

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**
DISTRICT 1

**F.A.U. ROUTE 2561 (GARY AVENUE - C.H. 23)
AT TRAVIS PARKWAY
LEAD AGENCY DUPAGE COUNTY
SAFETY IMPROVEMENTS
SECTION: 11-00237-12-SP
PROJECT NO. HSIP - 0043 (029)
COOK AND DUPAGE COUNTIES
C-91-540-12**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2561	11-00237-12-SP	DUPAGE/COOK	24	1
ILLINOIS CONTRACT NO. 63821				

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	SUMMARY OF QUANTITIES
4 - 5	TRAFFIC SIGNAL PLANS
6	CABLE PLANS, PHASING, AND SCHEDULE OF QUANTITIES
7	LIGHTING NOTES AND LEGEND
8 - 9	DUPAGE COUNTY LIGHTING PLANS
10	IDOT LIGHTING PLANS
11	DUPAGE COUNTY WIRING DIAGRAM
12	IDOT WIRING DIAGRAM
13 - 16	LIGHTING DETAILS
19 - 23	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
24	DUPAGE COUNTY STANDARD DETAILS

HIGHWAY STANDARDS

000001-06	001006	424001-07	424021-01
606306-03	701006-04	701101-03	701301-04
701421-05	701501-06	701601-08	701701-08
701801-05	701901-02	720001-01	720006-03
814001-02	814006-02	857001-01	862001-01
873001-02	877001-05	878001-09	880001-01
880006-01	886001-01		

IDOT DISTRICT ONE DETAILS

TS-05	BE-220	BE-410	BE-701
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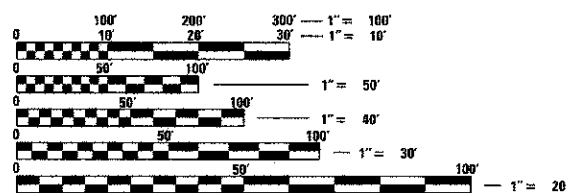
DUPAGE COUNTY STANDARD

DETAIL: TRAFFIC SIGNAL CABINET - TYPE IV (DUPAGE)

NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED).

THIS PROJECT IS LOCATED IN THE CITY OF ROSELLE.

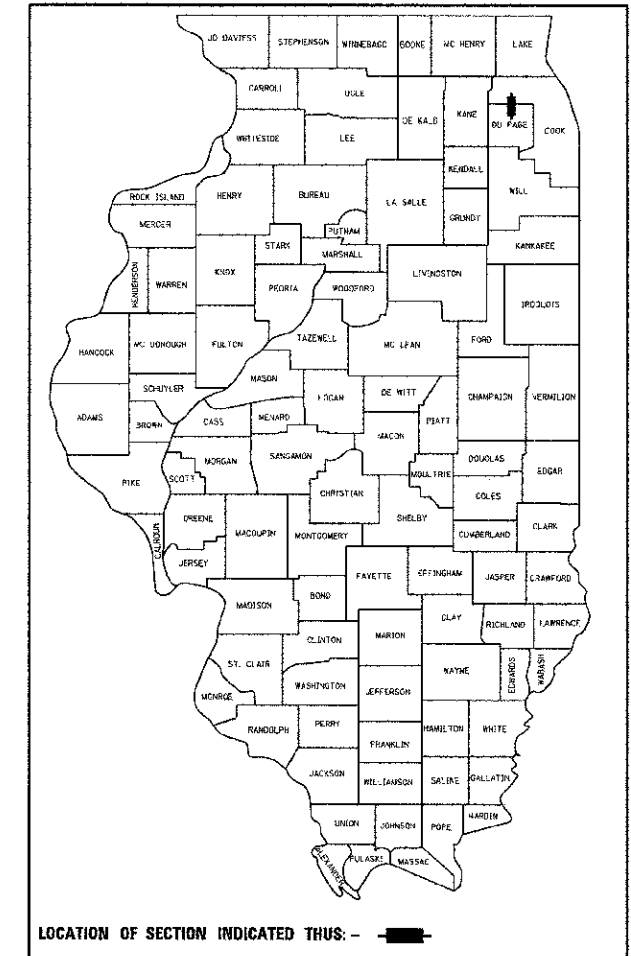
	48 HOURS BEFORE CONSTRUCTION	
	SECTION: N. 1/2 SEC. 5	S. 1/2 SEC. 32
	TOWNSHIP: 40 NORTH	41 NORTH
	RANGE: 10 EAST OF 3RD P.M.	



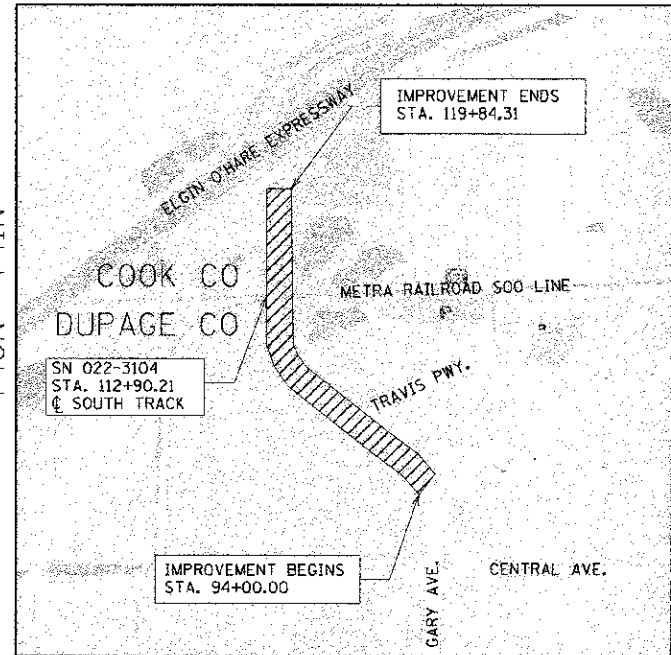
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: STEPHEN ZULKOWSKI
PROJECT MANAGER: JOHN CLARK
CONTRACT NO. 63821



R10E, 3RD PM



BLOOMINGDALE TOWNSHIP
LOCATION MAP

LOCATION MAP SCALE: N.T.S.

GROSS LENGTH OF IMPROVEMENT: 2584.31 LIN. FT. = 0.49 MILES
OMISSIONS: NONE
NET LENGTH OF IMPROVEMENT: 2584.31 LIN. FT. = 0.49 MILES

DESIGN DESIGNATION:
MAJOR COLLECTOR/
MINOR ARTERIAL

POSTED SPEED LIMIT:
45 MPH

TRAFFIC VOLUME:
18,100 ADT



JOHN A. CLARK, P.E.
NO. 062-055684
EXP. DATE: 11/30/2013
SHEETS 1 - 6
19 - 24



SYED ALI, P.E.
NO. 062-044196
EXP. DATE: 11/30/2013
SHEETS 7 - 18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED *Christopher Snyder*
April 5th 2013
COUNTY ENGINEER, DUPAGE COUNTY

PASSED April 9, 2013
C. Holt c.j. Holt
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW April 10, 2013
John Fortman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

STV Incorporated
engineers/architects/scientists/construction managers
200 W. Monroe - Suite 1650
Chicago, Illinois 60606
(312) 553-0655
FAX: (312) 553-0661

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

GENERAL NOTES - MISCELLANEOUS

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION AS SHOWN.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS. THE ENGINEER, OR AN AUTHORIZED SURVEYOR OR AGENT WILL WITNESS OR OTHERWISE REFERENCE AND RESET MONUMENTS AS NECESSARY. ALL PROPERTY CORNERS EXCEPT THOSE WITHIN AREAS WHERE THE SCHEDULE SHOWS PLACEMENT OF R.O.W. MARKERS, SHALL REMAIN UNDISTURBED.

THE CONTRACTOR AS REQUIRED, SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING WITH CONSTRUCTION. ANY FEES SHALL BE INCLUDED IN THE COST OF MOBILIZATION.

THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH STATE OR LOCAL REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS, AND THE AREA IMMEDIATELY ADJACENT TO PROPOSED CURB LINES. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

THE CONTRACTOR'S PERSONNEL SHALL NOT BE ALLOWED TO PARK PERSONAL VEHICLES IN THE WORK AREA AND/OR CONSTRUCTION LIMITS.

EXISTING RIGHT-OF-WAY LIMITS SHOWN ON THE PLANS ARE APPROXIMATE.

THE CONTRACTOR IS REQUIRED TO REPAIR AND RESTORE ANY ROADWAY APPROACH PAVEMENT THAT IS DAMAGED BY THE CONTRACTOR'S FORCES DURING THE CONSTRUCTION OF THESE PLANS AT NO ADDITIONAL COST.

GENERAL NOTES - ROADWAY

THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS WHICH WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE.

EXISTING FENCE THAT HAS BEEN DISCONNECTED AND/OR REMOVED FOR THE CONTRACTOR'S OPERATIONS OR DAMAGED BY THE CONTRACTOR SHALL BE RECONNECTED AND/OR REPLACED IN KIND AT NO ADDITIONAL COST TO THE CONTRACT.

THE REMOVAL OF ALL EXISTING SIGNS AND THE INSTALLATION OF ALL PROPOSED SIGNS (AS SPECIFIED IN THE PLANS AND AS DIRECTED BY THE DUPAGE TRAFFIC ENGINEER) SHALL BE PERFORMED BY THE DUPAGE SIGN SHOP. THE CONTRACTOR SHALL CONTACT - DUPAGE TRAFFIC - 630 407-6928 72 HOURS PRIOR TO THE REMOVAL OF EXISTING SIGNS AND TWO WEEKS PRIOR TO THE INSTALLATION OF ALL NEW SIGNS.

GENERAL NOTES - DRAINAGE

ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, CUTTERS, CROSSROAD PIPES, OR DRAINAGE STRUCTURES DUE TO CONSTRUCTION OPERATIONS SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT.

GENERAL NOTES - TRAFFIC CONTROL

THE CONTRACTOR WILL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED. ONE (1) WEIGHTED SAND BAG SHALL BE INSTALLED ACROSS EACH BOTTOM RAIL. ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.

FLUORESCENT VESTS AND HARD HATS: ALL CONSTRUCTION PERSONNEL WILL BE REQUIRED TO WEAR FLUORESCENT YELLOW/GREEN CONSTRUCTION VESTS CONFORMING TO ANSI CLASS 2 REQUIREMENTS AND HARD HATS AT ALL TIMES WHILE ON THE CONSTRUCTION SITE. COMPLIANCE WITH THIS REQUIREMENT SHALL BE INCLUDED IN THE CONTRACT.

