

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	1
M-4003(621)	ILLINOIS	CONTRACT NO.	61D06	

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAP 362 (BARRINGTON ROAD)
MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TRAFFIC SIGNAL IMPROVEMENTS AND ROADWAY LIGHTING
SECTION 13-00062-00-SP
PROJECT M-4003(621)
VILLAGE OF HANOVER PARK
COOK COUNTY

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, PE (847) 705-4406 SCHAUMBURG, IL

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR INDEX OF HIGHWAY STANDARDS, SEE SHEET NO. 2
PROJECT LOCATED IN THE VILLAGE OF HANOVER PARK

TRAFFIC DATA

ADT = 25,700 (2014)

SPEED LIMIT

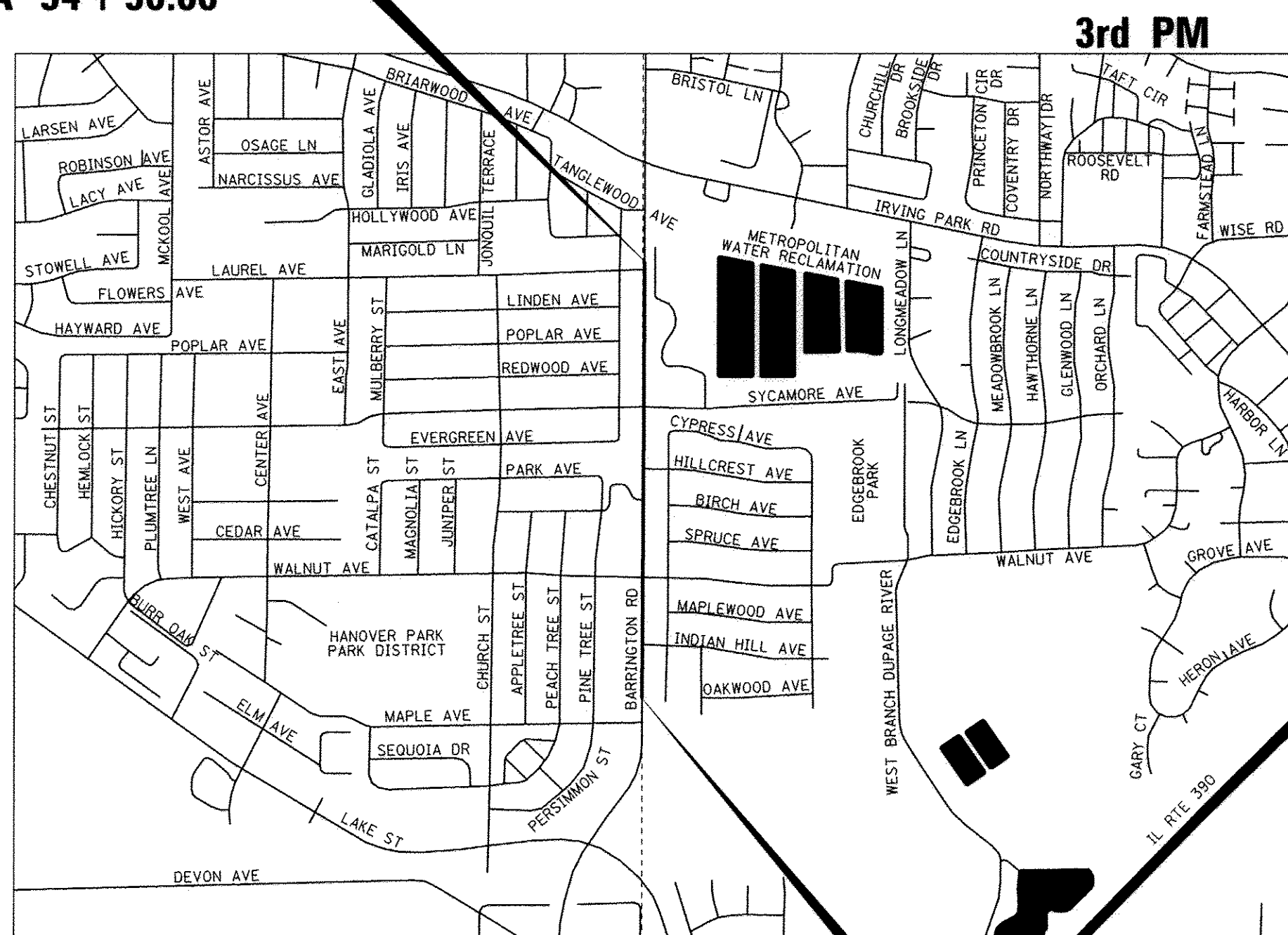
40 MPH (POSTED)

DESIGN DESIGNATION

OTHER PRINCIPAL ARTERIAL



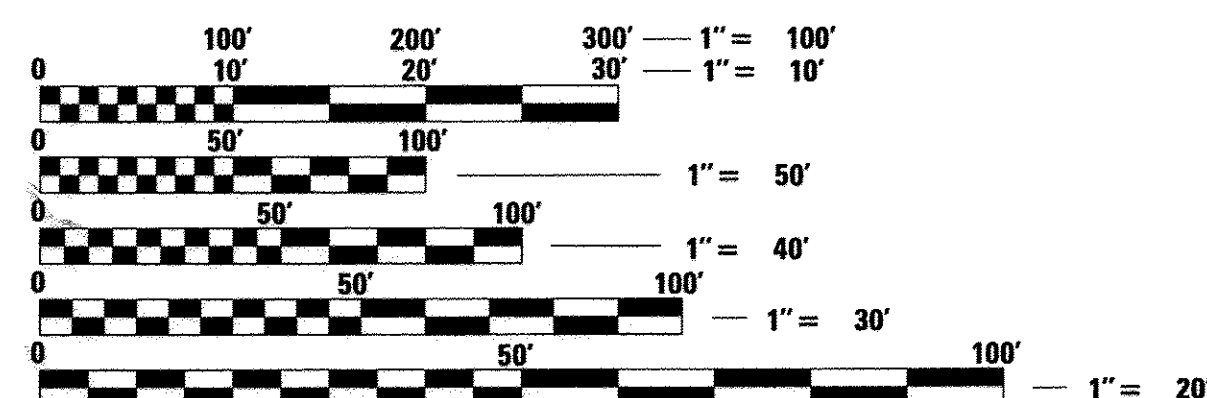
END IMPROVEMENT
STA 54 + 50.00



LOCATION MAP
NOT TO SCALE

BEGIN IMPROVEMENT
STA 14 + 65.00

GROSS LENGTH = 3,985 FT. = 0.75 MILE
NET LENGTH = 3,985 FT. = 0.75 MILE



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

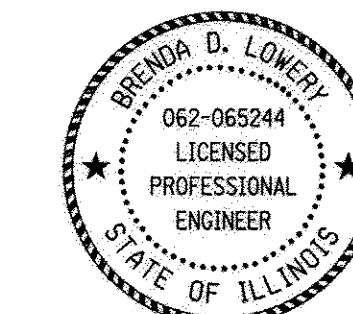
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



J. Patel

06/17/2016 DATE

JAYMIN I. PATEL
BOLLINGER, LACH & ASSOCIATES, INC.
NO.: 062-051494
EXP. DATE: 11-30-2017
APPLY TO SHEETS
1-35, 46-48



B. Lowery

06/17/2016 DATE

BRENDA D. LOWERY
AMES ENGINEERING, INC.
NO.: 062-065244
EXP. DATE: 11-30-2017
APPLY TO SHEETS
36-45

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	6/16/16 <i>[Signature]</i>
VILLAGE OF HANOVER PARK	
Passed	July 16, 2016 <i>[Signature]</i> Region One Engineer of Local Roads & Streets
Releasing for Bid Based on Limited Review	July 6, 2016 <i>[Signature]</i> Regional Engineer

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OF THE STATE OF ILLINOIS

CONSULTING ENGINEERS **BL** Bollinger, Lach & Associates, Inc.
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ILLINOIS • INDIANA • WISCONSIN

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HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL EQUIVALENTS OF AN INCH-FOOT
424006-02	DIAGONAL CURB RAMPS FOR SIDEWALKS
424011-02	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424021-03	DEPRESSED CORNER FOR SIDEWALKS
442201-03	CLASS C AND D PATCHES
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' to 24N FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' TO 24N FROM PAVEMENT EDGE
701427-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., SPD <= 40 MPH
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W W/ MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-05	TRAFFIC CONTROL DEVICES
814001-03	HANDHOLES
814006-02	DOUBLE HANDHOLES
862001-01	UNINTERRUPTABLE POWER SUPPLY
877001-06	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877002-03	STEEL MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

DISTRICT DETAILS

BD-22	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
BE-215	LIGHTING CONTROLLER SINGLE DOOR
BE-220	ELECTRIC SERVICE INSTALLATION AERIAL, REMOTE DISCONNECT
BE-301	LIGHT POLE FOUNDATION 40' TO 47 1/2' M.H. 15N BOLT CIRCLE
TC-10	TRAFFIC CONTROL & PROTECTION FOR SIDE RDS, INTERSECTIONS & DRIVEWAYS
TC-22	ARTERIAL ROAD INFORMATION SIGN
TS-02	MAST ARM MOUNTED STREET NAME SIGNS
TS-05	STANDARD TRAFFIC SIGNAL DESIGN DETAILS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 2016 (HEREIN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS), THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED APRIL 2016; THE LATEST EDITION OF THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS; THE STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS, SEVENTH EDITION; THE DETAILS IN THE PLANS; AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOURS NOTIFICATION IS REQUIRED.
4. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND WITH LOCAL EMERGENCY SERVICES AND THE VILLAGE OF HANOVER PARK.
5. THE CONTRACTOR SHALL PROVIDE A 48 HOUR ADVANCE NOTICE TO THE ENGINEER AND THE VILLAGE AS TO THE INITIAL START-UP DATE.
6. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE OR VILLAGE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT OR THE VILLAGE.
7. THE CONTRACTOR, THEIR EMPLOYEES, AND REPRESENTATIVES SHALL PARK VEHICLES AS CLOSE AS POSSIBLE TO THE PROJECT SITE WITHOUT CREATING TRAFFIC OR PEDESTRIAN HAZARDS AND IN KEEPING WITH THE "ILLINOIS RULES OF THE ROAD."
8. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
9. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
10. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED ON FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATIONS FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.
11. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
12. THE DEPARTMENT HAS NOT OBTAINED ANY PERMITS FOR OFFSITE BORROW OR WASTE/USE (BWU) AREAS. PRIOR TO WORKING IN BWU AREAS, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING PERMITS IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER PERMITS. IN ADDITION TO THE BORROW REVIEW (BDE 2289) and USE/WASTE REVIEW (BDE 2290) SUBMITTALS, THE CONTRACTOR WILL NEED TO SUBMIT AN EROSION AND SEDIMENT CONTROL (ESC) PLAN FOR EVERY BWU SITE TO THE DEPARTMENT FOR ACCEPTANCE. THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS TO PREPARE AND IMPLEMENT ESC PLANS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
13. THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES AND SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY IN ORDER TO PREVENT SETTLEMENT, DISPLACEMENT, OR DAMAGE TO THE UTILITIES. THE PROTECTION OF THE UTILITIES AS SPECIFIED HEREIN WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.
14. THE CONTRACTOR SHALL TAKE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
15. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION. ANY COST ASSOCIATED WITH OBTAINING THESE PERMITS SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE FOR THE ITEMS BEING INSTALLED.
16. POLLUTION CONTROL: THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THIS WORK WILL NOT BE PAID FOR SEPARATELY AND SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.
17. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.
18. NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET.
19. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL LOCAL TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND/OR DIRECTED BY THE ENGINEER.
20. THE COST OF SAW CUTTING, (FULL DEPTH) SHALL BE INCLUDED IN THE UNIT PRICES FOR THE VARIOUS REMOVAL PAY ITEMS.
21. ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:
 - a. SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.
 - b. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION AND BE VISIBLE TO TRAFFIC FOR WHICH IT IS NEEDED. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING.
 - c. ALL SIGNS SHALL BE RE-ERECTED IN PERMANENT LOCATIONS AS THE ROADWAY IS COMPLETED. HORIZONTAL LOCATION FROM THE EDGE OF PAVEMENT SHALL BE AS DIRECTED BY THE ENGINEER.
 - d. ALL UNUSED SIGNS AS DETERMINED BY THE ENGINEER WILL BE RETURNED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
 - e. LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS, THE COST SHALL BE INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT ACCORDING TO ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS.
22. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ON A REGULAR BASIS PORTABLE SANITARY FACILITIES ON THE PROJECT SITE FOR THEIR EMPLOYEES. A FACILITY SHALL BE PLACED AT A LOCATION APPROVED BY THE ENGINEER. THE COST OF PROVIDING AND MAINTAINING THE PORTABLE SANITARY FACILITIES SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
23. ANY ITEM THAT IS DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FRESH CONCRETE FROM DAMAGE AND VANDALISM. ANY DAMAGED OR VANDALIZED CONCRETE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
25. ALL TREES AND SHRUBS SHALL REMAIN UNLESS OTHERWISE INDICATED IN THE PLANS OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN WORKING NEAR EXISTING TREES AND SHRUBS TO AVOID DAMAGE. THE REPLACEMENT FOR ANY DAMAGED TREES OR SHRUBS SHALL BE AT THE CONTRACTOR'S EXPENSE.
26. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE A SET OF "FOR CONSTRUCTION" PROJECT DRAWINGS IS AVAILABLE AT THE SITE AT ALL TIMES.
27. THE CONTRACTOR IN PROCEEDING WITH THEIR DAILY WORK ACTIVITIES SHALL ENDEAVOR TO MINIMIZE DUST AND DEBRIS ON AND AROUND THE CONSTRUCTION SITE AT THEIR OWN EXPENSE. DUST SHALL BE CONTROLLED BY THE UNIFORM APPLICATION OF SPRINKLED WATER IN CONFORMANCE WITH THE SPECIAL PROVISIONS. FAILURE TO RESPOND TO REQUESTS BY THE ENGINEER TO MAINTAIN THE SITE MAY RESULT IN THE VILLAGE INITIATING ACTION. IF THIS ACTION BECOMES NECESSARY THE CONTRACTOR WILL BE CHARGED FOR ANY AND ALL EFFORTS. DUST CONTROL WATERING SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.
28. NORTHWEST SUBURBAN MUNICIPAL (NSM) JAWA INFRASTRUCTURE SHALL BE VACUUM EXCAVATED AND EXPOSED. ALL DIRECTIONAL BORING ACTIVITIES WHICH CROSS NSM JAWA INFRASTRUCTURE SHALL BE PERFORMED UNDER THE OBSERVATION OF NSM JAWA PERSONNEL.



USER NAME = WJeng	DESIGNED - WJT	REVISED -
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PLOT DATE = 7/27/2016	DATE - 06/17/2016	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
INDEX, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS**

SCALE: N.T.S. SHEET 1 OF 2 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	2
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

TRAFFIC SIGNAL NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION ACTIVITIES. THIS SHALL INCLUDE LOCATING MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTHS.
2. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, AND LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES. CONTACT THE LOCAL COUNTIES AND MUNICIPALITIES FOR LOCATES. THE CONTRACTOR SHALL CALL JULIE AT (800) 892-0123 FOR LOCATIONS OF BURIED UTILITIES (48 HOUR NOTIFICATION IS REQUIRED).
3. THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

TEMPORARY TRAFFIC SIGNAL NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION ACTIVITIES. THIS SHALL INCLUDE LOCATING WOOD POST LOCATION AND VERIFYING THE CABLE LENGTHS.
2. THE CONTRACTOR SHALL CHECK THE TEMPORARY TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
3. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
4. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
5. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300MM) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
6. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
7. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
8. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
9. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
10. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
11. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
12. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



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PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
INDEX, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS**

SCALE: N.T.S. SHEET 2 OF 2 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	3
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0005	TRAFFIC SIGNALS 0021	HIGHWAY LIGHTING 0021
20101000	TEMPORARY FENCE	FOOT	88	88		
20200100	EARTH EXCAVATION	CU YD	16	16		
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	8	8		
* 21101625	TOPSOIL FURNISH AND PLACE, 6"	SO YD	54	54		
* 25200110	SODDING, SALT TOLERANT	SO YD	96	96		
25200200	SUPPLEMENTAL WATERING	UNIT	1	1		
31102200	SUBBASE GRANULAR MATERIAL, TYPE C 5"	SO YD	23	23		
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SO YD	120	120		
40603365	HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N70	TON	2	2		
40800029	BITUMINOUS MATERIALS (TACK COAT)	POUND	15	15		
42001300	PROTECTIVE COAT	SO YD	170	170		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SO FT	1285	1285		
42400800	DETECTABLE WARNINGS	SO FT	30	30		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	67	67		

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL



USER NAME = WTeng	DESIGNED - WJT	REVISED -
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PLOT SCALE = 50.0000" / 1"	CHECKED - MTC	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 1 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	4
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621			CONTRACT NO. 61006	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0005	TRAFFIC SIGNALS 0021	HIGHWAY LIGHTING 0021
44000600	SIDEWALK REMOVAL	SO FT	989	989		
44201761	CLASS D PATCHES, TYPE I, 10 INCH	SO YD	3	3		
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SO YD	14	14		
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	1	1		
60600605	CONCRETE CURB, TYPE B	FOOT	7.5	7.5		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	67	67		
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	30	30		
* 66900450	SPECIAL WASTE PLANS AND REPORTS	LSUM	1	1		
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1		
67100100	MOBILIZATION	LSUM	1	1		
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	LSUM	1	1		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1	1		
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1	1		
* 80400100	ELECTRIC SERVICE INSTALLATION	EACH	1			1

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL



Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

DESIGNED - WJT	REVISED -
DRAWN - MTC	REVISED -
CHECKED - MTC	REVISED -
DATE - 06/17/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES**

F.A.P. RTE. 362	SECTION 13-00062-00-5P	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 5
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT M-4003621	

SCALE: N.T.S. SHEET 2 OF 7 SHEETS STA. N/A TO STA. N/A

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0005	TRAFFIC SIGNALS 0021	HIGHWAY LIGHTING 0021
* 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3538		3538	
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2378		2378	
* 87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1606		1606	
* 87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	698		698	
* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2548		2548	
* 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	105		105	
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	4573		4573	
* 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4		4	
* 87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1		1	
* 87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2		2	
* 87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1		1	
* 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16		16	
* 87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4	
* 87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10		10	

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL



USER NAME = WTeng
PLOT SCALE = 50.0000' / in.
PLOT DATE = 7/27/2016

DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 4 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	7
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0005	TRAFFIC SIGNALS 0021	HIGHWAY LIGHTING 0021
* 87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	35		35	
87900200	DRILL EXISTING HANDHOLE	EACH	1		1	
* 88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8		8	
* 88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2		2	
* 88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2		2	
* 88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2		2	
* 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8		8	
* 88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10		10	
* 88500100	INDUCTIVE LOOP DETECTOR	EACH	10		10	
# * 88600100	DETECTOR LOOP, TYPE I	FOOT	829		829	
# * 88800100	PEDESTRIAN PUSH-BUTTON	EACH	8		8	
# * 89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1	
Δ # * 89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2		2	
Δ # * 89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1		1	

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL
Δ 100% VILLAGE OF HANOVER PARK COST



Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 5 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	8
CONTRACT NO. 61D06			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621	

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
					ROADWAY	TRAFFIC SIGNALS	HIGHWAY LIGHTING
					0005	0021	0021
# *	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1	
# *	89502380	REMOVE EXISTING HANDHOLE	EACH	16		16	
# *	89502382	REMOVE EXISTING DOUBLE HANDHOLE	EACH	1		1	
# *	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9		9	
△ # *	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	270		270	
△ # *	X0327698	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4		4	
# *	X1400081	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1		1	
# *	X8211125	LUMINAIRE, LED, HORIZONTAL MOUNT, SPECIAL	EACH	33			33
# *	X8250505	LIGHTING CONTROLLER, SPECIAL	EACH	1			1
# *	X8300001	LIGHT POLE, SPECIAL	EACH	23			23
# *	X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1		1	
# *	X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	3843		3843	
#	Z0013798	CONSTRUCTION LAYOUT	LSUM	1	1		
#	Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	103	103		

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL
△ 100% VILLAGE OF HANOVER PARK COST



USER NAME = WTeng
PLOT SCALE = 50.0000' / in.
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

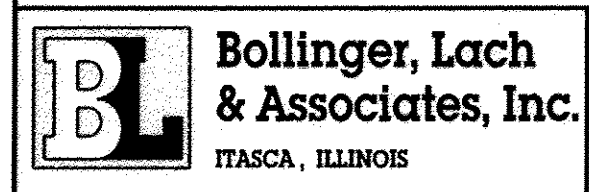
**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 6 OF 7 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	9
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0005	TRAFFIC SIGNALS 0021	HIGHWAY LIGHTING 0021
# *	Z0033046 RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	2		2	
# *	Z0073510 TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2		2	
# †	Z0076600 TRAINEES	HOUR	500	500		
# †	Z0076604 TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500		
# *	XX009135 LIGHT POLE, SPECIAL, TYPE 2	EACH	10			10

* SPECIALTY ITEM
SPECIAL PROVISION AND/OR DETAIL
† 0042

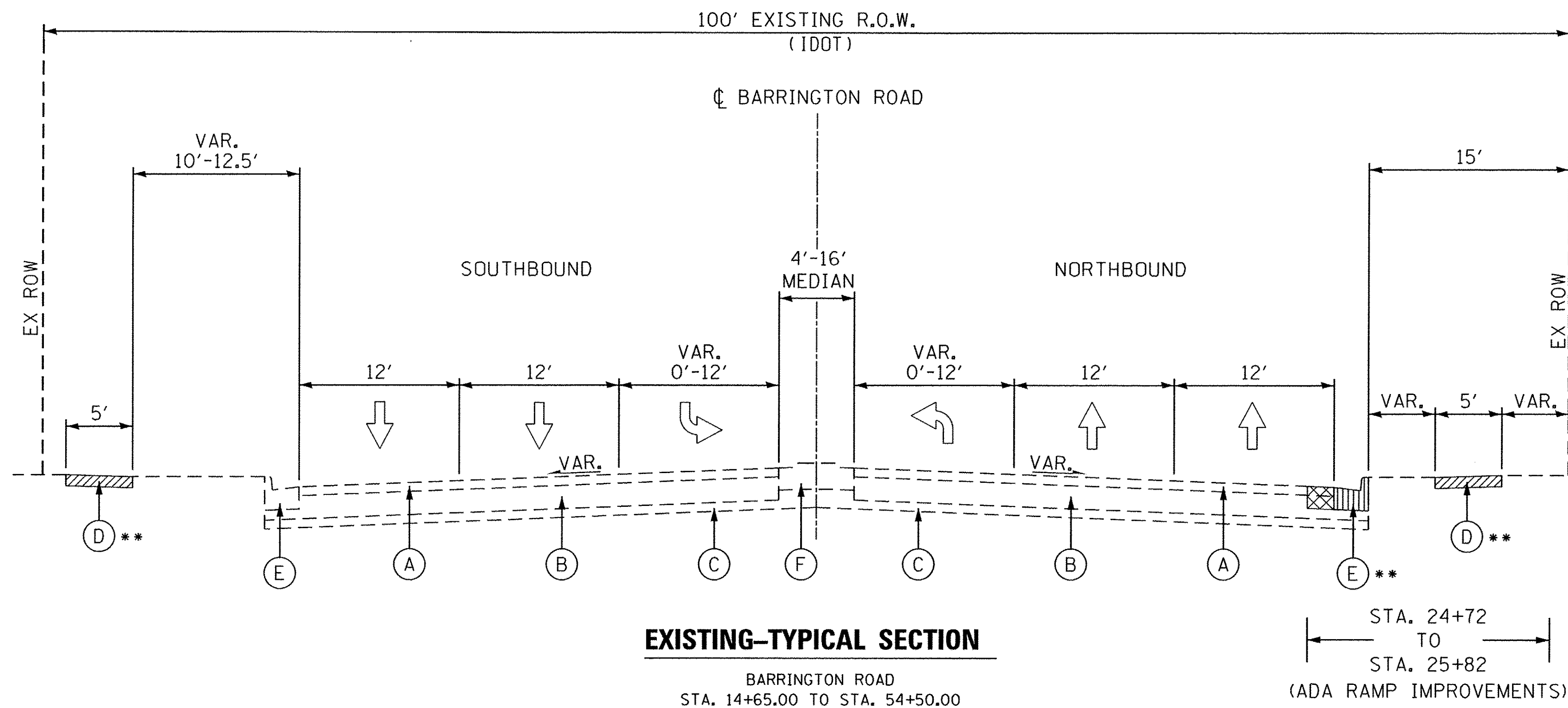


USER NAME = wTeng	DESIGNED - WJT	REVISED -
	DRAWN - MTC	REVISED -
PLOT SCALE = 50.0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 7/28/2016	DATE - 06/17/2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SUMMARY OF QUANTITIES**

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 10
SCALE: N.T.S.		SHEET 7 OF 7 SHEETS	STA. N/A TO STA. N/A	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621
CONTRACT NO. 61D06				



- SIDEWALK REMOVAL
- CLASS D PATCHES
- COMBINATION CURB AND GUTTER REMOVAL

EXISTING LEGEND

- (A) EX. HOT-MIX ASPHALT SURFACE COURSE, 4" (R) **
 - (B) EX. HOT-MIX ASPHALT BASE COURSE, 10.5" (R, 8") **
 - (C) EX. SUBBASE GRANULAR MATERIAL, 4"
 - (D) EX. PCC SIDEWALK (R) **
 - (E) EX. COMB. CONC. CURB & GUTTER (R) **
 - (F) EX. CONCRETE MEDIAN
- } SEE NOTE A

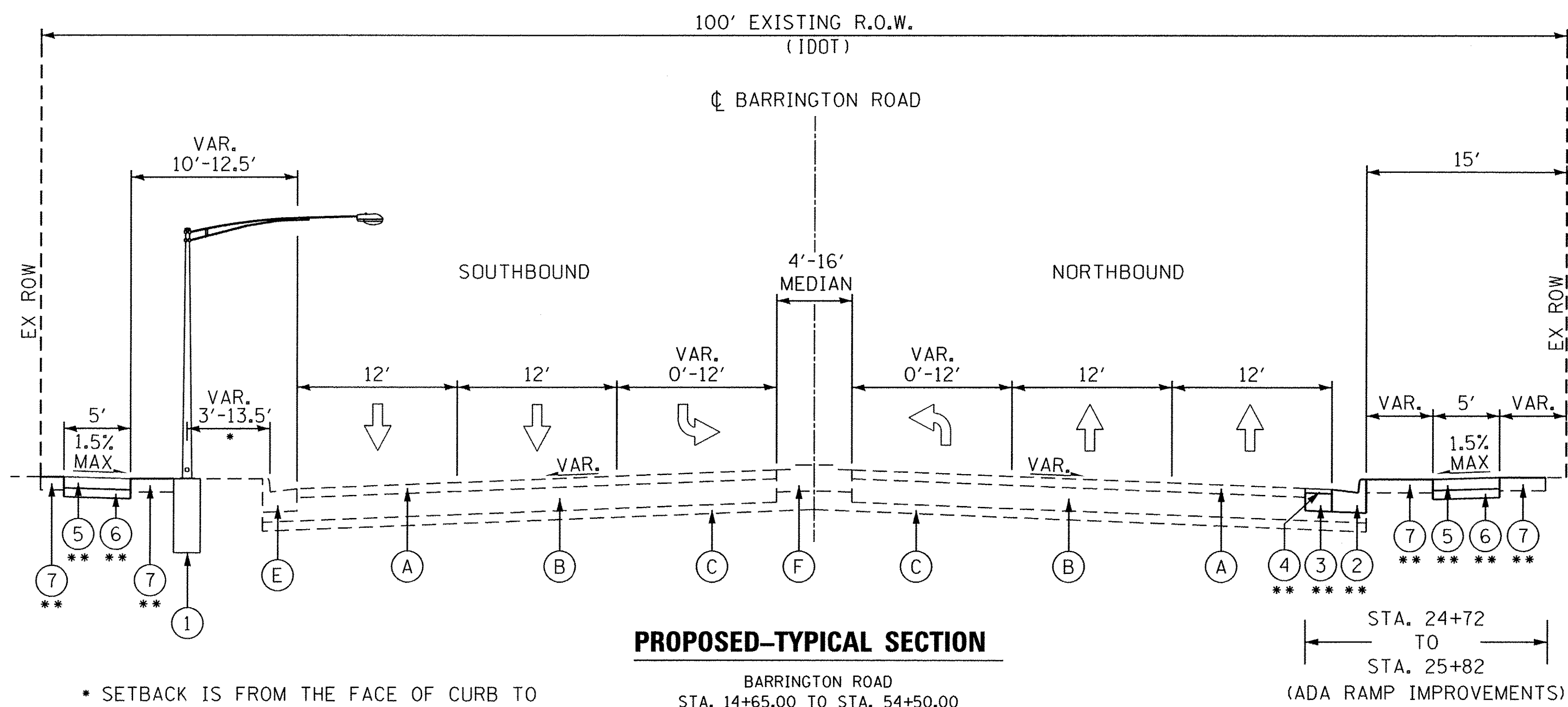
ITEMS WITH (R) ARE TO BE REMOVED AS SHOWN IN THE TYPICAL SECTIONS AND/OR SHOWN ON THE PLANS.

NOTE A: THE REMOVAL OF HMA SURFACE COURSE AND HMA BASE COURSE AS SHOWN SHALL BE INCLUDED IN THE COST OF "CLASS D PATCHES, 10 INCH", OF THE TYPE SPECIFIED.

PROPOSED LEGEND

- (1) PR. ROADWAY LIGHTING UNIT
- (2) PR. COMB. CONC. CURB & GUTTER TY. B-6.24 **
- (3) PR. CLASS D PATCHES; 10" **
- (4) PR. HMA SURFACE COURSE MIX "E", N70; 2" **
- (5) PR. PCC SIDEWALK 5" **
- (6) PR. AGG BASE COURSE TY. B 4" **
- (7) PR. TOPSOIL EX. & PLACE OR FURNISH & PLACE; 6" WITH SODDING AND FERTILIZER NUTRIENTS

** AS INDICATED ON THE PLANS AT THE LOCATIONS SHOWN.



* SETBACK IS FROM THE FACE OF CURB TO THE CENTER OF THE LIGHT POLE (SEE LIGHTING PLANS FOR EXACT LOCATIONS)

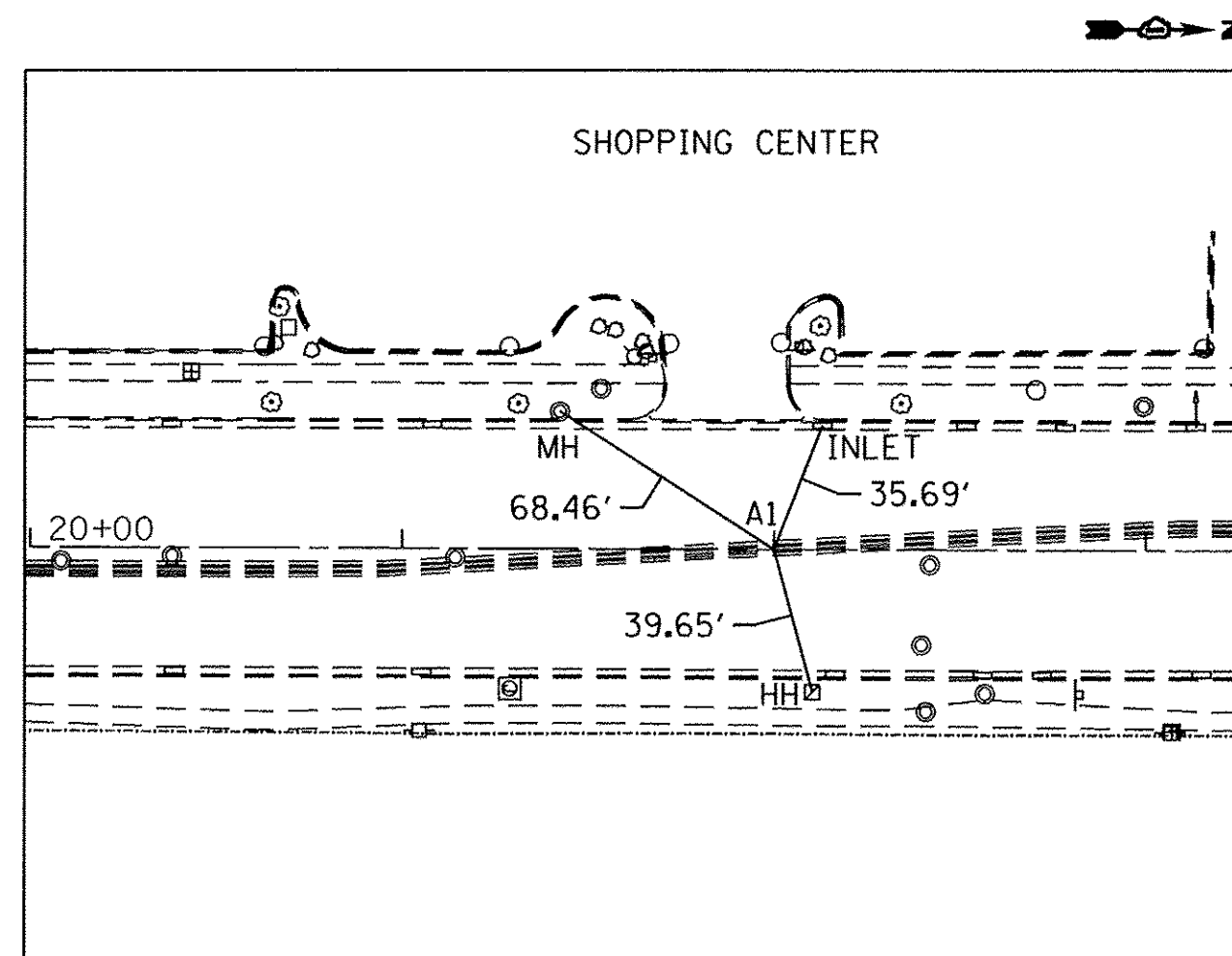
HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS @ Ndes
PATCHING	
CLASS D PATCHES (HMA BINDER IL-19mm), N70; 10"	4% @ 70 GYR
SURFACE	
HMA SURFACE COURSE MIX "E", N70 (IL 9.5mm); 2"	4% @ 70 GYR

NOTES:

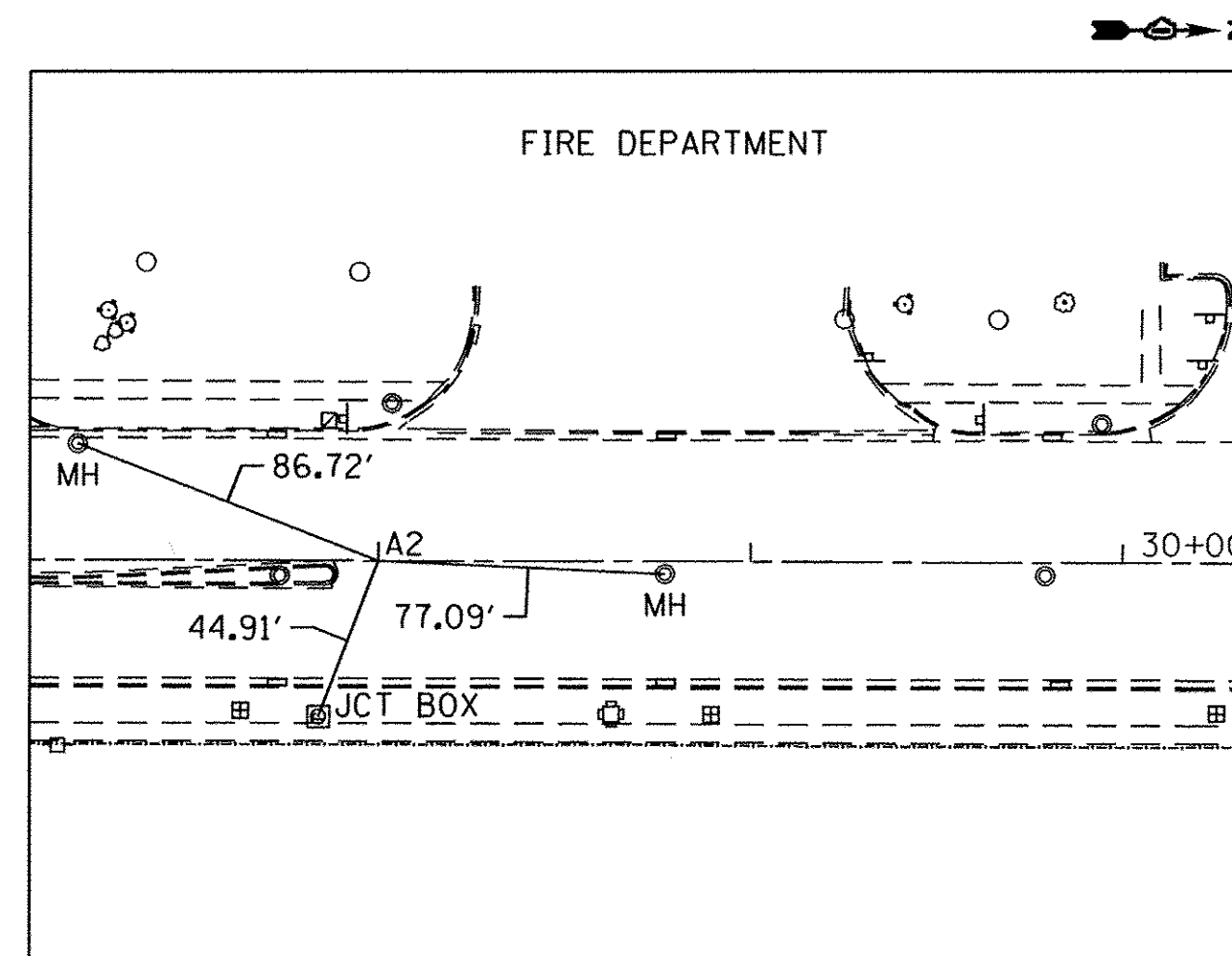
FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SO YD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.



ALIGNMENT TIE #A1
 STATION 22+00.00
 N: 1,940,647.7677
 E: 1,035,503.8242

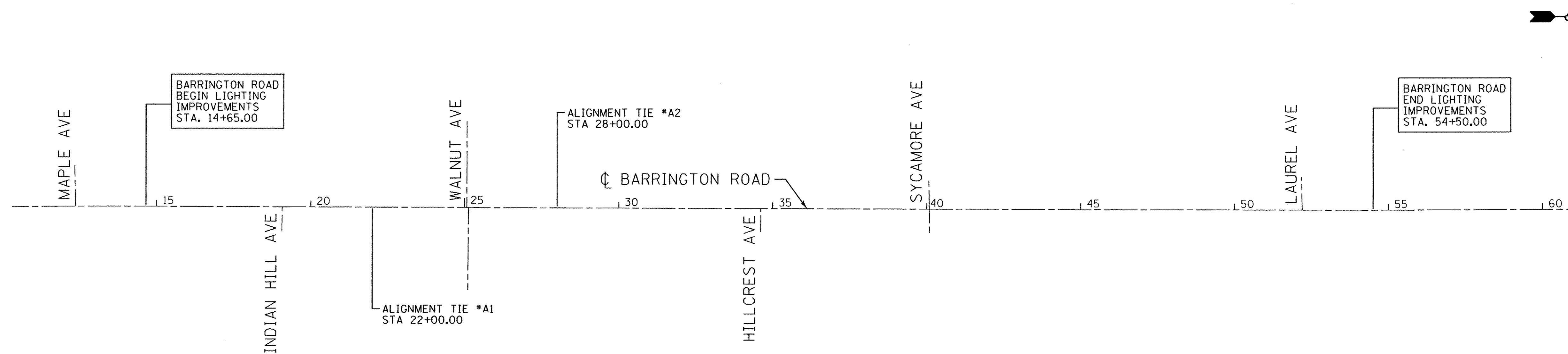


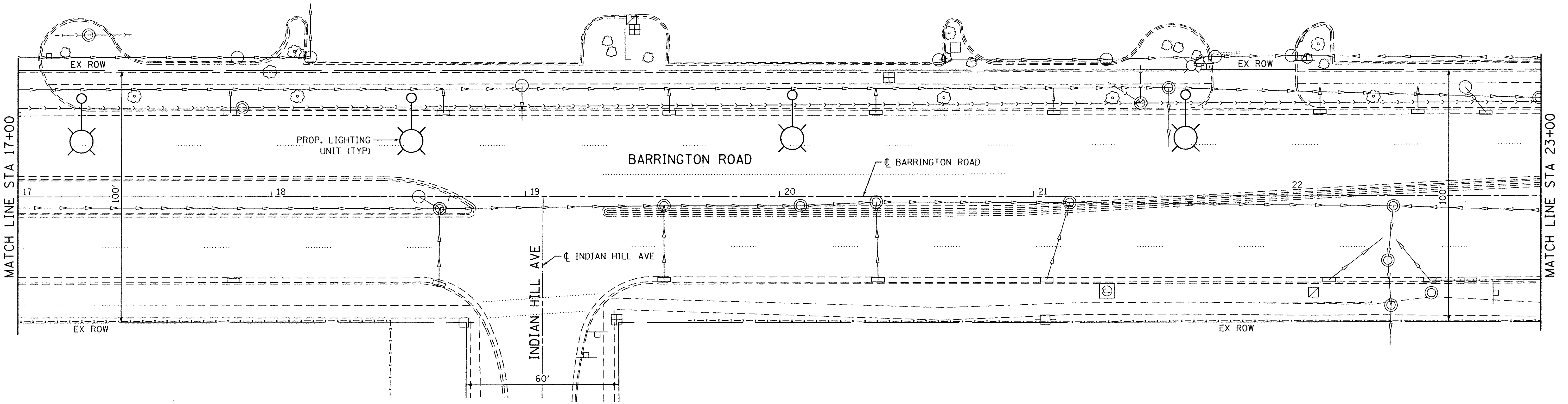
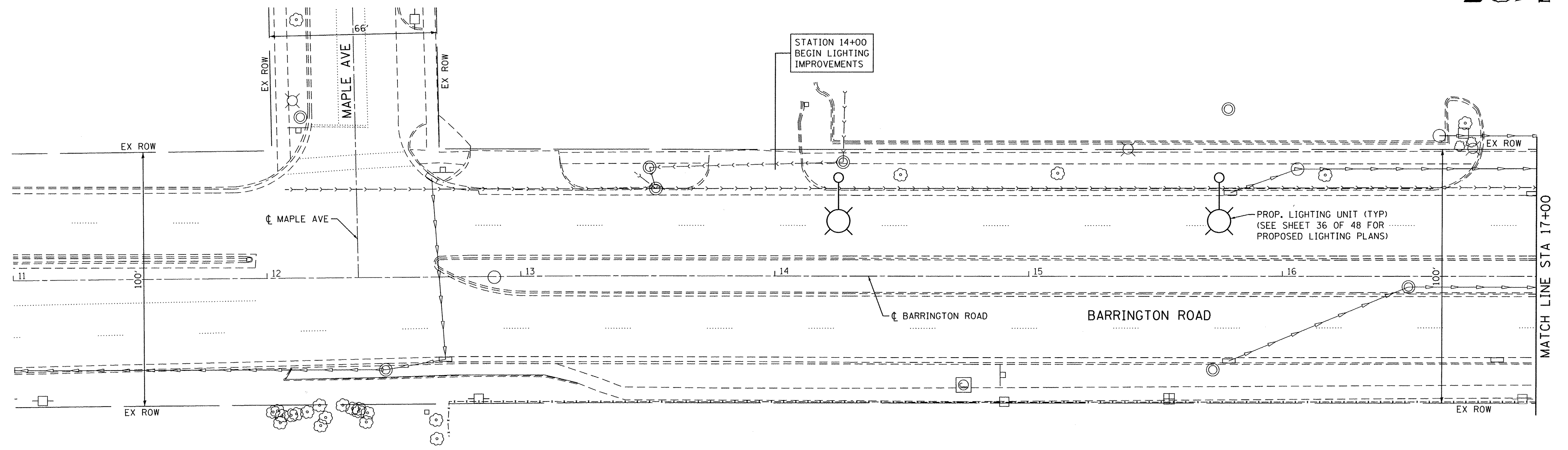
ALIGNMENT TIE #A2
 STATION 28+00.00
 N: 1,941,247.7594
 E: 1,035,506.5380

BENCHMARKS:

- BM #1: CHISELED SQUARE ON METAL BASE OF FLAG POLE LOCATED ON THE SOUTH SIDE OF LAUREL HILL SCHOOL. ELEV = 821.89
- BM #2: CUT SQUARE ON FOUNDATION EXTENSION AT THE NORTHEAST CORNER OF THE FIRE STATION AT 6850 BARRINGTON ROAD. ELEV = 809.75
- BM #3: CUT SQUARE IN CENTER OF HEADWALL AT THE NORTHEAST CORNER OF POND AT THE NORTHWEST CORNER OF LAKE STREET AND BARRINGTON ROAD. ELEV = 801.95

ALL ELEVATIONS ARE IN NAVD 88.





