

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DUPAGE	19	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	60117	

D-91-861-09

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED

F.A.U. 1453 / 22nd STREET
DISTRICT 1
TRAFFIC SIGNAL MODERNIZATION WITH INTERCONNECT

22nd STREET @ McDONALD DRIVE
22nd STREET @ JORIE BOULEVARD / ENTERPRISE DRIVE

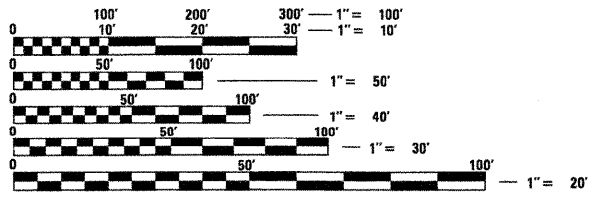
DuPAGE COUNTY
SECTION 2009-080 TS
C-91-861-09



LOCATION OF SECTION INDICATED THUS: - [shaded box] -

IDOT STANDARDS:

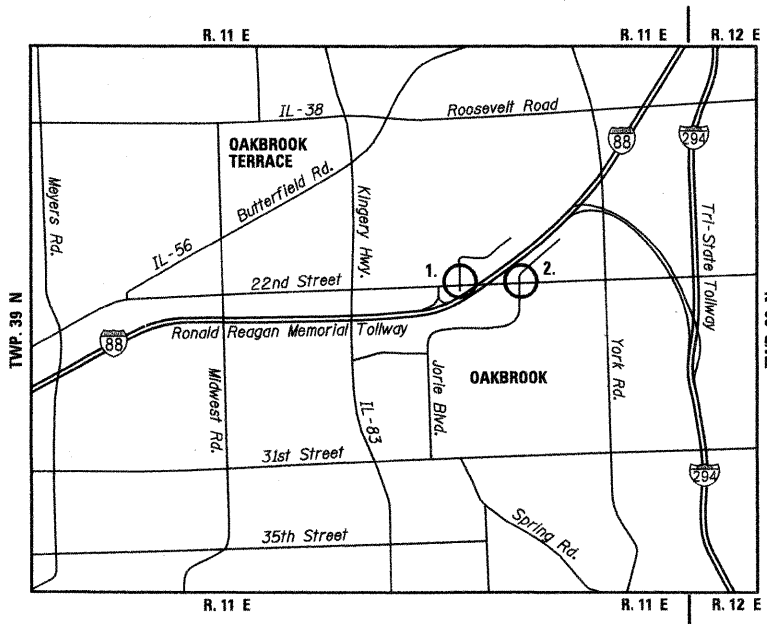
- 353001-04 PCC BASE COURSE WITH HMA BINDER AND SURFACE COURSES
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FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

CONTRACT NO. 60117



- LEGEND:**
1. 22nd Street @ McDonald Drive
 2. 22nd Street @ Jorie Boulevard /Enterprise Drive



Bruce P. Talsot DATE: 9-21-09
EXPIRES: 11-30-2009

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct. 16 2009
Deanne M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 4, 2009
Charles J. Ingerson
ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

BUREAU OF TRAFFIC, DISTRICT ONE: STEPHEN TRAVIA / DARYLE DREW (847) 705-4420

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007 (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"); THE LATEST "SUPPLEMENTAL SPECIFICATIONS" AND "RECURRING SPECIAL PROVISIONS"; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (1-800-892-0123) AT LEAST 10 DAYS PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ALL UTILITIES MUST BE NOTIFIED AND STAKED PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES.
5. THE CONTRACTOR IS REQUIRED TO ATTEND AN ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) PRECONSTRUCTION MEETING AND SHALL INFORM THE IDOT TRAFFIC ENGINEER BEFORE WORK COMMENCES.
6. THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE IN PROVIDING SAFE AND HEALTHFUL CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE DAMAGE INCURRED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
9. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS AND 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 THE STANDARD SPECIFICATIONS 252 AND 250, RESPECTIVELY.
10. CONTROLLER CABINETS SHALL BE PLACED SO THAT THE TRAFFIC MOVEMENTS AT THE INTERSECTION ARE VISIBLE FROM THE CONTROLLER.
11. ANY CONTROLLER CABINET WHETHER NEW OR EXISTING TO RECEIVE UPS, SHALL HAVE A "L" SHAPED 4 FOOT CONCRETE MAINTENANCE PAD INSTALLED. SEE PLANS FOR DETAIL. THE COST OF INSTALLATION OF CONCRETE PAD IS INCIDENTAL TO NEW CONTROLLER AND/OR UPS INSTALLATIONS.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS e Ndes
HMA SIDEWALK	
HMA SURFACE COURSE, MIX "C", N50 (IL 9.5 mm)	4% e 50 Gyr.
ROADWAY PATCHES	
HMA SURFACE COURSE, MIX "D", N70 (IL 9.5 mm)	4% e 70 Gyr.

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

FILE NAME =	USER NAME = RDS	DESIGNED - KK	REVISED -
\\MICROST\352082\02-GENNOTES		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Rev.
GENERAL NOTES

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DuPAGE	19	2
CONTRACT NO. 60I17				

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

PAY CODE NUMBER	SUMMARY OF TRAFFIC SIGNAL QUANTITIES ITEM	UNIT	URBAN TOTAL QUANTITY /	CONSTRUCTION TYPE CODE Y-031-1F		
				22nd ST@ 90% STATE 10% OAKBROOK JORIE BLVD.	22nd ST@ 90% STATE 10% OAKBROOK MCDONALD DR	INTERCONNECT 100% STATE
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4		2	
67100100	MOBILIZATION	L SUM	1.00	0.50	0.50	
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1.00	0.50	0.50	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.00	0.50	0.50	
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.00	0.50	0.50	
20200100	EARTH EXCAVATION	CU YD	120	120		
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	101	101		
35300500	PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	159	159		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	12	12		
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	23	23		
42400800	DETECTABLE WARNINGS	SQ FT	78	24	54	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	373	373		
44000600	SIDEWALK REMOVAL	SQ FT	878	824	54	
44002805	ISLAND REMOVAL	SQ FT	1251	1251		
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	10	10		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	64	64		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2115	2115		
72000100	SIGN PANEL - TYPE 1	SQ FT	64	44	20	
72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	21		21	
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	63		63	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	156	156		
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	144	144		
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	344	344		
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1134	1134		
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	233	233		
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	834	268	566	
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	162	155	7	
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	51		51	
81000900	CONDUIT IN TRENCH, 3 1/2" DIA., GALVANIZED STEEL	FOOT	40	16	24	
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	18	10	8	
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	149	84	65	
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	23	23		
81018800	CONDUIT PUSHED, 3 1/2" DIA., GALVANIZED STEEL	FOOT	209	138	71	
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	501	501		
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1105	449	656	
86400100	TRANSCIVER - FIBER OPTIC	EACH	2	1	1	
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	1	1	
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1748	849	899	
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	7233	3980	3253	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	6478	2970	3508	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3676	2663	1013	
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	241	197	44	
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	7679	5718	1961	
81400100	HANDHOLE	EACH	6	1	5	
81400200	HEAVY DUTY HANDHOLE	EACH	3	3		
81400300	DOUBLE HANDHOLE	EACH	4	3	1	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1		1	
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1	1		
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1	1		
87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1	1		
87700290	STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1	1		
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1		1	
87700340	STEEL MAST ARM ASSEMBLY AND POLE, 58 FT.	EACH	1		1	
X8770210	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 12 FT. AND 42 FT.	EACH	1		1	
X8772030	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 18 FT. AND 34 FT.	EACH	1		1	
X8772480	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 30 FT. AND 70 FT.	EACH	1	1		
X8772630	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 40 FT. AND 58 FT.	EACH	1	1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	8		8	
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8	4	4	
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15	15		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	90	45	45	
87800420	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	71	50	21	
87900200	DRILL EXISTING HANDHOLE	EACH	22	17	5	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	24	10	14	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	5	5		
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	8	6	2	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4	2	2	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3	1	2	
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	21	21		
88500100	INDUCTIVE LOOP DETECTOR	EACH	27	19	8	
88600100	DETECTOR LOOP, TYPE 1	FOOT	2426	1670	756	
88700200	LIGHT DETECTOR	EACH	9	5	4	
88700300	LIGHT DETECTOR AMPLIFIER	EACH	2	1	1	
88800100	PEDESTRIAN PUSH-BUTTON	EACH	7	3	4	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	16000	6500	9500	
89502380	REMOVE EXISTING HANDHOLE	EACH	11	3	8	
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	6	1	5	
Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	159	159		
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	104.8	52.4	52.4	
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2595			2595
X0325705	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM, LEVEL 2	EACH	2	1	1	
X8050010	SERVICE INSTALLATION-GROUND MOUNTED	EACH	2	1	1	
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62 5/125, MM12F SM12F	FOOT	2918			2918
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1223	748	475	
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	4579	2708	1871	
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	2	1	1	
X8900030	REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT	EACH	2	1	1	
XX003665	REBUILD EXISTING HANDHOLE TO DOUBLE HANDHOLE	EACH	1		1	

SPECIALTY ITEMS
 * 100% COST TO THE VILLAGE OF OAKBROOK - Y031-1D

PREPARED BY:
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FILE NAME = MICROST\352082\ 03-SUMMARY	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 09-21-09	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

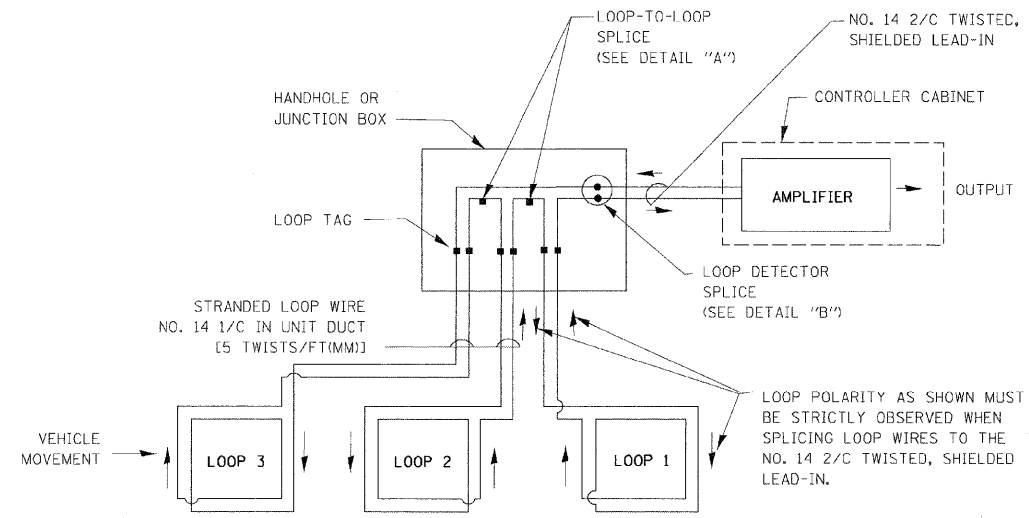
SCALE: N.T.S.	SHEET NO.	OF	SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DUPAGE	19	3
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	CONTRACT NO. 60117

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

LOOP DETECTOR NOTES

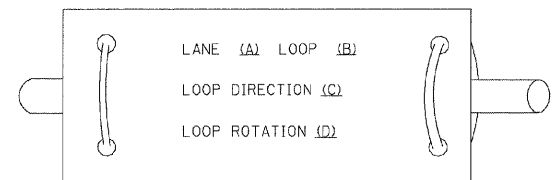
1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