THE CONTRACTOR IS ADVISED THAT IN THE EVENT OF SNOW, HE WILL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF ANY MAINTENANCE OF TRAFFIC PROTECTIVE DEVICES REQUIRED FOR HIS OPERATIONS THAT WOULD INTERFERE WITH SNOW REMOVAL OPERATIONS PERFORMED BY THE STATE OR LOCAL AGENCY.

THE CONTRACTOR SHALL NOT MOUNT SIGNS ON EXISTING SIGNS.

THE CONTRACTOR SHALL COVER ANY EXISTING SIGNS THAT CONFLICT WITH THE INTENT OF THE TRAFFIC CONTROL PLAN. EXISTING SIGNS TO BE COVERED SHALL BE DIRECTED BY THE RESIDENT ENGINEER. THE COST FOR COVERING EXISTING SIGNS SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701421.

GENERAL NOTES - TRAFFIC SIGNALS

THE CONTRACTOR SHALL INFORM THE COUNTY TRAFFIC SIGNAL ENGINEER AT (630) 407-6900 AND THE COUNTY MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK ON THE CONTRACT. A MINIMUM OF 72 HOUR ADVANCE NOTICE IS REQUIRED.

ECONOLITE BRAND CONTROL EQUIPMENT SHALL BE SPECIFIED ON THIS PROJECT TO BE COMPATIBLE WITH THE ADJACENT SIGNAL SYSTEM. ALL PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE COMPATIBLE WITH THIS CONTROL EQUIPMENT.

TRENCH AND BACKFILL FOR ELECTRICAL WORK SHALL BE INCLUDED IN THE COST OF GALVANIZED STEEL CONDUIT BEING INSTALLED.

GENERAL NOTES - UTILITIES

THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES. WHEN REQUIRED BY THE ENGINEER, THE CONTRACTOR 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 THE COST THEREOF SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE LIGHTING OR TRAFFIC SIGNAL PLANS. FOR LOCATION OF UTILITIES, CALL J.U.L.I.F. TOLL FREE NUMBER 1-800-892-0123.

THE LOCATIONS OF PUBLIC AND PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THEIR ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES. THE CONTRACTOR SHALL REPORT ANY ENCOUNTERED DISCREPANCIES TO THE ENGINEER AT ONCE. THE CONTRACTOR SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY UTILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES AND THE COUNTIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING FACILITIES SO THE UTILITIES AND THEIR APPURTENANCES MAY BE LOCATED AND ADJUSTED OR MOVED, IF NECESSARY, PRIOR TO THE START OF CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS.

NAME OF UTILITY	TYPE	LOCATION	ESTIMATED DATES FOR START AND COMPLETION OF RELOCATION OR ADJUSTMENTS
AT&T 1000 COMMERCE DRIVE OAK BROOK, IL 60523 ATTN: LEGAL MANDATE (630) 573-5450	UNDERGROUND FIBER OPTIC	LOCATION INFORMATION NOT RECEIVED IN DESIGN. CONTRACTOR TO FIELD VERIFY LOCATION	NO ADJUSTMENTS ANTICIPATED
COM ED 1700 SPENCER ROAD JOLIET, IL 60433 (630) 576-7094	UNDERGROUND ELECTRIC	EAST SIDE OF GARY AVE. THROUGHOUT PROJECT	NO ADJUSTMENTS ANTICIPATED
COMCAST 4024 WEST 127TH STREET ALSIP, IL 60803 ATTN: MARTHA GIERAS (630) 600-6352	UNDERGROUND CABLE	EAST SIDE OF GARY AVE. THROUGHOUT PROJECT	NO ADJUSTMENTS ANTICIPATED
DUPAGE COUNTY D.O.T. 421 NORTH COUNTY FARM ROAD 2ND FLOOR, SUITE 300 WHEATON, IL 60187 ATTN: JOHN KOS (630) 407-6900	STORM SEWER	EAST AND WEST SIDES OF GARY AVE. THROUGHOUT PROJECT	NO ADJUSTMENTS ANTICIPATED
NICOR GAS 1844 FERRY ROAD NAPERVILLE, IL 60563 ATTN: CONNIE LANE (630) 388-3830	GAS MAIN	WEST SIDE OF GARY AVE. THROUGHOUT PROJECT ALSO TRAVIS PKWY SOUTH SIDE HEADING EAST.	NO ADJUSTMENTS ANTICIPATED
VILLAGE OF ROSELLE 474 CONGRESS CIRCLE NORTH ROSELLE, IL 60172 ATTN: ROB BURNS (630) 671-2365	SANITARY SEWER	WEST SIDE OF GARY AVE. FROM TRAVIS PKWY. TO CENTRAL AVE.	NO ADJUSTMENTS ANTICIPATED
VILLAGE OF ROSELLE 474 CONGRESS CIRCLE NORTH ROSELLE, IL 60172 ATTN: ROB BURNS (630) 671-2365	WATER MAIN	EAST SIDE OF GARY AVE. THROUGHOUT PROJECT	NO ADJUSTMENTS ANTICIPATED

THIS CONTRACT WILL NOT INVOLVE ANY WORK TO BE DONE ON OR NEAR THE METRA 500 RAILROAD RIGHT OF WAY. THE CONTRACTOR SHALL NOT HAVE WORKERS OR EQUIPMENT IN METRA 500 RAILROAD RIGHT OF WAY AT ANY TIME.

BOXED ITEMS INDICATE WORK NOT PAID FOR SEPARATELY, BUT INCLUDED AS PART OF ANOTHER PAY ITEM OR COST ASSOCIATED WITH THE CONTRACT.

FILE NAME: I:\Projects\11-00237-12-SP\11-00237-12-SP-CDD\Notes and Sheets\11-Civil\Sheets\General\Notefin

USER NAME = zulkowc	DESIGNED = JAC	REVISED =
PLT SCALE = 20.0000 1/1 in.	DRAWN = SDZ	REVISED =
PLT DATE = 4/2/2013	CHECKED = JAP	REVISED =
	DATE = 03-22-2013	REVISED =

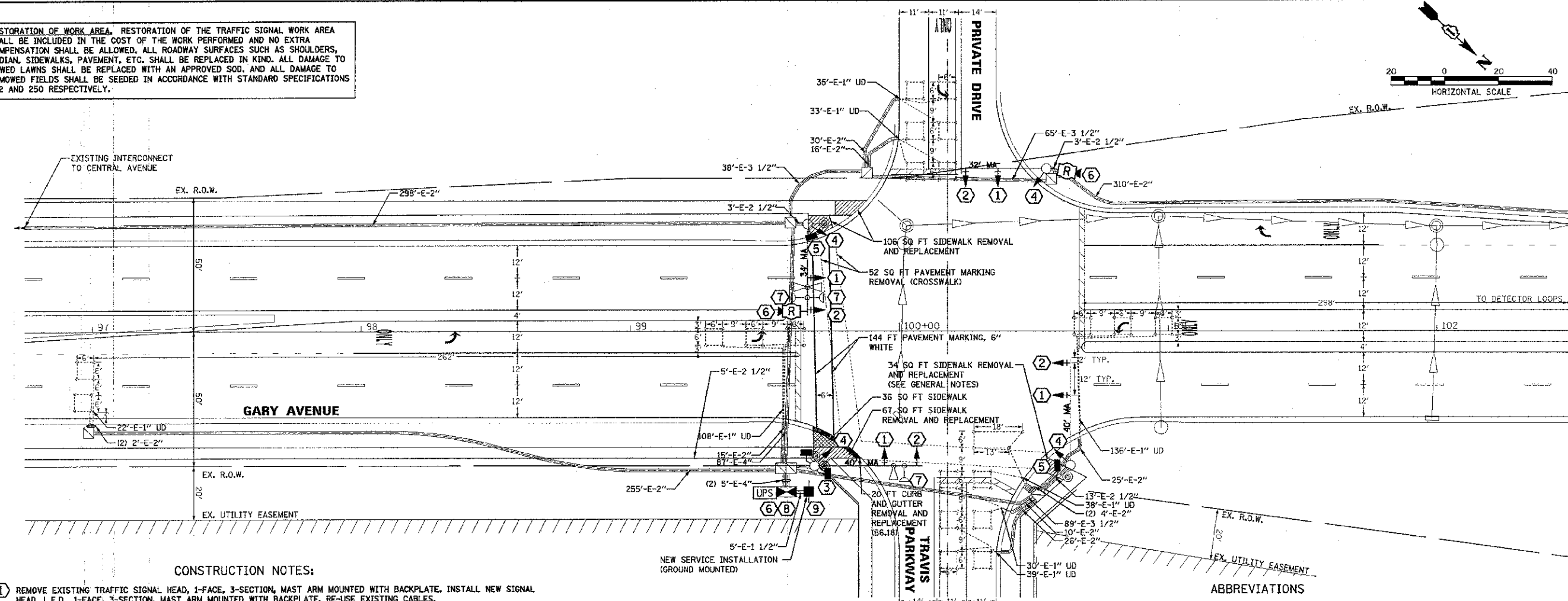
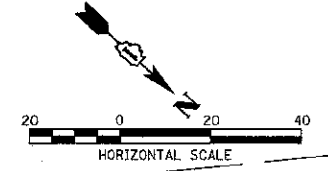
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GARY AVENUE AT TRAVIS PARKWAY
GENERAL NOTES**

F.A.U. RTE. 2561	SECTION 11-00237-12-SP	COUNTY DUPAGE/COOK	TOTAL SHEETS 24	SHEET NO. 2
CONTRACT NO. 63821				
ILLINOIS FED. AID PROJECT HSIP-0043 (028)				

SCALE: NTS SHEET NO. 2 OF 24 SHEETS STA. N/A TO STA. N/A

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE WORK PERFORMED AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



MATCHLINE STA. 102+50
SEE SHEET 5 FOR CONTINUATION

CONSTRUCTION NOTES:

- 1 REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED WITH BACKPLATE. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED WITH BACKPLATE. RE-USE EXISTING CABLES.
 - 2 REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED WITH BACKPLATE. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED WITH BACKPLATE. RE-USE EXISTING CABLES.
 - 3 REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER, L.E.D., 2-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLES. INSTALL NEW PEDESTRIAN PUSH BUTTON FOR TRAVIS PARKWAY CROSSING ON EXISTING TRAFFIC SIGNAL POLE.
 - 4 REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED. INSTALL NEW TRAFFIC SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION BRACKET MOUNTED. RE-USE EXISTING CABLES.
 - 5 REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER, L.E.D., 1-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLES.
 - 6 INSTALL NEW RADAR VEHICLE DETECTION SYSTEM, BRACKET MOUNTED. PULL NEW CABLE TO CONTROL CABINET. CONTRACTOR TO COORDINATE INSTALLATION OF EQUIPMENT WITH RADAR DETECTION SYSTEM'S MANUFACTURER TO ENSURE PROPER CONFIGURATION AND OPERATION OF DEVICE, EXACT MOUNTING LOCATION TO BE DETERMINED BY FIELD TESTING AND APPROVAL OF MANUFACTURER OF DETECTION SYSTEM.
 - 7 REMOVE EXISTING CONFIRMATION BEACON INCANDESCENT BULB. INSTALL NEW CONFIRMATION BEACON L.E.D LAMP IN ACCORDANCE WITH DISTRICT ONE EMERGENCY VEHICLE PRIORITY SYSTEM SPECIFICATION AT NO ADDITIONAL COST TO CONTRACT (INCLUDED IN COST OF UNINTERRUPTIBLE POWER SUPPLY).
 - 8 REMOVE EXISTING TRAFFIC SIGNAL CABINET AND RETURN CABINET TO DUPAGE COUNTY AS DIRECTED BY THE ENGINEER. INSTALL NEW TRAFFIC SIGNAL CABINET, TYPE IV-4, AND RELOCATE EXISTING TRAFFIC SIGNAL CONTROLLER AND EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT, INTO NEW CABINET ON EXISTING FOUNDATION. INSTALL NEW UNINTERRUPTIBLE POWER SUPPLY (UPS). REMOVE AND REPLACE DETECTOR LOOP AMPLIFIERS. INSTALL NEW LIGHT DETECTOR AMPLIFIER.
 - 9 INSTALL NEW GROUNDING CABLE AS SHOWN IN THE CABLE PLAN AND PROVIDE GROUNDING CONNECTION AS DETAILED IN IDOT DISTRICT ONE STANDARD, TS-05, SEE SHEET 21. REMOVE EXISTING GROUND MOUNTED SERVICE. INSTALL NEW GROUND MOUNTED SERVICE, MODEL TO BE APPROVED BY ENGINEER. EXISTING BASE AND MOUNTING POST FOR GROUND MOUNTED SERVICE SHALL BE RE-USED.
- * TYPE IV CABINET SHALL BE SIZED TO BE 65 INCHES TALL, 26 INCHES DEEP, AND 44 INCHES WIDE. SEE DETAILS ON SHEET 24.
 † RADAR VEHICLE DETECTION SYSTEM BACKPLATE AND ALL OTHER EQUIPMENT REQUIRED FOR PROPER INSTALLATION OF RADAR SENSORS INSIDE THE CONTROL CABINET SHALL BE PAID FOR AS "RADAR VEHICLE DETECTION SYSTEM". ALL OTHER EQUIPMENT REQUIRED FOR INSTALLATION OF RADAR SENSOR OUTSIDE THE CONTROL CABINET, INCLUDING CABLES AND BRACKETS, SHALL ALSO BE PAID FOR AS "RADAR VEHICLE DETECTION SYSTEM".



ALL EXISTING PEDESTRIAN PUSH-BUTTON SIGNAGE TO BE REMOVED. NEW PEDESTRIAN SIGNAGE TO BE INSTALLED ABOVE ALL EXISTING AND PROPOSED PEDESTRIAN PUSH-BUTTONS.

REMOVAL AND DISPOSAL OF EXISTING PUSH-BUTTON SIGNS SHALL BE INCLUDED IN THE PRICE OF "SIGN PANEL - TYPE 1"

GENERAL NOTES:

ALL SIDEWALK REMOVAL AND REPLACEMENT AREAS SHALL BE FIELD VERIFIED SUCH THAT THE CROSSWALKS, RAMPS, AND SIDEWALK BENDS LEADING UP TO THE INTERSECTION MEET CURRENT ADA STANDARDS. ANY ADDITIONAL REMOVAL AND REPLACEMENT OF SIDEWALK SHALL BE PAID FOR AT THE UNIT PRICE OF "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH" RESPECTIVELY. CONTRACTOR SHALL NOTIFY THE ENGINEER IF FIELD REVIEW WARRANTS ADDITIONAL QUANTITIES.

THE EXISTING TRAFFIC SIGNAL CABINET SHALL BE RETURNED TO DUPAGE COUNTY. CONTRACTOR SHALL DELIVER EXISTING CABINET TO LOCATION AS DETERMINED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE COST OF THE TRAFFIC SIGNAL CONTROL CABINET BEING INSTALLED.

ALL SIDEWALK CROSSING LOCATIONS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED PER HIGHWAY STANDARD 424001 AND SHALL BE PAID FOR AS "DETECTABLE WARNING". SIDEWALK WALK REMOVAL AND REPLACEMENT SHALL BE PAID FOR AS "SIDEWALK REMOVAL" AND "PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH" RESPECTIVELY. ALL REQUIRED EXCAVATION, TOPSOIL, AND SEEDING/SODDING REQUIRED TO INSTALL SIDEWALK SHALL BE INCLUDED IN THE COST OF "PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH".

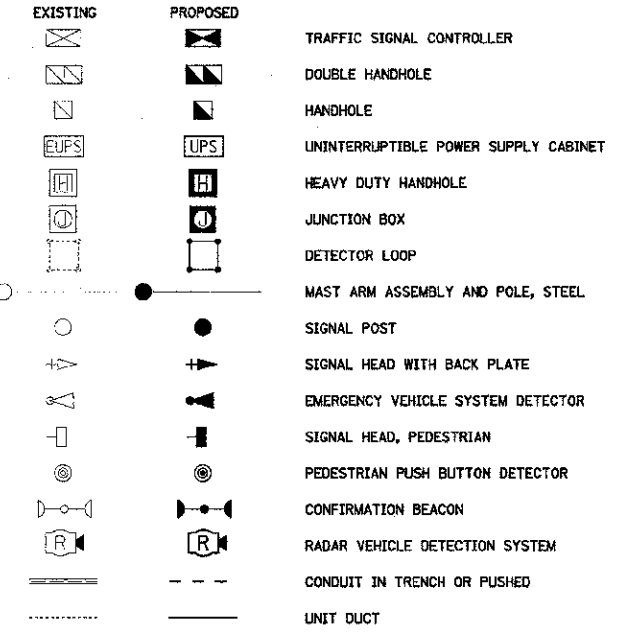
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE RIGHT-OF-WAY AT THE CONTRACTOR'S EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH	SIGNAL HEAD, 1-FACE, 3-SECTION	2 EACH	PEDESTRIAN SIGNAL, 1-FACE
8 EACH	SIGNAL HEAD, 1-FACE, 5-SECTION	1 EACH	PEDESTRIAN SIGNAL, 2-FACE
2 EACH	FLASHING BEACON, AMBER, 1-FACE	8 EACH	TRAFFIC SIGNAL BACKPLATE

ABBREVIATIONS

- 30'-E-1" UD (LENGTH OF ITEM) - (EXISTING) - (SIZE OF UNIT DUCT)
- 26'-E-2" (LENGTH OF ITEM) - (EXISTING) - (SIZE OF CONDUIT)
- 15'-UC (LENGTH OF ITEM) - (UNDERGROUND CONDUIT)
- 2 1/2" (SIZE OF CONDUIT)

TRAFFIC SIGNAL LEGEND



FILE NAME: J:\Projects\4855591\4855591.dwg Models and Sheets\DC-C-Dwg1\Sheets\013 signal.dwg

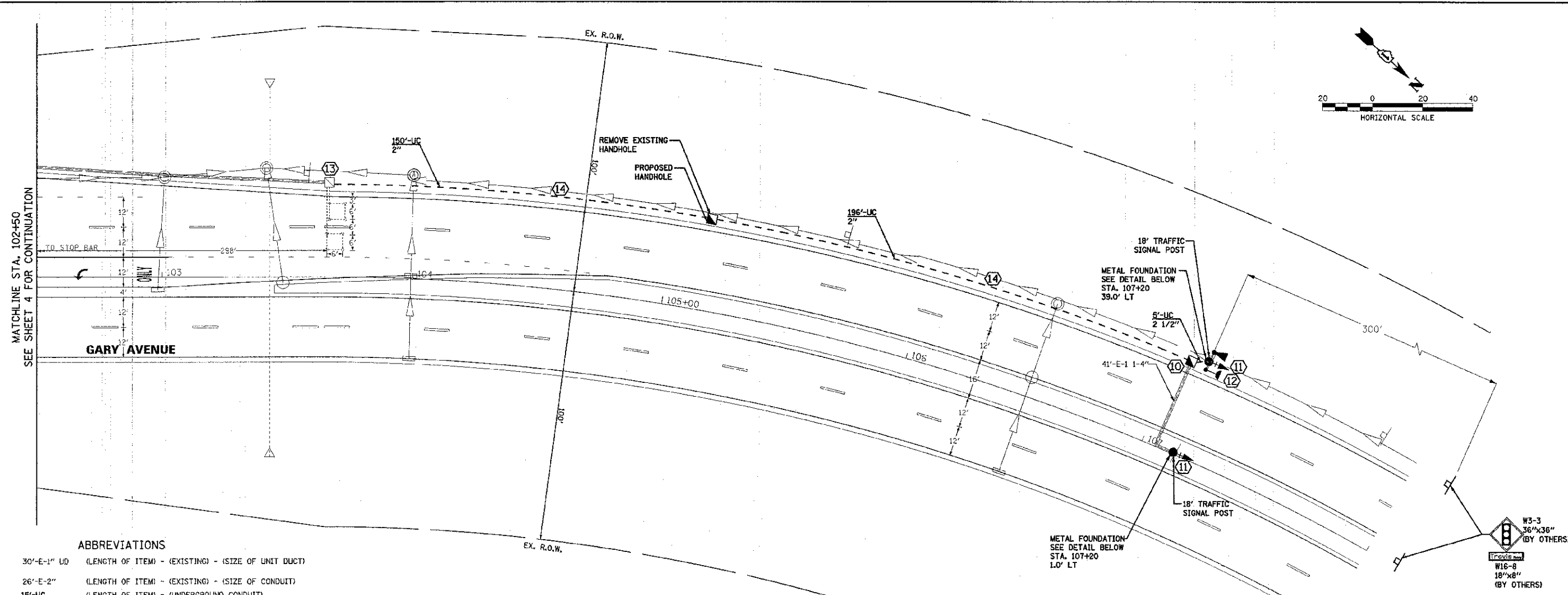
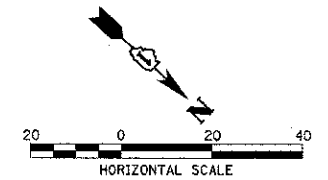
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PLOT SCALE = 48.0000 1/2 in.	DRAWN - SDZ	REVISED -
PLOT DATE = 4/2/2013	CHECKED - JAP	REVISED -
	DATE - 03-22-2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GARY AVENUE AT TRAVIS PARKWAY
TRAFFIC SIGNAL MODIFICATION PLAN**