USER NAME = wTeng
 PLOT SCALE = 20.0000' / 1" =
 PLOT DATE = 7/28/2016

DESIGNED - WJT
 DRAWN - MTC
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 DATE - 06/17/2016

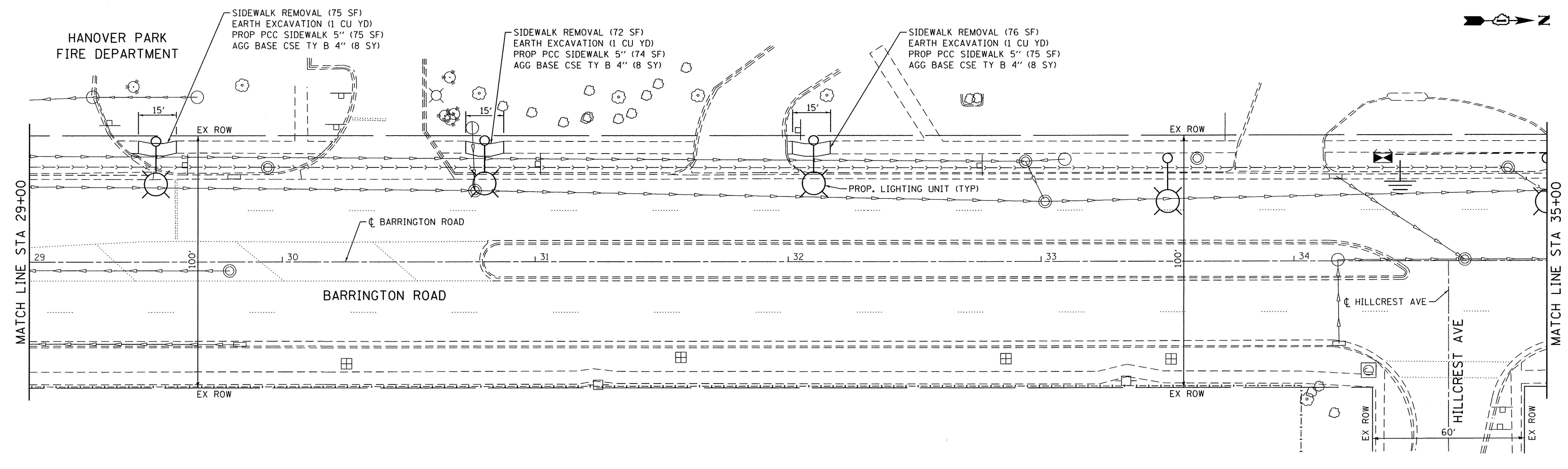
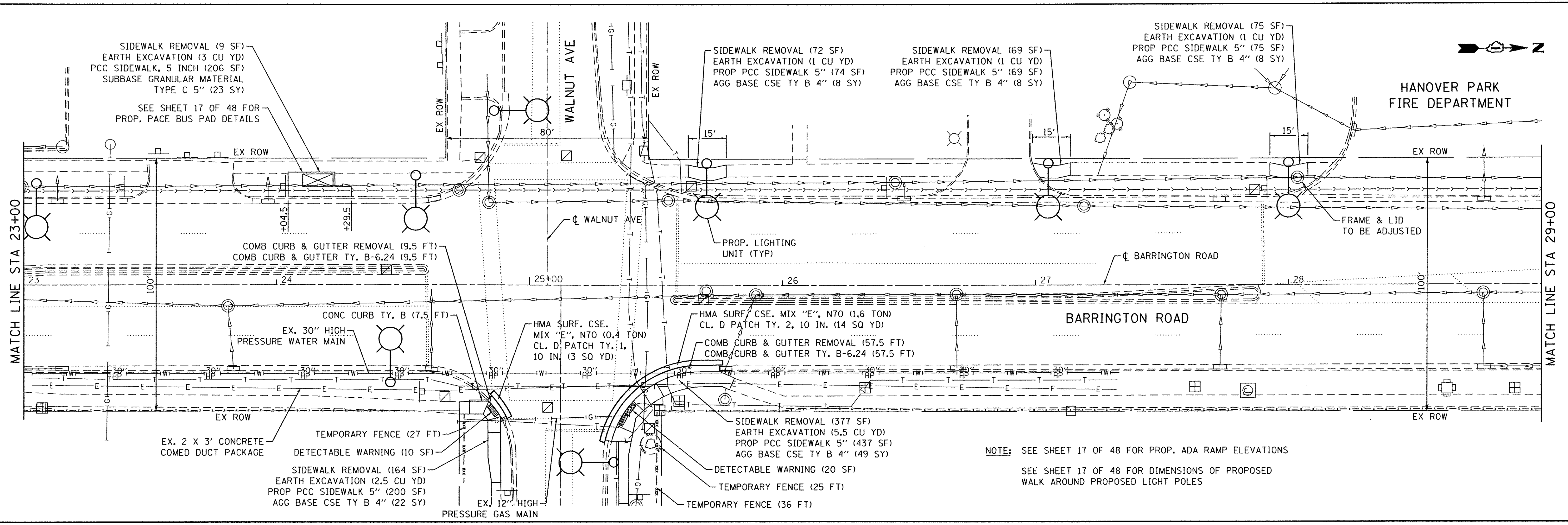
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
 ROADWAY PLANS**

SCALE: 1"=20' SHEET 1 OF 4 SHEETS STA. 11+00 TO STA. 23+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	13
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				



NOTE: SEE SHEET 17 OF 48 FOR PROP. ADA RAMP ELEVATIONS
SEE SHEET 17 OF 48 FOR DIMENSIONS OF PROPOSED WALK AROUND PROPOSED LIGHT POLES

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = wTeng
PLOT SCALE = 20.0000' / 1in.
PLOT DATE = 7/27/2016

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CHECKED - MTC
DATE - 06/17/2016

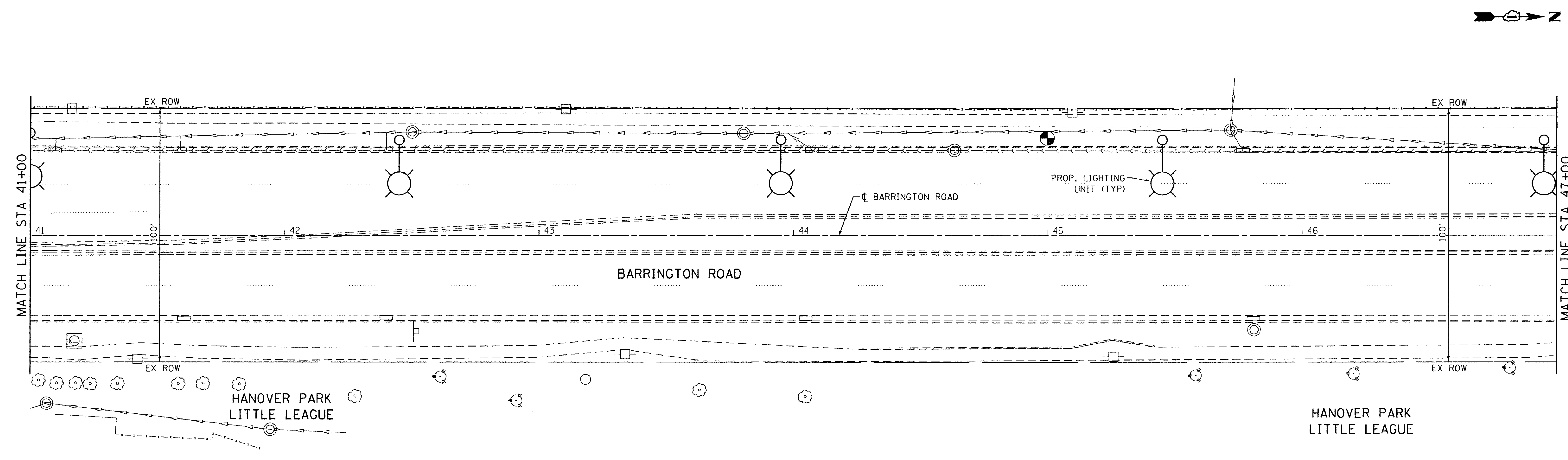
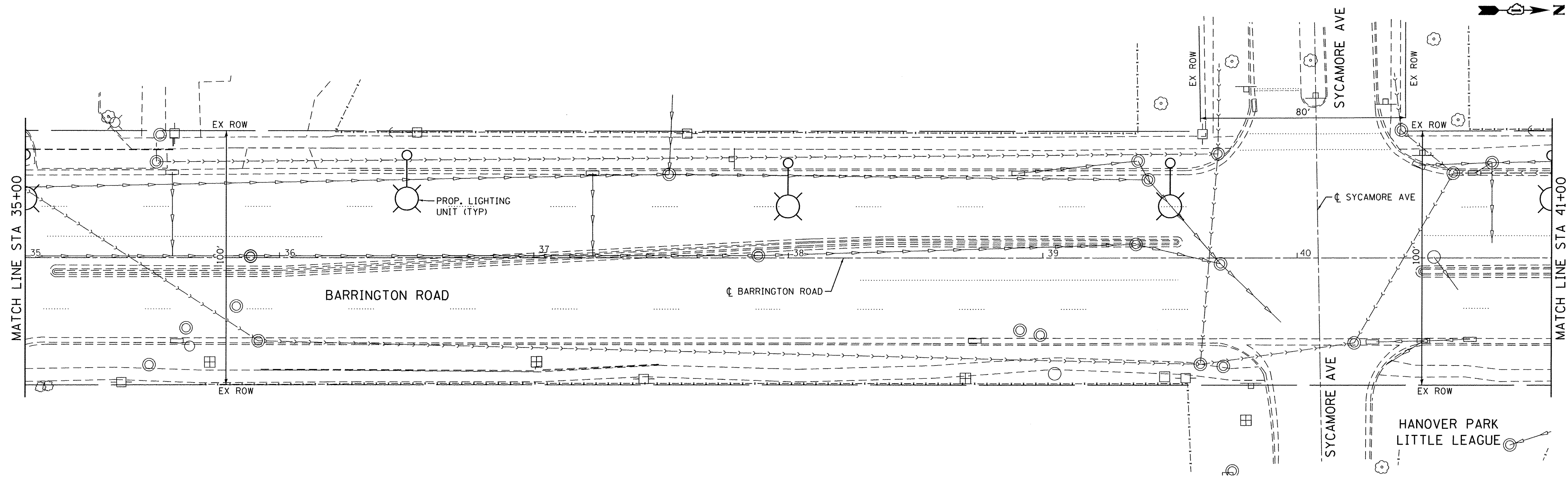
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
ROADWAY PLANS**

SCALE: 1"=20' SHEET 2 OF 4 SHEETS STA. 23+00 TO STA. 35+00

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 14
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40031621				



Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = WTeng
PLOT SCALE = 20,0000' / 1" = 1/16"
PLOT DATE = 7/27/2016

DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

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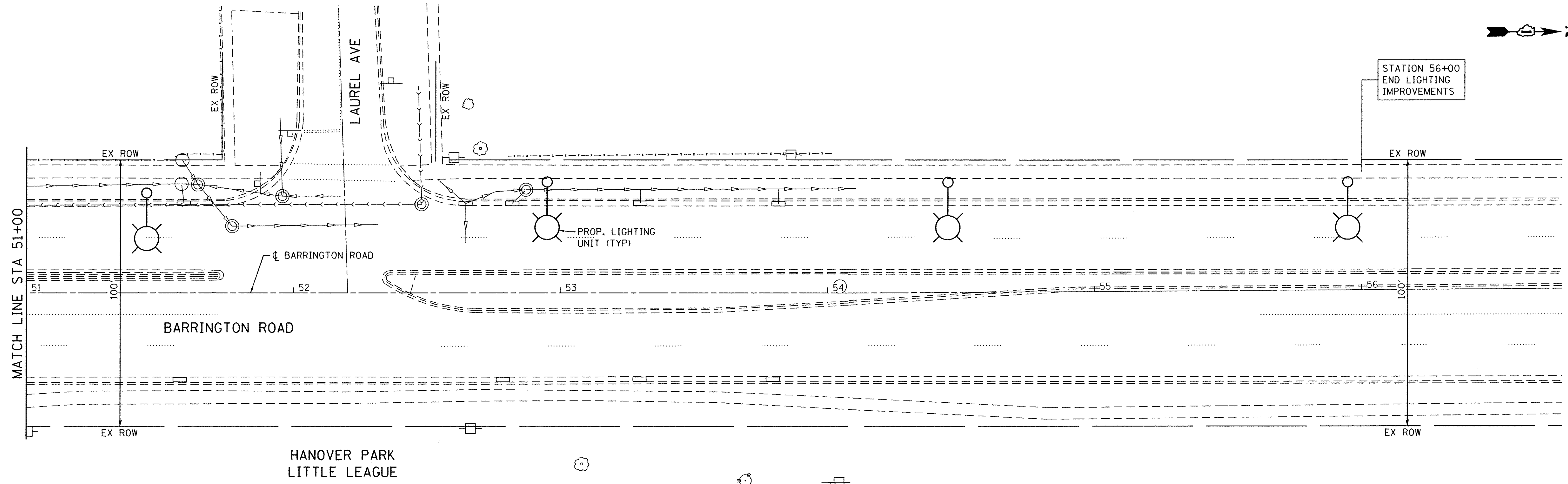
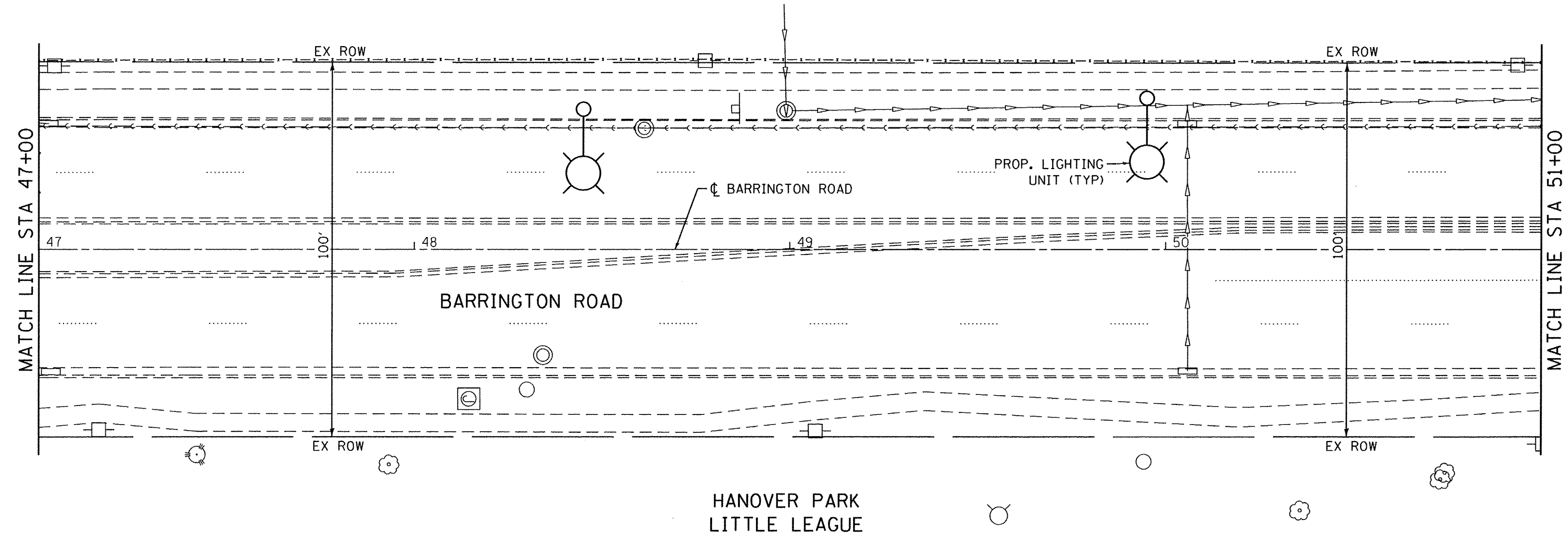
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
ROADWAY PLANS**

SCALE: 1"=20' SHEET 3 OF 4 SHEETS STA. 35+00 TO STA. 47+00

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 15
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT M-4003621	

CONTRACT NO. 61D06



Bollinger, Lach & Associates, Inc.
 ITASCA, ILLINOIS

USER NAME = wTeng	DESIGNED - WJT	REVISED -
	DRAWN - MTC	REVISED -
PLOT SCALE = 20,0000' / in.	CHECKED - MTC	REVISED -
PLOT DATE = 7/28/2016	DATE - 06/17/2016	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
 ROADWAY PLANS**

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 16
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				

SCALE: 1"=20' SHEET 4 OF 4 SHEETS STA. 47+00 TO STA. 54+00

NOTE:
AN ADDITIONAL QUANTITY OF 25 SQ YD OF SODDING, SALT TOLERANT HAS BEEN PROVIDED FOR LOCATIONS BY PROPOSED SIDEWALK FROM STA. 27+05 TO 32+10.



ADA RAMP ELEVATION TABLE BARRINGTON RD & WALNUT AVE NORTHEAST CORNER			
POINT No.:	STATION	OFFSET	ELEV.
1	25+32.95	61.73' RT	MATCH EX.
2	25+35.05	55.46' RT	805.87
3	25+41.37	45.76' RT	806.05
4	25+50.12	38.59' RT	806.72
5	25+67.34	34.17' RT	807.01
6	25+75.28	34.14' RT	MATCH EX.
7	25+35.99	86.40' RT	MATCH EX.
8	25+39.85	86.36' RT	MATCH EX.
9	25+39.76	66.65' RT	806.08
10	25+35.71	61.70' RT	806.12
11	25+40.72	61.64' RT	806.11
12	25+41.36	58.27' RT	805.97
13	25+42.47	52.47' RT	806.05
14	25+45.40	49.44' RT	806.11
15	25+53.05	43.92' RT	806.81
16	25+69.45	40.03' RT	806.95
17	25+76.16	40.01' RT	807.00
18	25+79.01	41.28' RT	MATCH EX.
19	25+81.04	36.72' RT	MATCH EX.

ADA RAMP ELEVATION TABLE BARRINGTON RD & WALNUT AVE SOUTHEAST CORNER			
POINT No.:	STATION	OFFSET	ELEV.
20	24+72.63	46.45' RT	MATCH EX.
21	24+76.63	46.24' RT	806.04
22	24+84.28	46.15' RT	805.91
23	24+88.99	52.06' RT	805.84
24	24+89.06	58.53' RT	806.04
25	24+72.68	51.28' RT	MATCH EX.
26	24+76.68	51.24' RT	805.98
27	24+82.13	51.18' RT	805.95
28	24+84.00	53.59' RT	805.92
29	24+84.06	58.59' RT	806.08
30	24+84.17	68.40' RT	805.96
31	24+85.64	78.38' RT	MATCH EX.
32	24+89.31	78.34' RT	MATCH EX.

THE CONTRACTOR SHALL UTILIZE "DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED" PORTION OF THE IDOT HIGHWAY STANDARD 606001 FOR ESTABLISHING THE EDGE OF PAVEMENT / TOP OF DEPRESSED CURB RELATIONSHIP ON ALL CURB RAMPS.

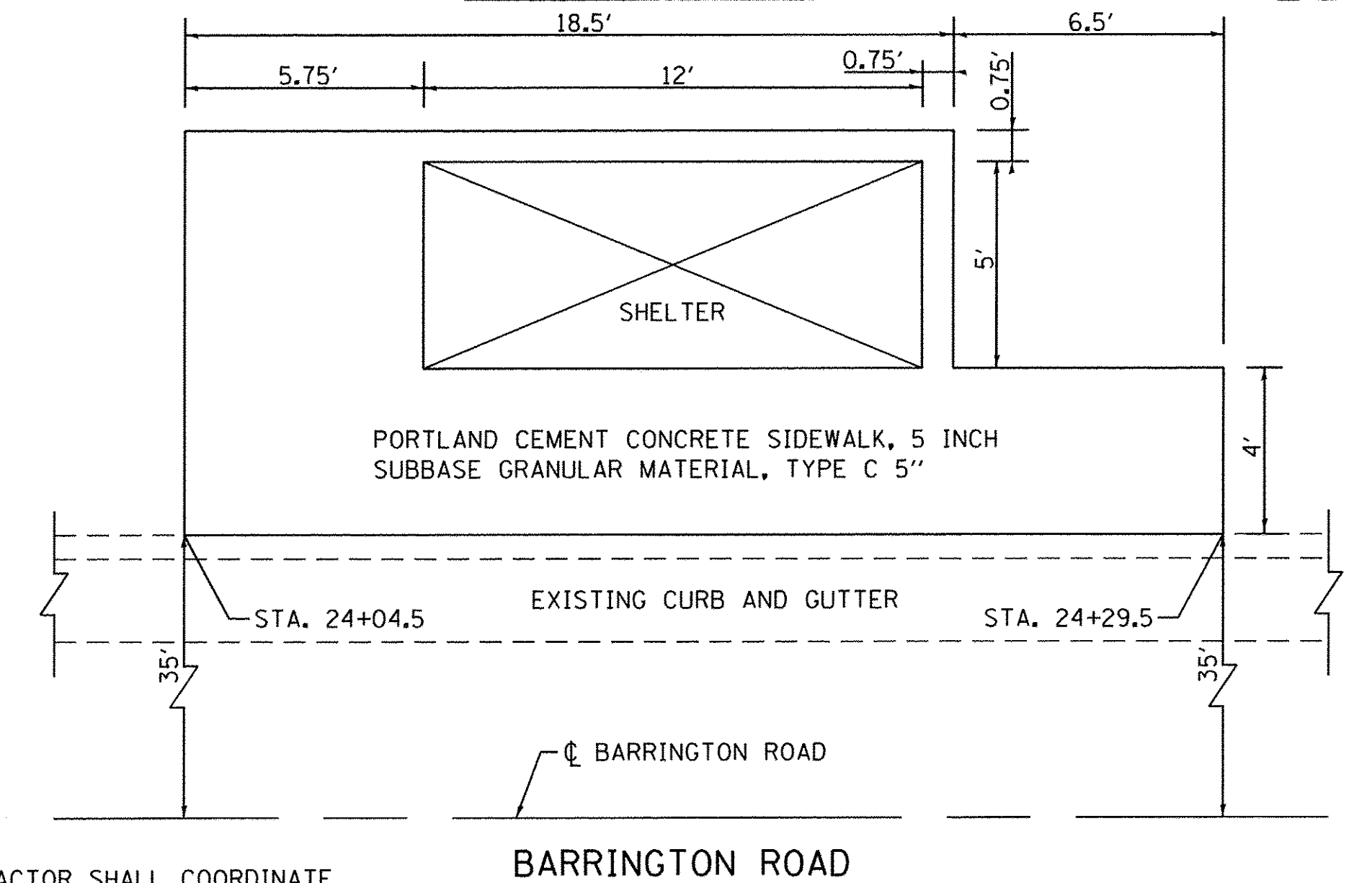
RELATIONSHIP IS AS FOLLOWS:
EOP - TOC (B-6.24): EOP+0.38'=TOC
EOP - TODC (B-6.24): EOP-0.06'=TODC

EOP= EDGE OF PAVEMENT
TOC= TOP OF CURB
TODC= TOP OF DEPRESSED CURB

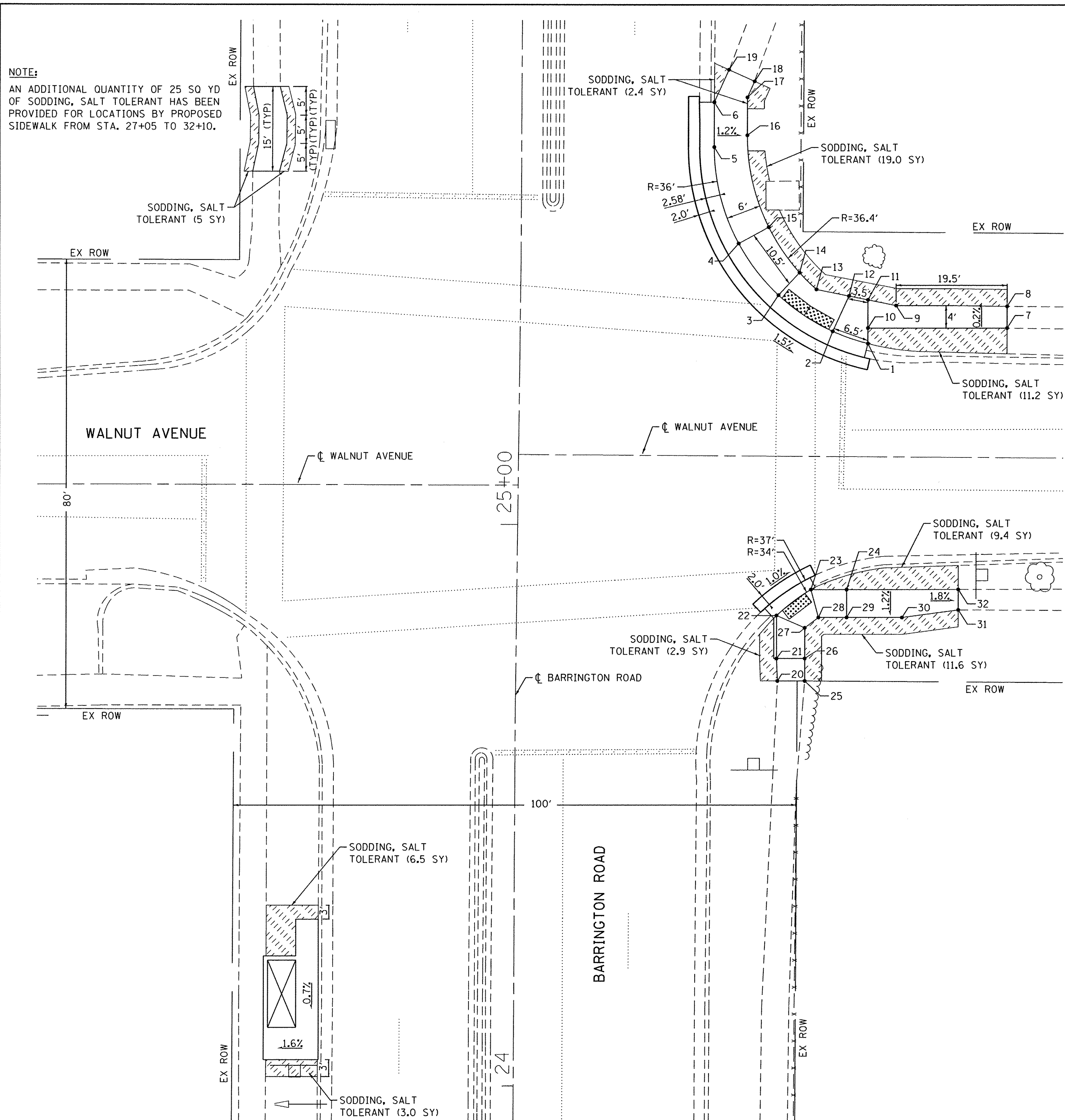
STA. 24+00 TO STA. 32+10		
ITEM	SODDING	QUANTITY
NITROGEN FERTILIZER NUTRIENT	60 LBS/AC X 0.020 AC = 1 LB	1 LB
PHOSPHORUS FERTILIZER NUTRIENT	60 LBS/AC X 0.020 AC = 1 LB	1 LB
POTASSIUM FERTILIZER NUTRIENT	60 LBS/AC X 0.020 AC = 1 LB	1 LB

NOTE:
NITROGEN, PHOSPHORUS, AND POTASSIUM FERTILIZER NUTRIENTS SHALL BE INCLUDED IN THE COST OF SODDING, SALT TOLERANT.

BUS PAD LAYOUT



NOTE:
THE CONTRACTOR SHALL COORDINATE WITH PACE REGARDING THE PROPOSED BUS SHELTER. THE SHELTER WILL BE PROVIDED AND INSTALLED BY PACE.



Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = WTong	DESIGNED - WJT	REVISED -
PLOT SCALE = 10,0000' / in.	DRAWN - MTC	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
ADA RAMP AND PACE BUS PAD DETAILS

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

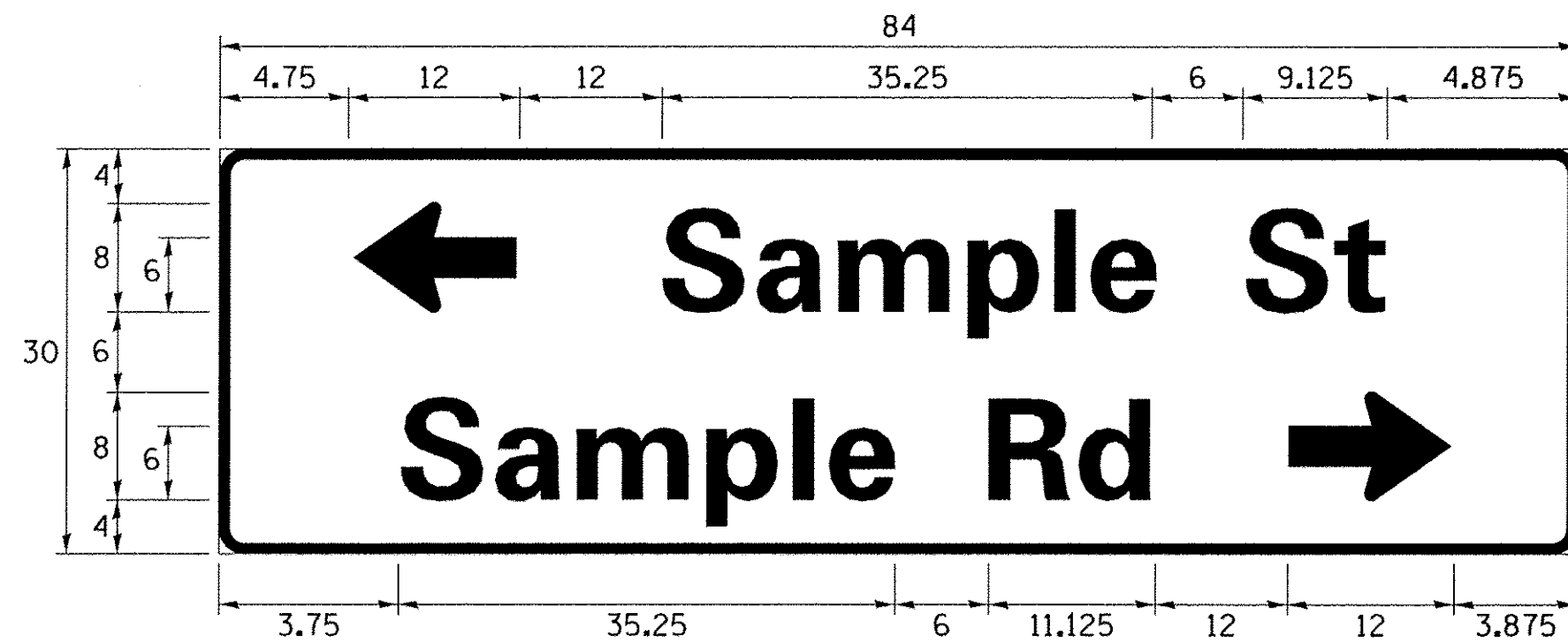
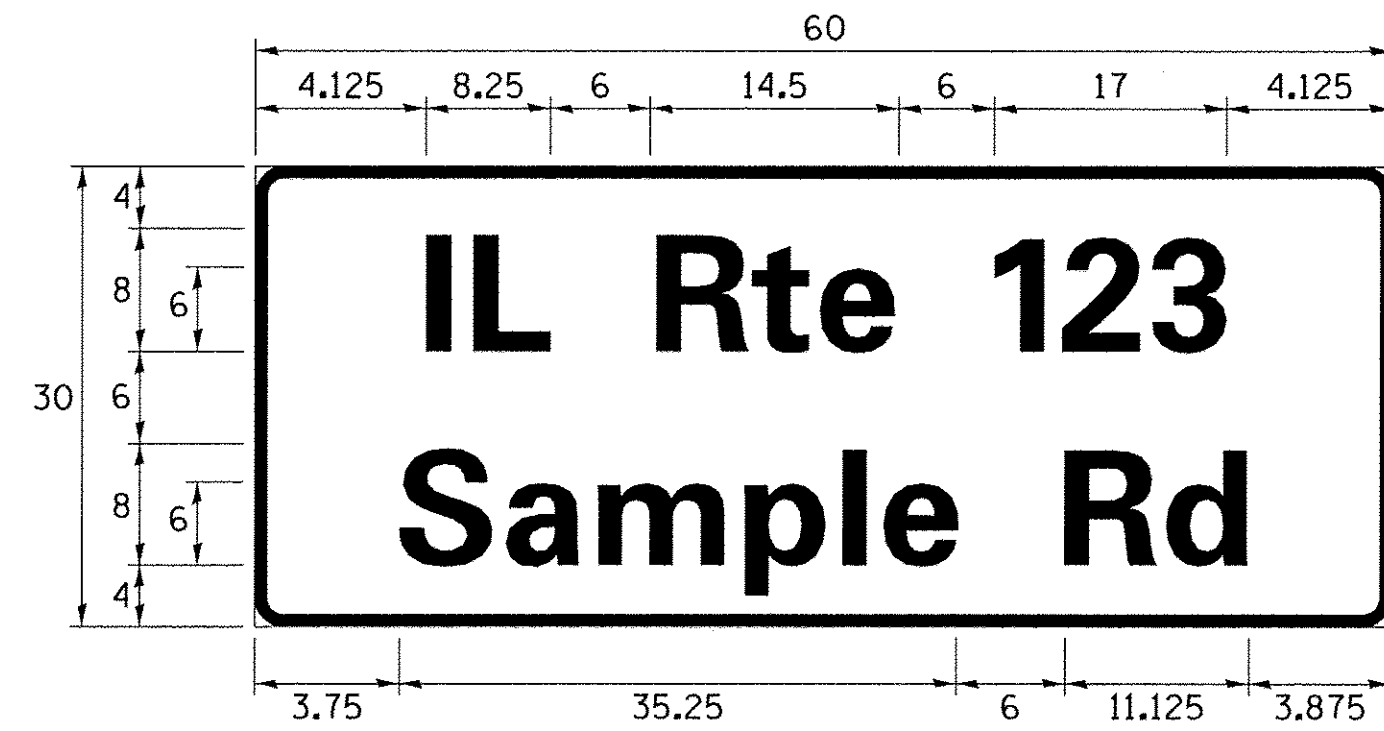
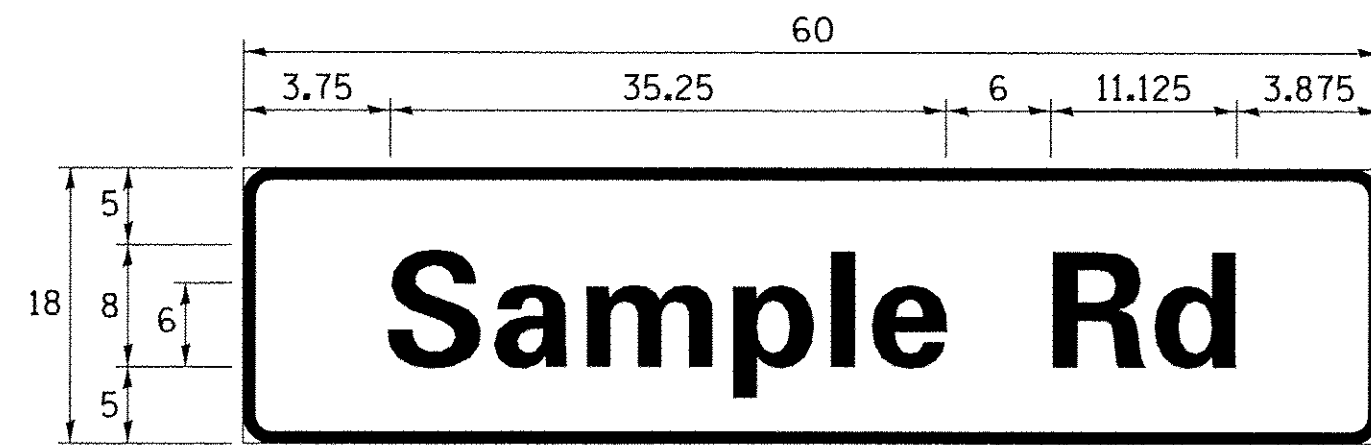
F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 17
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				

SIGN PANEL – TYPE 1 OR TYPE 2

GENERAL NOTES

STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

ALL DIMENSIONS ARE IN INCHES EXCEPT NOTED OTHERWISE

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVIATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

- 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 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-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 CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS SHALL BE 3/4" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6", IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8'-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:

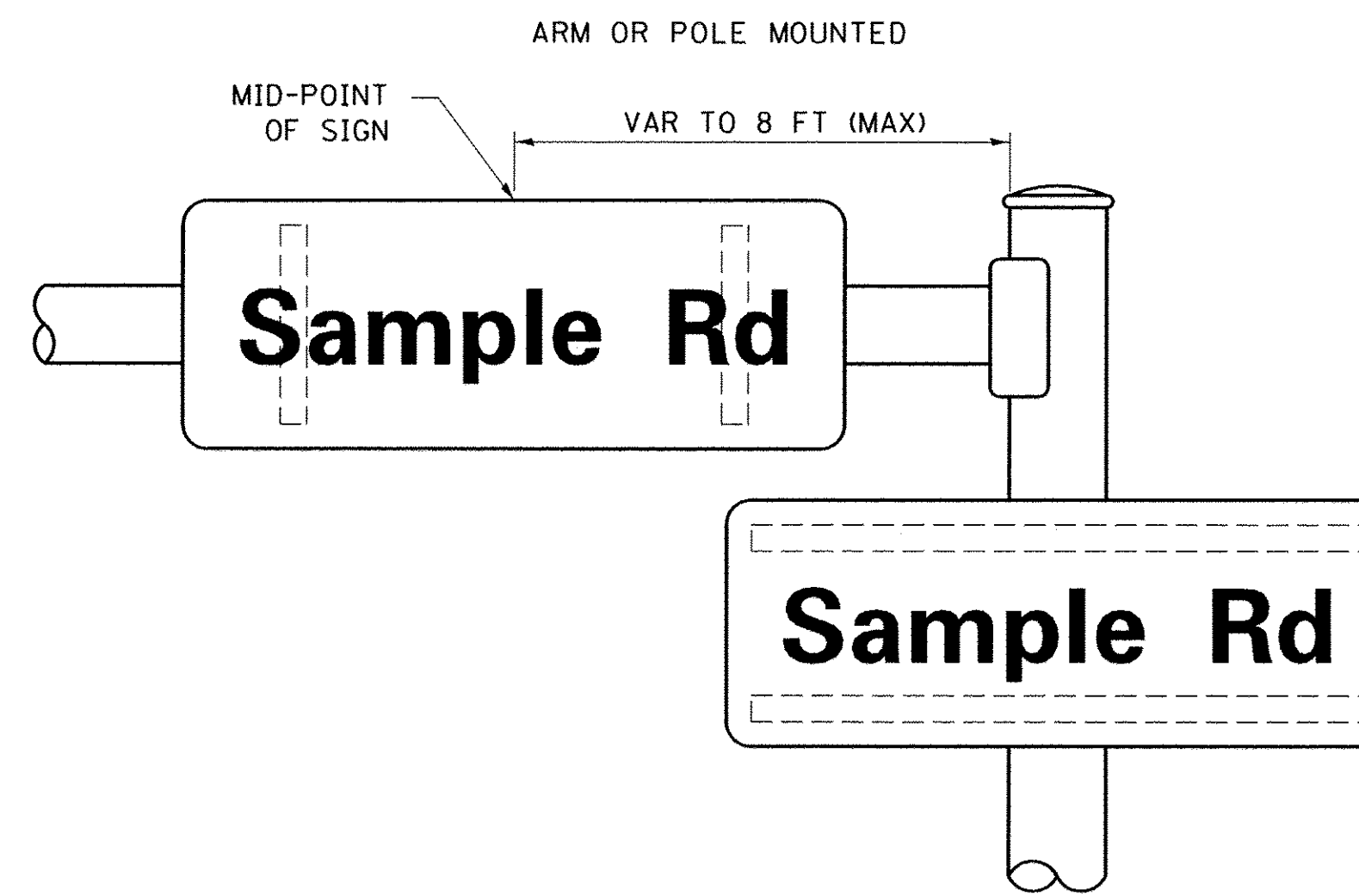
- J.O. HERBERT COMPANY, INC
MIDLOTHIAN, VA
- WESTERN REMAC, INC.
WOODRIDGE, IL

PARTS LISTING:

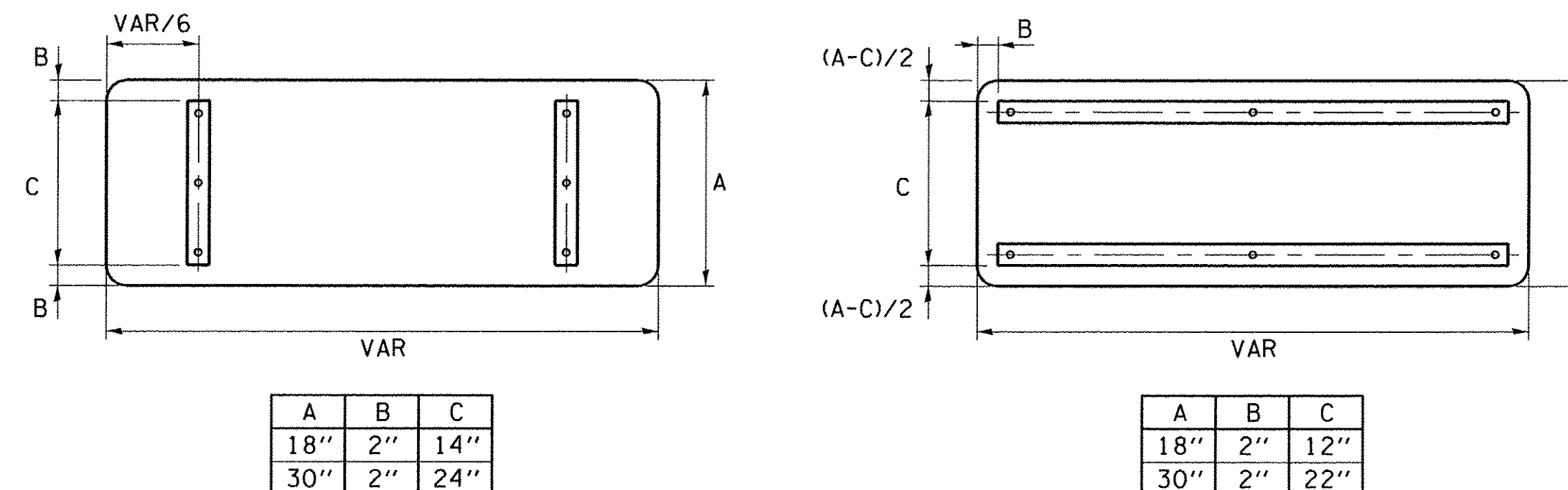
- SIGN CHANNEL PART *HPN053 (MED. CHANNEL)
SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
SELF TAPPING WITH NEOPRENE WASHER
- BRACKETS PART *HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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

MOUNTING LOCATION



SUPPORTING CHANNELS



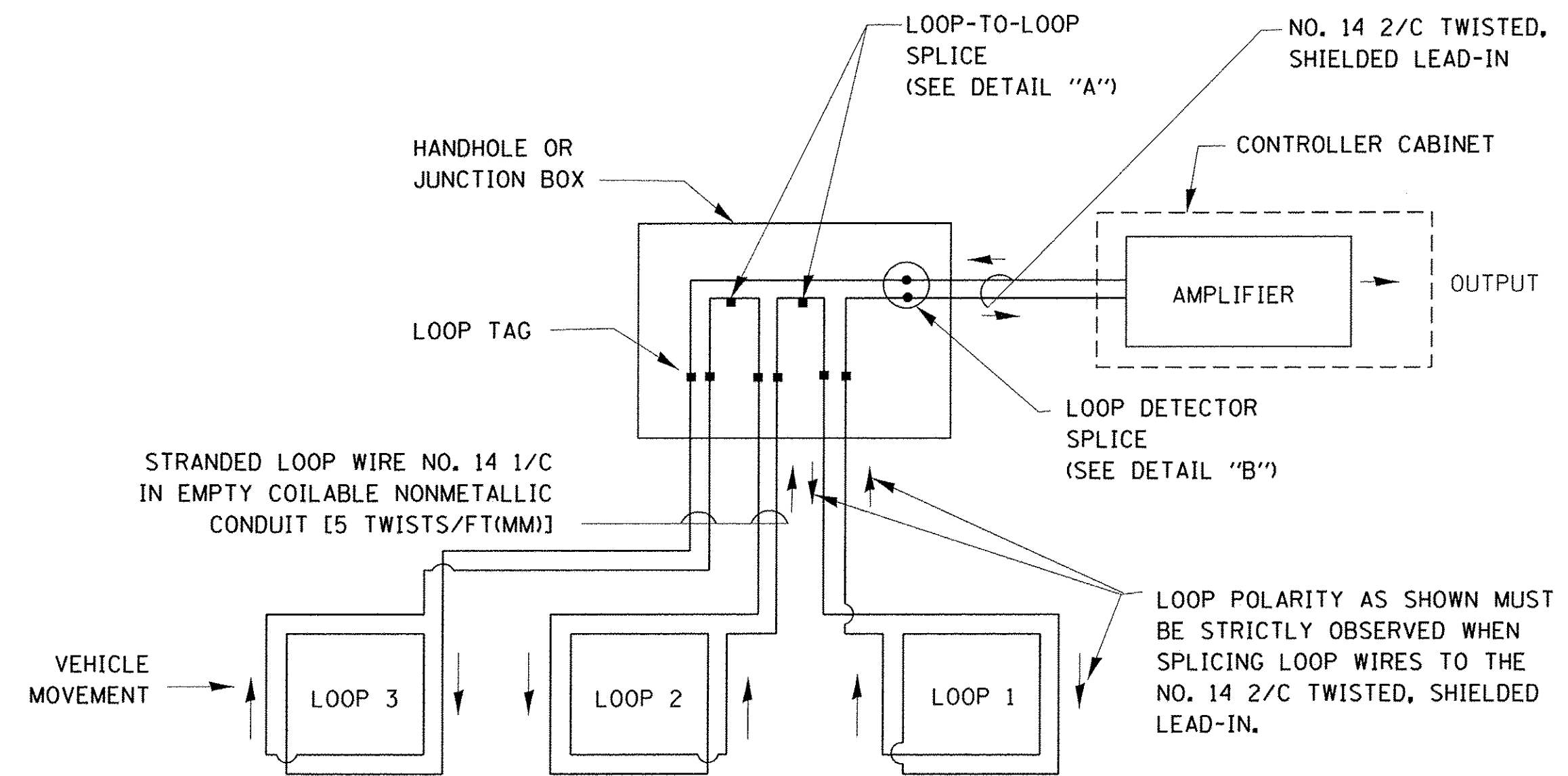
FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED												
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE															
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE															
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA															
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED															
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F															
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F															
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F															
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F															
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE															
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED															
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED															
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED															
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED															
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED															
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR															
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR															
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR															
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR															
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EXISTING</th> <th style="width: 50%;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>				EXISTING	PROPOSED										
EXISTING	PROPOSED																						
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED																			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID																			
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER																			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT																			
DETECTOR LOOP, TYPE I				RADIO REPEATER																			
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED																			
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																			
VIDEO DETECTION CAMERA																							
VIDEO DETECTION ZONE																							
PAN, TILT, ZOOM CAMERA																							
WIRELESS DETECTOR SENSOR																							
WIRELESS ACCESS POINT																							

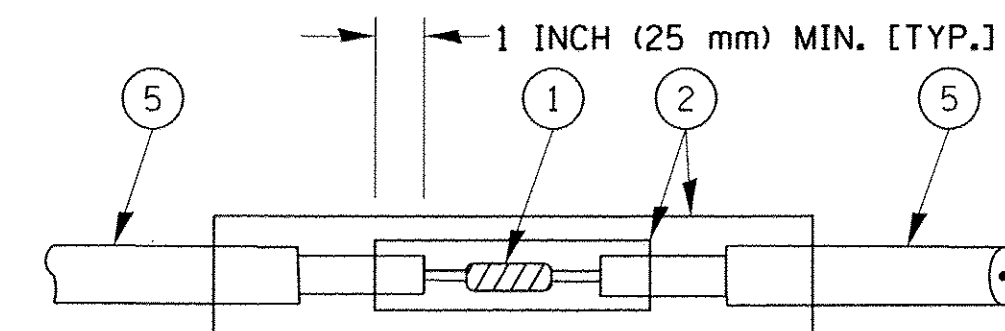
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT 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.

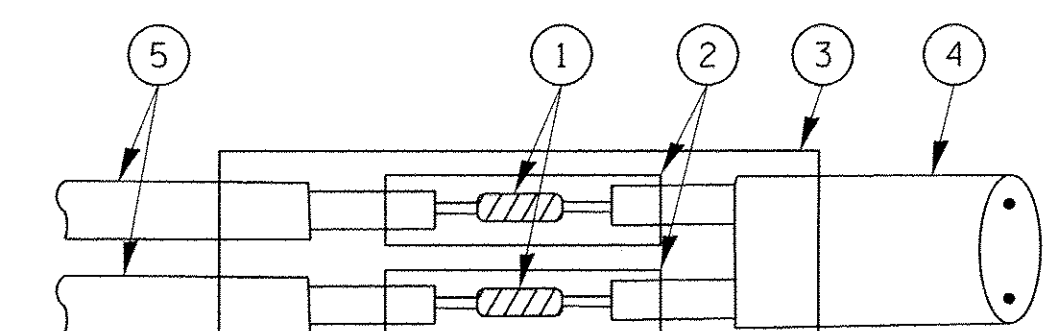


DETECTOR LOOP WIRING SCHEMATIC

- 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.



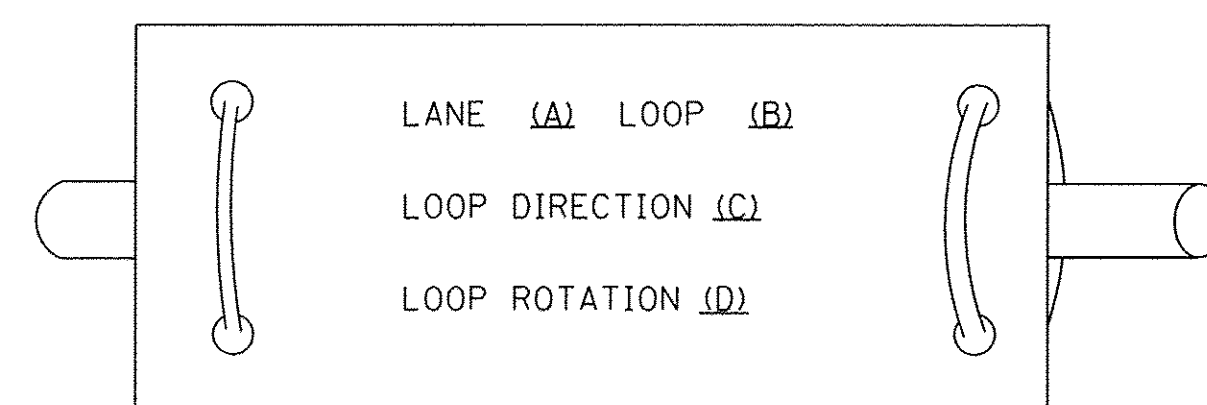
DETAIL "A"
LOOP-TO-LOOP SPLICE



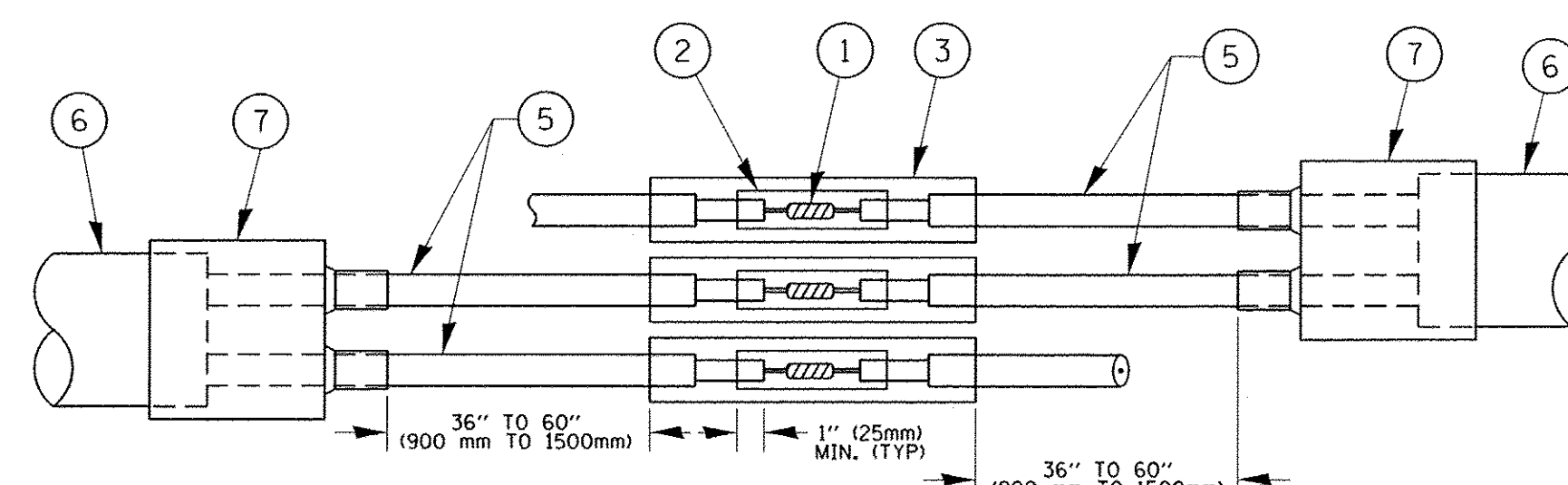
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP

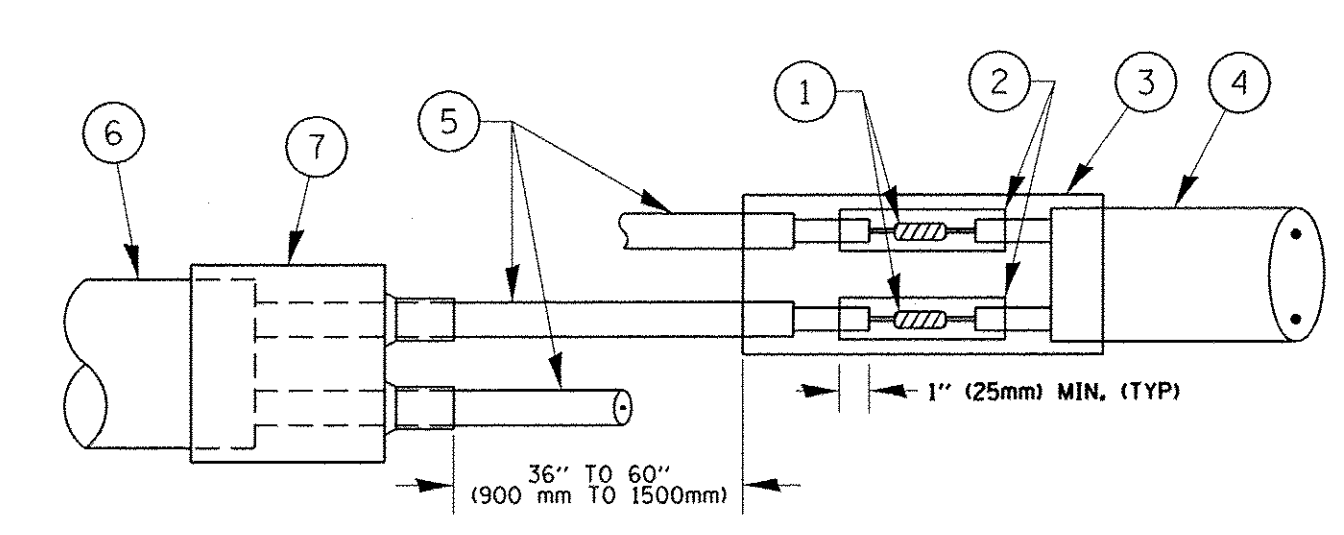
LOOP LEAD-IN CABLE TAG



- 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

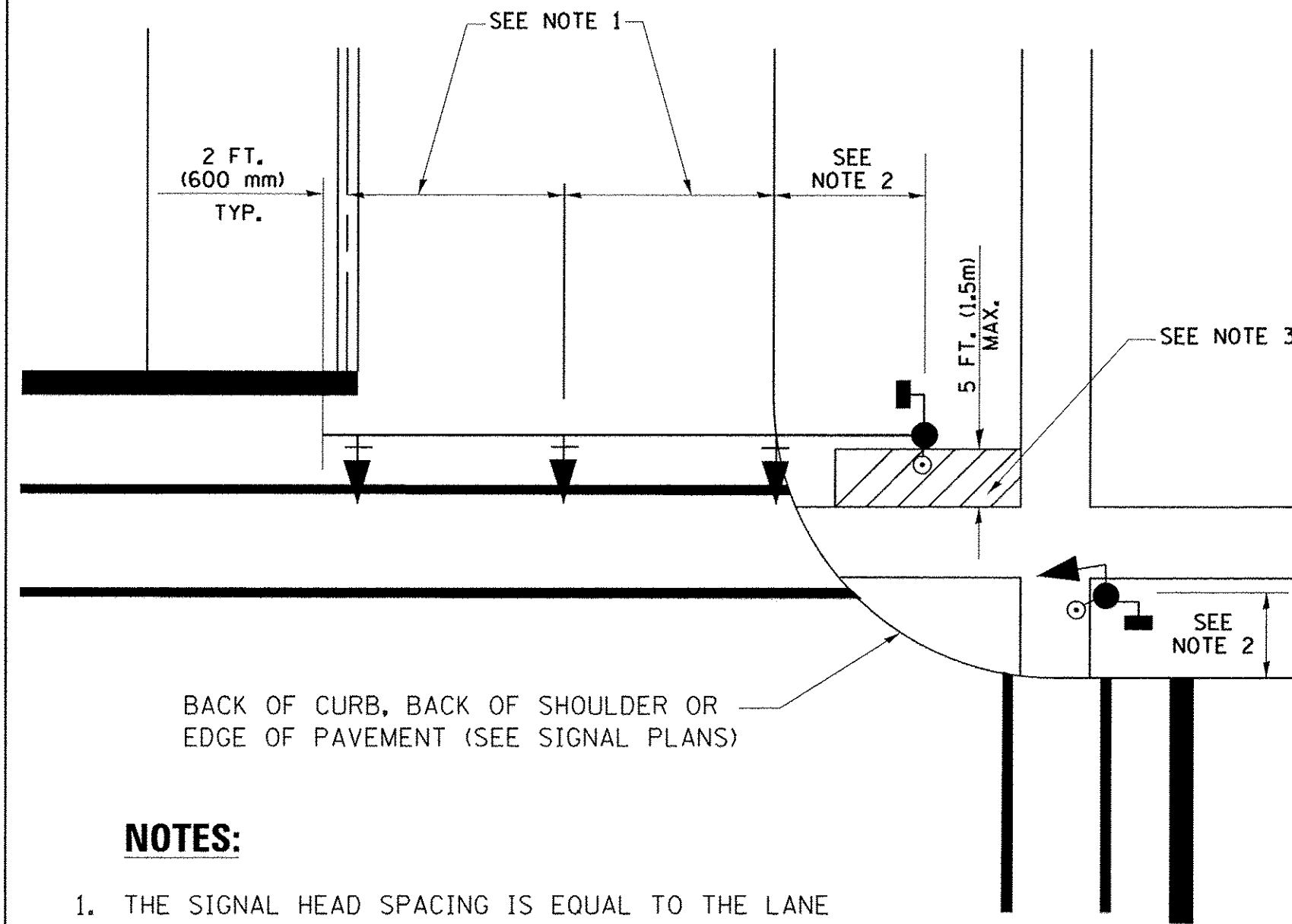
PREFORMED LOOP

LOOP DETECTOR SPLICE

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 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.
- ⑥ PREFORMED LOOP
- ⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = Footemj	DESIGNED - DAD	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 20
ci:\pw_work\pwidot\Footemj\08108315\ts05.dgn	PLOT SCALE = 50,0000' / in.	DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA. TO STA.	TS-05		CONTRACT NO. 61D06		
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (621)							
		DATE - 10-28-09	REVISED -									

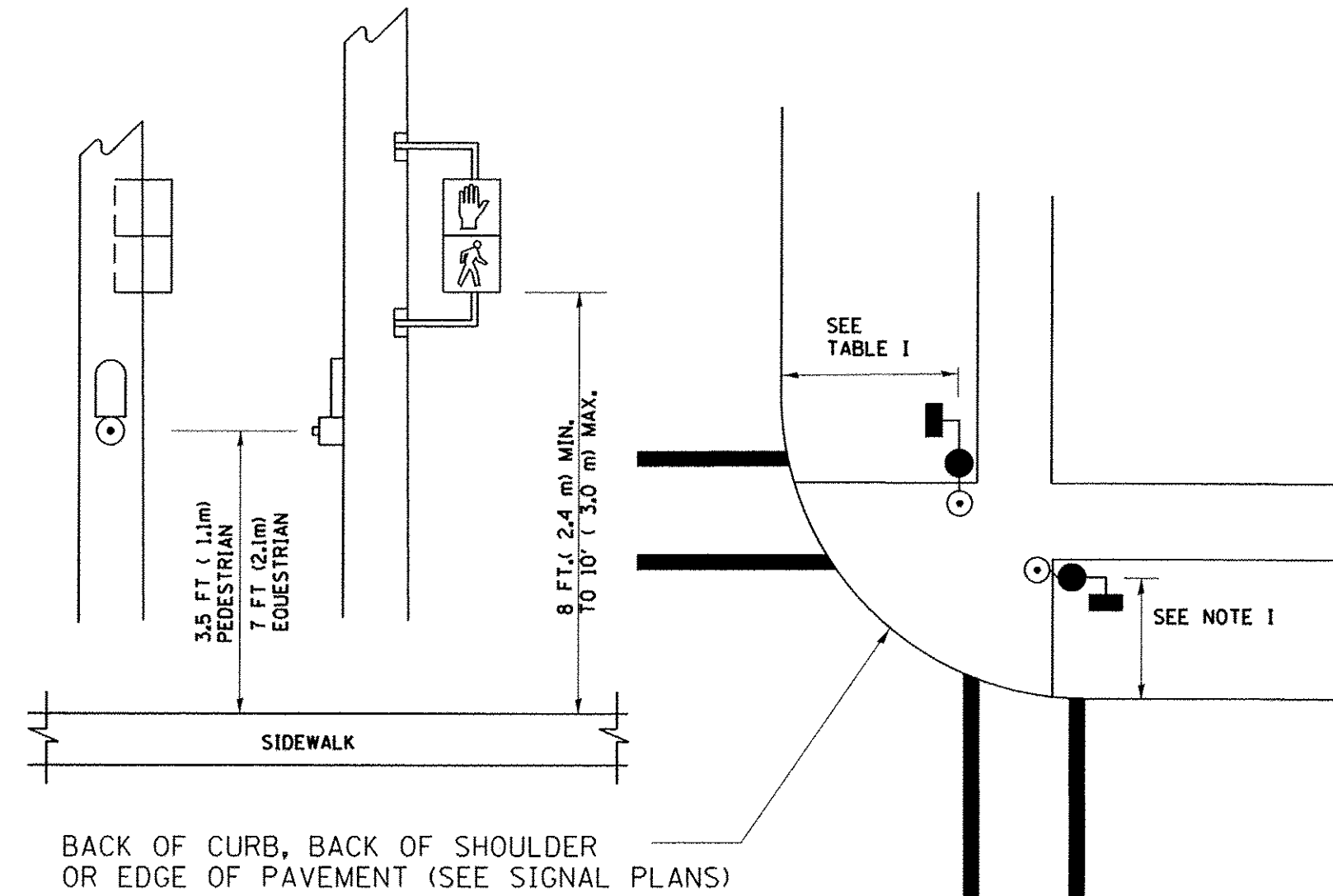
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

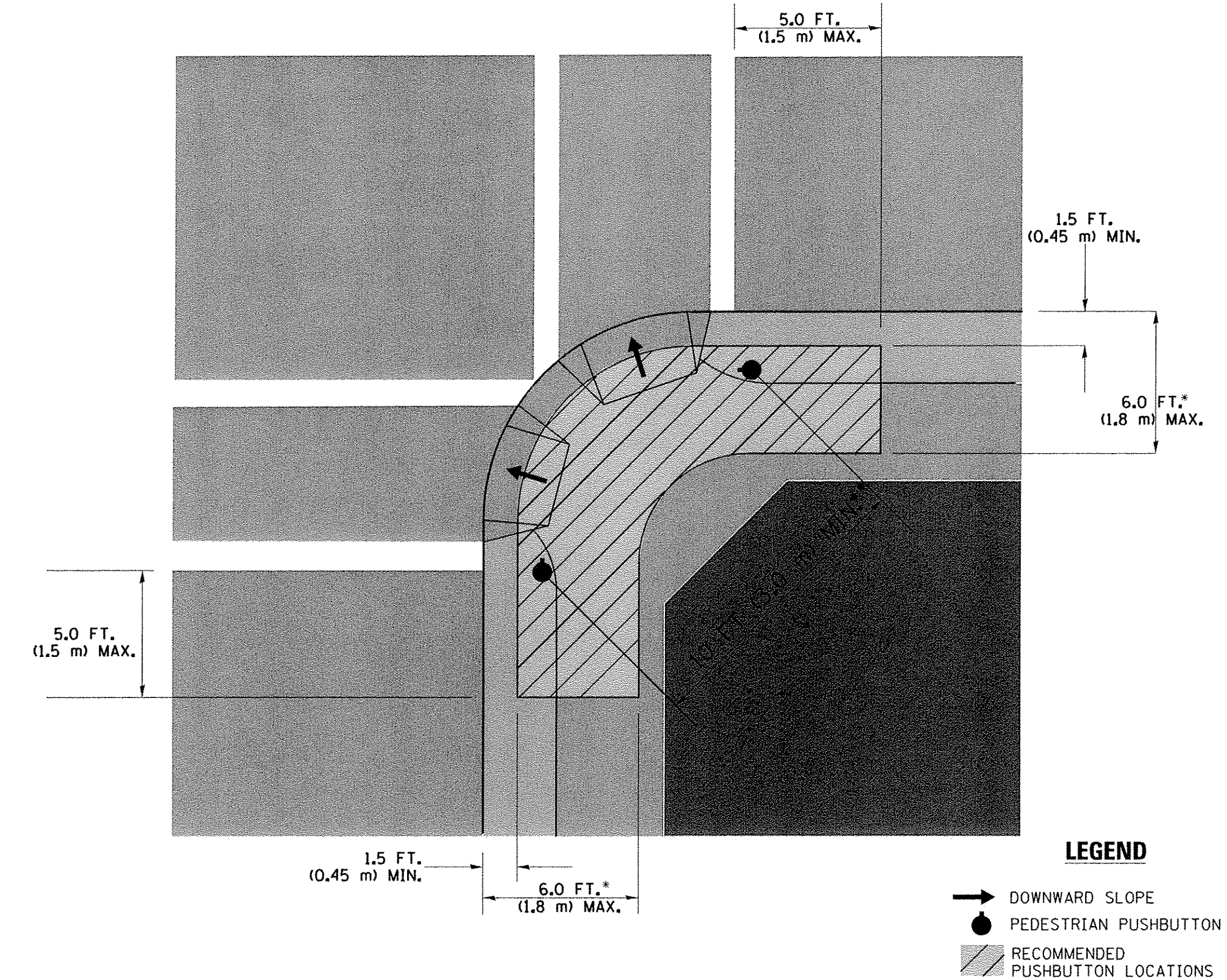
PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

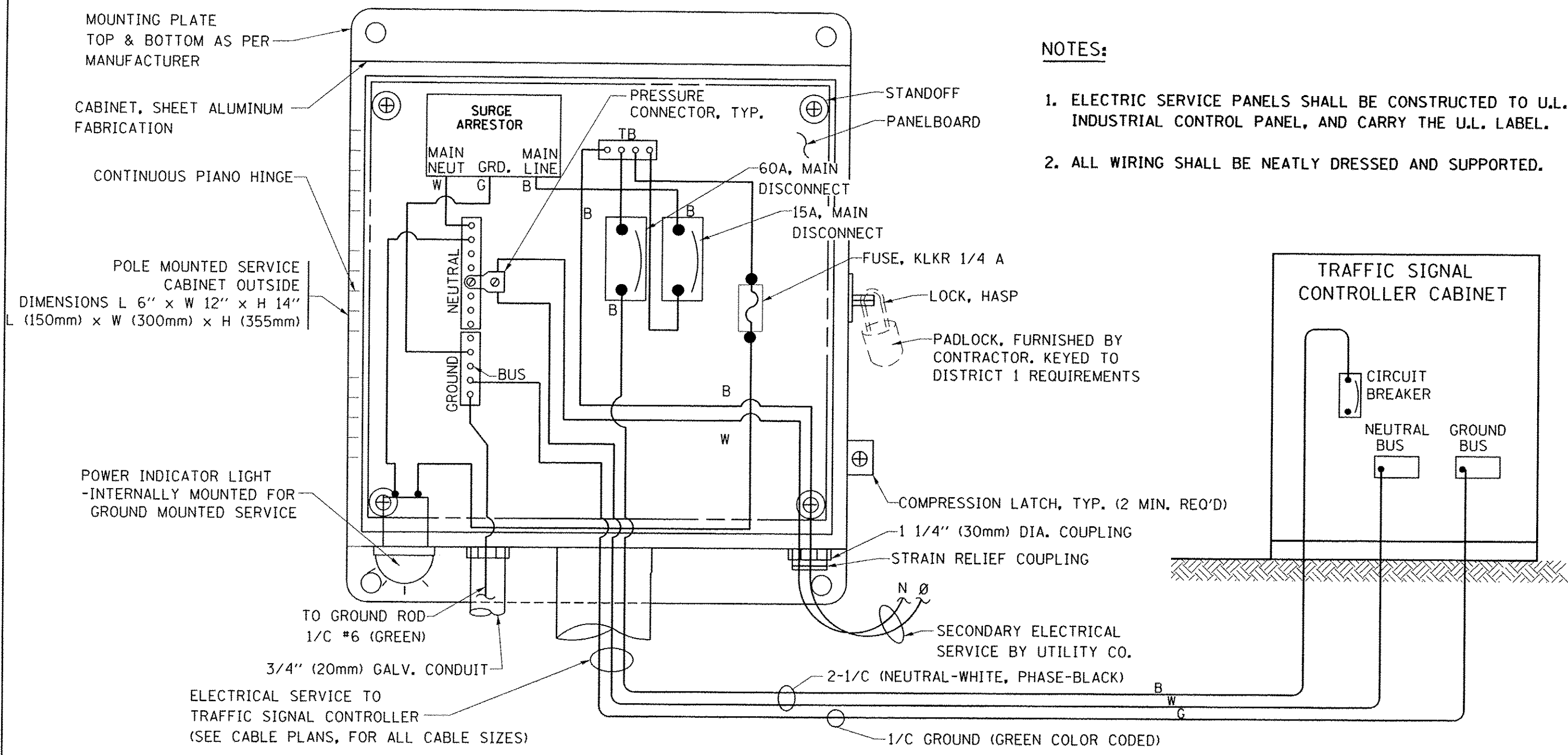
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

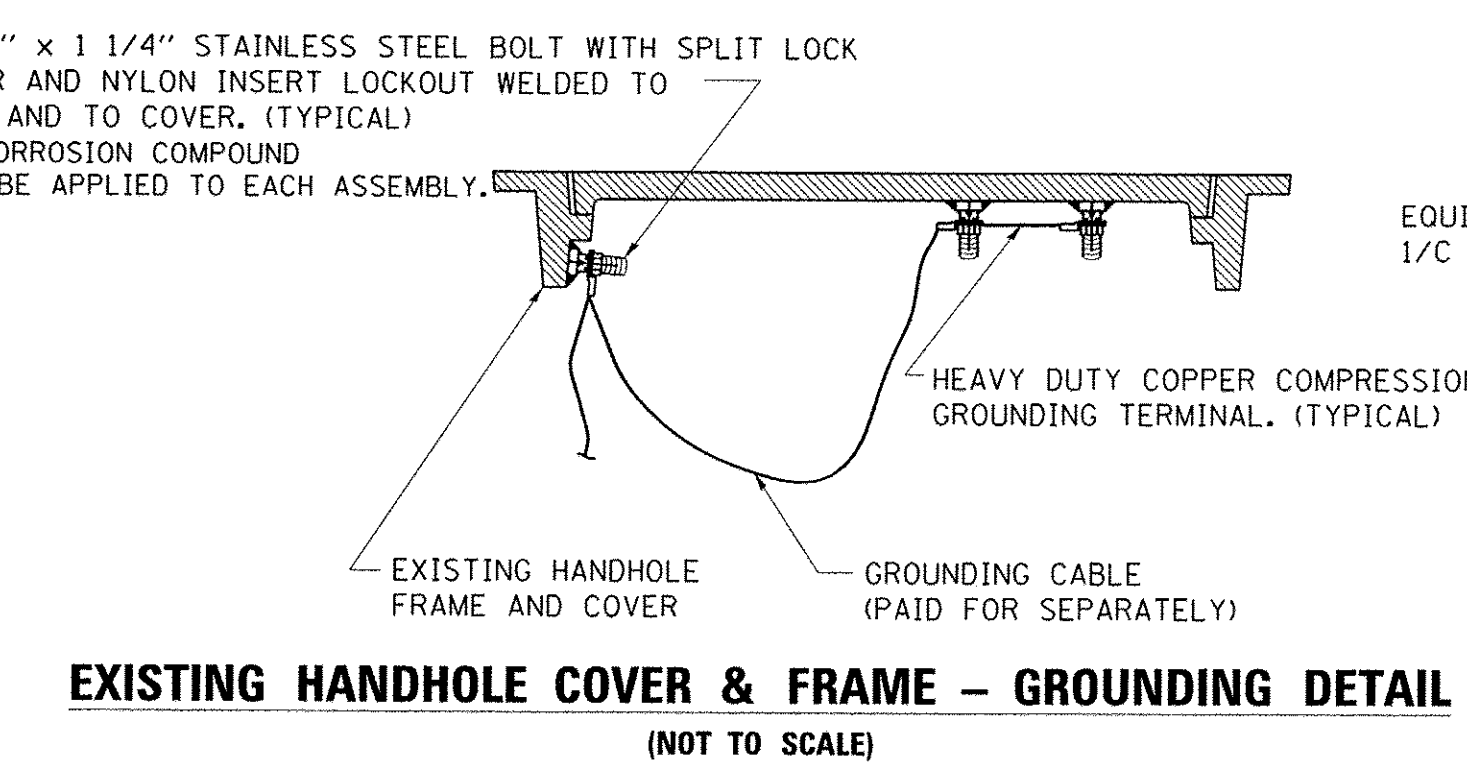
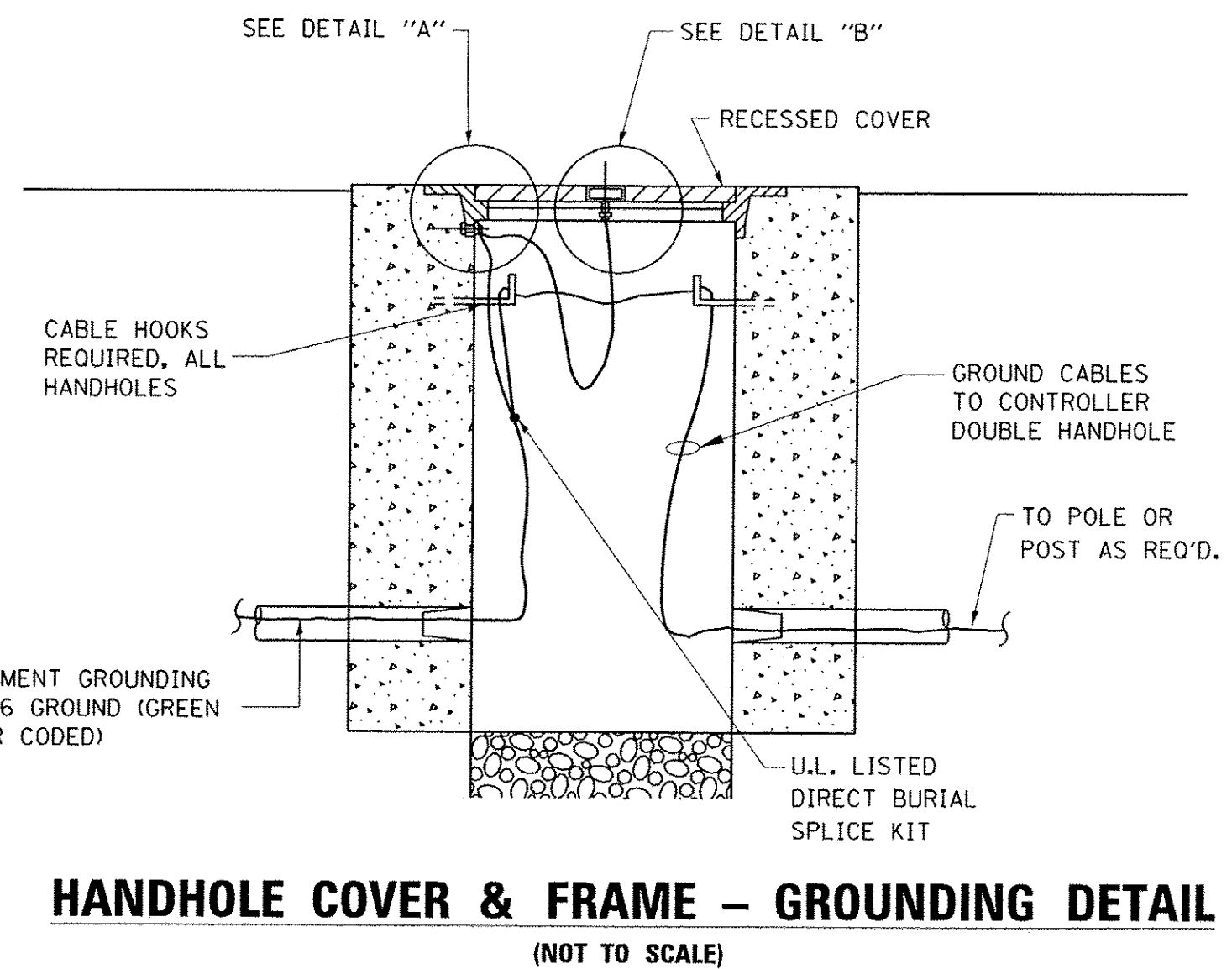
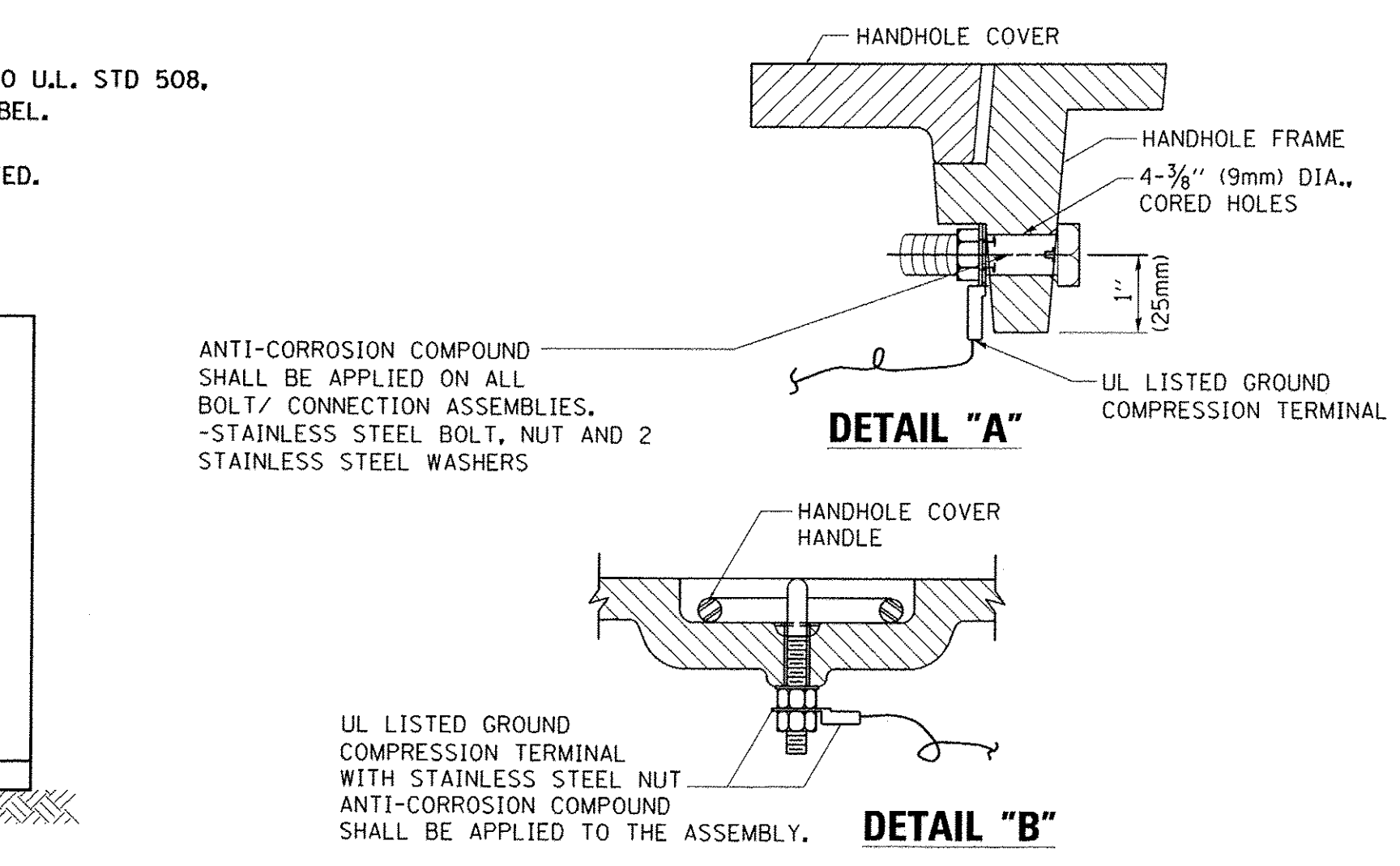
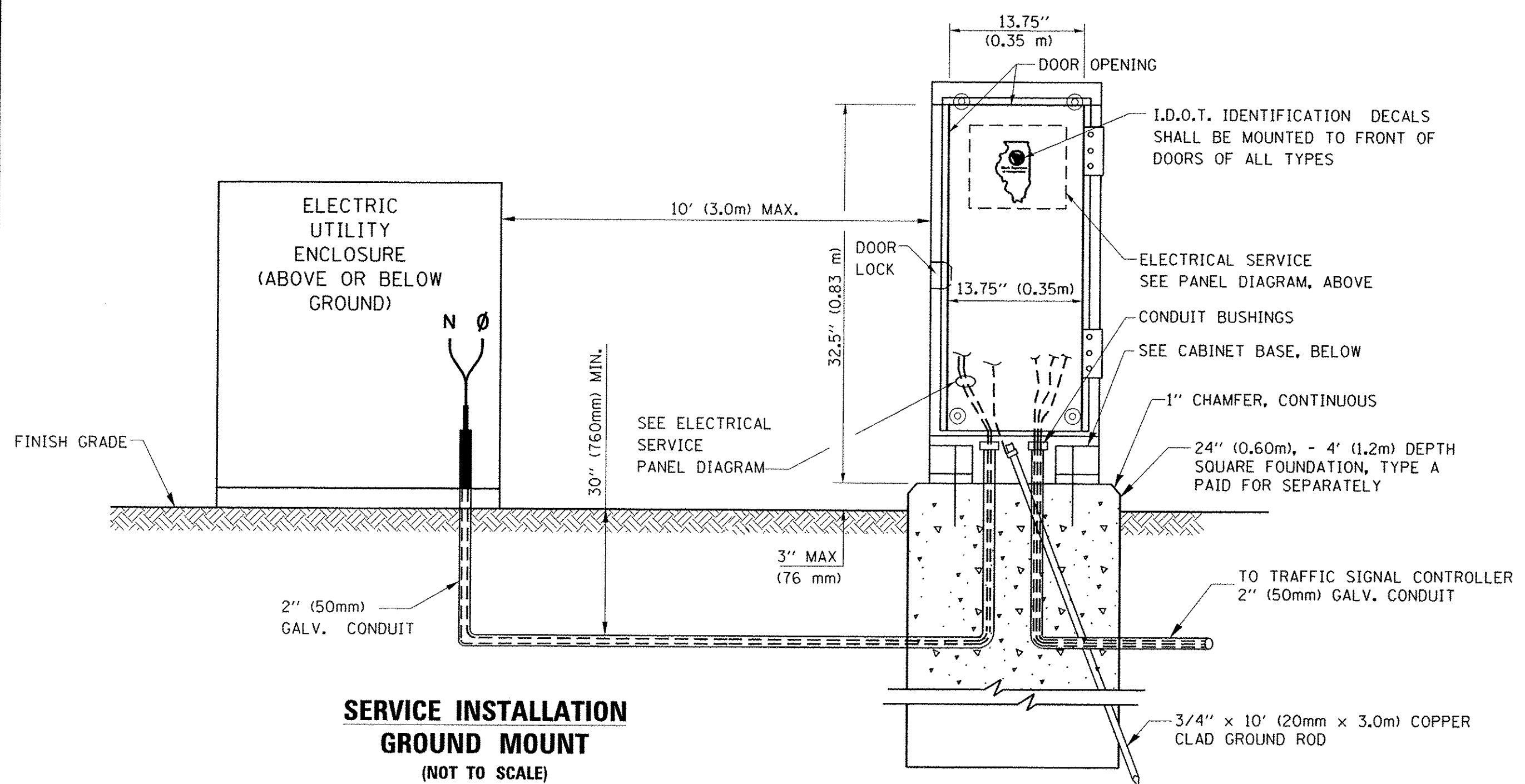
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD AFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.



