

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2960	07-00063-00-TL	COOK	13	1
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
TRAFFIC SIGNAL INTERCONNECT**

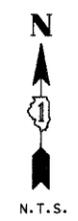
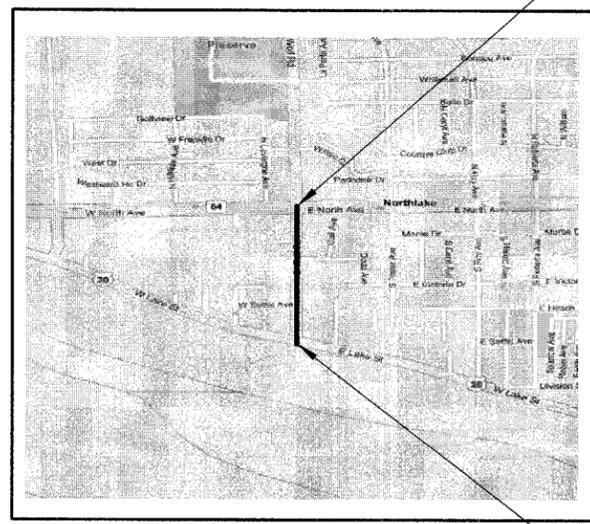
DISTRICT 1

**CONGESTION MITIGATION AIR QUALITY
F.A.U. 2960 WOLF ROAD
FROM LAKE STREET TO LEMOYNE AVENUE
FEDERAL PROJECT NO.: CMM-8003(783)
JOB NO: C-91-163-07
SECTION 07-00063-00-TL
CITY OF NORTHLAKE
COOK COUNTY**



LOCATION OF SECTION INDICATED THIS: - [highlighted area] -

PROJECT ENDS
WOLF ROAD AND LEMOYNE AVENUE



PROJECT BEGINS
WOLF ROAD AND LAKE STREET

LOCATION MAP

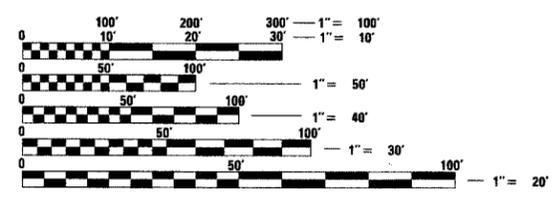
LENGTH OF IMPROVEMENTS =
0.25 MILES

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUMMARY OF QUANTITIES
3	WOLF ROAD AND SOFFEL AVENUE REMOVAL PLAN
4	WOLF ROAD AND SOFFEL AVENUE ROADWAY AND STRIPING PLAN
5	WOLF ROAD AND SOFFEL AVENUE TRAFFIC SIGNAL INSTALLATION PLAN
6	WOLF ROAD AND SOFFEL AVENUE SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
7	INTERCONNECT PLAN
8	INTERCONNECT SCHEMATIC
9	STREET NAME SIGNS
10-13	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

LIST OF STATE STANDARDS

STANDARD NO.	DESCRIPTION
STD. 000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
STD. 606001-03	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
STD. 606306-02	CORRUGATED PC CONCRETE MEDIANS
STD. 701011-01	OFF ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
STD. 701101-01	OFF ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
STD. 701106-01	OFF ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
STD. 701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
STD. 701701-05	URBAN LANE CLOSURE, MULTI-LANE INTERSECTION
STD. 701801-03	LANE CLOSURE, MULTI-LANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
STD. 701901	TRAFFIC CONTROL DEVICES
STD. 720001	SIGN PANEL MOUNTING DETAILS
STD. 780001-01	TYPICAL PAVEMENT MARKINGS
STD. 814001-01	CONCRETE HANDHOLES
STD. 814006-01	DOUBLE HANDHOLES
STD. 857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
STD. 877001-03	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
STD. 878001-06	CONCRETE FOUNDATION DETAILS
STD. 880006	TRAFFIC SIGNAL MOUNTING DETAILS
STD. 886001	DETECTOR LOOP INSTALLATIONS



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. 63026

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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED *April 2 2008*

 DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

PASSED *APRIL 9 2008*

 CHRISTOPHER HOLT
 DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
 BASED ON LIMITED REVIEW
APRIL 9 2008

 DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

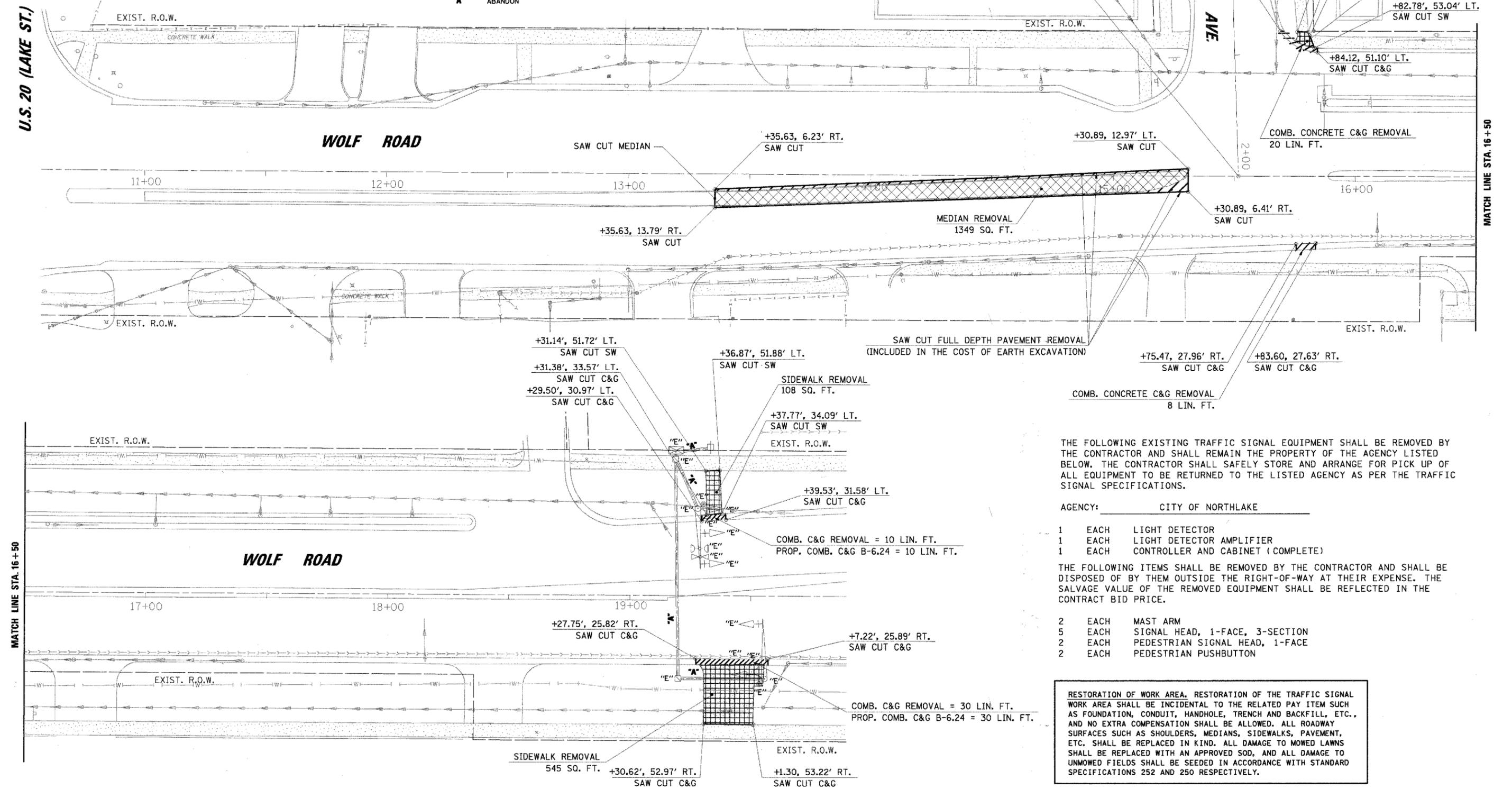
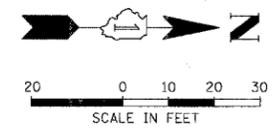
**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

