F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-TL	DUPAGE	13	1

CONTRACT NO. 83759

6-17-05 Letting, Item 127

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED TRAFFIC SIGNAL MODIFICATION and INTERCONNECT PLAN

FINLEY ROAD (BROOK ROAD TO FINLEY SQUARE)

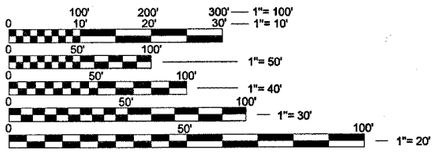
VILLAGE OF DOWNERS GROVE

SECTION 02-00091-00-TL
PROJECT NO: M-8003 (428)
DUPAGE COUNTY
JOB NUMBER C91-264-04

INDEX

STANDARDS

STANDARD	701301-02	STANDARD	880001
STANDARD	702001-05	STANDARD	880006
STANDARD	424001-03	STANDARD	886001
STANDARD	720001	STANDARD	701501-03
STANDARD	814001	STANDARD	701601-04
STANDARD	814006	STANDARD	701701-04
STANDARD	857001	STANDARD	701801-03
STANDARD	877011-02		
STANDARD	878001-03		

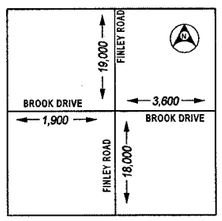


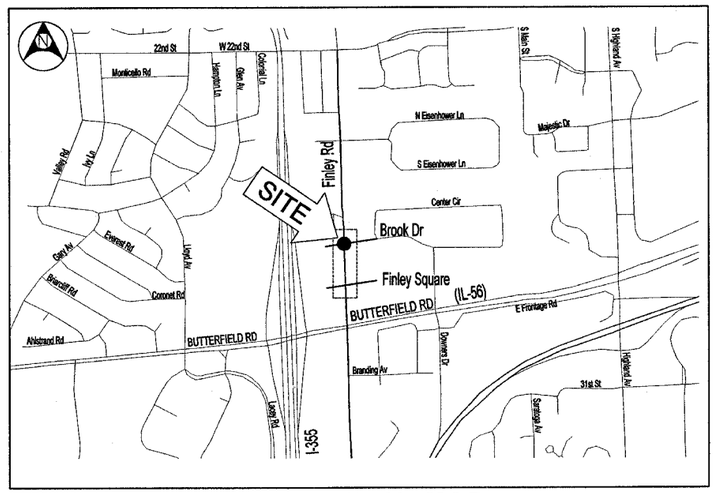
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 83759

AVERAGE DAILY TRAFFIC





LOCATION MAP

SPEED LIMIT FINLEY ROAD = 40 MPH
SPEED LIMIT BROOK ROAD = 30 MPH

LOCATION OF SECTION INDICATED THUS:-■-

WARNING
CALL JULIE TOLL FREE
1-800-892-0123
CALL BEFORE YOU DIG

062027363
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
Ronald G. Rude
Expires 11/30/05

METRO
METRO TRANSPORTATION GROUP, INC.
TRANSPORTATION, PLANNING, ENGINEERING, AND DESIGN
3100 WEST HIGGINS ROAD HOFFMAN ESTATES, IL. 60195
PH# (630) 213-1000

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED September 22 20 04
Michael D. Millitzky
LOCAL AGENCY OFFICIAL

December 1, 20 04
Robert J. Kerbrat
DISTRICT ENGINEER OF LOCAL ROADS & STREET

December 1, 20 04
Diane O'Keefe /RP
DISTRICT ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID COORDINATOR: PHIL MARCYN (847) 705-4189

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE Y031-1F

CODE NO.	PAY ITEM	UNIT	Brook Drive @ Finley Road	Interconnect	TOTAL
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM		1	1
XX006131	ILLUMINATED SIGN PANEL, SPECIAL	EACH	4		4
X8050015	SERVICE INSTALLATION, POLE MOUNTED	EACH	1		1
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	70		70
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	23		23
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	26		26
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	12		12
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	27		27
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	220		220
81400100	HANDHOLE	EACH	7		7
81400300	DOUBLE HANDHOLE	EACH	1		1
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	119		119
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH		1	1
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH		1	1
85700305	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1		1
86000105	MASTER CONTROLLER (SPECIAL)	EACH	1		1
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1	1	2
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT		594	594
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	467		467
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F	FOOT		637	637
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	565		565
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	798		798
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1815		1815
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	647		647
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	233		233
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	43		43
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2		2
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2		2

CODE NO.	PAY ITEM	UNIT	Brook Drive @ Finley Road	Interconnect	TOTAL
87702850	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT.	EACH	1		1
87702860	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT.	EACH	1		1
87702880	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT.	EACH	1		1
87702930	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	EACH	1		1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16		16
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	4		4
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	45		45
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15		15
87900200	DRILL EXISTING HANDHOLE	EACH		1	1
X8800020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6		6
X8800035	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3		3
X8800040	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1		1
X8800045	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2		2
X8805280	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1		1
88100200	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED	EACH	4		4
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8		8
88700200	LIGHT DETECTOR	EACH	2		2
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4		4
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1
89502380	REMOVE EXISTING HANDHOLE	EACH	7		7
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	7		7
X0320872	VIDEO VEHICLE DETECTION SYSTEM	EACH	1		1
XX002856	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	LSUM		1	1
X8011010	TELEPHONE SERVICE INSTALLATION	L SUM	1		1
XX006130	LAPTOP SYSTEM MONITORING COMPUTER	EACH		1	1

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

SUMMARY OF QUANTITIES

FINLEY ROAD @ BROOK DRIVE
DOWNERS GROVE, ILLINOIS

FILE NAME:	02_sqn.dgn
DATE:	SEPT 7, 2004
PROJECT NO.:	H0312-18
SHEET NO.:	2 OF 13

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	3
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

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.

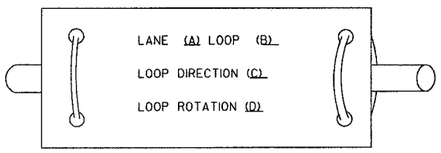
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

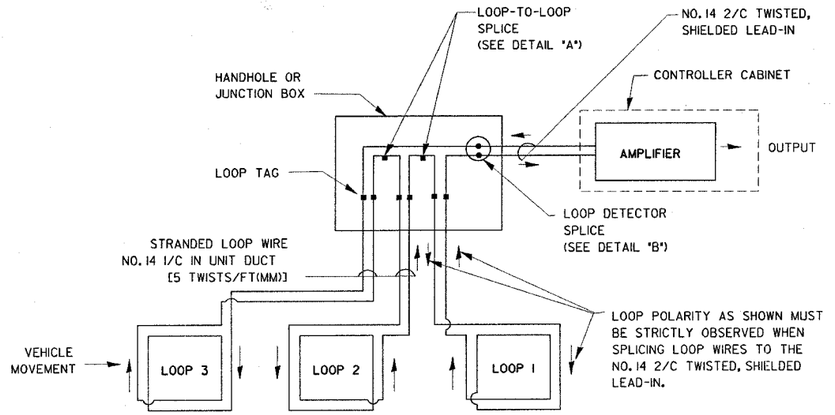


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

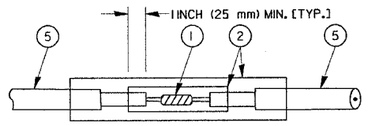
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

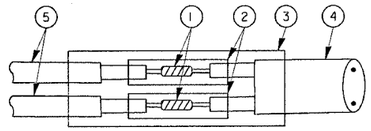


DETECTOR LOOP WIRING SCHEMATIC

- 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.