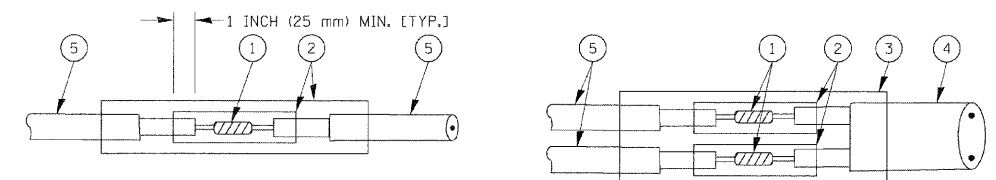
DETECTOR LOOP WIRING SCHEMATIC

- 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



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



DETAIL "A" LOOP-TO-LOOP SPLICE

DETAIL "B" LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

SCALE: VERT. NONE
 HORIZ. 1"=20'
 DATE 10/18/2002

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

10/18/2002
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 VHTS05

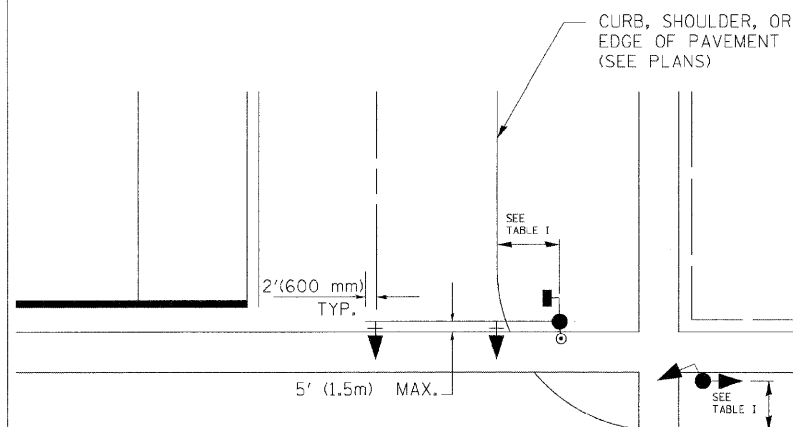
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PLOT SCALE = 1"=20'	DESIGNED - RDS	CHECKED - BPT	REVISED -			SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	CONTRACT NO. 60117
PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -	REVISED -							

REVISION DATE: 01/09/02

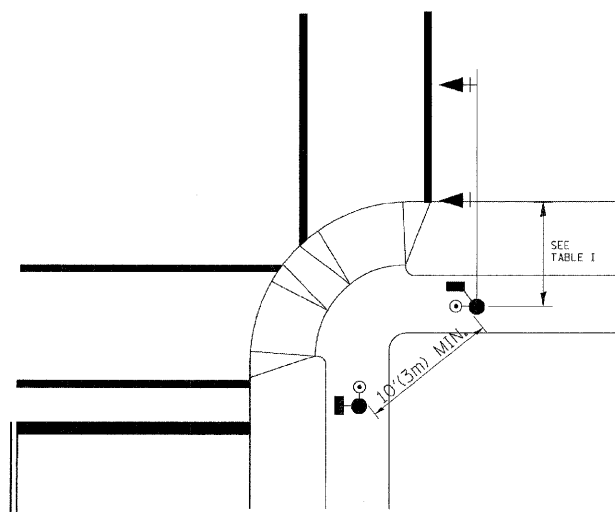
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

- 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

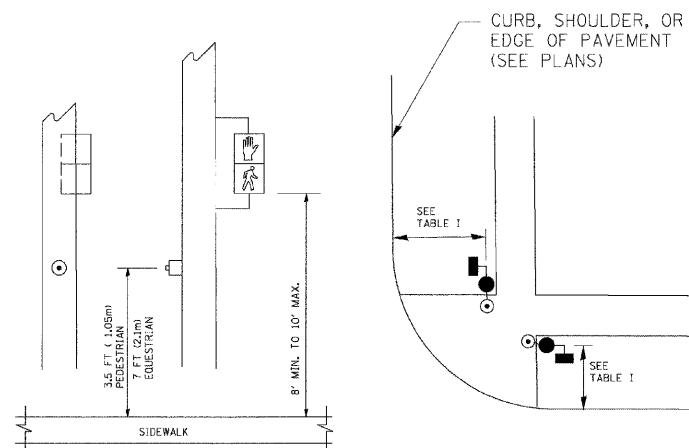


TABLE I

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
BUREAU OF TRAFFIC	1/01/02

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ. DATE 10/18/2002
 DRAWN BY: RWP
 DESIGNED BY: DAZ
 CHECKED BY: DAZ
 SHEET 2 OF 4

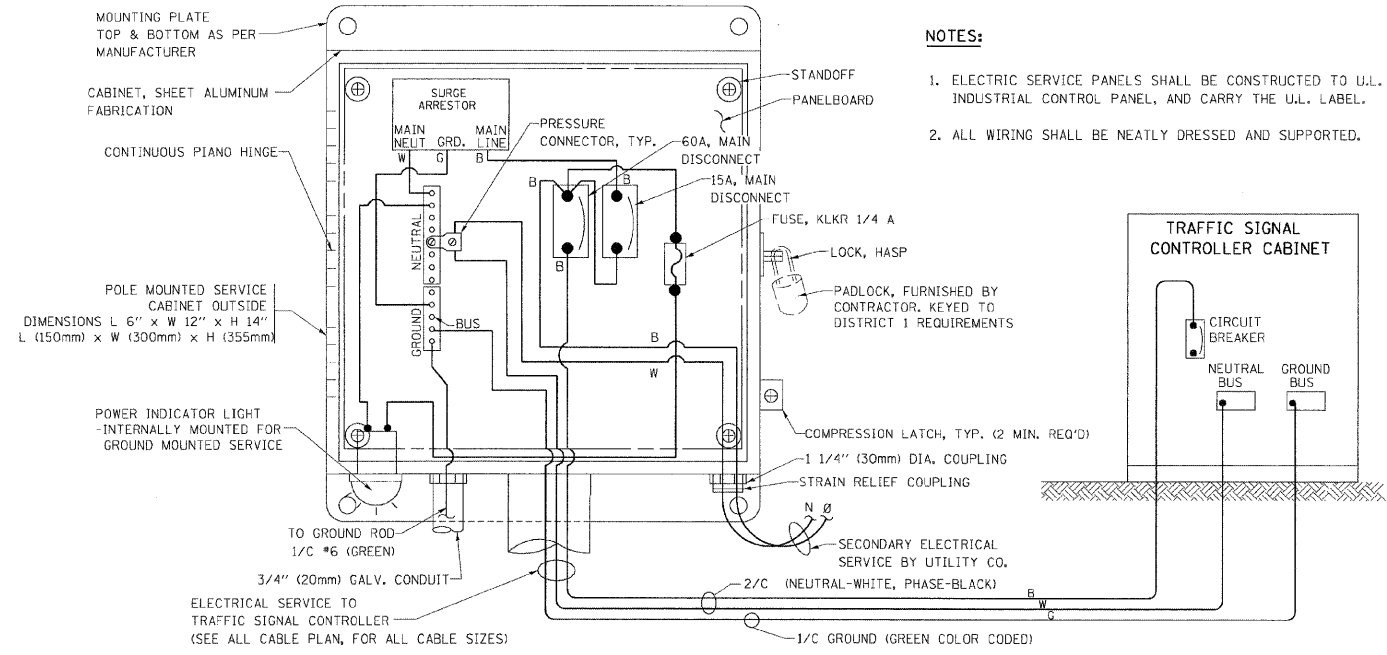
TS05

REVISION DATE: 01/01/02

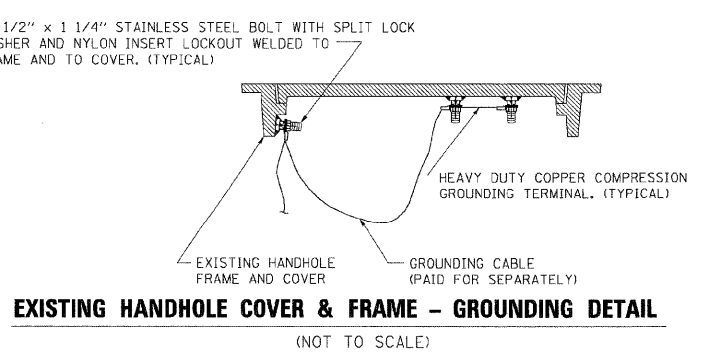
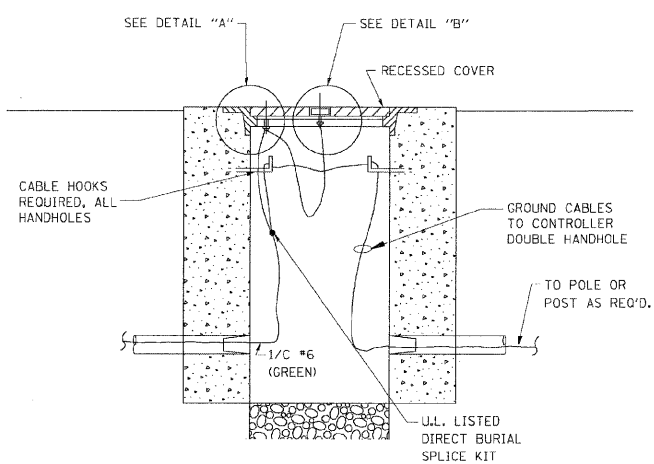
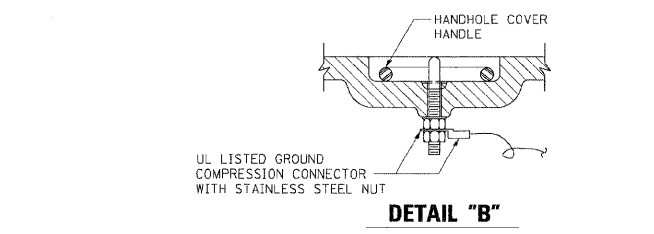
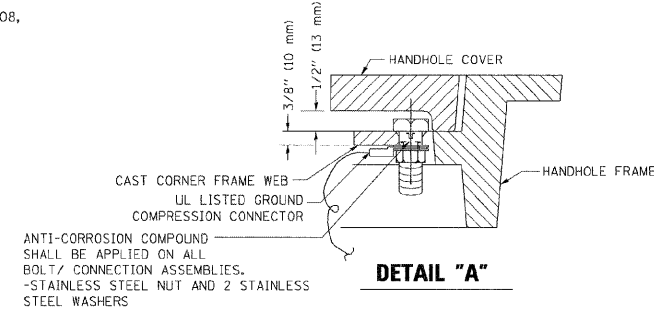
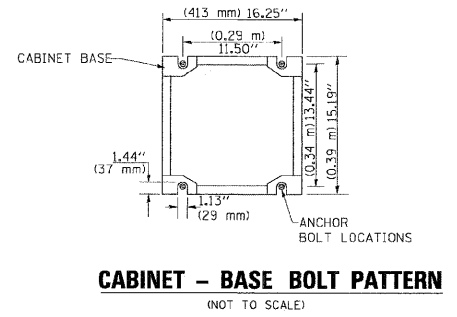
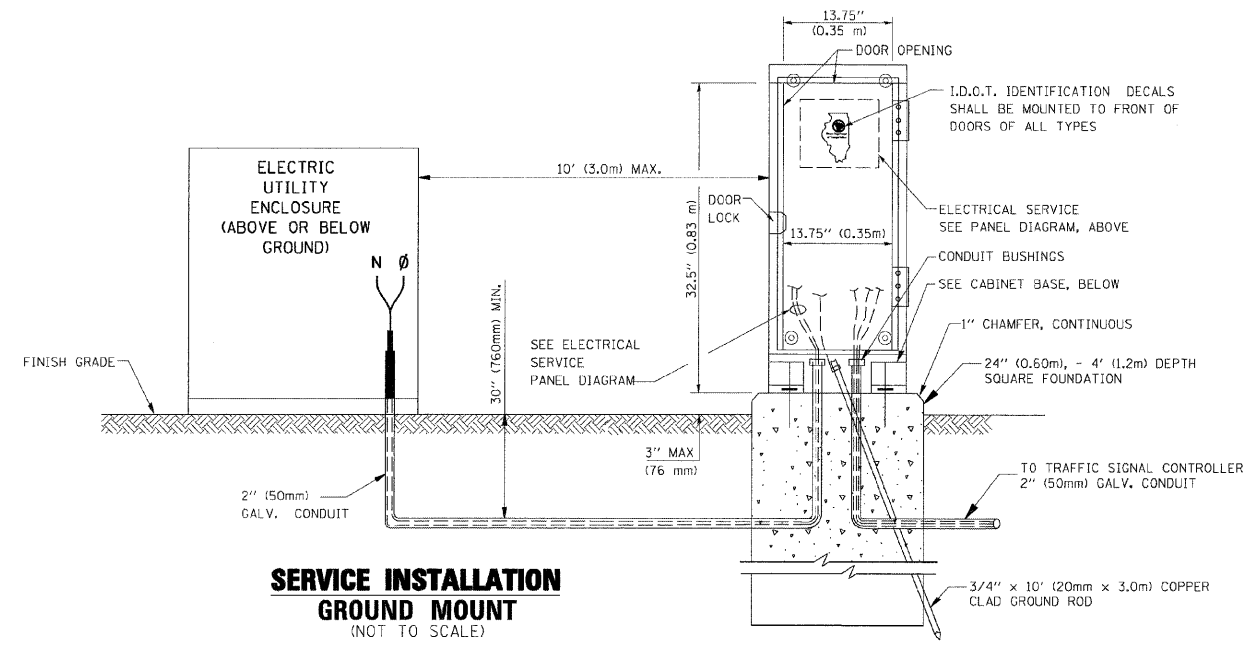
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PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -	SCALE: N.T.S.			SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60117
PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -								