REGISTERED PROFESSIONAL ENGINEER
 DATE: *4-3-2008*
GEORGE M. ZIEGLER
 ILLINOIS REGISTRATION No. 062-45853
 EXPIRATION DATE: 11-30-2009
 PROFESSIONAL DESIGN FIRM No.: 184-001742
 EXPIRATION DATE: 04-30-2009

PROFILE SURVEYED (GRADES CHECKED) DATE: _____
 NOTE BOOK NO. _____
 STRUCTURE NOTATIONS CHECKED BY: _____
 PLAN SURVEYED (ALIGNMENT CHECKED) DATE: _____
 NOTE BOOK NO. _____
 ROAD FILE NAME: _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Skokie, Illinois 60076
 (847) 823-6580

LEGEND:
 COMB. CONC. C&G REMOVAL
 SIDEWALK REMOVAL
 MEDIAN REMOVAL
 FULL DEPTH PAVEMENT REMOVAL (INCLUDED IN THE COST OF EARTH EXCAVATION)

EXISTING EQUIPMENT TO BE REMOVED LEGEND
 "E" △ EXISTING SIGNAL HEAD TO BE REMOVED
 "E" ○ EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
 "E" □ EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
 "E" ⊠ EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
 "E" ⊞ EXISTING HANDHOLE TO BE REMOVED
 "E" ⊞ EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
 "E" ⊙ EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
 "E" ⊞ EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
 "E" ⊞ EXISTING CONFIRMATION BEACON TO BE REMOVED
 "A" ABANDON



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: CITY OF NORTHLAKE
- 1 EACH LIGHT DETECTOR
 - 1 EACH LIGHT DETECTOR AMPLIFIER
 - 1 EACH CONTROLLER AND CABINET (COMPLETE)

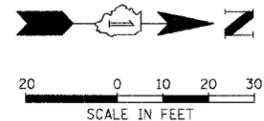
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 2 EACH MAST ARM
- 5 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN PUSHBUTTON

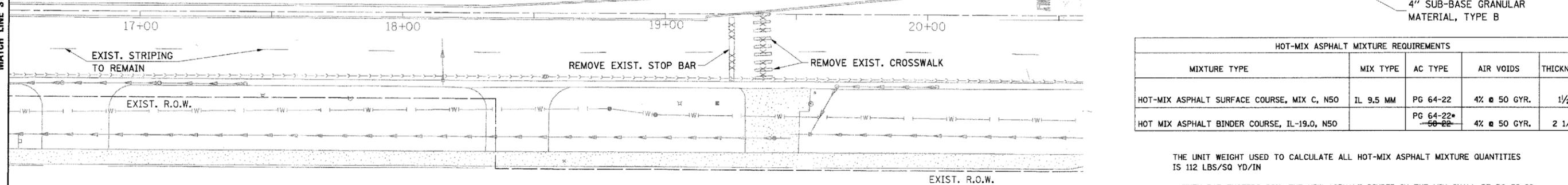
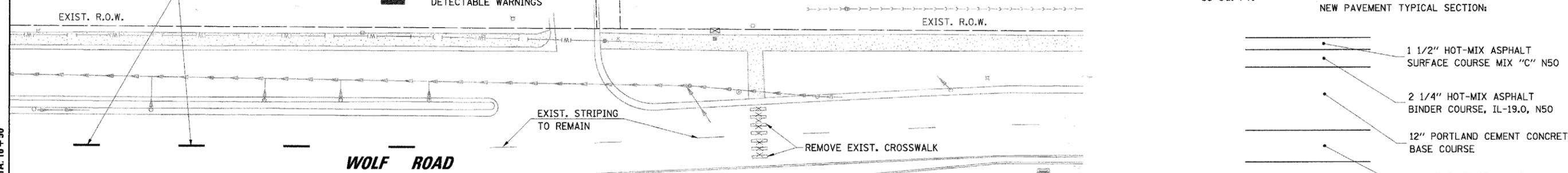
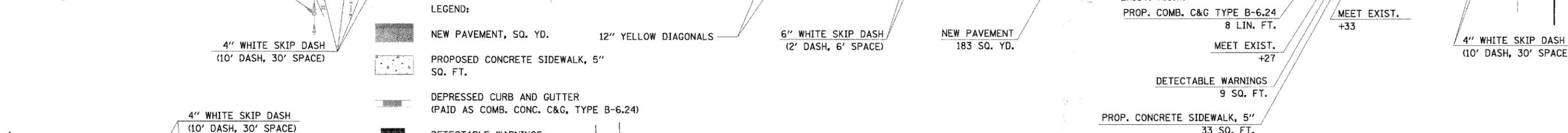
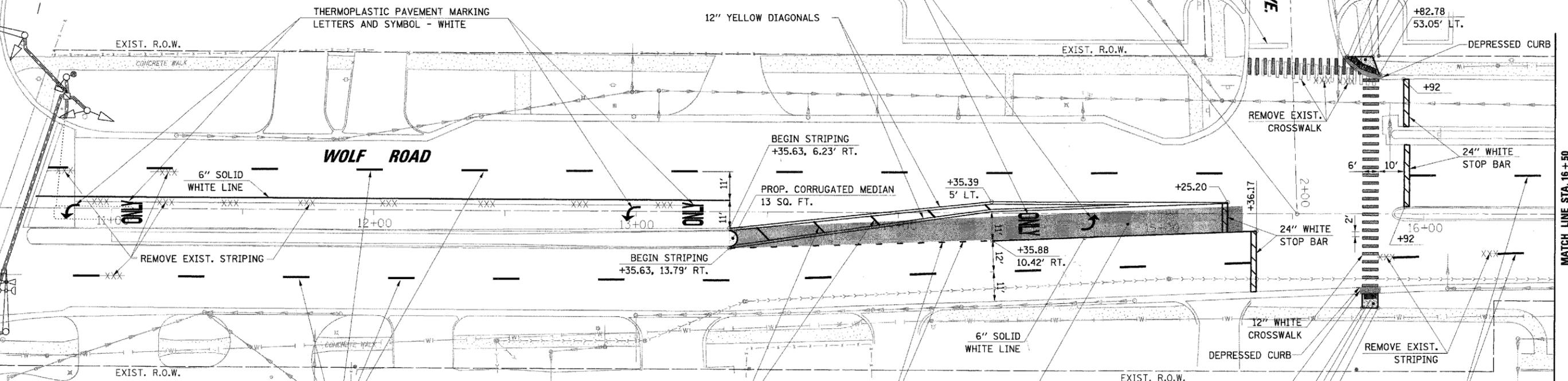
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL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

FILE NAME =	USER NAME = MWILLIAM	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL PLAN WOLF ROAD NORTHLAKE, ILLINOIS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\NORTHLAKE\9400320C00\Tr\off\c\REM.W	FRid.rdg	DRAWN -	REVISED -			2960	07-00063-00-TL	COOK	13	3	
PLOT SCALE = 20'		CHECKED -	REVISED -			SCALE: 1" = 20'		SHEET NO. OF SHEETS		STA. TO STA.	
PLOT DATE = 4/4/2008		DATE -	REVISED -			CONTRACT NO. 63026					
						FED. ROAD DIST. NO. ILLINOIS/FED. AID PROJECT					

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



U.S. 20 (LAKE ST.)



