

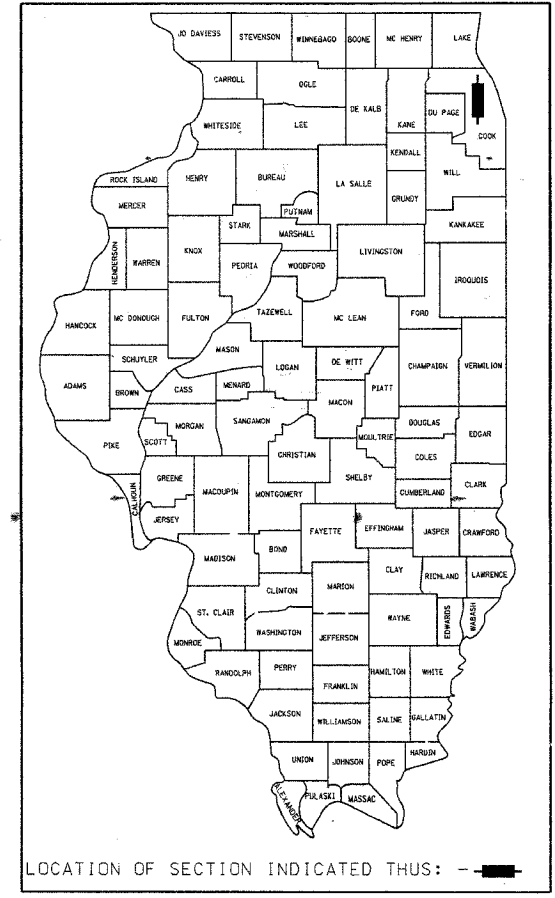
62739

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	1
F.H.W.A. REC.	ILLINOIS	PROJECT		
D-91-173-04				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1
CONGESTION MITIGATION AIR QUALITY
FIBER OPTIC COMMUNICATIONS NETWORK
ILL. ROUTE 21 (MILWAUKEE AVENUE)
MAIN STREET TO OAKTON STREET



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12. INTERCONNECT PLAN - SHEET 2 OF 2
13. INTERCONNECT SCHEMATIC & SCHEDULE OF QUANTITIES

INFRASTRUCTURE ENGINEERING, INC.
 29 S. LASALLE ST., SUITE 345
 CHICAGO, ILL. 60603-1557
 PHONE 312.425.9560
 FAX 312.425.9564
 WWW.INFRASTRUCTURE-ENG.COM

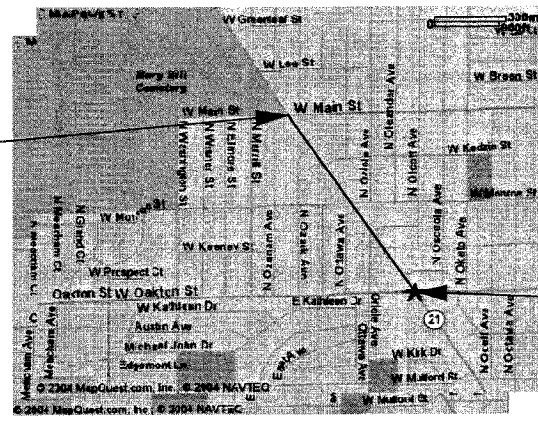
STANDARD DRAWINGS

701006	701011	701101	701301	702001
424001	720001	813001	814001	814006
877001	877006	877011	878001	
880001	880006	886001	857001	
701201	701501	701606	701801	701321
701421	701601	701701	701316	701502

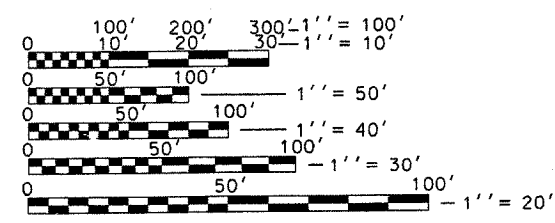
NOTE: STANDARD DRAWINGS REQUIRED(CIRCLED)

NILES TOWNSHIP
VILLAGE OF NILES

PROJECT BEGINS



PROJECT ENDS



LOCATION MAP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 4 2005

Deanne M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13, 2005
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

May 13, 2005
Victor Moders
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

CONTRACT NO. 62739

PREPARED BY Jerry Rammacher
TRAFFIC ENGINEER

3/14/05
DATE

CALL J.U.L.I.E. 48 HRS. BEFORE DIGGING



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NUMBER: 62739				

INFRASTRUCTURE ENGINEERING, INC.
 29 S. LASALLE ST., SUITE 345
 CHICAGO, IL 60603-1557
 PHONE 312.425.9560
 FAX 312.425.9564
 info@infrastructure-eng.com

PERCENTAGES				URBAN 80% FED. 20% STATE		
SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE		
CODE#	ITEM	UNIT	TOTAL QUANTITIES	YO31-1F IL. RTE. 21 AT OAKTON STREET	YO31-1F IL. RTE. 21 AT MAIN STREET	YO31-1F INTERCONNECT IL. RTE. 21 (MILWAUKEE AVE.) FROM OAKTON STREET TO MAIN STREET
67100100	MOBILIZATION	L SUM	1			
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.33	0.33	0.34
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	0.33	0.33	0.34
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.33	0.33	0.34
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1363			1363
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	1680			1680
81400100	HANDHOLE	EACH	5			5
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	3254			3254
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	781		781	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	3260			3260
87900200	DRILL EXISTING HANDHOLE	EACH	4			4
88500100	INDUCTIVE LOOP DETECTOR	EACH	10		10	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	1	1	
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET(SPECIAL)	EACH	1		1	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1		1	
X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	1		1	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1	
XX002856	RE-OPTIMIZATION OF TRAFFIC SIGNAL SYSTEMS	L. SUM	1			1
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	35		35	
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	35		35	

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE PERFORMED ACCORDING TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS PROMULGATED BY ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 1 TRAFFIC SIGNAL SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.
- THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL J.U.L.I.E. TOLL-FREE: 1-800-892-0123.

REVISIONS	
NAME	DATE

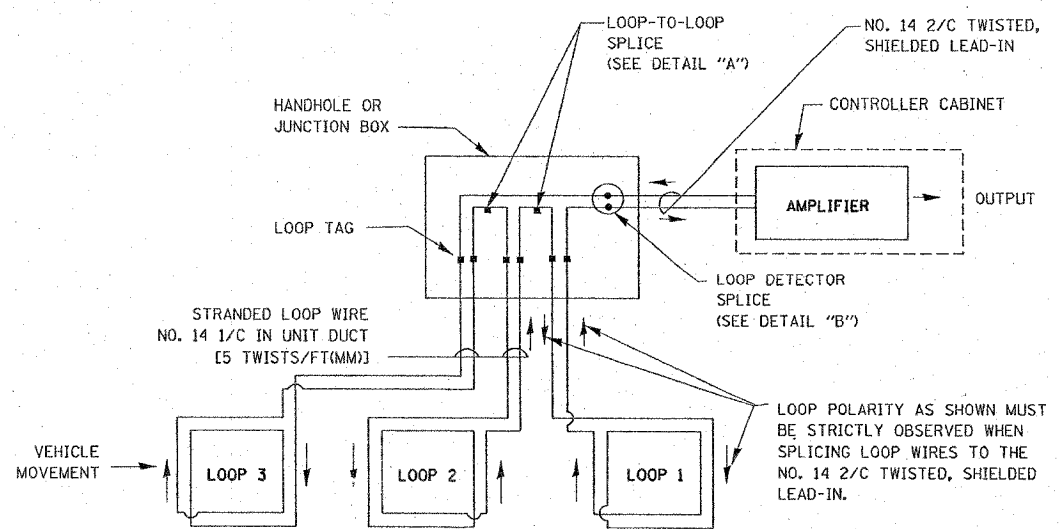
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUMMARY OF QUANTITIES,
 GENERAL NOTES-
 ILL. RTE. 21 (MILWAUKEE AVE.)
 FROM MAIN STREET TO
 OAKTON STREET

SCALE: N.T.S.
 DATE 09-20-04

DRAWN BY N.B.
 DESIGNED BY N.B.
 CHECKED BY D.B./M.S.

LOOP DETECTOR NOTES

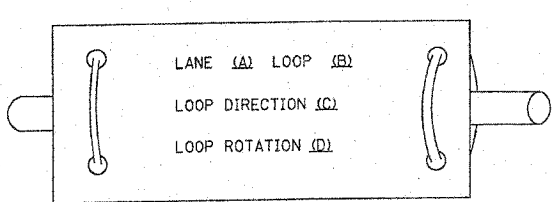
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCIDENTAL TO THE COST OF THE CABLE.
- LOOP TURNS AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. 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. IDENTIFICATION SHALL INCLUDE LOOP LOCATION POLARITY (CLOCKWISE/COUNTERCLOCKWISE) AND WIRE DIRECTION (IN OR OUT).
- 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.
- 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 AS-BUILT PLANS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER.



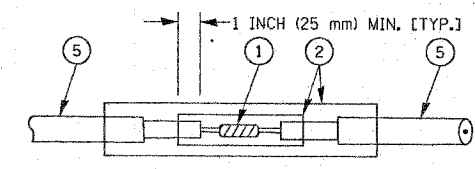
DETECTOR LOOP WIRING SCHEMATIC

- 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.

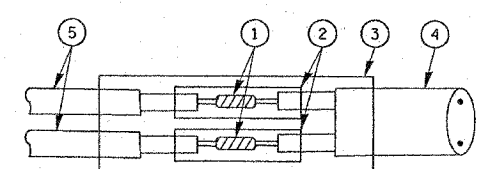
LOOP LEAD-IN CABLE TAG



- 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.

