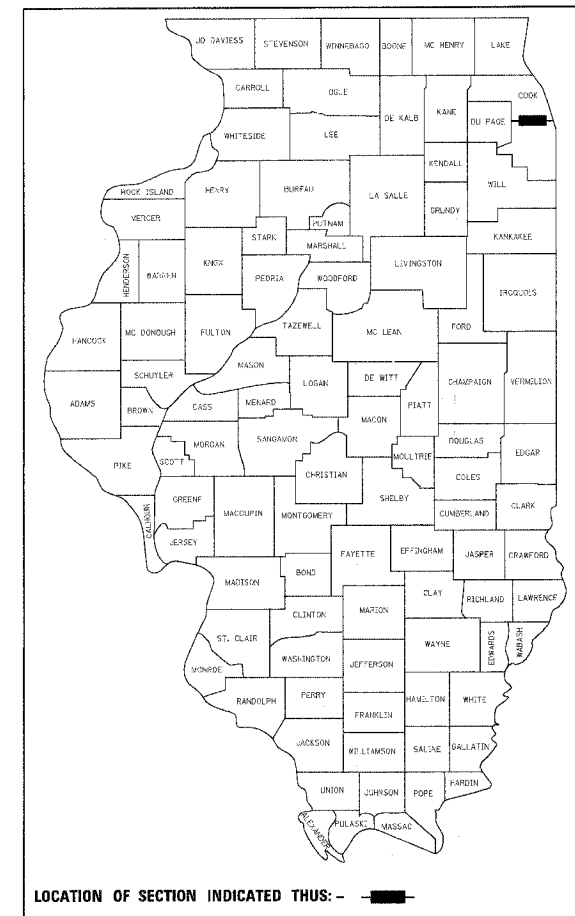


F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	1
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

111th STREET AND COLLEGE PARKWAY / POSSUM DRIVE
Section No.: 04-00029-00-CH
Project No.: M-8003 (393)
CITY OF PALOS HILLS, COOK COUNTY
Job No.: C-91-179-04



LOCATION OF SECTION INDICATED THIS: -

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUMMARY OF QUANTITIES
3	TRAFFIC SIGNAL INSTALLATION PLAN
4	SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
5	INTERCONNECT PLAN
6	INTERCONNECT SCHEMATIC
7	PAVEMENT MARKING PLAN
8	DISTRICT 1 TYPICAL PAVEMENT MARKINGS
9	MAST ARM MOUNTED STREET NAME SIGNS
10-13	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

CHRISTOPHER B. BURKE
 ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



FEDERAL AID DESIGN ENGINEER: PHIL MARCVYN
 (847) 705-4189

LIST OF STATE STANDARDS

STANDARD NO.	DESCRIPTION
STD. 000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
STD. 424001-04	CURB RAMP FOR SIDEWALKS
STD. 606001-03	CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
STD. 701602-02	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
STD. 701701-04	URBAN LANE CLOSURE, MULTI-LANE INTERSECTION
STD. 701801-03	LANE CLOSURE, MULTILANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
STD. 702001-06	TRAFFIC CONTROL DEVICES
STD. 720001	SIGN PANEL MOUNTING DETAILS
STD. 720000-01	SIGN PANEL ERECTION DETAILS
STD. 720001	METAL POSTS (SIGNS, MARKERS, AND DELINEATORS)
STD. 720001	APPLICATION OF TYPE A AND B METAL POSTS
STD. 780001-01	TYPICAL PAVEMENT MARKINGS
STD. 810001-01	CONCRETE HANDHOLES
STD. 814000-01	DOUBLE HANDHOLES
STD. 857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
STD. 877001-02	STEEL MAST ARM ASSEMBLY AND POLE
STD. 878001-05	CONCRETE FOUNDATION DETAILS
STD. 880001	SPAN WIRE INDICATED SIGNALS AND FLASHING BEACON INSTALLATION
STD. 880008	TRAFFIC SIGNAL MOUNTING DETAILS
STD. 880001	DETECTOR LOOP INSTALLATIONS
B.L.R. 18-4	TRAFFIC CONTROL DEVICES - DAY LABOR MAINTENANCE

DESIGN DESIGNATION - MINOR ARTERIAL

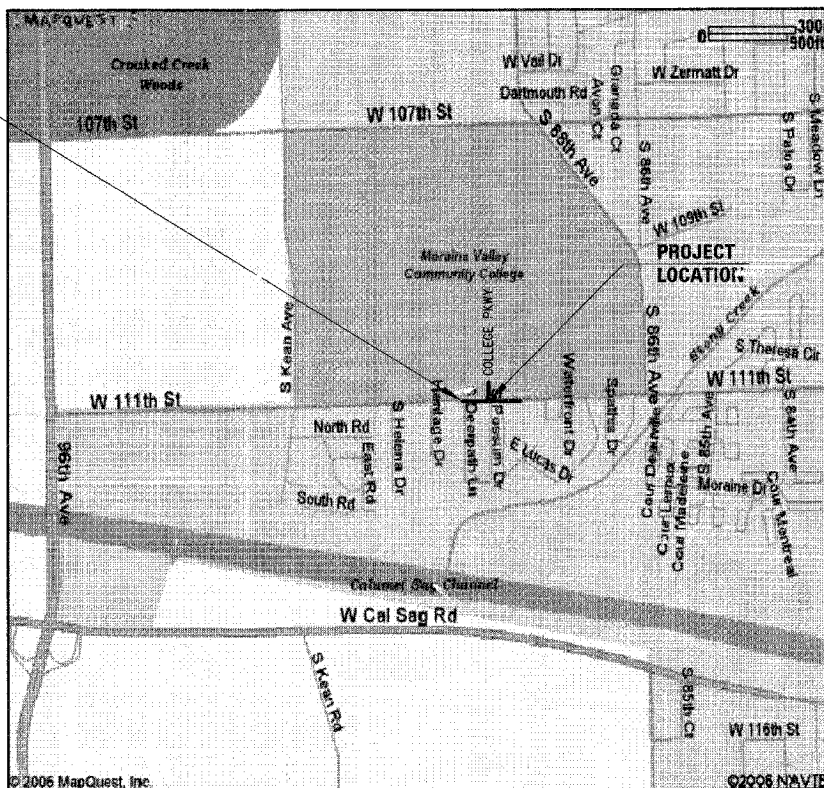
STRUCTURAL DESIGN TRAFFIC:	YEAR 2025	
PV = 3040	SU = 128	MU = 32
ROAD/STREET CLASSIFICATION:	CLASS II	

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:

P = 95%	S = 4%	M = 1%
---------	--------	--------

TRAFFIC FACTOR: MINIMUM TF = 0.27 ACTUAL TF = 0.85

SUBGRADE SUPPORT RATING:
SSR = FAIR (ENTIRE PROJECT)



LOCATION MAP
SCALE: NONE

GROSS LENGTH OF PROJECT = 960.31 LINEAL FEET (0.18 MILES)
NET LENGTH OF PROJECT = 960.31 LINEAL FEET (0.18 MILES)

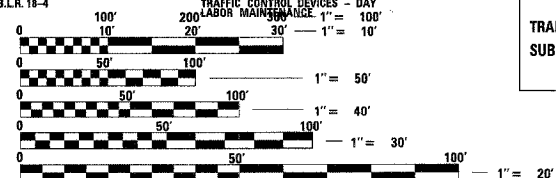
PROJECT LOCATED IN: CITY OF PALOS HILLS



TRAFFIC DATA

EXISTING ADT: 21,300
PROPOSED ADT: 24,000

POSTED SPEED = 45 MPH
DESIGN SPEED = 50 MPH



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. 83895

AGENCY RESPONSIBLE FOR LETTING
CITY OF PALOS HILLS

APPROVED 3/8/07 2007
George M. Ziegler
LOCAL AGENCY POSITION

PASSED MARCH 12 2007

Christophe Burke
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED REVIEW
March 12 2007
Diane O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

George M. Ziegler 3-8-2007
ENGINEER DATE

GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-45853
EXPIRATION DATE: 11-30-2007
PROFESSIONAL DESIGN FIRM No.: 184-001742
EXPIRATION DATE: 04-30-2007

SUMMARY OF QUANTITIES

83895

CONSTRUCTION TYPE CODE Y031-1F				111th Street @ College Pkwy/ Possum Drive	111th Street Interconnect
CODE NO.	ITEM	UNIT	TOTAL		
* 42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	118	118	
* 42400800	DETECTABLE WARNINGS	SQ FT	63	63	
* 44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	8	8	
* 44000600	SIDEWALK REMOVAL	SQ FT	106	106	
* 44003100	MEDIAN REMOVAL	SQ FT	165	165	
XX006851	PAVEMENT RESTORATION (SPECIAL)	SQ YD	22	22	
XX006852	EXPLORATION TRENCH (SPECIAL)	CU YD	100	100	
* 60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	27	27	
* 60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	8	8	
67100100	MOBILIZATION	L SUM	1	/	
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1	/	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	/	
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	/	
* 72000100	SIGN PANEL TYPE 1	SQ FT	98	98	
* 72000200	SIGN PANEL TYPE 2	SQ FT	43.5	43.5	
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	153	153	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1885	1885	
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	854	854	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	38	38	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	110	110	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	43	43	
* 78300100	PAVEMENT MARKING REMOVAL	SQ FT	554	554	
* 78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	37	37	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	243	243	
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	69	69	
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	18	18	
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	69	69	
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	90	90	
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	196	196	
81400100	HANDHOLE	EACH	5	5	
81400200	HEAVY DUTY HANDHOLE	EACH	2	2	
81400300	DOUBLE HANDHOLE	EACH	1	1	
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	497	497	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1	1
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1	1	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	768	768	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1569	1569	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1431	1431	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	691	691	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1304	1304	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	575	575	
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 10 FT.	EACH	1	1	
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT.	EACH	2	2	
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2	2	
87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1	1	
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1	1	
87800100	CONCRETE FOUNDATION TYPE A	FOOT	12	12	
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	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6	6	
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2	2	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	2	
88100200	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	4	4	
88100400	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1	1	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8	8	
88500100	INDUCTIVE LOOP DETECTOR	EACH	7	7	
88600100	DETECTOR LOOP TYPE 1	FOOT	656	656	
88700200	LIGHT DETECTOR	EACH	2	2	
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1	1	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	5	5	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3966	3966	
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1954	1954	
X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	1	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62 5/125, MM12F SM12F	FOOT	1968	1968	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	484	484	
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	481	481	
XX002856	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	LSUM	1	1	
XX004574	UNINTERRUPTIBLE POWER SUPPLY AND TYPE III CABINET	EACH	1	1	

*SPECIALTY ITEMS

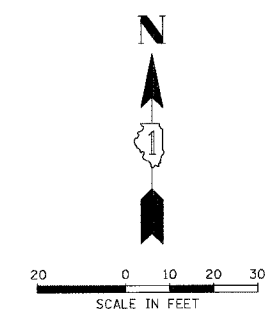
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES 111th STREET AT COLLEGE PKWY / POSSUM DRIVE PALOS HILLS, ILLINOIS SCALE: N.T.S. DATE: 3/6/2007
NAME	DATE	