10/18/2002
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



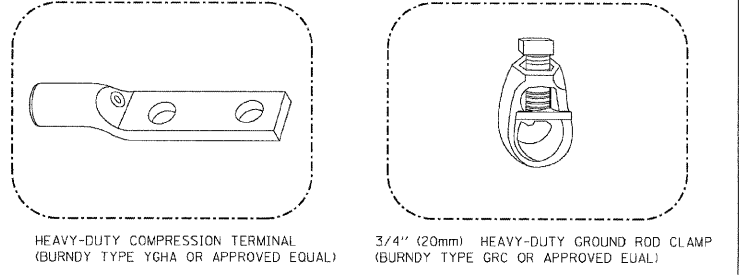
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



NOTES:

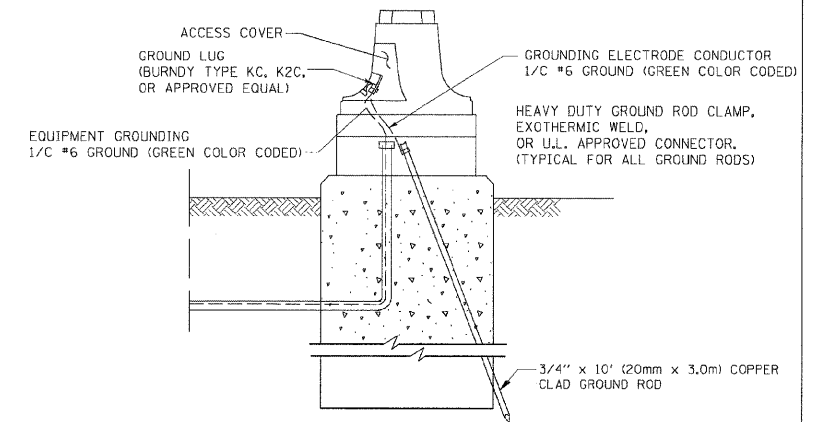
GROUNDING SYSTEM

- 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	
NAME	DATE
CADD	5/30/00
CADD	3/15/01
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ. DATE 10/18/2002

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

PREPARED BY:
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FILE NAME = \MICROST\352082\06-TS05C
 USER NAME = RDS
 PLOT SCALE = 1"=20'
 PLOT DATE = 09-21-09

DESIGNED - KK	REVISED -
DRAWN - RDS	REVISED -
CHECKED - BPT	REVISED -
DATE - 09-21-09	REVISED -

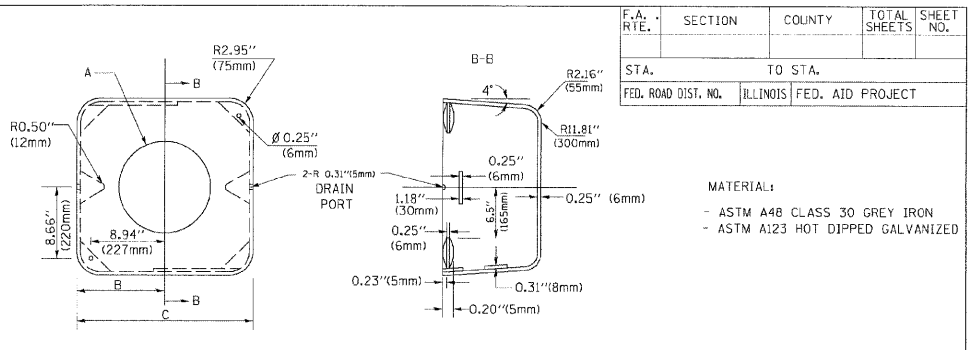
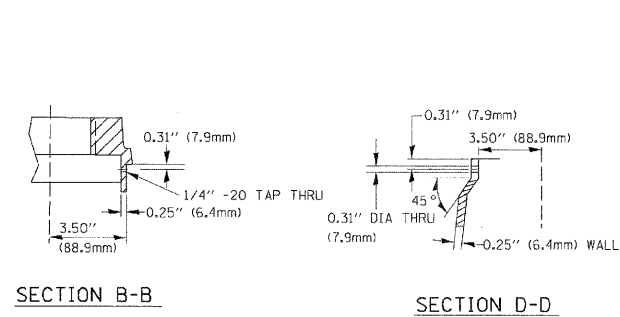
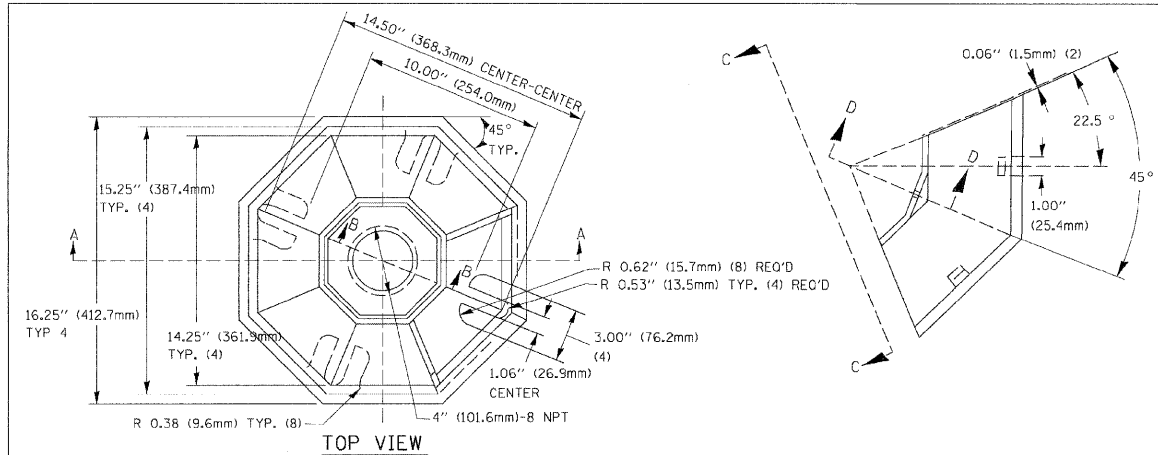
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

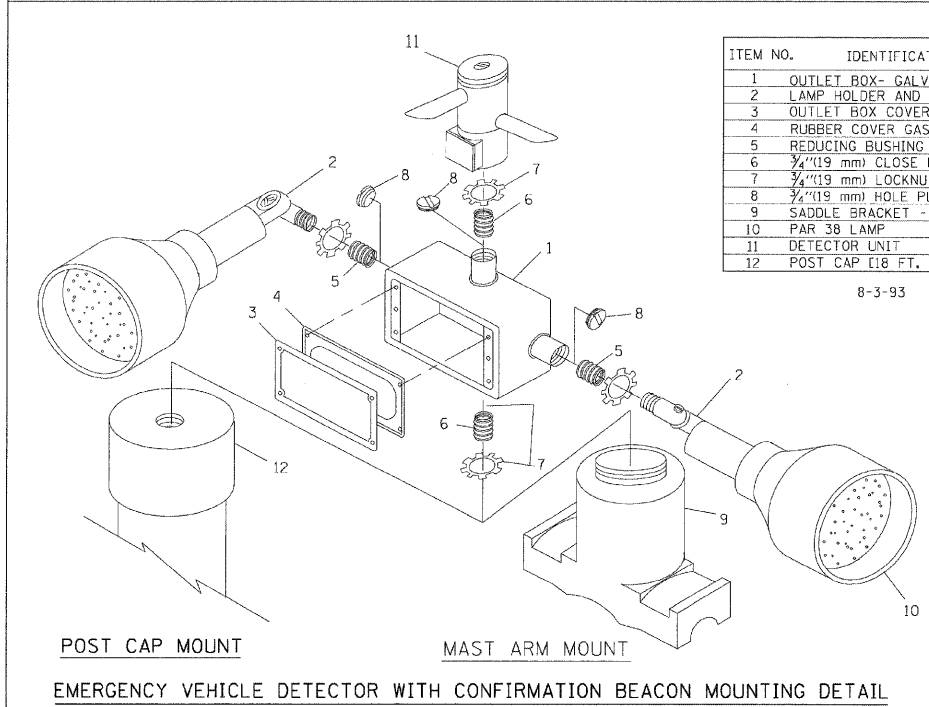
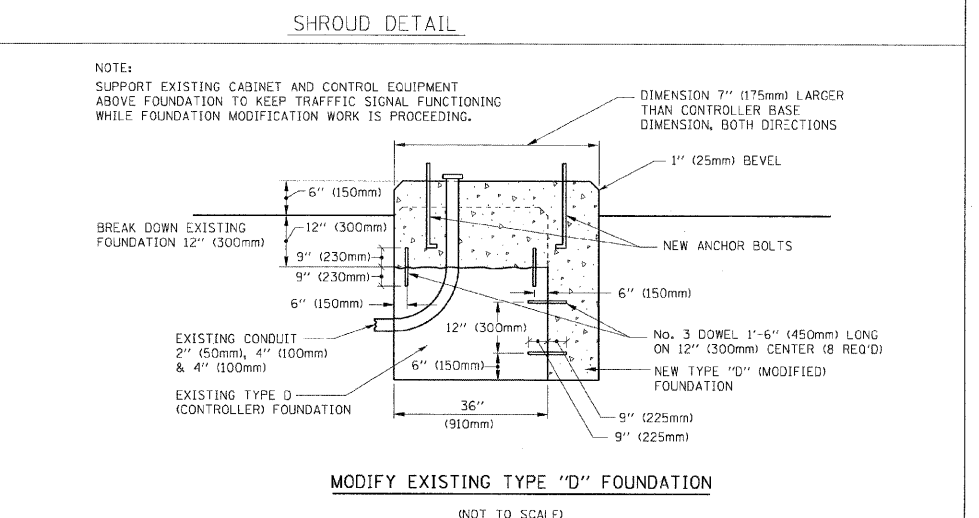
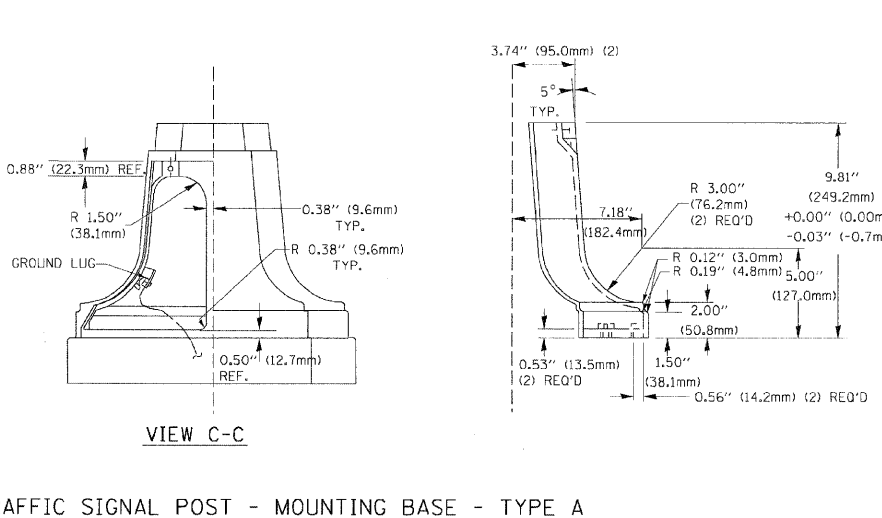
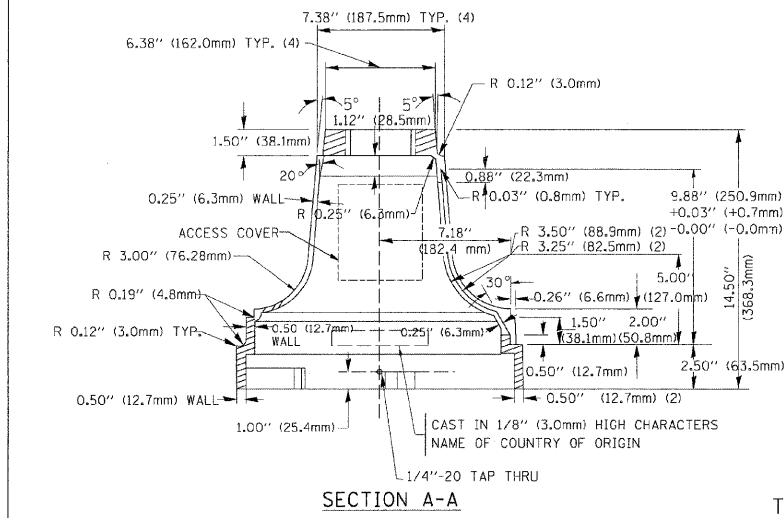
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 1453	SECTION 2009-080 TS	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 6
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				CONTRACT NO. 60117