NOTE:
THE COMMONWEALTH EDISON MARKETING REPRESENTATIVE FOR THIS PROJECT IS:
NAME: _____
TELEPHONE: _____

REVISIONS	
NAME	DATE
CADD	5/30/00

ILLINOIS DEPARTMENT OF TRANSPORTATION
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**

SCALE: VERT. NONE
HORIZ. DATE 11-16-94

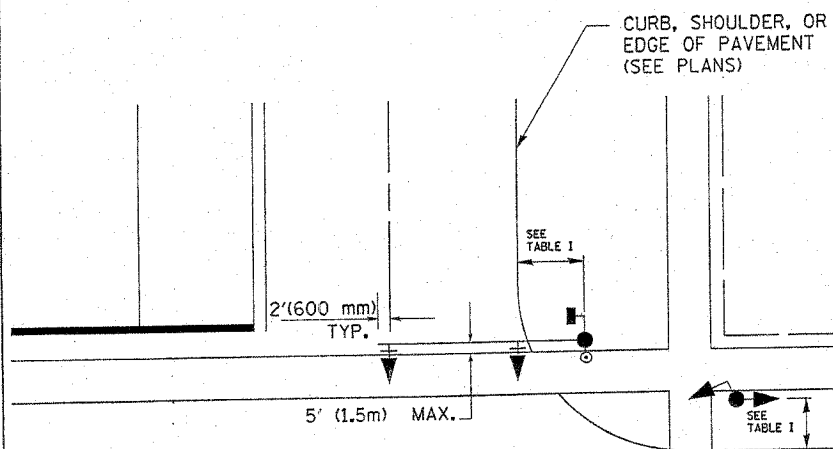
DRAWN BY: DGN
DESIGNED BY: DAZ
CHECKED BY: DAZ
SHEET 1 OF 3

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020TS	COOK	13	4
STA.	TO STA.			
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

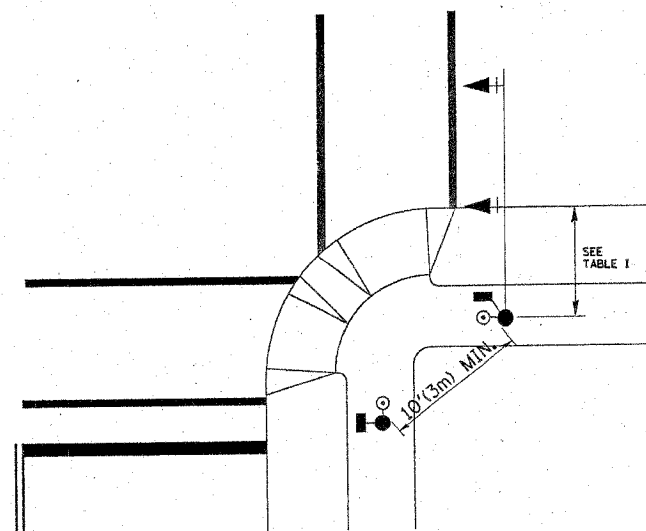
CONTRACT NO.: 62739

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

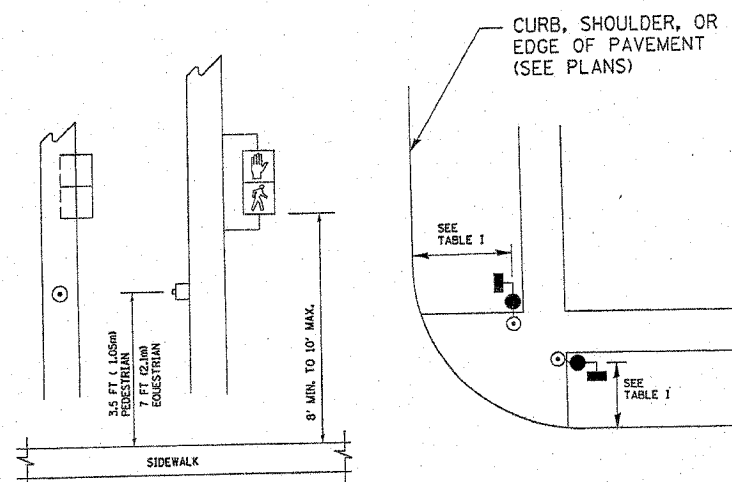


TABLE I

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

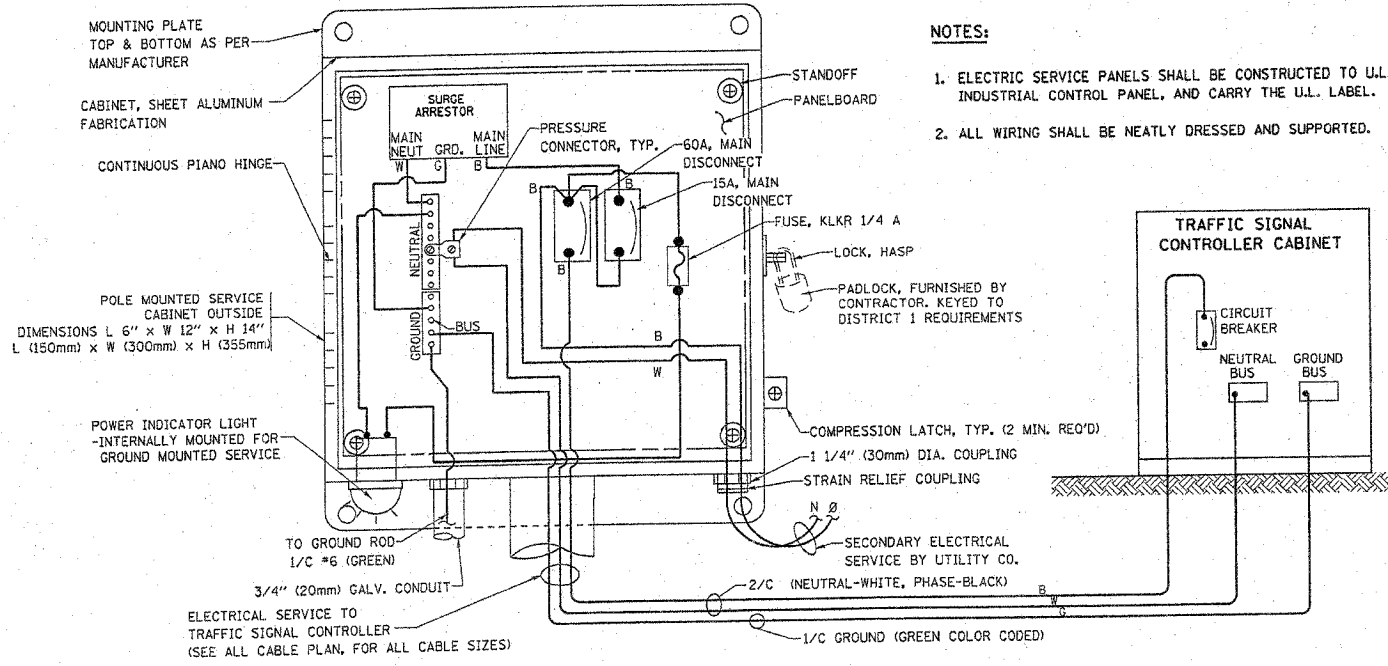
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

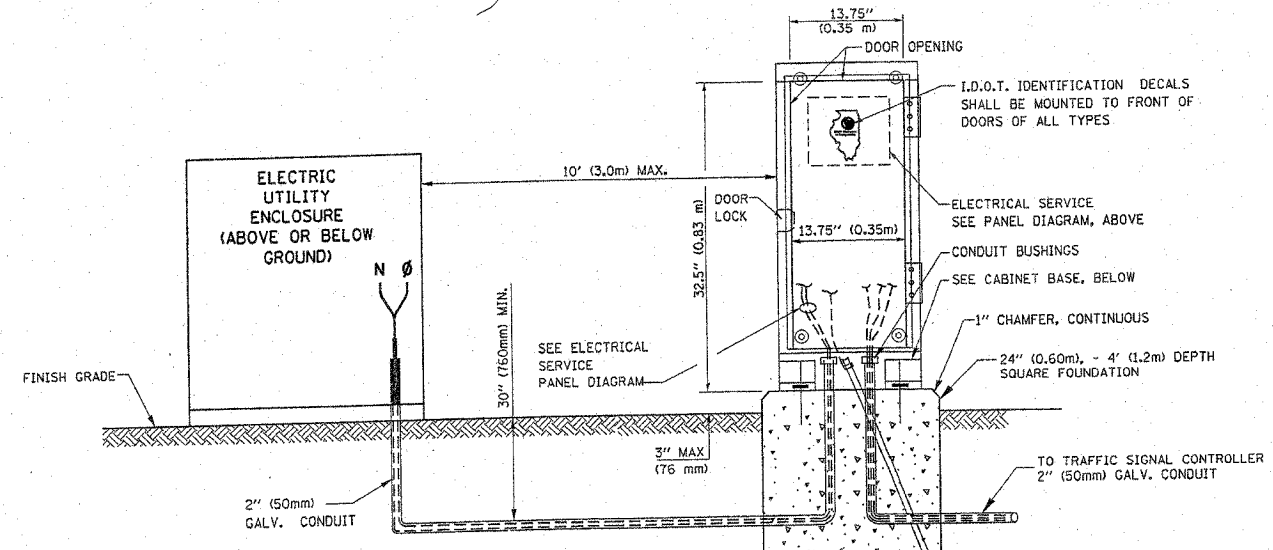
SCALE: VERT. NONE
HORIZ. NONE
DATE: 1-01-02

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

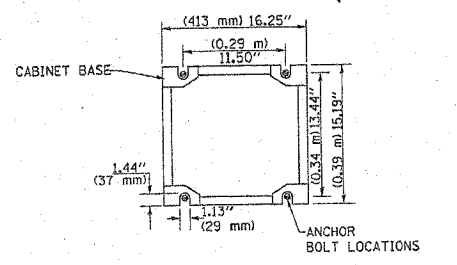
F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374/2004-020 TS	COOK	13	5
STA. TO STA.		ILLINOIS FED. AID PROJECT	
FED. ROAD DIST. NO.		CONTRACT NO. 62739	