SCALE: 1" = 20' SHEET NO. 4 OF 24 SHEETS STA. 96+75.00 TO STA. 102+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2561	11-00237-12-5P	DUPAGE/COOK	24	4
CONTRACT NO. 63821				
ILLINOIS FED. AID PROJECT HSIP-0043 (029)				



MATCHLINE STA. 102+50
SEE SHEET 4 FOR CONTINUATION

ABBREVIATIONS

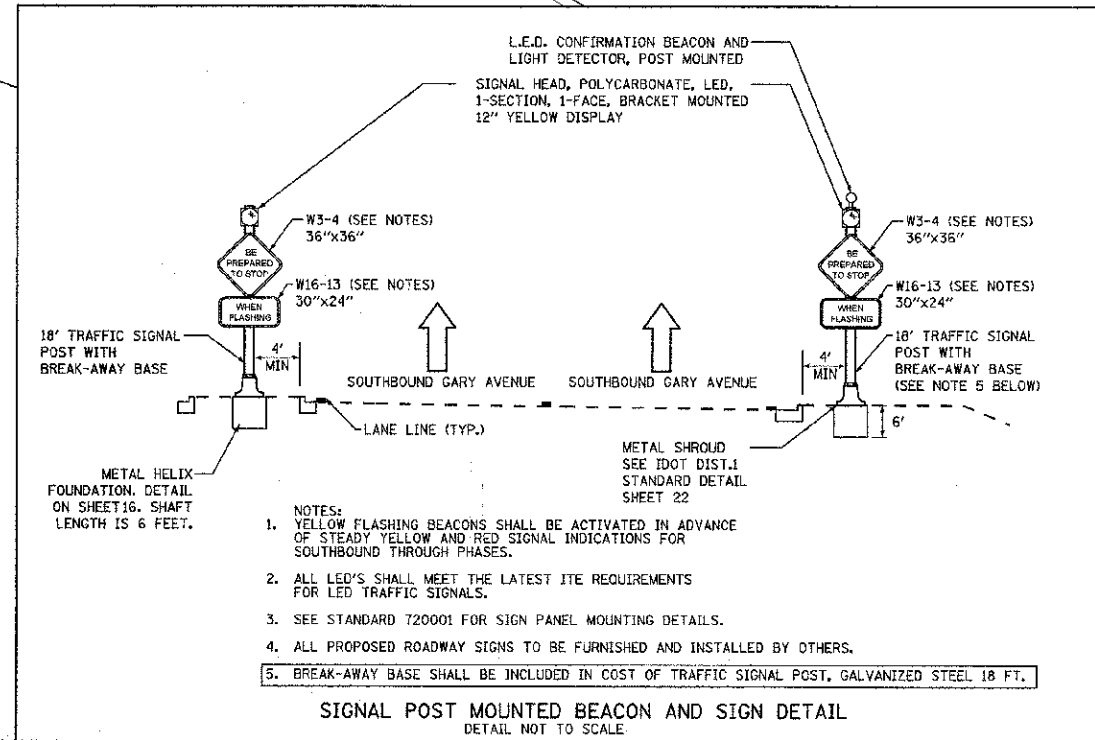
- 30'-E-1" UD (LENGTH OF ITEM) - (EXISTING) - (SIZE OF UNIT DUCT)
- 26'-E-2" (LENGTH OF ITEM) - (EXISTING) - (SIZE OF CONDUIT)
- 15'-UC 2 1/2" (LENGTH OF ITEM) - (UNDERGROUND CONDUIT) (SIZE OF CONDUIT)

TRAFFIC SIGNAL LEGEND

EXISTING	PROPOSED	
		TRAFFIC SIGNAL CONTROLLER
		DOUBLE HANDHOLE
		HANDHOLE
		UNINTERRUPTIBLE POWER SUPPLY CABINET
		HEAVY DUTY HANDHOLE
		JUNCTION BOX
		DETECTOR LOOP
		MAST ARM ASSEMBLY AND POLE, STEEL
		SIGNAL POST
		SIGNAL HEAD WITH BACK PLATE
		EMERGENCY VEHICLE SYSTEM DETECTOR
		SIGNAL HEAD, PEDESTRIAN
		PEDESTRIAN PUSH BUTTON DETECTOR
		CONFIRMATION BEACON
		RADAR VEHICLE DETECTION SYSTEM
		CONDUIT IN TRENCH OR PUSHED
		UNIT DUCT

CONSTRUCTION NOTES:

- 10 INSTALL NEW TRAFFIC SIGNAL HANDHOLE TO INTERCEPT EXISTING CONDUIT. INSTALL NEW 2 1/2 INCH UNDERGROUND CONDUIT BETWEEN NEW TRAFFIC SIGNAL HANDHOLE TO NEW TRAFFIC SIGNAL POST. SEE STANDARD 814001 AND DISTRICT ONE DETAIL ON SHEET 22 FOR THE "HANDHOLE TO INTERCEPT EXISTING CONDUIT" DETAIL.
- 11 REMOVE EXISTING FLASHING BEACON 1-FACE AMBER, POST MOUNTED. REMOVE EXISTING SIGN AND POST. INSTALL NEW LIGHT POLE FOUNDATION, METAL, 1 1/2" BOLT CIRCLE, AND INSTALL 18' GALVANIZED STEEL TRAFFIC SIGNAL POST WITH BREAK-AWAY BASE. INSTALL NEW L.E.D. FLASHING BEACON, 1-FACE AMBER, MOUNTING LOCATION AS SHOWN IN DETAIL (BRACKET MOUNTED). REMOVE AND REPLACE EXISTING CABLES FROM TRAFFIC SIGNAL CONTROLLER TO NEW L.E.D. FLASHING BEACON. PROPOSED SIGNAGE TO BE INSTALLED BY OTHERS.
- 12 INSTALL NEW EMERGENCY VEHICLE LIGHT DETECTOR, POST MOUNTED, AND L.E.D. CONFIRMATION BEACON, POST MOUNTED TO 18' TRAFFIC SIGNAL POST. RUN NEW CABLES TO CONTROLLER CABINET.
- 13 EXISTING HANDHOLE TO REMAIN. CORE HANDHOLE FOUNDATION'S CONDUIT OPENINGS FOR 2" GALVANIZED STEEL CONDUIT. SEAL WITH MORTAR ONCE NEW 2" GALVANIZED STEEL CONDUIT IS PLACED. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF 2" GALVANIZED STEEL CONDUIT.
- 14 REMOVE EXISTING 1/4 INCH GALVANIZED STEEL CONDUIT. REMOVAL OF EXISTING CONDUIT SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF CONDUIT BEING INSTALLED.



- NOTES:**
1. YELLOW FLASHING BEACONS SHALL BE ACTIVATED IN ADVANCE OF STEADY YELLOW AND RED SIGNAL INDICATIONS FOR SOUTHBOUND THROUGH PHASES.
 2. ALL LED'S SHALL MEET THE LATEST ITE REQUIREMENTS FOR LED TRAFFIC SIGNALS.
 3. SEE STANDARD 720001 FOR SIGN PANEL MOUNTING DETAILS.
 4. ALL PROPOSED ROADWAY SIGNS TO BE FURNISHED AND INSTALLED BY OTHERS.
 5. BREAK-AWAY BASE SHALL BE INCLUDED IN COST OF TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.

SIGNAL POST MOUNTED BEACON AND SIGN DETAIL
DETAIL NOT TO SCALE

FILE NAME: I:\Projects\4715561\4715561.dwg; Sheets\04_C:\Civ\1\Sheet\0413-signal.dwg

USER NAME = zulkowid	DESIGNED - JAC	REVISED -
PLOT SCALE = 40 0000 1/1 in.	DRAWN - SDZ	REVISED -
PLOT DATE = 4/1/2013	CHECKED - JAP	REVISED -
	DATE - 03-22-2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GARY AVENUE AT TRAVIS PARKWAY
TRAFFIC SIGNAL MODIFICATION PLAN**
SCALE: 1" = 20' SHEET NO. 5 OF 24 SHEETS STA. 102+50.00 TO STA. 108+00.00

F.A.U. R.T.E. 2561	SECTION 11-00237-12-SP	COUNTY DUPAGE/COOK	TOTAL SHEETS 24	SHEET NO. 5
CONTRACT NO. 63821				(ILLINOIS) FED. AID PROJECT HSIP-0043 (029)

CABLE PLAN LEGEND

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SO FT	243
DETECTABLE WARNINGS	SO FT	64
SIDEWALK REMOVAL	SO FT	207
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	346
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	5
ELECTRIC CABLE IN TRENCH, SIGNAL, NO. 14 2C	FOOT	2931
HANDHOLE	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 1-SECTION, POST MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED**	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED**	EACH	1
LIGHT POLE FOUNDATION, METAL, 11 1/2" BOLT CIRCLE, 8 5/8" X 6"	EACH	2
RADAR VEHICLE DETECTION SYSTEM	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1071
INDUCTION LOOP DETECTOR AMPLIFIER	EACH	8
SERVICE INSTALLATION - GROUND MOUNTED	EACH	1
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
RELOCATE EXISTING MASTER CONTROLLER	EACH	1
CONFIRMATION BEACON	EACH	1
LIGHT DETECTOR	EACH	1
LIGHT DETECTOR AMPLIFIER	EACH	1
ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 20 3C	FOOT	945
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1846
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	1
SIGN PANEL - TYPE I	FOOT	346
	SQ FT	4

** WITH COUNT DOWN TIMER

PRIORITY LANE INTERVAL	3	4
MOVEMENT	←	↑

EXISTING AND PROPOSED EMERGENCY VEHICLE PRE-EMPTION SEQUENCE

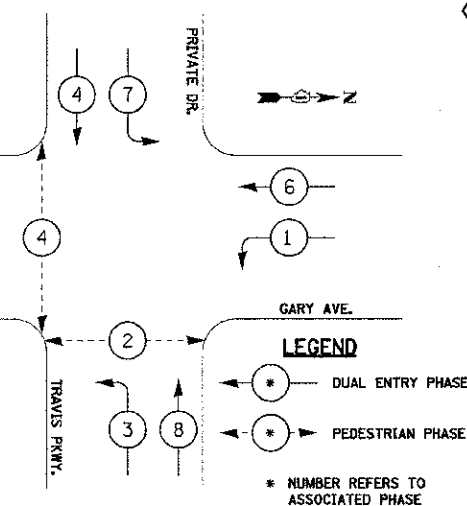
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE LED	% OPERATION	
SIGNAL (RED)	12	17	0.50	0.50	102.00
(YELLOW)	12	25	0.25	0.25	75.00
(GREEN)	12	15	0.25	0.25	45.00
ARROW	16	12	0.10	0.10	19.20
PED. SIGNAL	4	25	1.00	1.00	100.00
CONTROLLER	1	100	1.00	1.00	100.00
ILLUM. SIGN	-	-	0.05	-	-
FLASHER	2	25	0.50	0.50	25.00
TOTAL =					466.20

ENERGY COSTS TO: VILLAGE OF ROSELLE, 31 S. PROSPECT STREET, ROSELLE, ILLINOIS 60172
 ENERGY SUPPLY CONTACT: DEBRA DALTON, (630) 424-5702, COMPANY: COM. ED.

