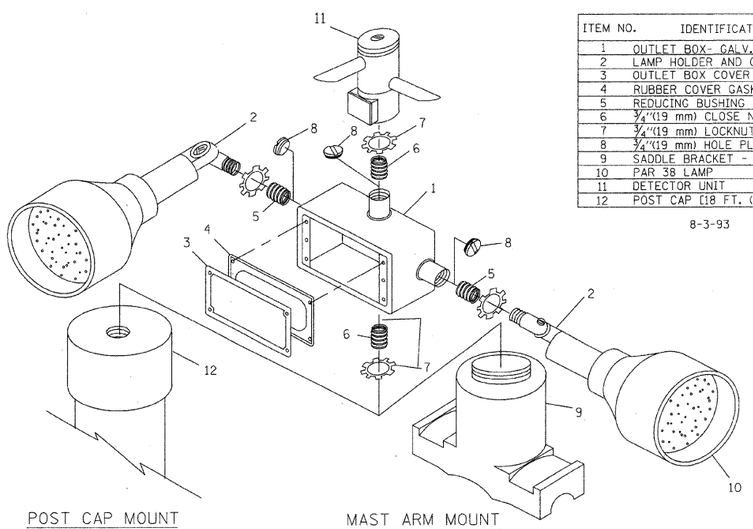
SHROUD DETAIL

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

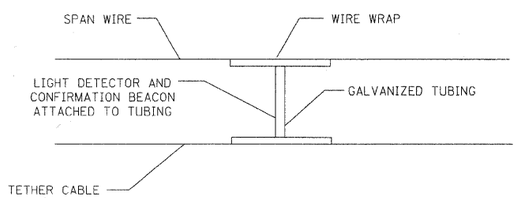
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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

8-3-93

NOTES:

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

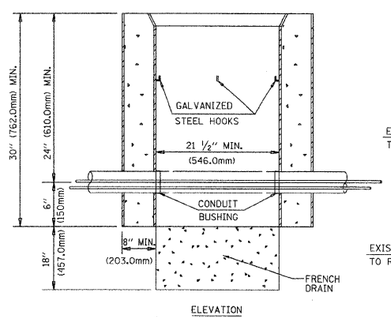


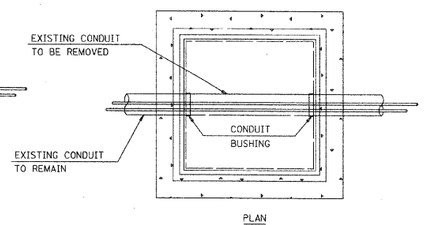
LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:

1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.





DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

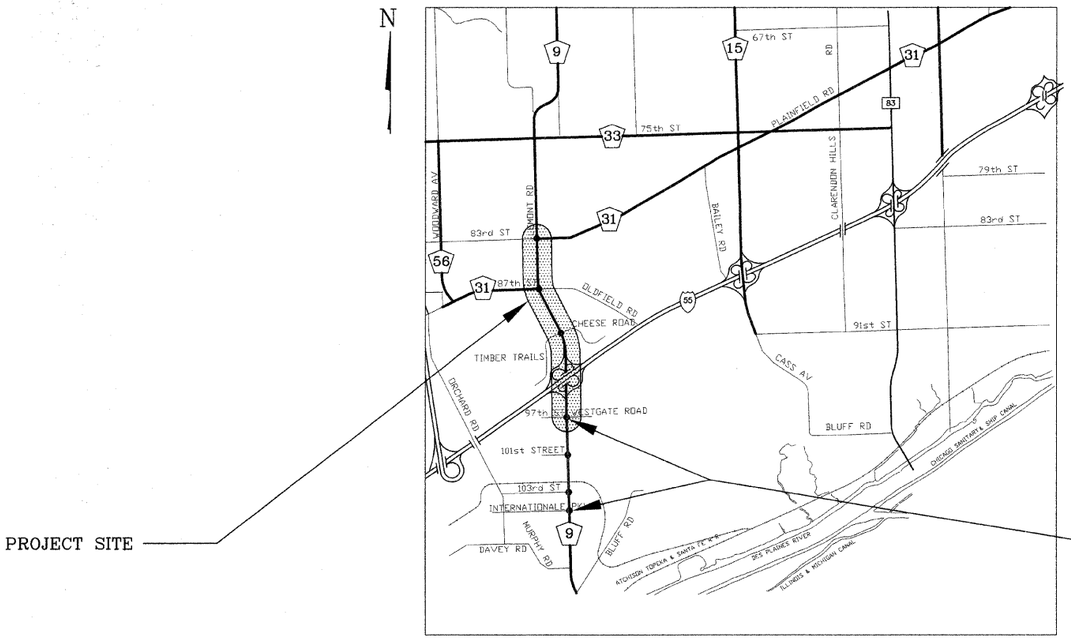
SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

TS05

COUNTY HIGHWAY	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	7
SEC. 07-00232-05-TL			DU PAGE CO

LOCATION 1 SYSTEM MAP



LOCATION 1 SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES	LEMONT ROAD INTERCONNECT	LEMONT RD & 97TH ST/WESTGATE RD	LEMONT RD & TIMBER TR/CHEESE RD	LEMONT RD & 87TH ST	LEMONT RD & 83RD ST
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	**6429**	6429				
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	**1953**	1953				
81400100	HANDHOLE	EACH	**14**	14				
81400200	HEAVY-DUTY HANDHOLE	EACH	**7**	7				
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	**6429**	6429				
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	**750**		750			
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	**10329**	10329				
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	**10329**	10329				
87900200	DRILL EXISTING HANDHOLE	EACH	**6**		1	2	2	1
88500100	INDUCTIVE LOOP DETECTOR	EACH	**2**		2			
88600100	DETECTOR LOOP, TYPE 1	FOOT	**180**		180			
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	**1**		1			
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	**1**		1			
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	**1**		1			
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	**1**		1			
X0325705	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM *LEVEL 2*	L SUM	**0.5**	0.5				

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD
SUMMARY OF QUANTITIES

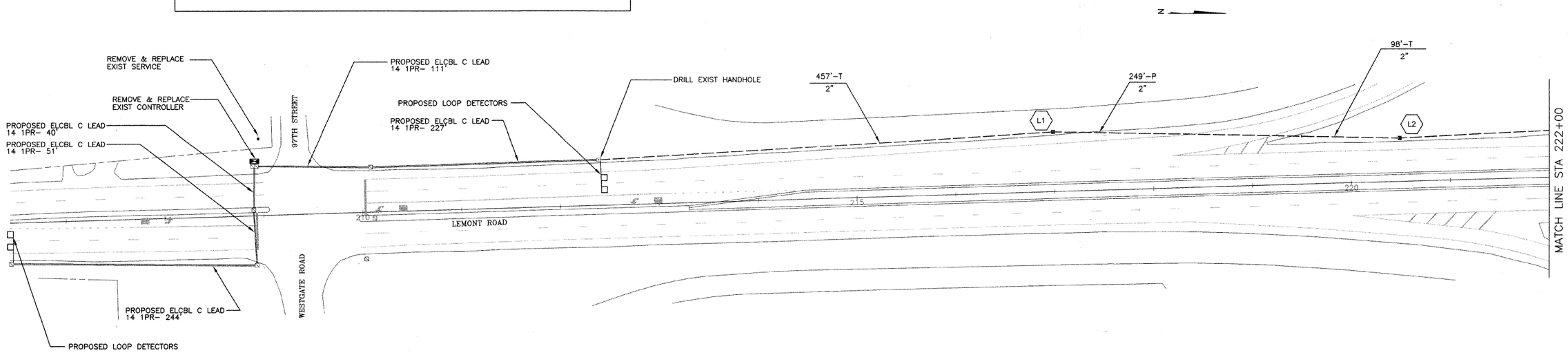
SCALE: NONE
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	8
SEC. 07-00232-05-TL	DUPAGE CO.		

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.



REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
97TH ST/WESTGATE RD TO 83RD ST/PLAINFIELD RD

SCALE: 1"=50'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	9
SEC. 07-00232-05-TL	DUPAGE CO.		

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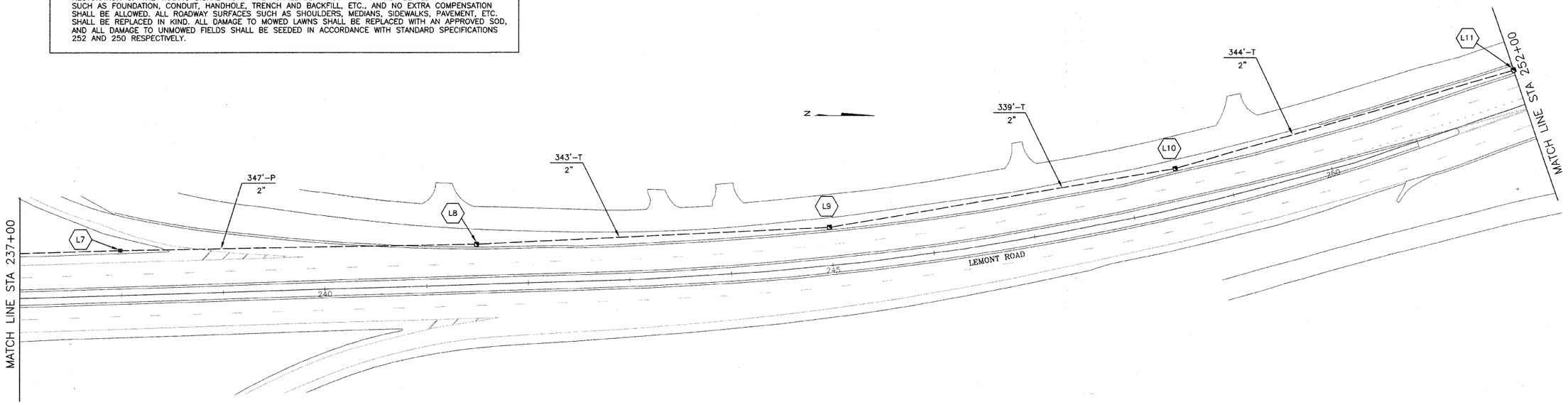

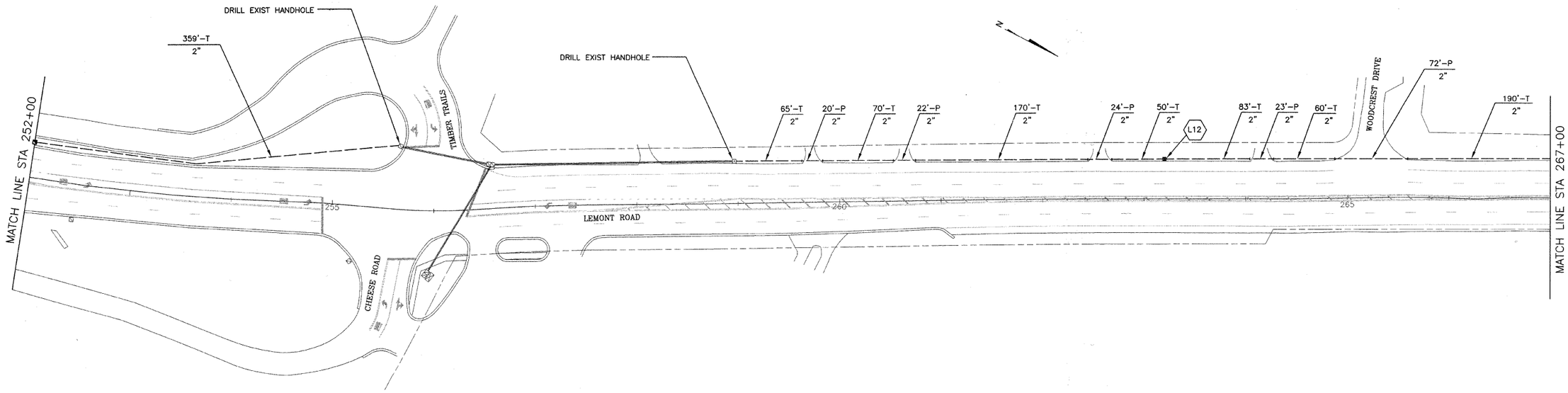

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD

TRAFFIC SIGNAL INTERCONNECT PLAN

97TH ST/WESTGATE RD TO

83RD ST/PLAINFIELD RD

SCALE: 1"=50'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	10
SEC. 07-00232-05-TL DUPAGE CO.			