HOT-MIX ASPHALT MIXTURE REQUIREMENTS				
MIXTURE TYPE	MIX TYPE	AC TYPE	AIR VOIDS	THICKNESS
HOT-MIX ASPHALT SURFACE COURSE, MIX C, N50	IL 9.5 MM	PG 64-22	4% @ 50 GYR.	1 1/2"
HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50		PG 64-22	4% @ 50 GYR.	2 1/4"

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN

• WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

DATE: _____ BY: _____
 SURVEYED: _____
 PLAN: _____
 CHECKED: _____
 DATE: _____
 FILE NAME: _____

FILE NAME: N:\NORT-LAKE\9402320C00\T-off\RD-WolfRd.dgn	USER NAME: MWILLIAM	DESIGNED: -	REVISED: -
PLOT SCALE: 20'		DRAWN: -	REVISED: -
PLOT DATE: 4/4/2008		CHECKED: -	REVISED: -
		DATE: -	REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY AND STRIPING PLAN

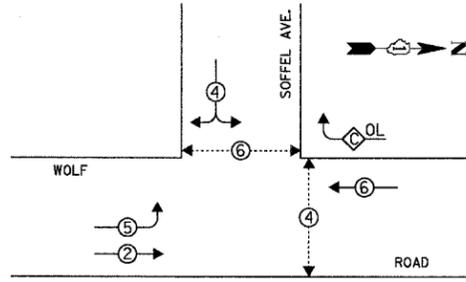
WOLF ROAD
NORTHLAKE, ILLINOIS
SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE. 2960	SECTION 07-00063-00-TL	COUNTY COOK	TOTAL SHEETS 13	SHEET NO. 4
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 63026		

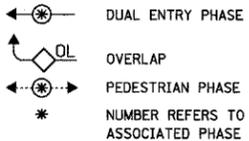
DATE: _____ BY: _____
 CHECKED: _____
 ALIGNED: _____
 CADD FILE NAME: _____
 NO. _____
 DATE: _____ BY: _____
 CHECKED: _____
 ALIGNED: _____
 CADD FILE NAME: _____
 NO. _____

CHRISTOPHER B. BURKE
 ENGINEERING LTD.
 3525 West Higgins Road, Suite 600
 Northlake, Illinois 60164
 (847) 823-0500

CONTROLLER SEQUENCE

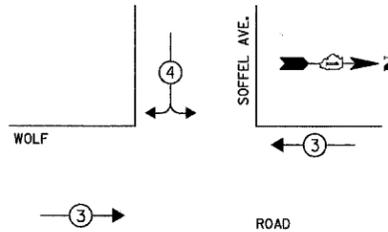


LEGEND



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↘

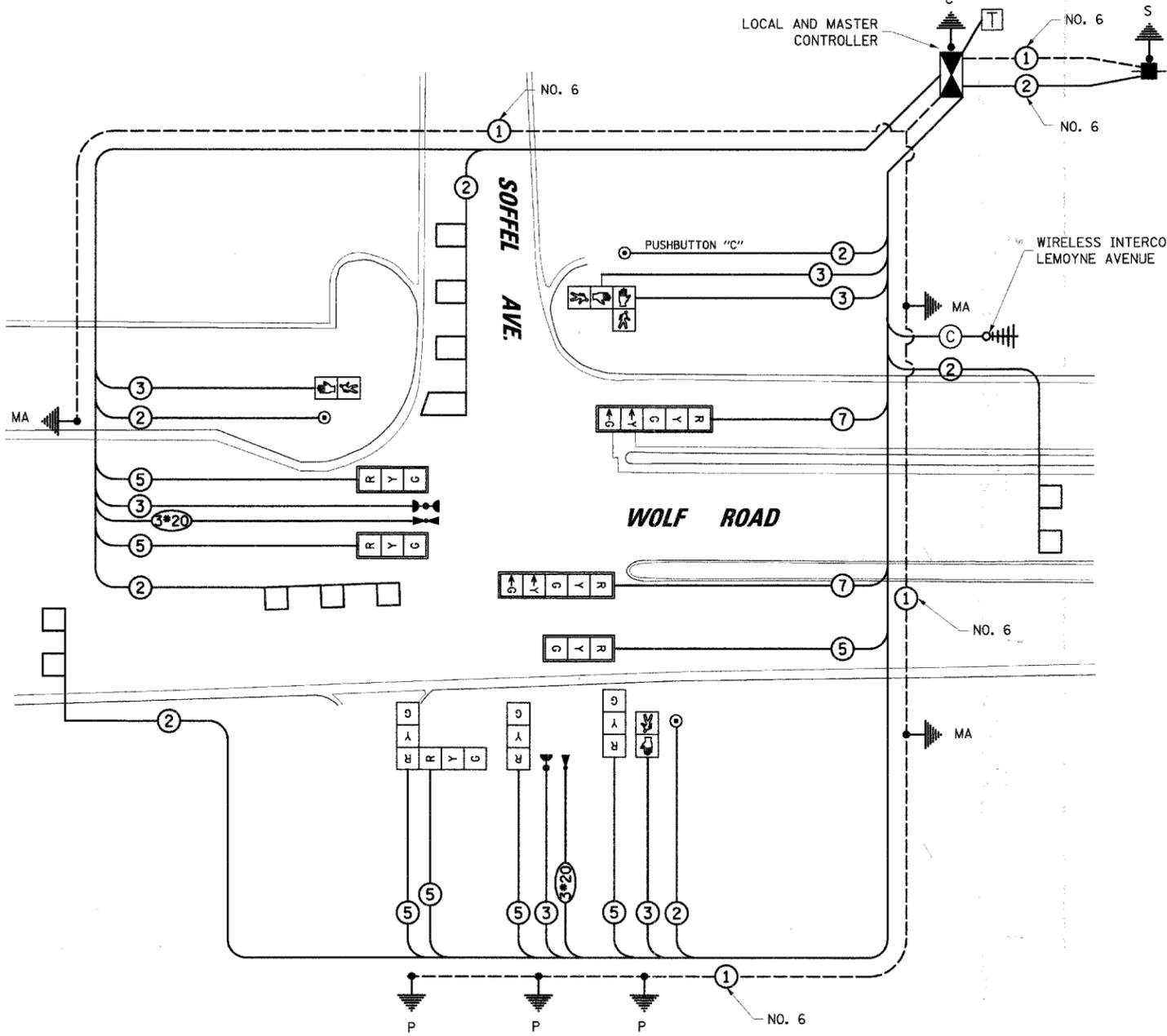
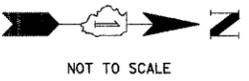
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE X INCAND.	LED	% OPERATION	
SIGNAL (RED)	9		17	0.50	76.50
(YELLOW)	9		25	0.25	56.75
(GREEN)	9		15	0.25	33.75
ARROW	4		12	0.10	4.80
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 371.30

CITY OF NORTHLAKE
 55 E. NORTH AVENUE
 NORTHLAKE, ILLINOIS 60164

ENERGY SUPPLY: CONTACT: LINDA KLOC
 PHONE: (708) 410-5313
 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'H-L-2=
E - M. ARM POLE	2 (1.0)	SIGNAL POST	2 (1.0)	(6m-HL-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)



NOTE: PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 4 AND 6.