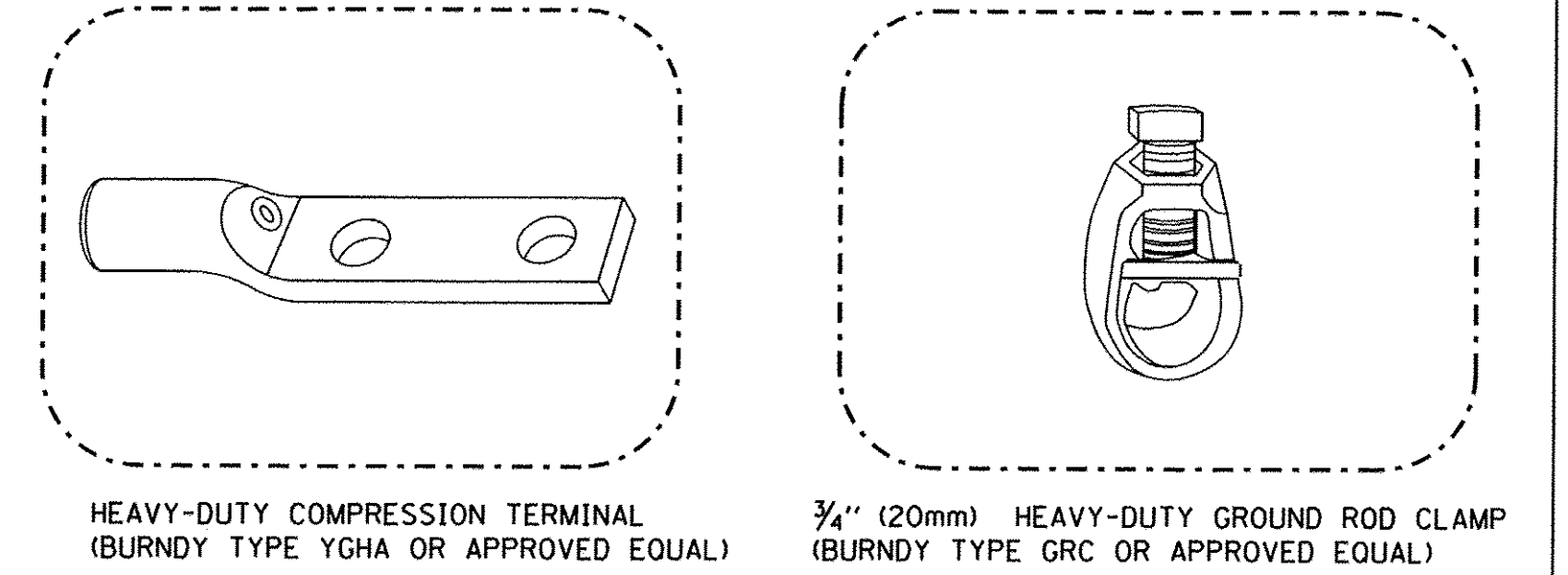
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)



NOTES:

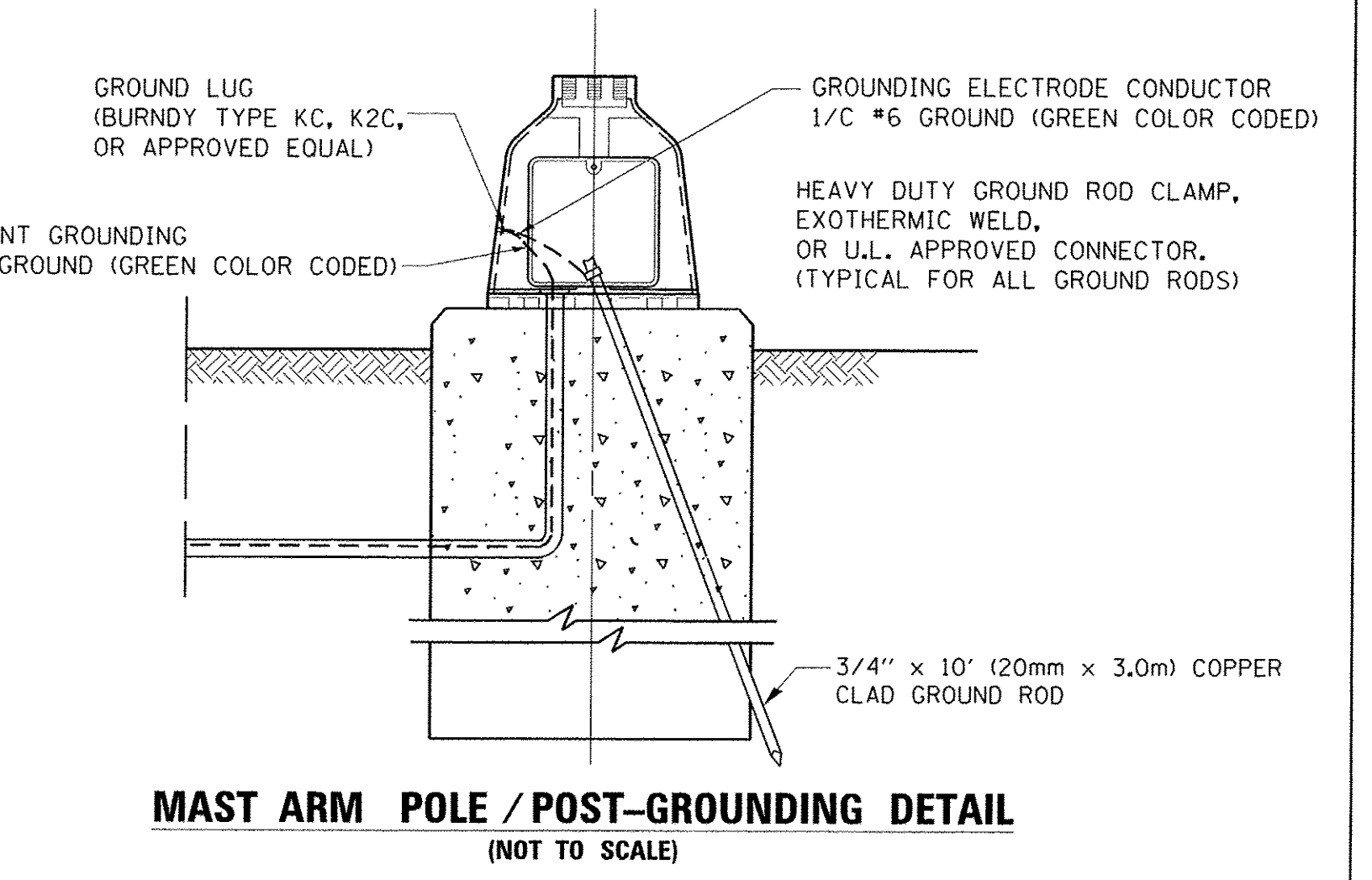
GROUNDING SYSTEM

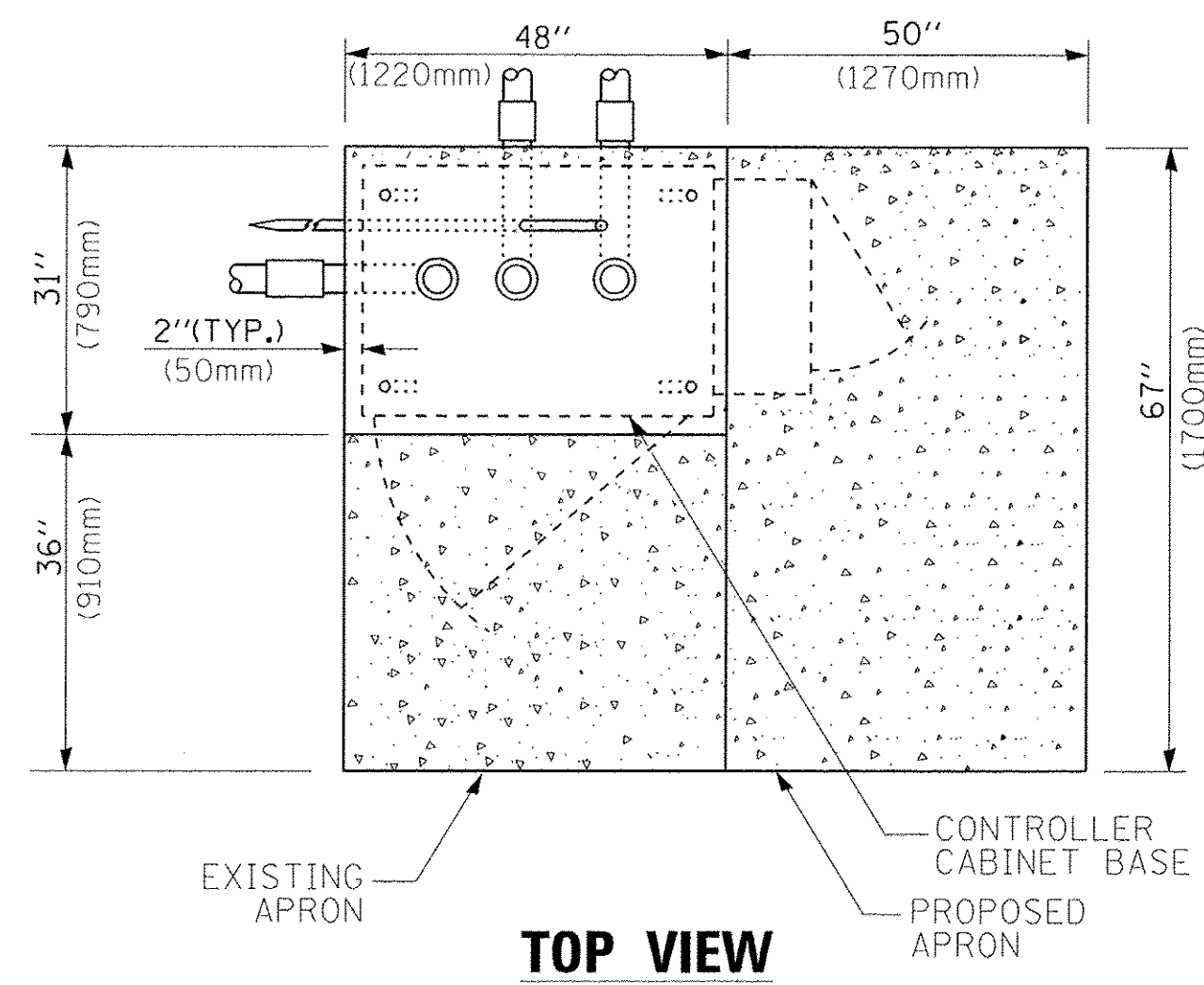
- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, 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.



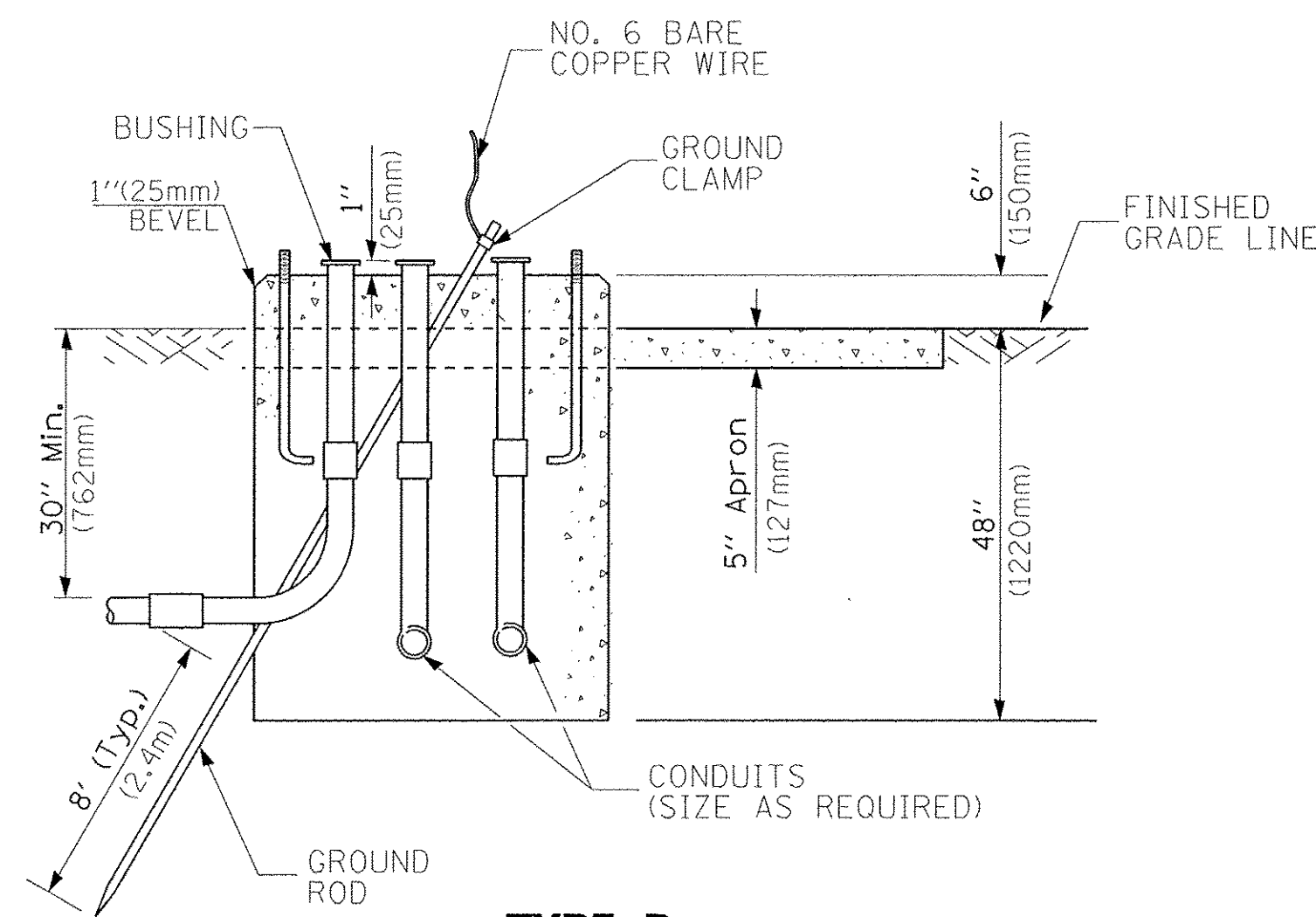
NOTES:

- 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.

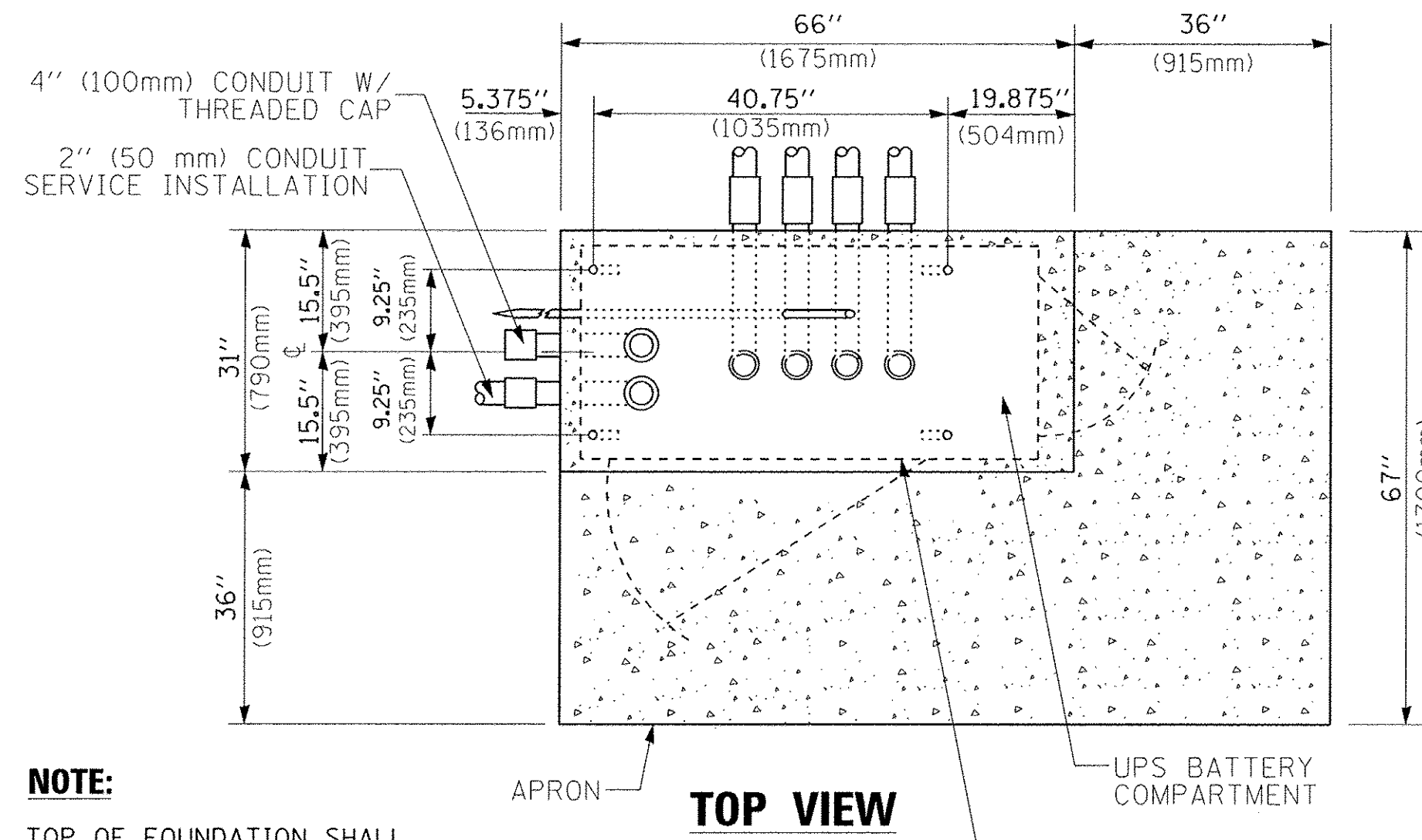




TOP VIEW



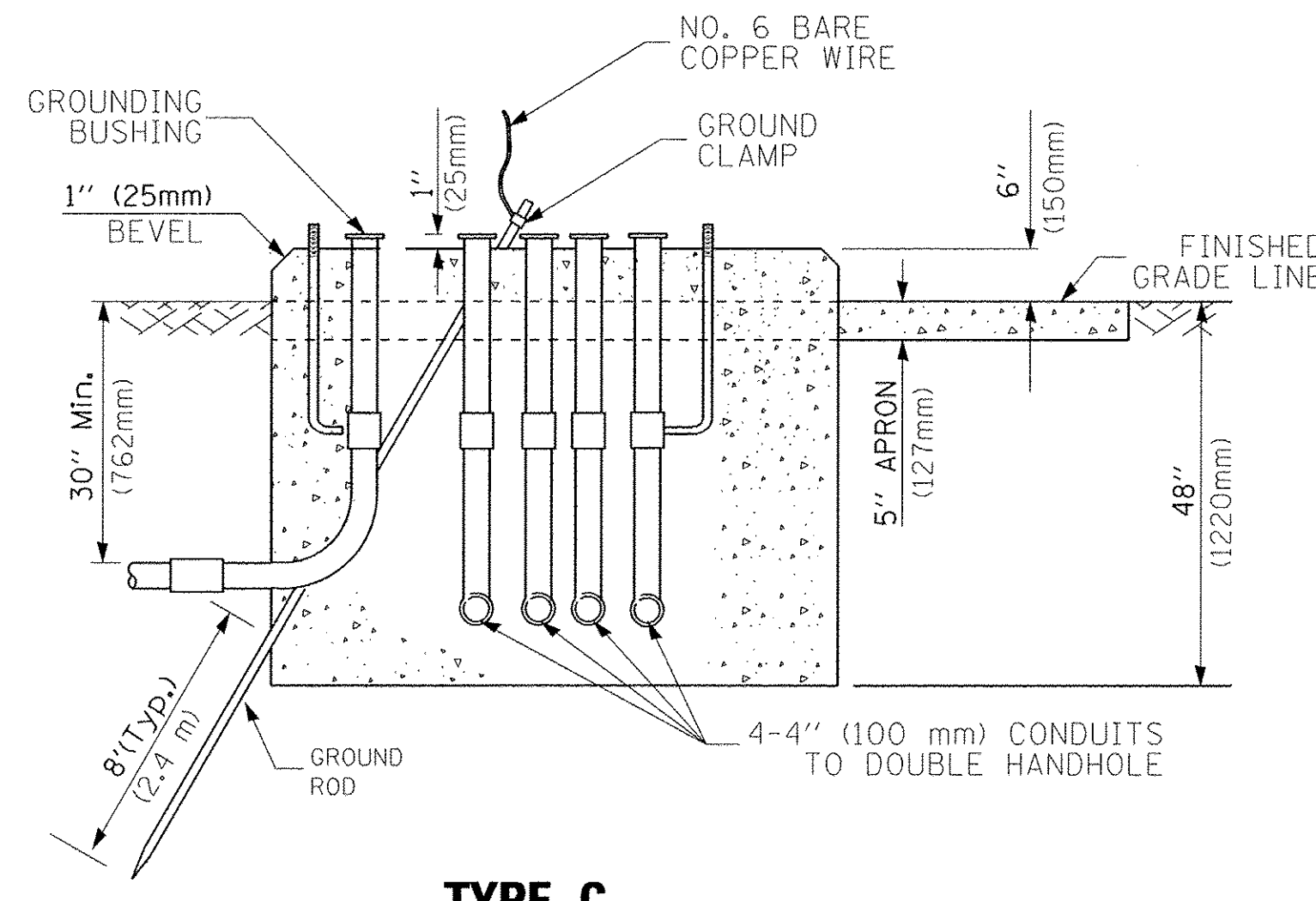
**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



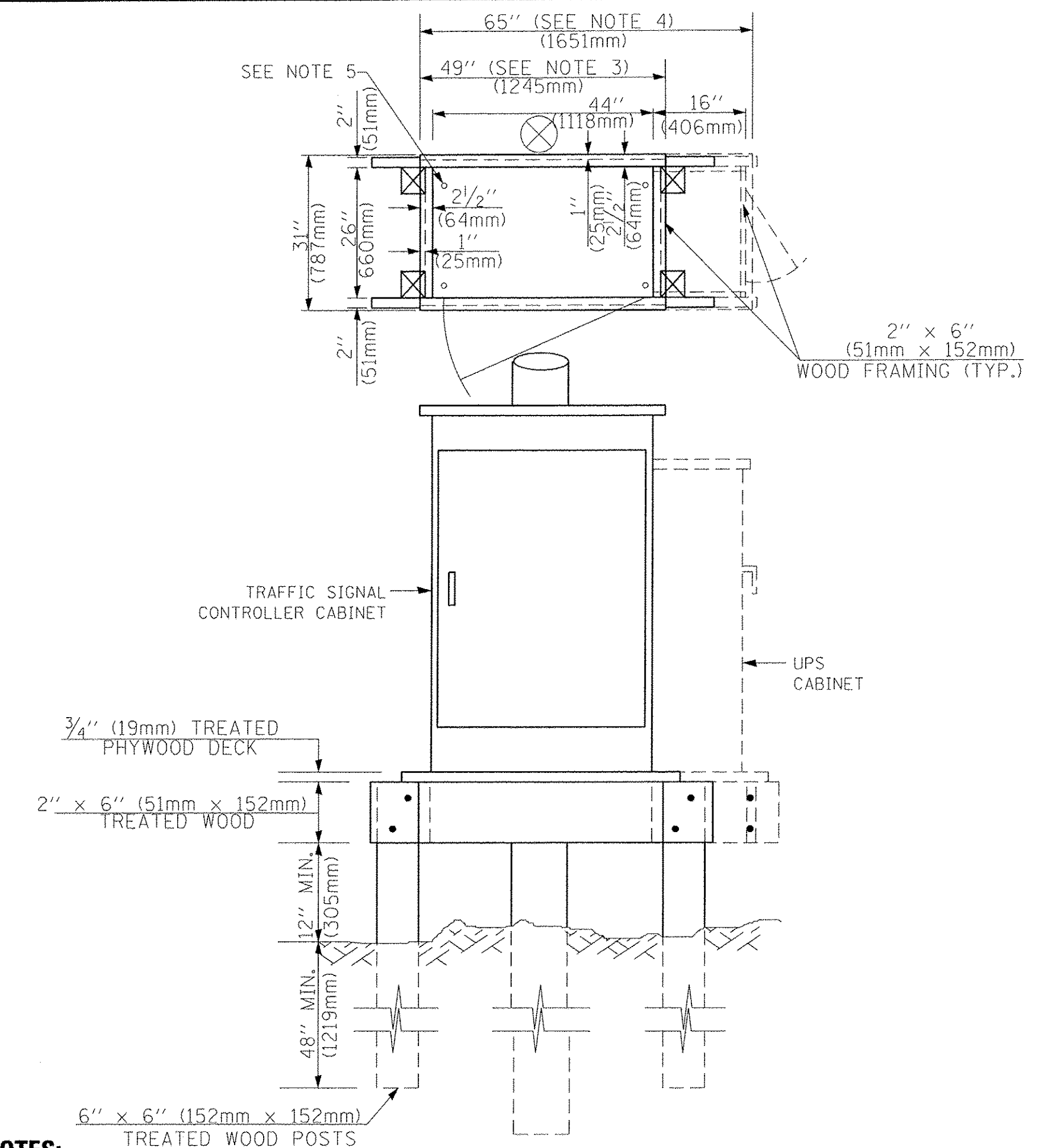
TOP VIEW

NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

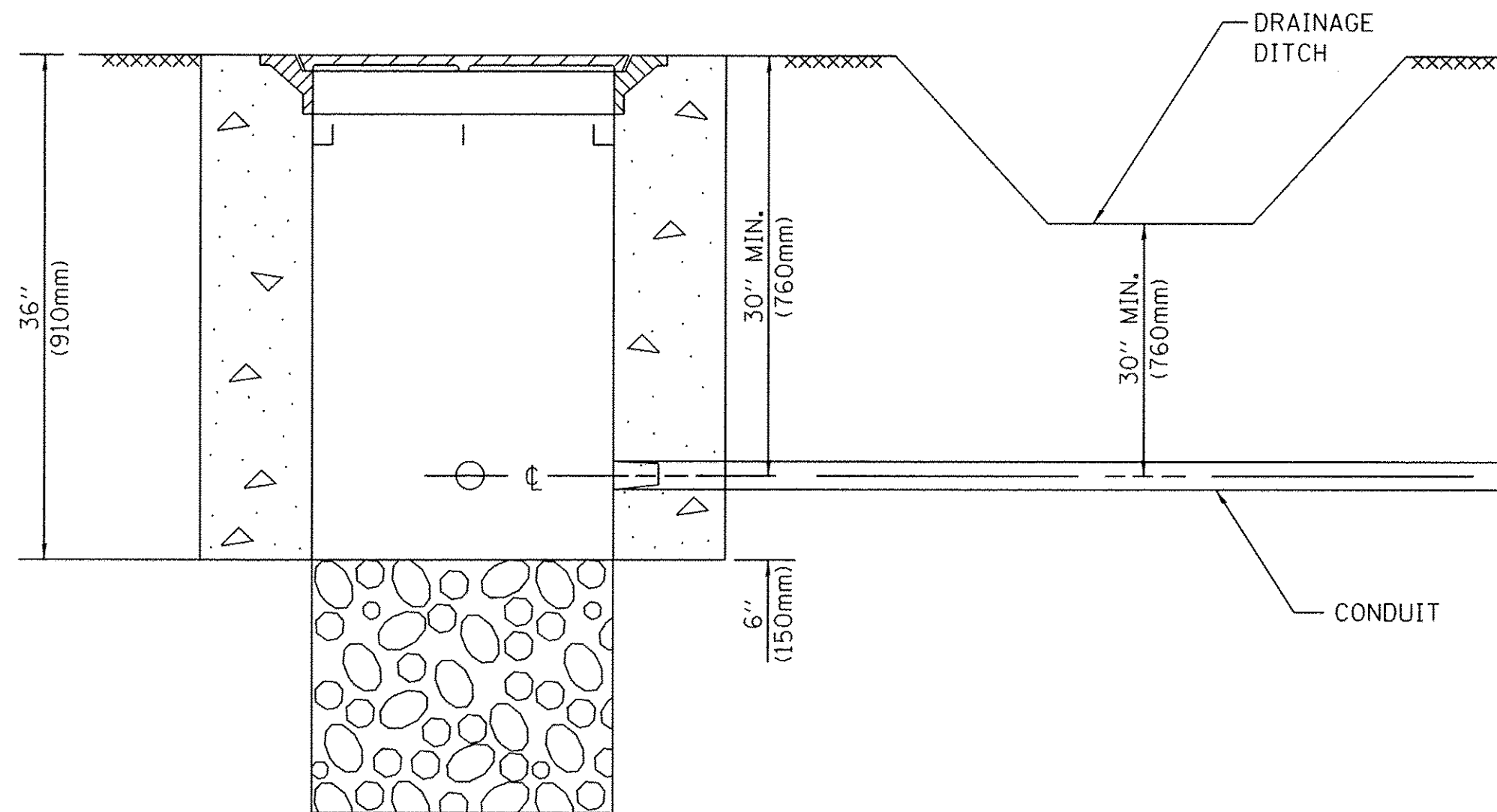
DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
4. For mast arm assemblies with dual arms refer to state standard 878001..

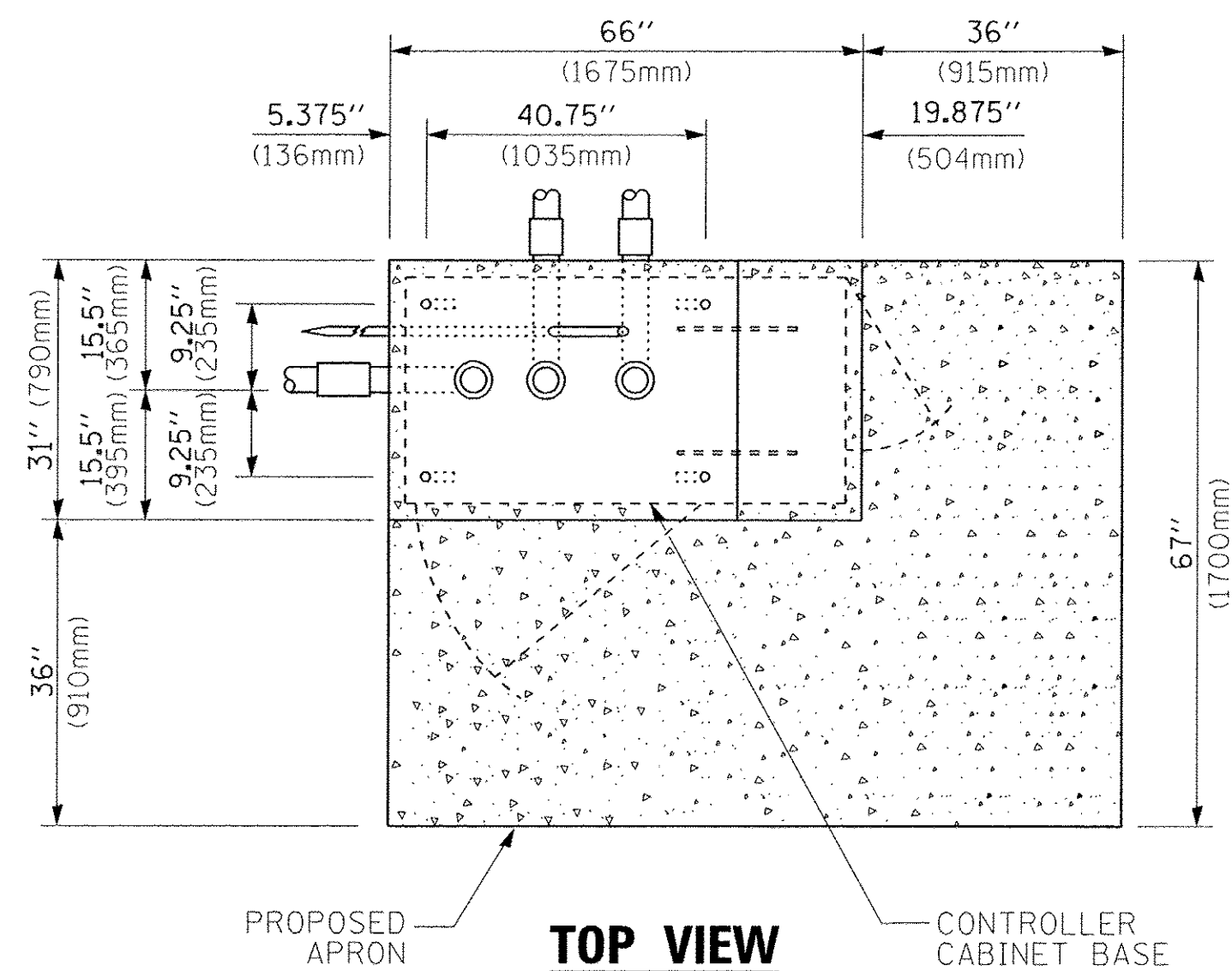
DEPTH OF MAST ARM FOUNDATIONS, TYPE E



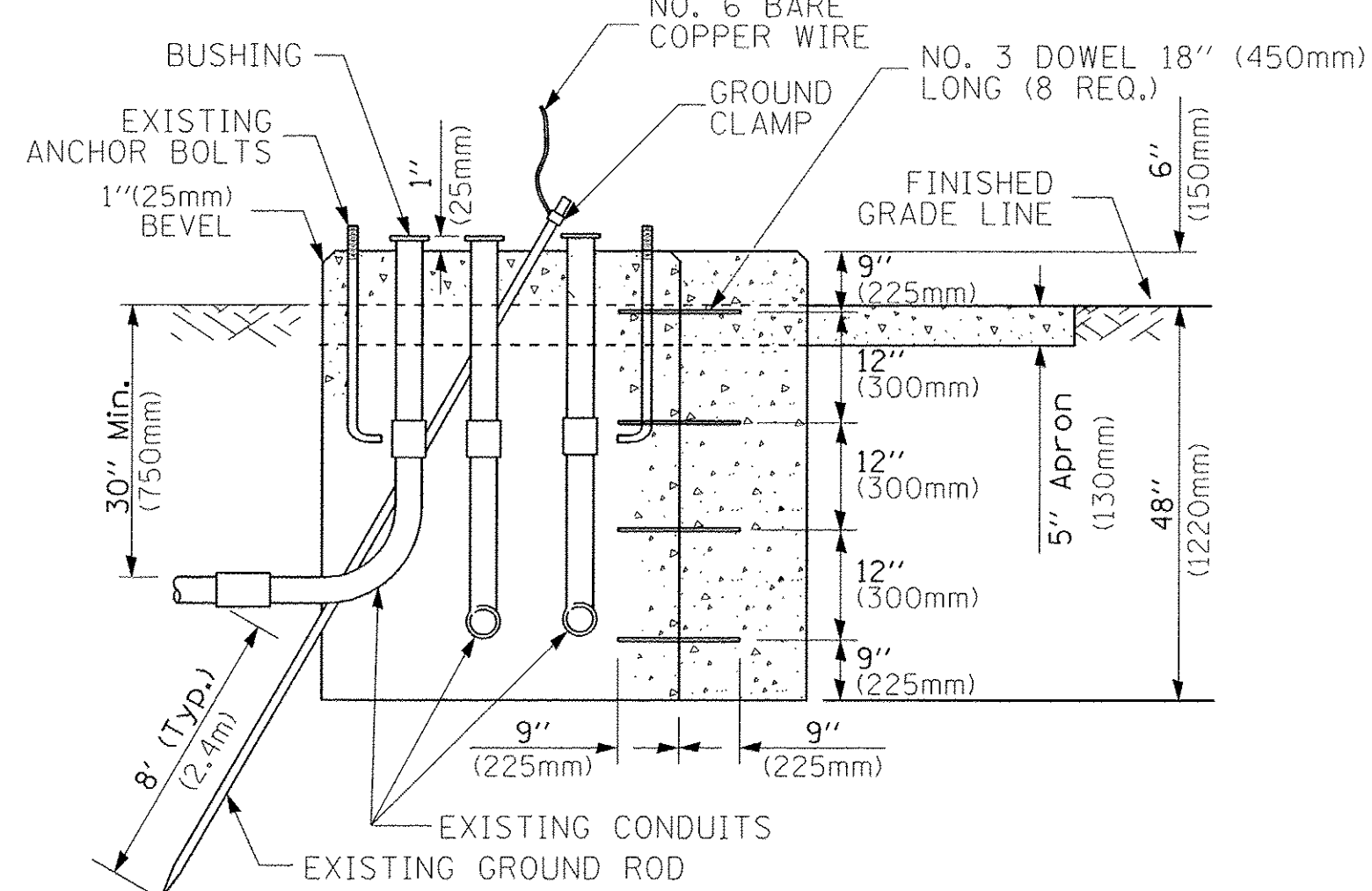
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



TOP VIEW
(NOT TO SCALE)

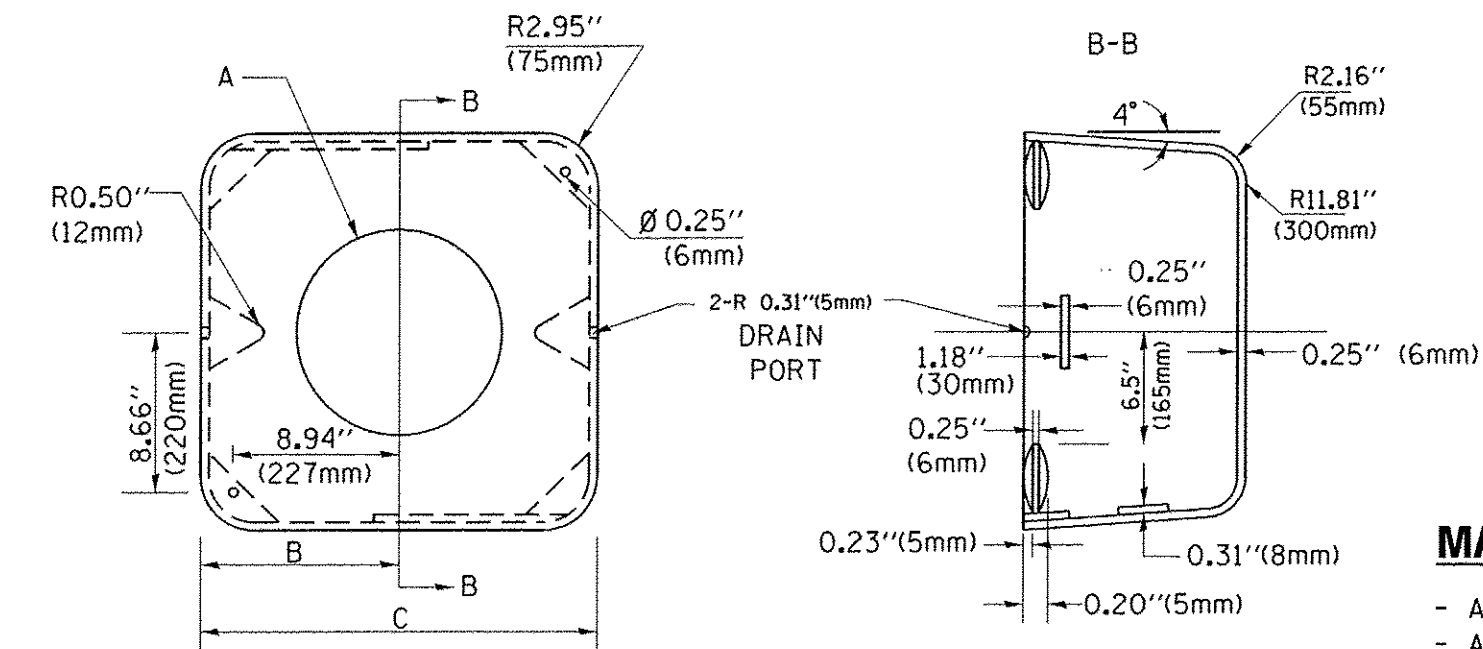


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

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

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 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.