TS05
 REVISION DATE: 01/01/02

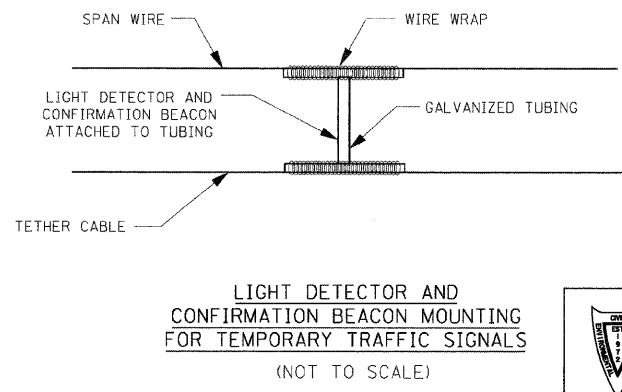
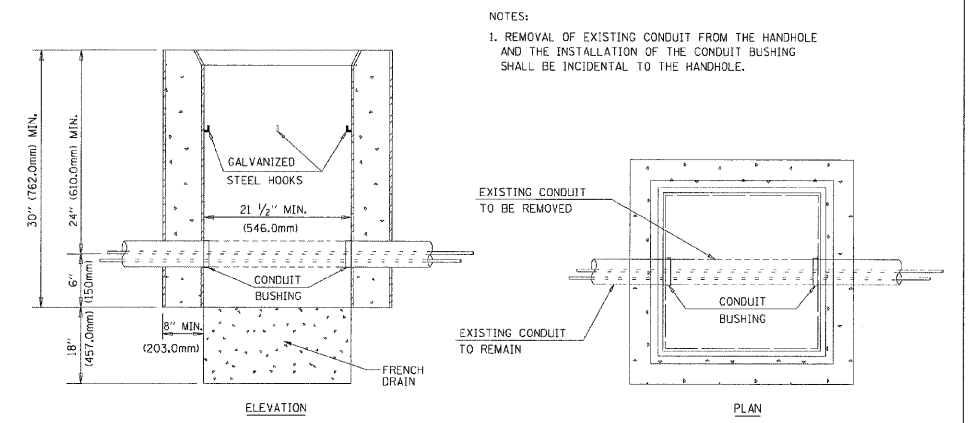


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\" (300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\" (300mm)	26kg



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.]

- 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.



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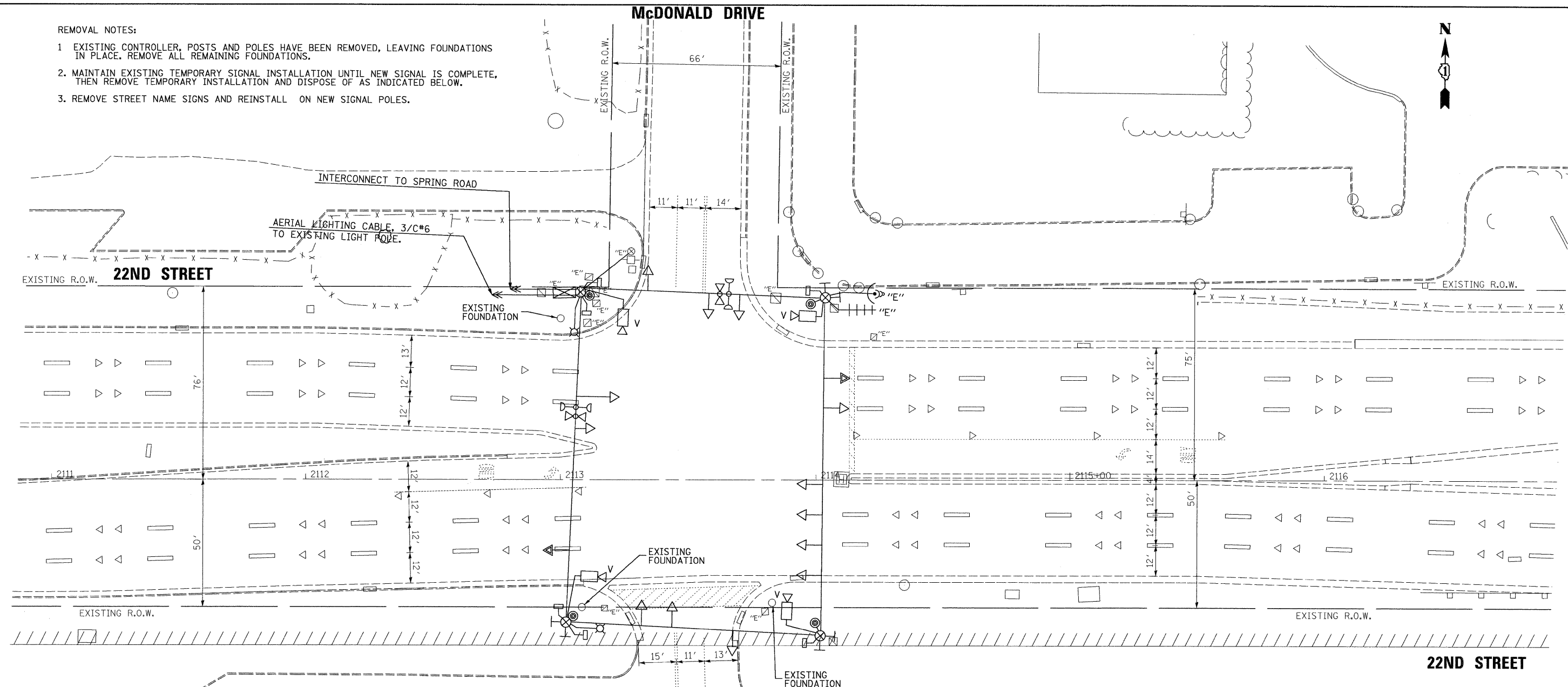
REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS
SCALE: VERT. NONE
HORIZ. DATE 10/18/2002
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DA2
SHEET 4 OF 4

10/18/2002
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VHTSD5

REMOVAL NOTES:

1. EXISTING CONTROLLER, POSTS AND POLES HAVE BEEN REMOVED, LEAVING FOUNDATIONS IN PLACE. REMOVE ALL REMAINING FOUNDATIONS.
2. MAINTAIN EXISTING TEMPORARY SIGNAL INSTALLATION UNTIL NEW SIGNAL IS COMPLETE, THEN REMOVE TEMPORARY INSTALLATION AND DISPOSE OF AS INDICATED BELOW.
3. REMOVE STREET NAME SIGNS AND REINSTALL ON NEW SIGNAL POLES.



- EXISTING EQUIPMENT TO BE REMOVED LEGEND**
- 'E'-□ EXISTING SERVICE INSTALLATION TO BE REMOVED
 - EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED (SEE NOTE 1)
 - ⊃ 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 HEAVY DUTY HANDHOLE TO BE REMOVED
 - ⊃ EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
 - ⊃ EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
 - ⊃ EXISTING PRIORITY VEHICLE DETECTOR TO BE REMOVED
 - ⊃ EXISTING CONFIRMATION BEACON TO BE REMOVED
 - EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
 - ⊃ EXISTING TRAFFIC SIGNAL HEAD WITH BACKPLATE TO BE REMOVED
 - ⊃ EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
 - 'E'-⊃ EXISTING RADIO ANTENNA TO BE REMOVED
 - 'E'-⊃ EXISTING RADIO ANTENNA TO BE REMOVED
 - ⊃ EXISTING VIDEO VEHICLE DETECTOR TO BE REMOVED
 - ⊃ EXISTING TEMPORARY WOOD POLE TO BE REMOVED

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

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO THE VILLAGE OF OAKBROOK.

- 1 EACH LIGHT DETECTOR AMPLIFIER
- 2 EACH LIGHT DETECTOR

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY 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.