CHRISTOPHER B. BURKE ENGINEERING LTD.
 3515 West Higgins Road, Suite 600
 Palos Hills, Illinois 60465
 (847) 823-0600

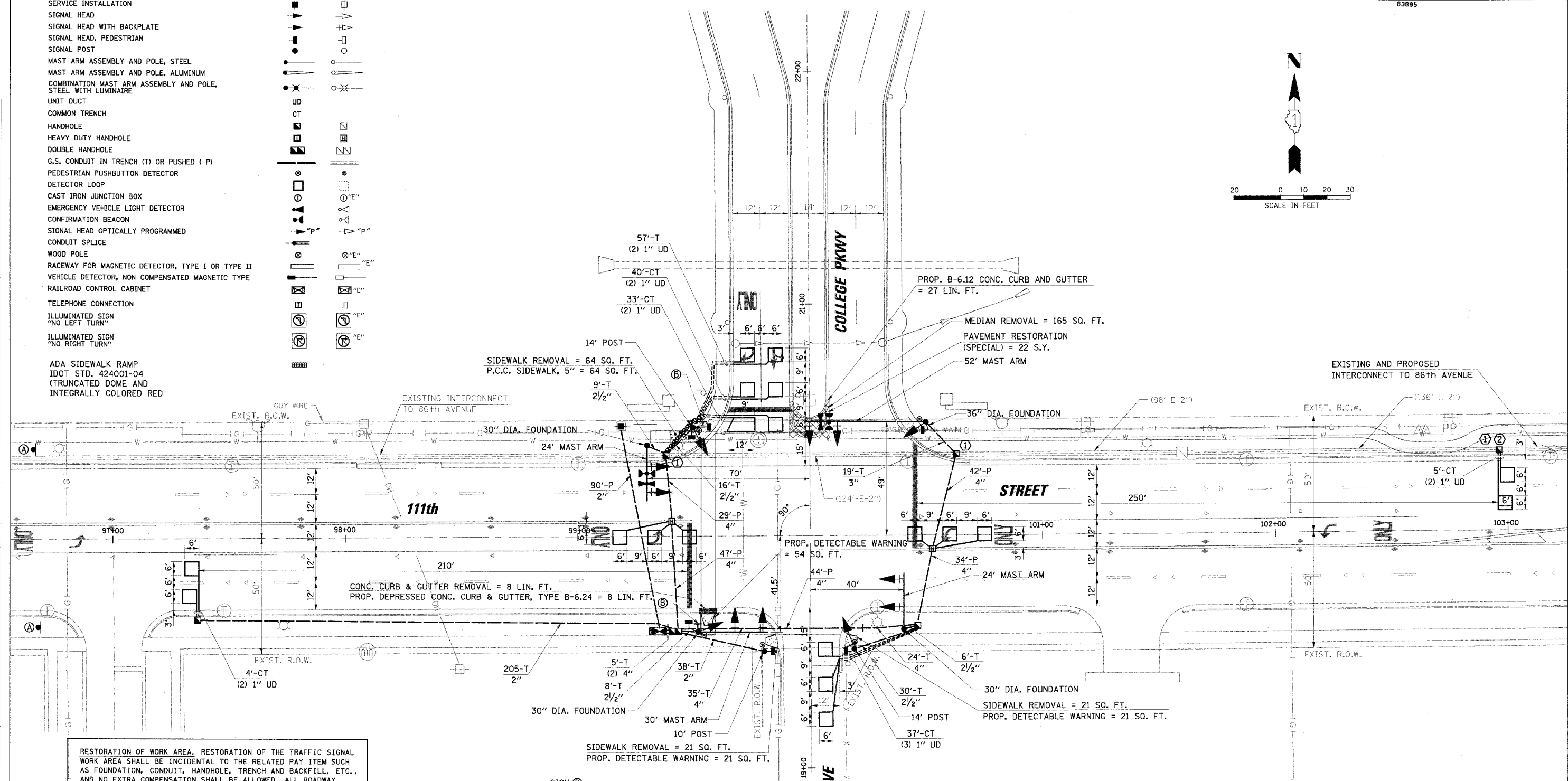
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
83895				

TRAFFIC SIGNAL LEGEND

- | PROPOSED | EXISTING |
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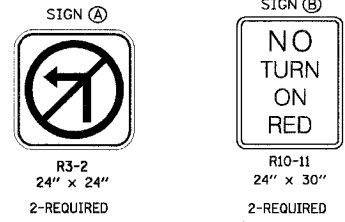


PROJECT: PALOSHILLS\0210A87\Traf\11th.dgn
 DATE: 2/16/2007
 BY: WCE
 CHECKED: GMZ
 DESIGNED: WCE
 DRAWN: FCP/FPB
 PROJECT NO.: 04-00029-00-CH
 SHEET NO.: 13 OF 13
 PROJECT TITLE: TRAFFIC SIGNAL INSTALLATION PLAN
 PROJECT LOCATION: 111th STREET AT COLLEGE PKWY / POSSUM DRIVE
 PROJECT OWNER: ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROJECT NUMBER: 83895



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

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



- CONSTRUCTION NOTES:
- INTERCEPT EXISTING 2" CONDUIT WITH NEW HANDHOLES.
 - INSTALL NEW LEAD-IN CABLE IN EXISTING AND PROPOSED CONDUIT.
 - THE THERMOPLASTIC PAVEMENT MARKING LINE, 24 INCH FOR THE STOP BARS ON 111th STREET SHALL NOT BE INSTALLED UNTIL TRAFFIC SIGNAL IS OPERATIONAL.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN

111th STREET AT COLLEGE PKWY / POSSUM DRIVE
PALOS HILLS, ILLINOIS

SCALE: 1" = 20'
DATE: 2/16/2007

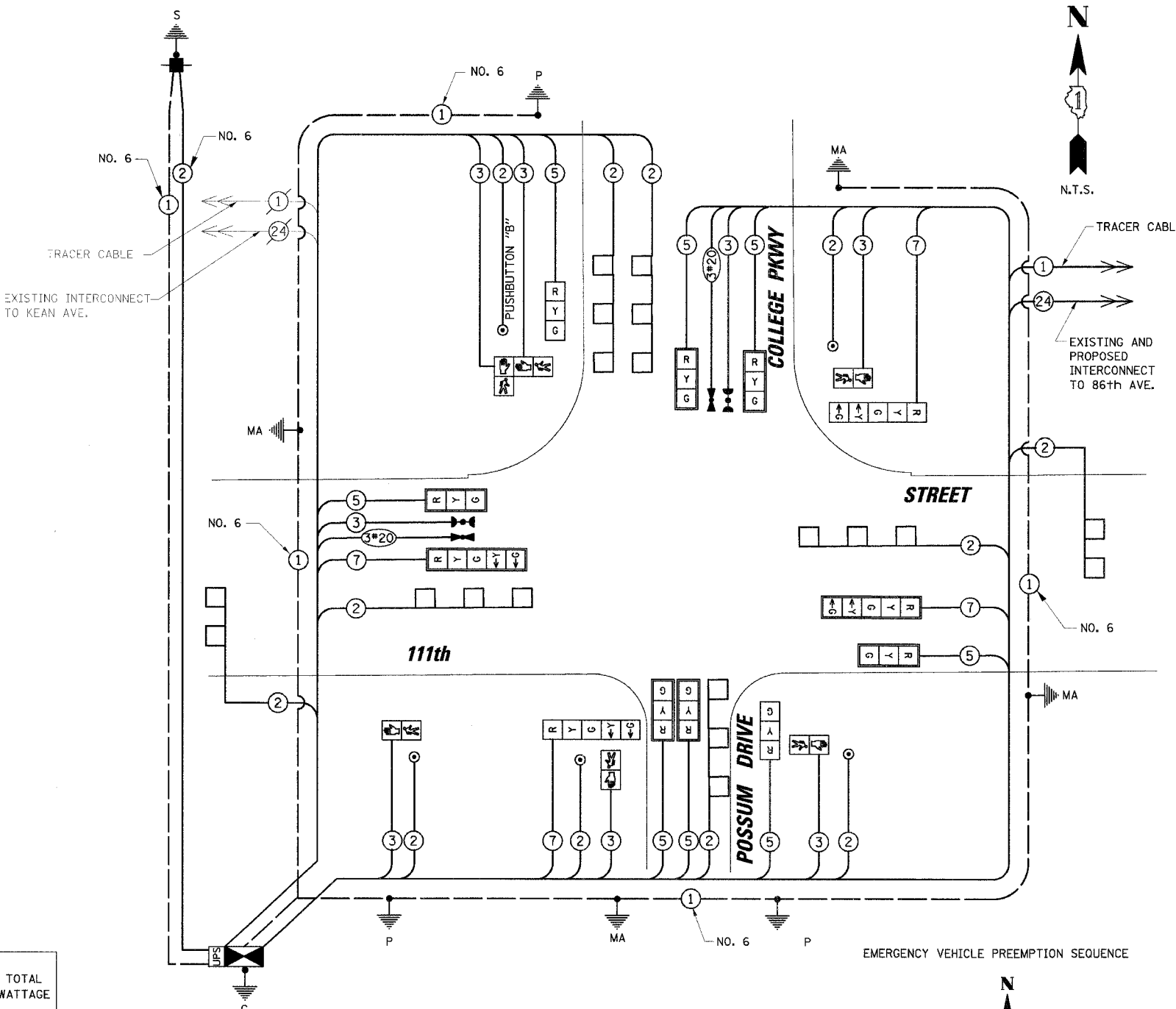
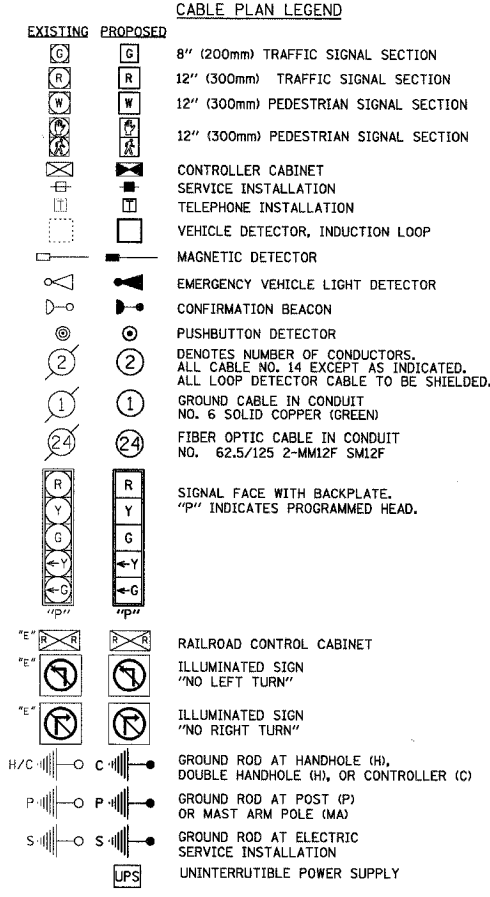
DRAWN BY: FCP/FPB
DESIGNED BY: WCE
CHECKED BY: GMZ