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20" H - 2"
E - M. ARM POLE	2 (0.6)	SIGNAL POST	2 (0.6)	(6m H - 0.6m)	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.3)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.3)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.3)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

EXISTING AND PROPOSED PHASE SIGNAL DIAGRAM
DUAL ENTRY - ALL LEGS

CONTROLLER SEQUENCE
REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.



TRACER CABLE END TIED TO A CABLE-HOOK IN THE DOUBLE HANDHOLE CLOSEST TO THE CONTROLLER FOUNDATION

INTERCONNECT TO CENTRAL AVENUE NO. 62.5/125/12F (FIBER OPTIC CABLE)

GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)

GARY AVE.

GARY AVE.

GARY AVE.

TRAVIS PKWY.

TRAVIS PKWY.

TRAVIS PKWY.

TRAVIS PKWY.

TRAVIS PKWY.

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TRAVIS PKWY.

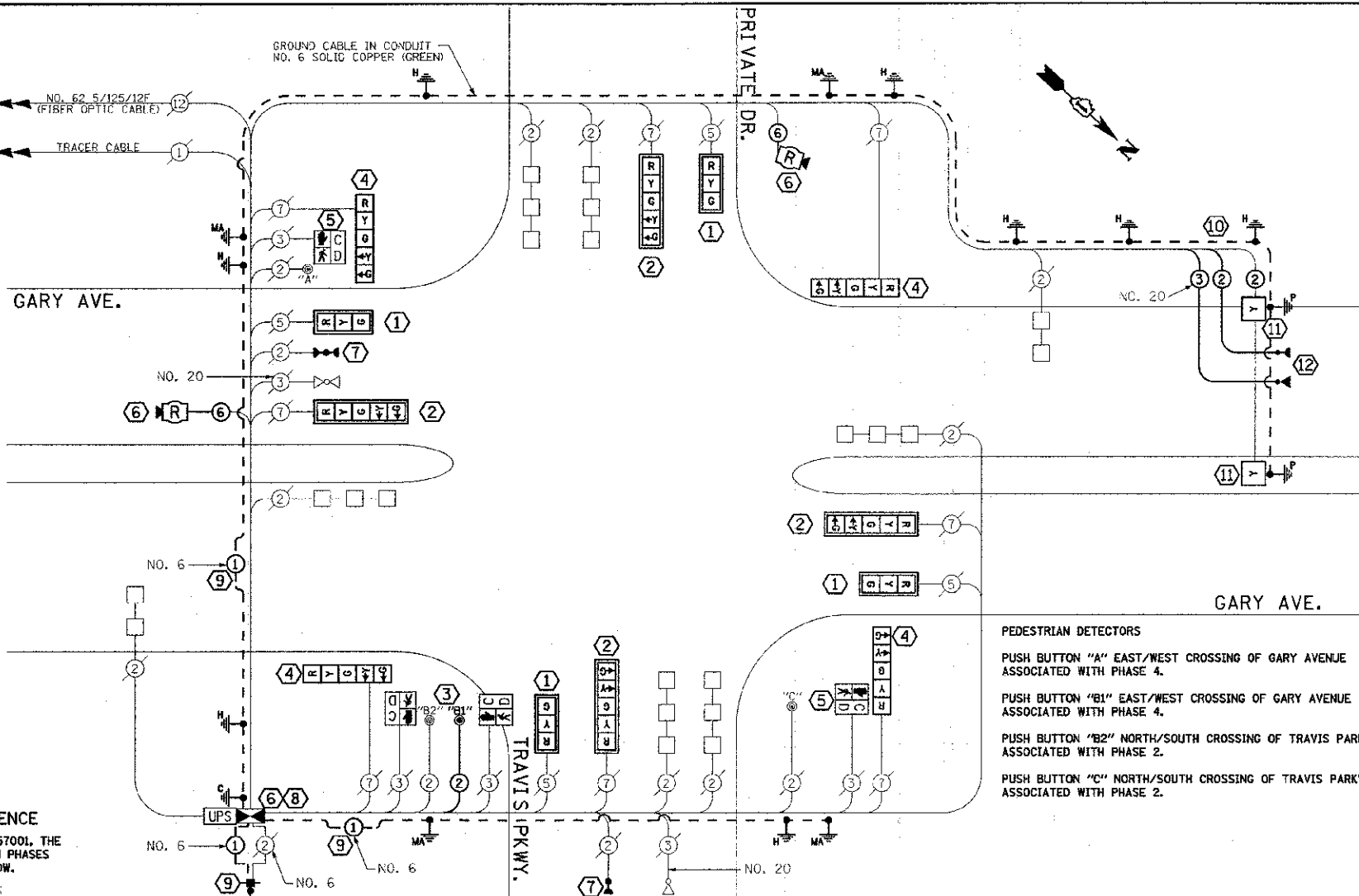
TRAVIS PKWY.

TRAVIS PKWY.

TRAVIS PKWY.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN
(NOT TO SCALE)



CONSTRUCTION NOTES:

- REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED WITH BACKPLATE. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED WITH BACKPLATE. RE-USE EXISTING CABLES.
- REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED WITH BACKPLATE. INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED WITH BACKPLATE. RE-USE EXISTING CABLES.
- REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER, L.E.D., 2-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLES. INSTALL NEW PEDESTRIAN PUSH-BUTTON FOR TRAVIS PARKWAY CROSSING ON EXISTING TRAFFIC SIGNAL POLE.
- REMOVE EXISTING TRAFFIC SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED. INSTALL NEW TRAFFIC SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION BRACKET MOUNTED. RE-USE EXISTING CABLES.
- REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER, L.E.D., 1-FACE, BRACKET MOUNTED. RE-USE EXISTING CABLES.
- INSTALL NEW RADAR VEHICLE DETECTION SYSTEM, BRACKET MOUNTED. PULL NEW CABLE TO CONTROL CABINET. CONTRACTOR TO COORDINATE INSTALLATION OF EQUIPMENT WITH RADAR DETECTION SYSTEMS MANUFACTURER TO ENSURE PROPER CONFIGURATION AND OPERATION OF DEVICE. EXACT MOUNTING LOCATION TO BE DETERMINED BY FIELD TESTING AND APPROVAL OF MANUFACTURER OF DETECTION SYSTEM.
- REMOVE EXISTING CONFIRMATION BEACON INCANDESCENT BULB. INSTALL NEW CONFIRMATION BEACON L.E.D. LAMP IN ACCORDANCE WITH DISTRICT ONE EMERGENCY VEHICLE PRIORITY SYSTEM SPECIFICATION AT NO ADDITIONAL COST TO CONTRACT (INCLUDED IN COST OF UNINTERRUPTIBLE POWER SUPPLY).
- REMOVE EXISTING TRAFFIC SIGNAL CABINET AND RETURN CABINET TO DUPAGE COUNTY AS DIRECTED BY THE ENGINEER. INSTALL NEW TRAFFIC SIGNAL CABINET, TYPE IV, AND RELOCATE EXISTING TRAFFIC SIGNAL CONTROLLER AND EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT, INTO NEW CABINET ON EXISTING FOUNDATION. INSTALL NEW UNINTERRUPTIBLE POWER SUPPLY (UPS). REMOVE AND REPLACE DETECTOR LOOP AMPLIFIERS. INSTALL NEW LIGHT DETECTOR AMPLIFIER.
- INSTALL NEW GROUNDING CABLE AS SHOWN IN THE CABLE PLAN AND PROVIDE GROUNDING CONNECTION AS DETAILED IN IDOT DISTRICT ONE STANDARD TS-05, SEE SHEET 21. REMOVE EXISTING GROUND MOUNTED SERVICE. INSTALL NEW GROUND MOUNTED SERVICE, MODEL TO BE APPROVED BY ENGINEER. EXISTING BASE AND MOUNTING POST FOR GROUND MOUNTED SERVICE SHALL BE RE-USED.
- INSTALL NEW TRAFFIC SIGNAL HANDHOLE TO INTERCEPT EXISTING CONDUIT. INSTALL NEW 2 1/2 INCH UNDERGROUND CONDUIT BETWEEN NEW TRAFFIC SIGNAL HANDHOLE TO NEW TRAFFIC SIGNAL POST. SEE STANDARD 814001 AND DISTRICT ONE DETAIL ON SHEET 22 FOR THE "HANDHOLE TO INTERCEPT EXISTING CONDUIT" DETAIL.
- REMOVE EXISTING FLASHING BEACON 1-FACE AMBER, POST MOUNTED. REMOVE EXISTING SIGN AND POST. INSTALL NEW METAL HELIX FOUNDATION, AND INSTALL 18' GALVANIZED STEEL TRAFFIC SIGNAL POST WITH BREAK-AWAY BASE. INSTALL NEW L.E.D. FLASHING BEACON, 1-FACE AMBER, MOUNTING LOCATION AS SHOWN IN DETAIL (BRACKET MOUNTED). REMOVE AND REPLACE EXISTING CABLES FROM TRAFFIC SIGNAL CONTROLLER TO NEW L.E.D. FLASHING BEACON. PROPOSED SIGNAGE TO BE INSTALLED BY OTHERS.
- INSTALL NEW EMERGENCY VEHICLE LIGHT DETECTOR, POST MOUNTED, AND L.E.D. CONFIRMATION BEACON, POST MOUNTED TO 18" TRAFFIC SIGNAL POST. RUN NEW CABLES TO CONTROLLER CABINET.
- EXISTING HANDHOLE TO REMAIN. CORE HANDHOLE FOUNDATION'S CONDUIT OPENINGS FOR 2" GALVANIZED STEEL CONDUIT. SEAL WITH MORTAR ONCE NEW 2" GALVANIZED STEEL CONDUIT IS PLACED. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF 2" GALVANIZED STEEL CONDUIT. (SEE SHEET 5 FOR LOCATION)
- REMOVE EXISTING 1/4 INCH GALVANIZED STEEL CONDUIT. REMOVAL OF EXISTING CONDUIT SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF CONDUIT BEING INSTALLED. (SEE SHEET 5 FOR LOCATION)

* TYPE IV CABINET SHALL BE SIZED TO BE 65 INCHES TALL, 26 INCHES DEEP, AND 44 INCHES WIDE.
 + SEE TRAFFIC SIGNAL PLAN SHEET 4 FOR ADDITIONAL NOTES.