FILE NAME:	SHEET NO.:
std_1.dgn	3
DATE: SEPT 7, 2004	OF 13
PROJECT NO.: H0312-18	

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

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

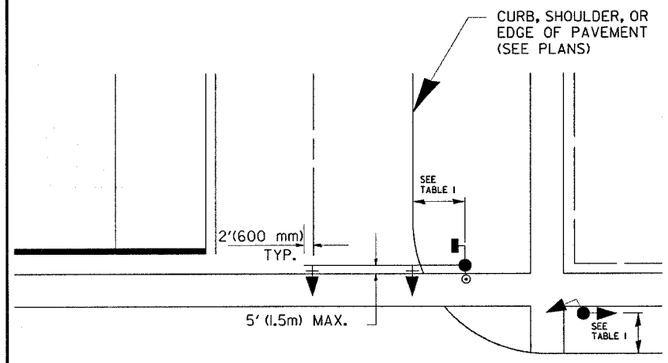
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1OF 4

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	4
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

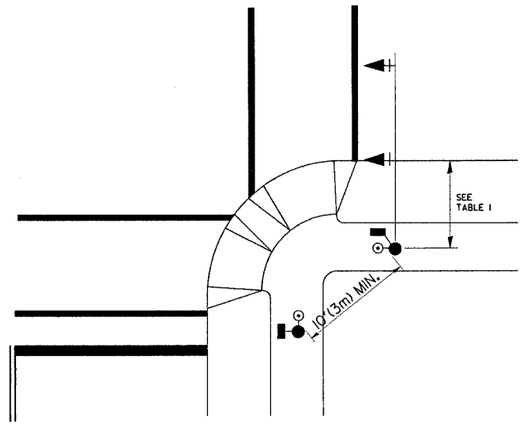
CONTRACT NO. 83759

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

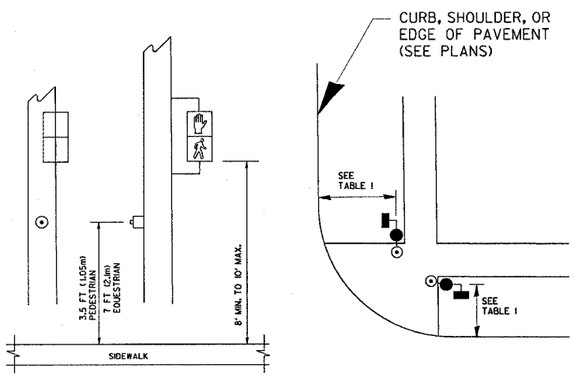


TABLE 1

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

FILE NAME:	SHEET NO.:
03_std_2.dgn	4
DATE: SEPT 7, 2004	OF 13
PROJECT NO.: H0312-18	

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. HORIZ. NONE

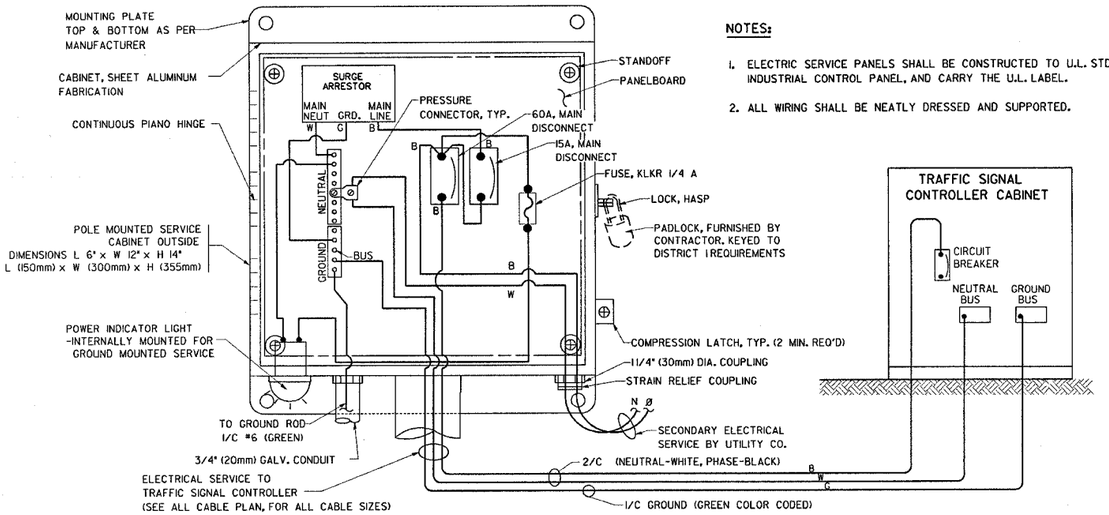
DATE 1-01-02

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

TS05

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	5
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759



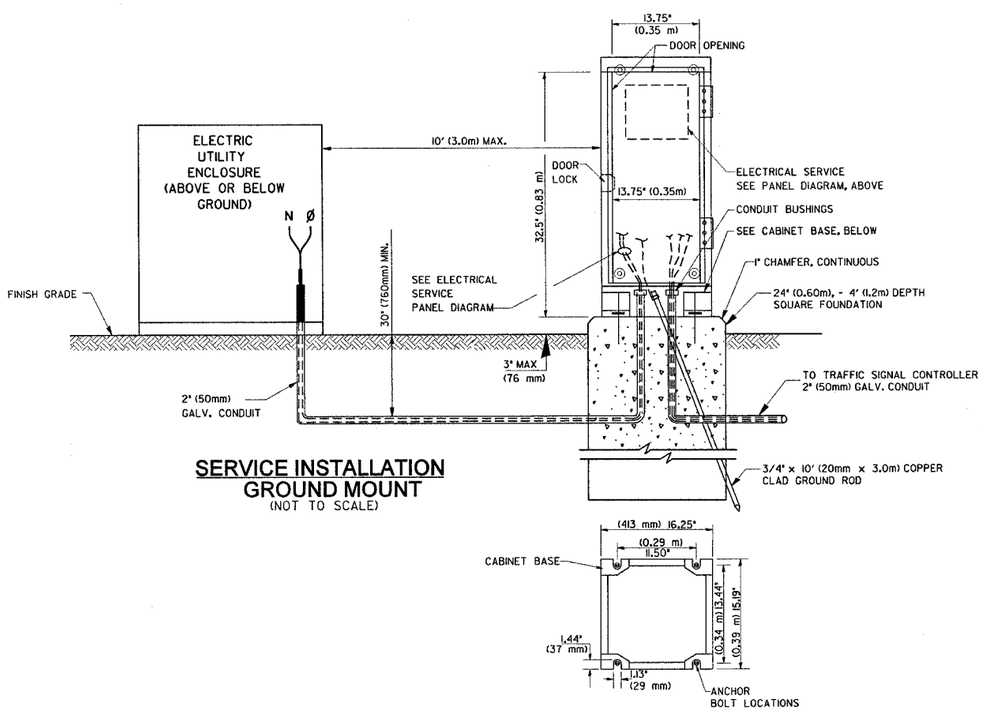
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

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.