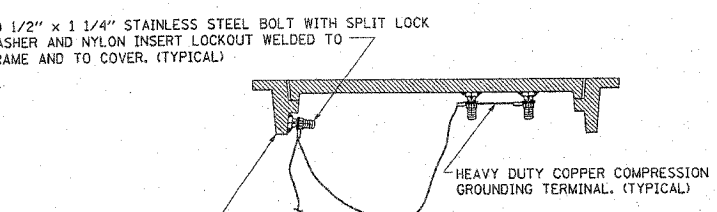
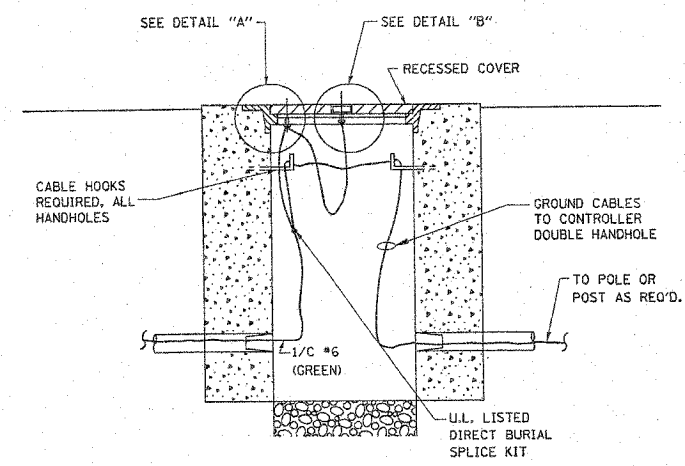
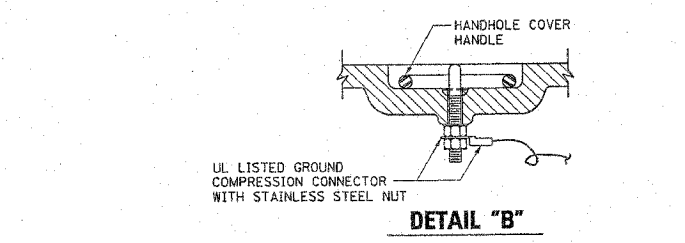
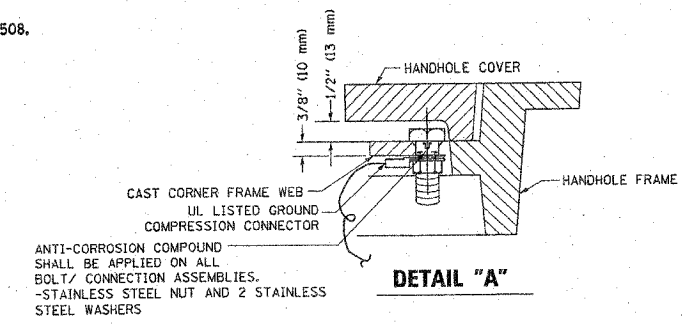
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)



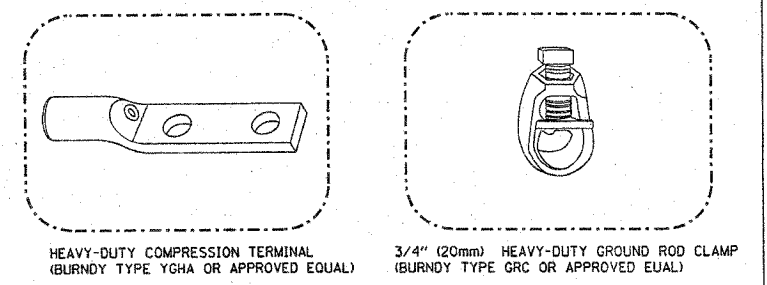
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



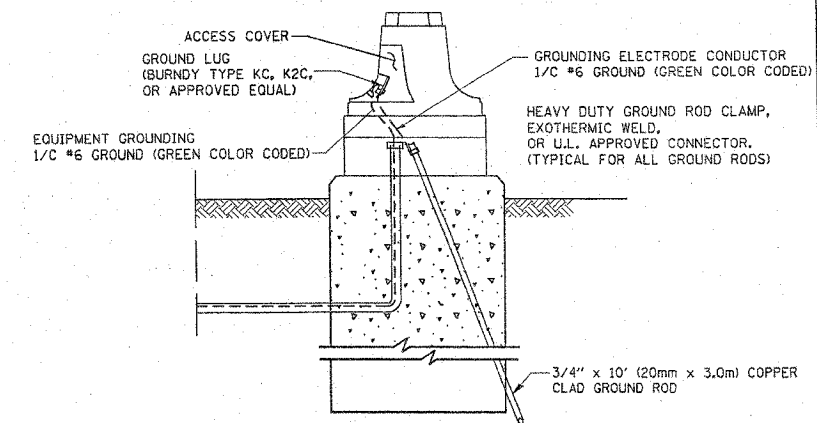
NOTES:

GROUNDING SYSTEM

- 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.
- 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.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



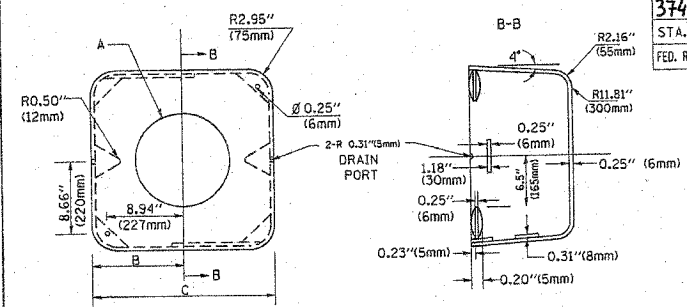
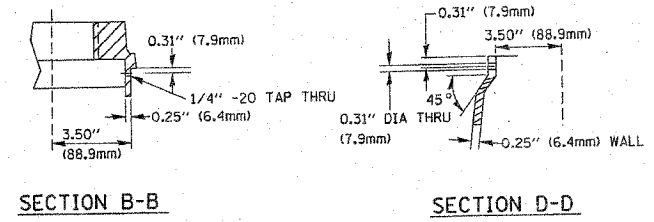
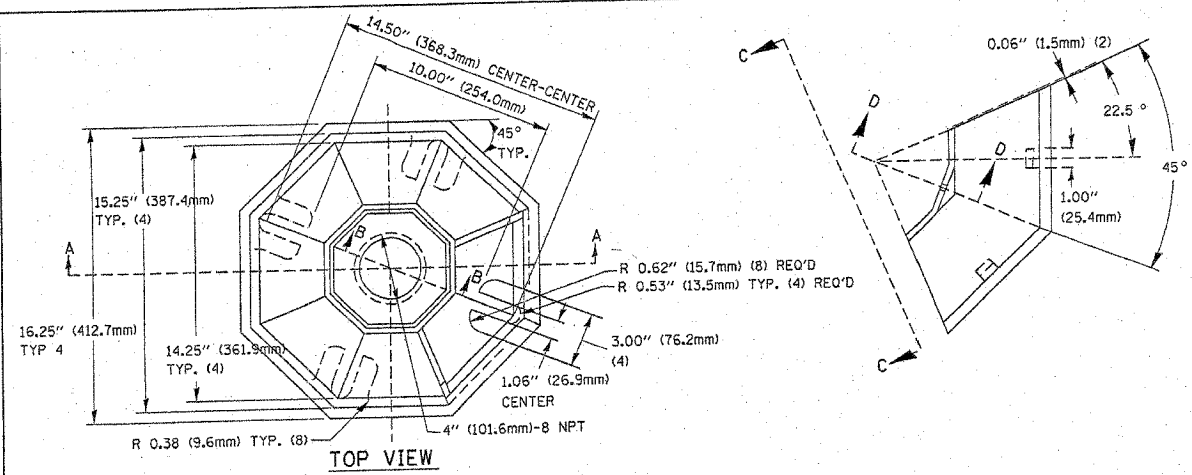
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

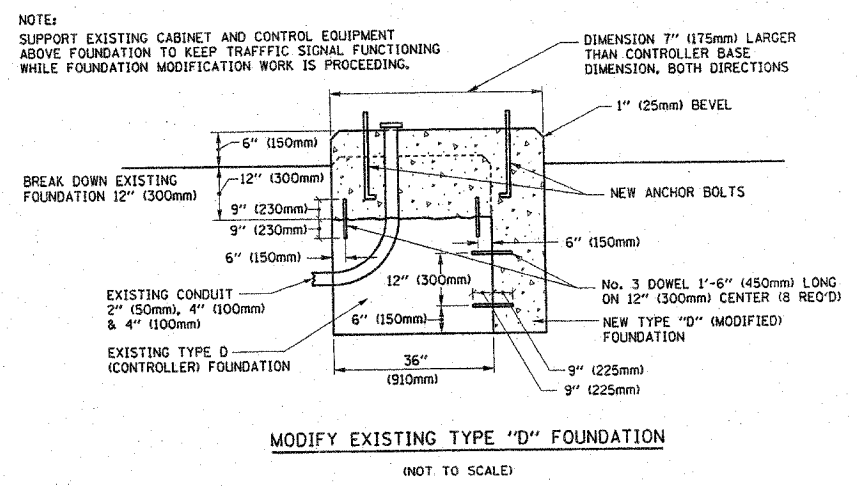
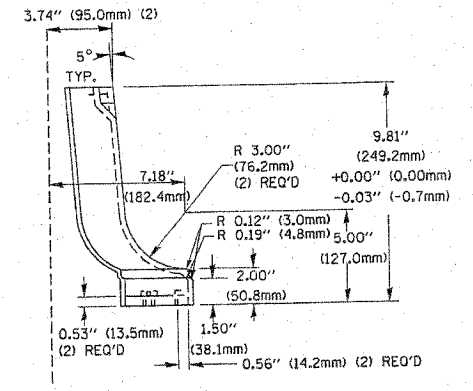
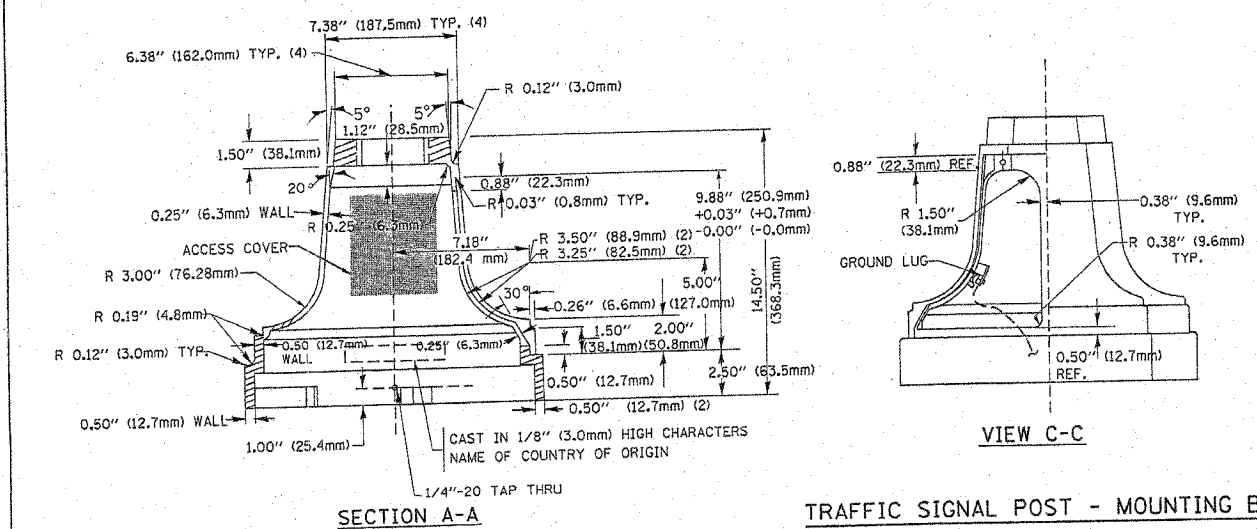
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 HORIZ. DATE 1-01-02