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

CABLE PLAN LEGEND

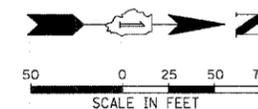
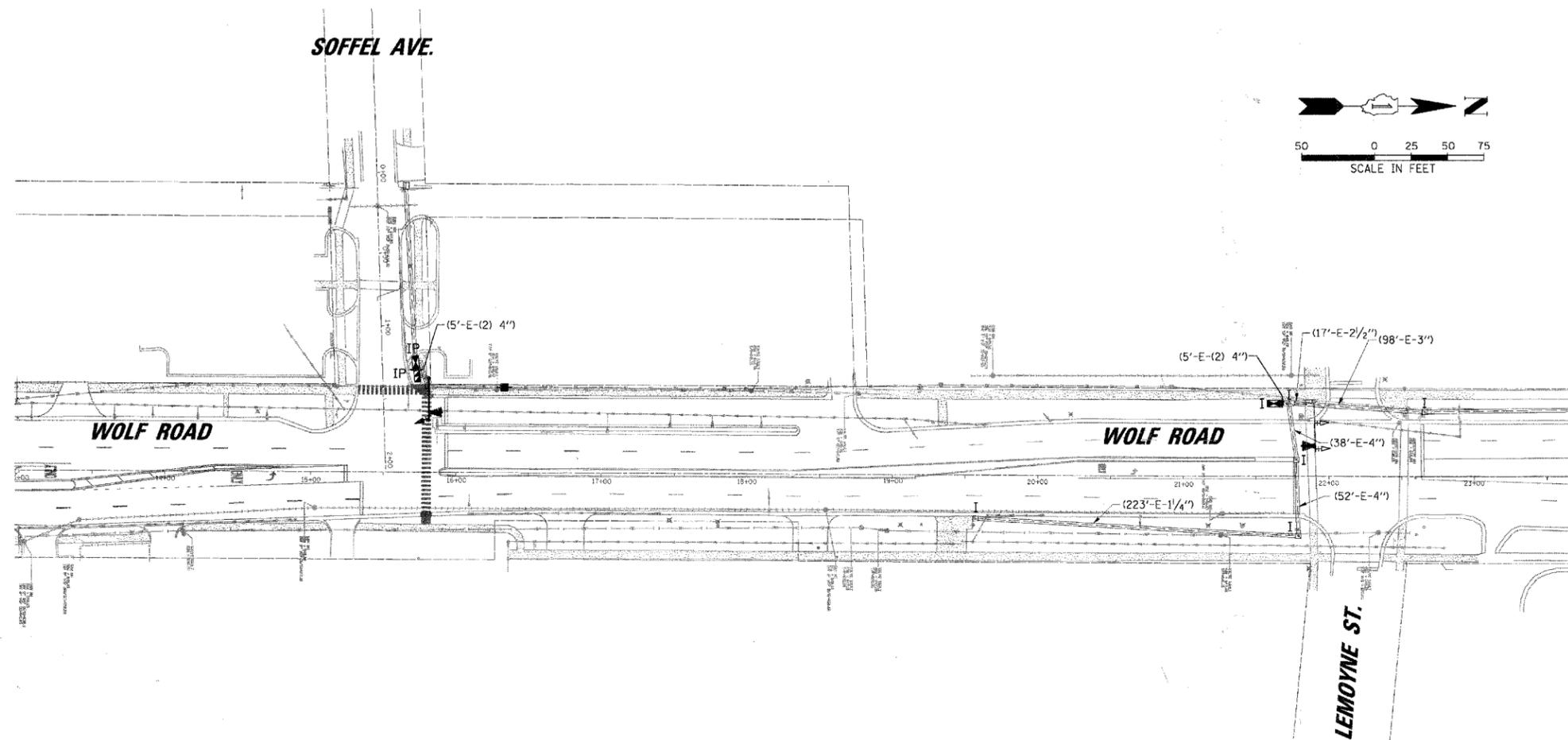
EXISTING	PROPOSED	DESCRIPTION
(Symbol)	(Symbol)	8" (200mm) TRAFFIC SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) TRAFFIC SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(Symbol)	(Symbol)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(Symbol)	(Symbol)	CONTROLLER CABINET SERVICE INSTALLATION
(Symbol)	(Symbol)	TELEPHONE INSTALLATION
(Symbol)	(Symbol)	VEHICLE DETECTOR, INDUCTION LOOP
(Symbol)	(Symbol)	MAGNETIC DETECTOR
(Symbol)	(Symbol)	EMERGENCY VEHICLE LIGHT DETECTOR
(Symbol)	(Symbol)	CONFIRMATION BEACON
(Symbol)	(Symbol)	PUSHBUTTON DETECTOR
(Symbol)	(Symbol)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(Symbol)	(Symbol)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(Symbol)	(Symbol)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F
(Symbol)	(Symbol)	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
(Symbol)	(Symbol)	RAILROAD CONTROL CABINET
(Symbol)	(Symbol)	ILLUMINATED SIGN "NO LEFT TURN"
(Symbol)	(Symbol)	ILLUMINATED SIGN "NO RIGHT TURN"
(Symbol)	(Symbol)	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
(Symbol)	(Symbol)	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
(Symbol)	(Symbol)	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(Symbol)	(Symbol)	TELEPHONE
(Symbol)	(Symbol)	WIRELESS INTERCONNECT
(Symbol)	(Symbol)	COAXIAL CABLE

Schedule of Quantities

ITEM	UNIT	TOTAL
SIGN PANEL TYPE I	SQ FT	44.5
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	139
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	9
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	654
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	121
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	150
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	1
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	149
FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1
MASTER CONTROLLER, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	275
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	637
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1165
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	289
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	927
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	80
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
CONCRETE FOUNDATION TYPE A	FOOT	12
CONCRETE FOUNDATION TYPE D	FOOT	4
CONCRETE FOUNDATION TYPE E, 30-INCH DIAMETER	FOOT	30
CONCRETE FOUNDATION TYPE E, 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	5
INDUCTIVE LOOP DETECTOR	EACH	4
DETECTOR LOOP, TYPE I	FOOT	441
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	3
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	369
ELECTRIC CABLE IN CONDUIT NO. 20 3C, TWISTED, SHIELDED	FOOT	313

DATE: _____
 5'
 CHECKED: _____
 ALIGNED: _____
 PLOTTED: _____
 CADD FILE NAME: _____
 NO. _____
 DATE: _____
 BY: _____
 REVIEWED: _____
 GRADES CHECKED: _____
 STRUCTURE NOTATIONS CHECKED: _____
 NO. _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 2001 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
CB



Schedule of Quantities		
Wolf Road Interconnect		
ITEM	UNIT	TOTAL
ENGINEERING FIELD OFFICE TYPE A	CAL MO	10
MOBILIZATION	LSUM	1
TRAFFIC CONTROL AND PROTECTION	LSUM	1
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL	EACH	1
WIRELESS INTERCONNECT (COMPLETE)	EACH	2

INTERCONNECT PLAN LEGEND

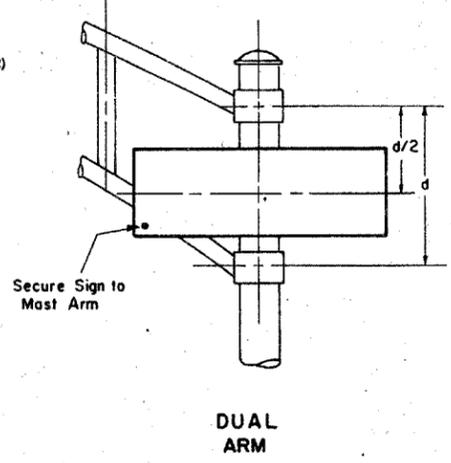
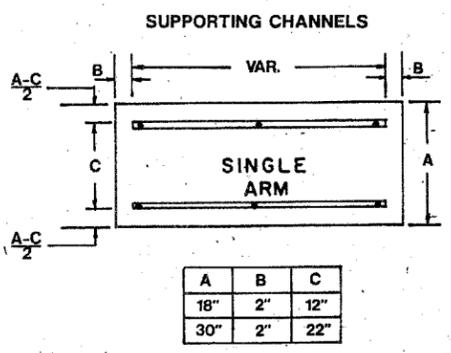
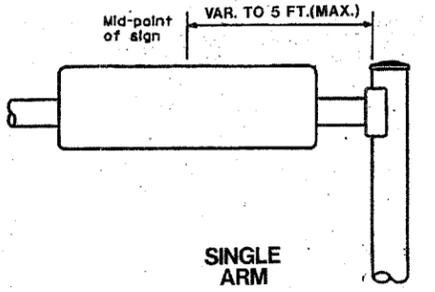
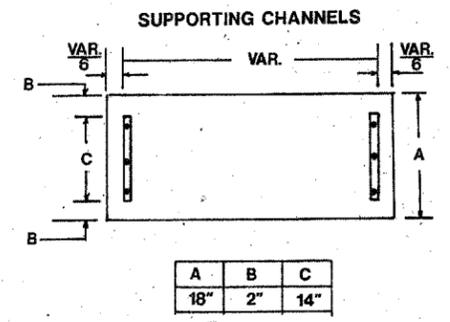
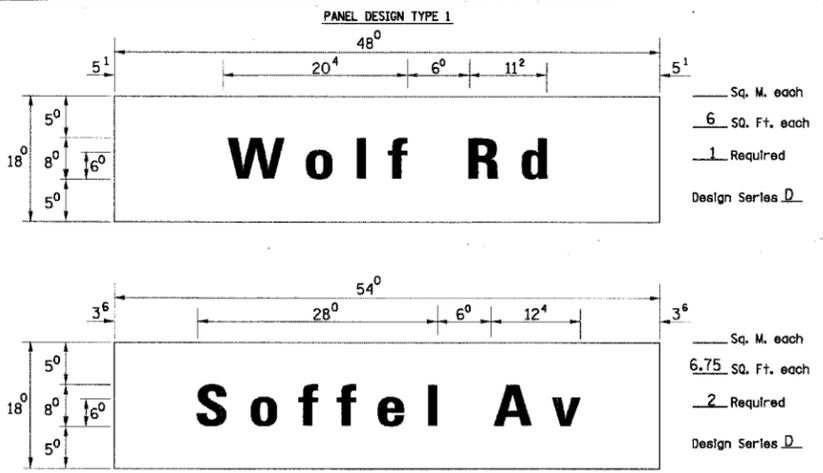
	PROPOSED	EXISTING
CONTROLLER		
HANDHOLE		
DOUBLE HANDHOLE		
HEAVY-DUTY HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		
DETECTOR LOOP		
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	
WIRELESS INTERCONNECT		