RESTORATION OF WORK AREA

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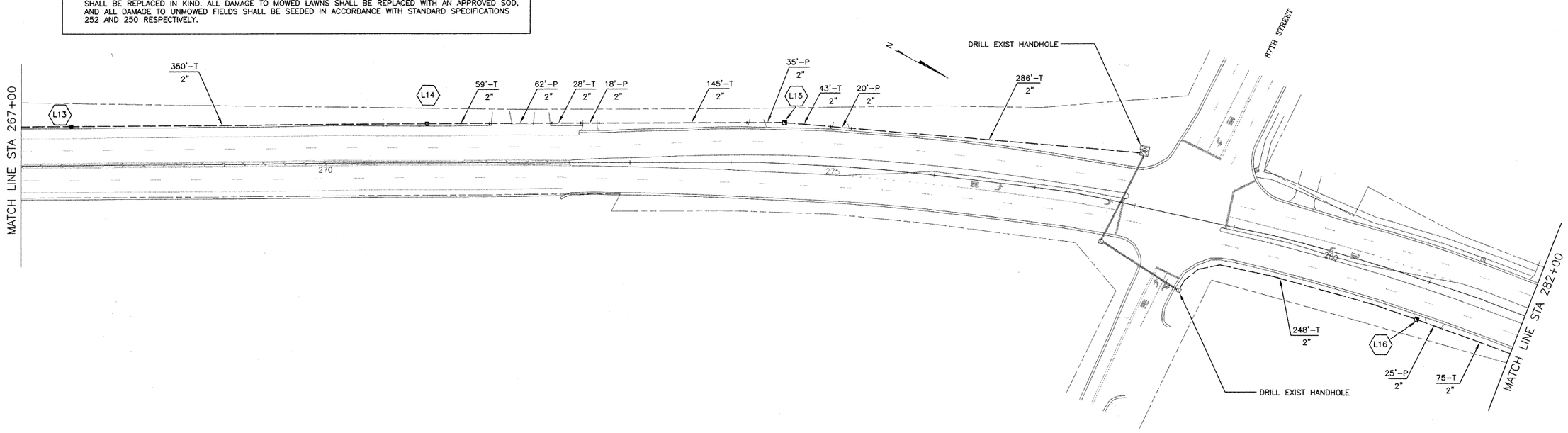

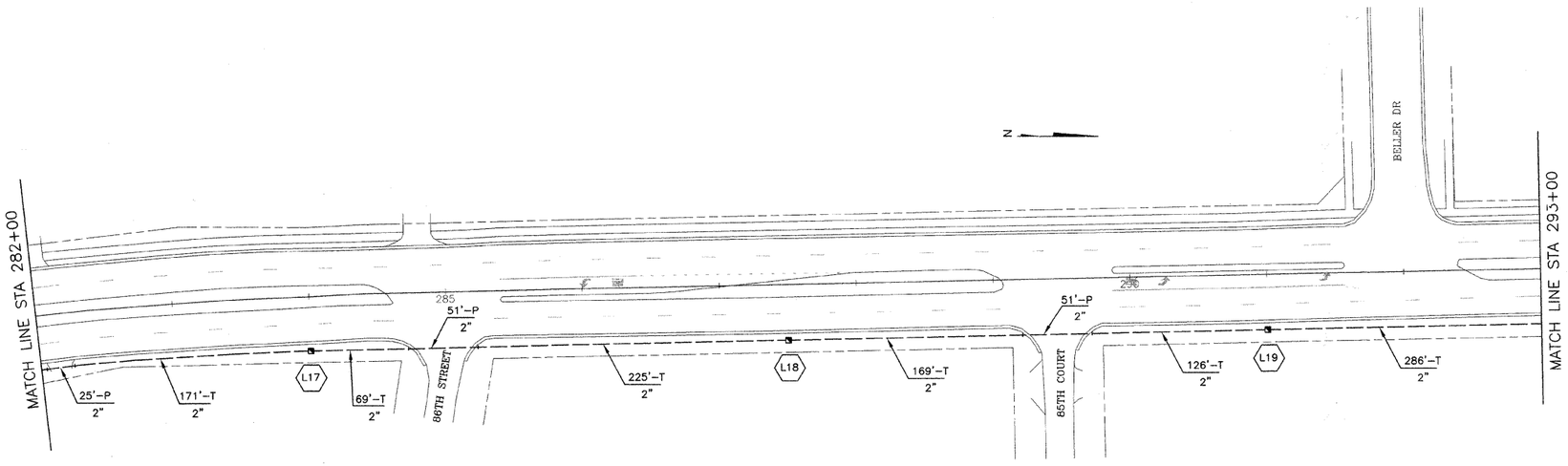

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
97TH ST/WESTGATE RD TO 83RD ST/PLAINFIELD RD

SCALE: 1"=50'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	11
SEC. 07-00232-05-TL DUPAGE CO.			

RESTORATION OF WORK AREA

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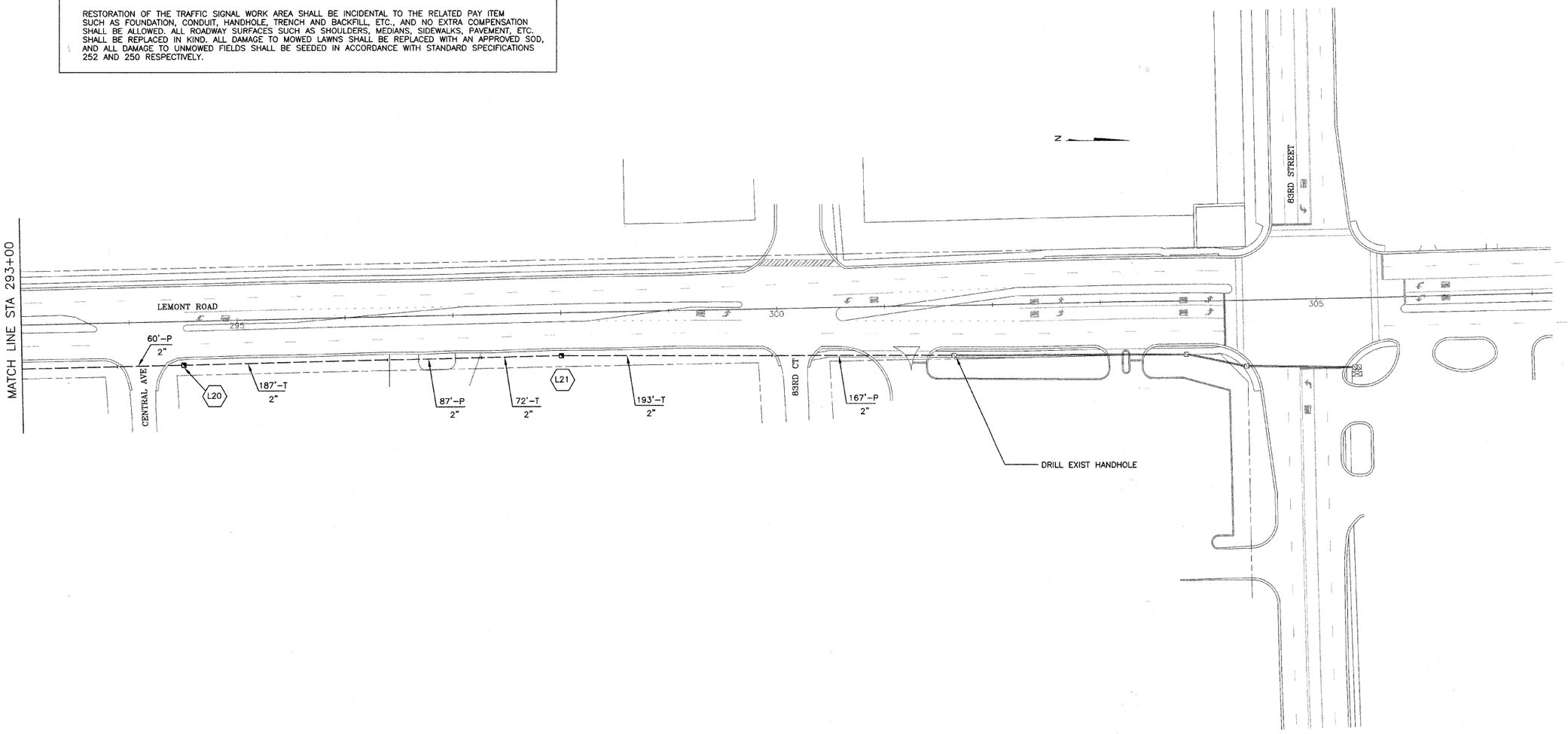


REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

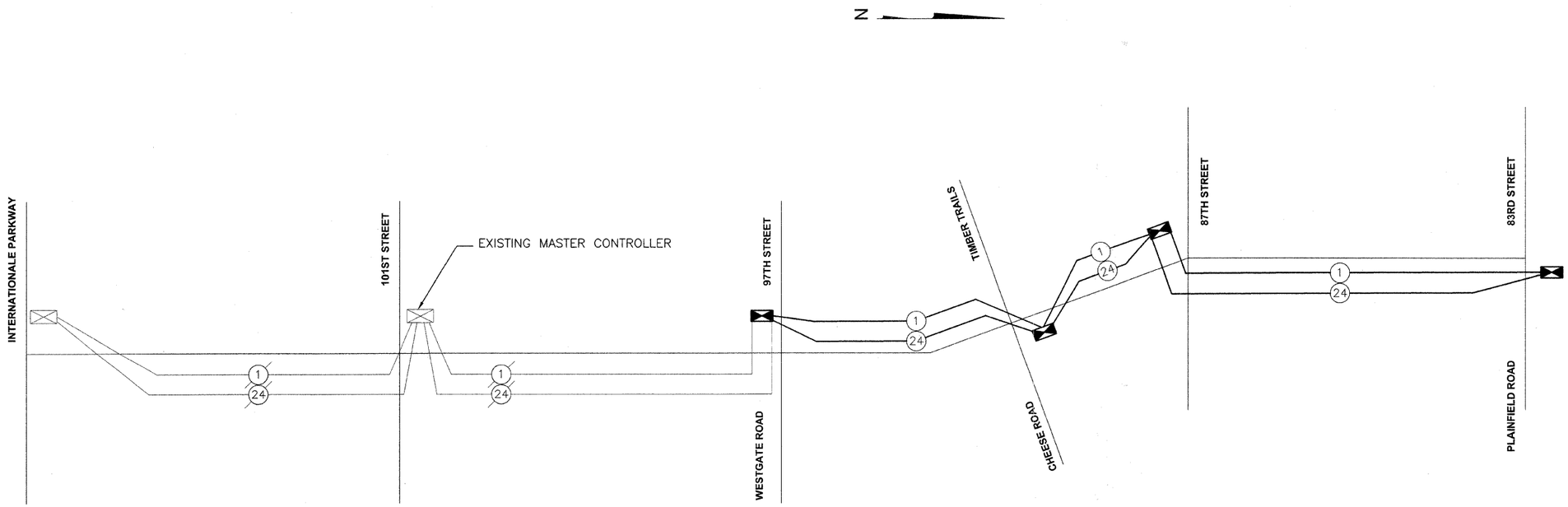
LEMONT ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
97TH ST/WESTGATE RD TO 83RD ST/PLAINFIELD RD

SCALE: 1"=50'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	12
SEC. 07-00232-05-TL DUPAGE CO.			



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- (24) PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125, MM12F SM12F
- (1) PROPOSED ELECTRIC CABLE 1/C (AS SPECIFIED)
- (24) NO. 62.5/125, MM12F SM12F
- (1) EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)

PROPOSED HANDHOLE LAYOUT FOR LEMONT ROAD

STATION/OFFSET	DESCRIPTION
L1 217+00 60' LT	HEAVY DUTY HANDHOLE
L2 220+50 44' LT	HEAVY DUTY HANDHOLE
L3 224+00 51' LT	HEAVY DUTY HANDHOLE
L4 227+50 59' LT	HEAVY DUTY HANDHOLE
L5 231+00 67' LT	HEAVY DUTY HANDHOLE
L6 234+50 45' LT	HEAVY DUTY HANDHOLE
L7 238+00 45' LT	HEAVY DUTY HANDHOLE
L8 241+50 40' LT	STANDARD HANDHOLE
L9 245+00 38' LT	STANDARD HANDHOLE
L10 248+50 39' LT	STANDARD HANDHOLE
L11 252+00 35' LT	STANDARD HANDHOLE
L12 263+20 39' LT	STANDARD HANDHOLE

STATION/OFFSET	DESCRIPTION
L13 267+50 38' LT	STANDARD HANDHOLE
L14 271+00 38' LT	STANDARD HANDHOLE
L15 274+50 40' LT	STANDARD HANDHOLE
L16 281+50 40' RT	STANDARD HANDHOLE
L17 248+00 40' RT	STANDARD HANDHOLE
L18 287+50 41' RT	STANDARD HANDHOLE
L19 291+00 41' RT	STANDARD HANDHOLE
L20 294+50 41' RT	STANDARD HANDHOLE
L21 298+00 40' RT	STANDARD HANDHOLE

REVISIONS NAME	DATE

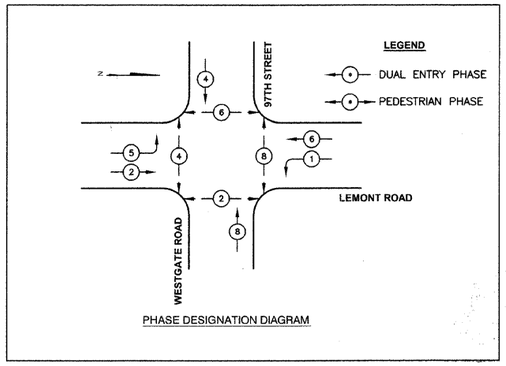
DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD INTERCONNECT CABLE PLAN AND HANDHOLE LAYOUT

SCALE: NONE
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	13
SEC. 07-00232-05-TL	DUPAGE CO.		



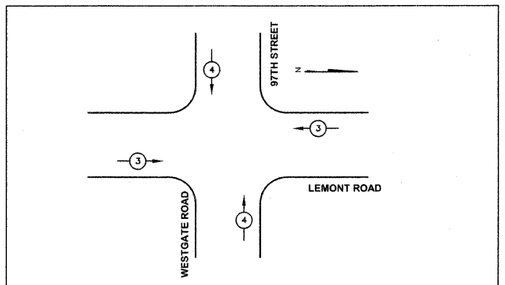
PHASE DESIGNATION DIAGRAM

SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QUANTITY
MAINTAIN EXISTING TRAFFIC SIGNAL INSTALL	L SUM	1
FULL ACTUATED CONTROLLER & TY IV CAB	EACH	1
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1PR	FOOT	750
DRILL EXISTING HANDHOLE	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	2
DETECTOR LOOP, TYPE 1	FOOT	180
RELOCATE LIGHT DETECTOR	EACH	1
SERVICE INSTALL, POLE MOUNT	EACH	1

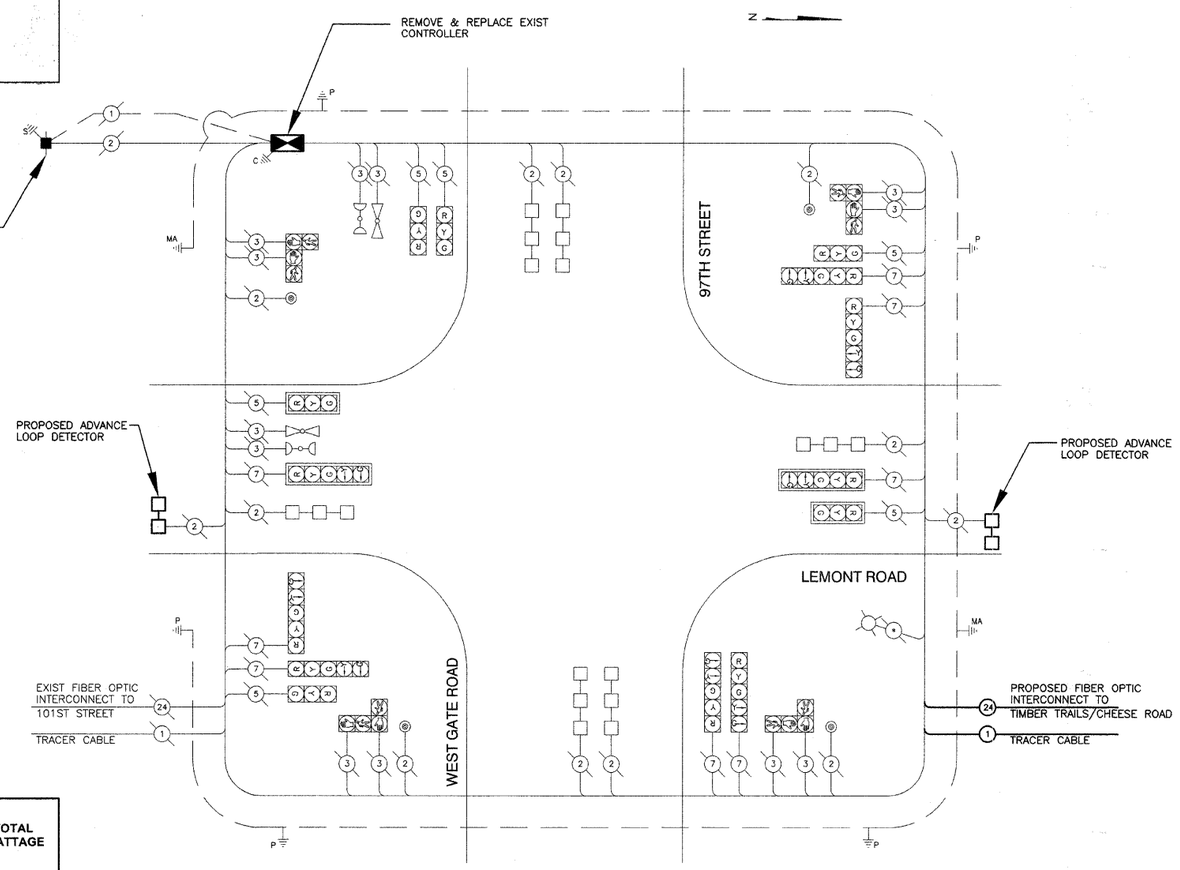
NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. LOOP DETECTORS TO BE CUT FOR NORTH AND SOUTHBOUND ADVANCE DETECTION AND IS TO REPLACE EXISTING MAGNETIC DETECTORS.
3. EXISTING CABLE TO BE REMOVED AND REPLACED IN EXISTING CONDUIT TO ADVANCE DETECTORS.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	14	135	10	0.60	84
YELLOW BALL	14	135	22	0.03	9.2
GREEN BALL	14	135	12	0.37	62.2
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	8	135	10	0.02	1.6
GREEN ARROW	8	135	5	0.13	5.2
PED - WALK	8	90	5	0.05	2
PED- DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	1	310		0.50	310
				TOTAL=	620

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

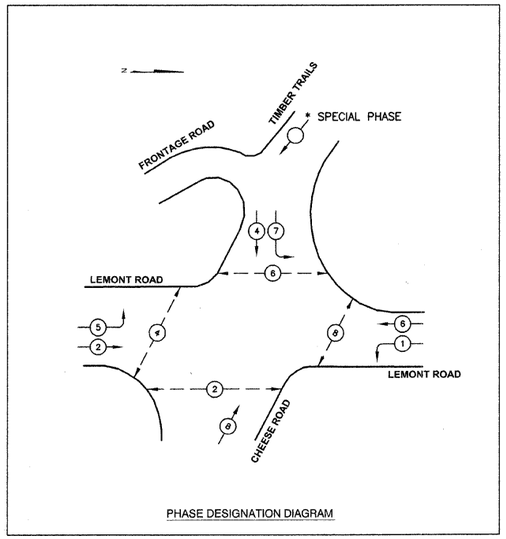
LEMONT ROAD & 97TH STREET/ WESTGATE ROAD EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

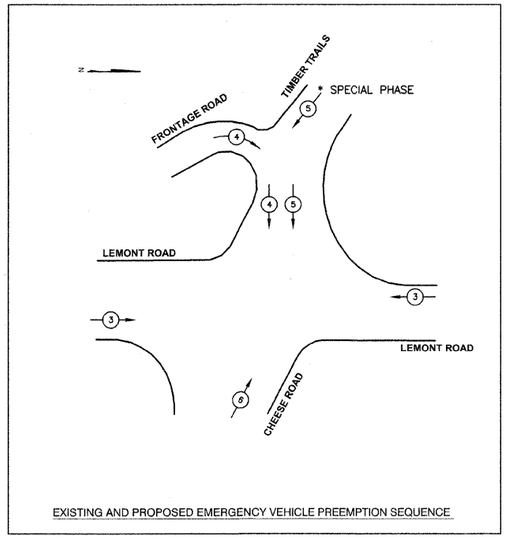
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	14
SEC. 07-00232-05-TL DUPAGE CO.			