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



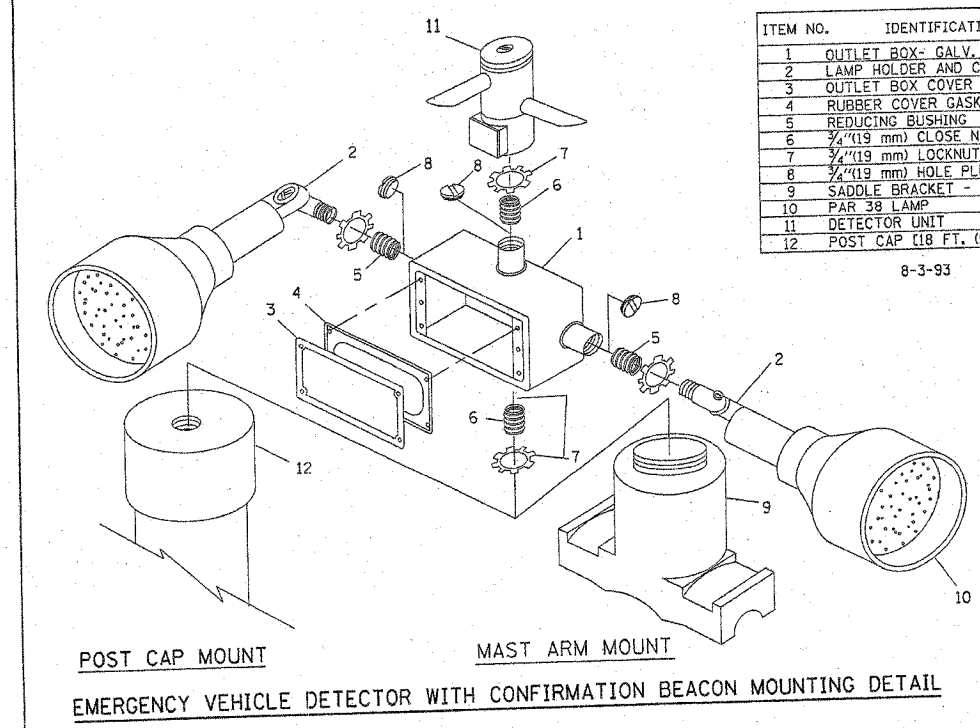
TYPE	A	B	C	HEIGHT	WEIGHT
I	∅ 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	∅ 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

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



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

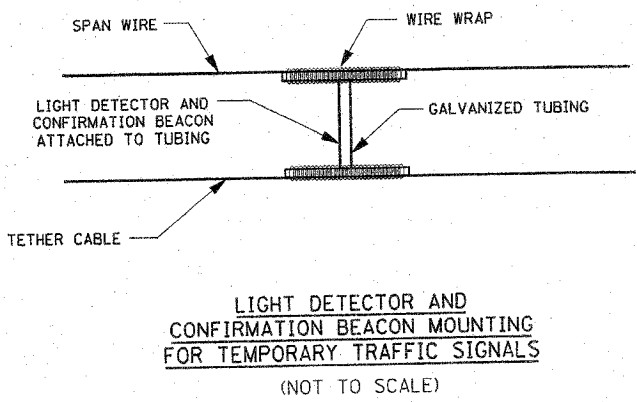
MODIFY EXISTING TYPE "D" FOUNDATION (NOT TO SCALE)



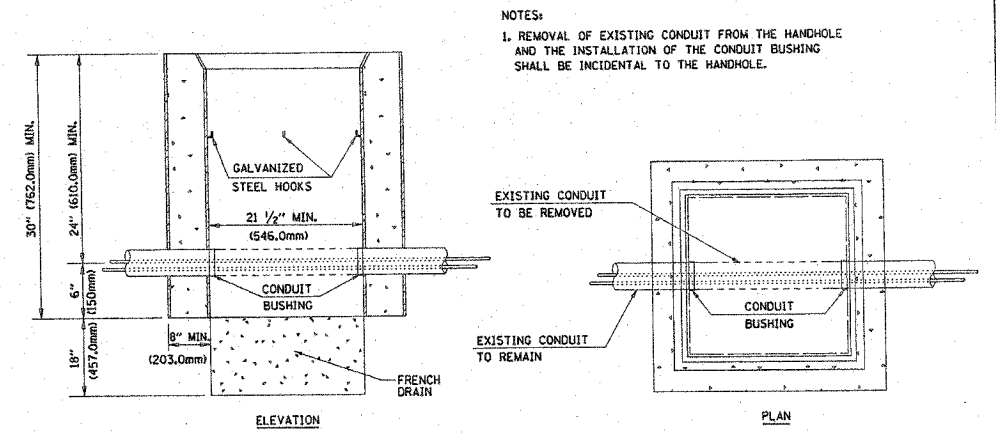
ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU.IN. (0.00344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

NOTES:

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



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

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

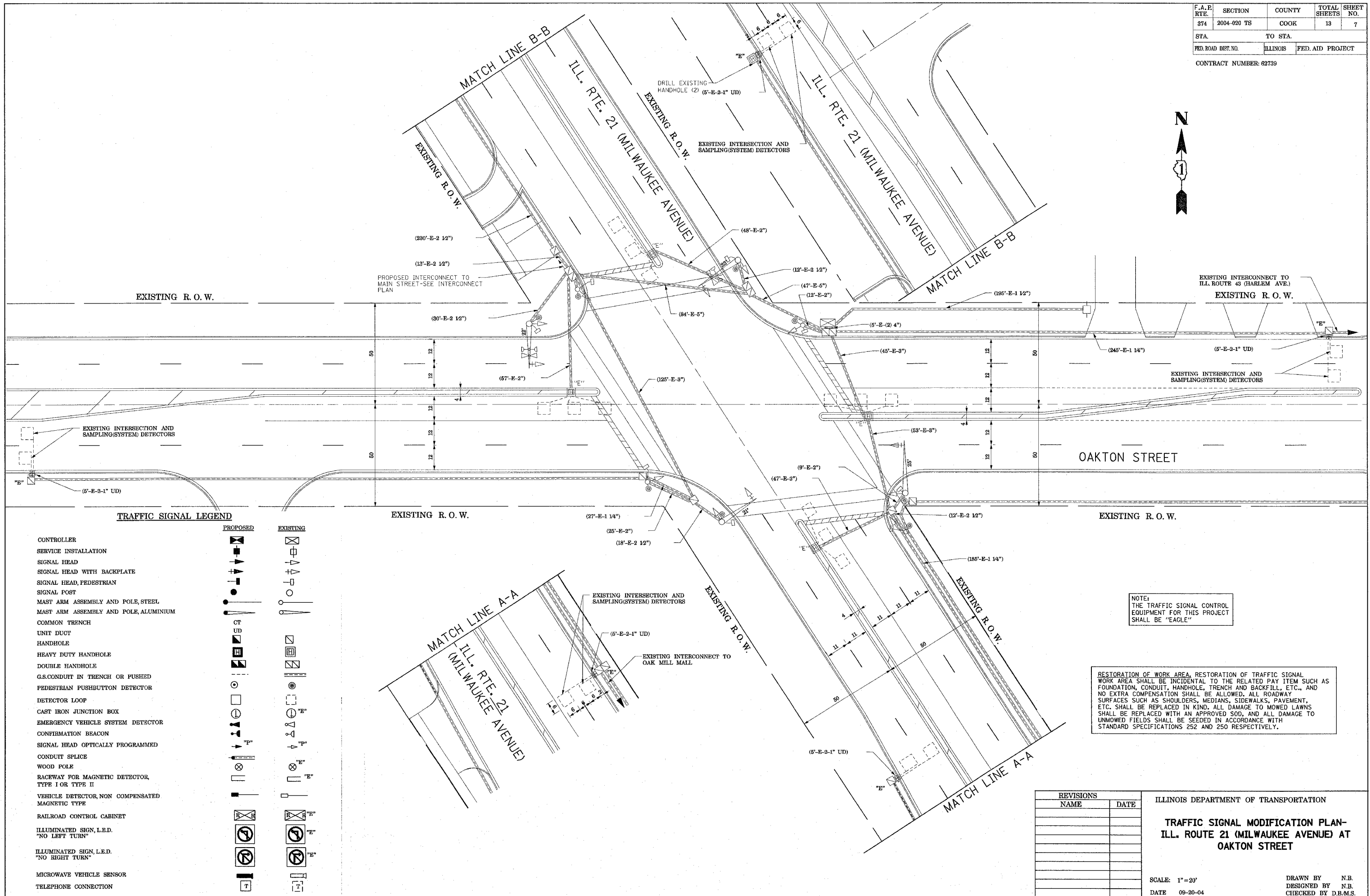
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NUMBER: 62739



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINIUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S.CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, L.E.D. "NO LEFT TURN"		
ILLUMINATED SIGN, L.E.D. "NO RIGHT TURN"		
MICROWAVE VEHICLE SENSOR		
TELEPHONE CONNECTION		

NOTE:
 THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE"