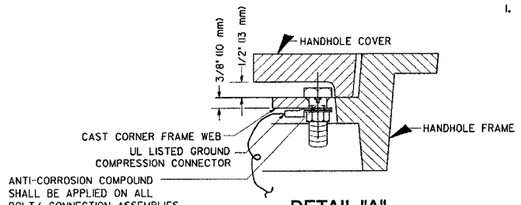


SERVICE INSTALLATION GROUND MOUNT

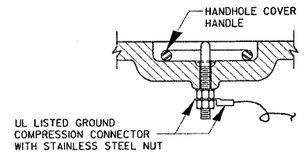
(NOT TO SCALE)

CABINET - BASE BOLT PATTERN

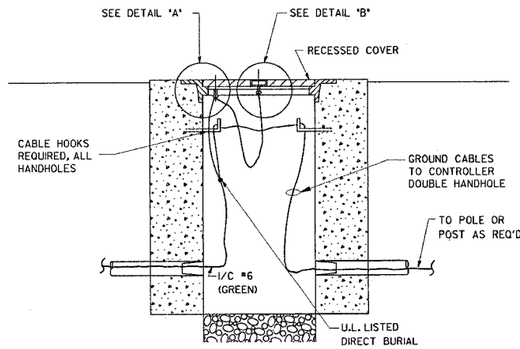
(NOT TO SCALE)



DETAIL "A"

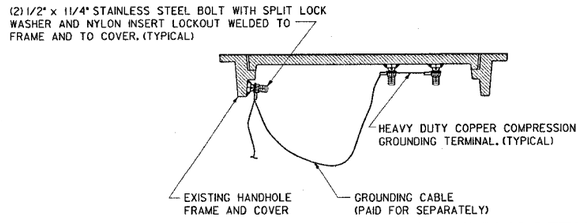


DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)



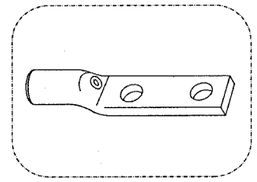
EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

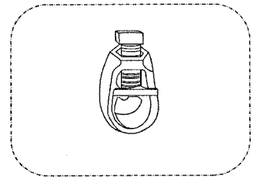
NOTES:

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.



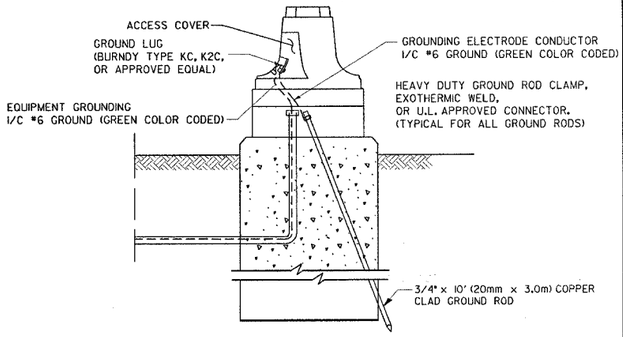
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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)

FILE NAME:	SHEET NO.:
std_3.dgn	5
DATE: SEPT 7, 2004	OF 13
PROJECT NO.: H0312-18	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

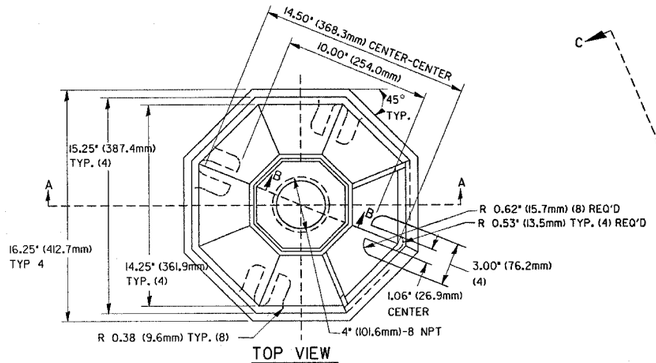
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

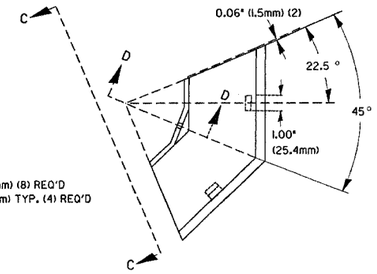
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

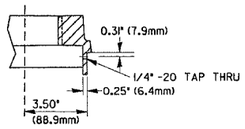
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	6
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

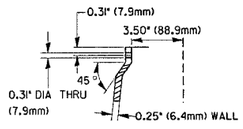


TOP VIEW

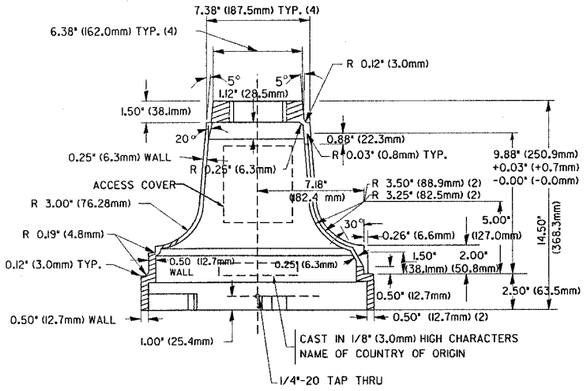




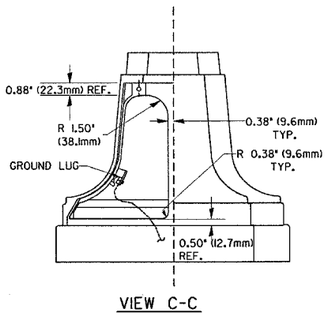
SECTION B-B



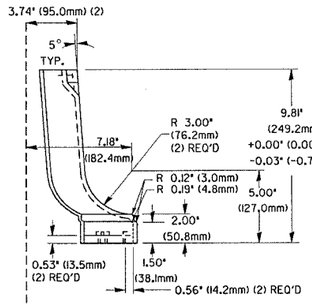
SECTION D-D



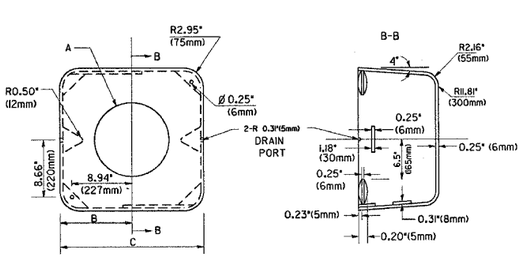
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

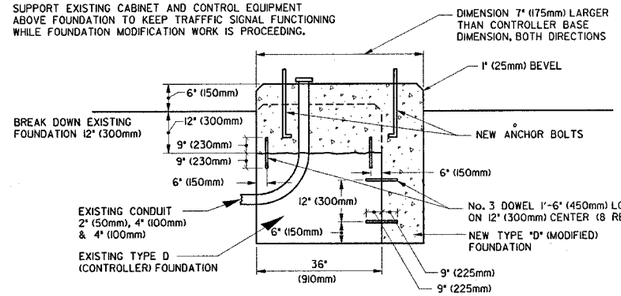


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

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

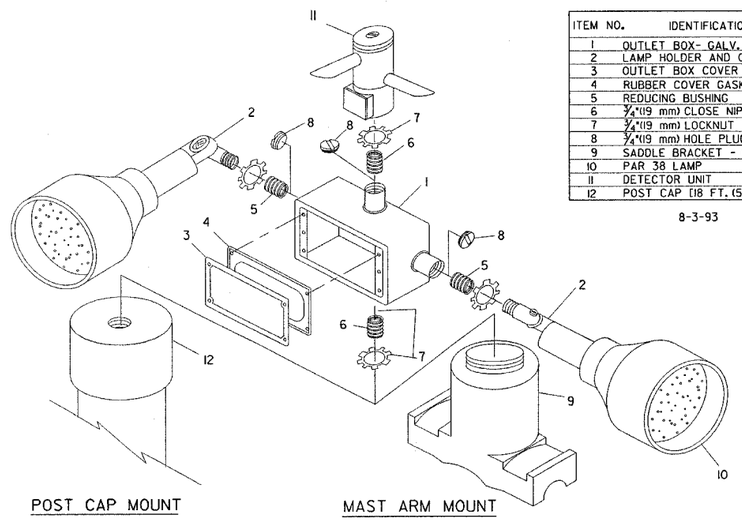
SHROUD DETAIL

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

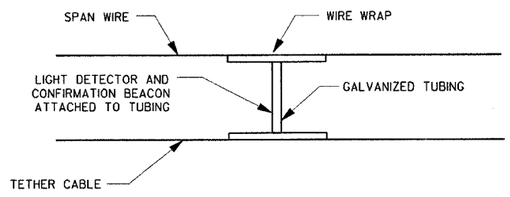
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21CU.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:

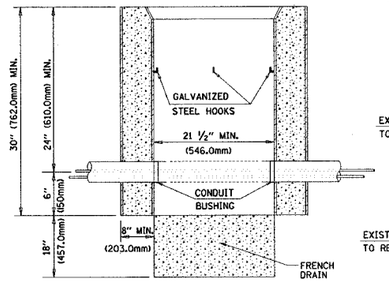
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. 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.