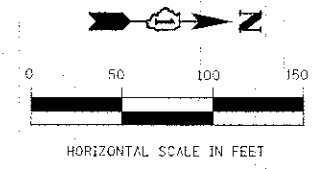
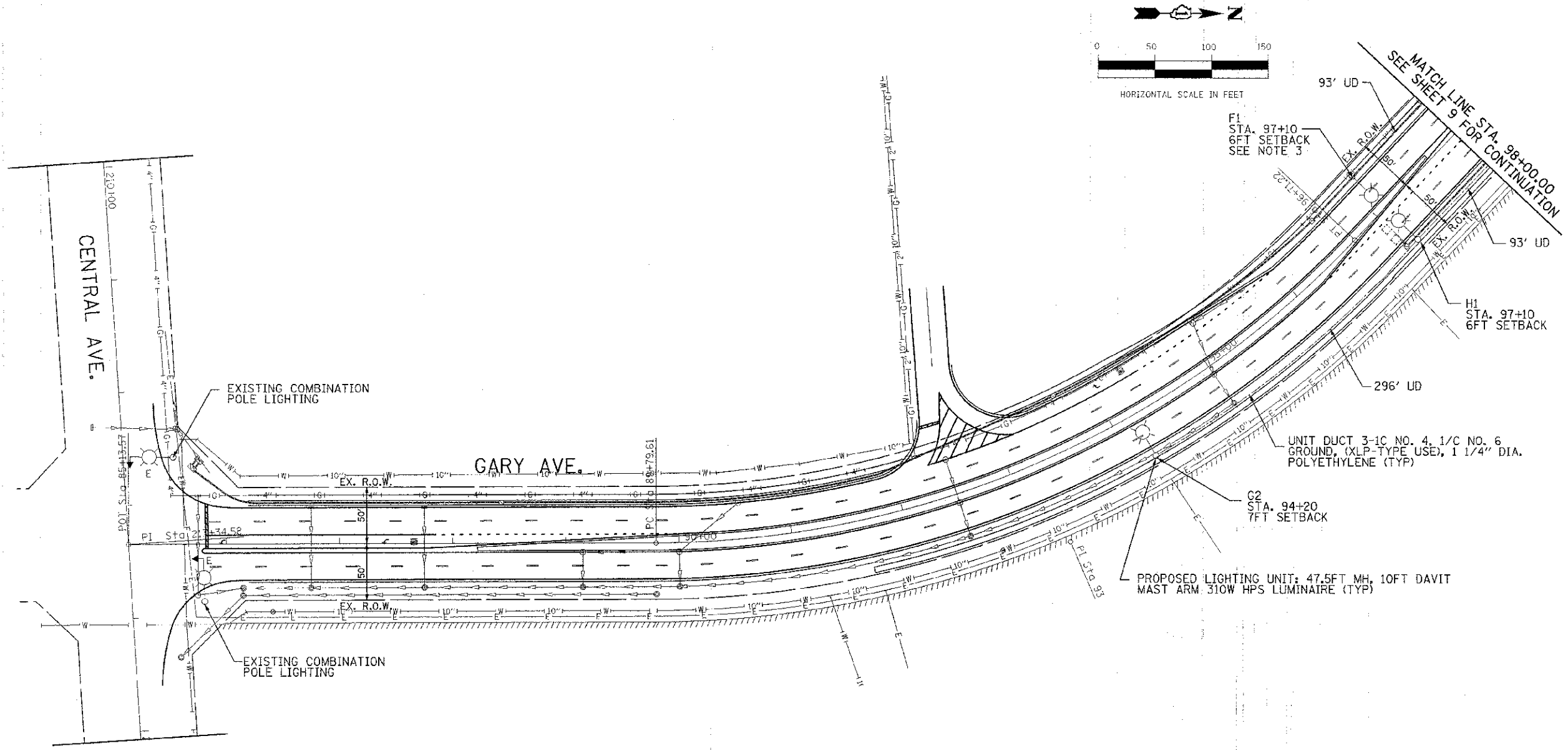
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
256I	11-0023T-12-SP	DUPAGE/COOK	24	6
CONTRACT NO. 63821			ILLINOIS FED. AID PROJECT HSIP-0043 0229	

GARY AVENUE AT TRAVIS PARKWAY
CABLE PLANS, PHASING, AND SCHEDULE OF QUANTITIES

SCALE: NTS SHEET NO. 6 OF 24 SHEETS STA. N/A TO STA. N/A

USER NAME = julkowd	DESIGNED - JAC	REVISED -
PLOT SCALE = 40:20000 1" = 500'	DRAWN - SDZ	REVISED -
PLOT DATE = 4/2/2013	CHECKED - JAP	REVISED -
	DATE - 03-22-2013	REVISED -

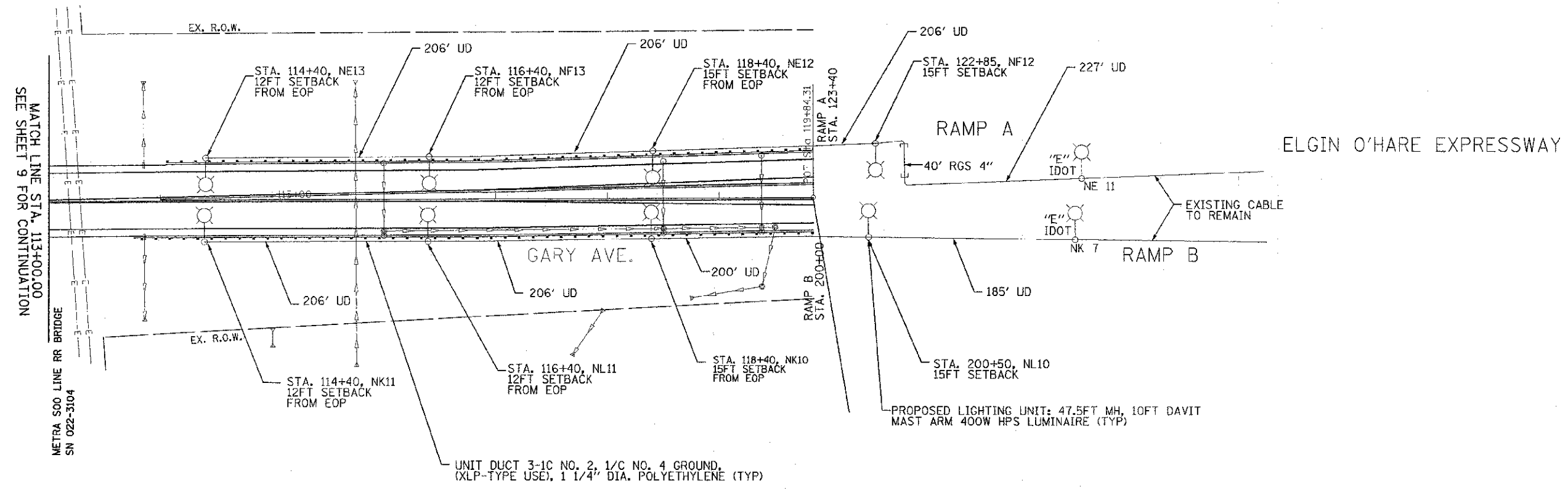
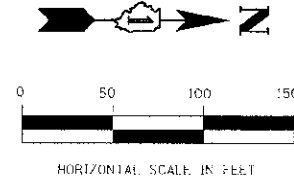
FILE NAME: I:\Projects\2013\11-0023T-12-SP\11-0023T-12-SP-Cable Plans, Phasing, and Schedule of Quantities.dwg



- NOTES:
1. SETBACKS INDICATED ARE FROM BACK OF CURB TO CENTER OF POLES UNLESS OTHERWISE NOTED.
 2. PROPOSED LIGHTING ON THIS SHEET IS OWNED AND MAINTAINED BY THE DUPAGE COUNTY DIVISION OF TRANSPORTATION.
 3. THE CONTRACTOR SHALL TAKE CARE INSTALLING LIGHT POLE FOUNDATION AND AVOID THE EXISTING GAS MAIN AND EXISTING TRAFFIC SIGNAL CONDUIT AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL ADJUST THE LIGHT POLE LOCATION AS APPROVED BY THE ENGINEER TO AVOID DAMAGE TO THOSE FACILITIES. THE EXPLORATORY WORK INVOLVED SHALL BE INCLUDED IN THE COST OF PAY ITEM "LIGHT POLE, FOUNDATION METAL, 15" BOLT CIRCLE, 10"X8" ". ALL COSTS ASSOCIATED WITH THE RESTORATION OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE.

FILE NAME = D:\P\0826\2011-07\Gary Travis Parkway - STUV\Drawn\9-KAL-TC-2 Lighting.dwg

AMES Engineering, Inc. CONSULTING ENGINEERS 1341 Warren Avenue Downers Grove, IL 60515	USER NAME = VRemesh	DESIGNED - SL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GARY AVENUE AT TRAVIS PARKWAY DUPAGE COUNTY LIGHTING PLANS	F.A.I. RTE. = 2561	SECTION = 11-00237-12-SP	COUNTY = DUPAGE/COOK	TOTAL SHEETS = 24	SHEET NO. = 8
	PLOT SCALE = 1/8"=1'-0"	CHECKED - SA	REVISED -			SCALE: 1"=50'	SHEET NO. 8 OF 24 SHEETS	STA. 85+13.57 TO STA. 98+00.00	CONTRACT NO. 63821 <small>ILLINOIS FED. AID PROJECT HSIP-0043 (029)</small>	
	PLOT DATE = 3/22/2013	DATE = 03-22-2013	REVISED -							