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

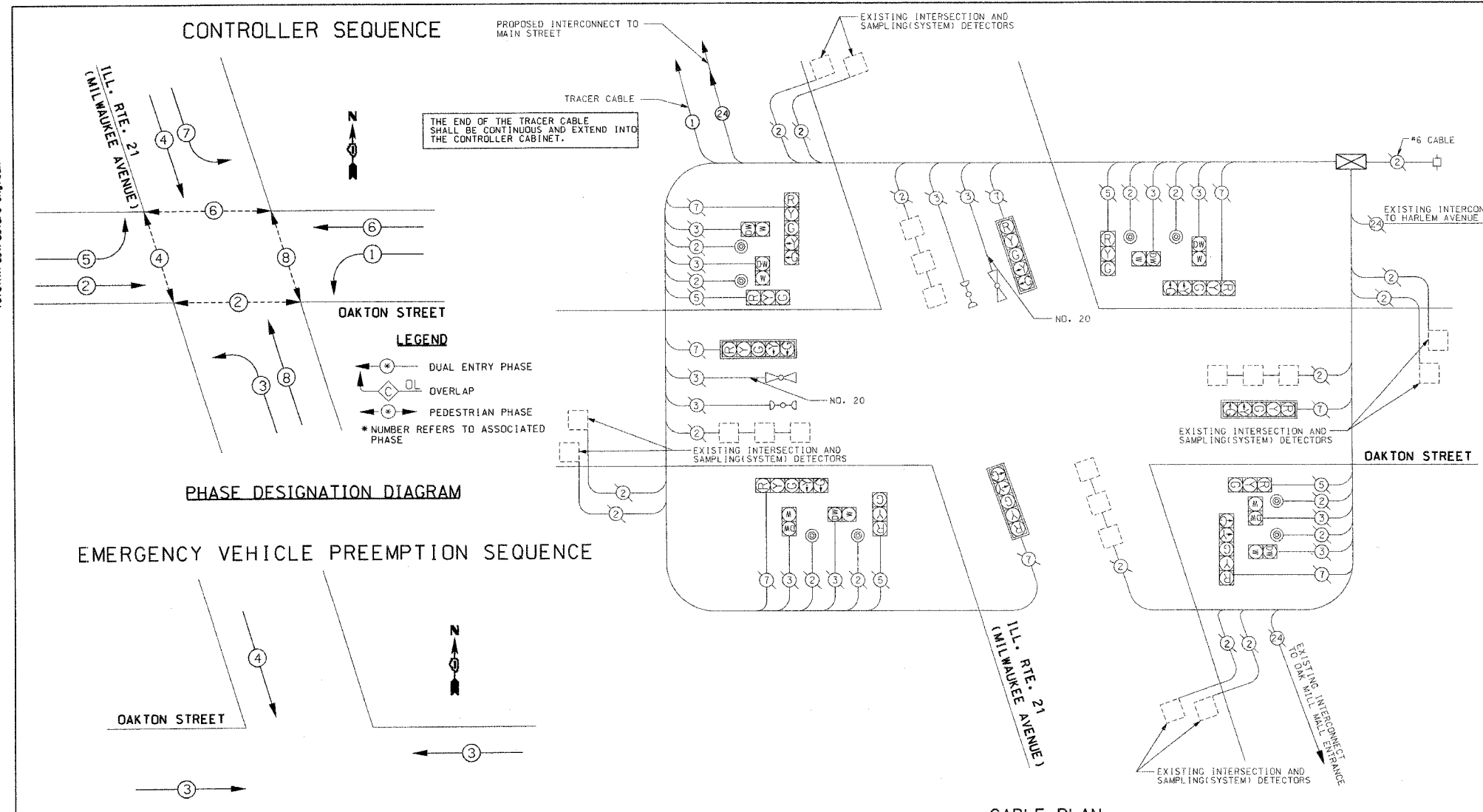
**TRAFFIC SIGNAL MODIFICATION PLAN-
 ILL. ROUTE 21 (MILWAUKEE AVENUE) AT
 OAKTON STREET**

SCALE: 1"=20'
 DATE 09-20-04

DRAWN BY N.B.
 DESIGNED BY N.B.
 CHECKED BY D.B.M.S.

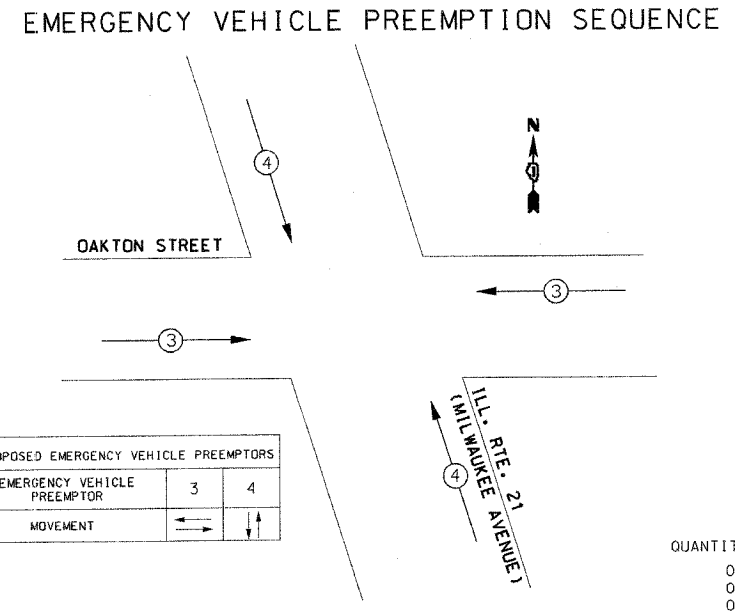
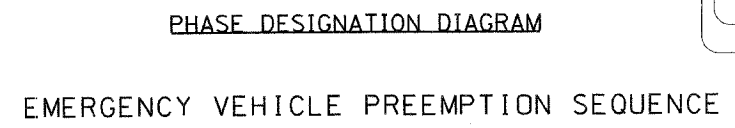
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NUMBER: 62739				

INFRASTRUCTURE ENGINEERING, INC.
29 S. LASALLE ST., SUITE 345
CHICAGO, IL. 60603-1557
PHONE 312.425.9560
FAX 312.425.9564
tel@infrastructure-eng.com



CABLE PLAN LEGEND

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



SCHEDULE OF QUANTITIES

QUANTITIES	UNIT	ITEM
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION

J.D.D.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	810
(YELLOW)	12	135	25	0.25	405
(GREEN)	12	135	15	0.25	405
ARROW	16	135	12	0.10	216
PED. SIGNAL	8	90	25	1.00	720
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	-
FLASHER				0.05	-
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION					TOTAL = 2656
201 WEST CENTER COURT, SCHAMBURG, ILLINOIS 60196-1036					
ENERGY SUPPLY CONTACT: RICK BILL, PHONE: (630) 844-6238, COMPANY: COMMONWEALTH EDISON					

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-2= (6m H-0.6m)=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600MM)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750MM)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE".

REVISIONS

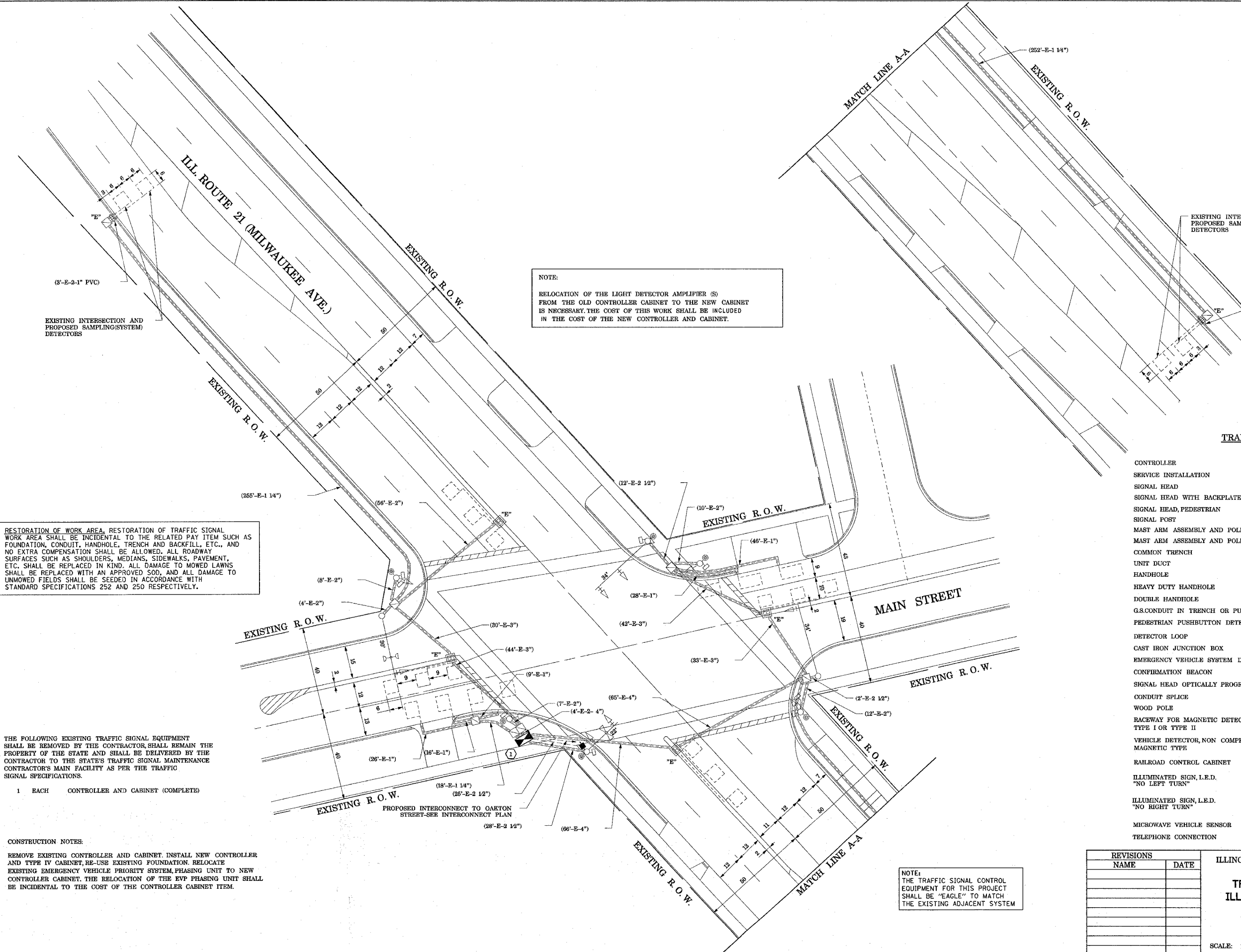
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN
PHASE DESIGNATION DIAGRAM
EMERGENCY VEHICLE PREEMPTION SEQUENCE
AND SCHEDULE OF QUANTITIES
ILL. ROUTE 21 (MILWAUKEE AVENUE)
AT OAKTON STREET

SCALE: N.T.S. DRAWN BY N.B.
DESIGNED BY N.B.
DATE 09-20-04 CHECKED BY D.B./M.S.