FILE NAME =	USER NAME = MWILLIAM	DESIGNED -	REVISED -
N:\NORTHLAKE\940\2320C00\Traffic\INT_wol	Rd.dgn	DRAWN -	REVISED -
	PLOT SCALE = 50'	CHECKED -	REVISED -
	PLOT DATE = 4/1/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN			
WOLF ROAD FROM U.S. 20 (LAKE ST.) TO LEMOYNE AVENUE			
NORTHLAKE, ILLINOIS			
SCALE: 1" = 50'	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2960	07-00063-00-TL	COOK	13	7
CONTRACT NO. 63026				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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

Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"
EXAMPLE, 2³ DENOTES $\frac{3}{8}$ "

FIRST LETTER	SECOND LETTER															
	acde		bhikl		fw		j		st		vy		x		z	
	g	o	q		m	n	p	r	u							
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															
	acde		bhikl		fw		j		st		vy		x		z	
	g	o	q		m	n	p	r	u							
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgij	16	17	22	24	16	17	12	14	14	15	14	15	16	17	16	17
lmnqu																
bfkops	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
tz	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"

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	14	12	14	14	15	14	15	11	12	14	15	14	15
7	12	14	12	14	14	15	12	14	05	06	12	14	14	15	11	12	14	15	12	14
8	16	17	16	17	14	15	12	14	14	15	16	17	12	14	16	17	14	15		

- 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.
 - WALNUTS, WI
 - AMERICAN FABRICATION CO.
 - CHICAGO HEIGHTS, IL
 - WESTERN TRAFFIC CONTROL INC.
 - CICERO, IL
- PARTS LISTING:**
- SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
SIGN SCREENS 1/4" X 1/4" 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/BACKET OF THE ABOVE PRODUCT.

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		LETTERS	6 INCH LOWER CASE LETTERS	
	SERIES		SERIES			SERIES	
	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

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	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

REVISIONS

NAME	DATE
D.A.Z./D.A.B.	11/90
	8-98

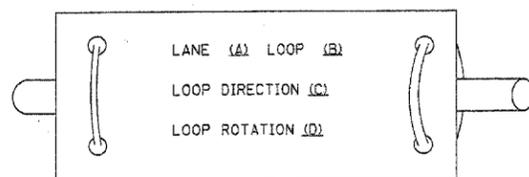
Illinois Department of Transportation
DISTRICT 1
MAST ARM MOUNTED STREET NAME SIGNS

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

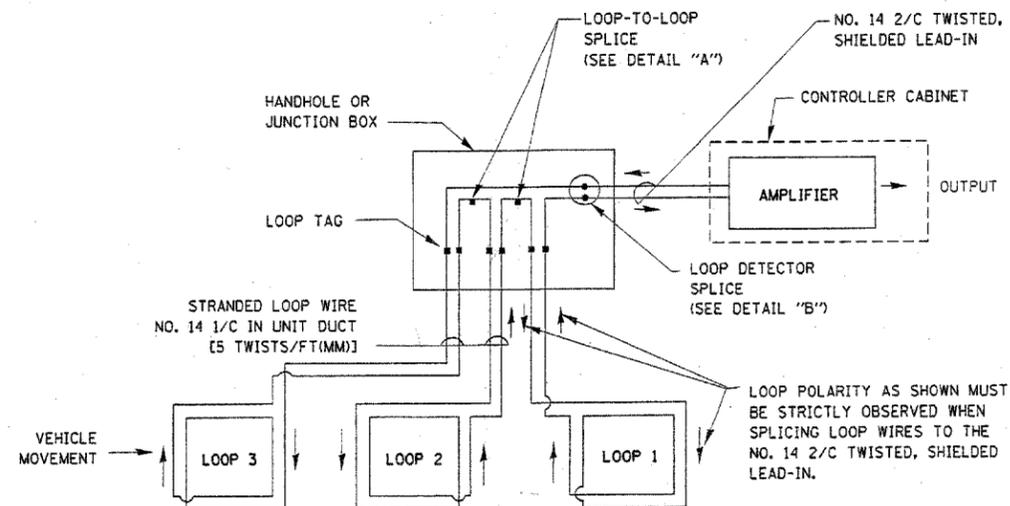
LOOP DETECTOR NOTES

- 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 DIVESHOLES 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.

LOOP LEAD-IN CABLE TAG

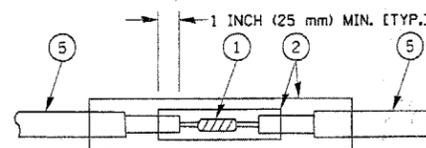


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

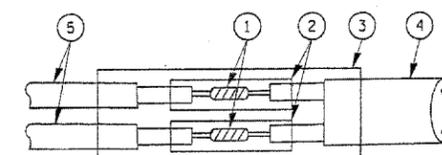


DETECTOR LOOP WIRING SCHEMATIC

- 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

- 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

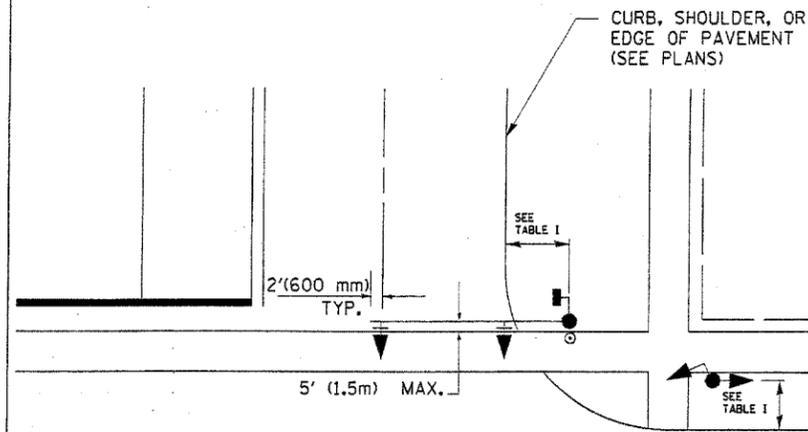
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