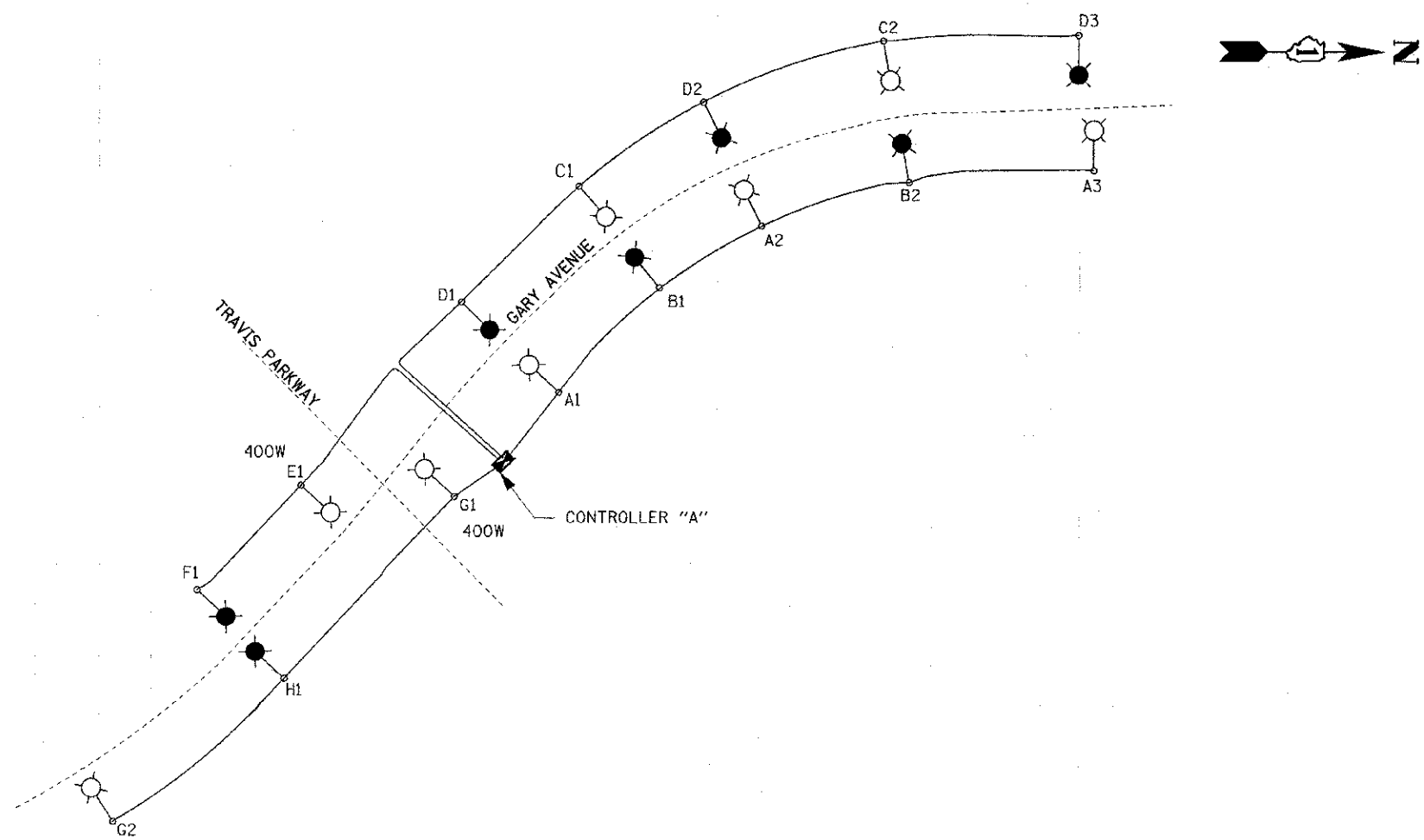


ELGIN O'HARE EXPRESSWAY

- NOTES:
1. SETBACKS INDICATED ARE FROM BACK OF CURB TO CENTER OF POLES UNLESS OTHERWISE NOTED.
 2. PROPOSED LIGHTING ON THIS SHEET SHALL BE CONNECTED TO EXISTING LIGHTING CONTROLLER "N".
 3. NO BREAKAWAY DEVICE REQUIRED. EACH PROPOSED LIGHTING UNIT SHALL BE INSTALLED BEHIND EXISTING GUARDRAIL.

FILE NAME: C:\Proje\2012\02\11\Gary_Travis_Parkway_11-00237-12-SP-4 Lighting Plans.dwg

AMES Engineering, Inc. CONSULTING ENGINEERS 1341 Warren Avenue Downers Grove, IL 60516	USER NAME = V.Ramsey	DESIGNED - BL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GARY AVENUE AT TRAVIS PARKWAY IDOT LIGHTING PLANS	F.A.U. RTE. 2961	SECTION 11-00237-12-SP	COUNTY DUPAGE/COOK	TOTAL SHEETS 24	SHEET NO. 10			
	PLOT SCALE = 1/8" = 1'-0"	CHECKED - SA	REVISED -			SCALE: 1"=50'	SHEET NO. 10 OF 24 SHEETS	STA. 113+00.00 TO STA. 122+85.00	ILLINOIS FED. AID PROJECT HSIP-0043 (029)				
	PLOT DATE = 3/21/2013	DATE = 03-22-2013	REVISED -				CONTRACT NO. 63821						



CONTROLLER AT GARY AVENUE AND TRAVIS PARKWAY

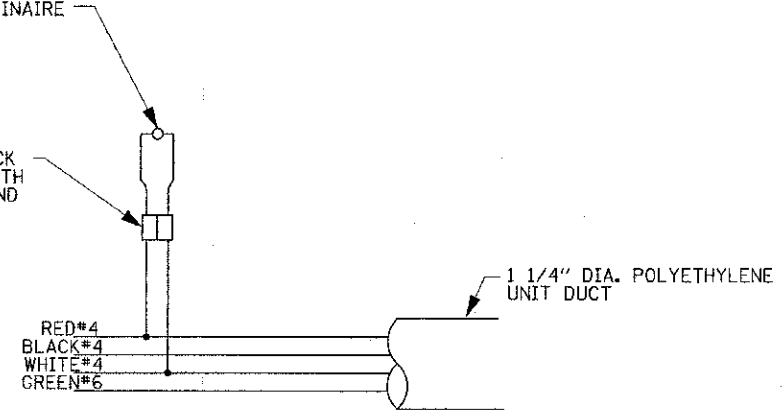
CIRCUIT	RED		CIRCUIT	BLACK	
	AMPS @ 240V	VA		AMPS @ 240V	VA
A	4.5	1080	B	3.0	720
C	3.0	720	D	4.5	1080
E	2.0	480	F	1.5	360
G	3.5	840	H	1.5	360
I	SPARE	SPARE	J	SPARE	SPARE
TOTAL	13.0	3120	TOTAL	10.5	2520
TOTAL LOAD 23.5					

LOAD DATA:

310W, 240V LUMINAIRE: 1.5A/LUMINAIRE
 400W, 240V LUMINAIRE: 2.0A/LUMINAIRE

310W OR 400W (AS INDICATED), 240V LUMINAIRE

TWO POLE QUICK DISCONNECT WITH 6 AMP FUSE AND SOLID SLUG



SINGLE POLE WIRING

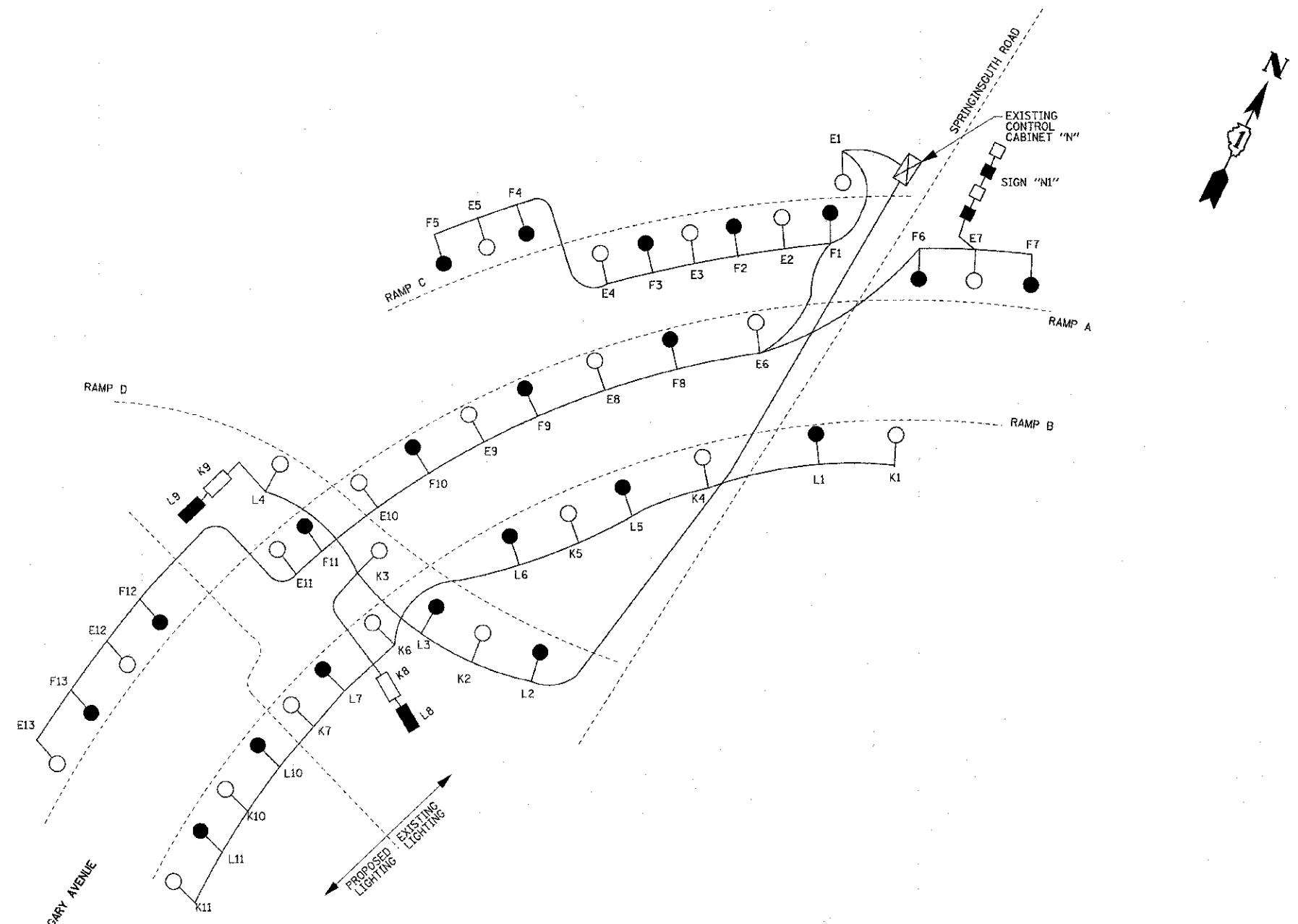
LEGEND

- LUMINAIRE, 310W, 240V RED (UNLESS OTHERWISE INDICATED)
- LUMINAIRE, 310W, 240V BLACK (UNLESS OTHERWISE INDICATED)
- PROPOSED LIGHTING CONTROLLER "A"
- UNIT DUCT 3 1/2" x 4 1/2" #6 GROUND, 1 1/4" POLY.