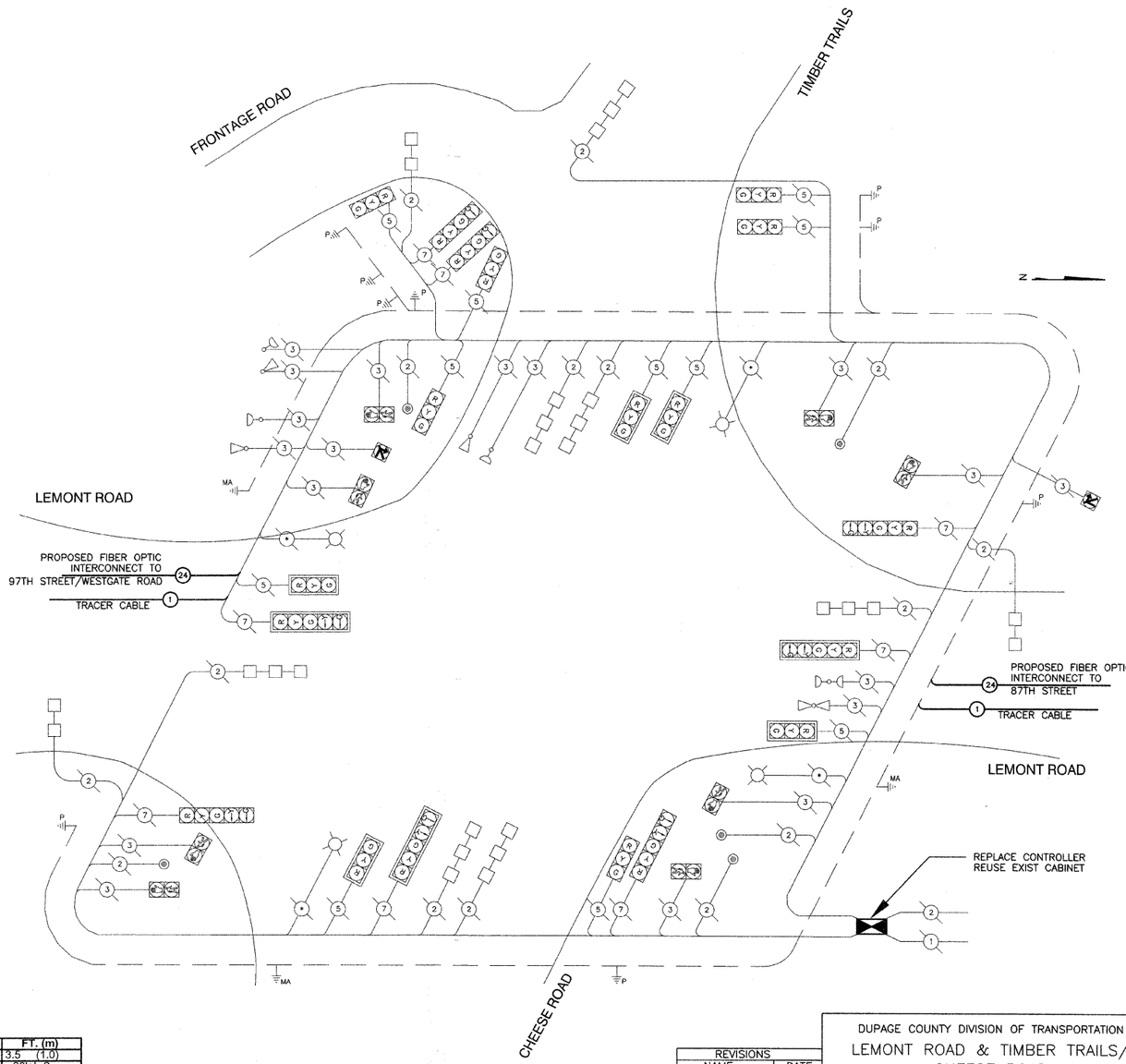
PHASE DESIGNATION DIAGRAM



EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER TO BE REPLACED, EXISTING CABINET TO BE KEPT IN PLACE.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.



CABLE PLAN LEGEND

PROPOSED	EXISTING		PROPOSED	EXISTING	
	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED			CONFIRMATION BEACON
		CONTROLLER CABINET			LUMINAIRE
		SERVICE INSTALLATION			PEDESTRIAN PUSH BUTTON
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE			12" PEDESTRIAN SIGNAL SECTION
		VEHICLE DETECTOR, INDUCTION LOOP			SIGNAL FACE WITH BACKPLATE
		EMERGENCY VEHICLE LIGHT DETECTOR			

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	14	135	10	0.60	84
YELLOW BALL	14	135	22	0.03	9.2
GREEN BALL	14	135	12	0.37	62.2
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	8	135	10	0.02	1.6
GREEN ARROW	8	135	5	0.13	5.2
PED - WALK	8	90	5	0.05	2
PED- DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	1	310		0.50	310
				TOTAL=	620

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

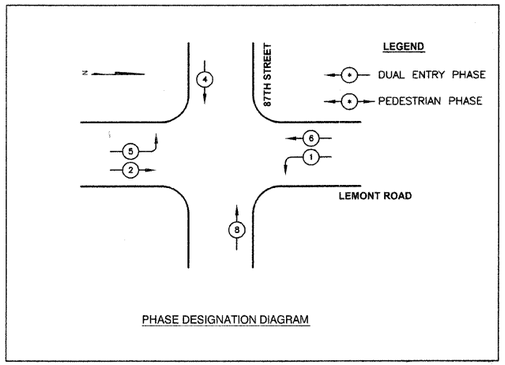
LEMONT ROAD & TIMBER TRAILS/ CHEESE ROAD EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

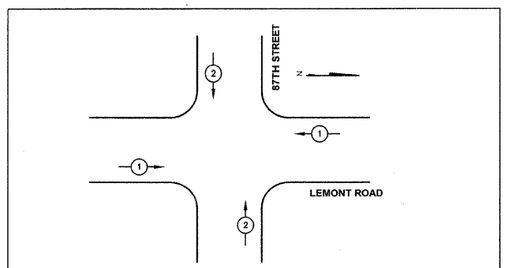
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	15
SEC. 07-00232-05-TL	DUPAGE CO.		

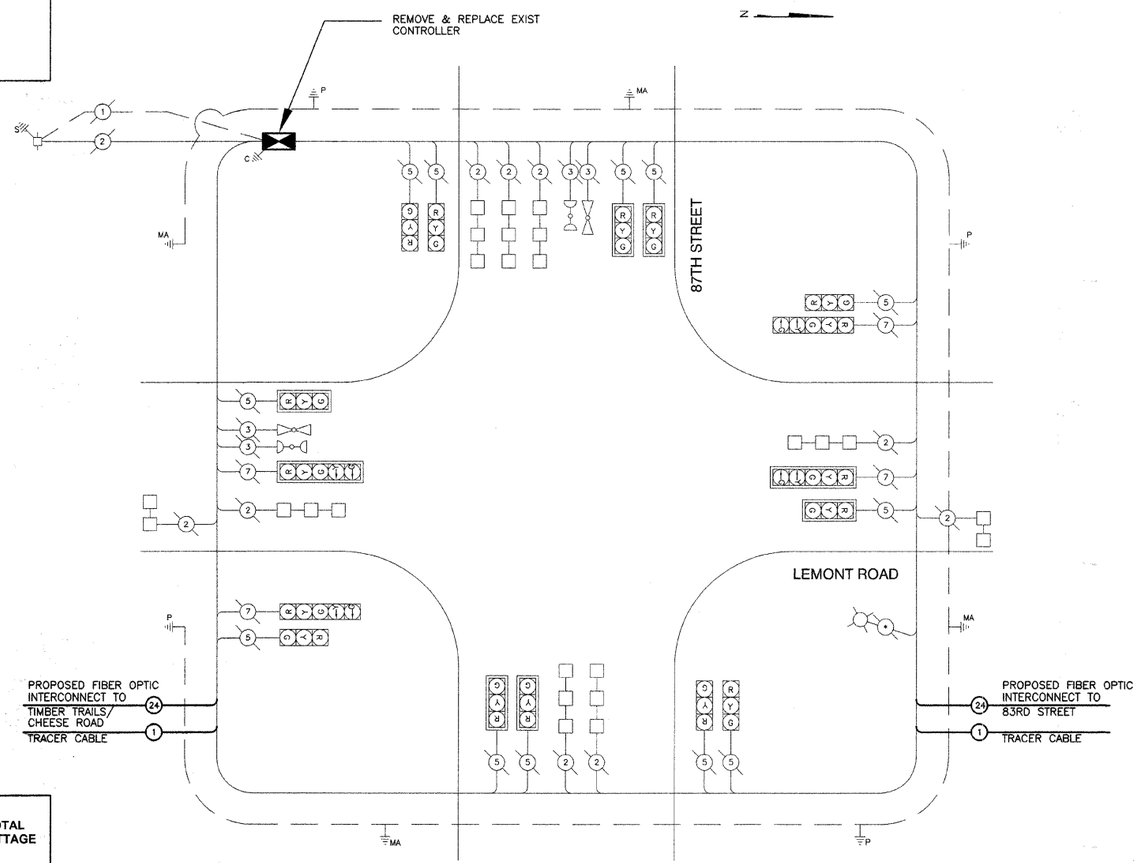


PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	← →	↑ ↓

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.

CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	16	135	10	0.60	96
YELLOW BALL	16	135	22	0.03	10.6
GREEN BALL	16	135	12	0.37	71
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	4	135	10	0.02	0.8
GREEN ARROW	4	135	5	0.13	2.6
PED - WALK	0	90	5	0.05	0
PED- DON'T WALK	0	90	6	0.95	0
CONTROLLER	1	100		1.00	100
LUMINAIRE	1	310		0.50	310
				TOTAL=	591

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

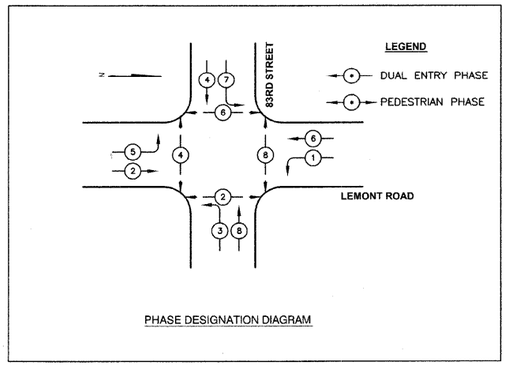
LEMONT ROAD & 87TH STREET EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

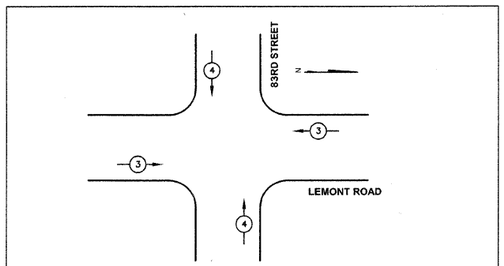
DATE: 7/1/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 2615	2008	25	16
SEC. 07-00232-05-TL	DUPAGE CO.		