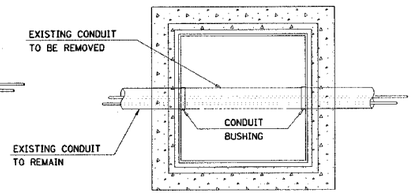
LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(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.



ELEVATION



PLAN

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

FILE NAME:	SHEET NO.:
std_4.dgn	6 OF 13
DATE: SEPT 7, 2004	
PROJECT NO.: H0312-18	

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	7
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

SCALE: 1"=20'

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL POSITION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY POSITION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m.) MIN.
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE.
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- VIDEO VEHICLE DETECTOR UNIT
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- UD — UNIT DUCT
- G.S. CONDUIT IN TRENCH OR PUSHED
- HANDHOLE
- HEAVY DUTY HANDHOLE
- CT — COMMON TRENCH
- DOWN GUY
- VEHICLE VIDEO DETECTION ZONE

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 2 EACH MAST ARM ASSEBLEY & POLE
- 5 EACH SIGNAL POST
- 2 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
- 2 EACH SIGNAL HEAD, 2-FACE, 3-SECTION, BRACKET MOUNTED
- 1 EACH CONTROLLER CABINET AND RELATED ASSERORIES
- 2 EACH EMERGENCY VEHICLE DETECTOR UNIT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

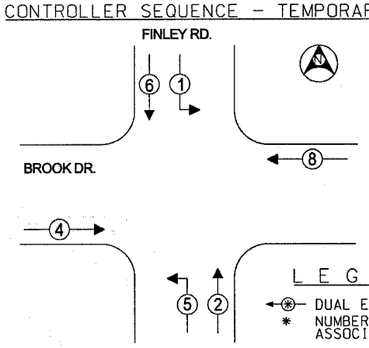
AGENCY: VILLAGE OF DOWNER GROVE

1 EACH CONTROLLER

CONSTRUCTION NOTES:

- (A) REMOVE EXISTING SIGNAL HEAD CABLE BACK TO CONTROLLER
- (B) REMOVE EXISTING HANDHOLE
- (C) REMOVE EXISTING FOUNDATION
- (D) REMOVE EXISTING CONTROLLER
- (E) ABANDON EXISTING CONDUIT OR LOOPS

CONTROLLER SEQUENCE - TEMPORARY

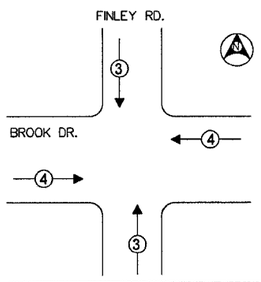


LEGEND

- ⊛ DUAL ENTRY PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE.

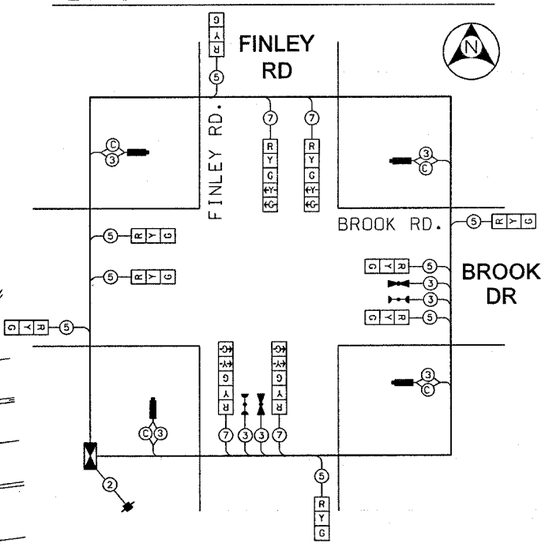
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

TEMPORARY CABLE PLAN DIAGRAM



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

NOTE: ABANDON ALL EXISTING CONDUIT

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". 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.

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

TEMPORARY TRAFFIC SIGNAL PLAN

FINLEY ROAD @ BROOK ROAD
DOWNERS GROVE, ILLINOIS

FILE NAME:	SHEET NO.:
07_tmp.dgn	7
DATE: SEPT 7, 2004	OF 13
PROJECT NO.: H0312-18	

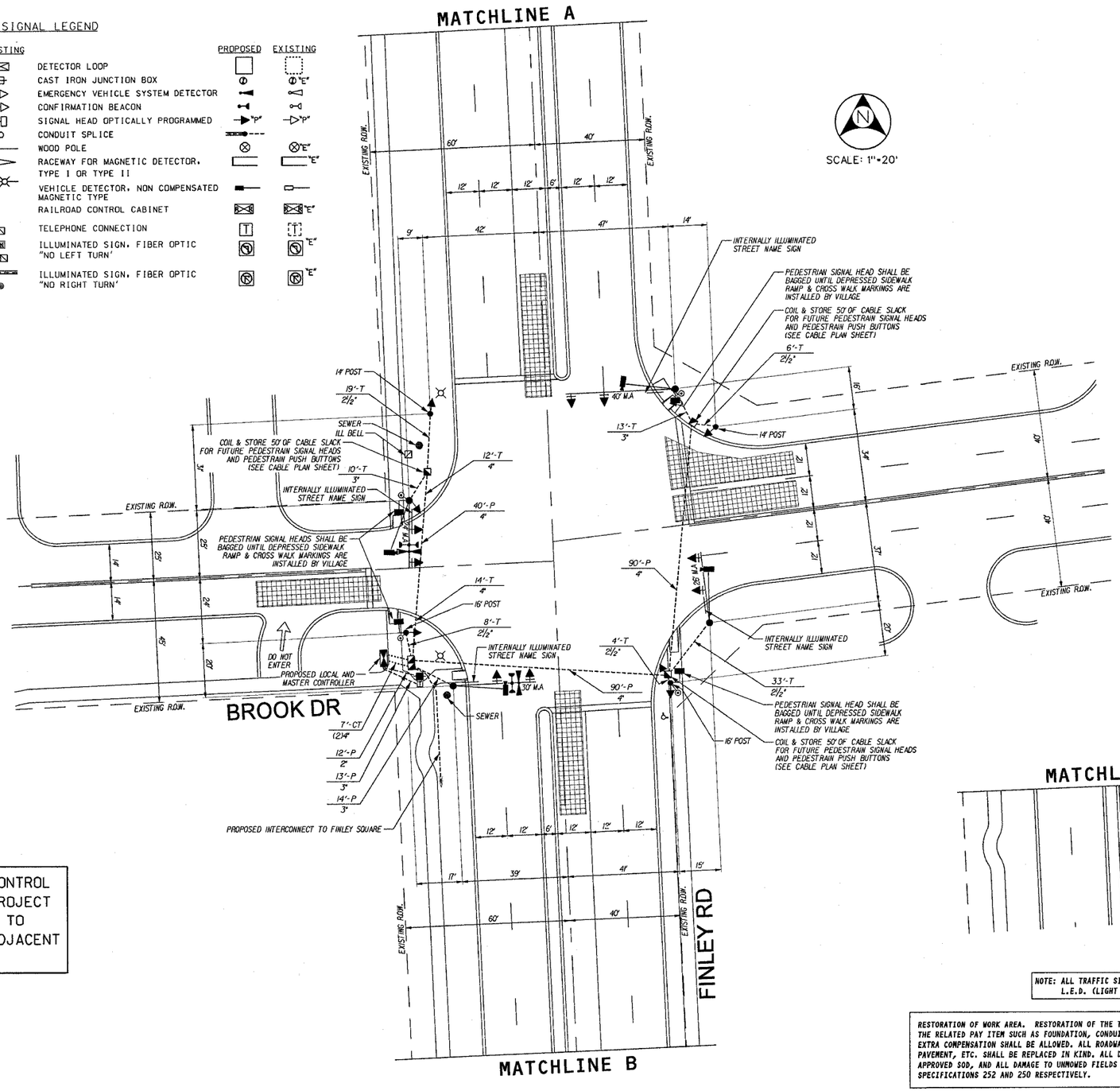
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	8
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