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

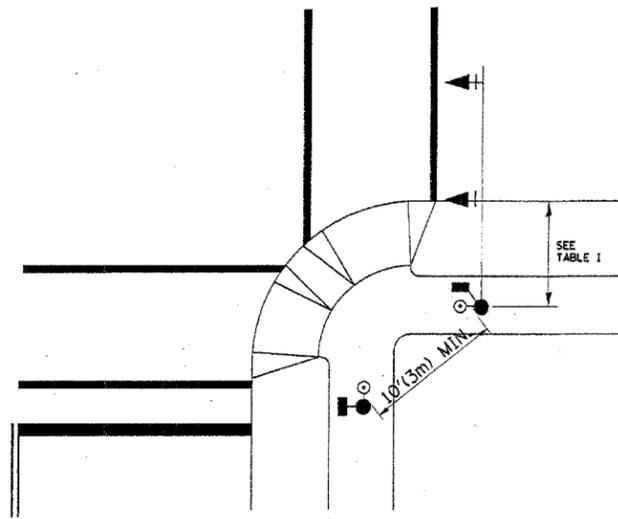
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

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

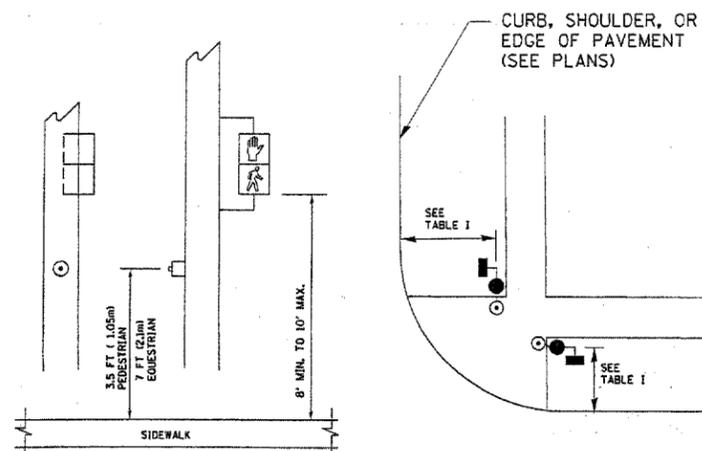


TABLE I

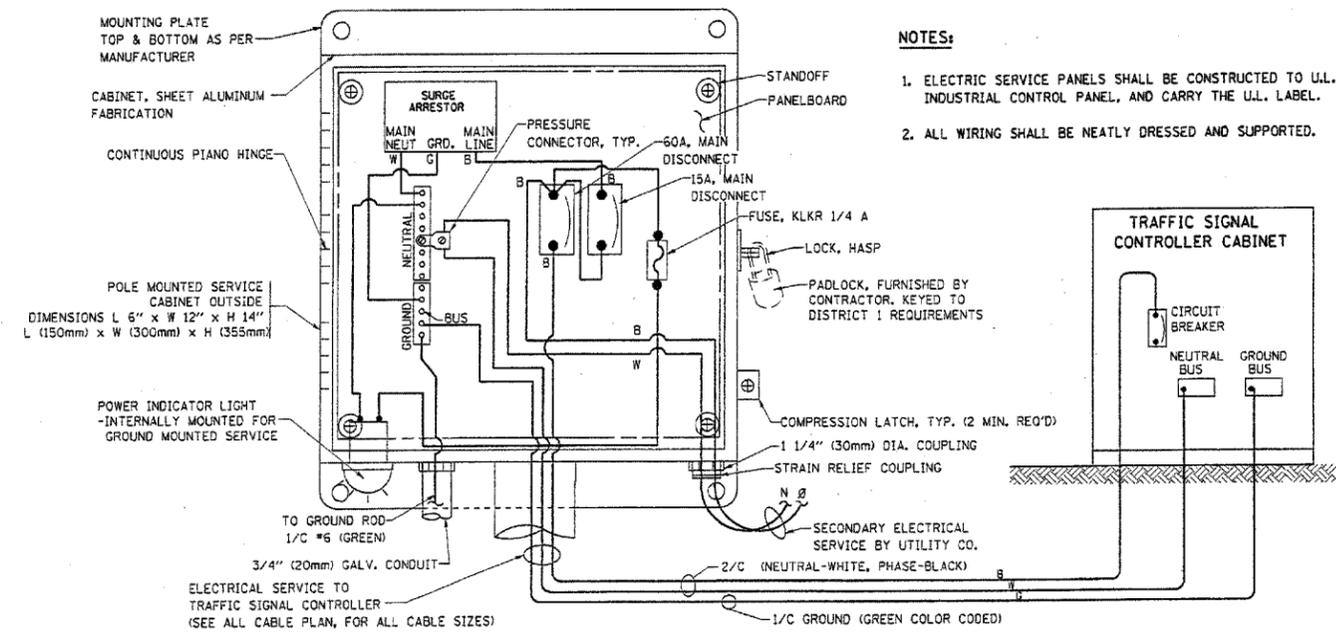
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m),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

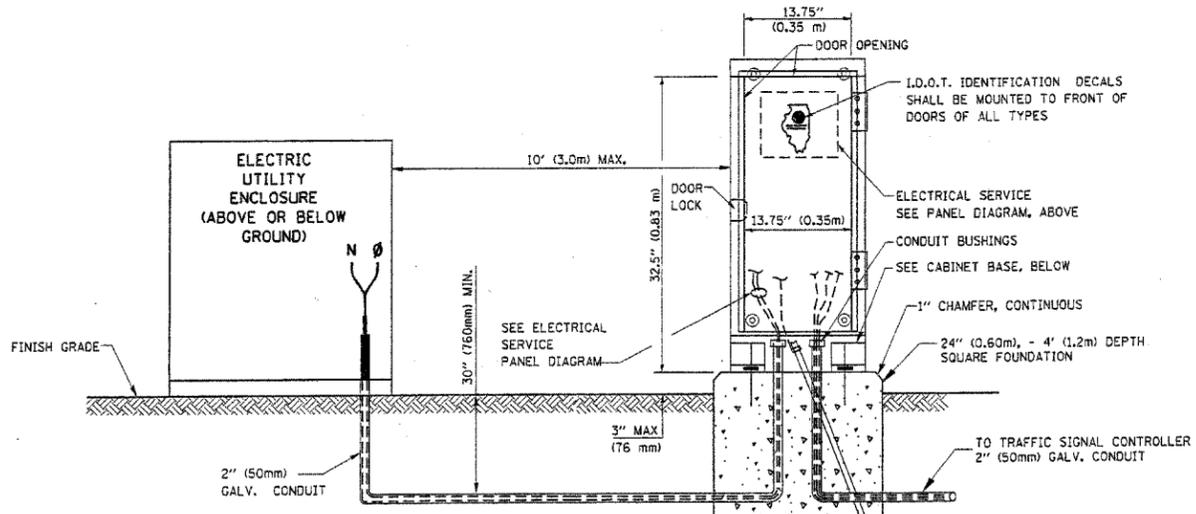
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

VERT. SCALE: NONE
 HORIZ. SCALE: 1"=10'
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

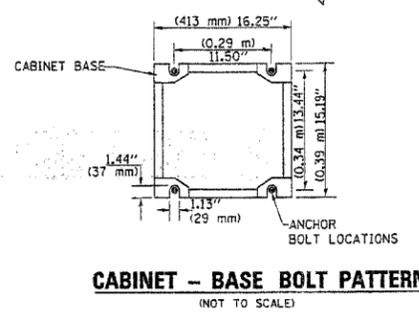
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	13	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



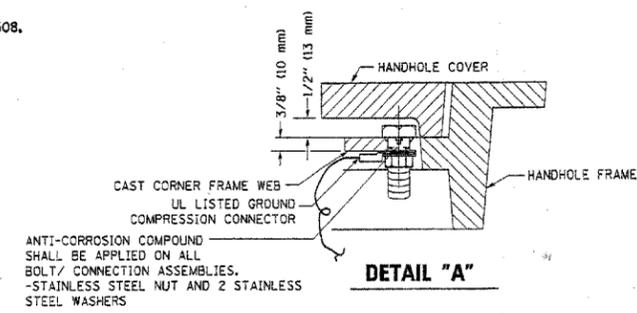
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



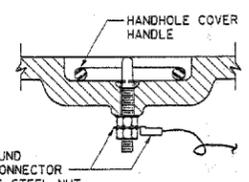
SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)