- 2 EACH RADIO ANTENNA (TRANSMITTER/RECEIVER)
- 4 EACH VIDEO VEHICLE DETECTOR
- 2 EACH WIRELESS TRANSCEIVER

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.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 7 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 4 EACH PEDESTRIAN PUSH BUTTON
- 1 EACH SERVICE INSTALLATION

FILE NAME = J:\MICROST\22ND @ McDONALDS.REM	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 09-21-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING TRAFFIC SIGNAL REMOVAL PLAN
22nd STREET AT McDonald DRIVE /AT&T ENTRANCE**

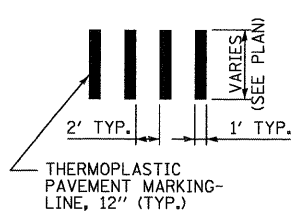
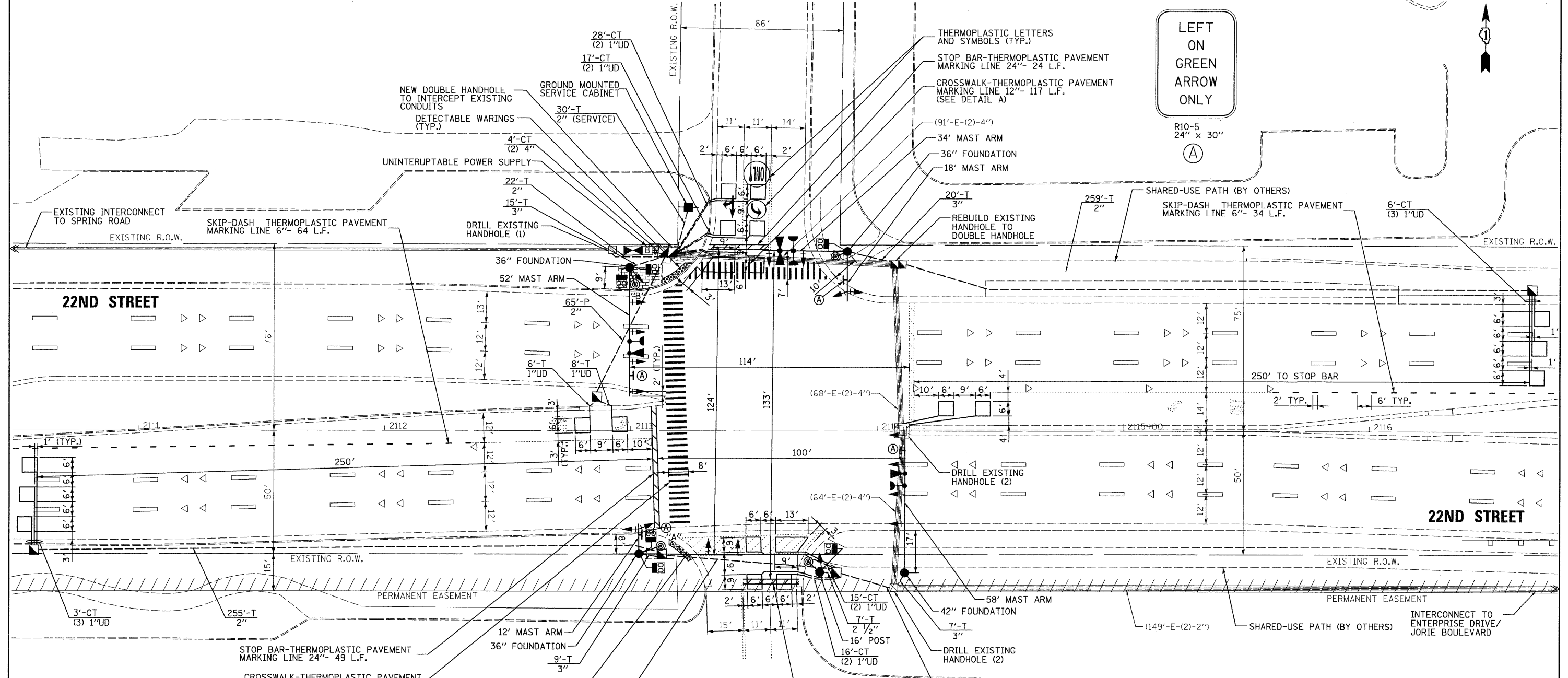
PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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F.A.U. RTE. 1453	SECTION 2009-080 TS	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 8
SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 60117
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

McDONALD DRIVE

LEFT
ON
GREEN
ARROW
ONLY

R10-5
24" x 30"



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

TRAFFIC SIGNAL LEGEND	
PROPOSED	EXISTING
CONTROLLER	CONFIRMATION BEACON
SERVICE INSTALLATION	SIGNAL HEAD OPTICALLY PROGRAMMED
SIGNAL HEAD	CONDUIT SPLICE
SIGNAL HEAD WITH BACKPLATE	WOOD POLE
SIGNAL HEAD, PEDESTRIAN	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
SIGNAL POST	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
STEEL MAST ARM ASSEMBLY AND POLE	RAILROAD CONTROL CABINET
MAST ARM ASSEMBLY AND POLE, ALUMINUM	TELEPHONE CONNECTION
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	ILLUMINATED SIGN "NO LEFT TURN"
UNIT DUCT	ILLUMINATED SIGN "NO RIGHT TURN"
COMMON TRENCH	UNINTERRUPTIBLE POWER SUPPLY
HANDHOLE	
HEAVY DUTY HANDHOLE	
DOUBLE HANDHOLE	
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	
PEDESTRIAN PUSH-BUTTON DETECTOR	
DETECTOR LOOP, TYPE I	
CAST IRON JUNCTION BOX	
EMERGENCY VEHICLE SYSTEM DETECTOR	
FLASHER CONTROLLER	

FILE NAME =	USER NAME = RDS	DESIGNED - KK	REVISED -
MICROST\352082\ 22ND @ McDONALDS SIG		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

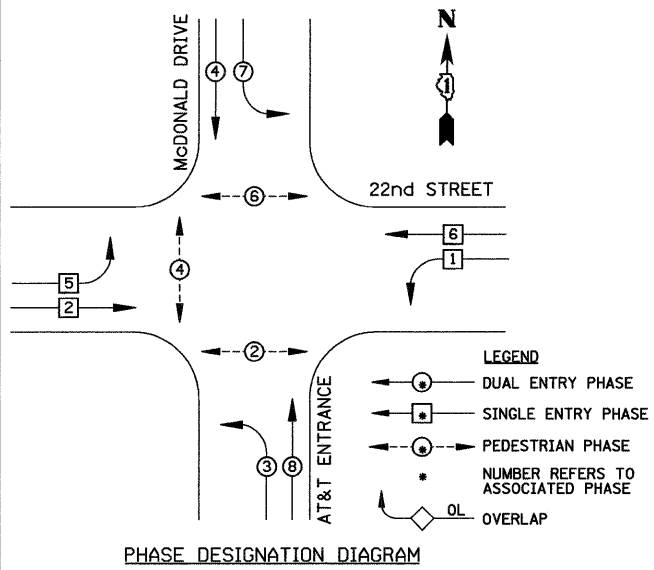
**TRAFFIC SIGNAL INSTALLATION PLAN
22nd STREET AT McDONALD DRIVE /AT&T ENTRANCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

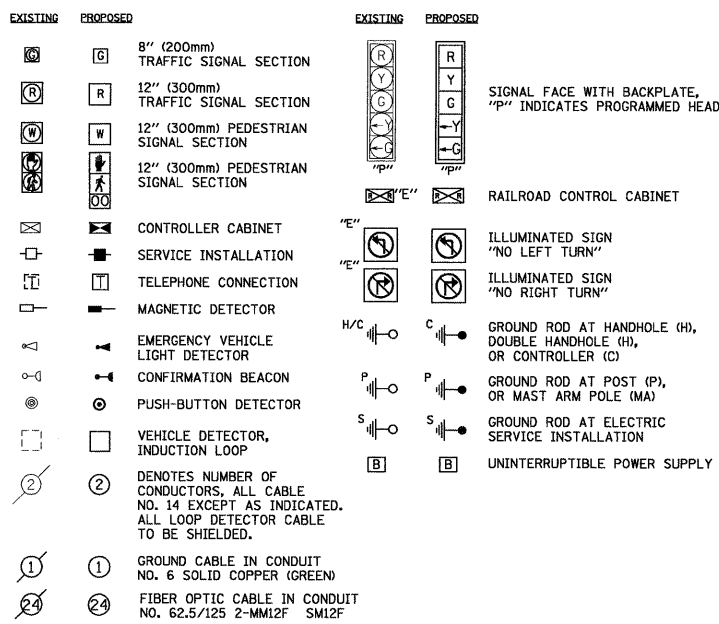
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DuPAGE	19	9
CONTRACT NO. 60117				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
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CONTROLLER SEQUENCE



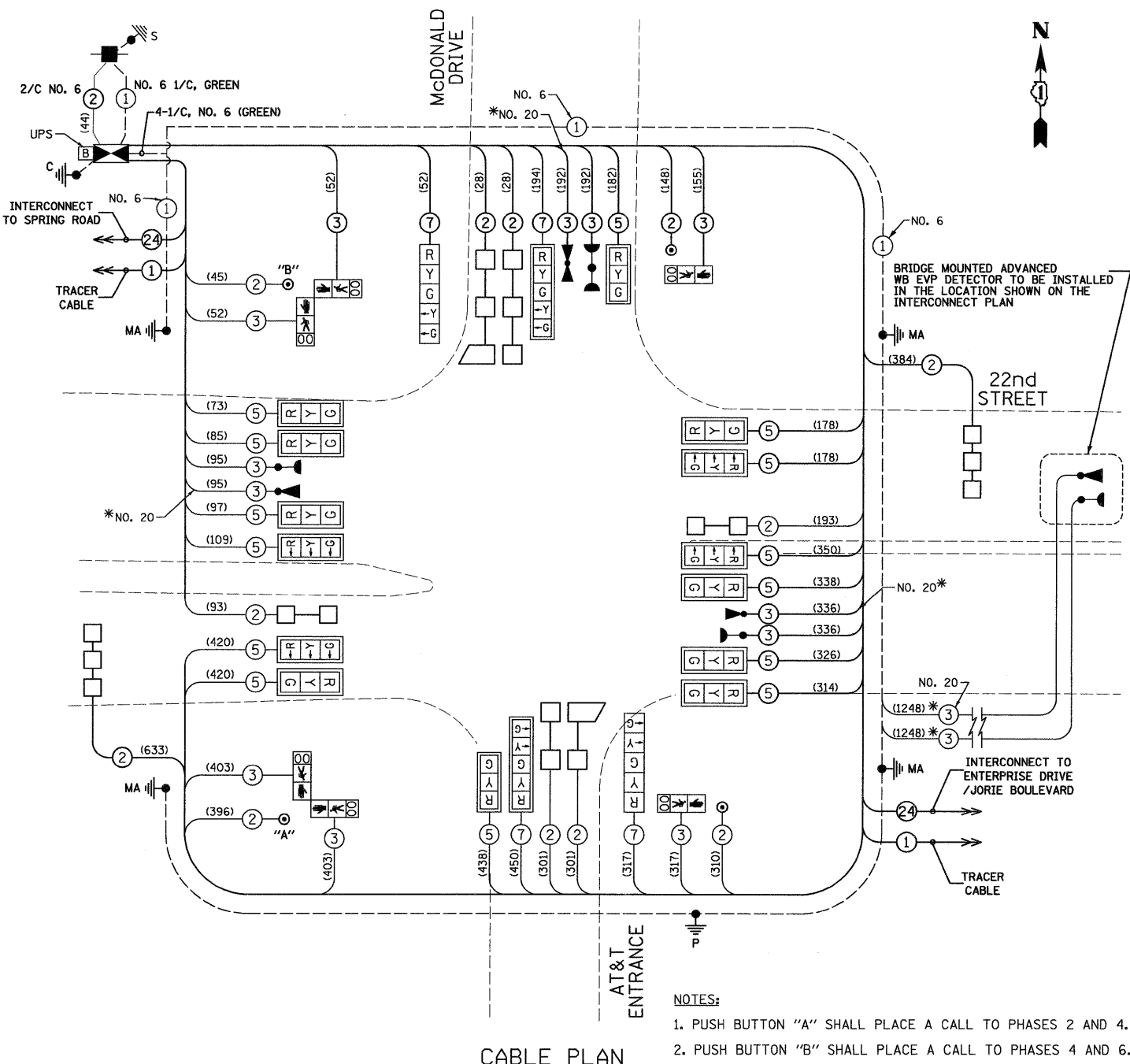
CABLE PLAN LEGEND



SCHEDULE OF QUANTITIES

DETECTABLE WARNINGS	50 FT	54
SIDEWALK REMOVAL	50 FT	54
SIGN PANEL, TYPE 1	50 FT	20
RELOCATE SIGN PANEL, TYPE 1	50 FT	21
THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	50 FT	63
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	566
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	7
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	51
CONDUIT IN TRENCH, 3 1/2" DIA., GALVANIZED STEEL	FOOT	24
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	8
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	65
CONDUIT PUSHED, 3 1/2" DIA., GALVANIZED STEEL	FOOT	71
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	656
TRANSCEIVER - FIBER OPTIC	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	899
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3253
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3508
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1013
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	44
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1961
HANDHOLE	EACH	5
DOUBLE HANDHOLE	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	14
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 58 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 12 FT. AND 42 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 18 FT. AND 34 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21
DRILL EXISTING HANDHOLE	FOOT	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	14
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE 1	FOOT	756
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	4
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	9500
REMOVE EXISTING HANDHOLE	EACH	8
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM 1/2 LEVEL II (per Intersection)	EACH	1
SERVICE INSTALLATION, GROUND MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	475
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	1871
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE TO DOUBLE HANDHOLE	EACH	1

* 100% COST TO THE VILLAGE OF OAKBROOK



CABLE PLAN

NOTE: (XXX) DENOTES CABLE LENGTH

- NOTES:
- PUSH BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
 - PUSH BUTTON "B" SHALL PLACE A CALL TO PHASES 4 AND 6.