F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NUMBER: 62739



NOTE:
 RELOCATION OF THE LIGHT DETECTOR AMPLIFIER (S) FROM THE OLD CONTROLLER CABINET TO THE NEW CABINET IS NECESSARY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE NEW CONTROLLER AND CABINET.

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

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET (COMPLETE)

CONSTRUCTION NOTES:
 1 REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT TO NEW CONTROLLER CABINET. THE RELOCATION OF THE E.V.P. PHASING UNIT SHALL BE INCIDENTAL TO THE COST OF THE CONTROLLER CABINET ITEM.

NOTE:
 THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINIUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S.CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, L.E.D. "NO LEFT TURN"		
ILLUMINATED SIGN, L.E.D. "NO RIGHT TURN"		
MICROWAVE VEHICLE SENSOR		
TELEPHONE CONNECTION		

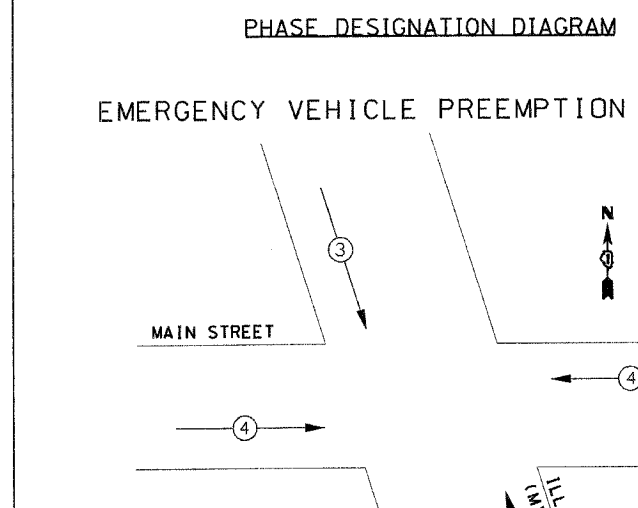
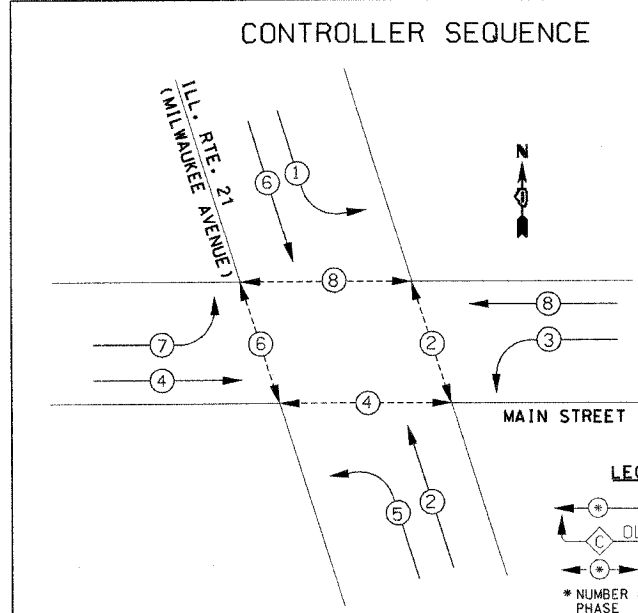
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL MODIFICATION PLAN
 ILL. ROUTE 21 (MILWAUKEE AVENUE) AT
 MAIN STREET

SCALE: 1" = 20'
 DATE: 09-20-04
 DRAWN BY: N.B.
 DESIGNED BY: N.B.
 CHECKED BY: D.B.M.S.

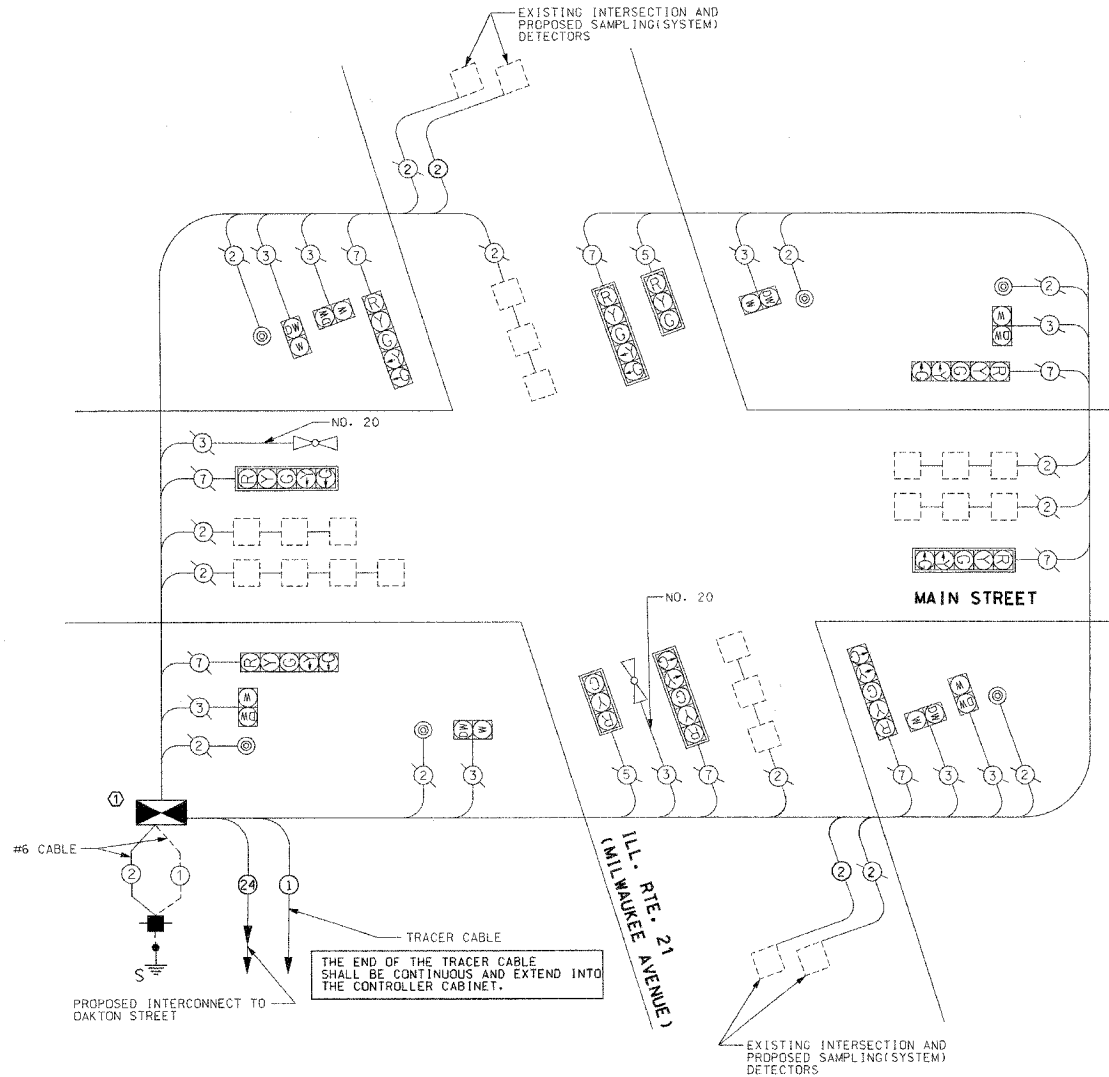
F.A.P. SECTION COUNTY TOTAL SHEETS NO.	374 2004-020 TS COOK 13 10
STA. TO STA.	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	
CONTRACT NUMBER: 62739	

INFRASTRUCTURE ENGINEERING, INC.
 29 S. LASALLE ST., SUITE 345
 CHICAGO, IL 60604
 PHONE: 312-425-9584
 FAX: 312-425-9584
 info@infrastructure-eng.com



LEGEND

- DUAL ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE



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
(Symbol)	(Symbol)	SERVICE INSTALLATION
(Symbol)	(Symbol)	TELEPHONE CONNECTION
(Symbol)	(Symbol)	MAGNETIC DETECTOR
(Symbol)	(Symbol)	EMERGENCY VEHICLE LIGHT DETECTOR
(Symbol)	(Symbol)	CONFIRMATION BEACON
(Symbol)	(Symbol)	PUSHBUTTON DETECTOR
(Symbol)	(Symbol)	VEHICLE DETECTOR, INDUCTION LOOP
(Symbol)	(Symbol)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(Symbol)	(Symbol)	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
(Symbol)	(Symbol)	RAILROAD CONTROL CABINET
(Symbol)	(Symbol)	ILLUMINATED SIGN, L.E.D. "NO LEFT TURN"
(Symbol)	(Symbol)	ILLUMINATE SIGN, L.E.D. "NO RIGHT TURN"
(Symbol)	(Symbol)	GROUND ROD AT HANDHOLE(H), DOUBLE HANDHOLE(H), OR CONTROLLER(C) OR POST(P) OR MAST ARM POLE(MA)
(Symbol)	(Symbol)	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(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)	MICROWAVE VEHICLE SENSOR

SCHEDULE OF QUANTITIES

QUANTITIES	UNIT	ITEM
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
781	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
10	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET(SPECIAL)
1	EACH	TRANSCIVER - FIBER OPTIC
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	SERVICE INSTALLATION, POLE MOUNT
35	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
35	FOOT	ELECTRIC CABLE IN CONDUIT, GROUND, NO. 6 1C

CONSTRUCTION NOTES:

1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET. RE-USE EXISTING FOUNDATION. RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. THE RELOCATION OF THE EVP PHASING UNIT SHALL BE INCLUDED IN THE COST OF THE CONTROLLER CABINET ITEM.