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

83895

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	118
DETECTABLE WARNINGS	SQ FT	63
COMBINATION CURB AND GUTTER REMOVAL	FOOT	8
SIDEWALK REMOVAL	SQ FT	106
MEDIAN REMOVAL	SQ FT	165
PAVEMENT RESTORATION (SPECIAL)	SQ YD	22
EXPLORATION TRENCH (SPECIAL)	CU YD	75
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-8.12	FOOT	27
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	8
SIGN PANEL TYPE 1	SQ FT	98
SIGN PANEL TYPE 2	SQ FT	43.5
THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	163
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1865
THERMOPLASTIC PAVEMENT MARKING - LINE 5"	FOOT	854
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	38
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	110
RAISED REFLECTIVE PAVEMENT MARKER	EACH	43
PAVEMENT MARKING REMOVAL	SQ FT	554
RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	37
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	243
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	69
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	18
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	69
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	90
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	196
HANDHOLE	EACH	5
HEAVY DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	497
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	788
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1589
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1431
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	691
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1304
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	575
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
CONCRETE FOUNDATION TYPE A	FOOT	12
CONCRETE FOUNDATION TYPE D	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	45
CONCRETE FOUNDATION TYPE E 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	7
INDUCTIVE LOOP DETECTOR	FOOT	656
DETECTOR LOOP TYPE 1	EACH	2
LIGHT DETECTOR	EACH	1
LIGHT DETECTOR AMPLIFIER	EACH	5
PEDESTRIAN PUSH-BUTTON	EACH	1
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	484
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	481
UNINTERRUPTIBLE POWER SUPPLY AND TYPE III CABINET	EACH	1



NOTES:
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

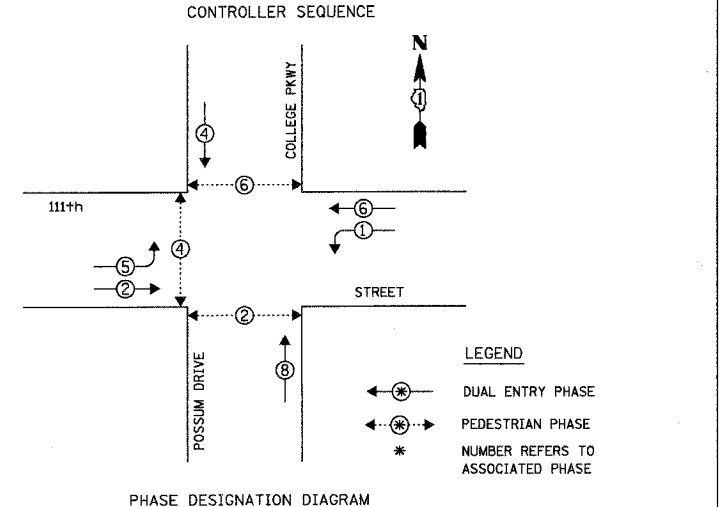
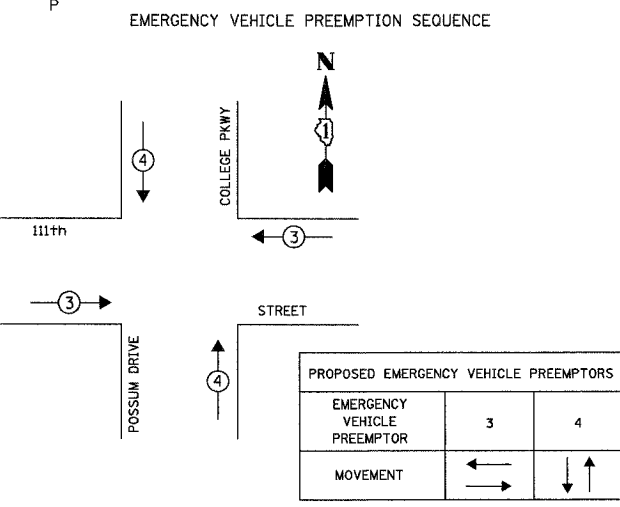
TYPE	NO. OF LAMPS	WATTAGE	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102.00
(YELLOW)	12	135	25	0.25	75.00
(GREEN)	12	135	15	0.25	45.00
ARROW	8	135	12	0.10	9.60
PED. SIGNAL	6	90	25	1.00	150.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN	0	252	25	0.05	-

ENERGY COSTS TO: TOTAL = 481.60

CITY OF PALOS HILLS
10335 S. ROBERT ROAD
PALOS HILLS, IL. 60465

ENERGY SUPPLY: CONTACT: NILES AGBKAR
PHONE: (708) 235- 2338
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)
		24" (600mm)	10 (3.0)	CONTROLLER CAB.	13 (4.0)
		30" (750mm)	15 (4.6)	FIBER OPTIC	4 (1.2)
		36" (900mm)	15 (4.6)	ELECTRIC SERVICE	13.5 (4.1)
				SERVICE TO GROUND	13.5 (4.1)
				GROUND CABLE	1 (0.5)
				POST MOUNTED	6 (1.8)



ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

111th STREET AT COLLEGE PKWY / POSSUM DRIVE
PALOS HILLS, ILLINOIS

SCALE: N.T.S.
DATE: 2/16/2007

DRAWN BY: FCP/FPB
DESIGNED BY: WCE
CHECKED BY: GMZ

DATE: _____ BY: _____

PROFILE SURVEYED _____

NOTE BOOK _____

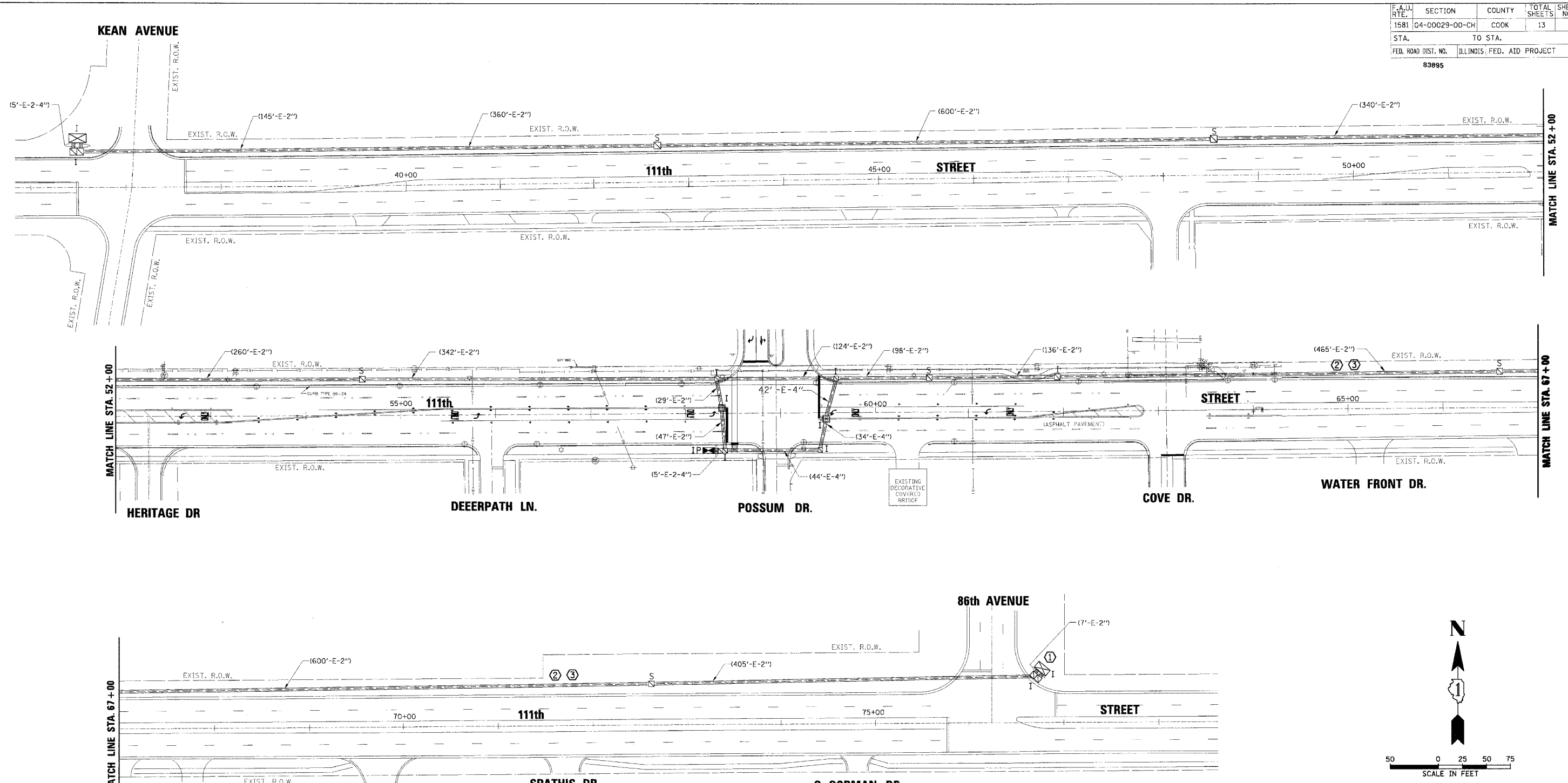
DATE: _____ BY: _____

PROFILE SURVEYED _____

NOTE BOOK _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(815) 825-6500

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
83895				



DATE	BY	DATE	BY
DATE	BY	DATE	BY

SURVEYED
 ALDAMANT
 CHECKED
 DATE
 NO.

PLAN
 NO.

PROFILE
 NO.

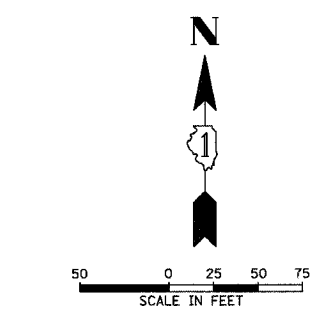
CHRISTOPHER B. BURKE ENGINEERING LTD.
 8575 West Higgins Road, Suite 600
 Palos Hills, Illinois 60018
 (847) 822-0500

- CONSTRUCTION NOTES:**
- THE EXISTING INTERCONNECT CABLE SHALL BE DISCONNECTED FROM THE EXISTING 86th AVENUE CONTROLLER AND CABINET.
 - PULL EXISTING INTERCONNECT AND TRACER CABLE FROM EXISTING CONDUITS. RE-INSTALL IN THE PROPOSED CONDUIT AND CONNECT TO THE PROPOSED CONTROLLER AND CABINET AT COLLEGE PARKWAY/POSSUM DRIVE.
 - INSTALL NEW FIBER OPTIC AND TRACER CABLES IN EXISTING AND PROPOSED CONDUIT FROM THE EXISTING 86th AVENUE CONTROLLER CABINET TO THE PROPOSED CONTROLLER AND CABINET AT COLLEGE PARKWAY/POSSUM DRIVE.
 - THE THERMOPLASTIC PAVEMENT MARKING LINE, 24 INCH FOR THE STOP BARS ON 111th STREET SHALL NOT BE INSTALLED UNTIL TRAFFIC SIGNAL IS OPERATIONAL.

INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	☐	☒
HANDHOLE	■	◻
DOUBLE HANDHOLE	▣	◻
HEAVY-DUTY HANDHOLE	▤	◻
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	—	—
DETECTOR LOOP	□	□
SYSTEM	S	S
INTERSECTION	IP	I
UNIT DUCT	UD	UD
COMMON TRENCH	CT	CT

REVISIONS	
NAME	DATE

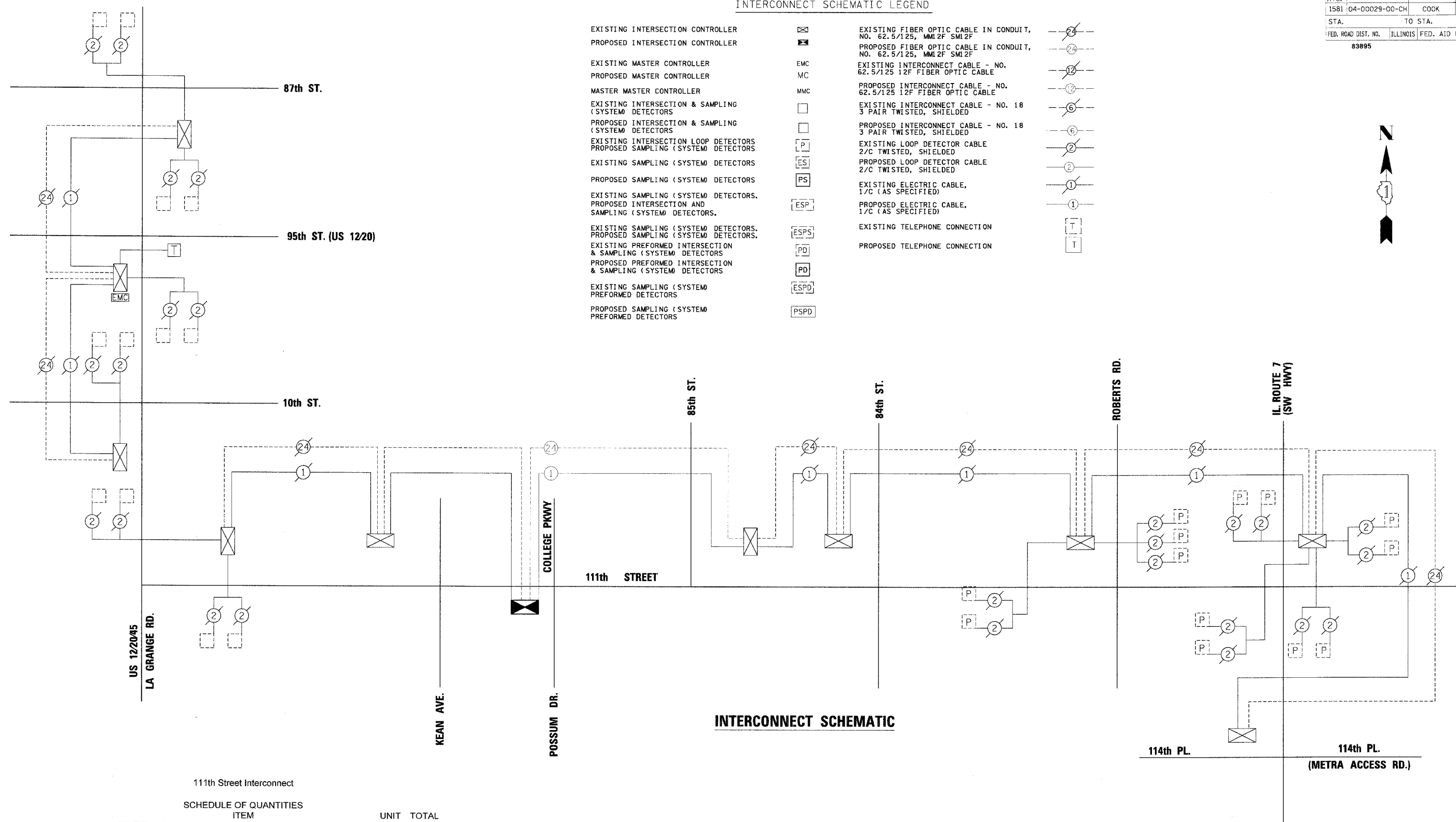


ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT PLAN
 111th STREET
 PALOS HILLS, ILLINOIS
 SCALE: 1" = 50'
 DATE: 2/16/2007
 DRAWN BY: FCP/FPB
 DESIGNED BY: WCE
 CHECKED BY: GMZ

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
83895				

INTERCONNECT SCHEMATIC LEGEND

- | | | | |
|--|------|--|---|
| EXISTING INTERSECTION CONTROLLER | ☒ | EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F | ⊗ |
| PROPOSED INTERSECTION CONTROLLER | ☒ | PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F | ⊗ |
| EXISTING MASTER CONTROLLER | EMC | EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE | ⊗ |
| PROPOSED MASTER CONTROLLER | MC | PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE | ⊗ |
| MASTER MASTER CONTROLLER | MMC | EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED | ⊗ |
| EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS | ☐ | PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED | ⊗ |
| PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | ☐ | EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED | ⊗ |
| EXISTING INTERSECTION LOOP DETECTORS | ☐ | PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED | ⊗ |
| PROPOSED INTERSECTION LOOP DETECTORS | ☐ | EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED) | ⊗ |
| EXISTING SAMPLING (SYSTEM) DETECTORS | ☐ | PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED) | ⊗ |
| PROPOSED SAMPLING (SYSTEM) DETECTORS | ☐ | EXISTING TELEPHONE CONNECTION | ⊗ |
| EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS. | ESP | PROPOSED TELEPHONE CONNECTION | ⊗ |
| EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS. | ESPS | | |
| EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | PD | | |
| PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS | PD | | |
| EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS | ESPD | | |
| PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS | PSPD | | |



PROFILE SUBMITTED BY DATE
 CHECKED BY DATE
 STRUCTURE NOTATIONS CTRG
 PLAN NO. ROOM NO. CHECKED BY DATE
 FILE NAME
CHRISTOPHER B. BURKE ENGINEERING LTD.
 8575 West Higgins Road, Suite 500
 Rosemont, Illinois 60018
 (847) 823-0500
CB

111th Street Interconnect

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3966
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1954
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	1968
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	LSUM	1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

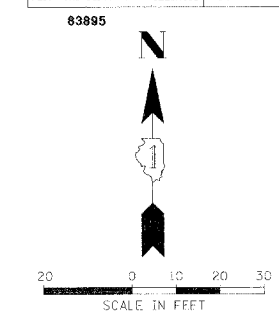
INTERCONNECT SCHEMATIC

111th STREET
PALOS HILLS, ILLINOIS

SCALE: N.T.S.
DATE: 2/16/2007

DRAWN BY: FCP/FPB
DESIGNED BY: WCE
CHECKED BY: GMZ

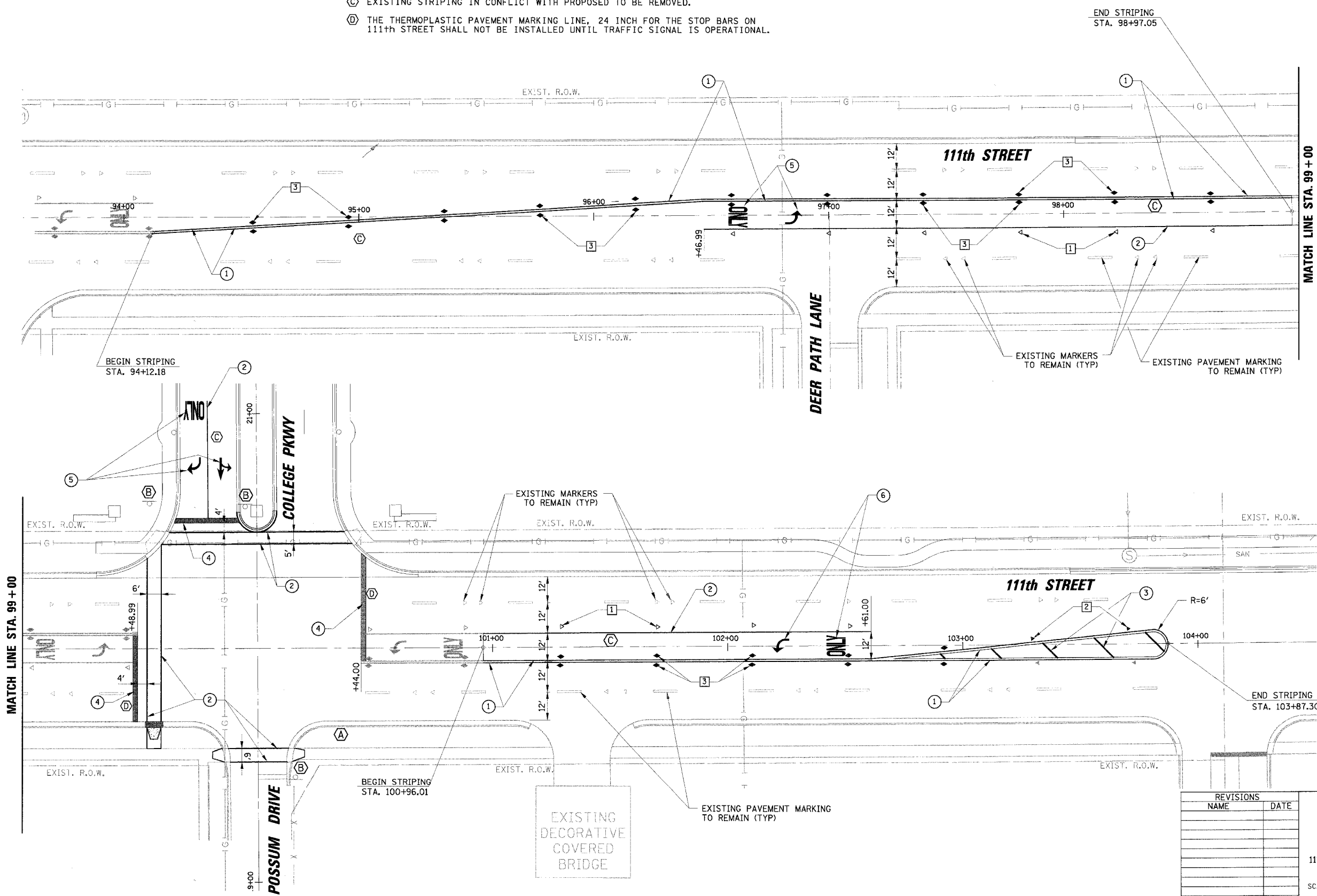
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



- CONSTRUCTION NOTES:
- (A) EXISTING INTERSECTION WARNING SIGN (W2-2) AND 88th AVENUE PLACARD TO BE REMOVED.
 - (B) EXISTING STOP SIGNS TO BE REMOVED AFTER TRAFFIC SIGNAL IS OPERATIONAL.
 - (C) EXISTING STRIPING IN CONFLICT WITH PROPOSED TO BE REMOVED.
 - (D) THE THERMOPLASTIC PAVEMENT MARKING LINE, 24 INCH FOR THE STOP BARS ON 111th STREET SHALL NOT BE INSTALLED UNTIL TRAFFIC SIGNAL IS OPERATIONAL.