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIES	9.5" (241mm)	19" (483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75" (273mm)	21.5" (546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0" (330mm)	26" (660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5" (470mm)	37" (940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

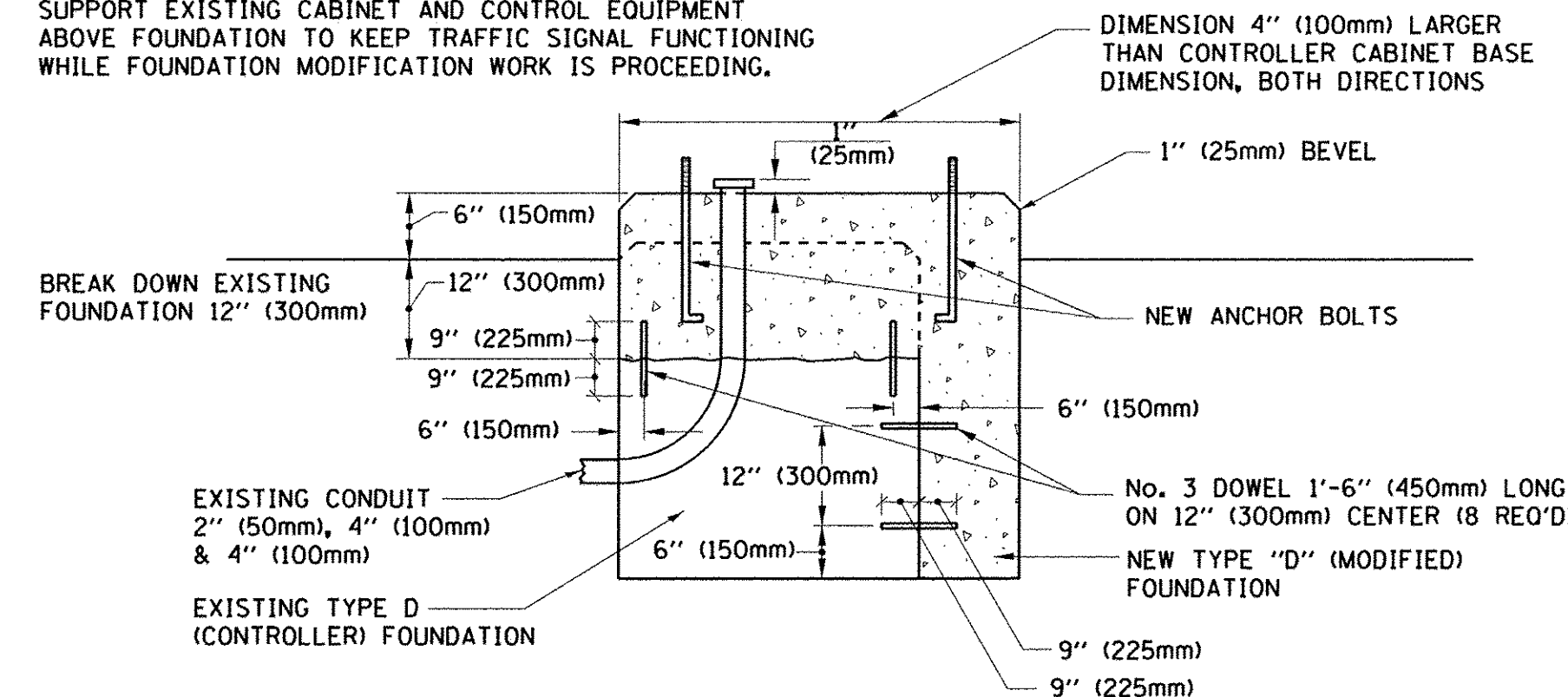
SHROUD

NOTES:

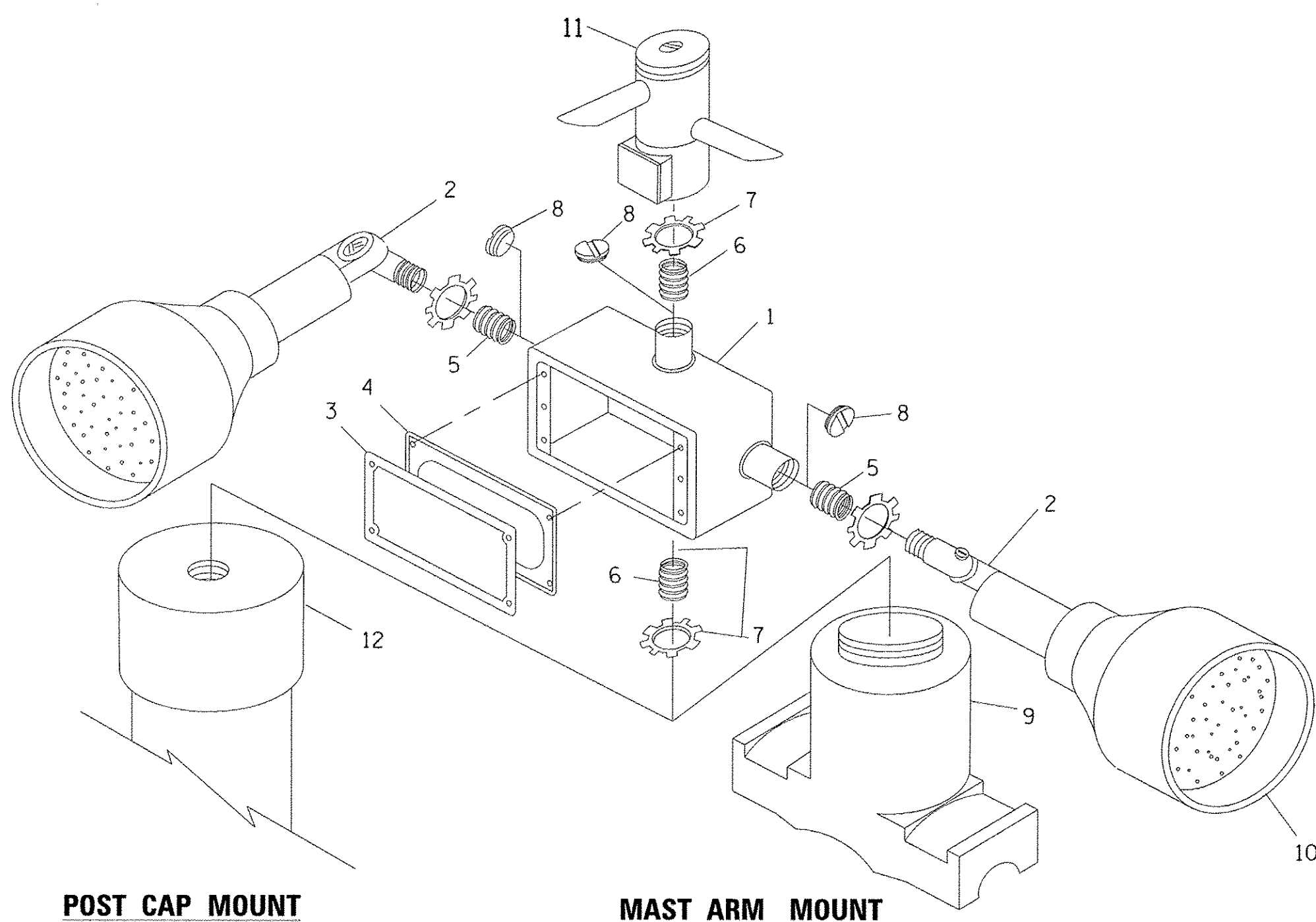
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

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



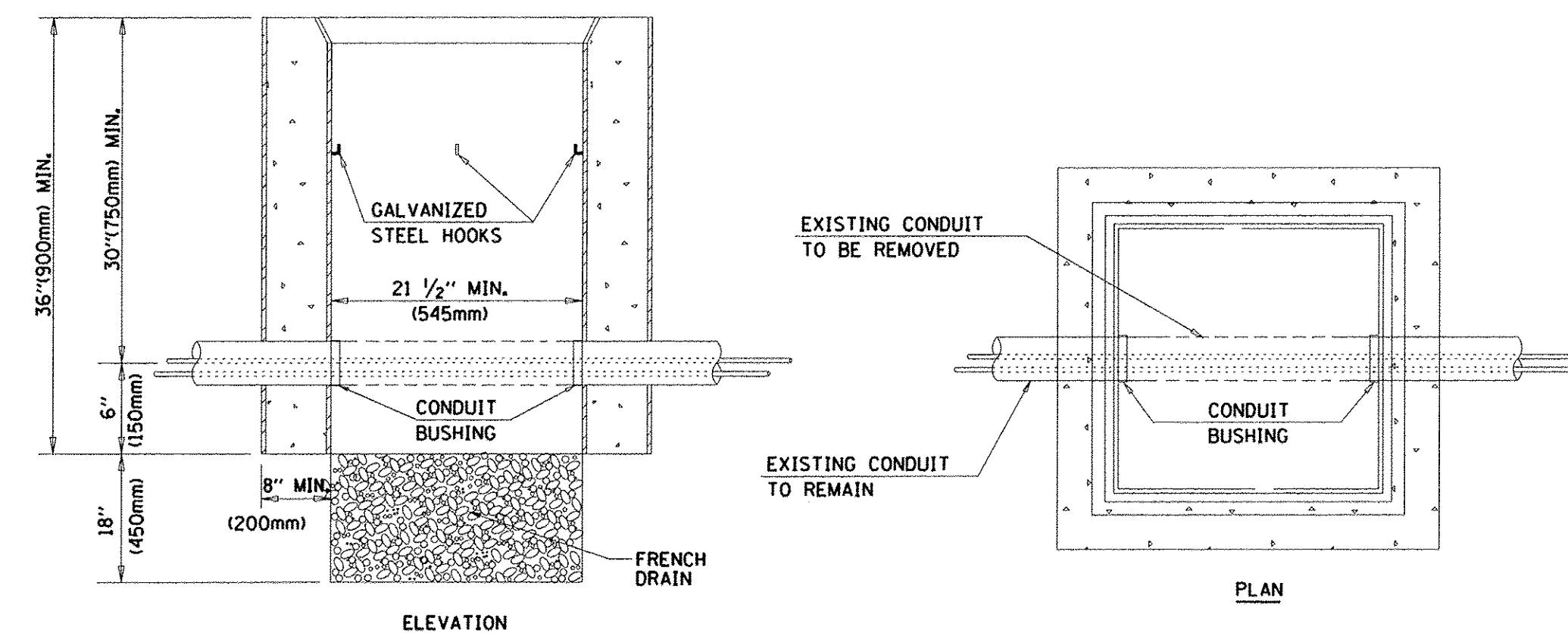
MODIFY EXISTING TYPE "D" FOUNDATION



POST CAP MOUNT

MAST ARM MOUNT

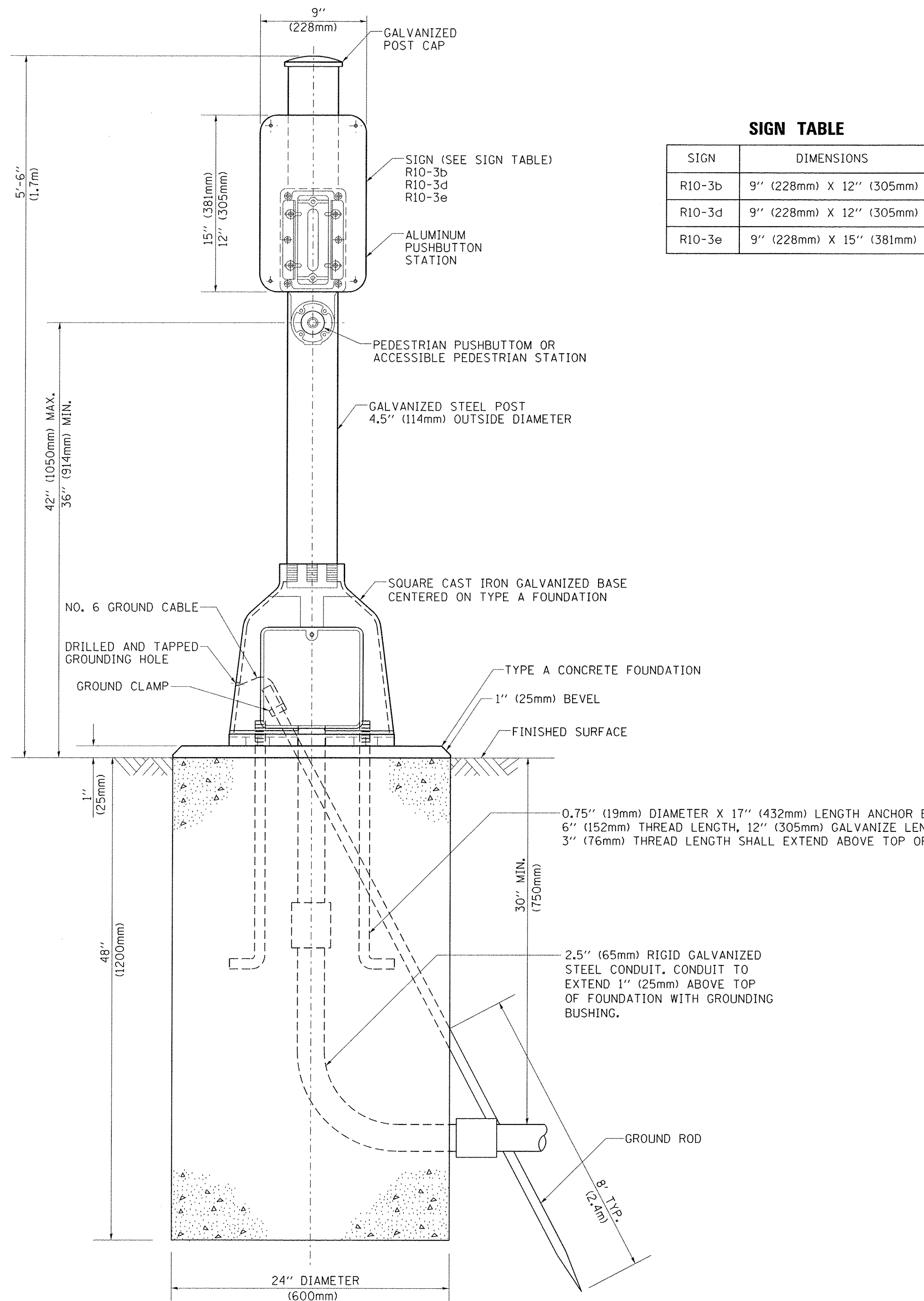
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



NOTES:

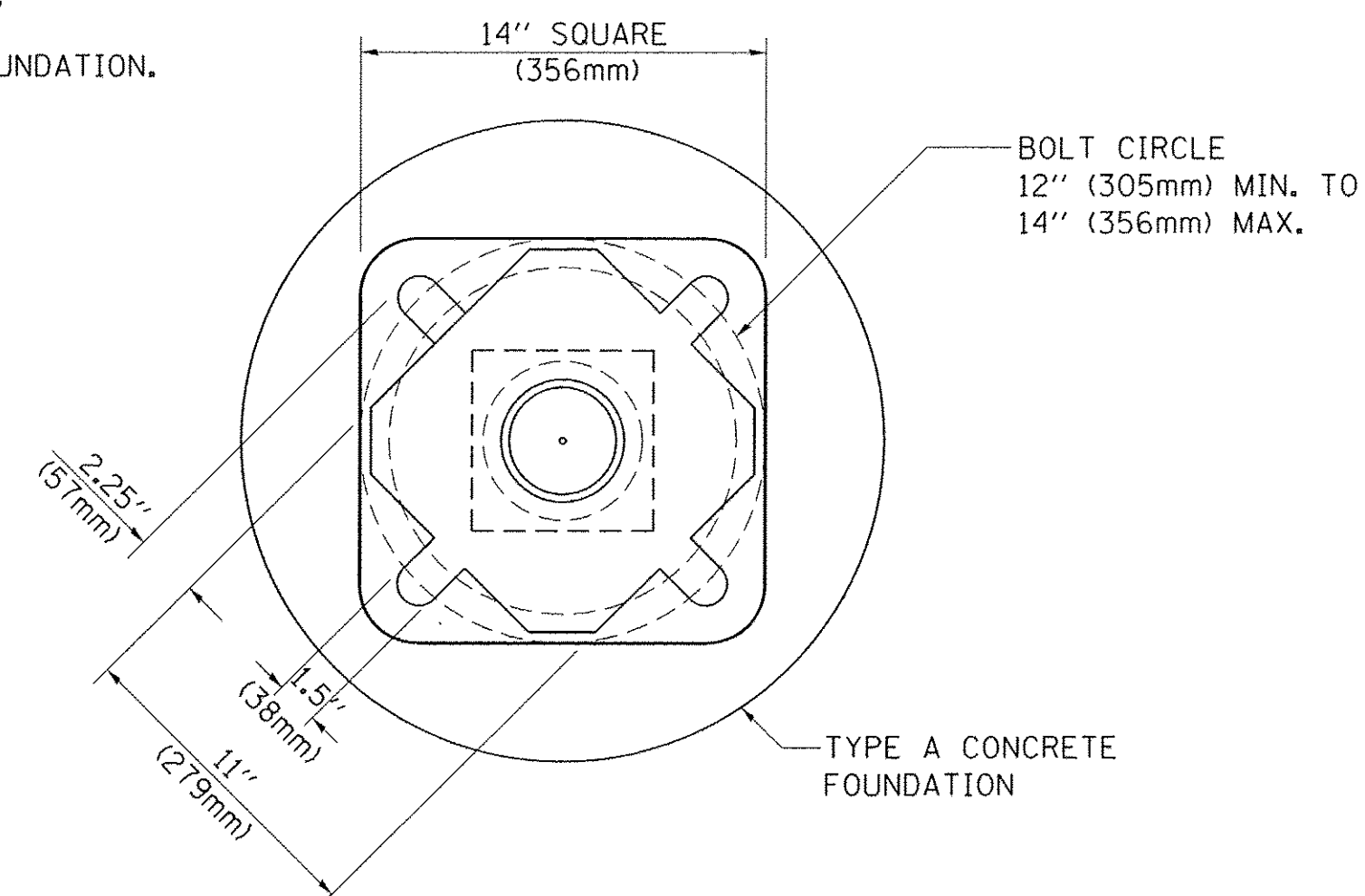
1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

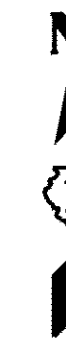
PEDESTRIAN PUSH BUTTON POST, TYPE A

FILE NAME =	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14
ct:\pw_work\pwidot\footemj\d0188315\ts05.dgn		DRAWN - GND	REVISED -
	PLOT SCALE = 50.0000 / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	25
TS-05			CONTRACT NO. 61D06	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (621)				



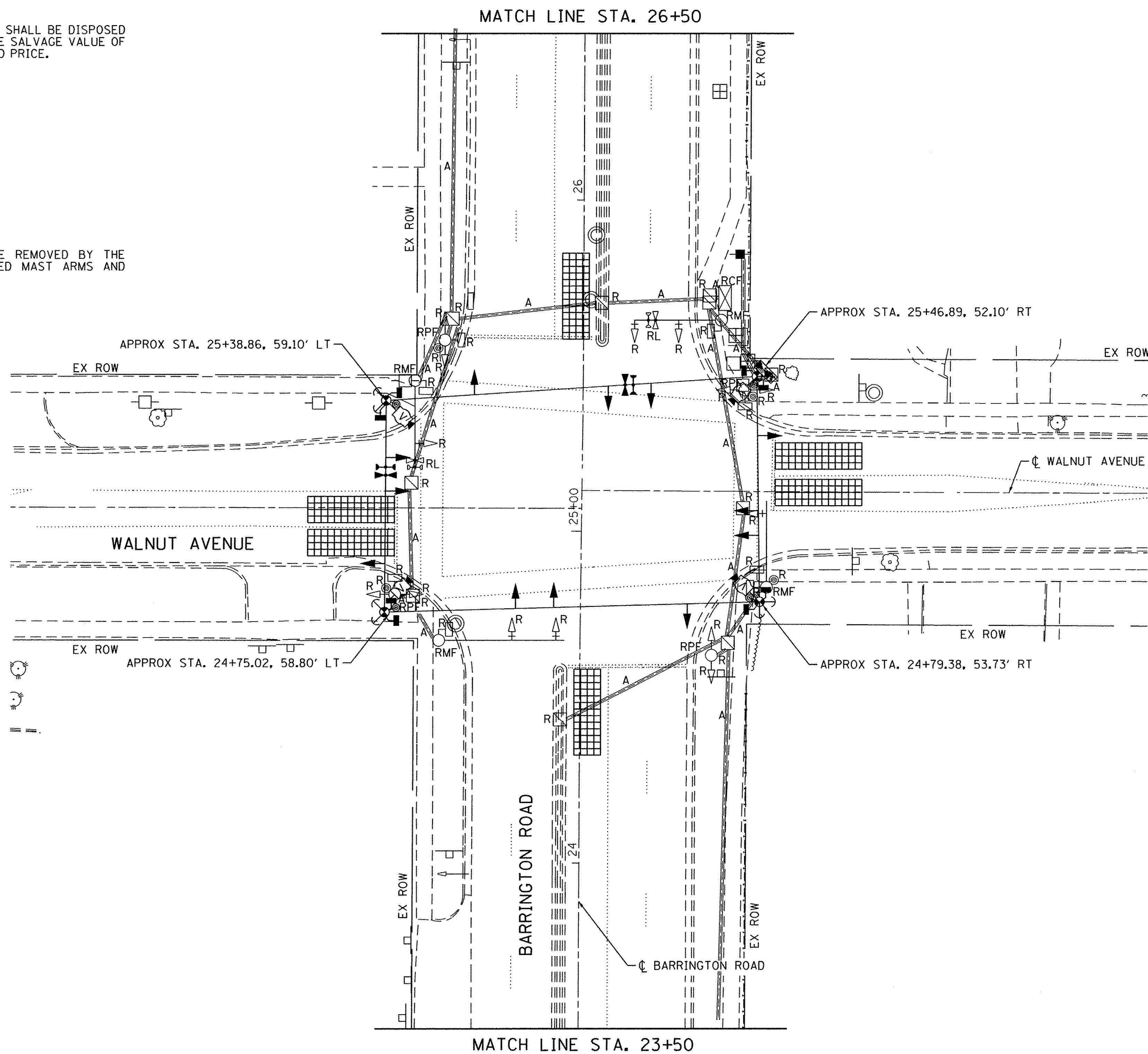
REMOVAL NOTES:

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 UNINTERRUPTABLE POWER SUPPLY
- 4 EACH STEEL MAST ARM ASSEMBLY AND POST
- 4 EACH TRAFFIC SIGNAL POST
- 10 EACH 3-SECTION SIGNAL HEAD
- 4 EACH 5-SECTION SIGNAL HEAD
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 6 EACH TRAFFIC SIGNAL BACKPLATE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED, AND RELOCATED TO THE PROPOSED MAST ARMS AND TRAFFIC SIGNAL CONTROLLER.

- 2 EACH CONFIRMATION BEACON
- 2 EACH LIGHT DETECTOR
- 1 EACH LIGHT DETECTOR AMPLIFIER



TS SHT NO. 1

**TS 13775
ECON 158**

Bollinger, Lach
& Associates, Inc.
ITASCA, ILLINOIS

USER NAME = wTeng	DESIGNED - WJT	REVISED -
PLOT SCALE = 20.0000' / 1"	DRAWN - MTC	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

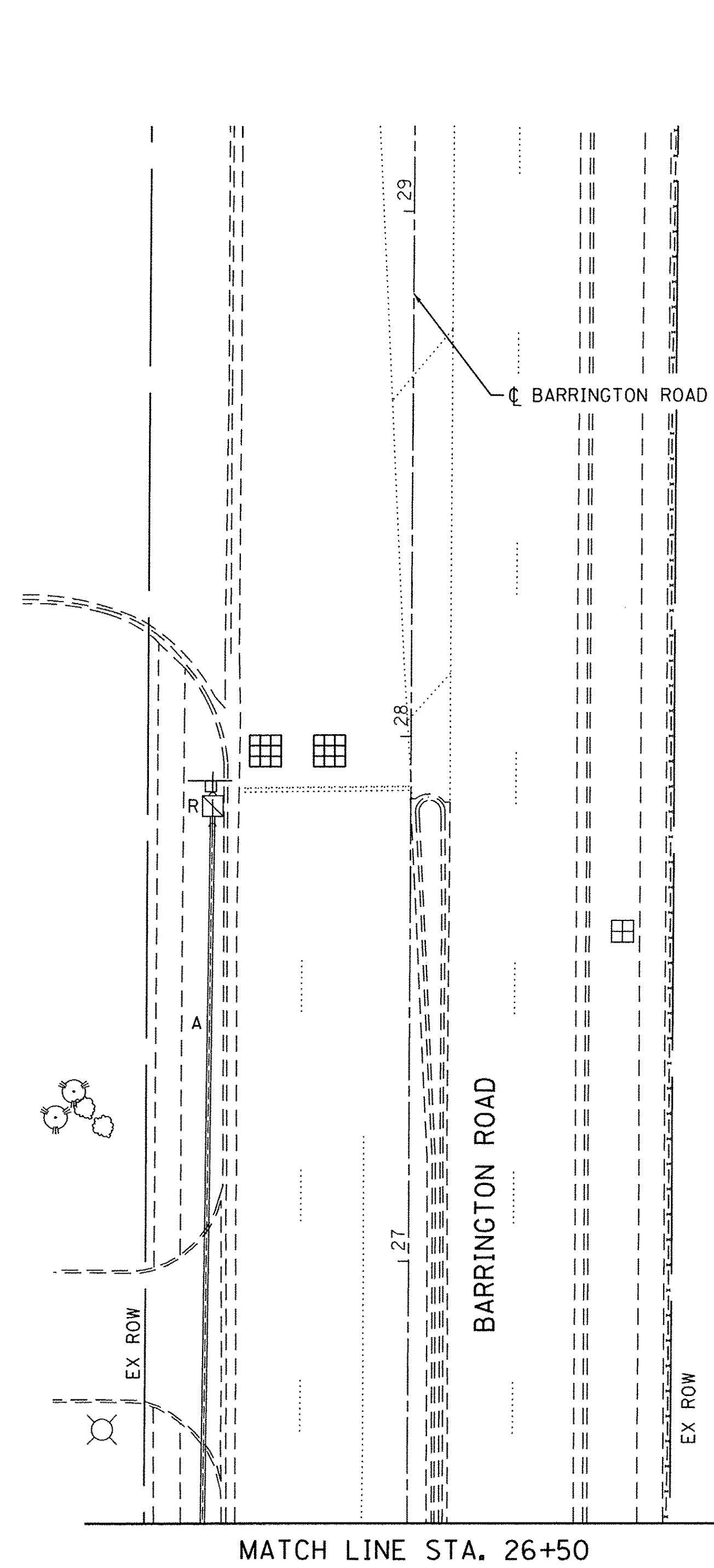
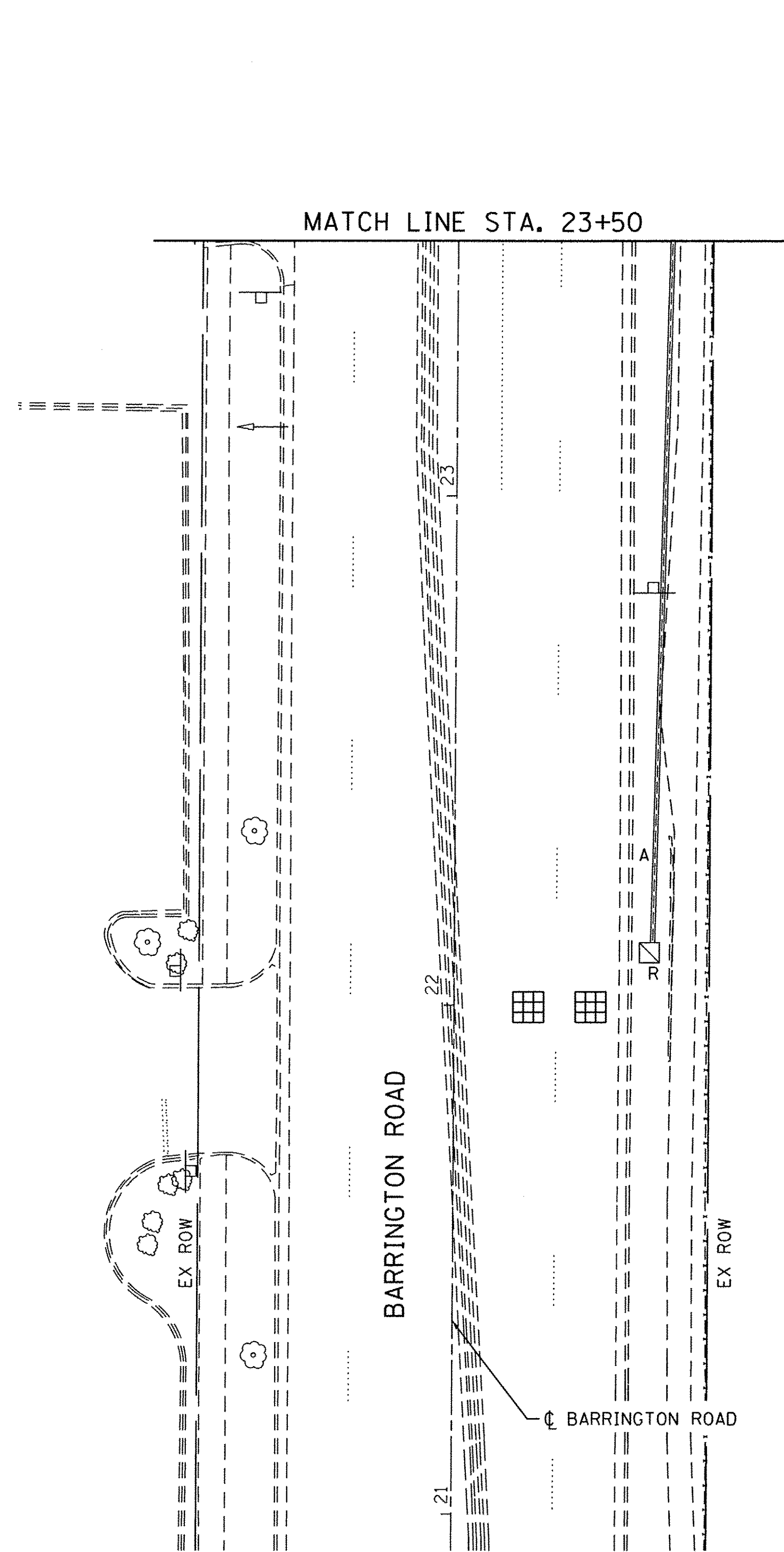
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

SCALE: 1"=20' SHEET 1 OF 10 SHEETS STA. TO STA.

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 26
CONTRACT NO. 61D06			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)	

TS SHT NO. 2



TS 13775
ECON 158

B Bollinger, Lach
& Associates, Inc.
ITASCA, ILLINOIS

USER NAME = WTeng
PLOT SCALE = 20.0000' / in.
PLOT DATE = 7/27/2016

DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

REVISED -
REVISED -
REVISED -
REVISED -

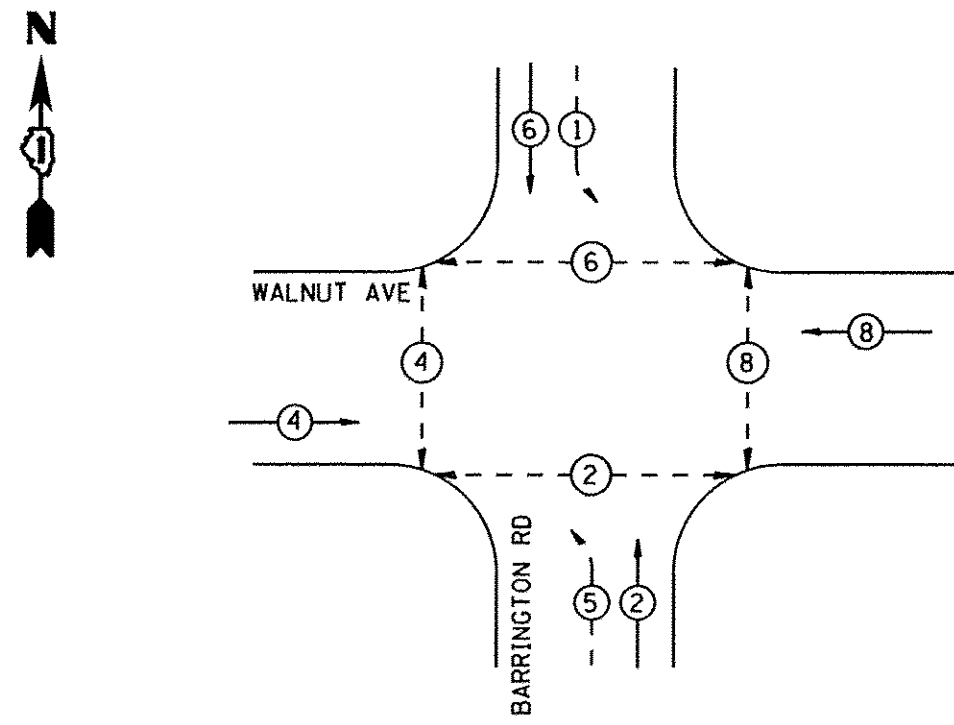
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

SCALE: 1"=20' SHEET 2 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	27
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40031621				

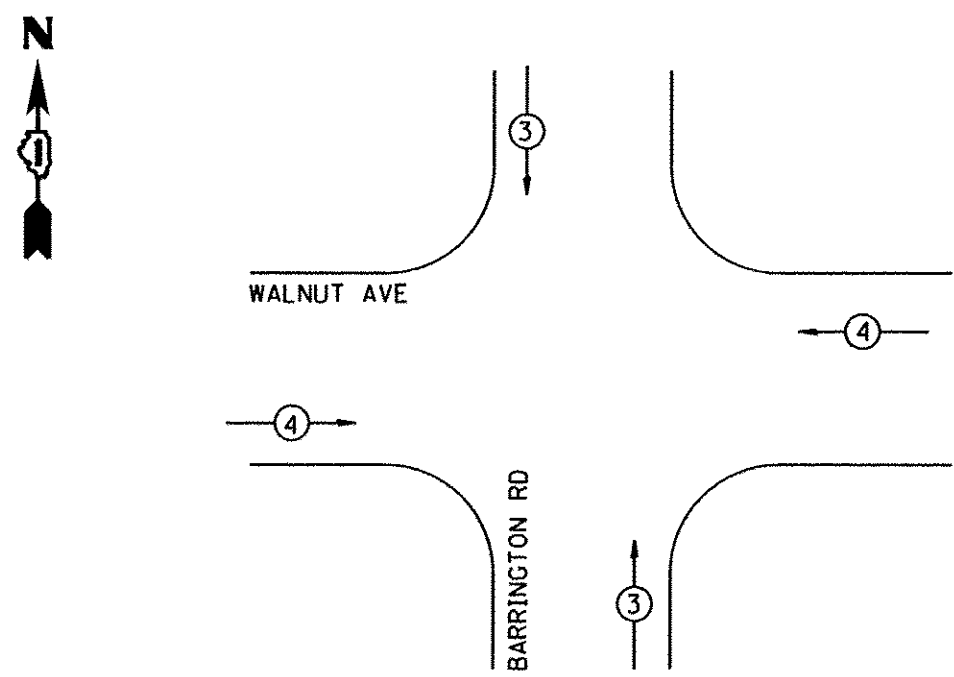
PROPOSED CONTROLLER SEQUENCE



LEGEND

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL OVERLAP

**PROPOSED EMERGENCY VEHICLE
PREEMPTION SEQUENCE**

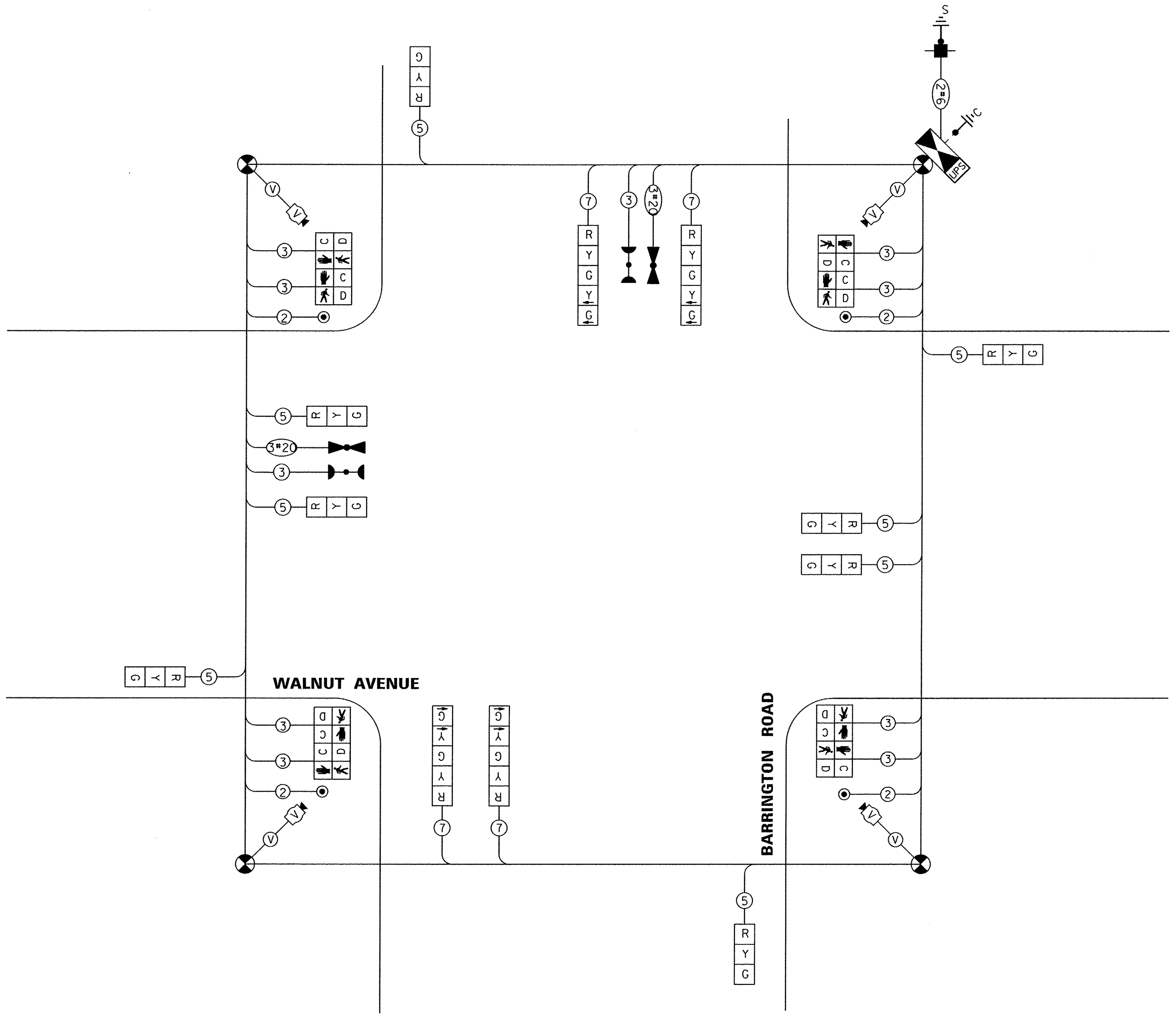


**TRAFFIC SIGNAL
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
			TOTAL =	585.8

ENERGY COST TO:
 VILLAGE OF HANOVER PARK
 2121 WEST LAKE STREET
 HANOVER PARK, ILLINOIS 60133

ENERGY SUPPLY: CONTACT: MR. JOE STACHO
 PHONE: (630) 424-5704
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: - - -



CABLE PLAN
(NOT TO SCALE)

TS SHT NO. 3



USER NAME = WTeng	DESIGNED - WJT	REVISED -
PLOT SCALE = 20,0000' / in.	DRAWN - MTC	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

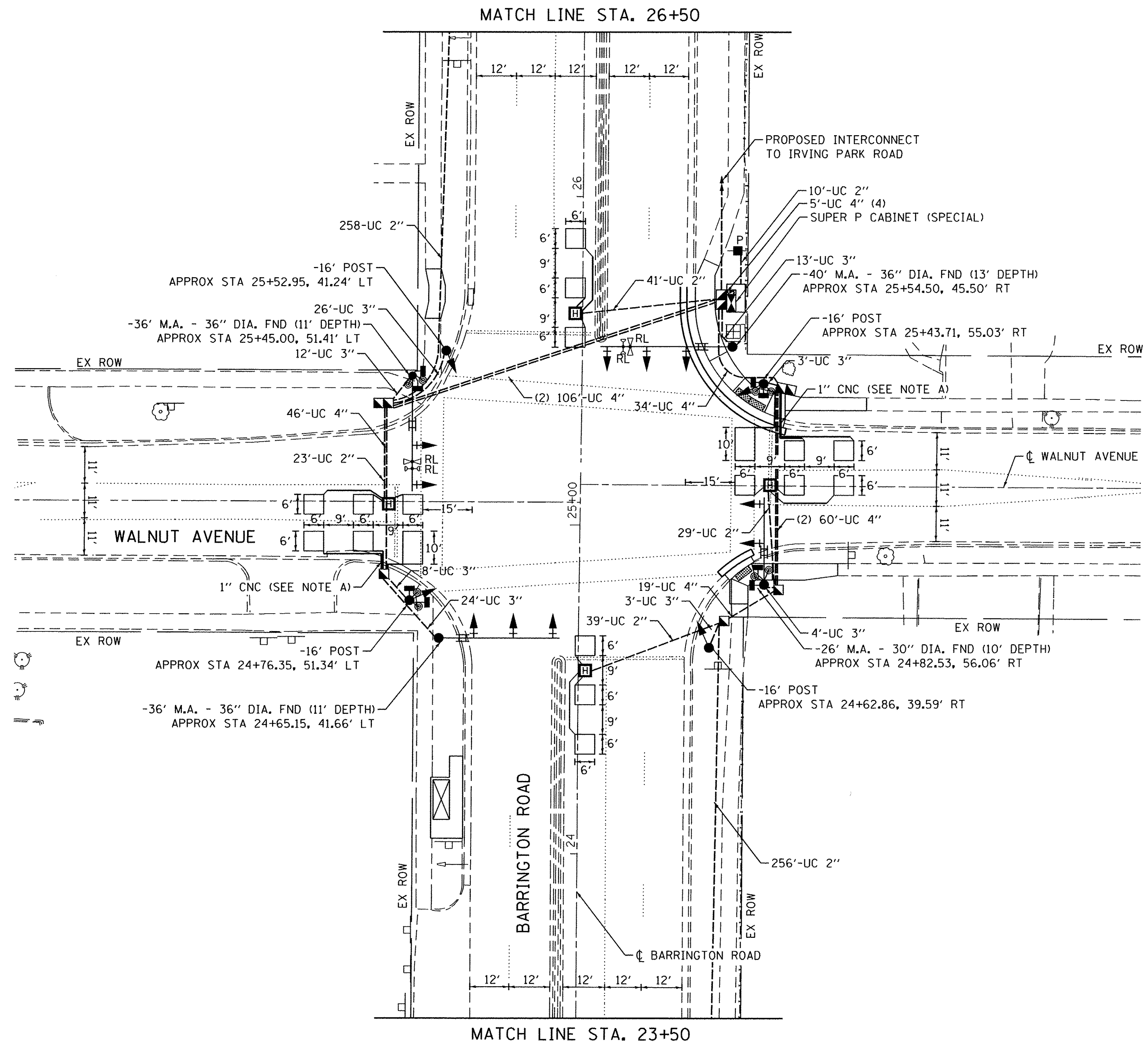
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM
AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET 3 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	28
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