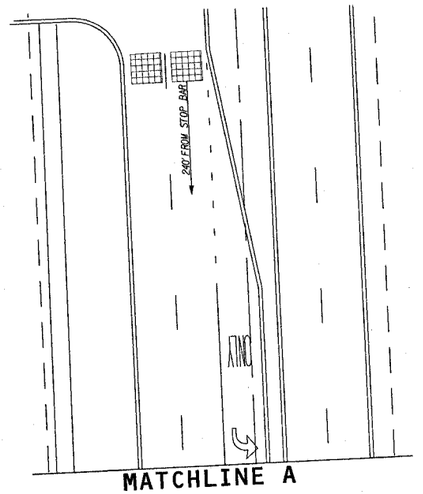
TRAFFIC SIGNAL LEGEND

	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	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	●—	○—
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	⊞	⊞
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN TRENCH OR PUSHED	------	------
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◉
VIDEO DETECTION CAMERA	▬	
VIDEO DETECTION ZONE	▦	

	PROPOSED	EXISTING
DETECTOR LOOP	□	⬚
CAST IRON JUNCTION BOX	Ⓓ	Ⓓ"E"
EMERGENCY VEHICLE SYSTEM DETECTOR	▮→	▮▷
CONFIRMATION BEACON	▮•	▮◦
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P"	▷"P"
CONDUIT SPLICE	⊸⊸	
WOOD POLE	⊗	⊗"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	▭	▭"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	▬	▭
RAILROAD CONTROL CABINET	▣	▣"E"
TELEPHONE CONNECTION	T	T"E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	⊘	⊘"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	⊘	⊘"E"



SCALE: 1"=20'



NOTE: DEPRESSED SIDEWALK RAMPS & CROSSWALK MARKINGS SHALL BE INSTALLED BY THE VILLAGE OF DOWNERS GROVE.

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

NOTE: ALL TRAFFIC SIGNAL HEADS SHALL L.E.D. (LIGHT EMITTING DIODE)

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 ROADWAYS SURFACES SUCH AS SHOULDERS, MEDIAN, 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.

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

TRAFFIC SIGNAL INSTALLATION PLAN

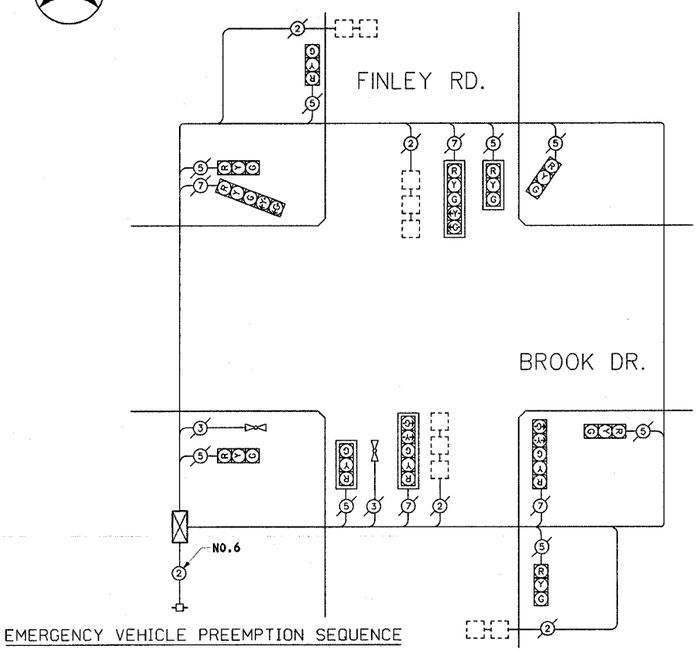
FINLEY ROAD @ BROOK ROAD
DOWNERS GROVE, ILLINOIS

FILE NAME:	08_sp.dgn
DATE:	SEPT 7, 2004
PROJECT NO.:	H0312-18
SHEET NO.:	8 OF 13

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	9
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

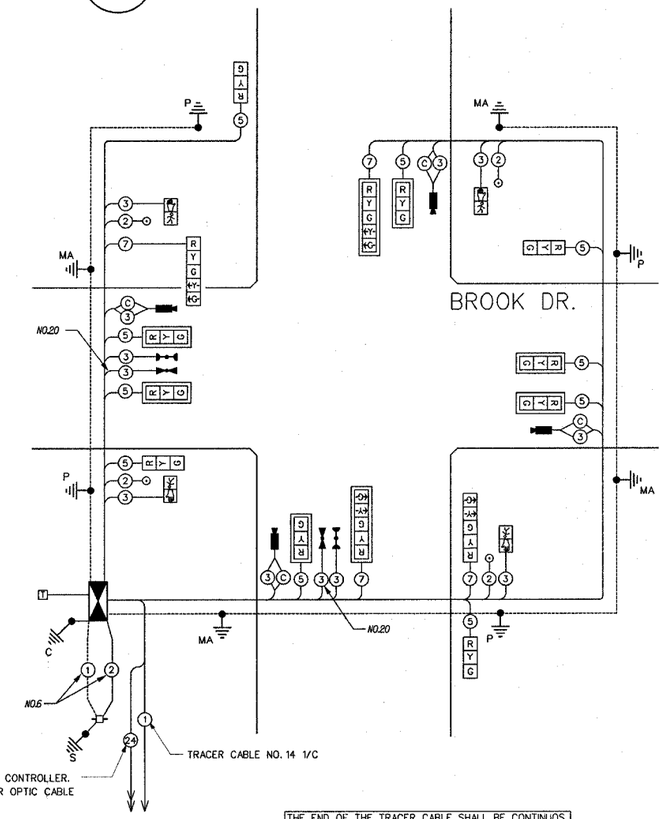
EXISTING CABLE PLAN



CABLE PLAN LEGEND

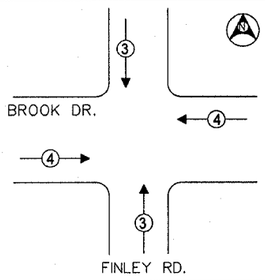
EXISTING	PROPOSED	
		8" (200mm) TRAFFIC SIGNAL SECTION
		12"(300mm) TRAFFIC SIGNAL SECTION
		12"(300mm) PEDESTRIAN SIGNAL SECTION
		12"(300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
24	24	NO. 62.5/125 MM 12F & SM 12F, FIBER OPTIC CABLE
		SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

CABLE PLAN
FINLEY RD.



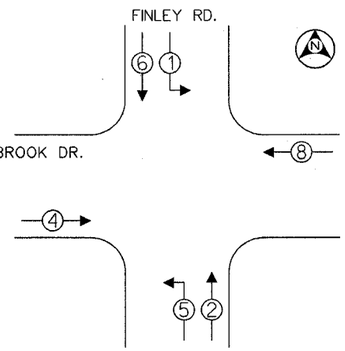
THE END OF THE TRACER CABLE SHALL BE CONTINUOS AND EXTEND INTO CONTROLLER CABINET.

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

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

L E G E N D

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE.