DATE	BY	REVISIONS
DATE	BY	REVISIONS

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9875 West Hickory Road, Suite 500
 Rosemont, Illinois 60018
 (847) 823-0500



- PAVEMENT MARKING LEGEND
- ① 4" YELLOW DOUBLE SOLID, 11" C-C
 - ② 6" WHITE SOLID
 - ③ 12" YELLOW DIAGONALS SOLID, 25' C-C
 - ④ 24" WHITE SOLID - STOP BAR
 - ⑤ LETTERS AND SYMBOLS - WHITE
 - ① ONE-WAY CRYSTAL MARKER AT 40' CENTERS
 - ② ONE-WAY AMBER MARKER AT 40' CENTERS
 - ③ TWO-WAY AMBER MARKER AT 40' CENTERS
 - EXISTING ONE-WAY AMBER MARKER TO REMAIN
 - EXISTING TWO-WAY AMBER MARKER TO REMAIN
 - EXISTING ONE-WAY CRYSTAL MARKER TO REMAIN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

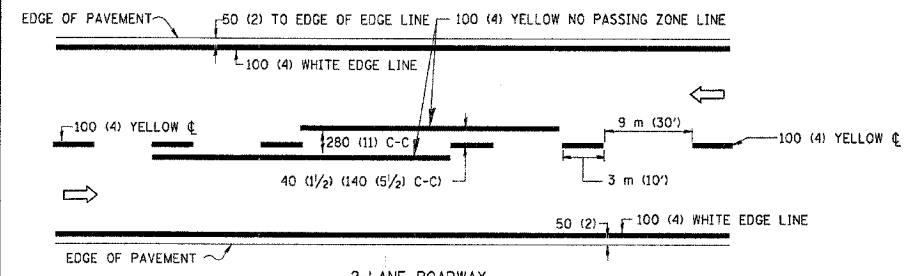
111th STREET AND COLLEGE PKWY / POSSUM DRIVE
 PALOS HILLS, ILLINOIS

SCALE: 1" = 20'
 DATE: 2/16/2007

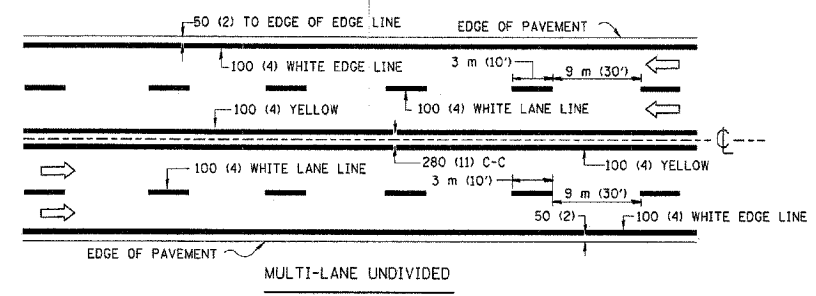
DRAWN BY: FCP/FPB
 DESIGNED BY: WCE
 CHECKED BY: GMZ

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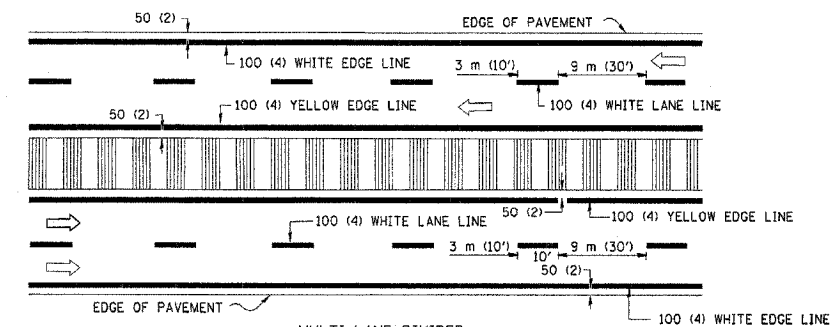
P.A. SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	13	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
83895				



2-LANE ROADWAY



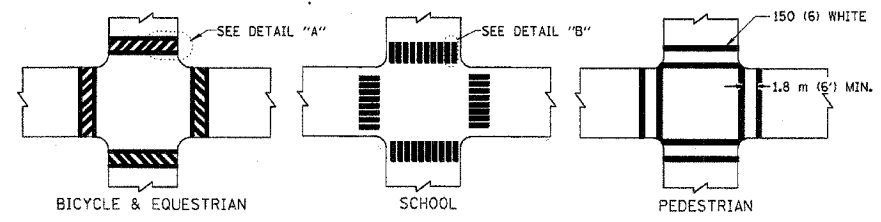
MULTI-LANE UNDIVIDED



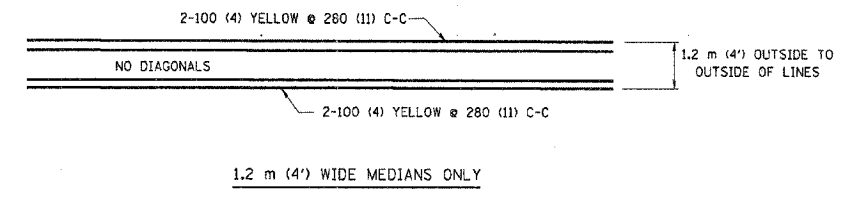
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

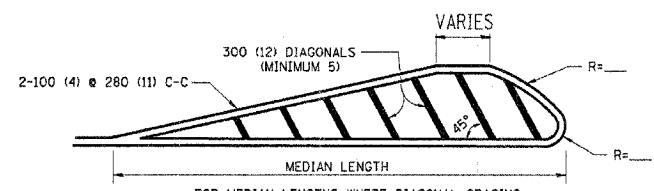
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

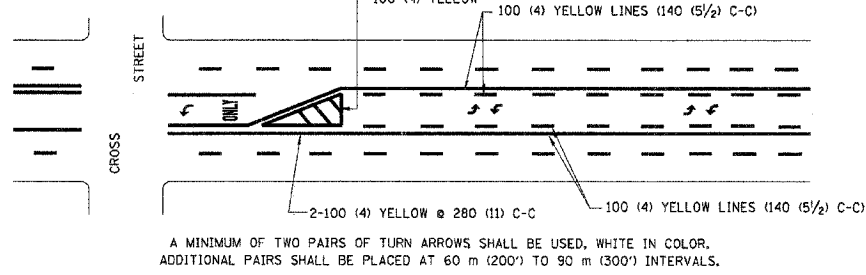


1.2 m (4') WIDE MEDIANS ONLY



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 15 m (50') C-C (LESS THAN 50 km/h (30 MPH))
 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH))
 45 m (150') C-C (MORE THAN 70 km/h (45 MPH))

MEDIANS OVER 1.2 m (4') WIDE

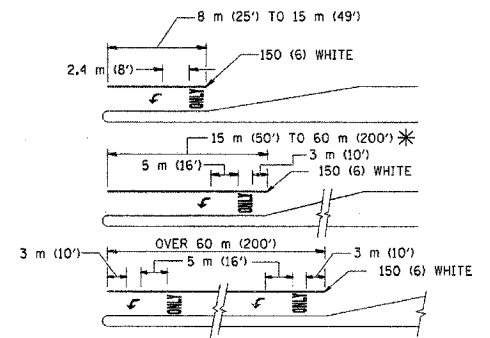


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

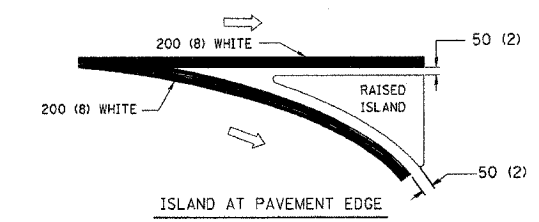
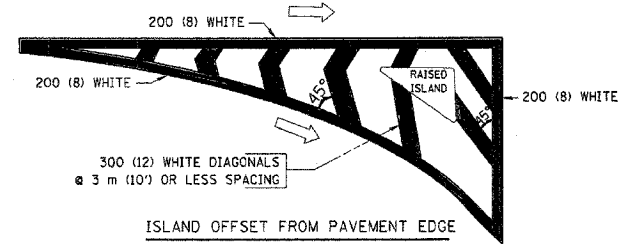
TYPICAL PAINTED MEDIAN MARKING



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

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" 15 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m ² (3.6 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

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

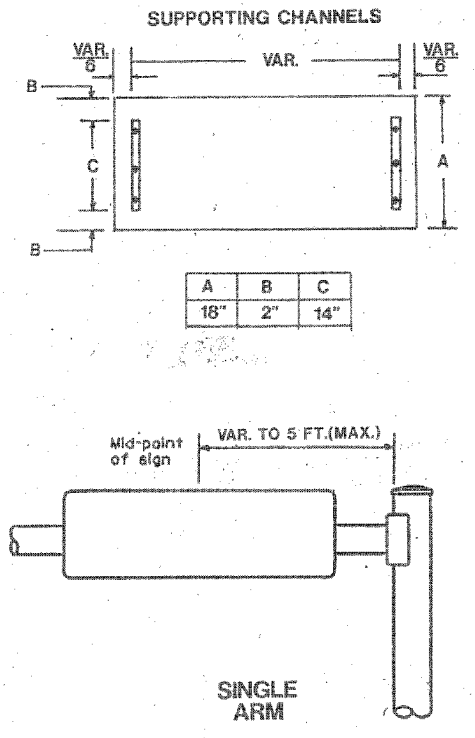
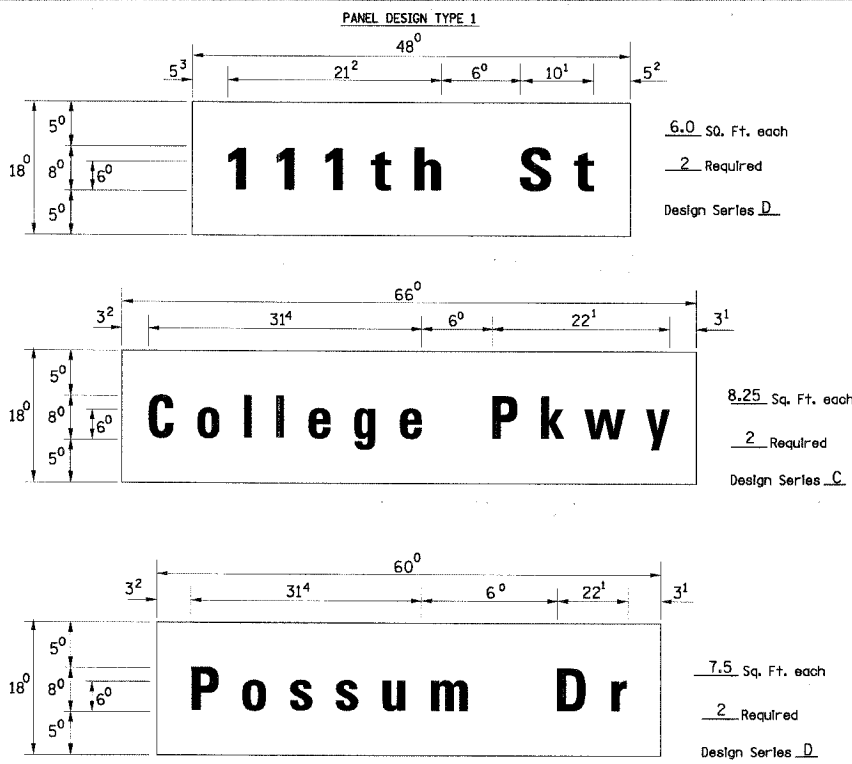
All dimensions are in millimeters (inches) unless otherwise shown.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT
MARKINGS