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	6	90	25	1.00	150
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAMBURG, IL 60196 TOTAL = 592.6

ENERGY SUPPLY CONTACT: COMPANY: COMED

FILE NAME = MICROSTV352082V_22ND @ McDONALDS CAB USER NAME = RDS

DESIGNED - KK REVISIONS -

DRAWN - RDS REVISIONS -

CHECKED - BPT REVISIONS -

DATE - 09-21-09 REVISIONS -

PLOT SCALE = 1"=20'

PLOT DATE = 09-21-09

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.0 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20.0 (6.0)
E - M. ARM POLE		SIGNAL POST	0 (0.0)	BRACKET MOUNTED	13 (4.0)
		24" (600mm)	10 (3.0)	PED. PUSH-BUTTON	6 (2.0)
		30" (750mm)	15 (4.6)	ELECTRIC SERVICE	13.5 (4.1)
				SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	13 (4.0)

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION 22nd STREET AT McDONALD DRIVE /AT&T ENTRANCE

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

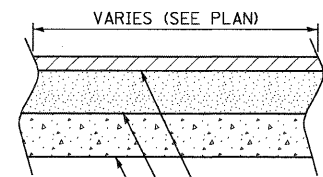
PREPARED BY: CEMCON, Ltd. Consulting Engineers, Land Surveyors & Planners 2280 White Oak Circle, Suite 100 Aurora, Illinois 60504-9675 Ph: 630.862.2100 Fax: 630.862.2199 E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.U. RTE. 1453	SECTION 2009-080 TS	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 10
CONTRACT NO. 60117				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

ENTERPRISE DRIVE

DETAIL "A"

PROPOSED PAVEMENT SECTION

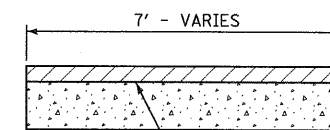


POLYMERIZED HOT MIX ASPHALT, SURFACE COURSE, MIX "F", N90, 2 1/2"
 PCC BASE COURSE, 10"
 AGGREGATE BASE COURSE, 12"

NOTES:

- PAVEMENT SHALL BE DOWELED AND JOINTED PER STANDARD SPECIFICATIONS.
- ANY VOIDS FOUND AT THE SE CORNER ISLAND ABOVE EXISTING SANITARY SEWER SHALL BE FILLED WITH CONTROLLED LOW STRENGTH MATERIAL.

DETAIL "B"
BITUMINOUS SIDEWALK



HOT MIX ASPHALT, SURFACE COURSE, MIX "C", N50, 2"
 AGGREGATE BASE COURSE, 6"

REMOVE DEPRESSED CURB AND GUTTER, REPLACE WITH TYPE B-6.24 CURB AND GUTTER 10 L.F.

REMOVE EXISTING ISLAND (179 S.F.) AND CURB AND GUTTER (60 L.F.) REPLACE WITH PAVEMENT (215 S.F.) AS SHOWN IN DETAIL "A"

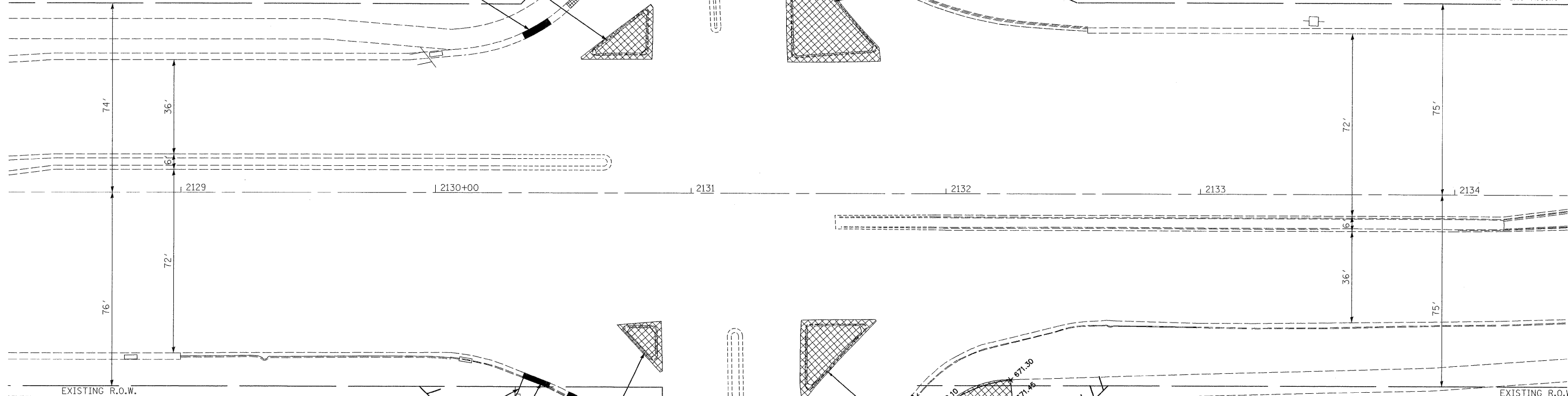
REMOVE CURB AND GUTTER, REPLACE WITH DEPRESSED CURB 12 L.F. (TYP.)

REMOVE EXISTING ISLAND (704 S.F.) AND CURB AND GUTTER (119 L.F.) REPLACE WITH PAVEMENT (677 S.F.) AS SHOWN IN DETAIL "A"

22ND STREET

EXISTING R.O.W.

EXISTING R.O.W.



PROPOSED BITUMINOUS SIDEWALK 354 S.F. SHALL BE CONSTRUCTED AS SHOWN IN DETAIL "B"

EXISTING SIDEWALK TO BE REMOVED - 264 S.F.

REMOVE CURB AND GUTTER, REPLACE WITH DEPRESSED CURB 22 L.F. (TYP.)

REMOVE EXISTING ISLAND (75 S.F.) AND CURB AND GUTTER (45 L.F.) REPLACE WITH PAVEMENT (181 S.F.) AS SHOWN IN DETAIL "A"

EXISTING BITUMINOUS SIDEWALK TO BE REMOVED - 560 S.F.

PROPOSED BITUMINOUS SIDEWALK - 550 S.F. SHALL BE CONSTRUCTED AS SHOWN IN DETAIL "B"

DETECTABLE WARNINGS

REMOVE CURB AND GUTTER, REPLACE WITH DEPRESSED CURB 12 L.F.

REMOVE EXISTING ISLAND (293 S.F.) AND CURB AND GUTTER (85 L.F.) REPLACE WITH PAVEMENT (355 S.F.) AS SHOWN IN DETAIL "A"

REMOVE DEPRESSED CURB AND GUTTER, REPLACE WITH TYPE B-6.24 CURB AND GUTTER 8 L.F.

NOTE: EXISTING ISLAND SURFACE IS APPROXIMATELY 4" PCC.

JORIE BOULEVARD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ISLAND REMOVAL AND ROADWAY REPLACEMENT
22nd STREET AT ENTERPRISE DRIVE /JORIE BOULEVARD

PREPARED BY:
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FILE NAME = MICROST\352082\ ENTERPR JORIE REM PAV

USER NAME = RDS

DESIGNED - KK

REVISED -

PLOT SCALE = 1"=20'

DRAWN - RDS

REVISED -

PLOT DATE = 09-21-09

CHECKED - BPT

REVISED -

DATE - 09-21-09

REVISED -

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DUPAGE	19	11

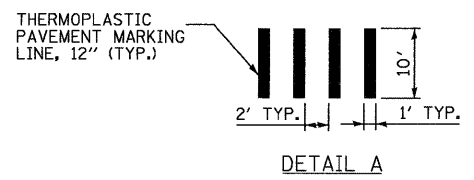
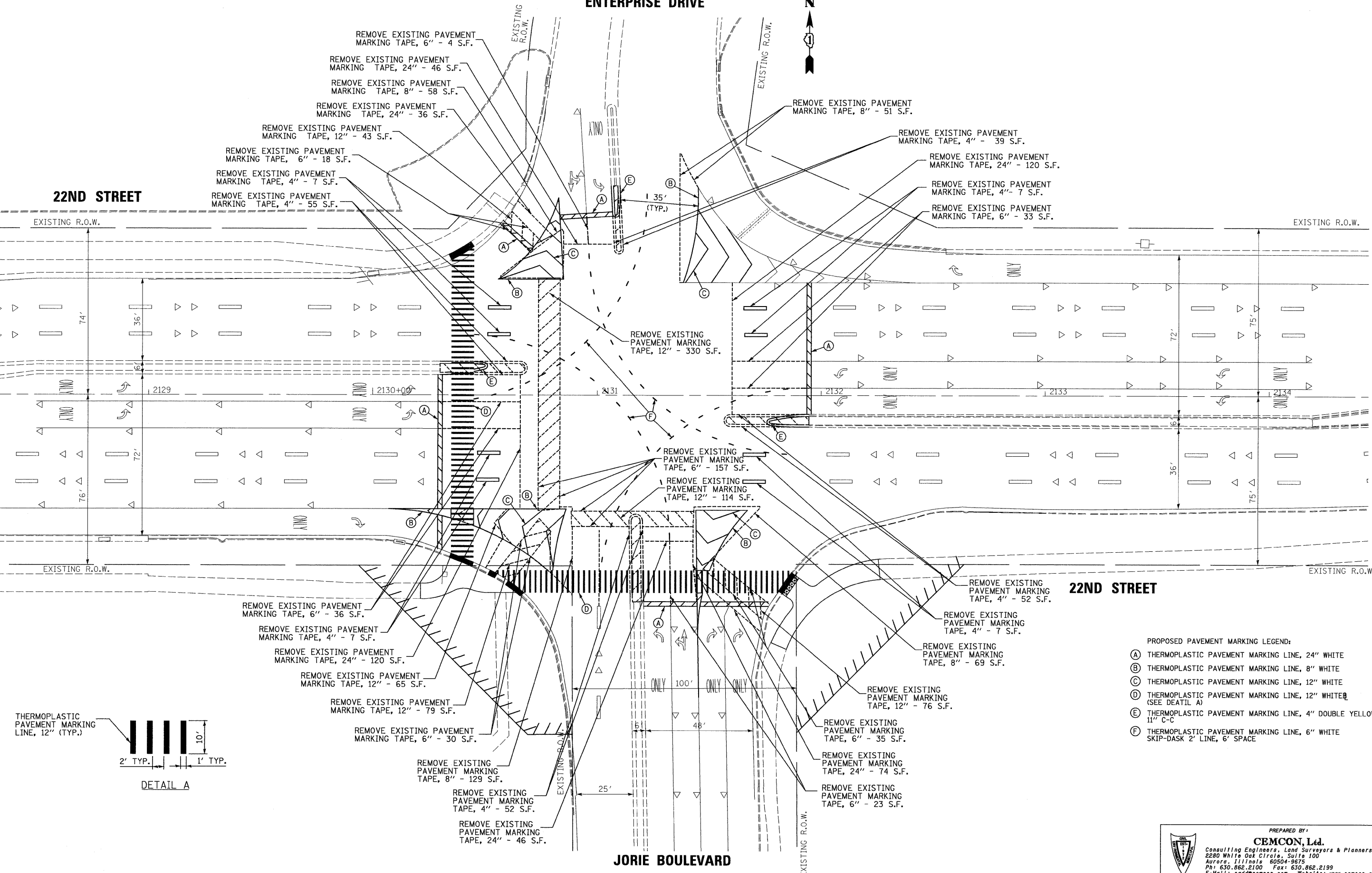
CONTRACT NO. 60117