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION	QTY	UNIT	ITEM DESCRIPTION	QTY	UNIT	ITEM DESCRIPTION
4	EACH	ILLUMINATED SIGN PANEL, SPECIAL	798	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	6	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SERVICE INSTALLATION, POLE MOUNTED	1815	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C			
70	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	647	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
23	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	233	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
26	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	43	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
12	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
27	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	4	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
220	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
7	EACH	HANDHOLE	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT.	2	EACH	LIGHT DETECTOR
1	EACH	DOUBLE HANDHOLE				1	EACH	LIGHT DETECTOR AMPLIFIER
119	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT.	4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 40 FT.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	MASTER CONTROLLER (SPECIAL)	16	FOOT	CONCRETE FOUNDATION, TYPE A	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	TRANSCEIVER - FIBER OPTIC	4	FOOT	CONCRETE FOUNDATION, TYPE D	7	EACH	REMOVE EXISTING HANDHOLE
467	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	45	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	7	EACH	REMOVE EXISTING CONCRETE FOUNDATION
			15	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	1	EACH	VIDEO VEHICLE DETECTION SYSTEM
565	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C				1	L SUM	TELEPHONE SERVICE INSTALLATION

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE X INCAND	WATTAGE LED	XX OPERATIONS	
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	87.50
(GREEN)	14	135	15	0.25	52.50
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	350.1

VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS 60133

ENERGY SUPPLY - CONTACT: JUDY KNELL
PHONE: (630) 691-4608
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 (1.1)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2 = (6.1+L-1.0)=
E - M ARM POLE		SIGNAL POST	2 (1.0)		
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)

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 ROADWAYS SURFACES SUCH AS SHOULDERS, MEDIAN, 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.

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES

FINLEY ROAD @ BROOK ROAD
DOWNERS GROVE, ILLINOIS

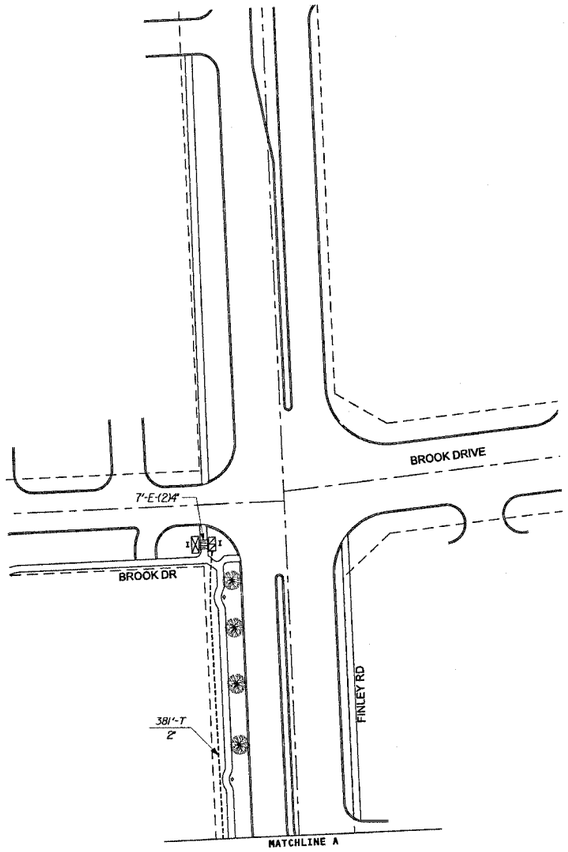
FILE NAME: 09_cp.dgn
DATE: SEPT 7, 2004
PROJECT NO.: H0312-18

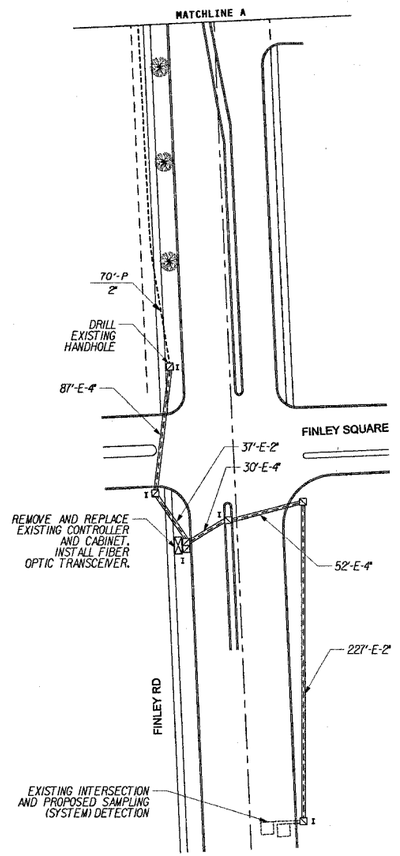
SHEET NO.: 9 OF 13

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	10
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

SCALE: 1"=50'





INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	▭
HANDHOLE	◪	◪
DOUBLE HANDHOLE	◪◪	◪◪
HEAVY-DUTY HANDHOLE	H	H
G.S. CONDUIT IN TRENCH OR PUSHED	----------	----------
DECTECTOR LOOP	□	□
COMMON TRENCH	CT	
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING
AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

SIGNAL INTERCONNECT PLAN

FINLEY ROAD, BROOK ROAD TO FINLEY SQUARE
DOWNERS GROVE, ILLINOIS

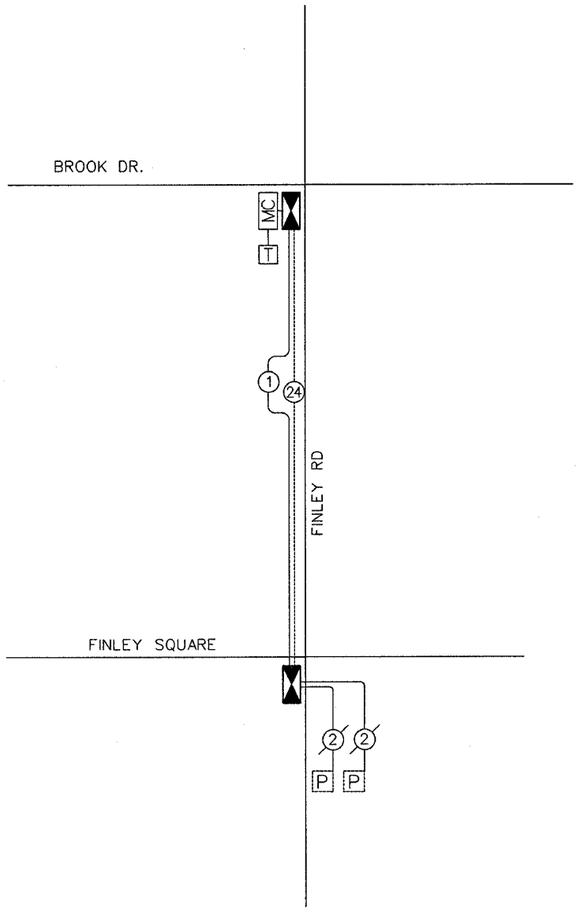
FILE NAME: ic.dgn
DATE: SEPT 7, 2004
PROJECT NO.: H0312-18

SHEET NO.: 10 OF 13

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	11
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

(NOT TO SCALE)



SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION
1	L SUM	TRAFFIC CONTROL AND PROTECTION
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1	EACH	TRANSCEIVER - FIBER OPTIC
594	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
637	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F
1	EACH	DRILL EXISTING HANDHOLE
1	LSUM	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM
1	EACH	LAPTOP SYSTEM MONITORING COMPUTER

INTERCONNECT SCHEMATIC LEGEND

- PROPOSED INTERSECTION CONTROLLER
- EXISTING INTERSECTION CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
- MMC — MASTER MASTER CONTROLLER
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTOR
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTOR
- P — EXISTING INTERSECTION DETECTOR AND PROPOSED SAMPLING (SYSTEM) DETECTOR
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
- PS — PROPOSED SAMPLING (SYSTEM) DETECTORS
- (24) PROPSED INTERCONNECT CABLE - NO.62.5/125 2 MM 12F & SM 12F - FIBER OPTIC CABLE
- (24) EXISTING INTERCONNECT CABLE - NO.62.5/125 2 MM 12F & SM 12F FIBER OPTIC CABLE
- (12) PROPOSED INTERCONNECT CABLE - NO.62.5/125 12F FIBER OPTIC CABLE
- (12) EXISTING INTERCONNECT CABLE - NO.62.5/125 12F FIBER OPTIC CABLE
- (6) PROPOSED INTERCONNECT CABLE - NO.18 3 PAIR TWISTED, SHIELDED
- (6) EXISTING INTERCONNECT CABLE - NO.18 3 PAIR TWISTED, SHIELDED
- (2) PROPOSED LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- (2) EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- (1) PROPOSED TRACER CABLE NO. 14 1/C
- (1) EXISTING TRACER CABLE NO. 14 1/C
- T — PROPOSED TELEPHONE CONNECTION
- T — EXISTING TELEPHONE CONNECTION