SCALE: NONE
DATE 5/9/02
DRAWN BY CADD
CHECKED BY

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00



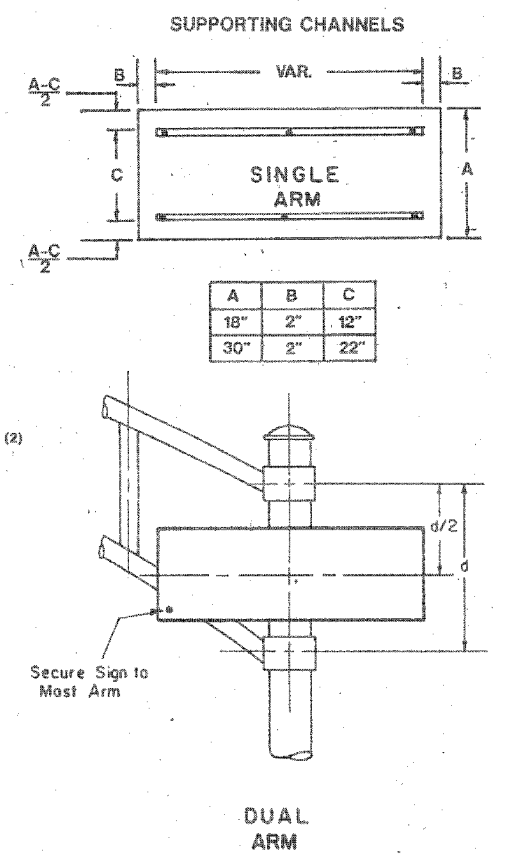
Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 DENOTES 3/8"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		fw		j		st		vy		x		z	
	goq	mnpru														
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

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		LETTERS	6 INCH LOWER CASE LETTERS	
	C	D	C	D		C	D
A	3 ⁶	5 ⁰	5 ⁰	6 ⁵	a	3 ⁵	4 ²
B	3 ²	4 ⁰	4 ³	5 ³	b	3 ⁵	4 ²
C	3 ²	4 ⁰	4 ³	5 ³	c	3 ⁵	4 ¹
D	3 ²	4 ⁰	4 ³	5 ³	d	3 ⁵	4 ²
E	3 ⁰	3 ⁵	4 ⁰	4 ⁷	e	3 ⁵	4 ²
F	3 ⁰	3 ⁵	4 ⁰	4 ⁷	f	2 ³	2 ⁶
G	3 ²	4 ⁰	4 ³	5 ³	g	3 ⁵	4 ²
H	3 ²	4 ⁰	4 ³	5 ³	h	3 ⁵	4 ²
I	0 ⁷	0 ⁷	1 ¹	1 ²	i	1 ¹	1 ¹
J	3 ⁰	3 ⁶	4 ⁰	5 ⁰	j	2 ⁰	2 ²
K	3 ²	4 ¹	4 ³	5 ⁴	k	3 ⁵	4 ²
L	3 ⁰	3 ⁵	4 ⁰	4 ⁷	l	1 ¹	1 ¹
M	3 ⁷	4 ⁵	5 ¹	6 ¹	m	6 ⁰	7 ⁰
N	3 ²	4 ⁰	4 ³	5 ³	n	3 ⁵	4 ²
O	3 ⁴	4 ²	4 ⁵	5 ⁵	o	3 ⁶	4 ³
P	3 ²	4 ⁰	4 ³	5 ³	p	3 ⁵	4 ²
Q	3 ⁴	4 ²	4 ⁵	5 ⁵	q	3 ⁵	4 ²
R	3 ²	4 ⁰	4 ³	5 ³	r	2 ⁶	3 ²
S	3 ²	4 ⁰	4 ³	5 ³	s	3 ⁶	4 ²
T	3 ⁰	3 ⁵	4 ⁰	4 ⁷	t	2 ⁷	3 ²
U	3 ²	4 ⁰	4 ³	5 ³	u	3 ⁵	4 ²
V	3 ⁵	4 ⁴	4 ⁷	6 ⁰	v	4 ²	4 ⁷
W	4 ⁴	5 ²	6 ⁰	7 ⁰	w	5 ⁵	6 ⁴
X	3 ⁴	4 ⁰	4 ⁵	5 ³	x	4 ⁴	5 ¹
Y	3 ⁶	5 ⁰	5 ⁰	6 ⁶	y	4 ⁶	5 ³
Z	3 ²	4 ⁰	4 ³	5 ³	z	3 ⁶	4 ³



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

FIRST LETTER	SECOND LETTER															
	acde		bhikl		fw		j		st		vy		x		z	
	goq	mnpru														
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
ad h g i j	16	17	22	24	16	17	12	14	14	15	14	15	16	17	16	17
l m n q u																
b f k o p s	12	14	16	17	11	12	05	06	11	12	11	12	12	14	12	14
ce	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
vy	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"

NUMBER	SECOND NUMBER			
	0	1	2	3
SERIES	C	D	C	D
0 9	16	17	16	17
1	20	21	20	21
2 3 4	14	15	14	15
5	14	15	14	15
6	16	17	16	17
7	12	14	12	14
8	16	17	16	17

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-8" 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.
- ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
 - A.K.T. CORPORATION
 - SCHAUMBURG, IL
 - TUCKER COMPANY, INC.
 - WAUNATOSA, WI
 - AMERICAN FABRICATION CO.
 - CHICAGO HEIGHTS, IL
 - WESTERN TRAFFIC CONTROL INC.
 - CICERO, IL

PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4" X 14 X 1" H.W.H. #3
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.

Illinois Department of Transportation
DISTRICT 1

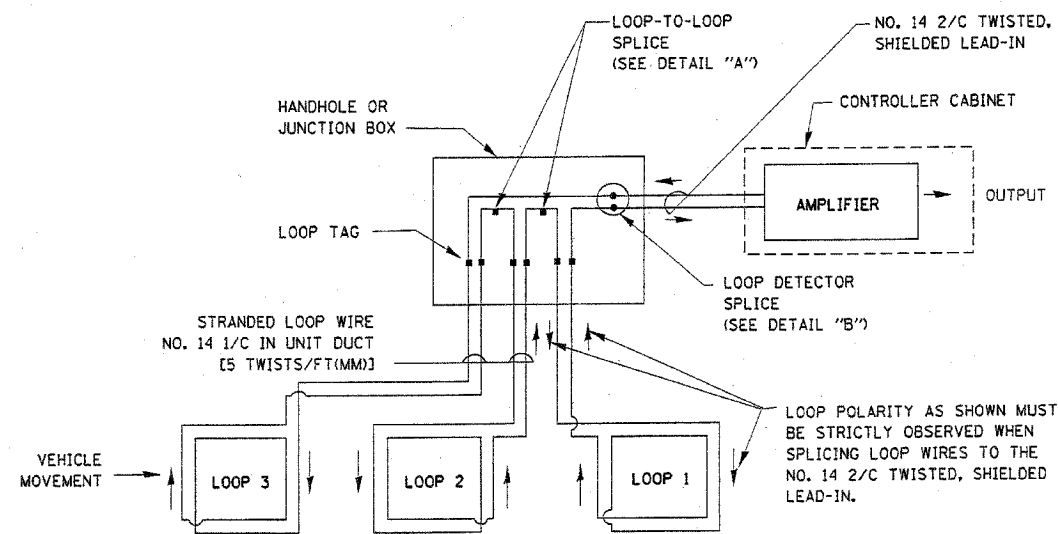
MAST ARM MOUNTED STREET NAME SIGNS

REVISIONS	
NAME	DATE
D.A.Z./D.A.B.	11/90
	6-96

SCALE: VERT. NONE HORIZ. NONE DATE 2-26-79 DRAWN BY: TJP CHECKED BY: RKF

LOOP DETECTOR NOTES

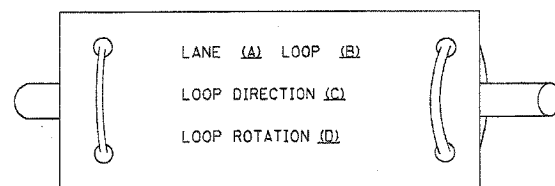
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED 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.
- 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.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 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.
- 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.
- 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.



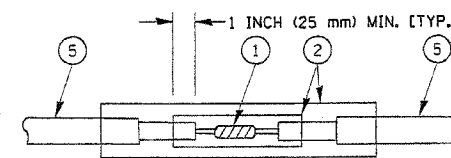
DETECTOR LOOP WIRING SCHEMATIC

- 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.

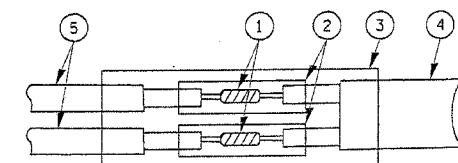
LOOP LEAD-IN CABLE TAG



- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE

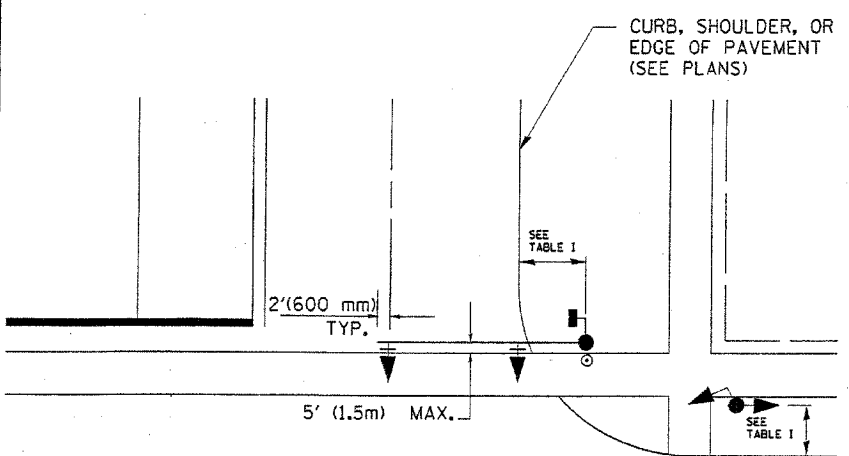
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

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

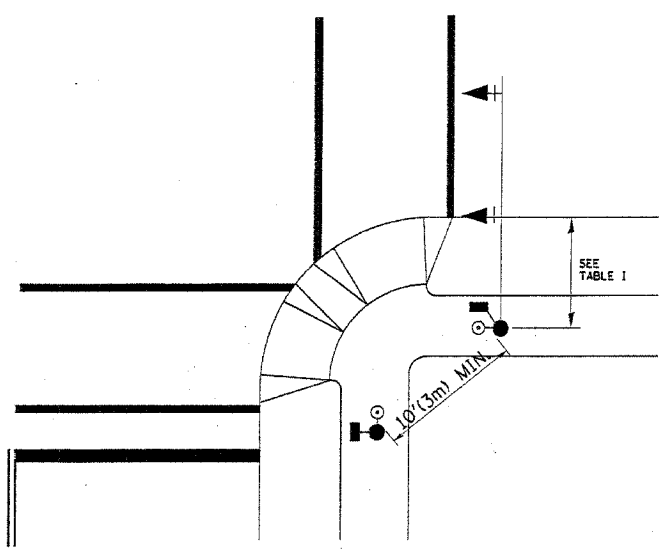
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