**TS 13775
ECON 158**



NOTE A

EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE MON-METALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

TS SHT NO. 4

TS 13775
ECON 158

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

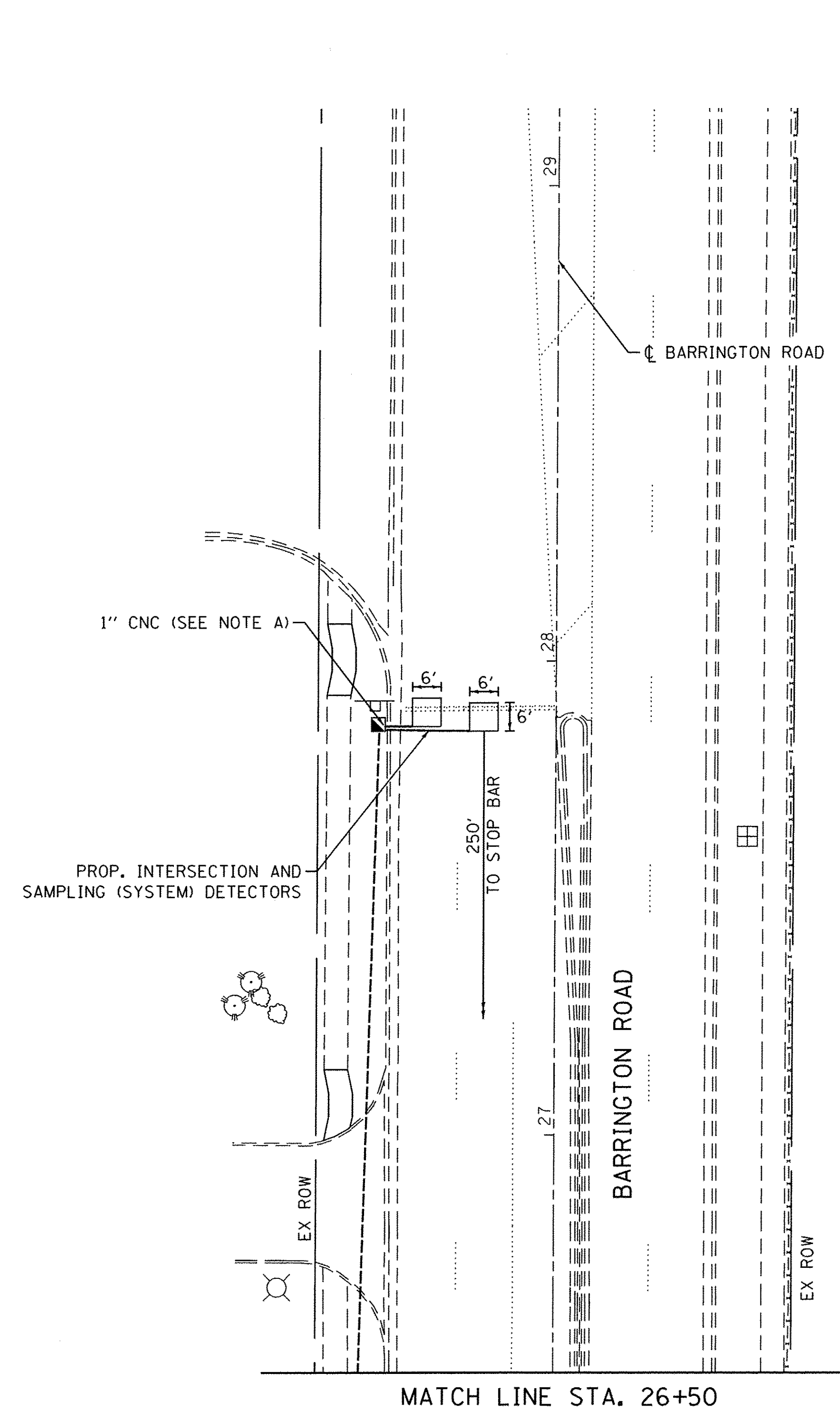
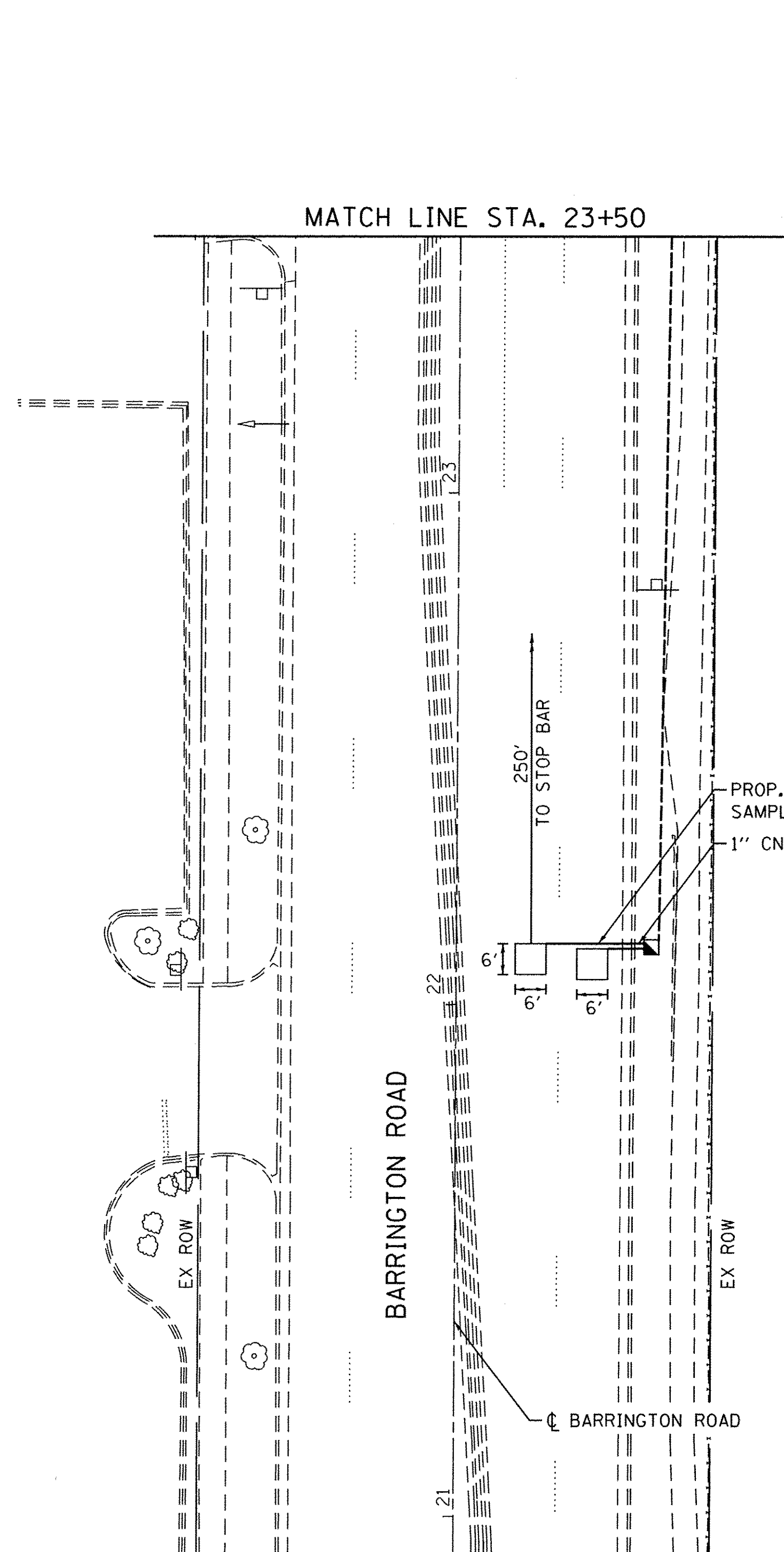
USER NAME = WTeng	DESIGNED - WJT	REVISED -
PLOT SCALE = 20,000' / in.	DRAWN - MTC	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TRAFFIC SIGNAL MODERNIZATION PLAN (SHEET 1 OF 2)

SCALE: 1"=20' SHEET 4 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	29
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				



NOTE A

EACH DETECTOR LOOP SHALL HAVE ITS OWN 1" COILABLE NON-METALLIC CONDUIT BETWEEN THE EDGE OF PAVEMENT AND THE ADJACENT HANDHOLE AS SHOWN ON THE PLANS AND AS STATED IN THE TRAFFIC SIGNAL SPECIFICATIONS.

TS 13775
ECON 158

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = wTong	DESIGNED - WJT	REVISED -
PLOT SCALE = 20,0000' / 1"	DRAWN - MTC	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MTC	REVISED -
	DATE - 06/17/2016	REVISED -

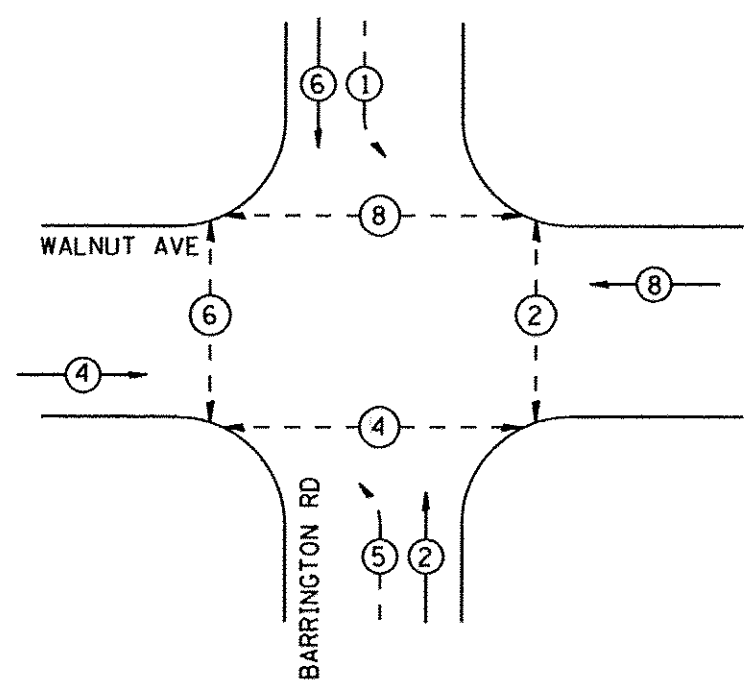
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
TRAFFIC SIGNAL MODERNIZATION PLAN (SHEET 2 OF 2)**

SCALE: 1"=20' SHEET 5 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	30
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

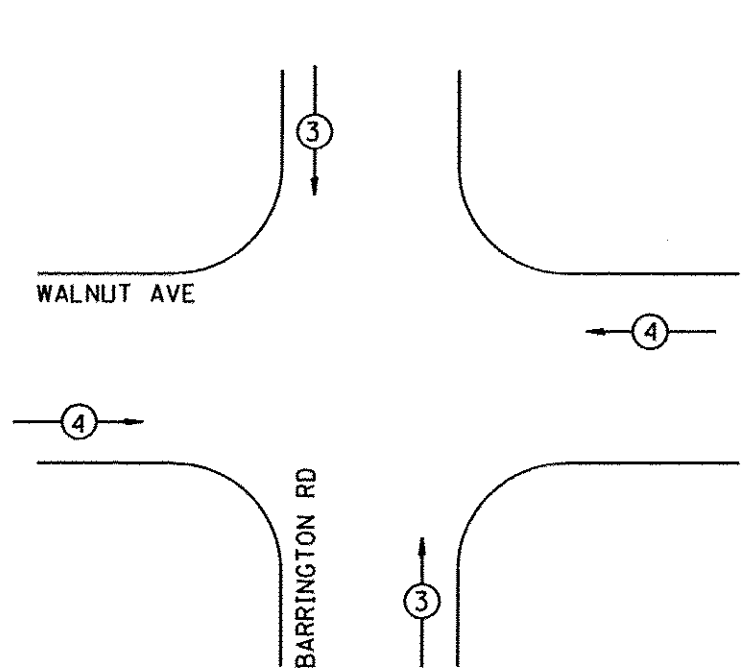
PROPOSED CONTROLLER SEQUENCE



LEGEND

- ⊙ PROTECTED PHASE
- ⊕ PROTECTED/PERMITTED PHASE
- ⊙ PEDESTRIAN PHASE
- ⊕ OVERLAP

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	11	50	77.0
(YELLOW)	14	20	5	14.0
(GREEN)	14	12	45	75.6
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	5.0
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240.0
LUMINAIRE	-	-	-	-
			TOTAL =	699.6

ENERGY COST TO:

VILLAGE OF HANOVER PARK
2121 WEST LAKE STREET
HANOVER PARK, ILLINOIS 60133

ENERGY SUPPLY: CONTACT: MR. JOE STACHO
PHONE: (630) 424-5704
COMPANY: COMMONWEALTH EDISON
ACCOUNT NUMBER: - - -

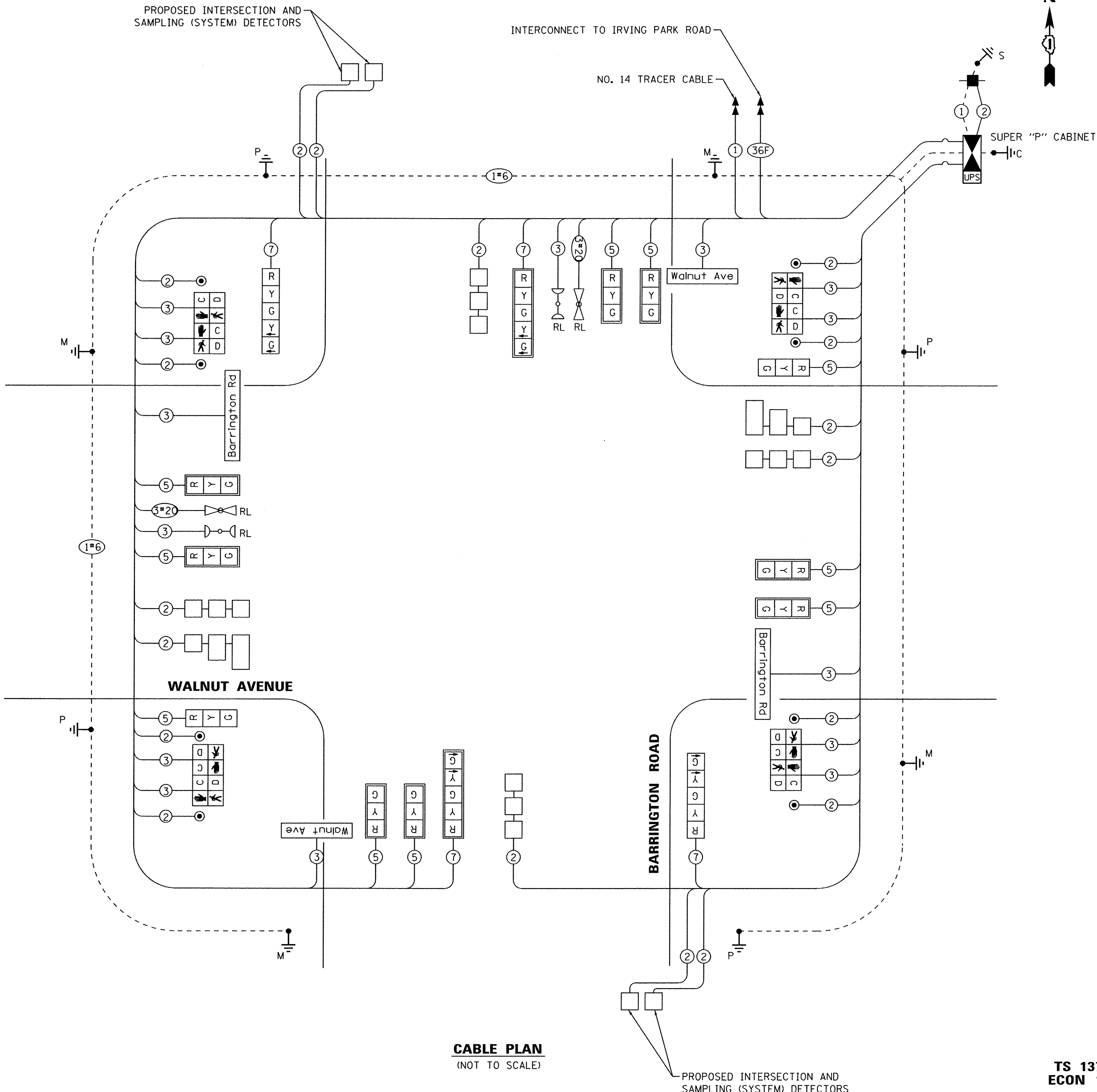
TS SHT NO. 6

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

INTERCONNECT TO IRVING PARK ROAD

NO. 14 TRACER CABLE

SUPER "P" CABINET



CABLE PLAN
(NOT TO SCALE)

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS



USER NAME = WTeng
DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

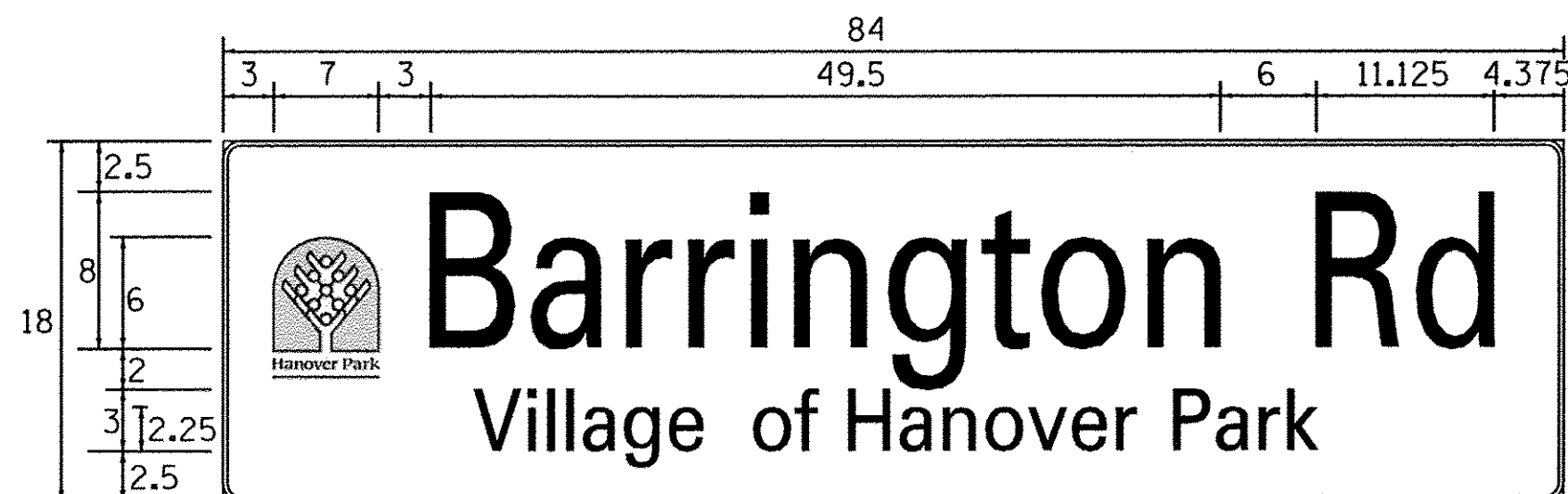
SCALE: N.T.S. SHEET 6 OF 10 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	31
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

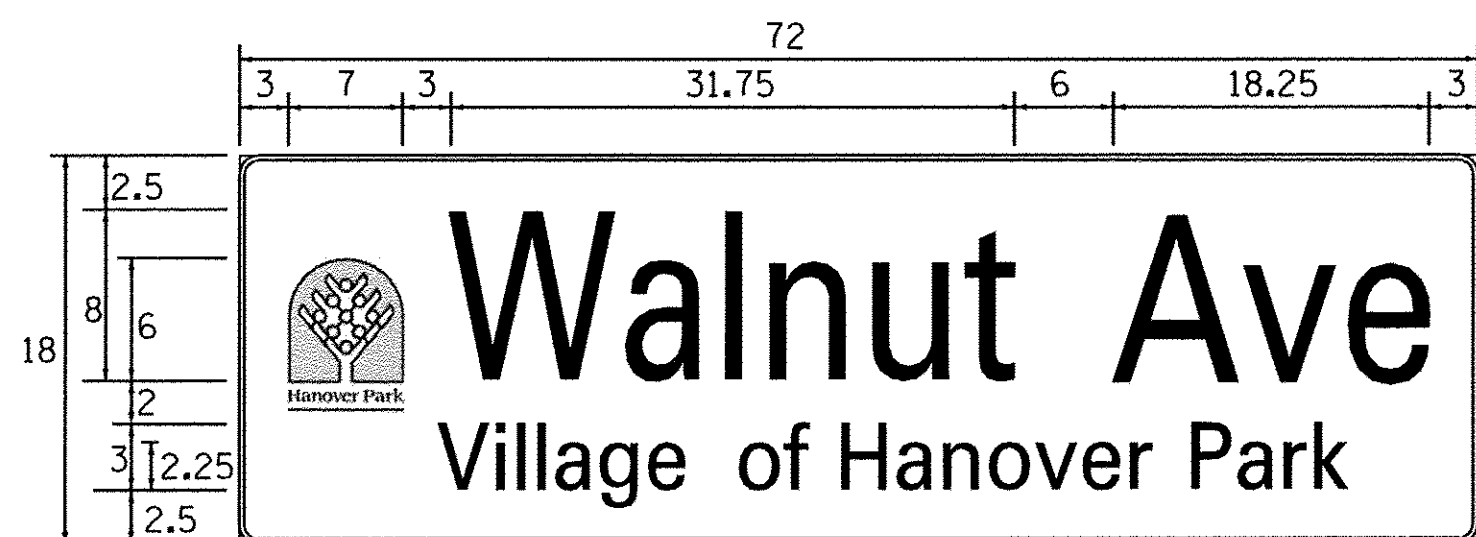
TS 13775
ECON 158

LED INTERNALLY ILLUMINATED STREET NAME SIGN

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	10.5	2	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.0	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNIT	TOTAL QTY.
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	4414
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	93
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	456
HANDHOLE	EACH	12
HEAVY DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3538
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2378
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1606
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	698
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2548
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	105
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	4573
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	10
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	35
DRILL EXISTING HANDHOLE	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	829
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
* RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
* RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	16
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
* EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	270
* LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2

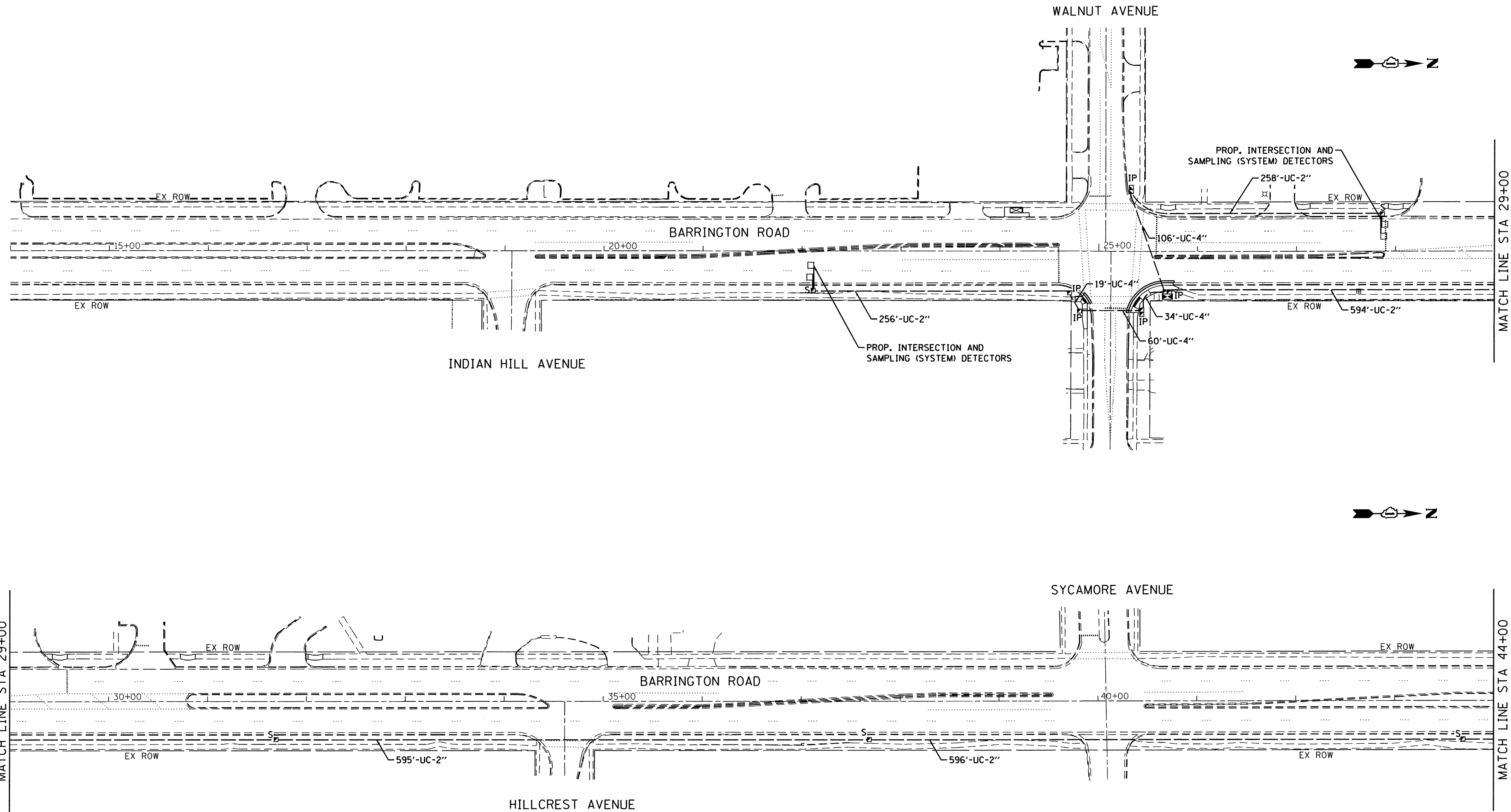
* 100% VILLAGE OF HANOVER PARK COST

TS SHT NO. 7

TS 13775
ECON 158

	USER NAME = wTeng DESIGNED - WJT DRAWN - MTC CHECKED - MTC DATE - 06/17/2016	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD) MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES		F.A.P. RTE. 362 SECTION 13-00062-00-SP COUNTY COOK CONTRACT NO. 61D06	TOTAL SHEETS 48 SHEET NO. 32
	PLOT SCALE = 20.0000 "/ in. PLOT DATE = 7/28/2016	DATE - 06/17/2016		SCALE: SHEET 7 OF 10 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40031621		

TS SHT NO. 8



B Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = WTeng
PLOT SCALE = 50.0000' / 1in.
PLOT DATE = 7/27/2016

DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

REVISED -
REVISED -
REVISED -
REVISED -

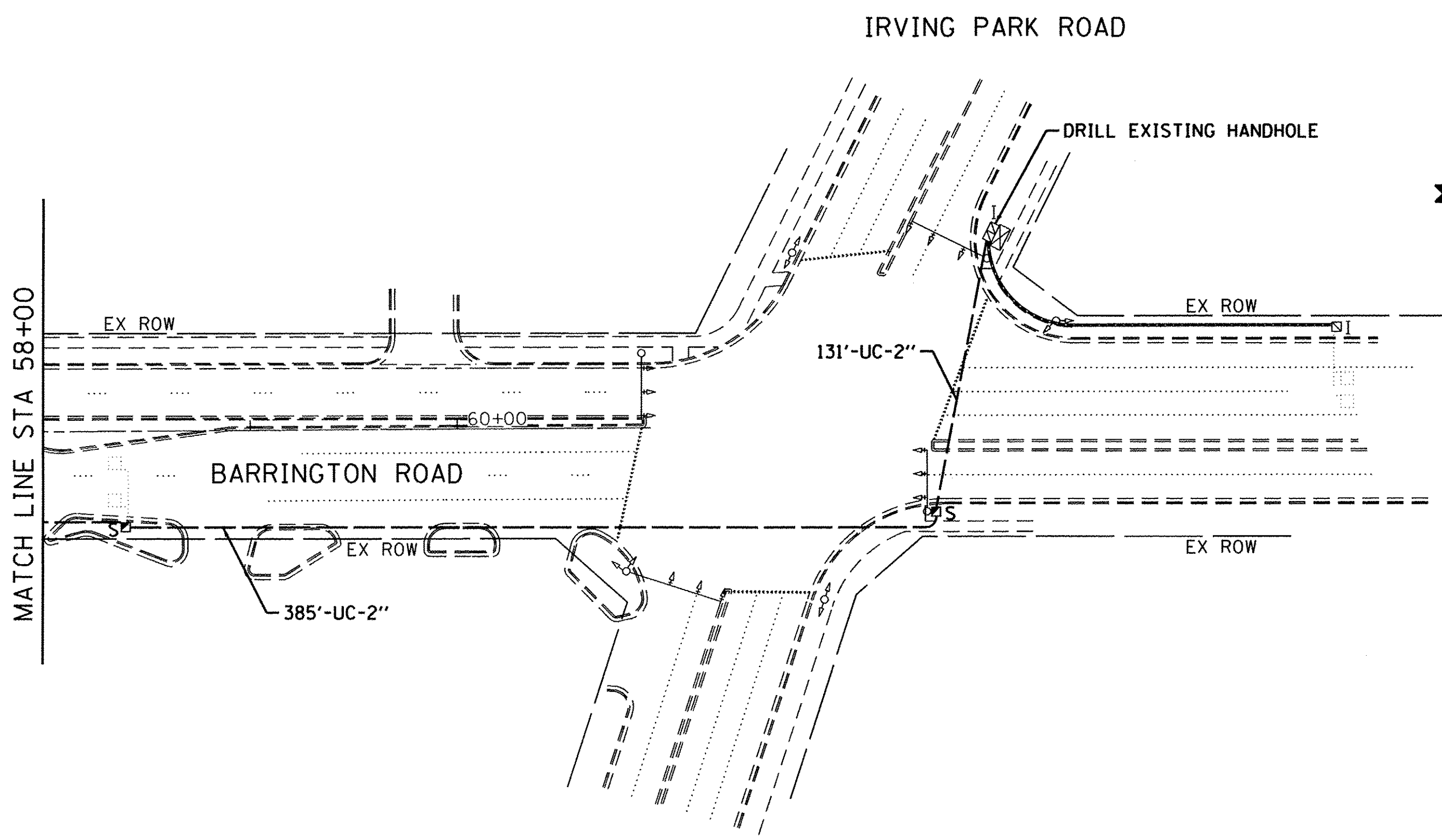
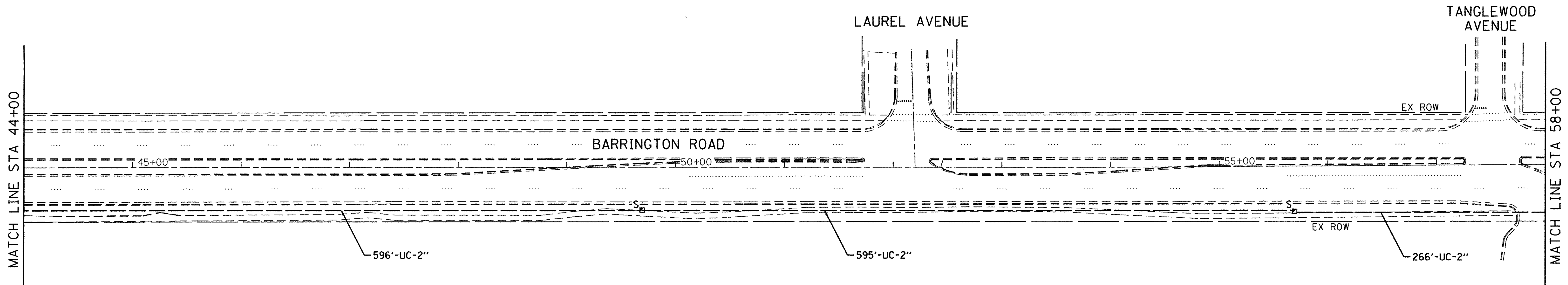
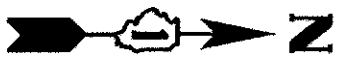
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
PROPOSED INTERCONNECT PLAN (SHEET 1 OF 2)

SCALE: 1"=50' SHEET 8 OF 10 SHEETS STA. 14+00 TO STA. 44+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	33
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40031621				

TS 13775
ECON 158



TS SHT NO. 9

TS 13775
ECON 158

Bollinger, Lach & Associates, Inc.
ITASCA, ILLINOIS

USER NAME = WTeng
PLOT SCALE = 50,000' / in.
PLOT DATE = 7/27/2016

DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

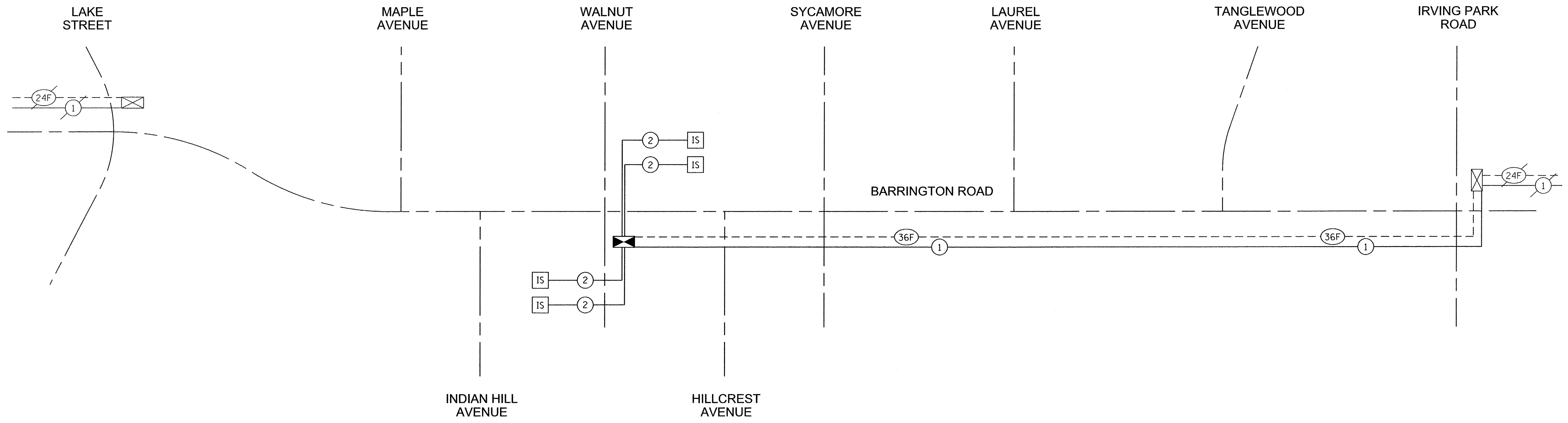
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
PROPOSED INTERCONNECT PLAN (SHEET 2 OF 2)**

SCALE: 1"=50' SHEET 9 OF 10 SHEETS STA. 44+00 TO STA. 60+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	34
CONTRACT NO. 61D06				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621				

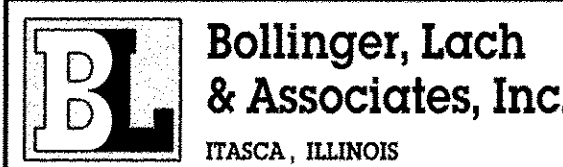


SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNIT	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	3023
HANDHOLE	EACH	7
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	3843
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	3843
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	2

TS SHT NO. 10

TS 13775
ECON 158



DESIGNED - WJT
DRAWN - MTC
CHECKED - MTC
DATE - 06/17/2016

REVISER -
REVISION -
REVISER -
REVISION -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
PROPOSED INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES

SCALE: N.T.S. SHEET 10 OF 10 SHEETS STA. TO STA.

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 35
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT M-4003(621)	

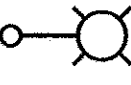



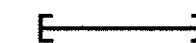


CONTRACT NO. 61D06

1. THIS PROJECT INCLUDES THE INSTALLATION OF A NEW LIGHTING SYSTEM ALONG BARRINGTON ROAD FROM NORTH OF MAPLE AVENUE TO SOUTH OF IRVING PARK ROAD. PROPOSED LIGHTING SHALL BE OWNED AND MAINTAINED BY THE VILLAGE OF HANOVER PARK.
2. THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO COORDINATE THE ELECTRIC SERVICE WORK. THE FIELD CONTACT PERSON IS SHERON GEETERS (847) 608-2400.
3. THE QUANTITIES OF RACEWAY WHERE INDICATED IN THESE PLANS ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.
4. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. TO LOCATE AND MARK/STAKE ALL UNDERGROUND UTILITIES.
5. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND/OVERHEAD UTILITIES PRIOR TO INSTALLATION OF LIGHT POLES AND CONDUITS. IF THERE IS A CONFLICT WITH THE LIGHT POLES/CONDUITS AS SHOWN ON PLANS, THE CONTRACTOR SHALL SUGGEST ALTERNATIVE LOCATIONS AND COORDINATE WITH THE ENGINEER PRIOR TO PERFORMING DIGGING WORK. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL AND DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION ACTIVITIES. THIS SHALL INCLUDE LOCATING LIGHTING FOUNDATIONS AND VERIFYING THE MAST ARM LENGTH.
6. TRENCHES FOR LIGHTING RACEWAYS SHALL HAVE A MINIMUM DEPTH OF 30".
7. LIGHTING SYSTEM INSTALLATION SHALL CONFORM TO THE LATEST IDOT STANDARDS, NEC AND LOCAL CODES.
8. ALL ELECTRICAL EQUIPMENT AND PRODUCTS SHALL BE U/L LISTED AND LABELED.
9. THE CONTRACTOR SHALL TAKE CARE WHEN INSTALLING UNIT DUCT TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES AND TREES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AS DETERMINED BY THE ENGINEER.
10. THE QUANTITY FOR THE PROPOSED CONCRETE LIGHT POLE FOUNDATION, 24" DIAMETER IS BASED ON 12 FEET PER POLE FOUNDATION. THIS IS BASED ON A GEOTECHNICAL ENGINEERING ANALYSIS AND EVALUATION REPORT PERTAINING TO THIS BARRINGTON RD. PROJECT. HOWEVER, THE ACTUAL FOUNDATION DEPTH MAY VARY BASED ON THE SOIL CONDITIONS AT THE ACTUAL POLE LOCATION.

BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
ELECTRIC SERVICE INSTALLATION	EACH	1
ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	602
UNIT DUCT, 600V, 5-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE) , 1 1/2" DIA. POLYETHYLENE	FOOT	4650
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C 1/0	FOOT	366
LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	396
LUMINAIRE, LED, HORIZONTAL MOUNT, SPECIAL	EACH	33
LIGHTING CONTROLLER, SPECIAL	EACH	1
LIGHT POLE, SPECIAL	EACH	23
LIGHT POLE, SPECIAL, TYPE 2	EACH	10

LEGEND

-  PROPOSED LIGHTING UNIT, 47.5 FT. MH, MAST ARM AS SPECIFIED, 240V (LINE TO NEUTRAL), LED LUMINAIRE WITH BREAKAWAY DEVICE
-  UNIT DUCT, 600V, 5-1C NO. 4, 1/C NO. 6 GROUND (XLP-TYPE USE) 1 1/2" DIA. POLYETHYLENE
-  ComEd ELECTRIC SERVICE 240/480V, 1 PHASE 3 WIRE
-  PROPOSED LIGHTING CONTROLLER "LC " 240/480V, 3 WIRE 100 AMP, PAD MOUNTED
-  RIGID GALVANIZED STEEL CONDUIT, UNDERGROUND
-  ELECTRIC CABLE IN CONDUIT 4" DIA., 3-1/C NO. 1/0
-  GROUND ROD 5/8" DIA. X 10 FT

FILE NAME = I:\774-020 Hanover Pl, Barrington Walnut STP Phase II\CADD Sheets\AMES Sheets 27 JUL 2016\774-020_Sht-Ltg-Bldg.dgn

AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

USER NAME = WTeng	DESIGNED - BL	REVISED -
	DRAWN - RV	REVISED -
PLOT SCALE = 50.0000' / 1" =	CHECKED - MB	REVISED -
PLOT DATE = 7/27/2016	DATE - 07-22-16	REVISED -

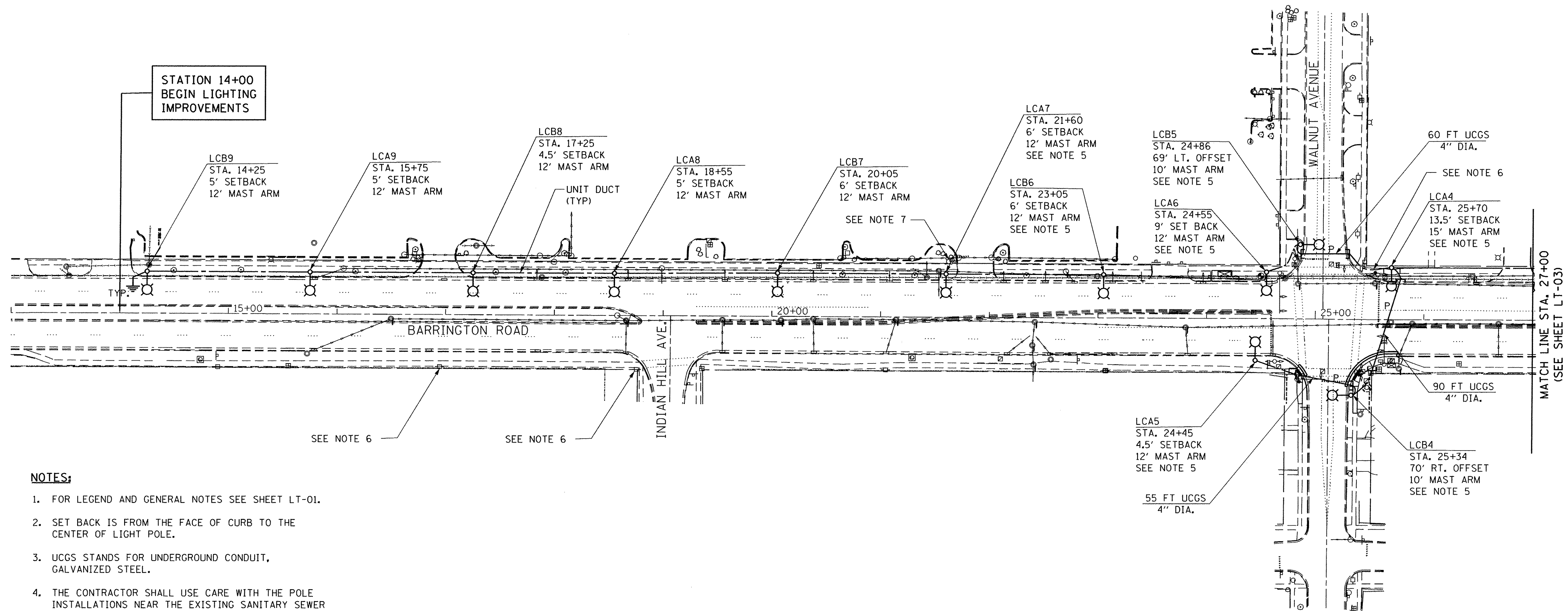
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, BILL OF MATERIALS AND LEGEND
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)**

SCALE: N.T.S SHEET OF SHEETS STA. N/A TO STA. N/A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	36
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 61D06	
			M-4003(621)	

LT-01



NOTES:

1. FOR LEGEND AND GENERAL NOTES SEE SHEET LT-01.
2. SET BACK IS FROM THE FACE OF CURB TO THE CENTER OF LIGHT POLE.
3. UCGS STANDS FOR UNDERGROUND CONDUIT, GALVANIZED STEEL.
4. THE CONTRACTOR SHALL USE CARE WITH THE POLE INSTALLATIONS NEAR THE EXISTING SANITARY SEWER AND STORM SEWER.
5. BANNERS SHALL BE PROHIBITED ON THIS LIGHT POLE.
6. EXISTING ComEd MAST ARM AND LUMINAIRE SHALL REMAIN IN USE DURING ALL PHASES OF CONSTRUCTION. THESE SHALL BE REMOVED BY ComEd ONLY WHEN PROPOSED LIGHTING IS INSTALLED AND OPERATIONAL. CONTRACTOR SHALL CONTACT ComEd FOR COORDINATION.
7. EXISTING WOOD POLE, MAST ARM AND LUMINAIRE SHALL BE REPLACED. THIS SHALL BE COORDINATED WITH THE VILLAGE OF HANOVER PARK.