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE".

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

TYPE	NO. LAMPS	WATTAGE (INCAND.)	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	135	17	0.50	675
(YELLOW)	10	135	25	0.25	337.5
(GREEN)	10	135	15	0.25	337.5
ARROW	16	135	12	0.10	216
PED. SIGNAL	8	90	25	1.00	270
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	-
FLASHER				0.05	-
TOTAL =					1936

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION, 201 WEST CENTER COURT, SCHAMBOURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: RICK BILL, PHONE: (630) 844-6238, COMPANY: COMMONWEALTH EDISON

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-2= (6m+L-0.6mm)=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600MM)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750MM)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN
 PHASE DESIGNATION DIAGRAM
 EMERGENCY VEHICLE PREEMPTION SEQUENCE
 AND SCHEDULE OF QUANTITIES
 ILL. RTE 21 (MILWAUKEE AVENUE)
 AT MAIN STREET

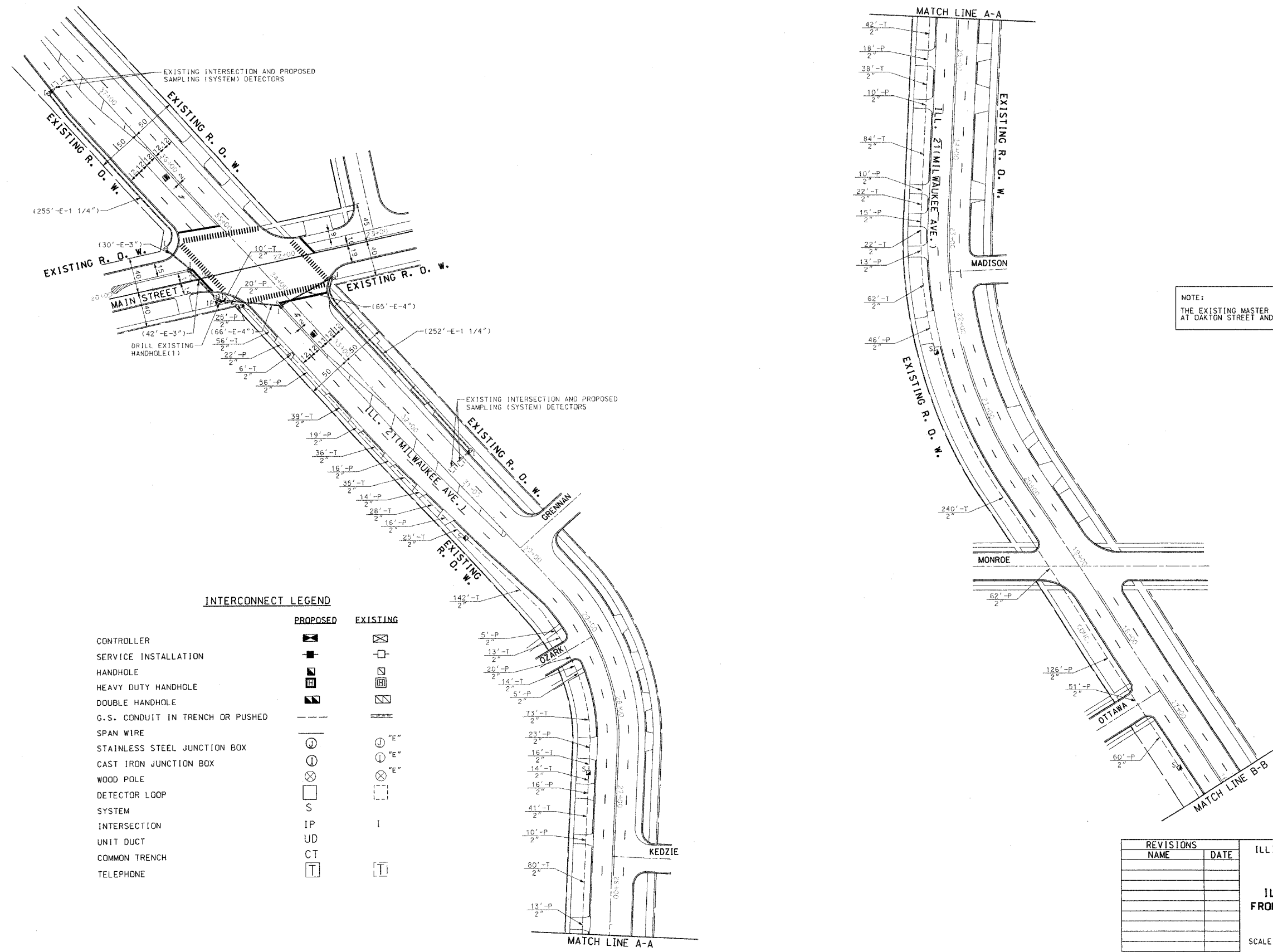
SCALE: N.T.S. DRAWN BY N.B.
 DESIGNED BY N.B.
 DATE 09-20-04 CHECKED BY D.B./M.S.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NUMBER: 62739				



NOTE:
THE EXISTING MASTER CONTROLLER IS LOCATED AT OAKTON STREET AND ILL. 21 (MILWAUKEE AVE.)

INFRASTRUCTURE ENGINEERING, INC.
29 S. LASALLE ST., SUITE 345
CHICAGO, IL 60603-1557
PHONE 312.425.9560
FAX 312.425.9564
ie@infrastructure-eng.com



INTERCONNECT LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
SPAN WIRE		
STAINLESS STEEL JUNCTION BOX		
CAST IRON JUNCTION BOX		
WOOD POLE		
DETECTOR LOOP		
SYSTEM		
INTERSECTION		
UNIT DUCT		
COMMON TRENCH		
TELEPHONE		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

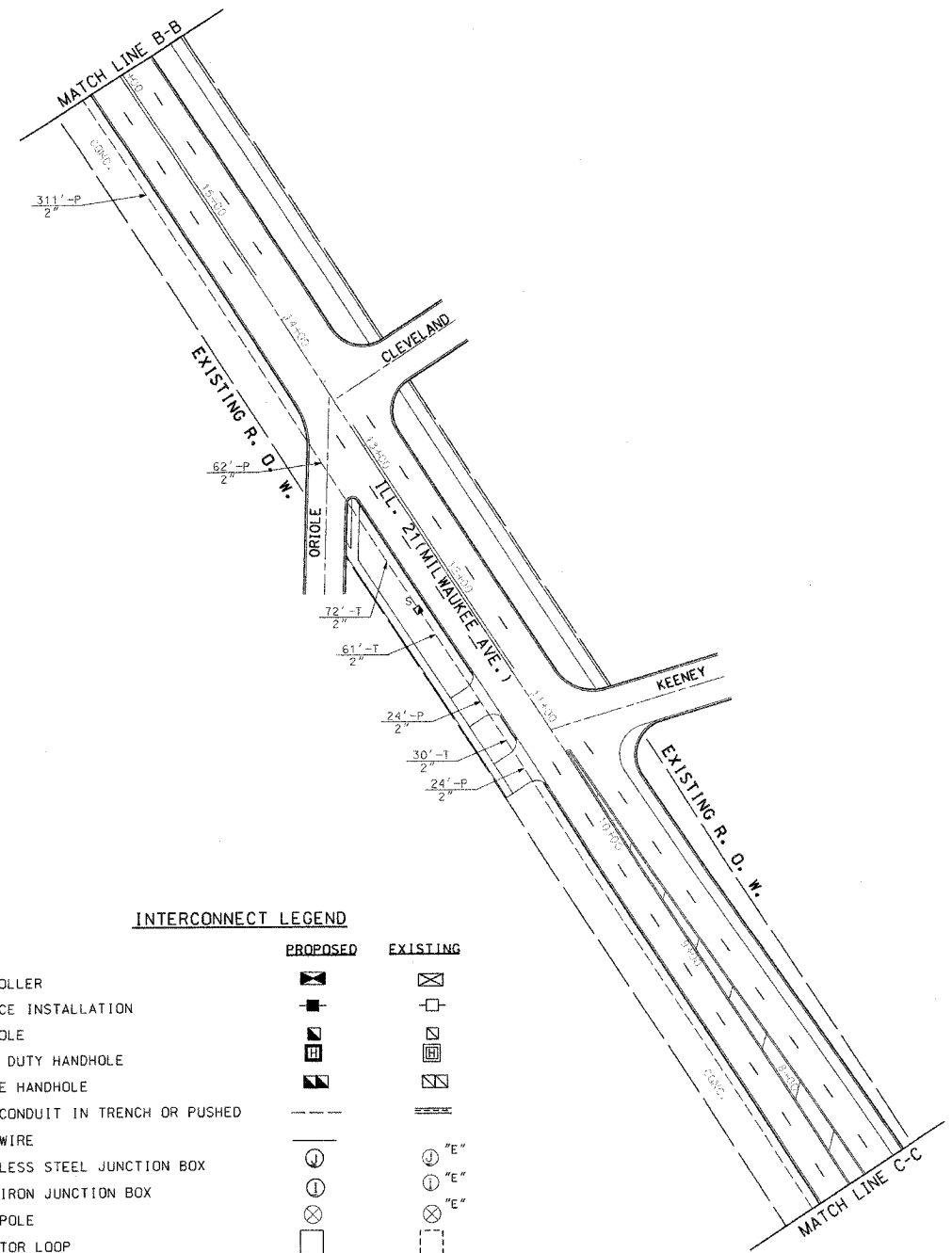
INTERCONNECT PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.)
FROM MAIN STREET TO OAKTON STREET
(SHEET 1 OF 2)

SCALE: 1"=50'
DATE 09-20-04

DRAWN BY N.B.
DESIGNED BY N.B.
CHECKED BY D.B./M.S.