PHASE DESIGNATION DIAGRAM

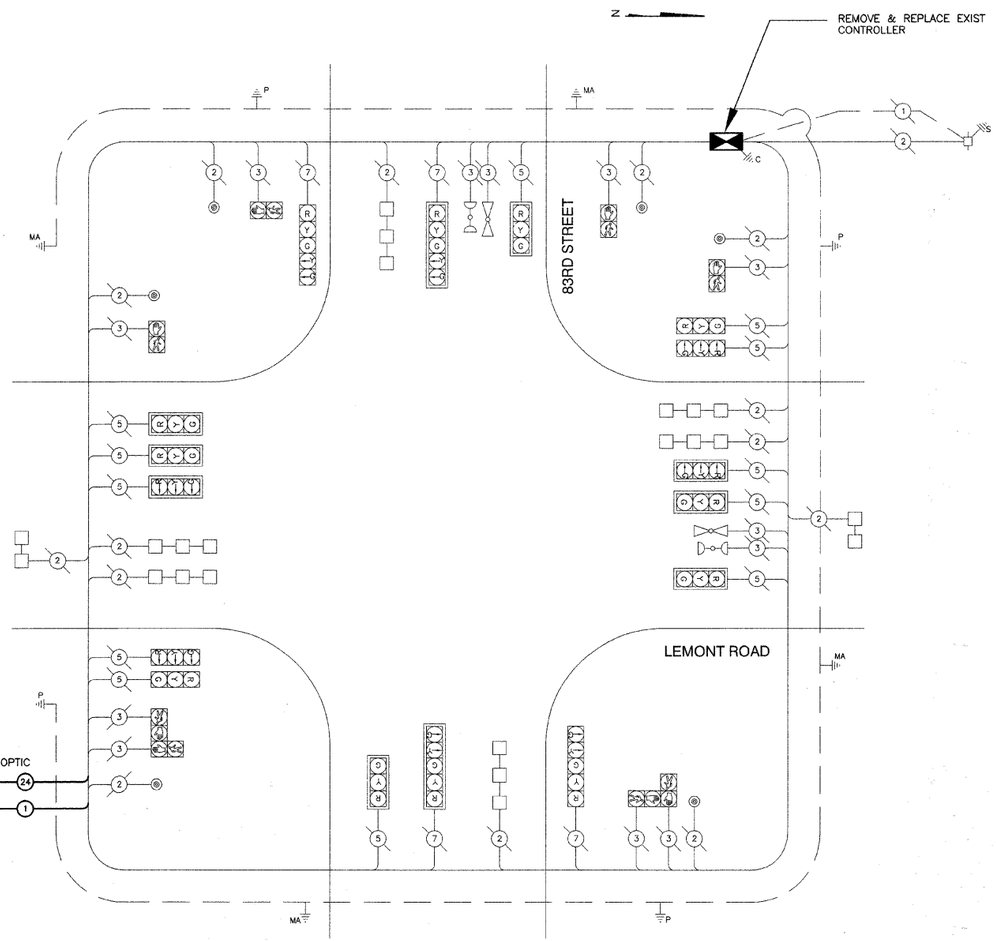


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. LOOP DETECTORS TO BE CUT FOR NORTH AND SOUTHBOUND ADVANCE DETECTION AND IS TO REPLACE EXISTING MAGNETIC DETECTORS.
3. EXISTING CABLE TO BE REMOVED AND REPLACED IN CONDUITS TO ADVANCE HANDHOLES.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.



CABLE PLAN LEGEND

PROPOSED	EXISTING	
①	①	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	12	135	10	0.60	72
YELLOW BALL	12	135	22	0.03	7.9
GREEN BALL	12	135	12	0.37	53.3
RED ARROW	4	135	5	0.85	17
YELLOW ARROW	8	135	10	0.02	1.6
GREEN ARROW	8	135	5	0.13	5.2
PED - WALK	8	90	5	0.05	2
PED- DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	1	310		0.50	310
				TOTAL=	615

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

LEMONT ROAD & 83RD STREET EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

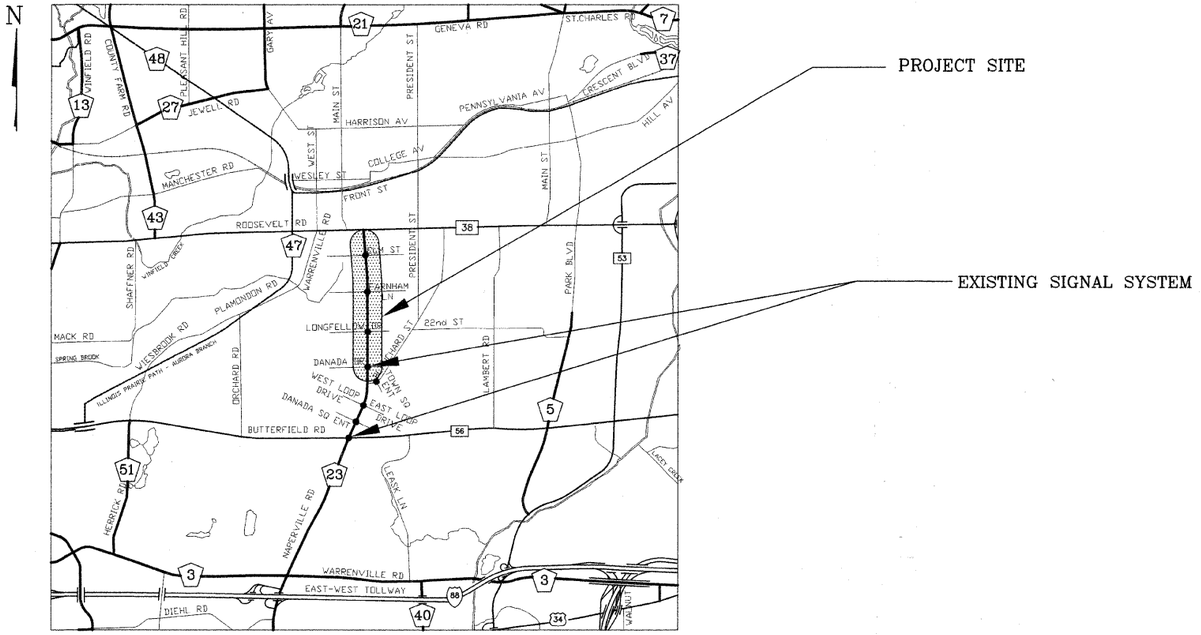
SCALE: 1"=20'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HIGHWAY	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	17
SEC. 07-00232-05-TL			DU PAGE CO

LOCATION 2 MAP



LOCATION 2 SCHEDULE OF QUANTITIES

PAY CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITIES	NAPERVILLE ROAD INTERCONNECT	NAPERVILLE RD & DANADA DR	NAPERVILLE RD & LONGFELLOW DR	NAPERVILLE RD & FARNHAM LN	NAPERVILLE RD & ELM ST	NAPERVILLE RD & ROOSEVELT RD
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	**3216**	3216					
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	**2603**	2603					
81400100	HANDHOLE	EACH	**13**	13					
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	**3216**	3216					
85000200	MAINTAINANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	**4**		1	1	1	1	
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	**3**		1		1	1	
85700500	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	**1**			1			
86400100	TRANSCEIVER - FIBER OPTIC	EACH	**3**			1	1	1	
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	**7868**	7868					
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	**7868**	7868					
87900200	DRILL EXISTING HANDHOLE	EACH	**8**		1	2	2	2	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	**3**		1		1	1	
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	**3**		1		1	1	
XX002856	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM	**0.5**	0.5					

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

NAPERVILLE ROAD
SUMMARY OF QUANTITIES

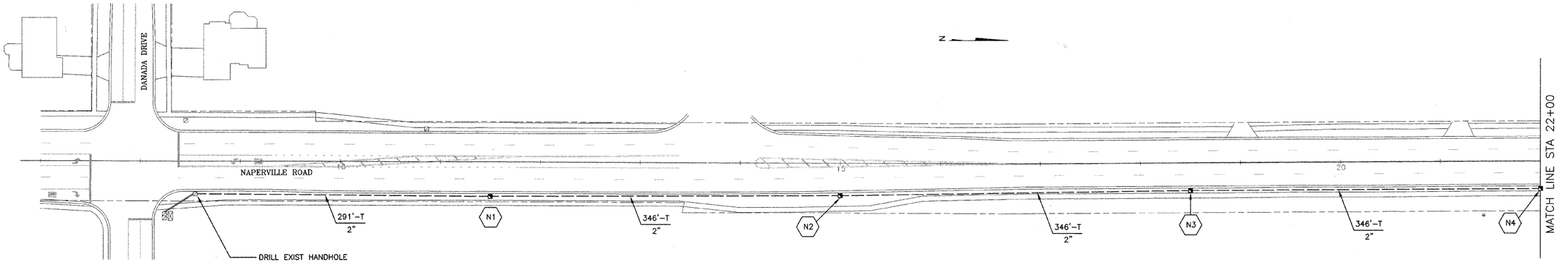
SCALE: NONE
DATE: 8/21/08

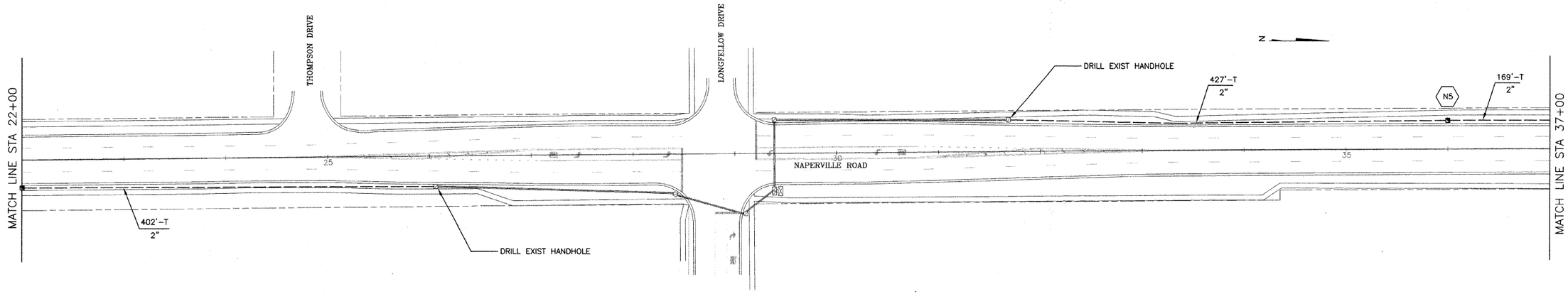
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	18
SEC. 07-00232-05-TL	DUPAGE CO.		