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

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

INTERCONNECT SCHEMATIC and SCHEDULE OF QUANTITIES

FINLEY ROAD FROM BROOK ROAD TO ACCESS DRIVE
DOWNERS GROVE, ILLINOIS

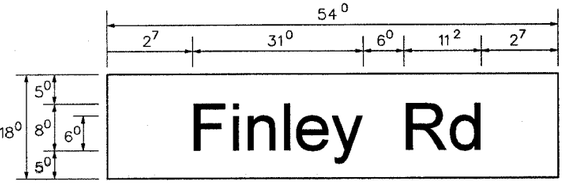
FILE NAME: 11_icsk.dgn
DATE: SEPT 7, 2004
PROJECT NO.: H0312-18

SHEET NO.: 11 OF 13

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	13	12
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 83759

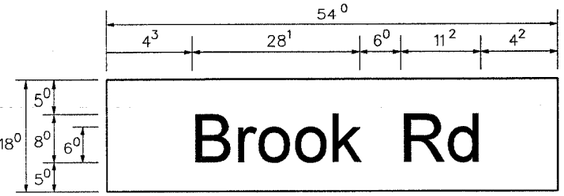
INTERNALLY ILLUMINATED SIGN PANEL DESIGN



____ Sq. M. each
____ Sq. Ft. each
2 Required
Design Series D

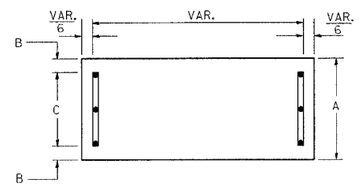
NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

INTERNALLY ILLUMINATED SIGN PANEL DESIGN

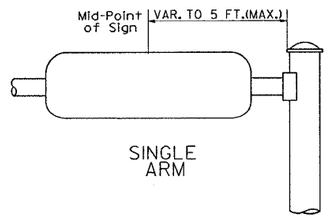


____ Sq. M. each
____ Sq. Ft. each
2 Required
Design Series D

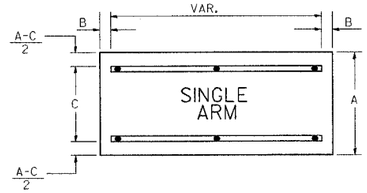
SUPPORTING CHANNELS



A	B	C
18"	2"	14"



SUPPORTING CHANNELS



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

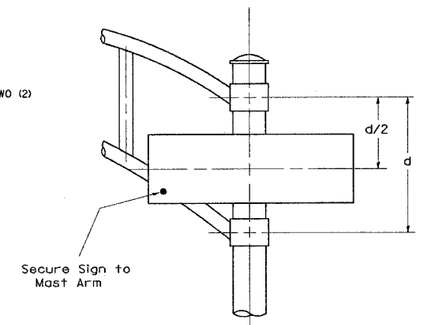
GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
4. ALL BORDERS SHALL BE ¾" WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * A.K.T. CORPORATION, SCHAUMBURG, IL
   - * TUCKER COMPANY, INC., WAUWATOSA, WI
   - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - * WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	¼" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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



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

EXAMPLE, 2 ③ DENOTES 3"/8

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

FIRST LETTER \ SECOND LETTER	a c d e g o q	b h i k l m n p r u	f w	j	s t	v y	x	z
SERIES	C D	C D	C D	C D	C D	C D	C D	C D
A W X	1²,1⁴	1⁴,1⁵	1²,1⁴	0⁶,1⁰	1¹,1⁴	0⁶,1⁰	1¹,1²	1²,1⁴
B	1⁴,1⁵	2⁰,2¹	1⁴,1⁵	1¹,1²	1⁴,1⁵	1²,1⁴	1²,1⁴	1⁶,1⁷
C E G	1⁴,1⁵	2⁰,2¹	1²,1⁴	0⁶,1⁰	1²,1⁴	1²,1⁴	1⁴,1⁵	1⁴,1⁵
D O Q R	1⁴,1⁵	2⁰,2¹	1⁴,1⁵	0⁶,1⁰	1²,1⁴	1²,1⁴	1⁴,1⁵	1⁴,1⁵
F	0⁵,0⁶	1⁴,1⁵	0⁶,1⁰	0⁵,0⁶	0⁶,1⁰	0⁶,1⁰	0⁶,1⁰	1¹,1²
H I M N	2⁰,2¹	2²,2⁴	2⁰,2¹	1⁴,1⁵	1⁶,1⁷	1⁶,1⁷	2⁰,2¹	2⁰,2¹
J U	2⁰,2¹	2⁰,2¹	1⁶,1⁷	1⁴,1⁵	1⁶,1⁷	1⁶,1⁷	1⁶,1⁷	2⁰,2¹
K L	1¹,1²	1⁶,1⁷	1¹,1²	0⁵,0⁶	1¹,1²	1¹,1²	1¹,1²	1²,1⁴
P	1²,1⁴	1⁴,1⁵	1²,1⁴	0⁵,0⁶	1¹,1²	1¹,1²	1²,1⁴	1²,1⁴
S	1²,1⁴	1⁶,1⁷	1²,1⁴	0⁶,1⁰	1²,1⁴	1²,1⁴	1²,1⁴	1²,1⁴
T	1¹,1²	1⁶,1⁷	0⁶,1⁰	0⁶,1⁰	1¹,1²	1¹,1²	1¹,1²	1²,1⁴
V	0⁶,1⁰	1⁴,1⁵	1¹,1²	0⁶,1⁰	1²,1⁴	1²,1⁴	1²,1⁴	1²,1⁴
Y	0⁵,0⁶	1⁴,1⁵	0⁶,1⁰	0⁵,0⁶	0⁵,0⁷	0⁵,0⁶	0⁶,1⁰	1¹,1²
Z	1⁶,1⁷	2²,2⁴	1⁶,1⁷	1²,1⁴	1⁶,1⁷	1⁶,1⁷	1⁶,1⁷	2⁰,2¹

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

FIRST LETTER \ SECOND LETTER	a c d e g o q	b h i k l m n p r u	f w	j	s t	v y	x	z
SERIES	C D	C D	C D	C D	C D	C D	C D	C D
a d h g i j l m n q u	1⁶,1⁷	2²,2⁴	1⁶,1⁷	1²,1⁴	1⁴,1⁵	1⁴,1⁵	1⁶,1⁷	1⁶,1⁷
b f k o p s	1²,1⁴	1⁶,1⁷	1¹,1²	0⁵,0⁶	1¹,1²	1¹,1²	1²,1⁴	1²,1⁴
c e	1²,1⁴	1⁶,1⁷	1²,1⁴	0⁶,1⁰	1²,1⁴	1²,1⁴	1²,1⁴	1²,1⁴
r	0⁶,1⁰	1²,1⁴	0⁶,1⁰	0³,0³	0⁵,0⁶	0⁵,0⁶	0⁶,1⁰	0⁶,1⁰
t z	1²,1⁴	1⁶,1⁷	1²,1⁴	0⁶,1⁰	1¹,1²	1¹,1²	1²,1⁴	1²,1⁴
v y	1¹,1²	1⁴,1⁵	1¹,1²	0⁵,0⁶	0⁶,1⁰	0⁶,1⁰	1¹,1²	1¹,1²
w	1¹,1²	1⁴,1⁵	1¹,1²	0⁵,0⁶	1¹,1²	1¹,1²	1¹,1²	1²,1⁴
x	1²,1⁴	1⁶,1⁷	1¹,1²	0⁵,0⁶	1¹,1²	1¹,1²	1¹,1²	1²,1⁴