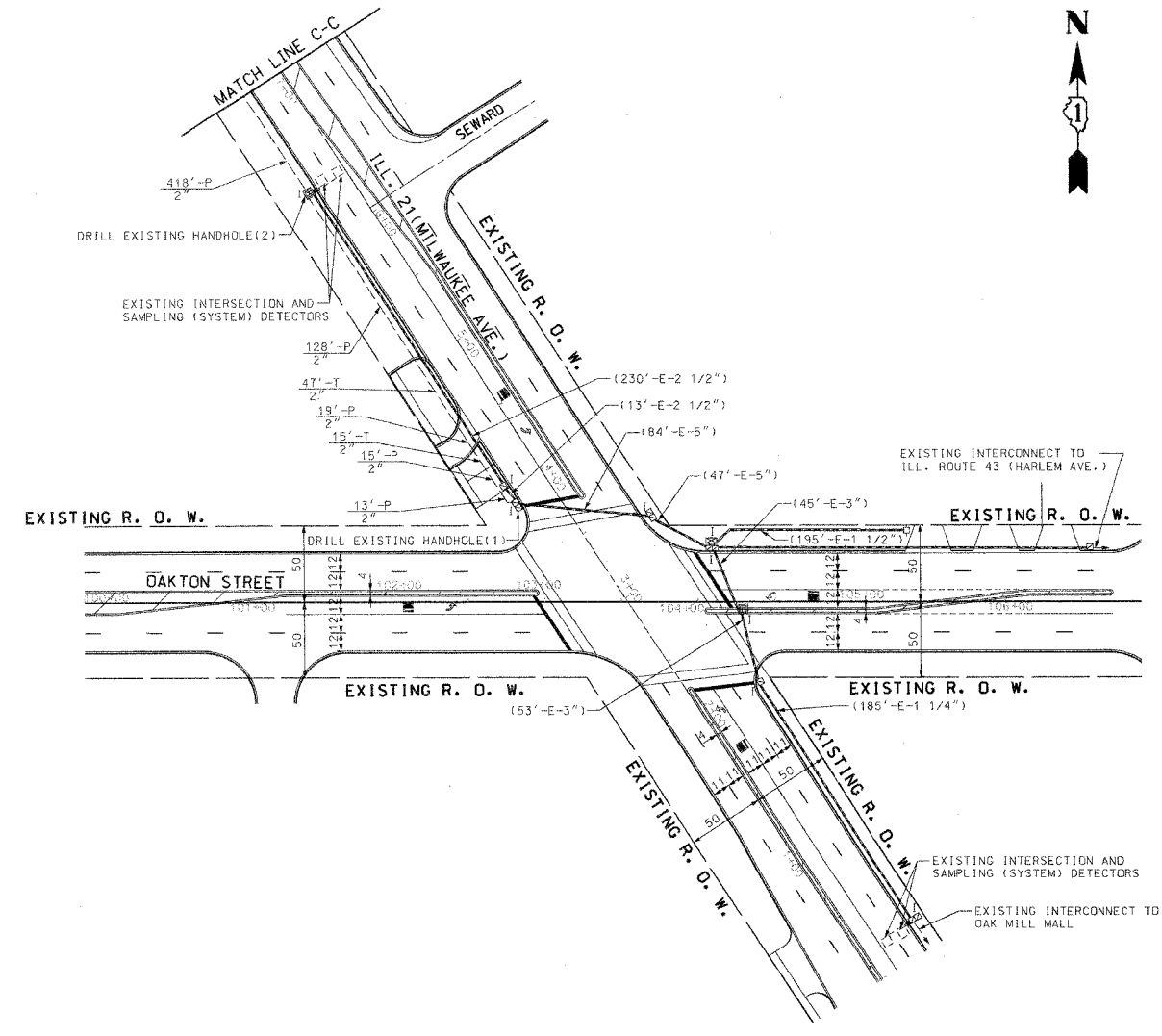
INFRASTRUCTURE ENGINEERING, INC.
 29 S. LASALLE ST., SUITE 345
 CHICAGO, IL 60603-1557
 PHONE 312.425.9560
 FAX 312.425.9564
 Tel: infrastructure-eng.com

F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NUMBER: 62739				



INTERCONNECT LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
SPAN WIRE		
STAINLESS STEEL JUNCTION BOX		
CAST IRON JUNCTION BOX		
WOOD POLE		
DETECTOR LOOP SYSTEM		
INTERSECTION		
UNIT DUCT		
COMMON TRENCH		
TELEPHONE		



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
 ILL. ROUTE 21 (MILWAUKEE AVE.)
 FROM MAIN STREET TO OAKTON STREET
 (SHEET 2 OF 2)

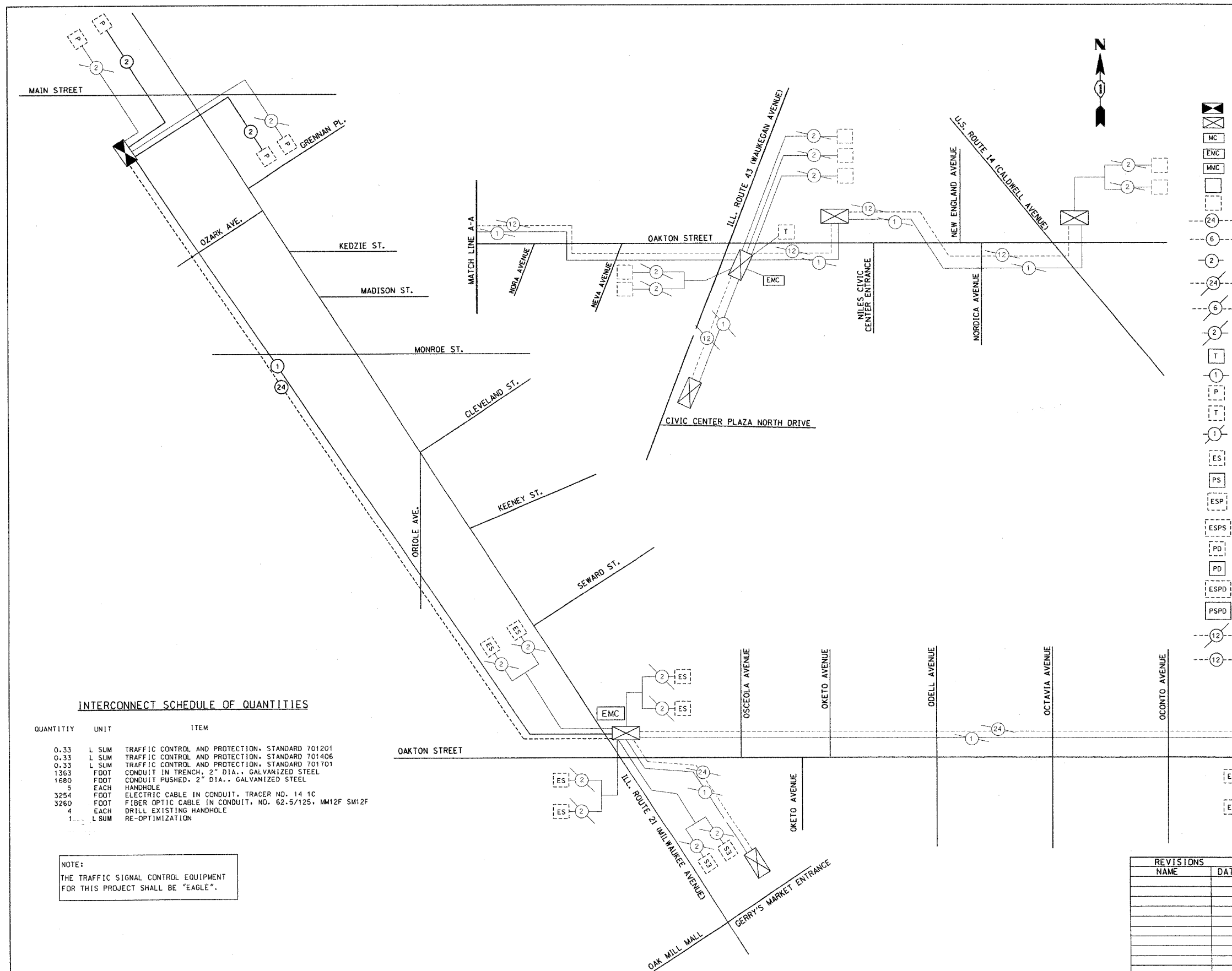
SCALE: 1"=50'
 DATE 09-20-04

DRAWN BY N.B.
 DESIGNED BY N.B.
 CHECKED BY D.B./N.M.

INFRASTRUCTURE ENGINEERING, INC.
 29 S. LASALLE ST., SUITE 345
 CHICAGO, IL 60603-1557
 PHONE: 312.425.9360
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
374	2004-020 TS	COOK	13	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NUMBER: 62739				



INTERCONNECT SCHEMATIC LEGEND

- INTERSECTION CONTROLLER
- EXISTING INTERSECTION CONTROLLER
- MASTER CONTROLLER
- EXISTING MASTER CONTROLLER
- MASTER MASTER CONTROLLER
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED FIBER OPTIC CABLE- NO. 62.5/125 MM12F SM12F
- EXISTING FIBER OPTIC CABLE-NO. 18 3 PAIR TWISTED, SHIELDED
- LOOP DETECTOR CABLE-2/C TWISTED, SHIELDED
- EXISTING FIBER OPTIC CABLE-NO. 62.5/125 MM12F SM12F
- EXISTING INTERCONNECT CABLE-NO. 18 3 PAIR TWISTED, SHIELDED
- EXISTING LOOP DETECTOR CABLE-2/C TWISTED, SHIELDED
- TELEPHONE CONNECTION
- PROPOSED TRACER CABLE NO. 14 1C
- EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING TELEPHONE CONNECTION
- EXISTING TRACER CABLE 1/C (AS SPECIFIED)
- EXISTING SAMPLING (SYSTEM) DETECTORS
- PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.
- EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS.
- PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS.
- EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS.
- PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS.
- EXISTING INTERCONNECT CABLE-NO. 62.5/125 12F FIBER OPTIC CABLE
- PROPOSED INTERCONNECT CABLE-NO. 62.5/125 12F FIBER OPTIC CABLE

INTERCONNECT SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.33	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1363	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
1680	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
5	EACH	HANDHOLE
3254	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
3260	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
4	EACH	DRILL EXISTING HANDHOLE
1	L SUM	RE-OPTIMIZATION

NOTE:
 THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERCONNECT SCHEMATIC
ILL. 21 (MILWAUKEE AVENUE)
FROM MAIN STREET TO OAKTON STREET
 SCALE: 1"=20'
 DATE 09-20-04
 DRAWN BY N.B.
 DESIGNED BY N.B.
 CHECKED BY D.B./M.S.