LT-02

FILE NAME = I:\774-020 Hanover-Pk Barrington-Walnut-STP Phase I\ACADD Sheets\AMES Sheets 27-JUL-2016\774-020-Sht-LT-02.dgn

AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

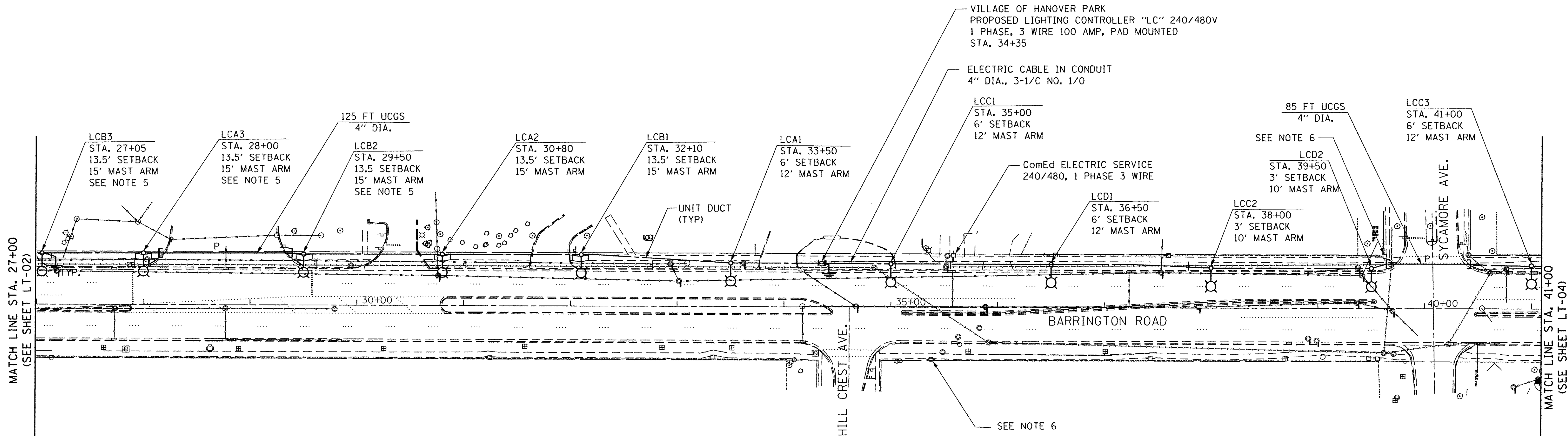
USER NAME = wTeng	DESIGNED - BL	REVISED -
	DRAWN - RV	REVISED -
PLOT SCALE = 50.0000' / in.	CHECKED - MB	REVISED -
PLOT DATE = 7/27/2016	DATE - 07-22-16	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)**

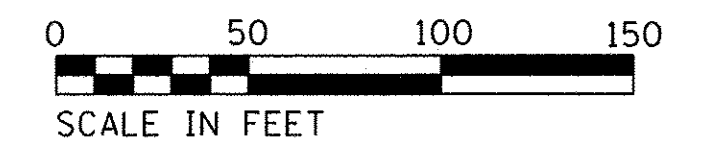
SCALE: 1"= 50' SHEET 1 OF 3 SHEETS STA. 13+00 TO STA. 27+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	37
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)			CONTRACT NO. 61D06	



NOTES:

1. FOR LEGEND AND GENERAL NOTES SEE SHEET LT-01.
2. SET BACK IS FROM THE FACE OF CURB TO THE CENTER OF LIGHT POLE.
3. UCGS STANDS FOR UNDERGROUND CONDUIT, GALVANIZED STEEL.
4. THE CONTRACTOR SHALL USE CARE WITH THE POLE INSTALLATIONS NEAR THE EXISTING SANITARY SEWER AND STORM SEWER.
5. BANNERS SHALL BE PROHIBITED ON THIS LIGHT POLE.
6. EXISTING ComEd MAST ARM AND LUMINAIRE SHALL REMAIN IN USE DURING ALL PHASES OF CONSTRUCTION. THESE SHALL BE REMOVED ONLY WHEN PROPOSED LIGHTING IS INSTALLED AND OPERATIONAL. CONTRACTOR SHALL CONTACT ComEd FOR COORDINATION.



FILE NAME = I:\774-020 Hanover Park Barrington Walnut STP Phase II\CD00 Sheets\AMES Sheets 27JUL2016\774-020_Sht-Lt-03.dgn

AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

USER NAME = WTeng	DESIGNED - BL	REVISED -
PLOT SCALE = 50.0000' / 1"	DRAWN - RV	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MB	REVISED -
	DATE - 07-22-16	REVISED -

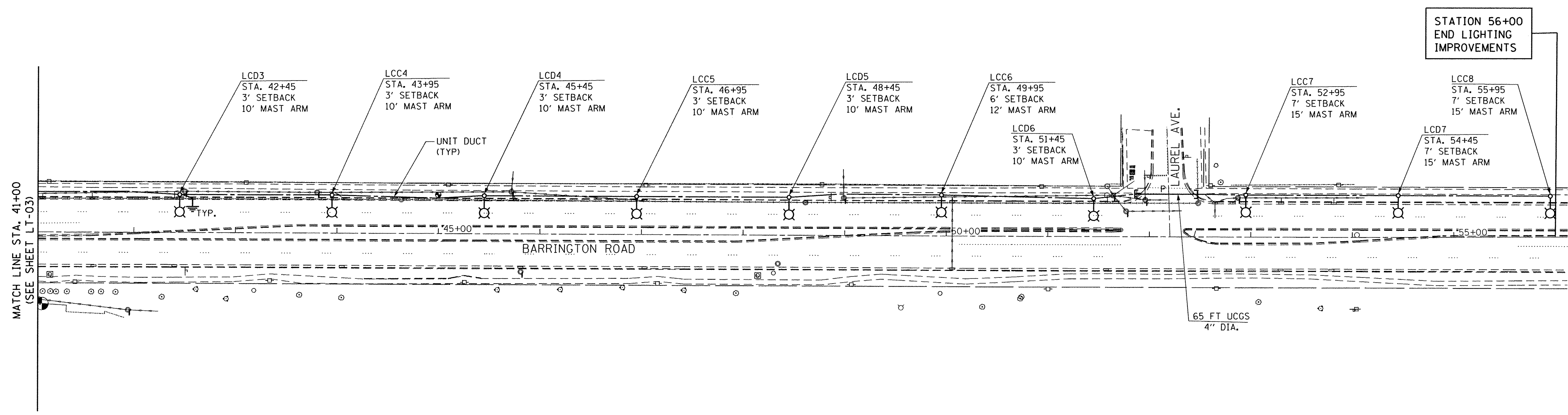
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)**

SCALE: 1" = 50' SHEET 2 OF 3 SHEETS STA. 27+00 TO STA. 41+00

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 38
CONTRACT NO. 61D06			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621	

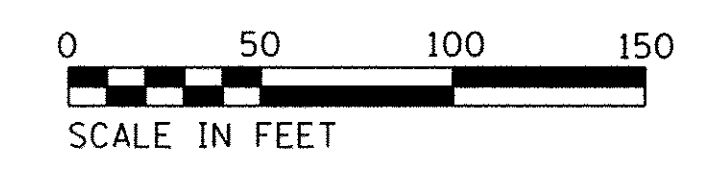
LT-03



MATCH LINE STA. 41+00 (SEE SHEET LT-03)

NOTES:

1. FOR LEGEND AND GENERAL NOTES SEE SHEET LT-01.
2. SET BACK IS FROM THE FACE OF CURB TO THE CENTER OF LIGHT POLE.
3. UCGS STANDS FOR UNDERGROUND CONDUIT, GALVANIZED STEEL.
4. THE CONTRACTOR SHALL USE CARE WITH THE POLE INSTALLATIONS NEAR THE EXISTING SANITARY SEWER AND STORM SEWER.



FILE NAME = I:\74-020 Hanover Pl. Barrington Walnut STP Phase I\CD00 Sheets\AMES Sheets 27JUL2016\74-020_Sht.Lt.Lg-04.dgn

AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

USER NAME = WTeng	DESIGNED - BL	REVISED -
	DRAWN - RV	REVISED -
PLOT SCALE = 50.0000' / in.	CHECKED - MB	REVISED -
PLOT DATE = 7/27/2016	DATE - 07-22-16	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)**

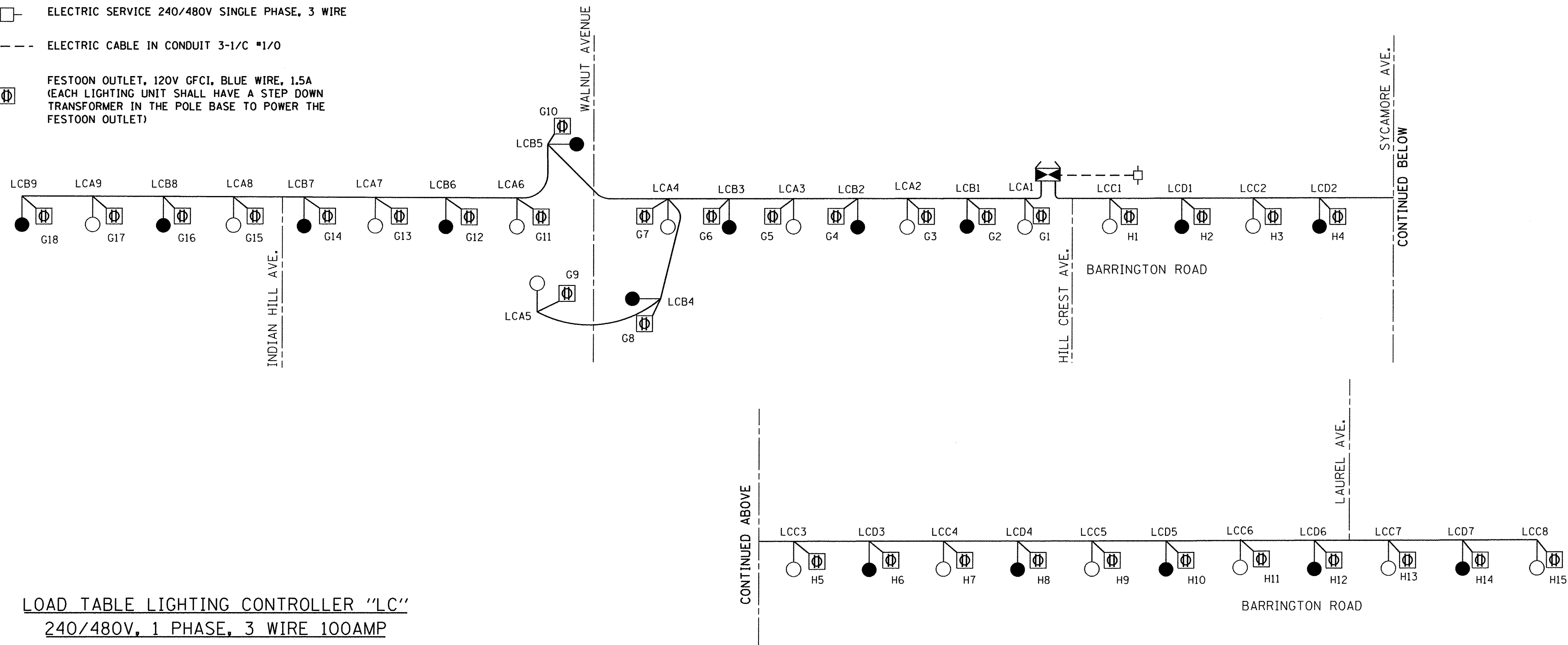
F.A.P. RTE. 362	SECTION 13-00062-00-5P	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 39
CONTRACT NO. 61D06				
SCALE: 1"= 50' SHEET 3 OF 3 SHEETS STA. 41+00 TO STA. 55+00				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

LT-04



LEGEND

- LUMINAIRE LED, 284W, 240V, RED WIRE, 1.3A
- LUMINAIRE LED, 284W, 240V, BLACK WIRE, 1.3A
- UNIT DUCT 5 1C #4 AND 1/C #6 GROUND
- ⊠ PROPOSED LIGHTING CONTROLLER "LC" 240/480V, 1 PHASE, 3 WIRE, 100 AMP
- ELECTRIC SERVICE 240/480V SINGLE PHASE, 3 WIRE
- ELECTRIC CABLE IN CONDUIT 3-1/C #1/0
- ⊕ FESTOON OUTLET, 120V GFCI, BLUE WIRE, 1.5A (EACH LIGHTING UNIT SHALL HAVE A STEP DOWN TRANSFORMER IN THE POLE BASE TO POWER THE FESTOON OUTLET)



LOAD TABLE LIGHTING CONTROLLER "LC"
240/480V, 1 PHASE, 3 WIRE 100AMP

RED			BLACK		
CIRCUIT	AMPS @ 240V	VA	CIRCUIT	AMPS @ 240V	VA
A	11.7	2808	B	11.7	2808
C	10.4	2496	D	9.1	2184
E	SPARE	SPARE	F	SPARE	SPARE
G	27(@ 120V)	3240	H	22.5(@ 120V)	2700
TOTAL	49.1	8544	TOTAL	43.3	7692
TOTAL LOAD		92A			

NOTE:
1. SEE SHEET LT-09 (REVISED IDOT D1 STANDARD BE 702) WIRING FOR LIGHTING AND FESTOON OUTLETS CONNECTIONS.

FILE NAME = I:\774-020 -Hemover Ph. Barrington Walnut STP Phase II\ACADD Sheets\AMES Sheets\27JUL2016\774-020_Sht.Lt-05.dgn

AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

USER NAME = WTeng	DESIGNED - BL	REVISED -
PLOT SCALE = 50.0000' / 1"	DRAWN - RV	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MB	REVISED -
	DATE - 07-22-16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

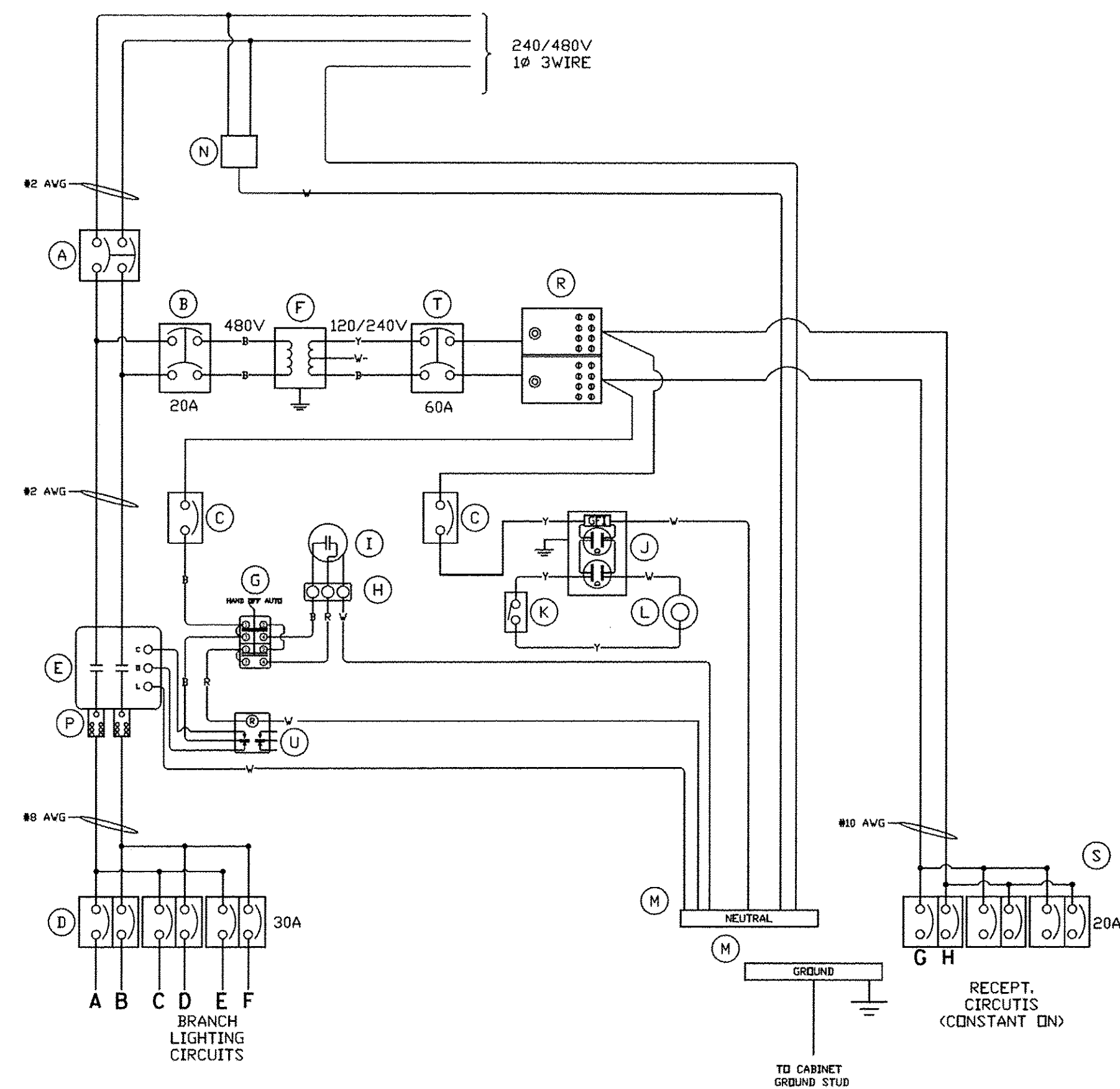
ONE LINE WIRING DIAGRAM
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 40
CONTRACT NO. 61D06				

FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	M-4003(621)
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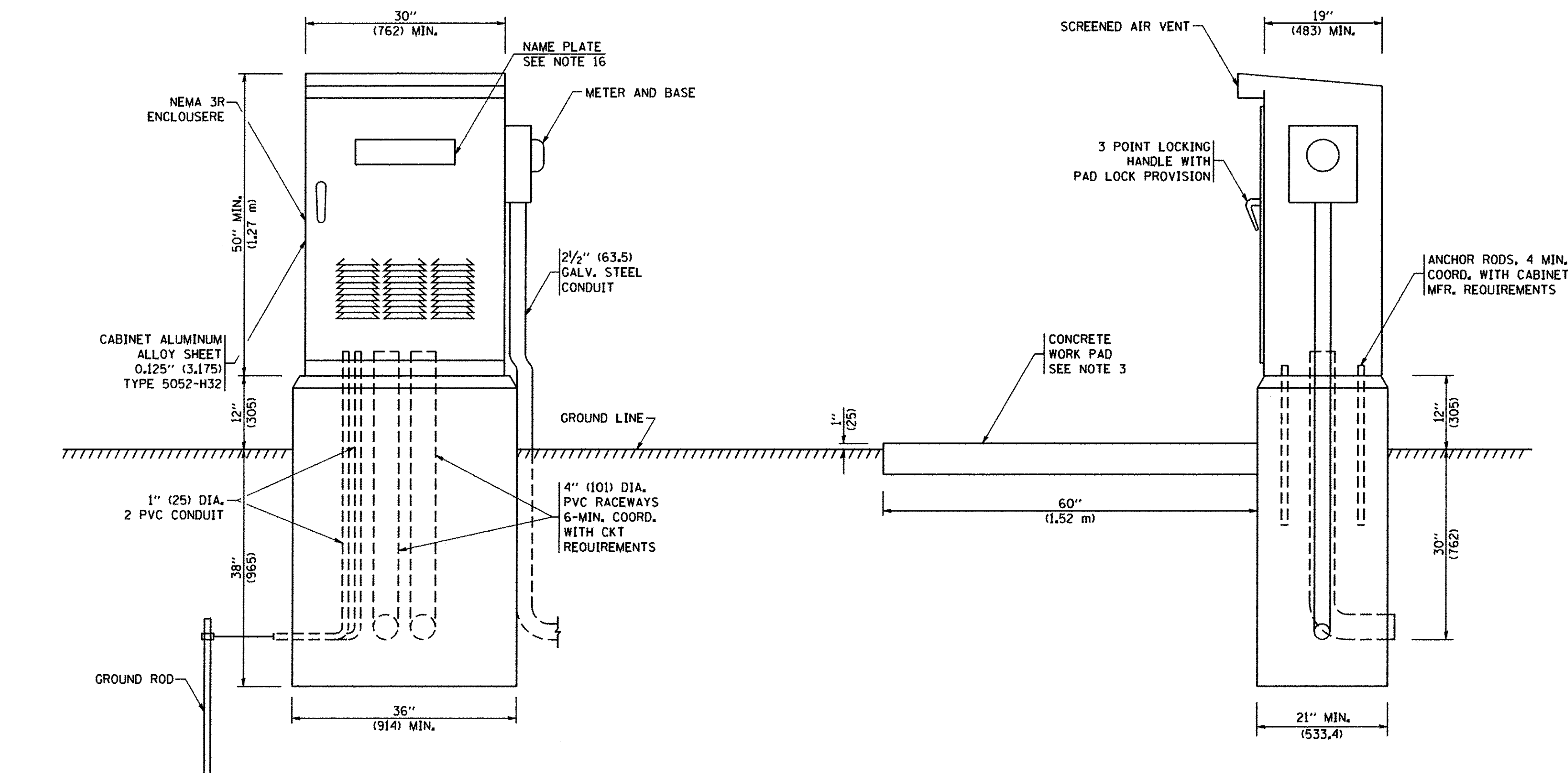
LT-05



NOTES:

- ALL POWER WIRING WILL BE RHH/RHW
- ALL CONTROL WIRING WILL BE #12 MTW
- WIRE COLORS:
 BL = BLUE
 W = WHITE
 B = BLACK
 R = RED
 Y = YELLOW

BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
A	1	SQ.D FAL24100 2P/100A MAIN BREAKER
B	1	SQ.D FAL24020 2P/20A TRANS PRI. BREAKER
C	2	SQ.D FAL14015 1P/15A CONTROL/AUX
D	6	SQ.D FAL14030 1P/30A BRANCH BREAKERS
E	1	SQ.D 8903PBQ10V02 120V COIL CONTACTOR
F	1	HAMMOND C1F007LES 7.5KVA XFORMER
G	1	SQ.D 9001KYK111 H.O.A. SWITCH
H	1	CINCH 3PT TERMINAL BLOCK
I	1	FISHER PIERCE FPFA-105M PHOTOCELL
J	1	HUBBELL GF201LA GFCI RECPT.
K	1	HUBBELL CS1221 SPST LIGHT SWITCH
L	1	RAB VX100DG LIGHT FIXTURE
M	2	12" x 1" x 1/4" GROUND/NEUTRAL BUS
N	1	SPDEE S50A277V2PN SURGE ARRESTER
Q	4	RESERVED
P	2	C.H. 6 HOLE LUGS
R	1	MERSEN MPDB67582 DIST. BLOCK
S	6	SQ. D FAL12020 1P/20A BREAKER
T	1	SQ. D FAL22060 2P/60A BREAKER
U	1	ZELIO RPF2BF7 120V COIL RELAY



- NOTES:**
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 - FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
 - IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL. LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) x 60" (1828.8 mm) x 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
 - DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
 - DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
 - DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
 - ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
 - CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
 - METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
 - CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
 - THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
 - ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
 R = RED BL = BLUE W = WHITE
 B = BLACK Y = YELLOW G = GREEN
 - PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
 - ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
 - THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
 - 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

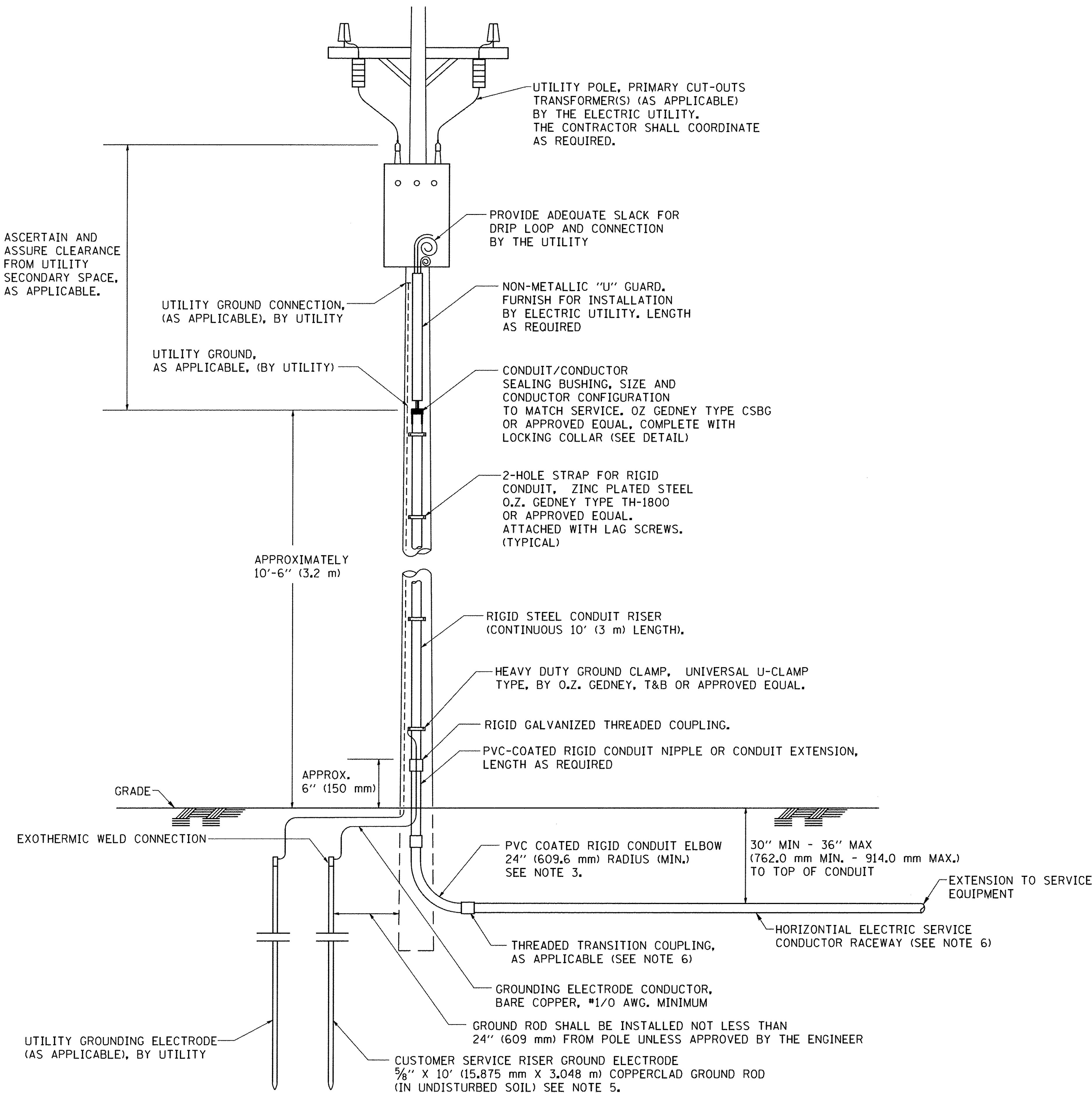
AMES Engineering, Inc.
 CONSULTING ENGINEERS
 5413 Walnut Avenue, Ste 2
 Downers Grove, IL 60515

USER NAME = goglionobt	DESIGNED -	REVISED - 08-20-04
PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -
PLOT DATE = 1/4/2008	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

LIGHTING CONTROLLER		F.A.P. RTE. 362	SECTION 13-0062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 41
SINGLE DOOR		BE-215		CONTRACT NO. 61D06		
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A			

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621

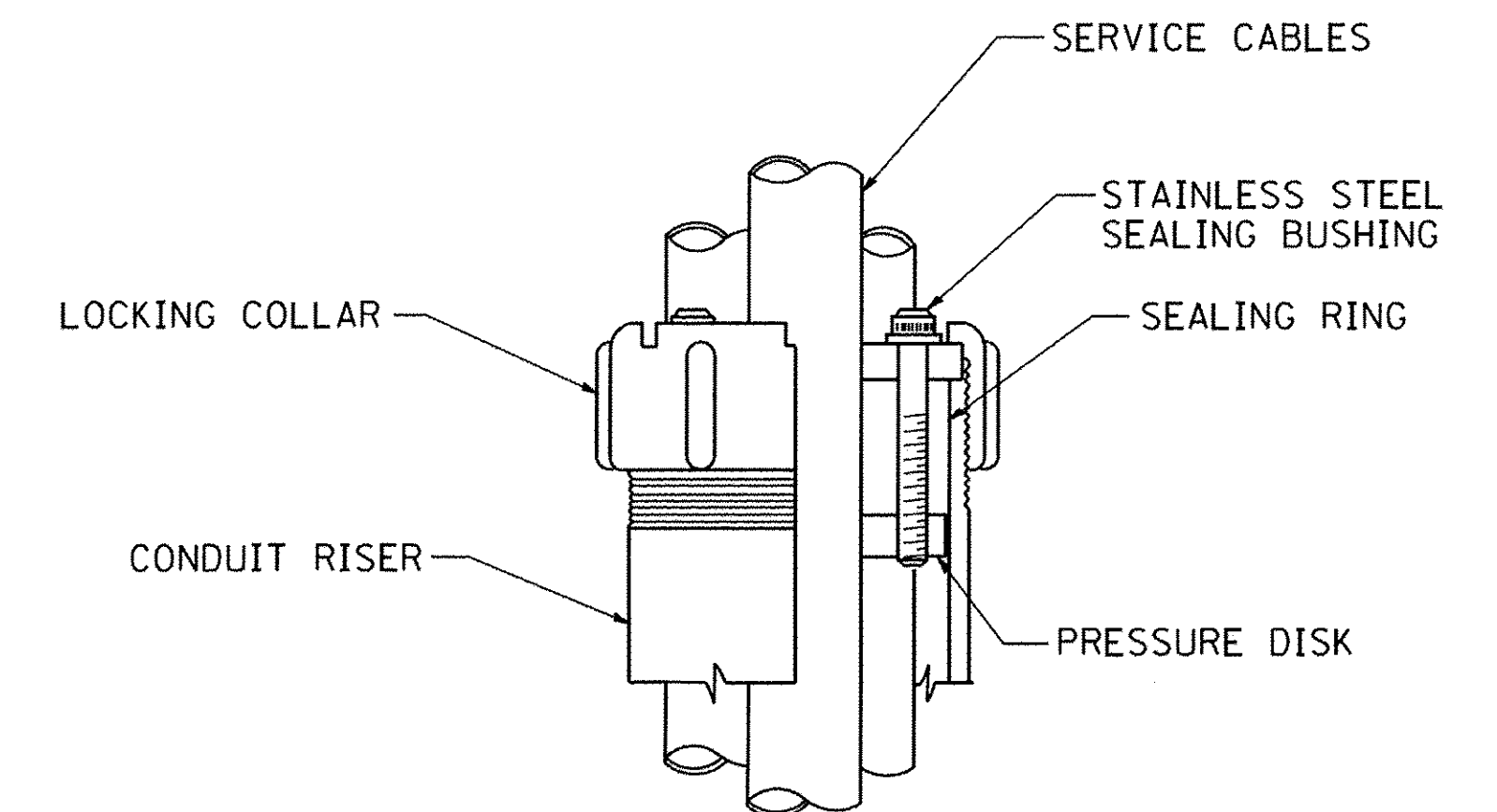


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

NOTES

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



SEALING BUSHING DETAIL

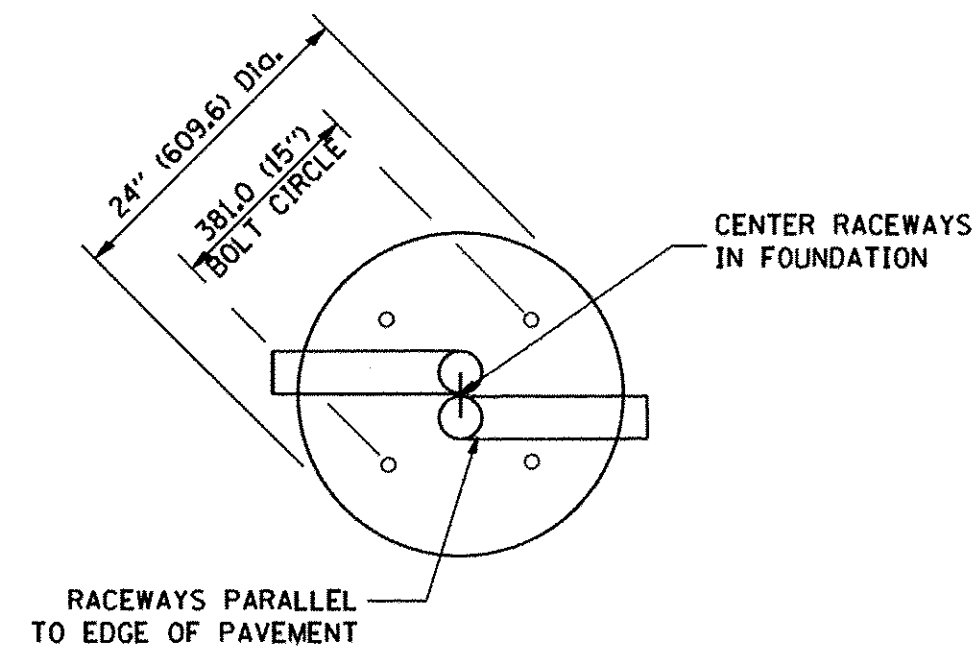
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PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -
PLOT DATE = 1/4/2008	CHECKED - MEA	REVISED -
	DATE -	REVISED -

ELECTRIC SERVICE INSTALLATION			
AERIAL, REMOTE DISCONNECT			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A

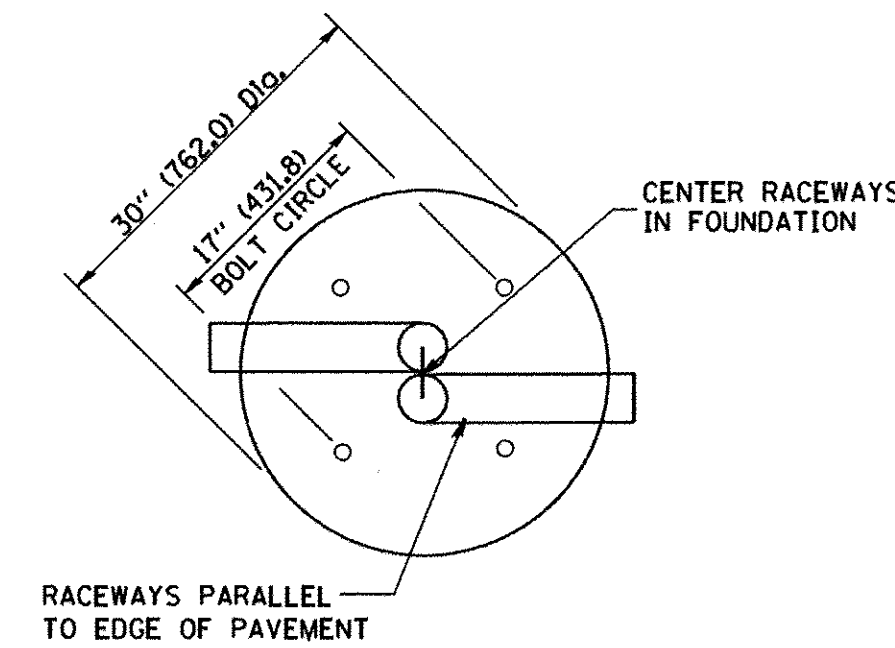
F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 42
BE-220			CONTRACT NO. 61D06	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(621)				

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY O _u = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY O _u = 0.75 TON/SQ.FT	9'-6" (2.99 m)	10'-9" (3.23 m)
STIFF CLAY O _u = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



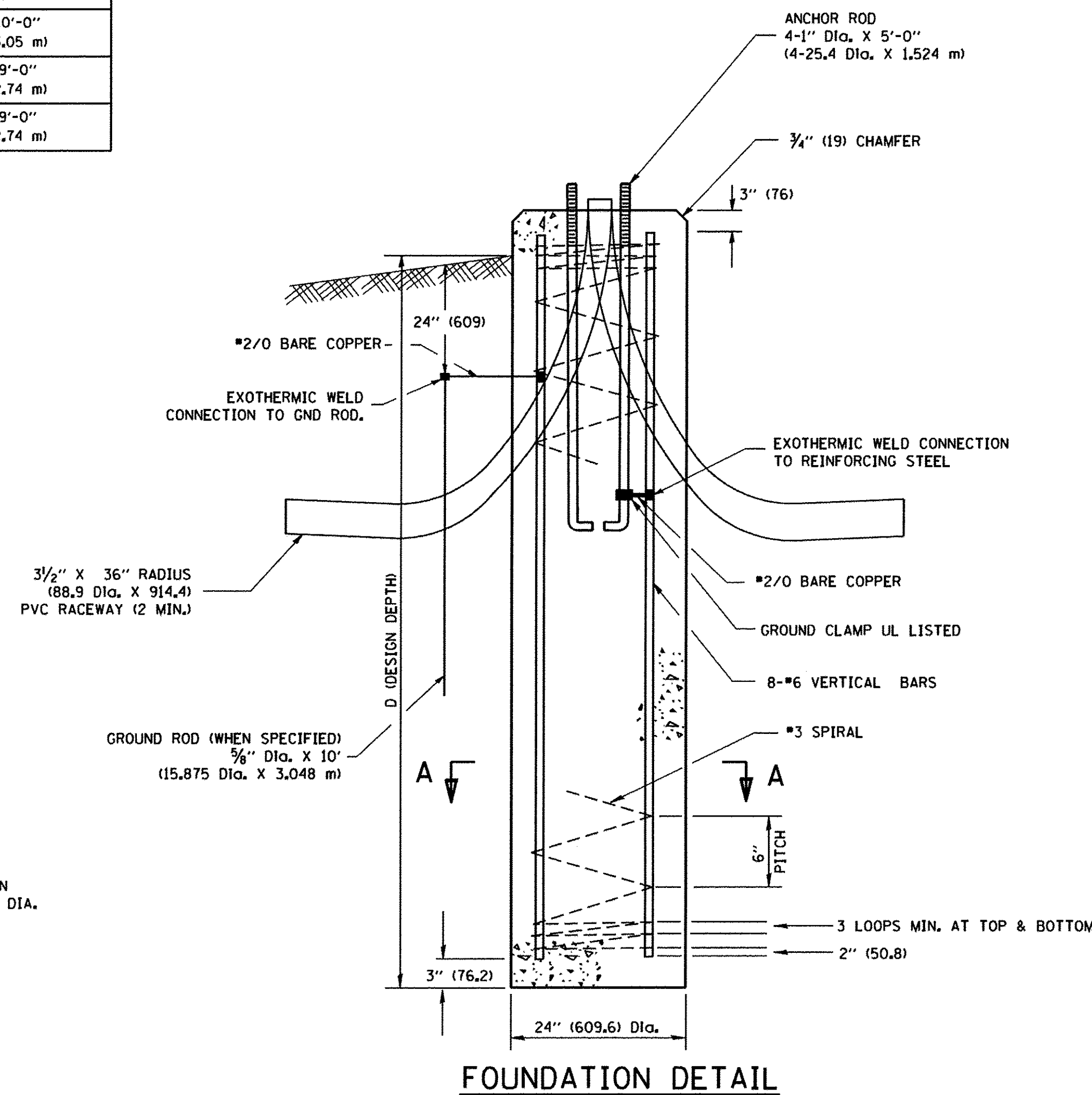
TOP VIEW



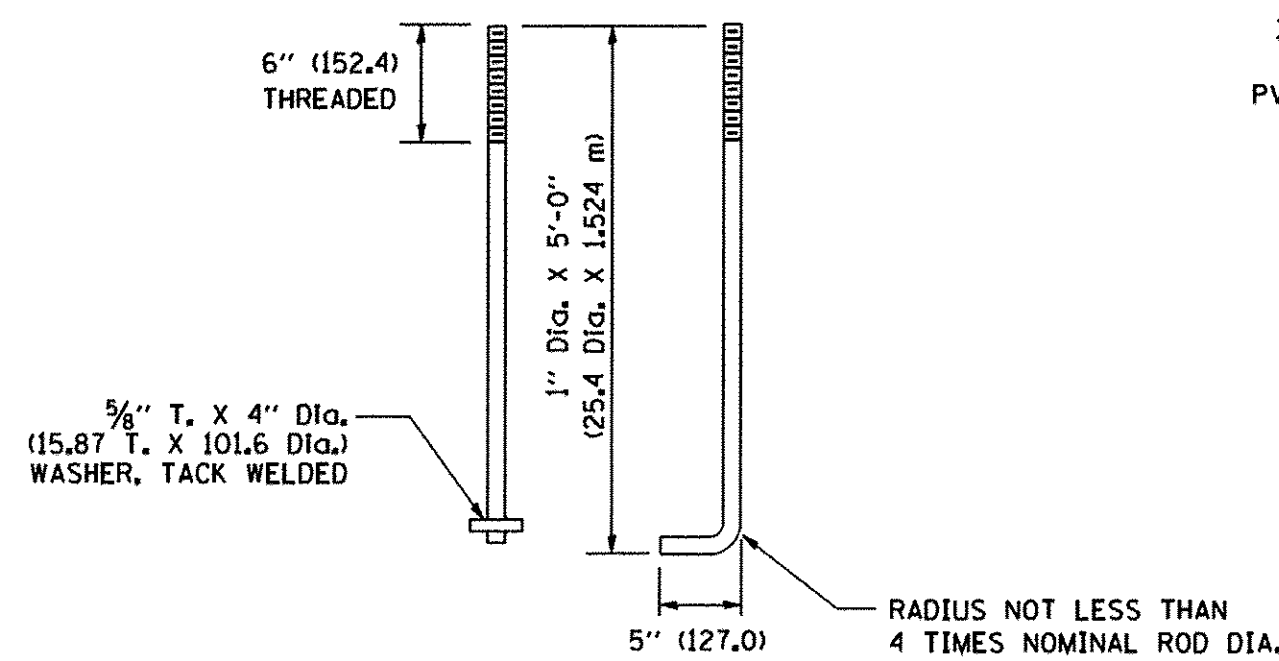
TOP VIEW

NOTES

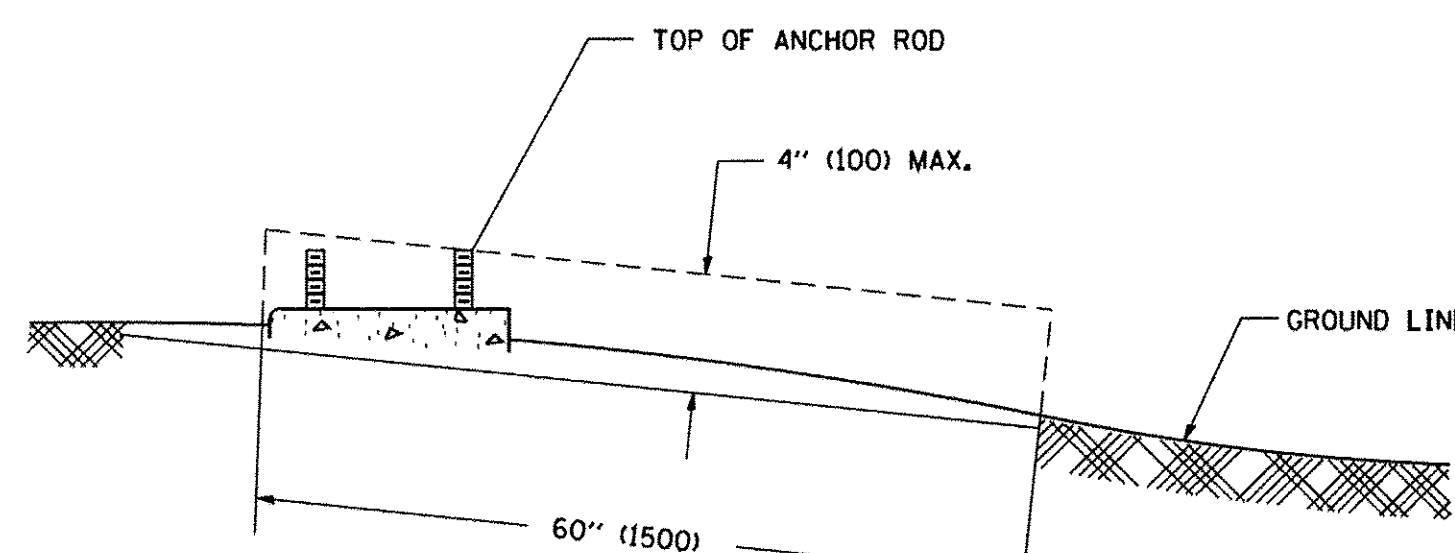
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105), NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERRECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