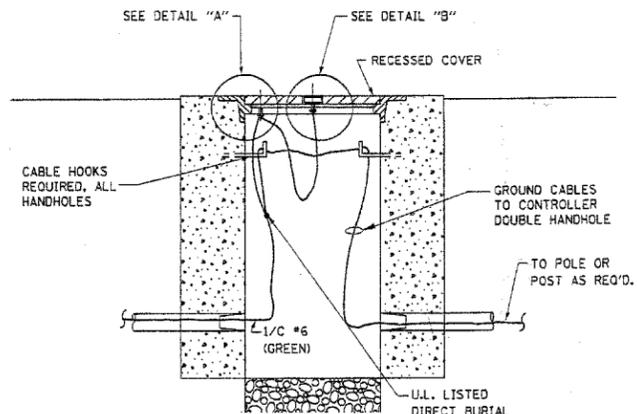
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



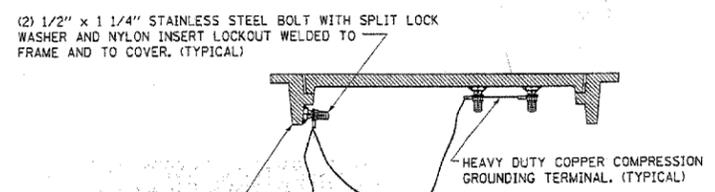
DETAIL "A"



DETAIL "B"



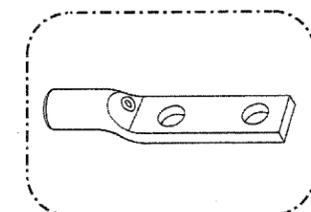
HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)



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

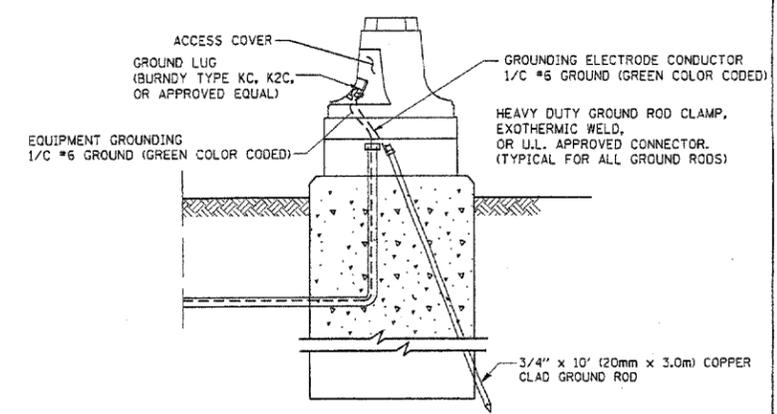
NOTES:
GROUNDING SYSTEM

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



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.