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

FIRST NUMBER \ SECOND NUMBER	0	1	2	3	4	5	6	7	8	9
SERIES	C D	C D	C D	C D	C D	C D	C D	C D	C D	C D
0 9	1⁶,1⁷	1⁶,1⁷	1⁴,1⁵	1²,1⁴	1⁴,1⁵	1⁴,1⁵	1⁶,1⁷	1²,1⁴	1⁶,1⁷	1⁶,1⁷
1	2⁰,2¹	2⁰,2¹	2⁰,2¹	1⁶,1⁷	1⁴,1⁵	2⁰,2¹	2⁰,2¹	1⁴,1⁵	2⁰,2¹	2⁰,2¹
2 3 4	1⁴,1⁵	1⁴,1⁵	1⁴,1⁵	1²,1⁴	1²,1⁴	1⁴,1⁵	1⁴,1⁵	1¹,1²	1⁶,1⁷	1⁴,1⁵
5	1⁴,1⁵	1⁴,1⁵	1⁴,1⁵	1¹,1²	1¹,1²	1⁴,1⁵	1⁴,1⁵	1¹,1²	1⁴,1⁵	1⁴,1⁵
6	1⁶,1⁷	1⁴,1⁵	1⁴,1⁵	1²,1⁵	1²,1⁴	1⁴,1⁵	1⁴,1⁵	1¹,1²	1⁴,1⁵	1⁴,1⁵
7	1²,1⁴	1²,1⁴	1⁴,1⁵	1²,1⁵	0⁵,0⁶	1²,1⁴	1⁴,1⁵	1¹,1²	1⁴,1⁵	1²,1⁴
8	1⁶,1⁷	1⁶,1⁷	1⁴,1⁵	1²,1⁵	1²,1⁴	1⁴,1⁵	1⁶,1⁷	1²,1⁴	1⁶,1⁷	1⁴,1⁵

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	6 INCH UPPER CASE LETTERS SERIES D	8 INCH UPPER CASE LETTERS SERIES C	8 INCH UPPER CASE LETTERS SERIES D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	6 INCH LOWER CASE LETTERS SERIES D
A	3⁶	5⁰	5⁰	6⁵	a	3⁵	4²
B	3²	4⁰	4³	5³	b	3⁵	4²
C	3²	4⁰	4³	5³	c	3⁵	4¹
D	3²	4⁰	4³	5³	d	3⁵	4²
E	3⁰	3⁵	4⁰	4⁷	e	3⁵	4²
F	3⁰	3⁵	4⁰	4⁷	f	2³	2⁶
G	3²	4⁰	4³	5³	g	3⁵	4²
H	3²	4⁰	4³	5³	h	3⁵	4²
I	0⁷	0⁷	1¹	1²	i	1¹	1¹
J	3⁰	3⁶	4⁰	5⁰	j	2⁰	2²
K	3²	4¹	4³	5⁴	k	3⁵	4²
L	3⁰	3⁵	4⁰	4⁷	l	1¹	1¹
M	3⁷	4⁵	5¹	6¹	m	6⁰	7⁰
N	3²	4⁰	4³	5³	n	3⁵	4²
O	3⁴	4²	4⁵	5⁵	o	3⁶	4³
P	3²	4⁰	4³	5³	p	3⁵	4²
Q	3⁴	4²	4⁵	5⁵	q	3⁵	4²
R	3²	4⁰	4³	5³	r	2⁶	3²
S	3²	4⁰	4³	5³	s	3⁶	4²
T	3⁰	3⁵	4⁰	4⁷	t	2⁷	3²
U	3²	4⁰	4³	5³	u	3⁵	4²
V	3⁵	4⁴	4⁷	6⁰	v	4²	4⁷
W	4⁴	5²	6⁰	7⁰	w	5⁵	6⁴
X	3⁴	4⁰	4⁵	5³	x	4⁴	5¹
Y	3⁶	5⁰	5⁰	6⁶	y	4⁶	5³
Z	3²	4⁰	4³	5³	z	3⁶	4³

NUMBER	6 INCH SERIES C	6 INCH SERIES D	8 INCH SERIES C	8 INCH SERIES D
1	1²	1⁴	1⁵	2⁰
2	3²	4⁰	4³	5³
3	3²	4⁰	4³	5³
4	3⁵	4³	4⁷	5⁷
5	3²	4⁰	4³	5³
6	3²	4⁰	4³	5³
7	3²	4⁰	4³	5³
8	3²	4⁰	4³	5³
9	3²	4⁰	4³	5³
0	3⁴	4²	4⁵	5⁵

FILE NAME:	SHEET NO.:
sign.dgn	12
DATE: SEPT 7, 2004	OF 13
PROJECT NO.: H0312-18	

REVISIONS NAME	DATE
D.A.Z./D.A.G.	11/90
	6/98
CADD	10/00

Illinois Department of Transportation
DISTRICT 1

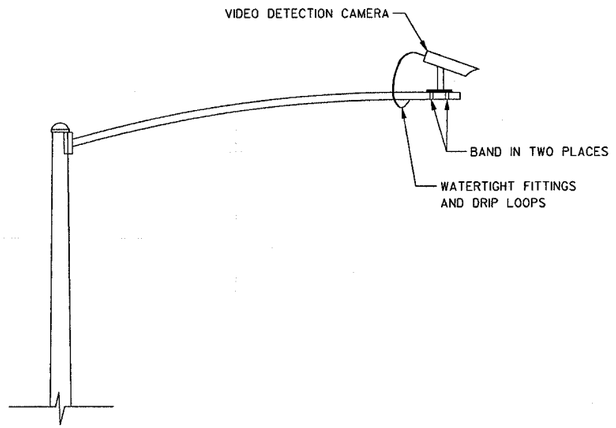
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE
DATE:

DRAWN BY: ROB
DESIGNED BY: JHE
CHECKED BY: DAD

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	02-00091-00-T	DUPAGE	13	13
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

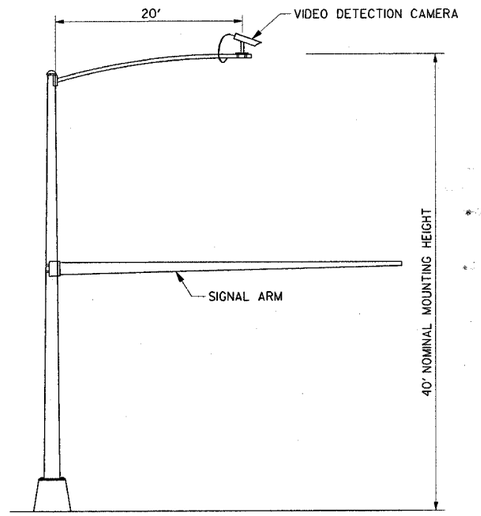
CONTRACT NO. 83759



VIDEO DETECTION CAMERA AND PTZ (DOME CAMERA) MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR SINGLE, AND MULTIPLE CAMERA MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
- MOUNT VIDEO DETECTION CAMERA AIMING DOWN AT 30 DEGREE ANGLE.



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

(NOT TO SCALE)

METRO TRANSPORTATION GROUP, INC.
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING
AND SIGNAL SYSTEMS/DESIGN
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS		
NO.	DATE	DESCRIPTION

CONSTRUCTION DETAILS

FINLEY ROAD @ BROOK DRIVE
DOWNERS GROVE, ILLINOIS

FILE NAME: 13_con1.dgn
DATE: SEPT 7. 2004
PROJECT NO.: H0312-18

SHEET NO.: 13 OF 13