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:

- 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
- 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.
- 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.
- 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

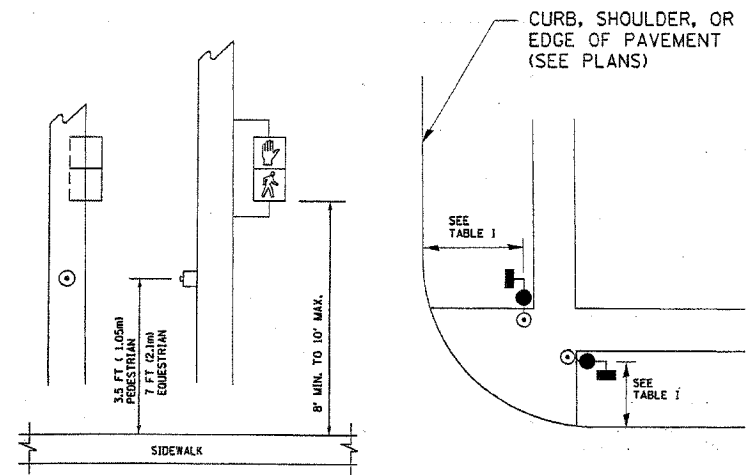


TABLE I

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
DATE 1-01-02

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

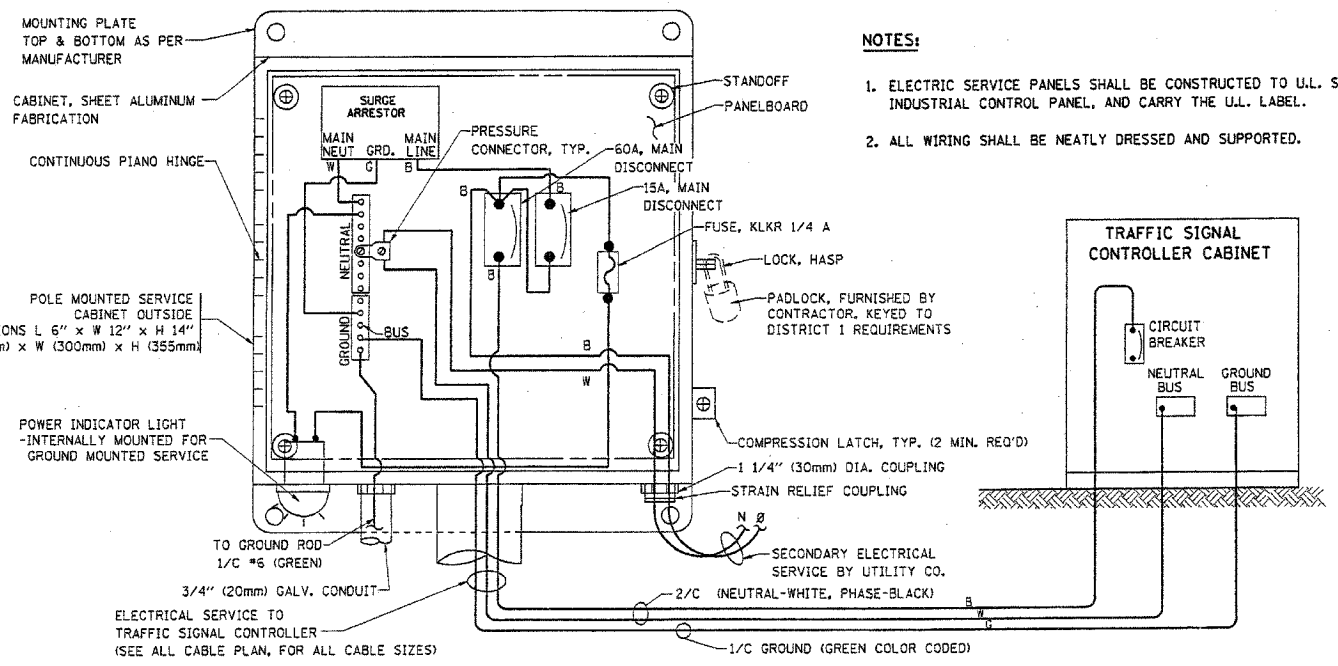
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

83895

NOTES:

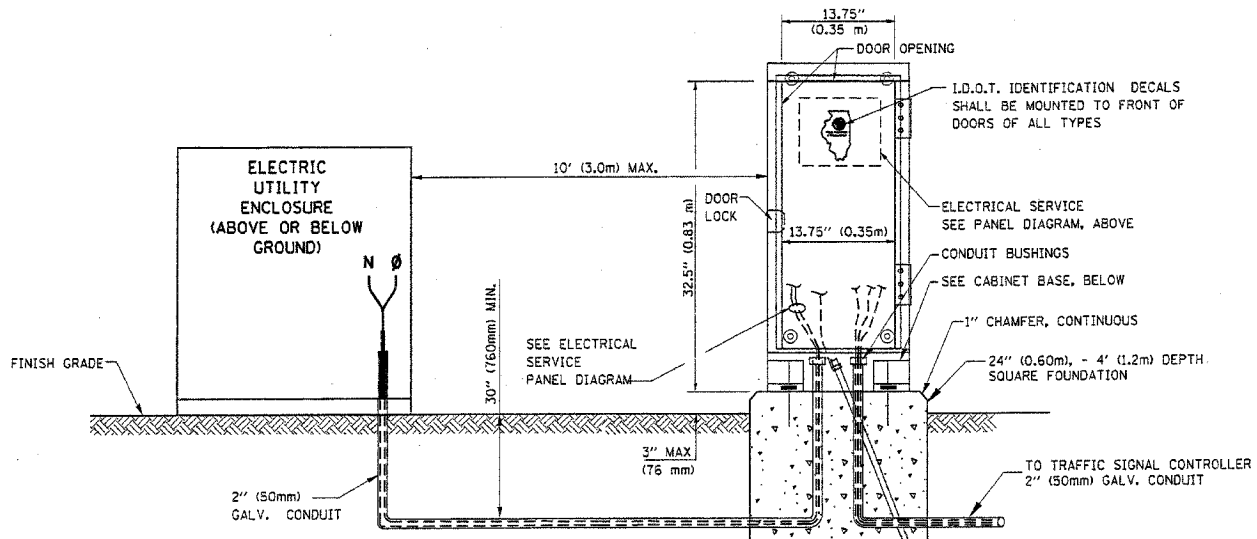
GROUNDING SYSTEM

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.

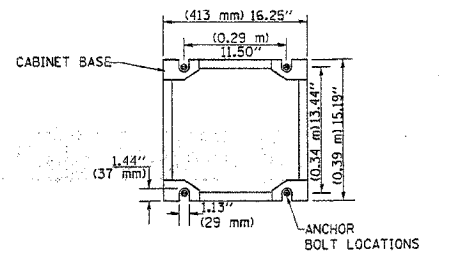


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

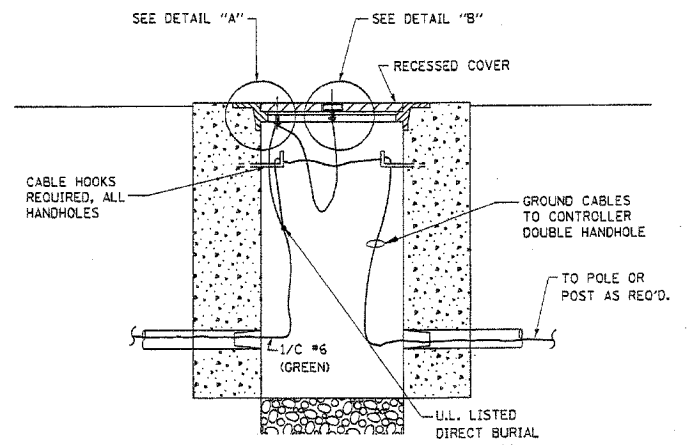
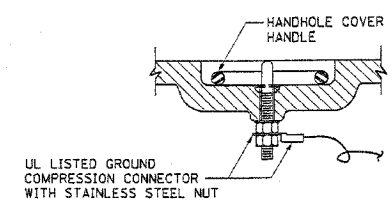
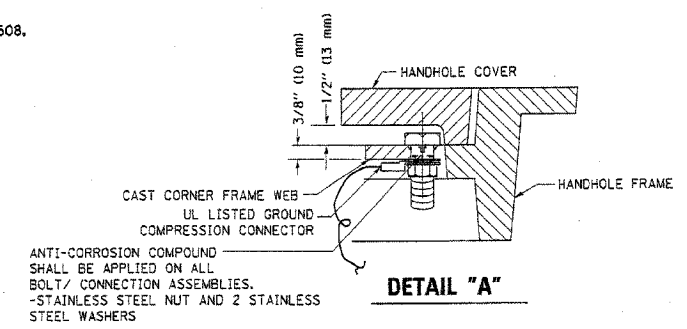
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



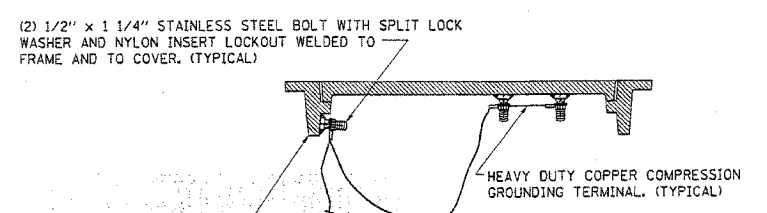
SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)



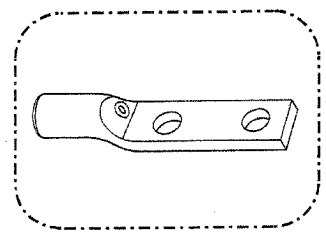
CABINET - BASE BOLT PATTERN
(NOT TO SCALE)



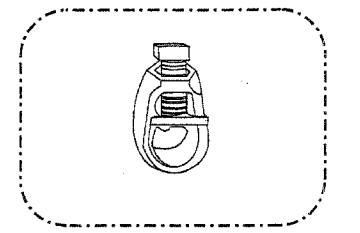
HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)



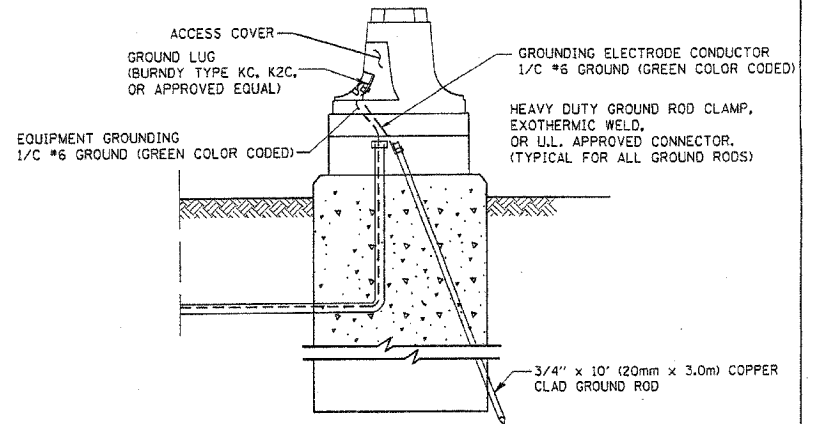
HEAVY-DUTY COMPRESSION TERMINAL (BURDYN TYPE YGHA OR APPROVED EQUAL)