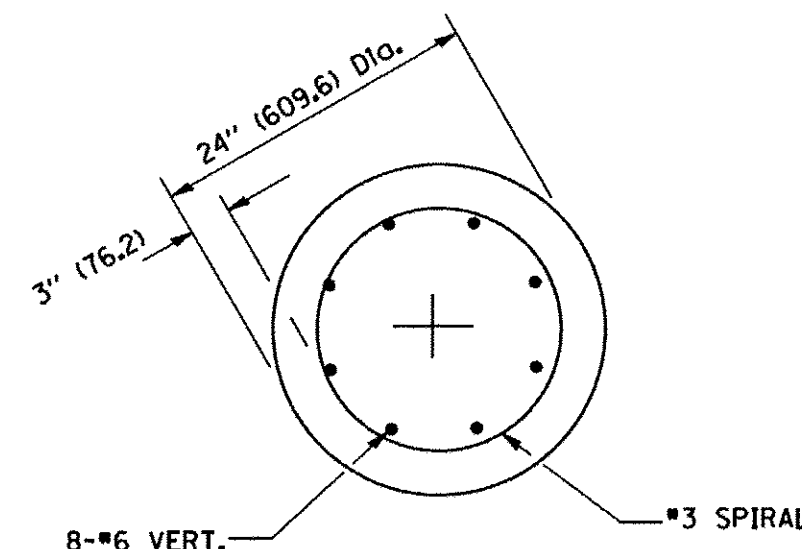
FOUNDATION DETAIL



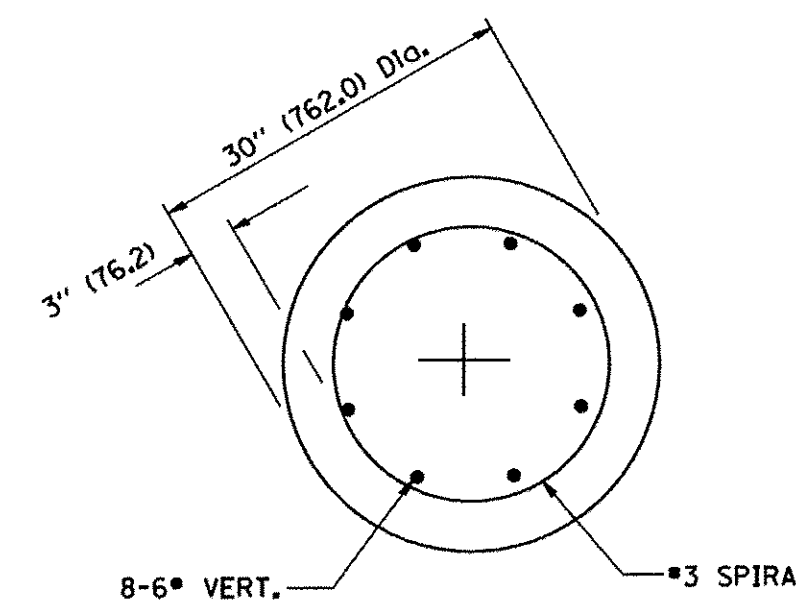
ANCHOR ROD DETAIL



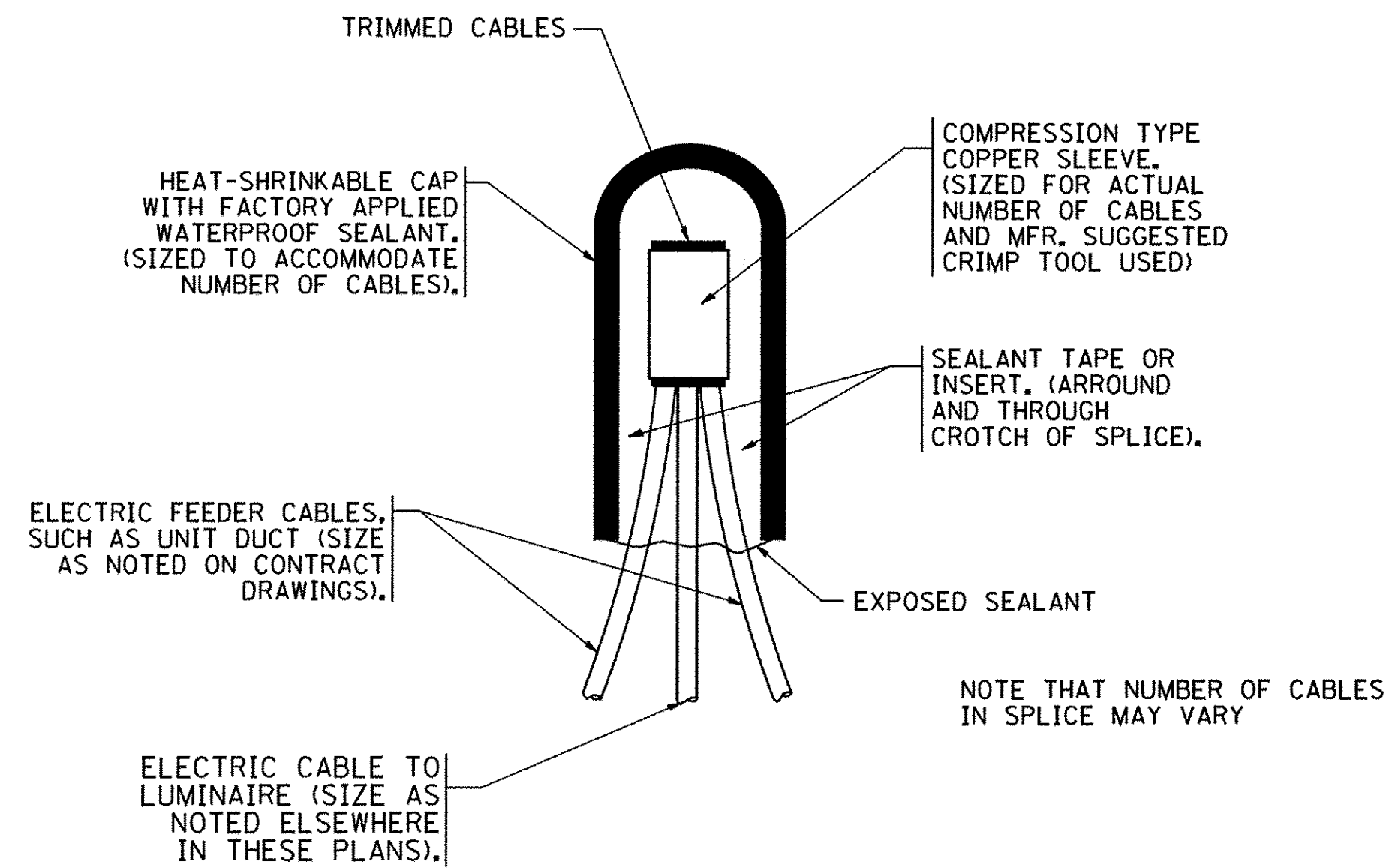
FOUNDATION EXTENSION DETAIL



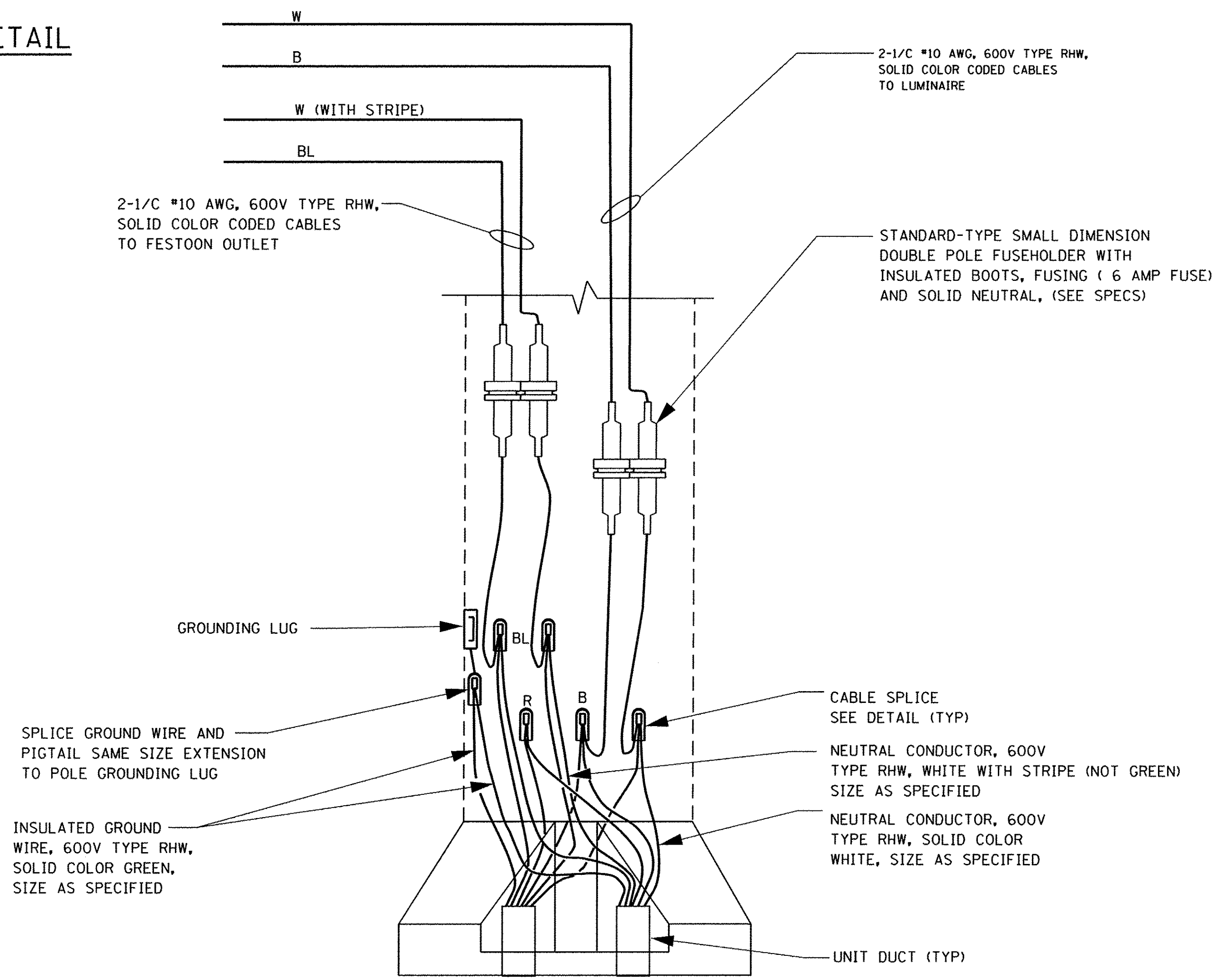
SECTION A-A



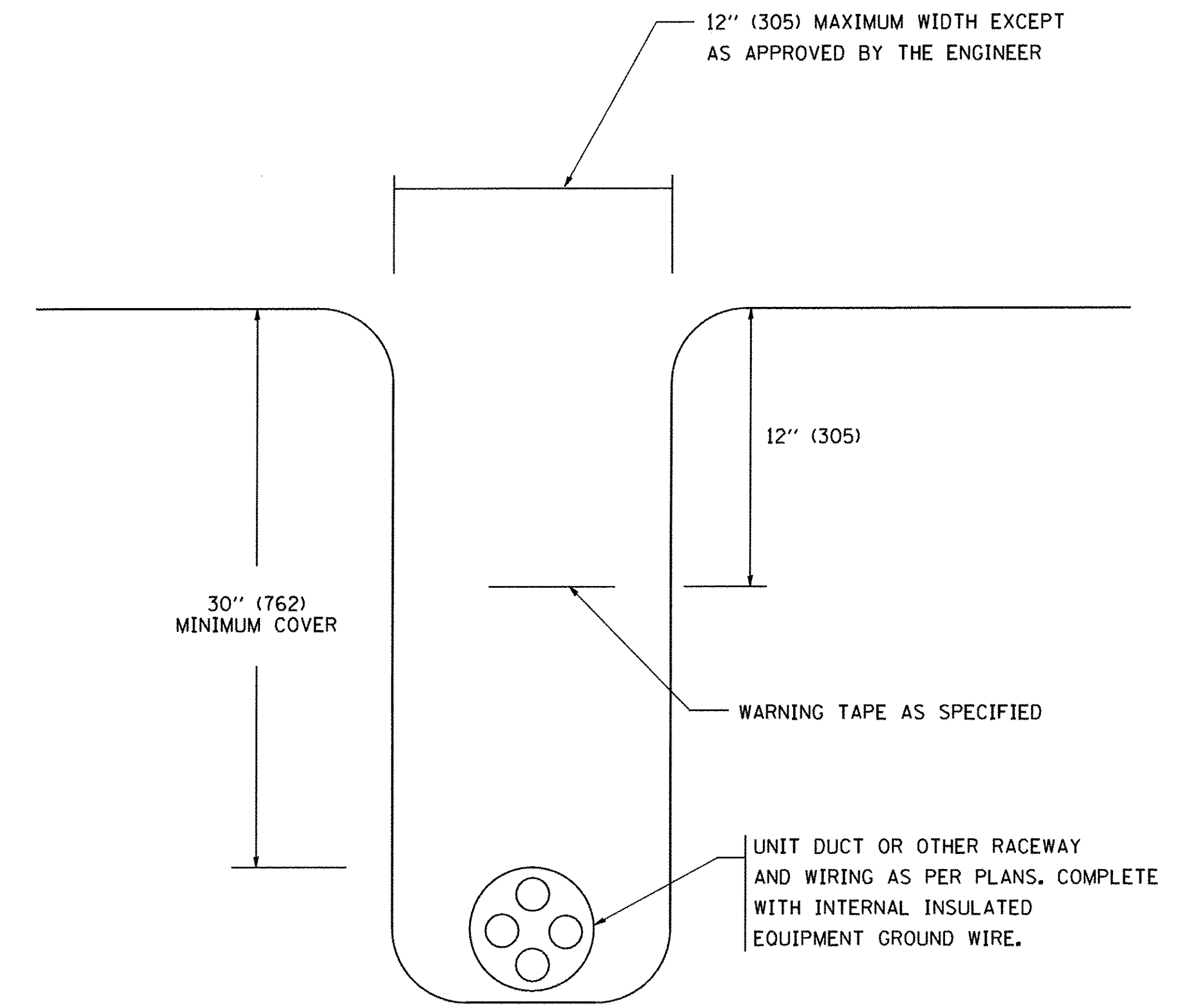
SECTION A-A



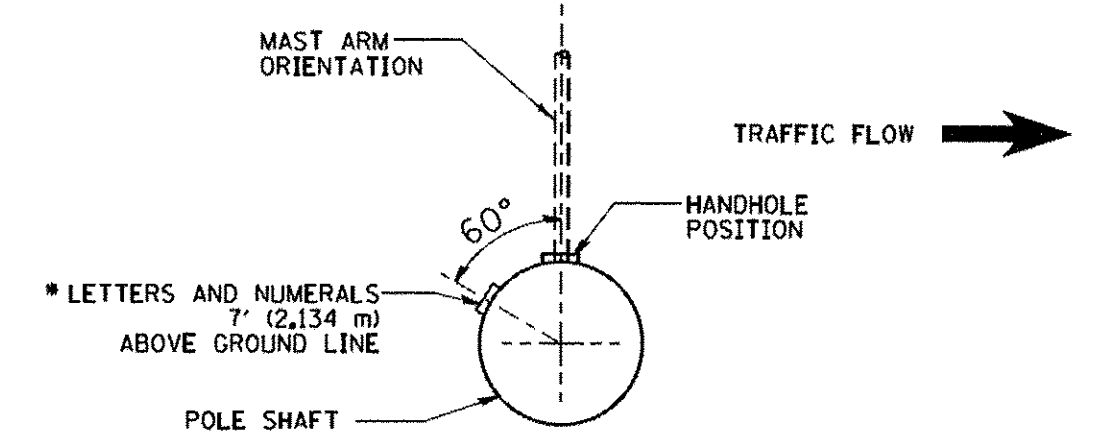
TYPICAL SPLICE DETAIL
N.T.S.



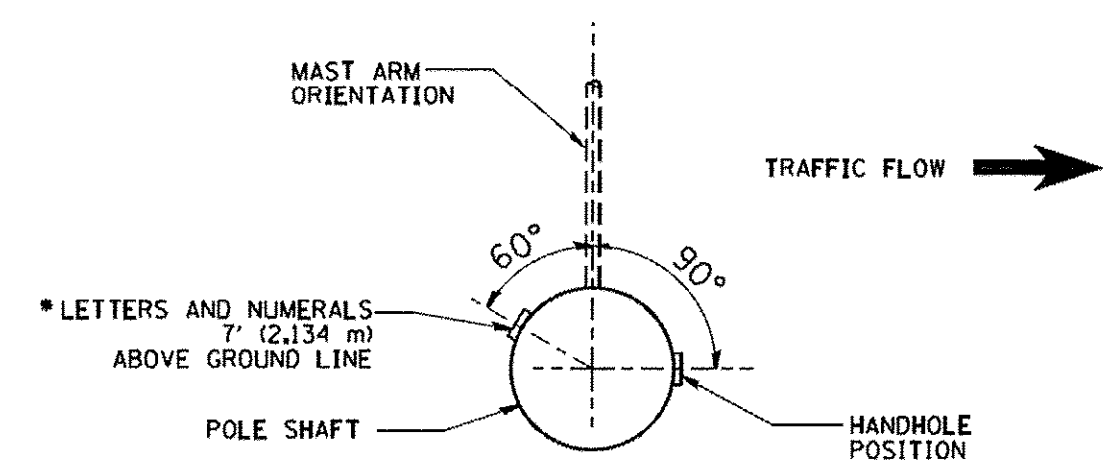
POLE BASE WIRING DIAGRAM
N.T.S.



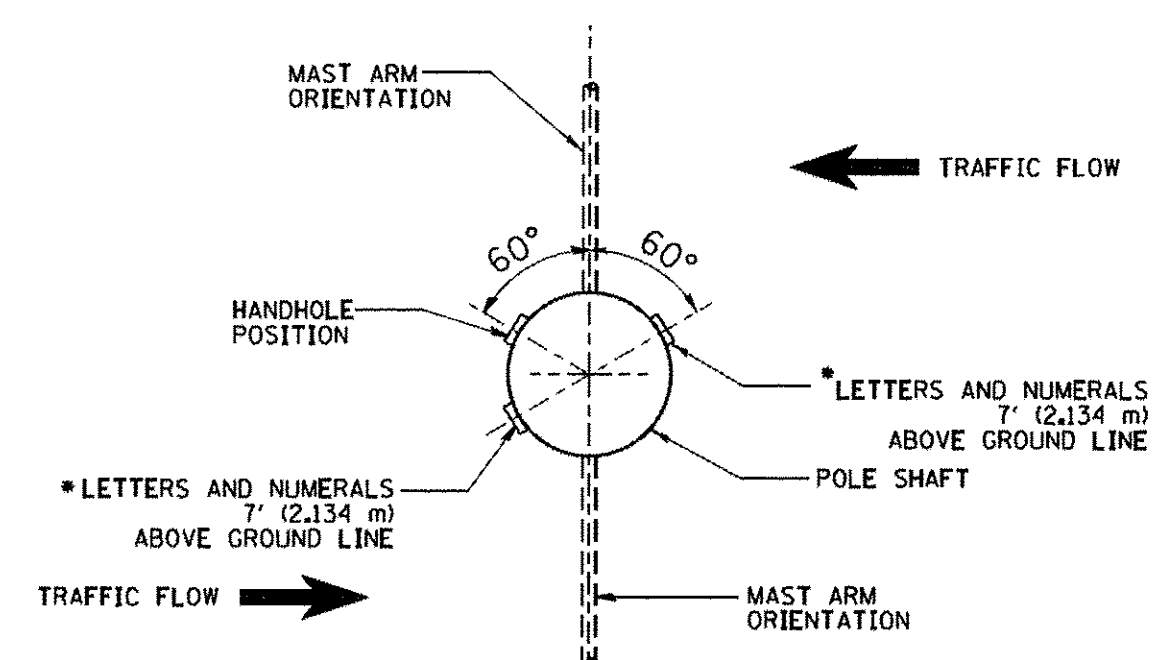
TYPICAL WIRING IN TRENCH DETAIL
N.T.S.



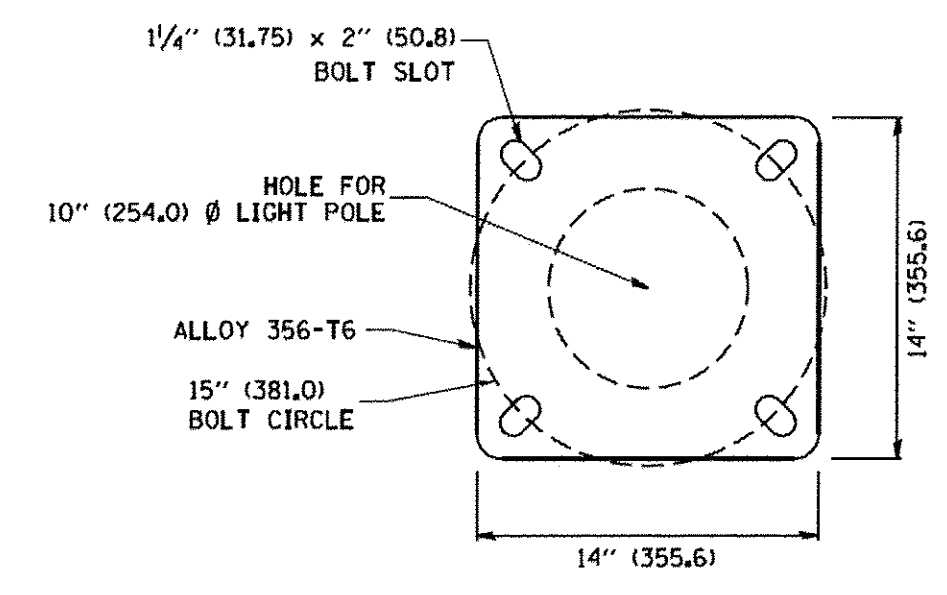
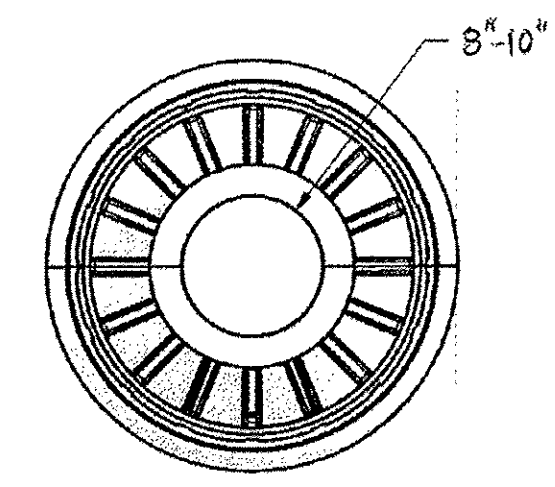
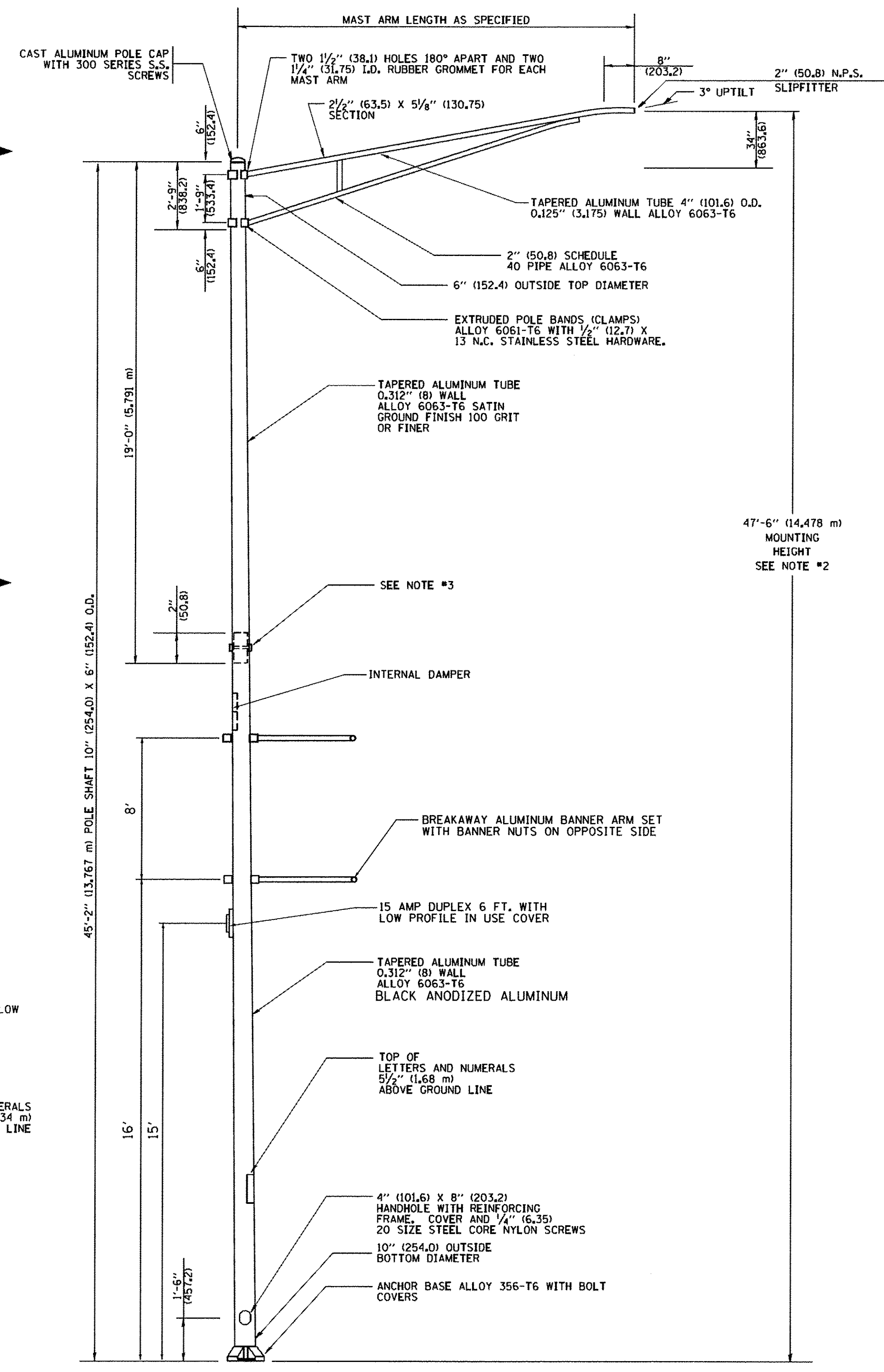
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



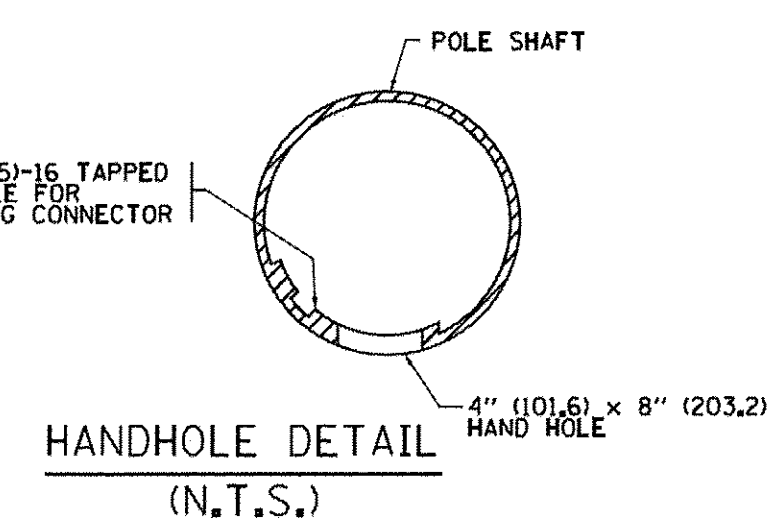
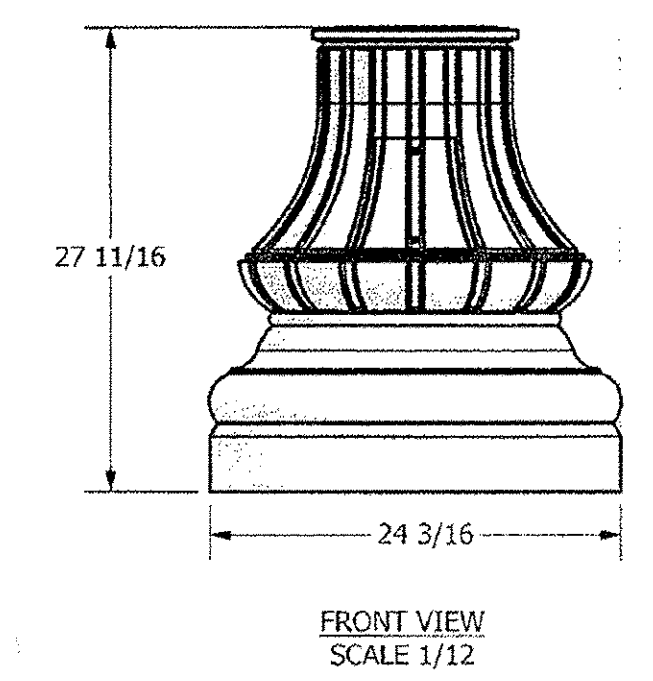
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



LIGHT POLE BASE PLATE DETAIL
15 INCH (381.0) BOLT CIRCLE



- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, F&B SP4DL OR APPROVED EQUAL.
 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
 8. THE LIGHTING UNITS SHALL BE AS SHOWN AS APPROVED BY THE VILLAGE OF HANOVER PARK.
 9. BREAKAWAY COUPLINGS SHALL BE PROVIDED AND SHALL MEET CURRENT AASHTO BREAKAWAY REQUIREMENTS.
 10. EACH POLE SHALL HAVE A RECESSED FESTOON OUTLET.
 11. THE LIGHT POLE, MAST ARM, LUMINAIRE, BANNER ARMS AND CLAMHELL ASSEMBLY SHALL MEET AASHTO DESIGN CRITERIA.
 12. A RETENTION CHAIN SHALL BE PROVIDED FOR THE BREAKAWAY BANNER ARMS.
 13. LIGHT POLE SHALL BE CLASSIFIED BY UL, ETL OR APPROVED BY OSHA TESTING LABORATORY.

FILE NAME: I:\74-020 Hanover-Pk Berrington Walnut STP Phase II\CADD Sheets\AMES Sheets 27 JUL 2016\74-020_Sht_LL1g-10.dgn

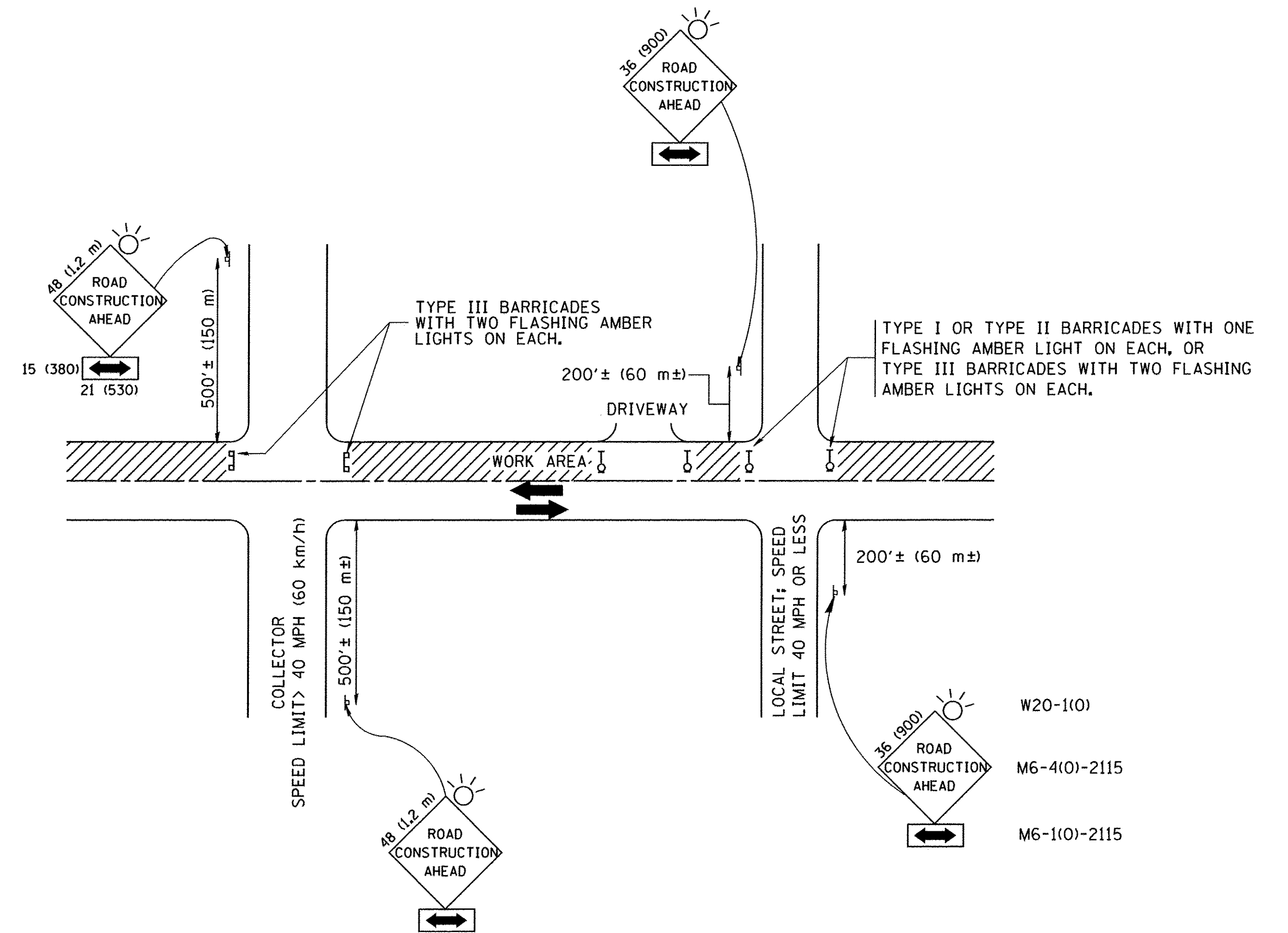
AMES Engineering, Inc.
CONSULTING ENGINEERS
5413 Walnut Avenue, Ste 2
Downers Grove, IL 60515

USER NAME = wTeng	DESIGNED - BL	REVISED -
PLOT SCALE = 50.0000' / 1"	DRAWN - RV	REVISED -
PLOT DATE = 7/27/2016	CHECKED - MB	REVISED -
	DATE - 07-22-16	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LIGHTING UNIT DETAIL
BARRINGTON ROAD - MAPLE AVENUE TO IL 19 (IRVING PARK ROAD)
SCALE: NONE SHEET 1 OF 1 SHEETS STA. N/A TO STA. N/A

F.A.P. RTE. 362	SECTION 13-00062-00-SP	COUNTY COOK	TOTAL SHEETS 48	SHEET NO. 45
CONTRACT NO. 61D06			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003621	



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

FILE NAME =
W:\diststd\22x34\tcl0.dgn

USER NAME = geglionabt
DRAWN -
PLOT SCALE = 50.000' / IN.
PLOT DATE = 1/4/2008

DESIGNED - LHA
CHECKED -
DATE - 06-89

REVISED - J. OBERLE 10-18-95
REVISED - A. HOUSEH 03-06-96
REVISED - A. HOUSEH 10-15-96
REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

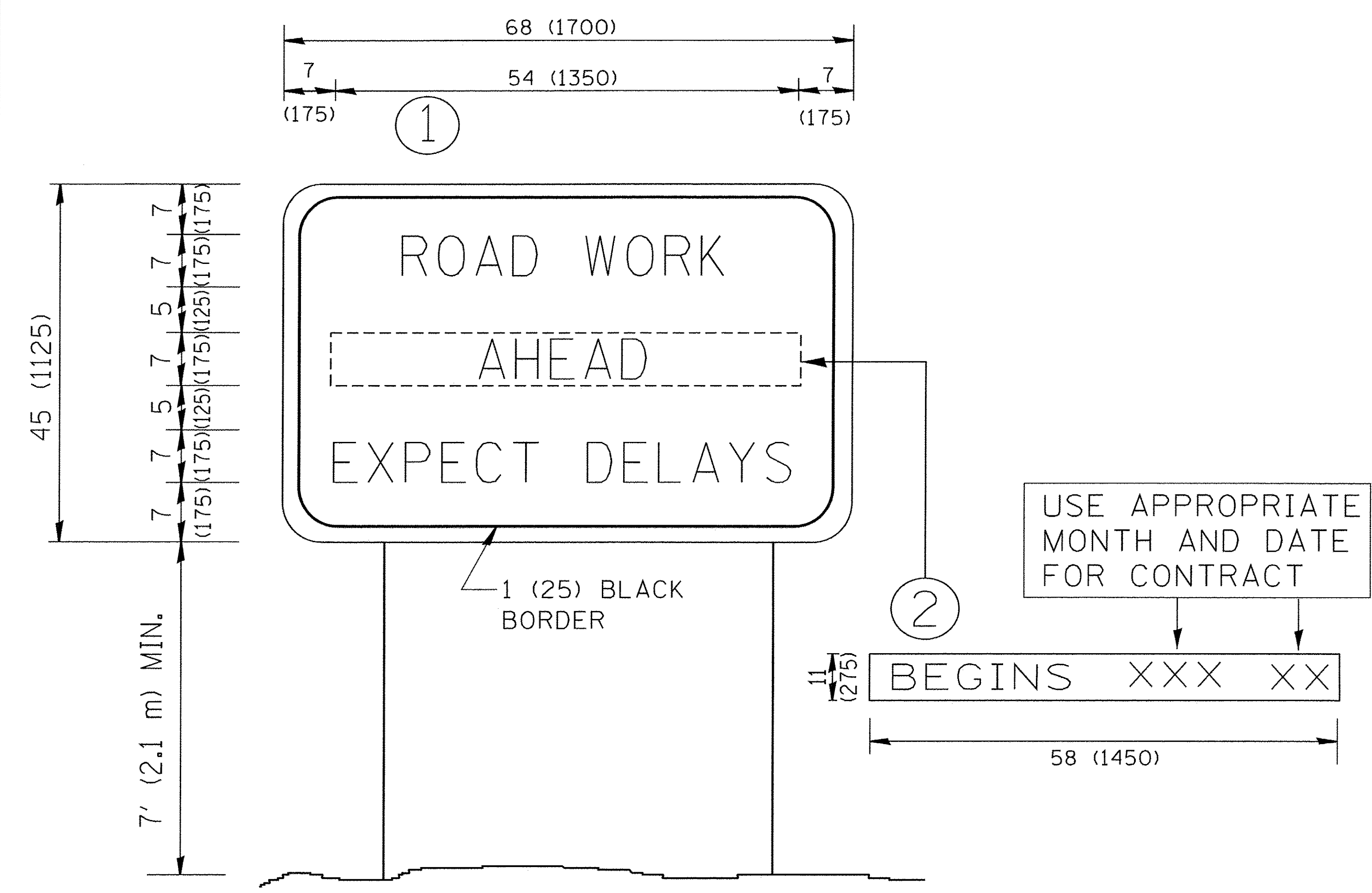
SCALE: NONE

SHEET NO. 1 OF 1 SHEETS

STA.

TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
362	13-00062-00-SP	COOK	48	47
TC-10			CONTRACT NO. 61D06	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (621)				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\to22.dgn	USER NAME = gaglienobt	DESIGNED - DRAWN -	REVISD - R. MIRS 09-15-97 REVISD - R. MIRS 12-11-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISD - T. RAMMACHER 02-02-99	362			13-00062-00-SP	COOK	48	48	
PLOT DATE = 1/4/2008	DATE -	REVISD - C. JUCIUS 01-31-07	TC-22			CONTRACT NO. 61D06		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (621)		
				SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		