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

ENTERPRISE DRIVE



22ND STREET



- PROPOSED PAVEMENT MARKING LEGEND:
- (A) THERMOPLASTIC PAVEMENT MARKING LINE, 24" WHITE
 - (B) THERMOPLASTIC PAVEMENT MARKING LINE, 8" WHITE
 - (C) THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE
 - (D) THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE (SEE DETAIL A)
 - (E) THERMOPLASTIC PAVEMENT MARKING LINE, 4" DOUBLE YELLOW, 11" C-C
 - (F) THERMOPLASTIC PAVEMENT MARKING LINE, 6" WHITE SKIP-DASK 2' LINE, 6' SPACE

JORIE BOULEVARD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRIPING PLAN
22nd STREET AT ENTERPRISE DRIVE /JORIE BOULEVARD

FILE NAME = MICROST\352082\ ENTERPR JORIE STRIPING

USER NAME = RDS
PLOT SCALE = 1"=20'
PLOT DATE = 09-21-09

DESIGNED - KK
DRAWN - RDS
CHECKED - BPT
DATE - 09-21-09

REVISED -
REVISED -
REVISED -
REVISED -

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DUPAGE	19	12
CONTRACT NO. 60117				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

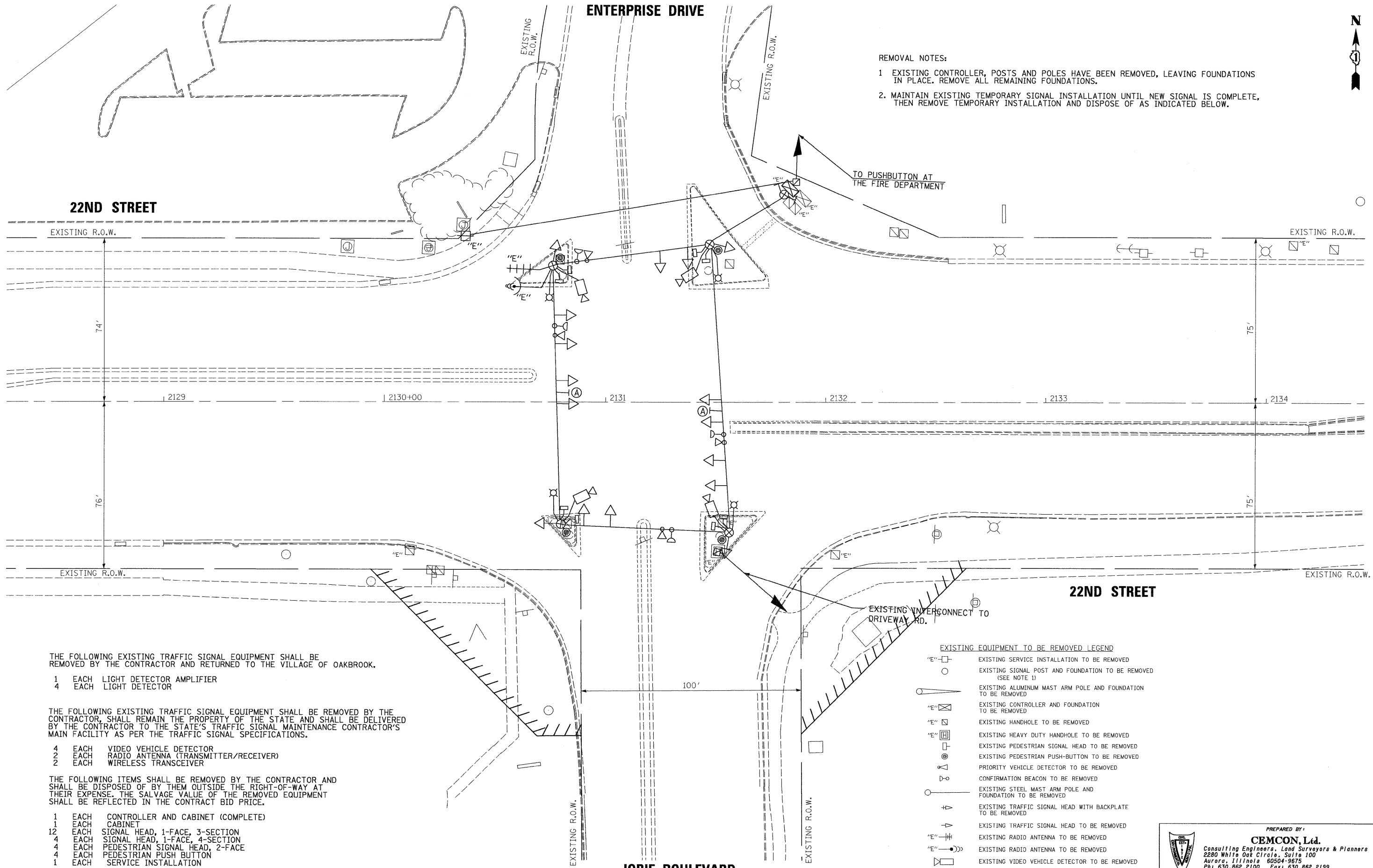


ENTERPRISE DRIVE

22ND STREET

REMOVAL NOTES:

- 1 EXISTING CONTROLLER, POSTS AND POLES HAVE BEEN REMOVED, LEAVING FOUNDATIONS IN PLACE. REMOVE ALL REMAINING FOUNDATIONS.
2. MAINTAIN EXISTING TEMPORARY SIGNAL INSTALLATION UNTIL NEW SIGNAL IS COMPLETE, THEN REMOVE TEMPORARY INSTALLATION AND DISPOSE OF AS INDICATED BELOW.



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO THE VILLAGE OF OAKBROOK.

- 1 EACH LIGHT DETECTOR AMPLIFIER
- 4 EACH LIGHT DETECTOR

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY 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.

- 4 EACH VIDEO VEHICLE DETECTOR
- 2 EACH RADIO ANTENNA (TRANSMITTER/RECEIVER)
- 2 EACH WIRELESS TRANSCIEVER

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.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 1 EACH CABINET
- 12 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 4 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 4 EACH PEDESTRIAN PUSH BUTTON
- 1 EACH SERVICE INSTALLATION

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- "E" □ EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED (SEE NOTE 1)
- ⊙ 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 HEAVY DUTY HANDHOLE TO BE REMOVED
- ⊙ EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- ⊙ EXISTING PEDESTRIAN PUSH-BUTTON TO BE REMOVED
- ⊙ PRIORITY VEHICLE DETECTOR TO BE REMOVED
- ⊙ CONFIRMATION BEACON TO BE REMOVED
- ⊙ EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- ⊙ EXISTING TRAFFIC SIGNAL HEAD WITH BACKPLATE TO BE REMOVED
- ⊙ EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" ⊕ EXISTING RADIO ANTENNA TO BE REMOVED
- "E" ⊕ EXISTING RADIO ANTENNA TO BE REMOVED
- ⊙ EXISTING VIDEO VEHICLE DETECTOR TO BE REMOVED

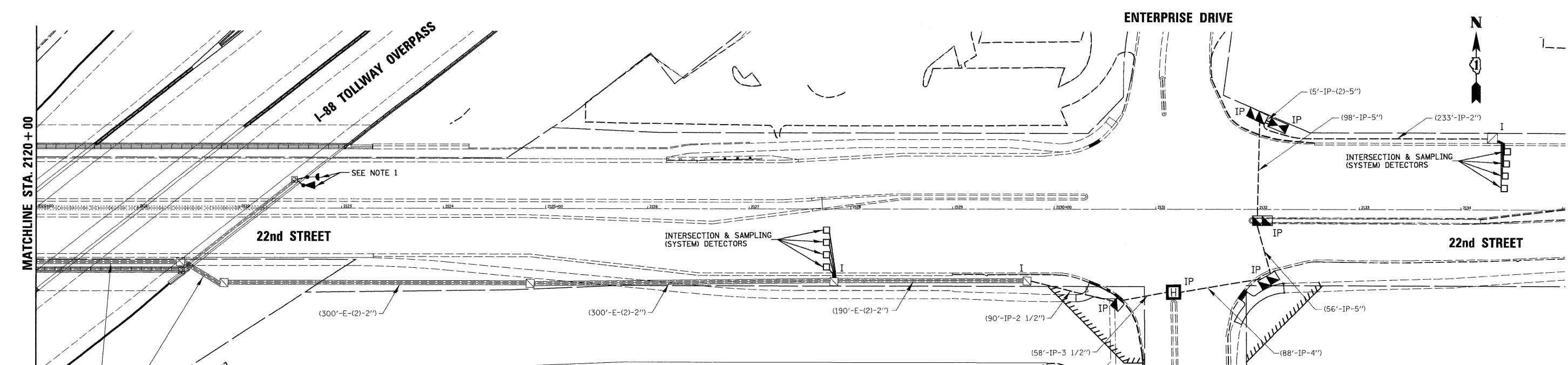
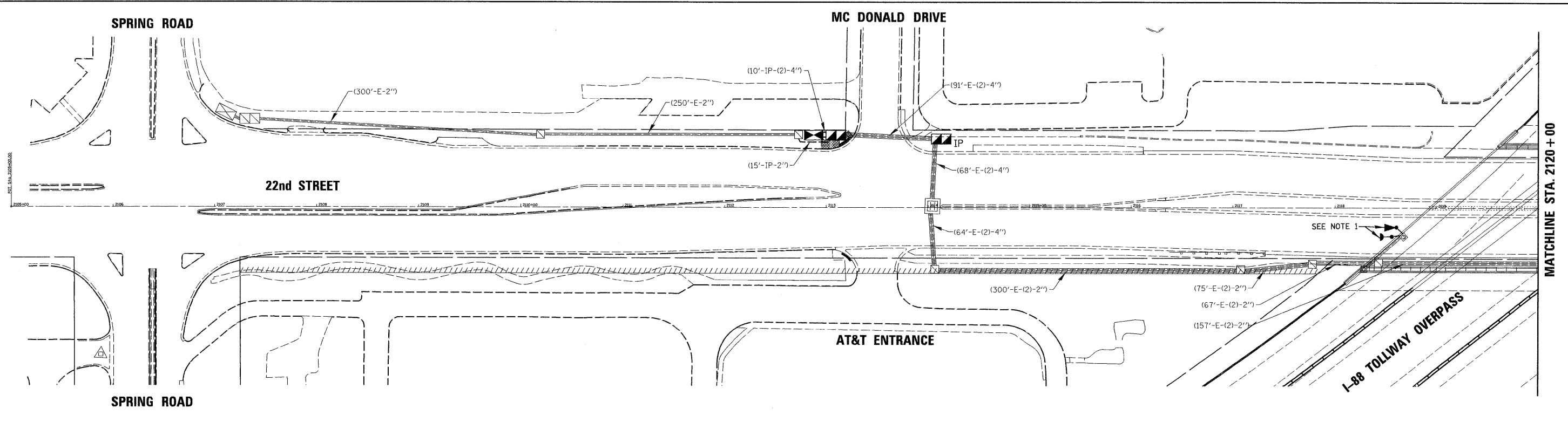
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		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL REMOVAL PLAN			
22nd STREET AT ENTERPRISE DRIVE /JORIE BOULEVARD			
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA. TO STA.