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

NOTES:

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



MAST ARM POLE / POST-GROUNDING DETAIL
(NOT TO SCALE)

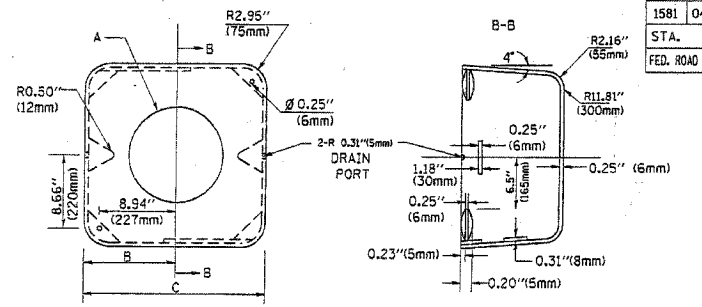
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. 1-01-02
DATE 1-01-02
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

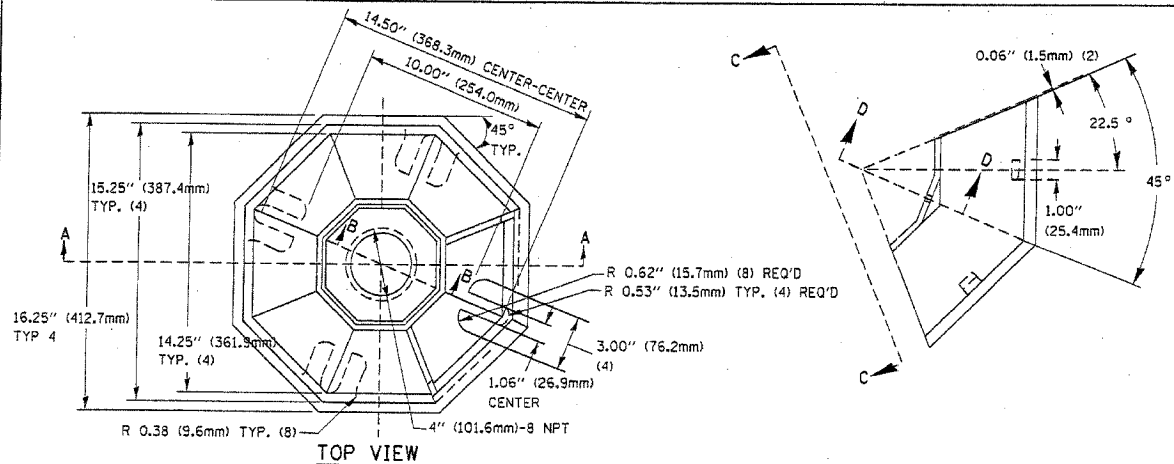
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	04-00029-00-CH	COOK	13	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
	83095			

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



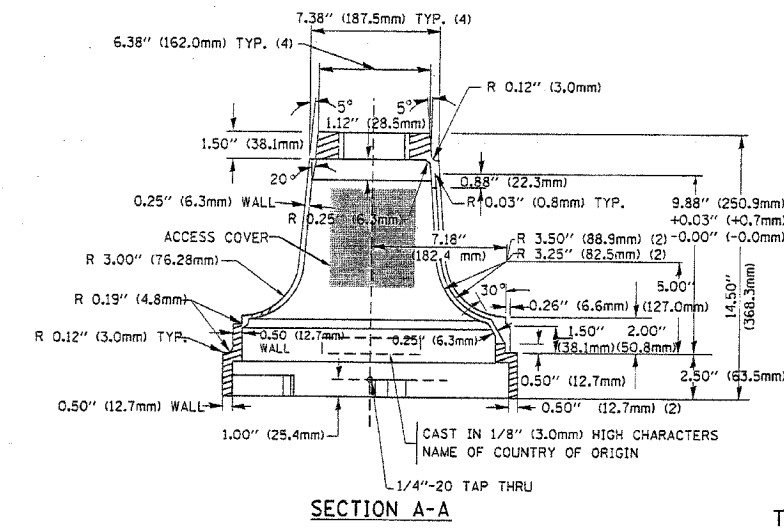
TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	Ø 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

SHROUD DETAIL

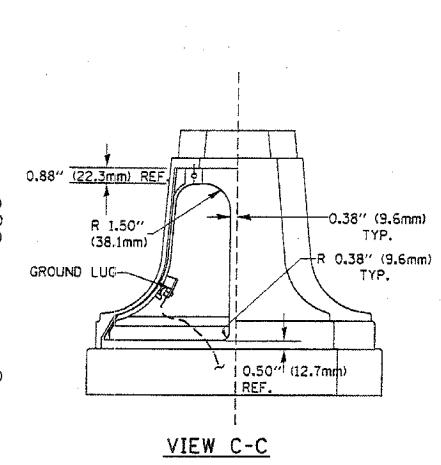


SECTION B-B

SECTION D-D

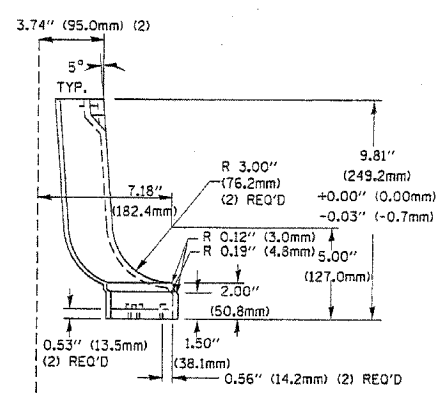


SECTION A-A



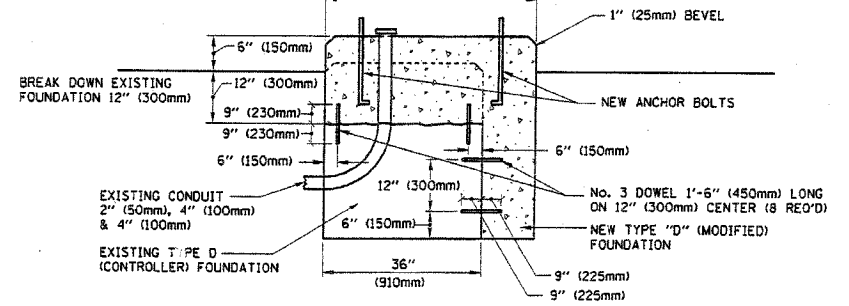
VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



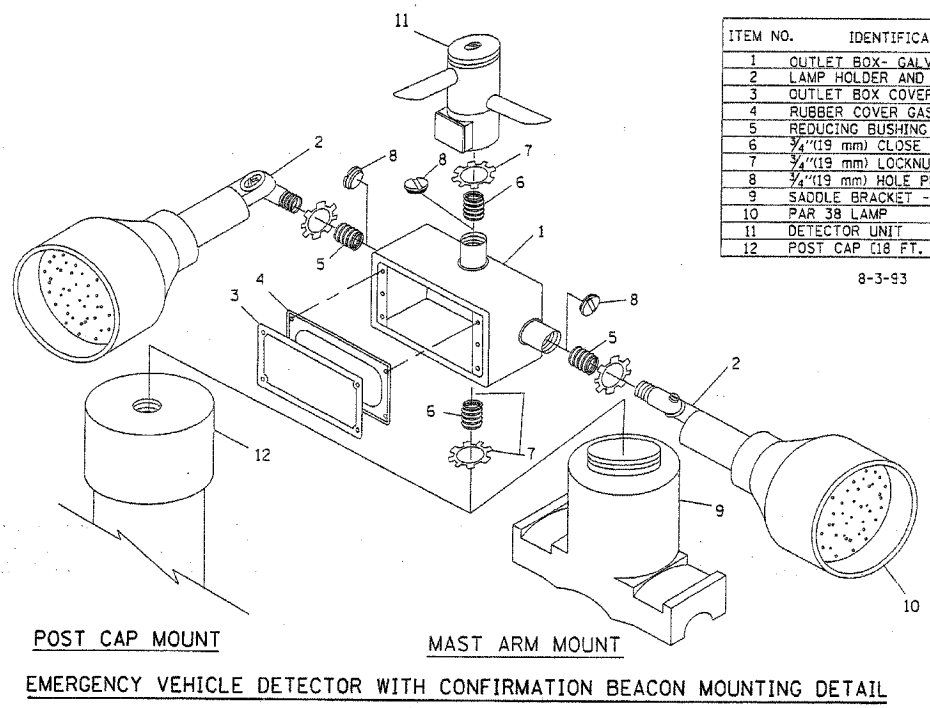
NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)

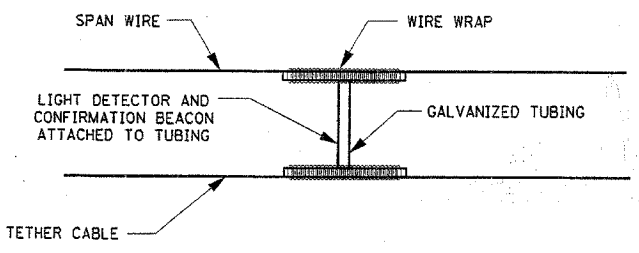


ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18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

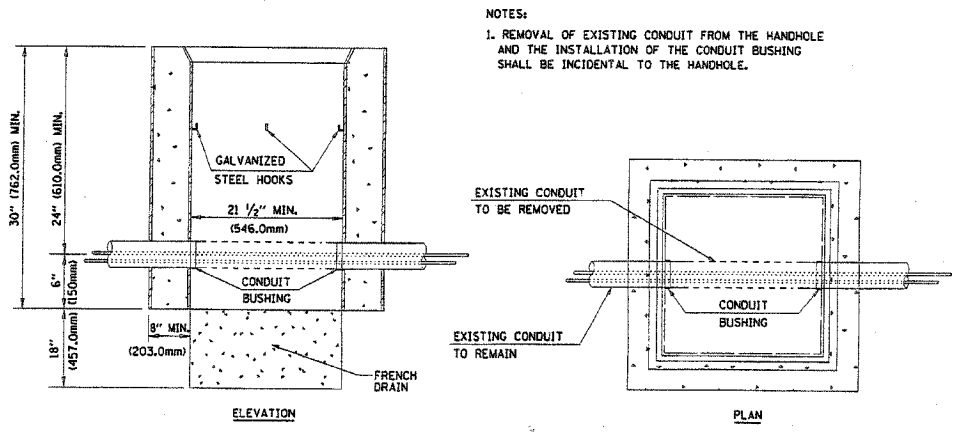
8-3-93

NOTES:

- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/CEADNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 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 3/4" (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)



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. 1"=1'-0"
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

8FILES