RESTORATION OF WORK AREA

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANHOLE, 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.





REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

NAPERVILLE ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
DANADA DRIVE TO ELM STREET

SCALE: 1"=50'

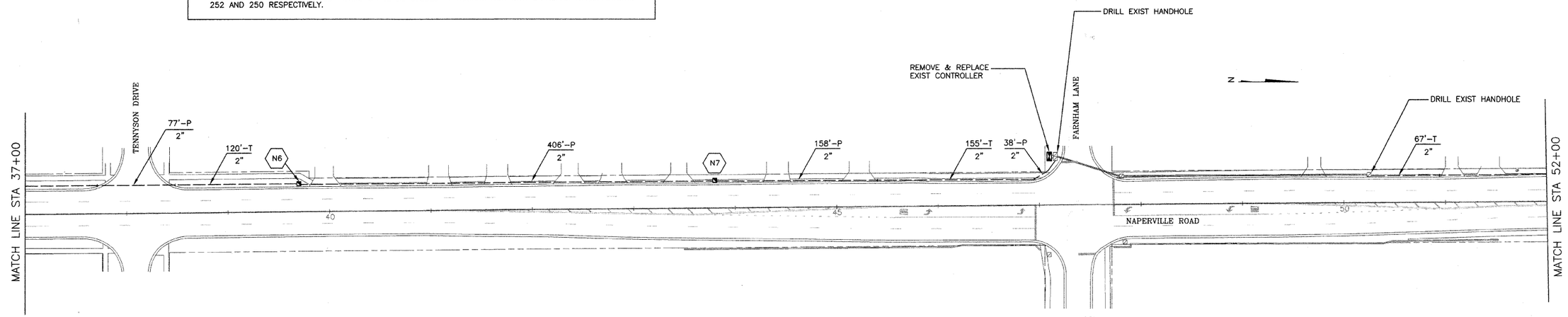
DATE: 8/21/08

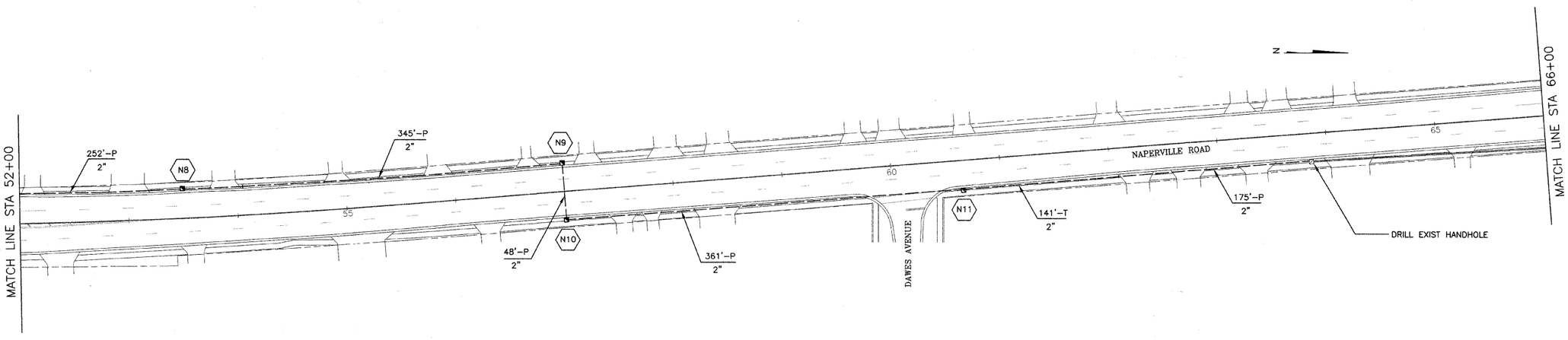
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	19
SEC. 07-00232-05-TL	DUPAGE CO.		

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.





REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

NAPERVILLE ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
DANADA DRIVE TO ELM STREET

SCALE: 1"=50'

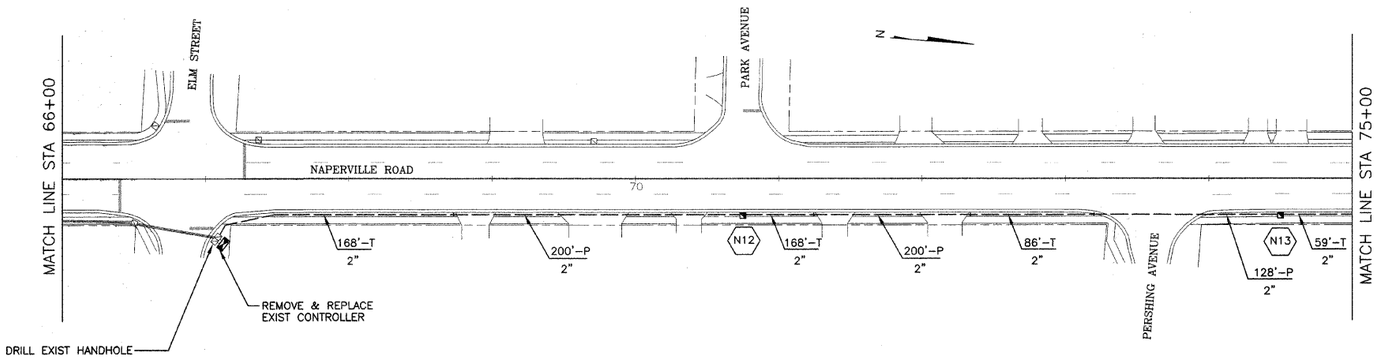
DATE: 8/21/08

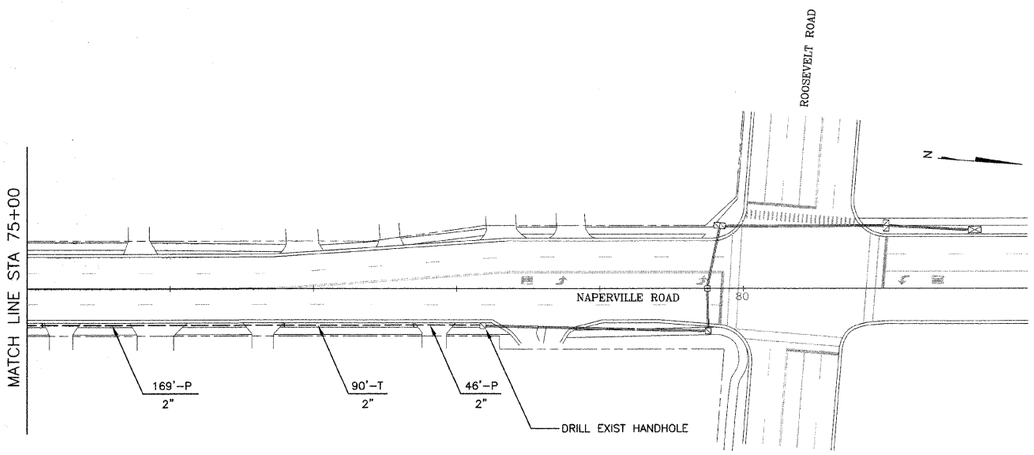
DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	20
SEC. 07-00232-05-TL DUPAGE CO.			

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.





REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

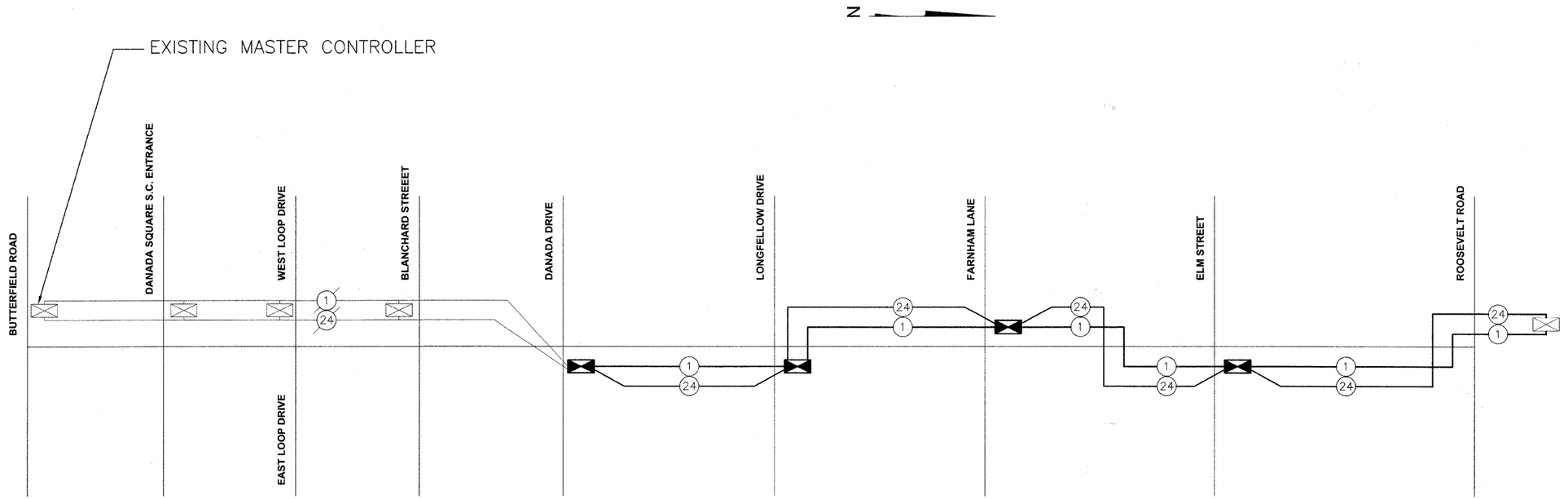
NAPERVILLE ROAD
TRAFFIC SIGNAL INTERCONNECT PLAN
DANADA DRIVE TO ELM STREET

SCALE: 1"=50'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	21
SEC. 07-00232-05-TL	DUPAGE CO.		