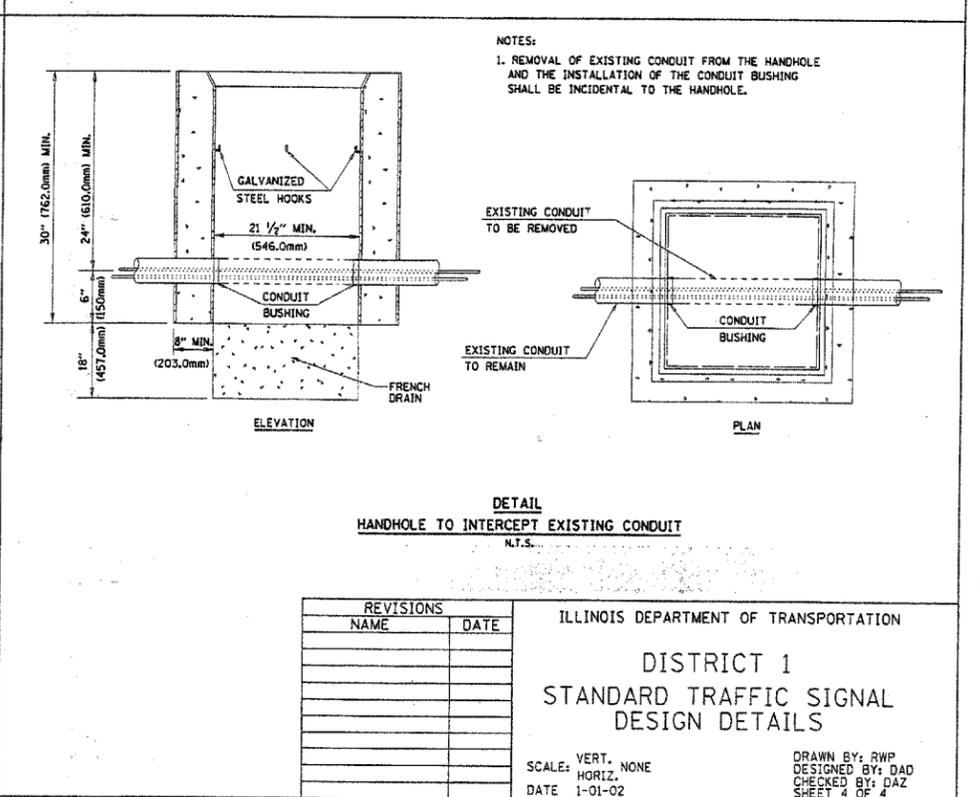
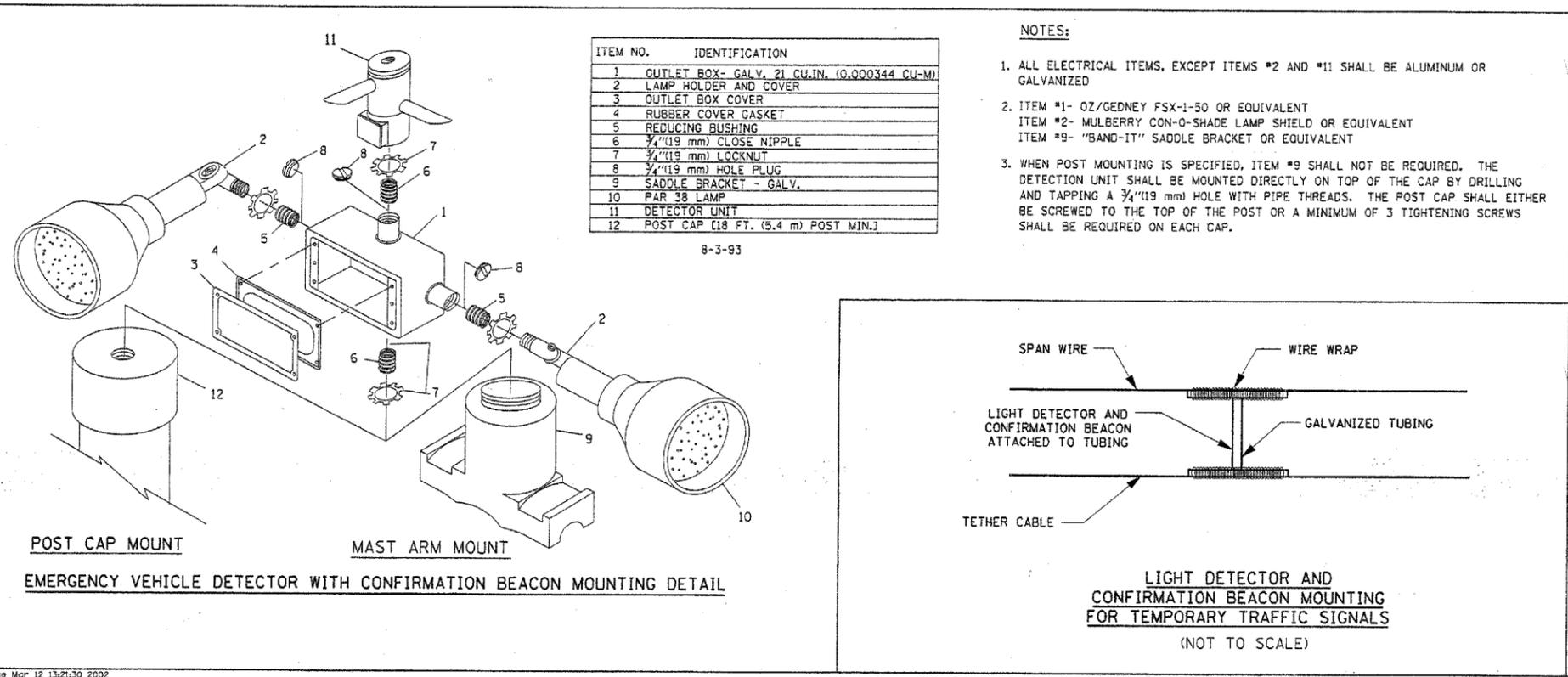
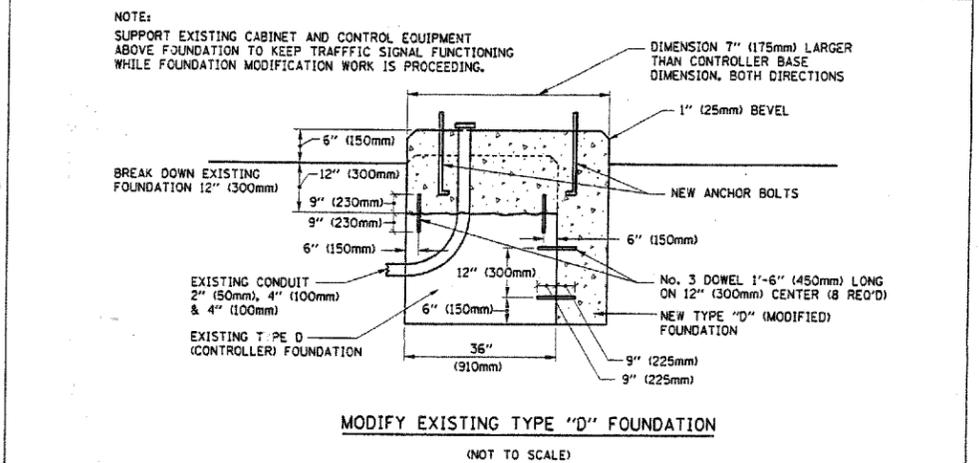
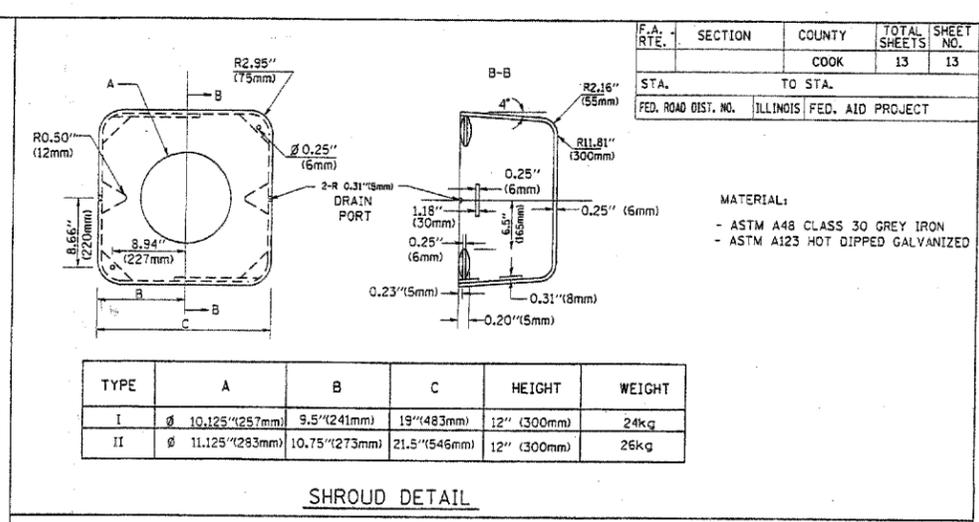
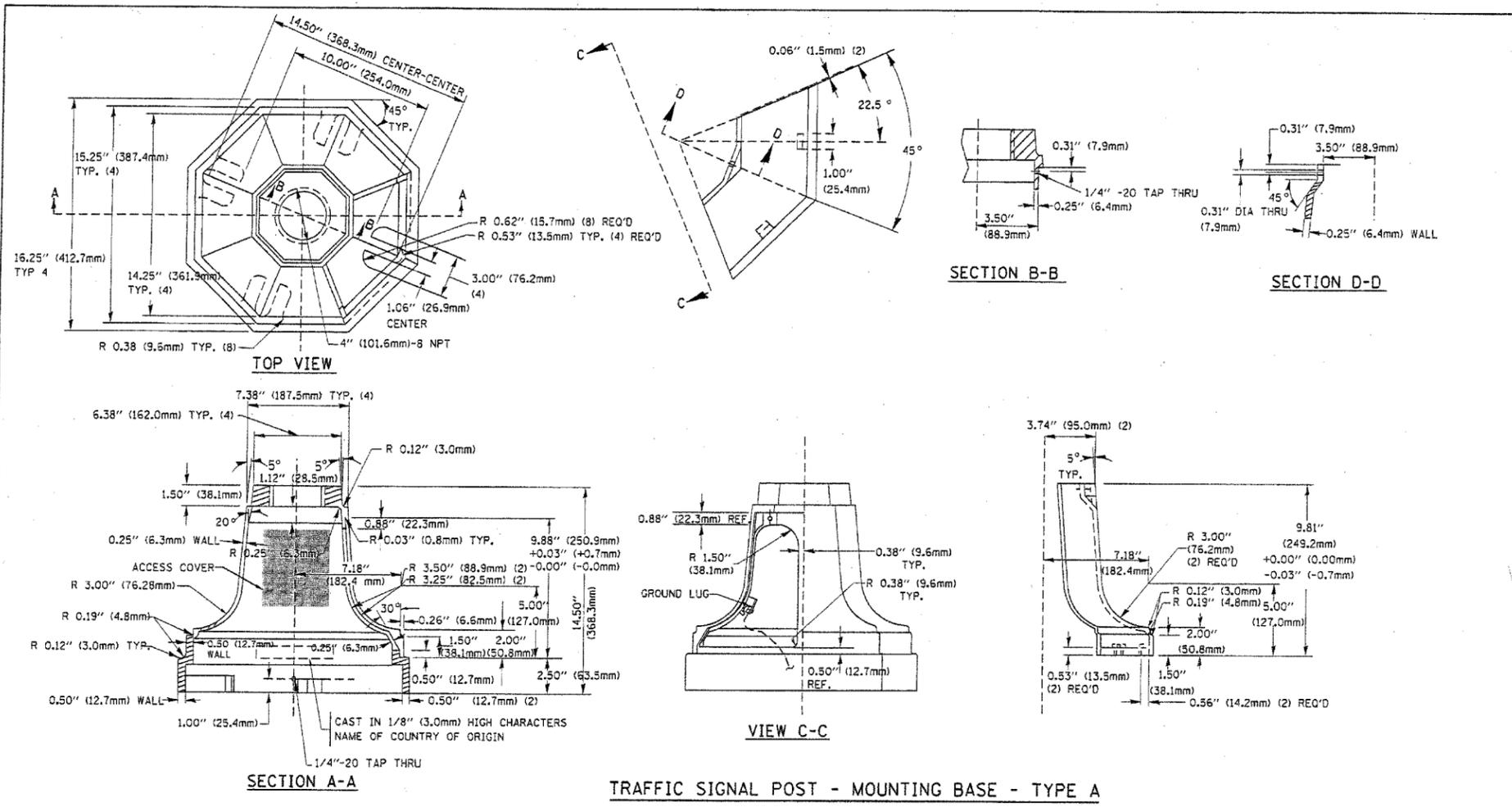
MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
 DATE 1-01-02

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



REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ. 1-1/2"=1'-0"

DATE 1-01-02

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