PREPARED BY:
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F.A.U. RTE. 1453	SECTION 2009-080 TS	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 13
CONTRACT NO. 60117				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT		
TELEPHONE CONNECTION		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
SYSTEM	S	S
INTERSECTION	IP	I
UNIT DUCT	UD	
COMMON TRENCH	CT	
DETECTOR LOOP, TYPE I		
PERFORMED DETECTOR LOOP		

INTERCONNECT SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C	FOOT	2608
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	2931

NOTES:

- INSTALL LIGHT DETECTOR AND CONFIRMATION BEACON ON FRONT FACE OF BRIDGE BEAM AND CONNECT TO EXISTING 1" GALVANIZED STEEL CONDUIT. DETECTOR UNIT SHALL BE SECURELY FASTENED TO BEAM IN A MANNER ACCEPTABLE TO THE ENGINEER, AND SHALL NOT PROTRUDE BELOW THE BOTTOM OF THE BEAM. INSTALL CABLES AS SHOWN ON INTERSECTION PLANS.

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

FILE NAME = \MICROST\352082\

USER NAME = RDS	DESIGNED - KK	REVISED -
PLOT SCALE = 1"=20'	DRAWN - RDS	REVISED -
PLOT DATE = 09-21-09	CHECKED - BPT	REVISED -
	DATE - 09-21-09	REVISED -

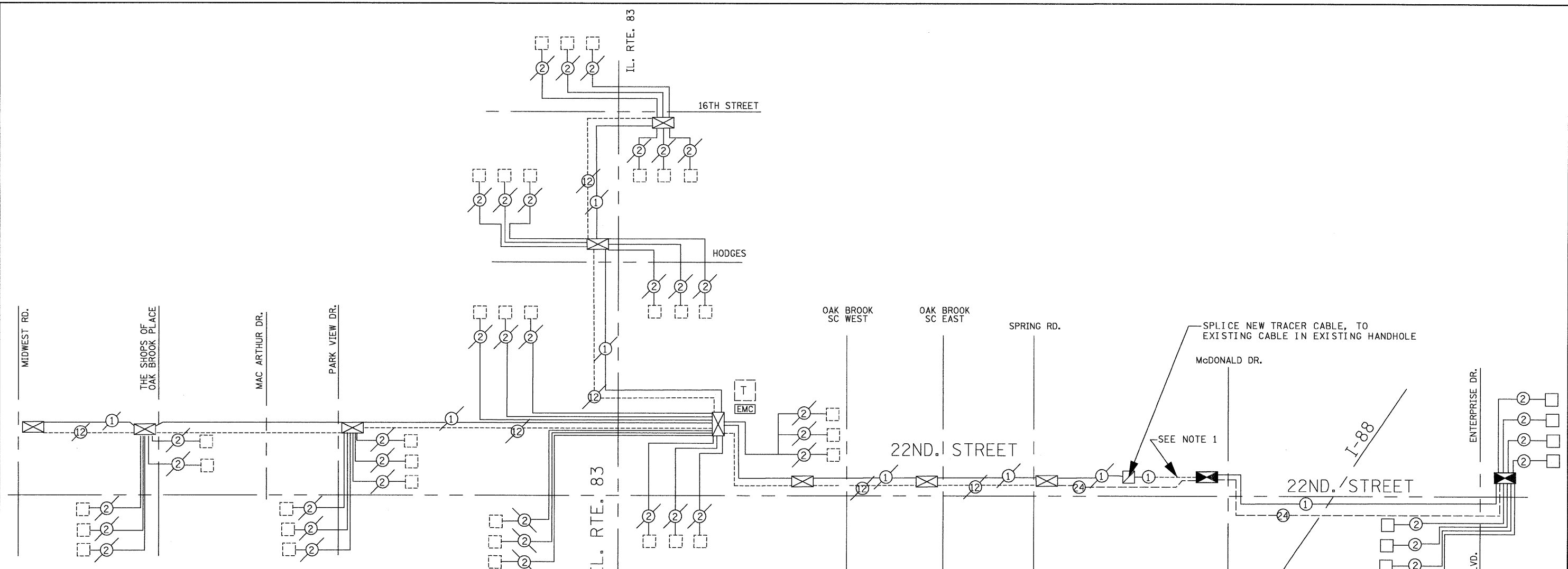
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN 22nd STREET:
SPRING ROAD TO ENTERPRISE /JORIE BOULEVARD**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DuPAGE	19	16
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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		EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
PROPOSED MASTER CONTROLLER		PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
MASTER MASTER CONTROLLER		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 SAMPLING (SYSTEM) 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 AND PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS		PROPOSED TELEPHONE CONNECTION	
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS		EXISTING WIRELESS INTERCONNECT ANTENNA	
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		EXISTING CO-AXIAL CABLE FOR ANTENNA	
PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		EXISTING HANDHOLE	
EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS		PROPOSED HANDHOLE	
PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS			

SPLICE NEW TRACER CABLE, TO EXISTING CABLE IN EXISTING HANDHOLE

SEE NOTE 1

FILE NAME = \MICROST\352082\	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

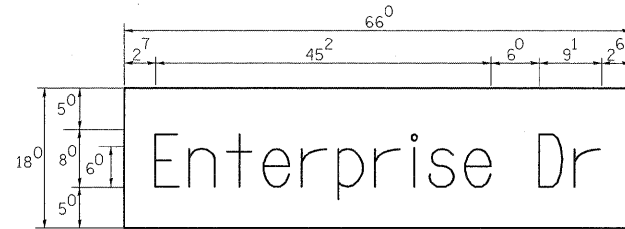
**INTERCONNECT PLAN 22nd STREET
INTERCONNECT SCHEMATIC**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

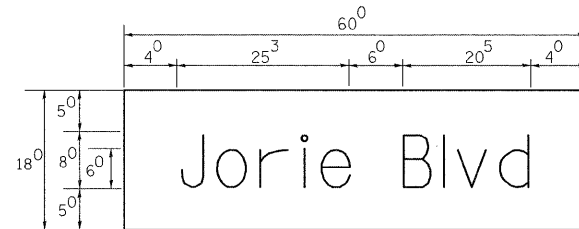
PREPARED BY:
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E-Mail: codd@cemcon.com Website: www.cemcon.com

F.A.U. RTE. 1453	SECTION 2009-080 TS	COUNTY DuPAGE	TOTAL SHEETS 19	SHEET NO. 17
CONTRACT NO. 60117				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

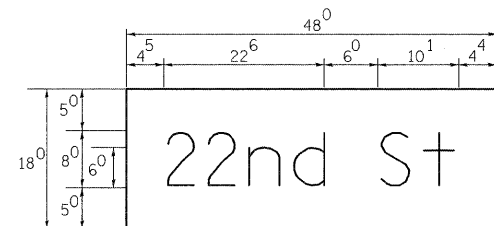
PANEL SIGN DESIGN TYPE 1



— Sq. M. each
 8.25 Sq. Ft. each
 — 2 Required
 Design Series "C"



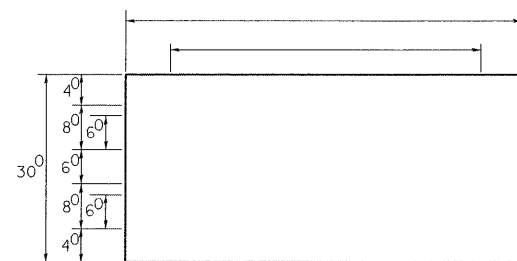
— Sq. M. each
 7.5 Sq. Ft. each
 — 2 Required
 Design Series "D"



— Sq. M. each
 6 Sq. Ft. each
 — 2 Required
 Design Series "D"

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2



— Sq. M. each
 — Sq. Ft. each
 — Required
 Design Series —

GENERAL NOTES

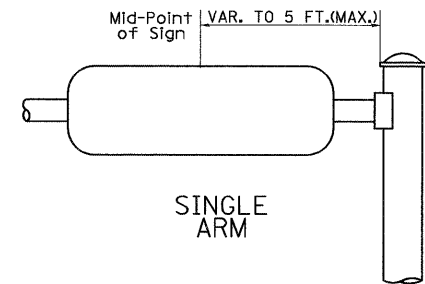
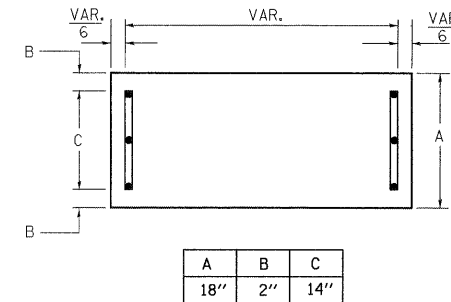
- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- 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. WAUWATOSA, WI
 - * AMERICAN FABRICATION CO. CHICAGO HEIGHTS, IL
 - * WESTERN TRAFFIC CONTROL INC. CICERO, IL

PARTS LISTING:

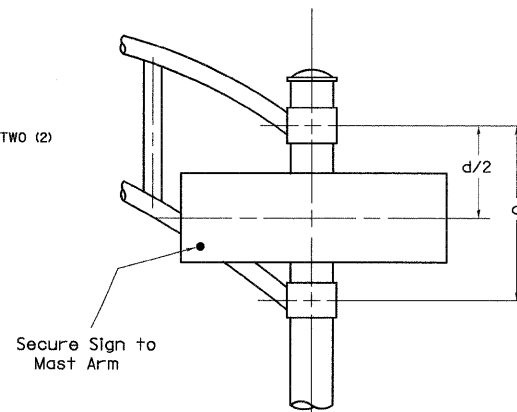
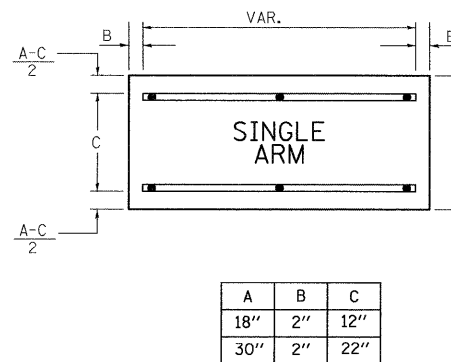
SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
 SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
 BRACKETS PART #HPN034 (UNIVERSAL)
 CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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

SUPPORTING CHANNELS



SUPPORTING CHANNELS



DUAL ARM
 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 3/8

SERIES	SECOND LETTER															
	acde		bhikl		f w		J		s t		v y		x z			
	g	o	q	m	n	p	r	u								
A W X	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ²	1 ⁴
B	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁶	1 ⁷
C E G	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
D O Q R	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
F	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²
H I M N	2 ⁰	2 ¹	2 ²	2 ⁴	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹	2 ⁰	2 ¹
J U	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹
K L	1 ¹	1 ²	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
P	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
S	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
T	1 ¹	1 ²	1 ⁶	1 ⁷	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
V	0 ⁶	1 ⁰	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
Y	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁵	0 ⁷	0 ⁵	0 ⁶	0 ⁶	1 ⁰	1 ¹	1 ²
Z	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹

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

SERIES	SECOND LETTER															
	acde		bhikl		f w		J		s t		v y		x z			
	g	o	q	m	n	p	r	u								
ad h g i j	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷
l m n q u																
b f k o p s	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
c e	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
r	0 ⁶	1 ⁰	1 ²	1 ⁴	0 ⁶	1 ⁰	0 ³	0 ³	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰
t z	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
v y	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²
w	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
x	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴

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

SERIES	SECOND NUMBER																	
	0	1	2	3	4	5	6	7	8	9								
	C	D	C	D	C	D	C	D	C	D								
0 9	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷
1	2 ⁰	2 ¹	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁴	1 ⁵	2 ⁰	2 ¹
2 3 4	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
5	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
6	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
7	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁵	0 ⁵	0 ⁶	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
8	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷

LETTERS	UPPER AND LOWER CASE LETTER WIDTHS						
	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	1 ²	1 ⁴	1 ⁵	2 ⁰
2	3 ²	4 ⁰	4 ³	5 ³
3	3 ²	4 ⁰	4 ³	5 ³
4	3 ⁵	4 ³	4 ⁷	5 ⁷
5	3 ²	4 ⁰	4 ³	5 ³
6	3 ²	4<		