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- (24) PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125, MM12F SM12F
- (1) PROPOSED ELECTRIC CABLE 1/C (AS SPECIFIED)
- (24) NO. 62.5/125, MM12F SM12F
- (1) EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)

PROPOSED HANDHOLE LAYOUT FOR NAPERVILLE ROAD

STATION/OFFSET	DESCRIPTION
N1 10+50 35' RT	STANDARD HANDHOLE
N2 15+00 33' RT	STANDARD HANDHOLE
N3 18+50 28' RT	STANDARD HANDHOLE
N4 22+00 28' RT	STANDARD HANDHOLE
N5 36+00 28' LT	STANDARD HANDHOLE
N6 39+70 28' LT	STANDARD HANDHOLE
N7 42+80 28' LT	STANDARD HANDHOLE
N8 53+50 28' LT	STANDARD HANDHOLE
N9 57+00 28' LT	STANDARD HANDHOLE
N10 57+00 28' RT	STANDARD HANDHOLE
N11 60+65 28' RT	STANDARD HANDHOLE
N12 70+75 28' RT	STANDARD HANDHOLE
N13 74+50 28' RT	STANDARD HANDHOLE

REVISIONS NAME	DATE

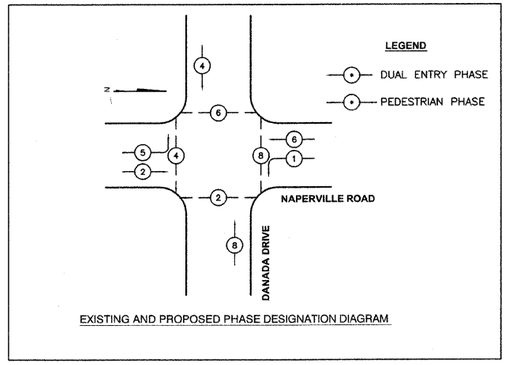
DUPAGE COUNTY DIVISION OF TRANSPORTATION

NAPERVILLE ROAD INTERCONNECT CABLE PLAN AND HANDHOLE LAYOUT

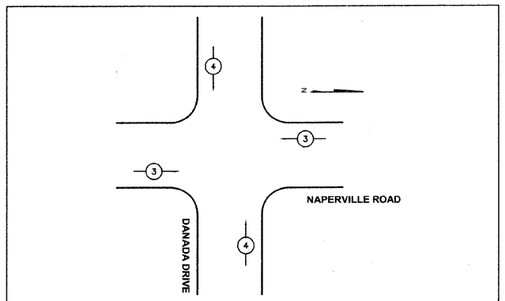
SCALE: NONE
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	22
SEC. 07-00232-05-TL	DUPAGE CO.		

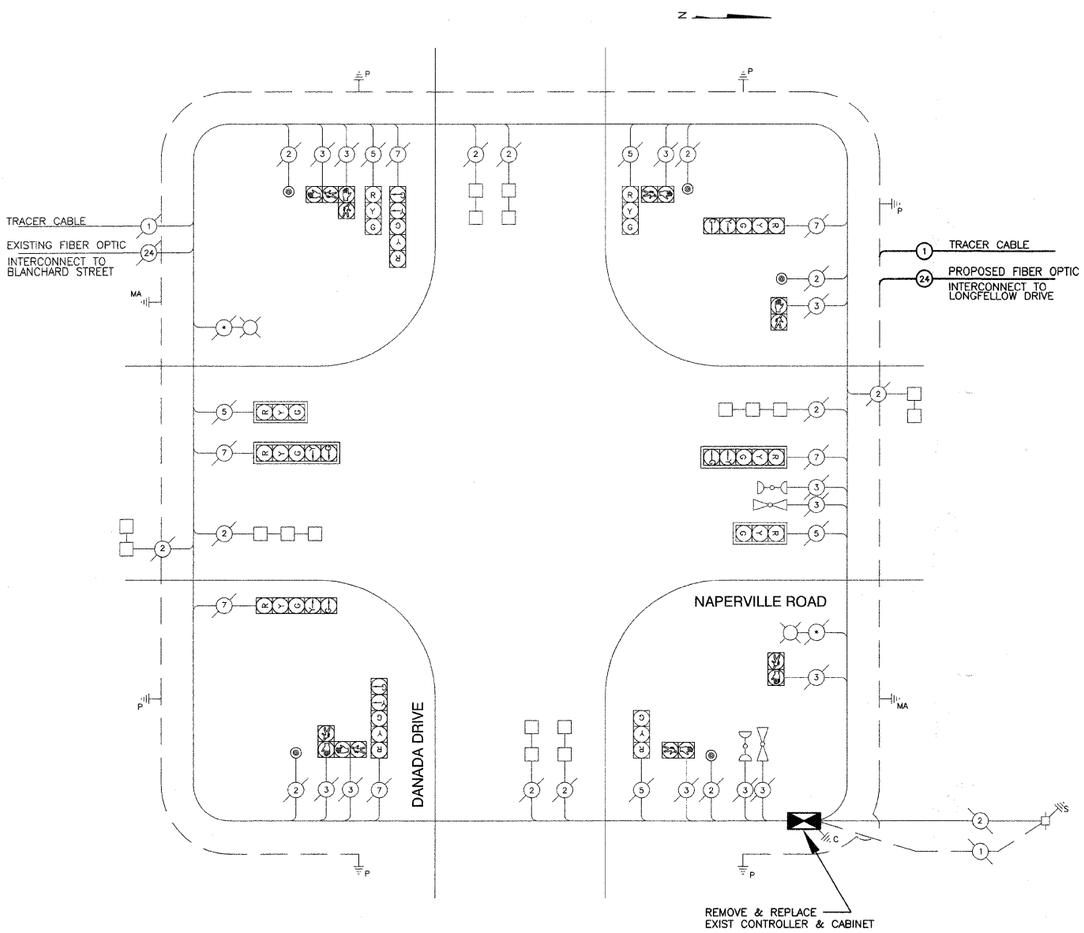


EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.

CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	10	135	10	0.60	60
YELLOW BALL	10	135	22	0.03	6.6
GREEN BALL	10	135	12	0.37	44.4
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	4	135	10	0.02	0.8
GREEN ARROW	4	135	5	0.13	2.6
PED - WALK	8	90	5	0.05	2
PED - DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	620
				TOTAL=	882

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

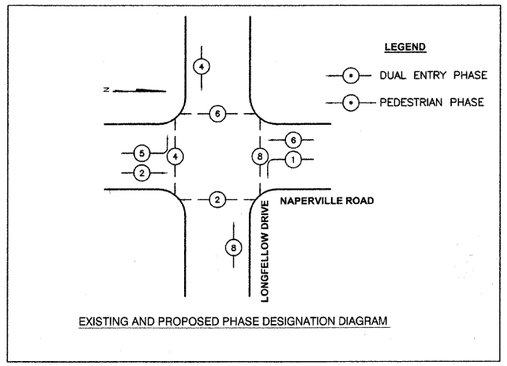
NAPERVILLE ROAD/ DANADA DRIVE EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

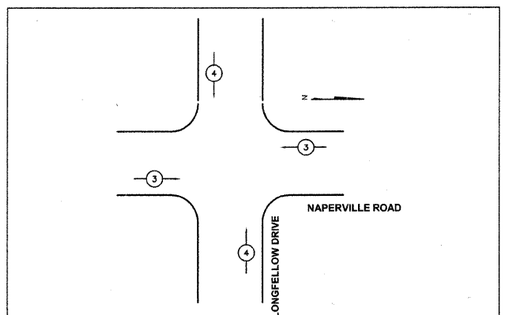
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	23
SEC. 07-00232-05-TL	DUPAGE CO.		

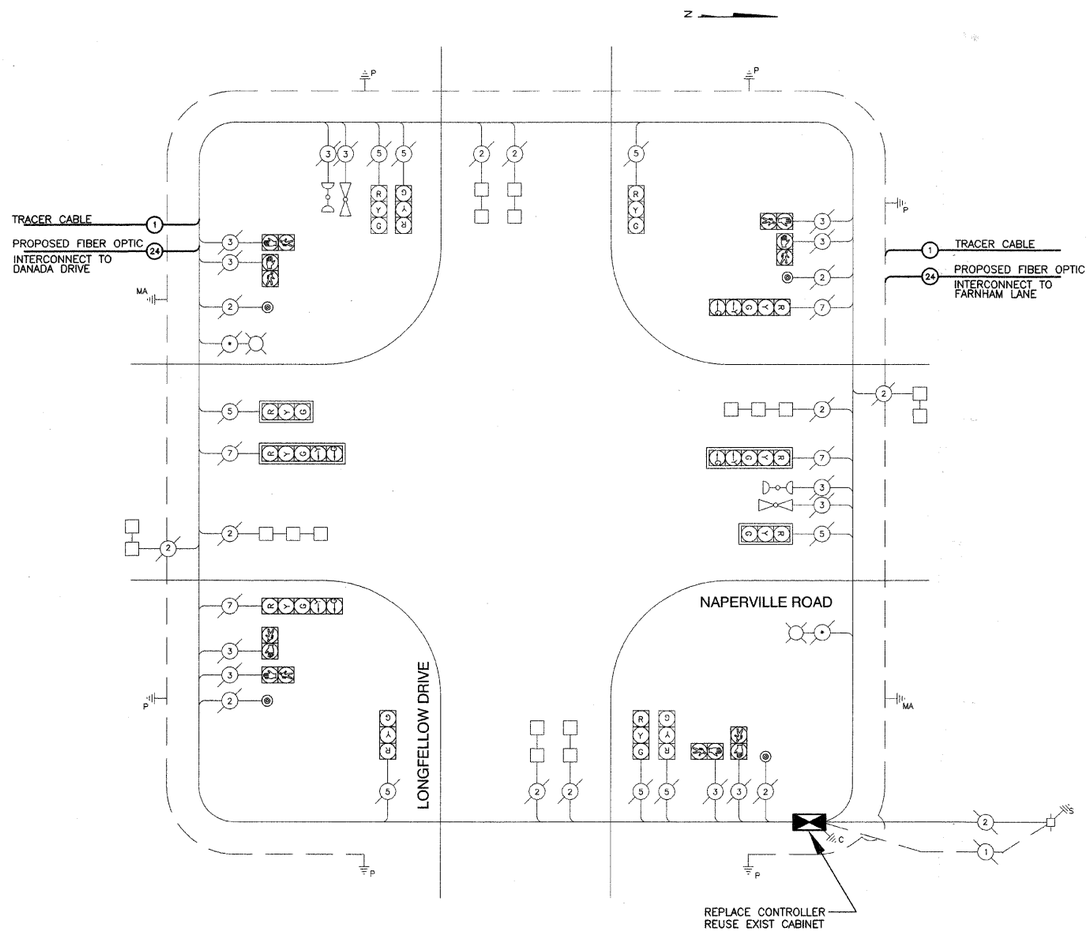


EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



NOTES:

1. EXISTING CONTROLLER TO BE REPLACED, EXISTING CABINET TO BE KEPT IN PLACE.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.

CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	12	135	10	0.60	72
YELLOW BALL	12	135	22	0.03	7.9
GREEN BALL	12	135	12	0.37	53.3
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	4	135	10	0.02	0.8
GREEN ARROW	4	135	5	0.13	2.6
PED - WALK	8	90	5	0.05	2
PED - DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100			100
LUMINAIRE	2	310			310
				TOTAL=	594

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

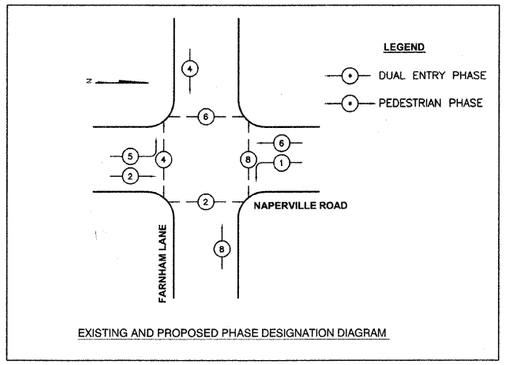
NAPERVILLE ROAD/ LONGFELLOW DRIVE EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

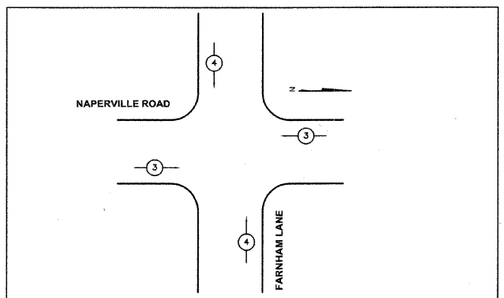
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	24
SEC. 07-00232-05-TL DUPAGE CO.			



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

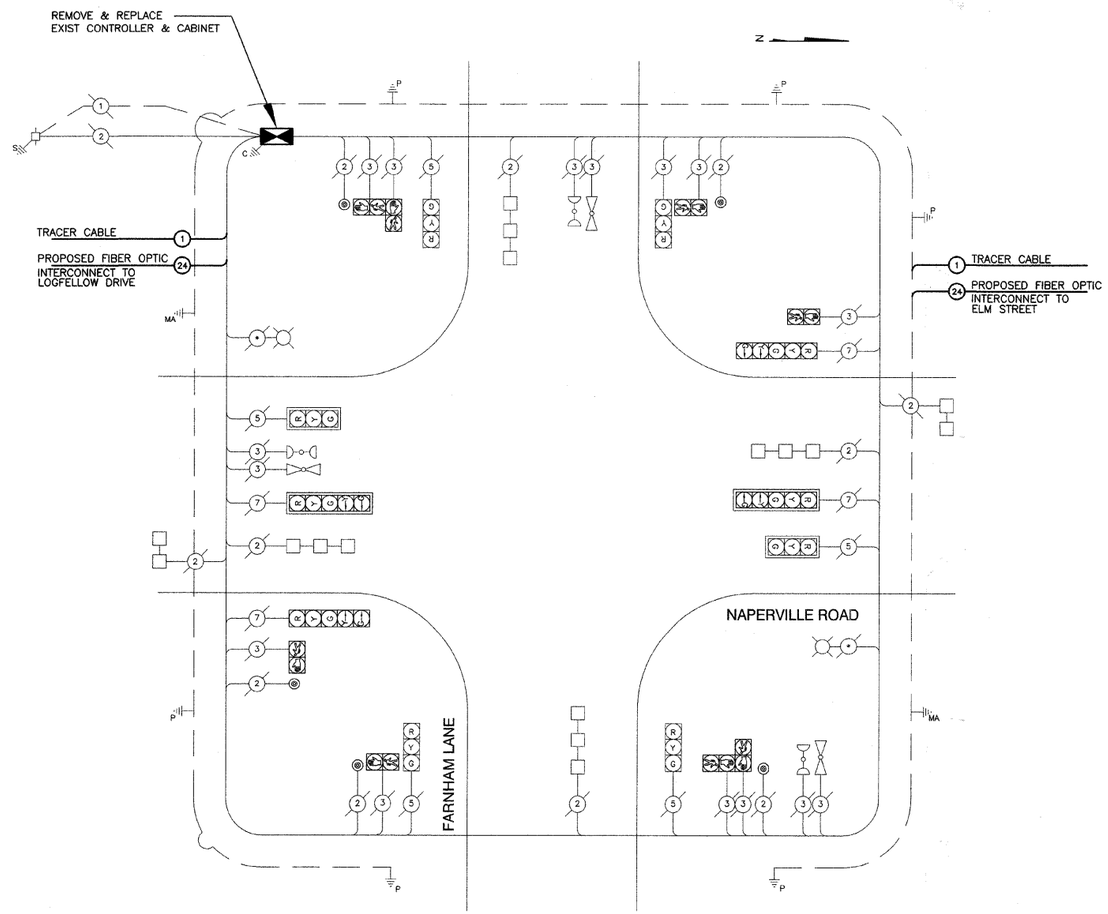


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.



CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	10	135	10	0.60	60
YELLOW BALL	10	135	22	0.03	6.6
GREEN BALL	10	135	12	0.37	44.4
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	4	135	10	0.02	0.8
GREEN ARROW	4	135	5	0.13	2.6
PED - WALK	8	90	5	0.05	2
PED - DONT WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	620
				TOTAL=	882

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

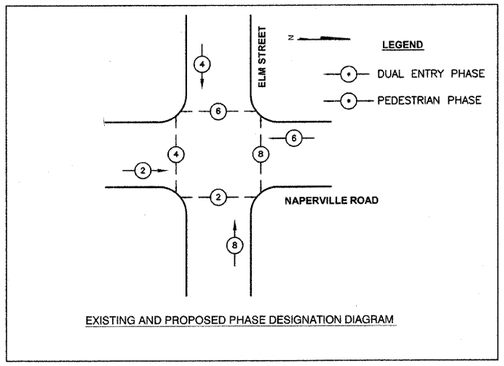
NAPERVILLE ROAD/
FARNHAM LANE
EXISTING AND PROPOSED
CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

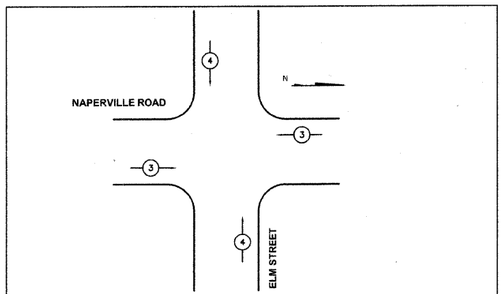
DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ

COUNTY HWY.	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
FAU 0856	2008	25	25
SEC. 07-00232-05-TL	DUPAGE CO.		



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

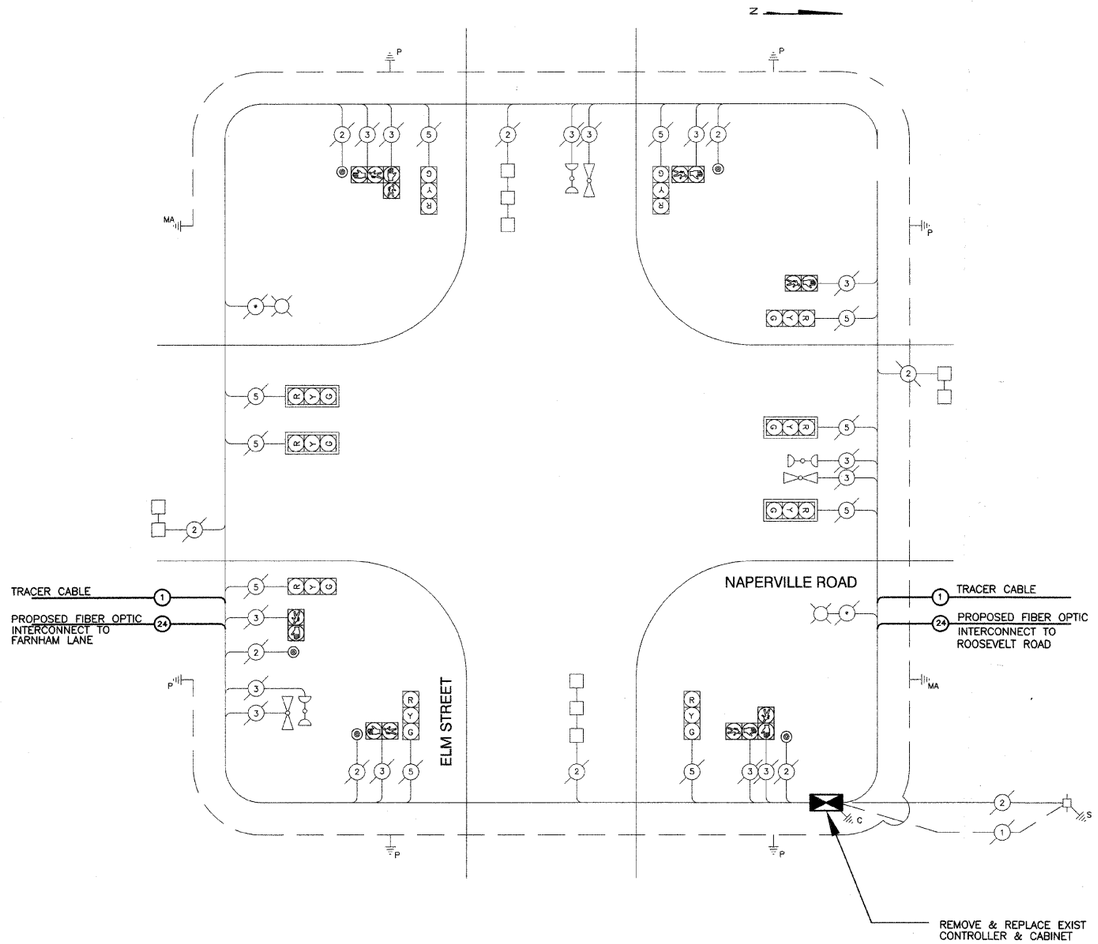


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

NOTES:

1. EXISTING CONTROLLER AND CABINET TO BE REPLACED.
2. REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF DUPAGE COUNTY. THE CONTRACTOR SHALL RETURN THE EXISTING CONTROLLER AND CABINET COMPLETE TO THE DUPAGE ELECTRICAL MAINTENANCE FACILITIES.



CABLE PLAN LEGEND

PROPOSED	EXISTING	
(1)	(1)	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED
		CONTROLLER CABINET
		SERVICE INSTALLATION
		GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (MA) MAST ARM OR (S) SERVICE
		VEHICLE DETECTOR, INDUCTION LOOP
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		LUMINAIRE
		PEDESTRIAN PUSH BUTTON
		12" PEDESTRIAN SIGNAL SECTION
		SIGNAL FACE WITH BACKPLATE

DU PAGE COUNTY D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		OPERATION	
		INCAND.	LED	(%)	
RED BALL	10	135	10	0.60	60
YELLOW BALL	10	135	22	0.03	6.6
GREEN BALL	10	135	12	0.37	44.4
RED ARROW	0	135	5	0.85	0
YELLOW ARROW	0	135	10	0.02	0
GREEN ARROW	0	135	5	0.13	0
PED - WALK	8	90	5	0.05	2
PED - DON'T WALK	8	90	6	0.95	45.6
CONTROLLER	1	100		1.00	100
LUMINAIRE	2	310		0.50	620
				TOTAL=	879

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=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600 mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750 mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. BUTTON	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)

REVISIONS	
NAME	DATE

DUPAGE COUNTY DIVISION OF TRANSPORTATION

NAPERVILLE ROAD/ ELM STREET EXISTING AND PROPOSED CABLE PLAN AND PHASING DIAGRAM

SCALE: 1"=20'

DATE: 8/21/08

DRAWN BY: TH
DESIGNED BY: TH
CHECKED BY: DAZ