FILE NAME: C:\Projects\281-01\Gary, Travis Parkway - STD Design\Sheet\TC-5 Wiring Diagram.dwg

CONTROLLER @ ELGIN O'HARE AND SPRINGSGUTH ROAD
(STANDARD 2-POLE 175AMP MAIN)

CIRCUIT	RED		CIRCUIT	BLACK	
	AMPS @ 240V	VA		AMPS @ 240V	VA
A	29.3	7022	B	27.0	6485
C	30.2	7240	D	30.2	7240
I	31.1	7462	J	26.7	6396
K	24.3	5829	L	24.3	5829
TOTAL	114.9	27553	TOTAL	108.2	24030
E	33.4	8005	F	33.4	8005
G	21.8	5243	H	24.0	5776
M	36.8	9120	N	33.6	8064
O	SPARE	SPARE	P	SPARE	SPARE
TOTAL	91.2	22368	TOTAL	91.0	21845
RED TOTAL	206.1		BLACK TOTAL	199.2	
TOTAL LOAD	405.3				



LEGEND

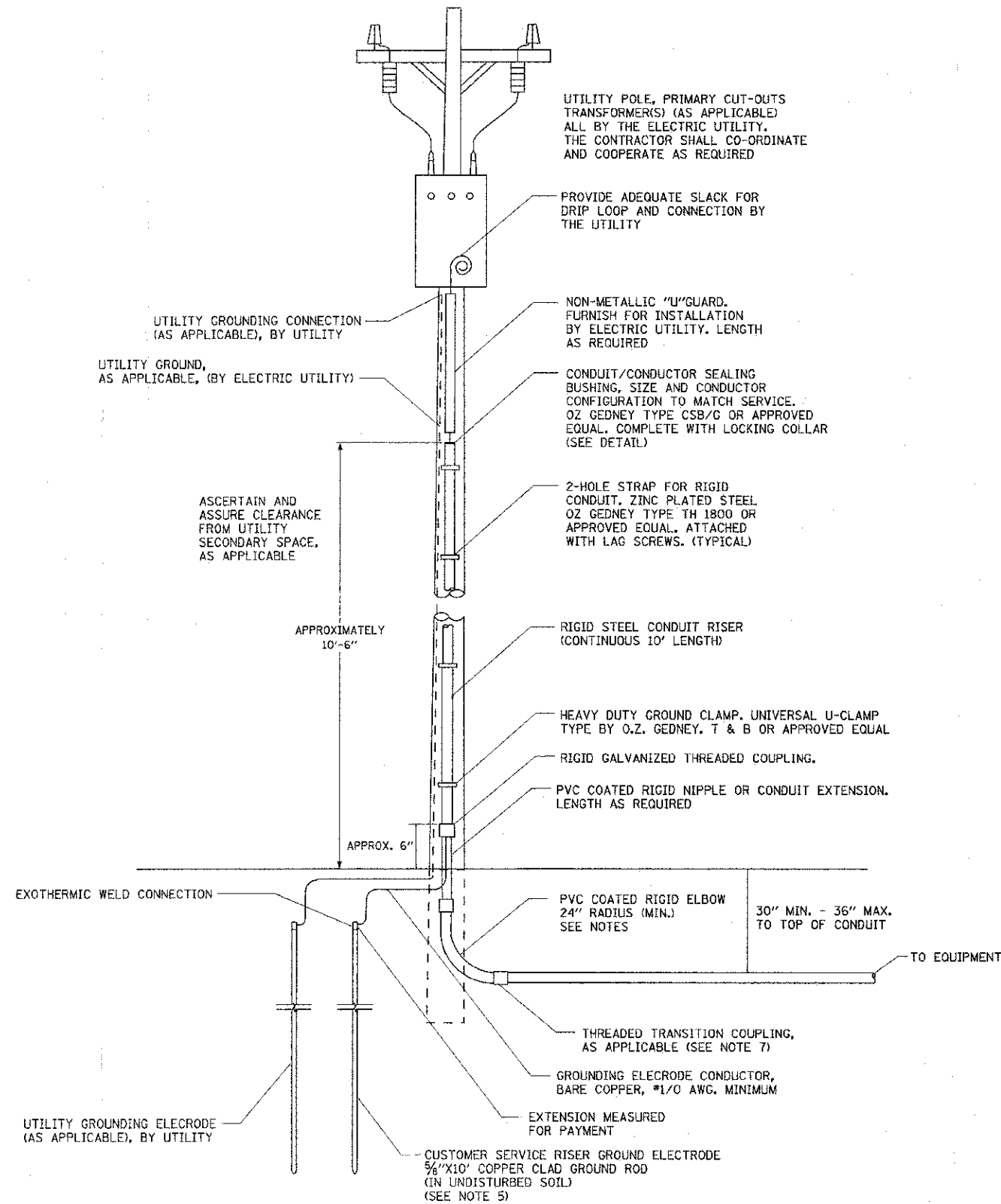
- 400W, 240V LUMINAIRE, RED
- 400W, 240V LUMINAIRE, BLACK
- SIGN LUMINAIRE, RED
- SIGN LUMINAIRE, BLACK
- 55W, 240V UNDERPASS LUMINAIRE, RED
- 55W, 240V UNDERPASS LUMINAIRE, BLACK
- ⊠ EXISTING IDOT CONTROLLER "N"
- UNIT DUCT 3 1/C #2 1/C #4 GROUND

NOTES:

- EXISTING CIRCUITS A, B, C, D, G, H, I, J, M AND N TO REMAIN. NOT SHOWN IN WIRING. LOAD TABLE REFLECTS THE LOAD AS INSTALLED ORIGINALLY FOR EACH OF THESE CIRCUITS.

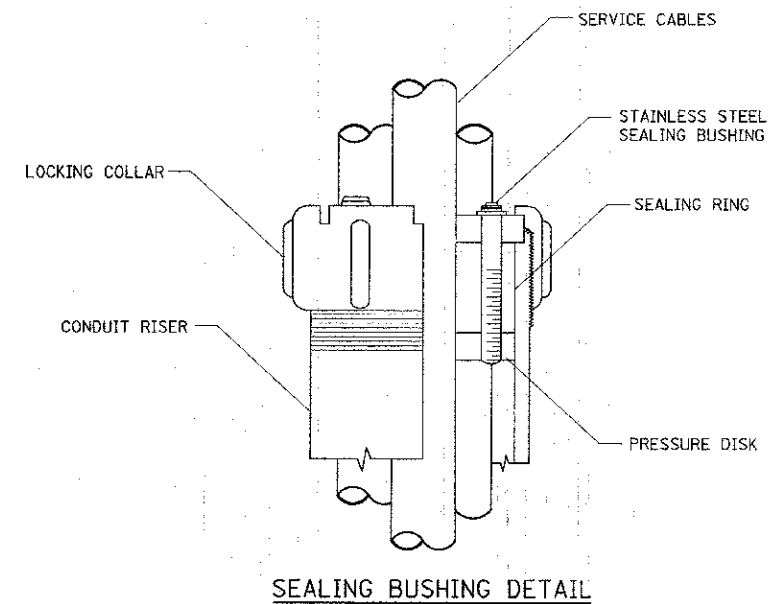
FILE NAME: C:\Projects\2011\0716\Elgin Travis Parkway - STD\Design\SHAL\IDOT Wiring Diagram.dwg

AMES Engineering, Inc. CONSULTING ENGINEERS 1341 Warren Avenue Downers Grove, IL 60515	USER NAME = vromasht	DESIGNED BL	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GARY AVENUE AT TRAVIS PARKWAY IDOT WIRING DIAGRAM	F.A.U. RTE. 2561	SECTION 11-00237-12-SP	COUNTY DUPAGE/COOK	TOTAL SHEETS 24	SHEET NO. 12			
	PLOT SCALE = 1/80,000 1" = 100'	CHECKED - SA	REVIS			SCALE: N.T.S	SHEET NO. 12 OF 24 SHEETS	STA. TO STA.	CONTRACT NO. 63821				
	PLOT DATE = 3/21/2013	DATE - 03-22-2013	REVIS			ILLINOIS FED. AID PROJECT HSIP-0043 (029)							



NOTES:

- SERVICE VOLTAGE SHALL BE 120/240V AS INDICATED ON SHEET LTG-02 AND 04.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRIC UTILITY SERVICE INSTALLATION.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
- 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 BACK FILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE SERVICE METER SOCKET, AS APPLICABLE, MOUNTED ELSEWHERE AS INDICATED SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRICAL UTILITY SERVICE INSTALLATION PAY ITEM.
- THE 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 METALLIC TO NON METALLIC 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.



FILE NAME: I:\C:\Projects\11-00237-12-SP\Drawings\11-00237-12-SP-04-01.dwg

AMES Engineering, Inc.
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1341 Warren Avenue
Downers Grove, IL 60516

USER NAME = YRamesh
PLOT SCALE = 68.8888 m / in.
PLOT DATE = 3/14/2013

DESIGNED - BL
DRAWN - MSA/RV
CHECKED - SA
DATE - 01-21-2013

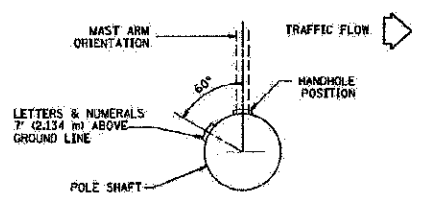
REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

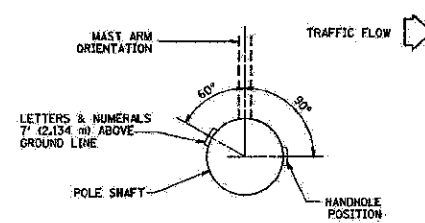
ELECTRIC SERVICE INSTALLATION ABOVE GROUND (BE-220)

SCALE: SHEET NO. OF 27 SHEETS STA. TO STA.

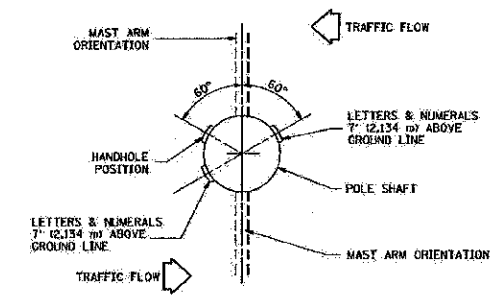
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CONTRACT NO. 63821				
ILLINOIS FED. AID PROJECT HSIP-0043 (029)				



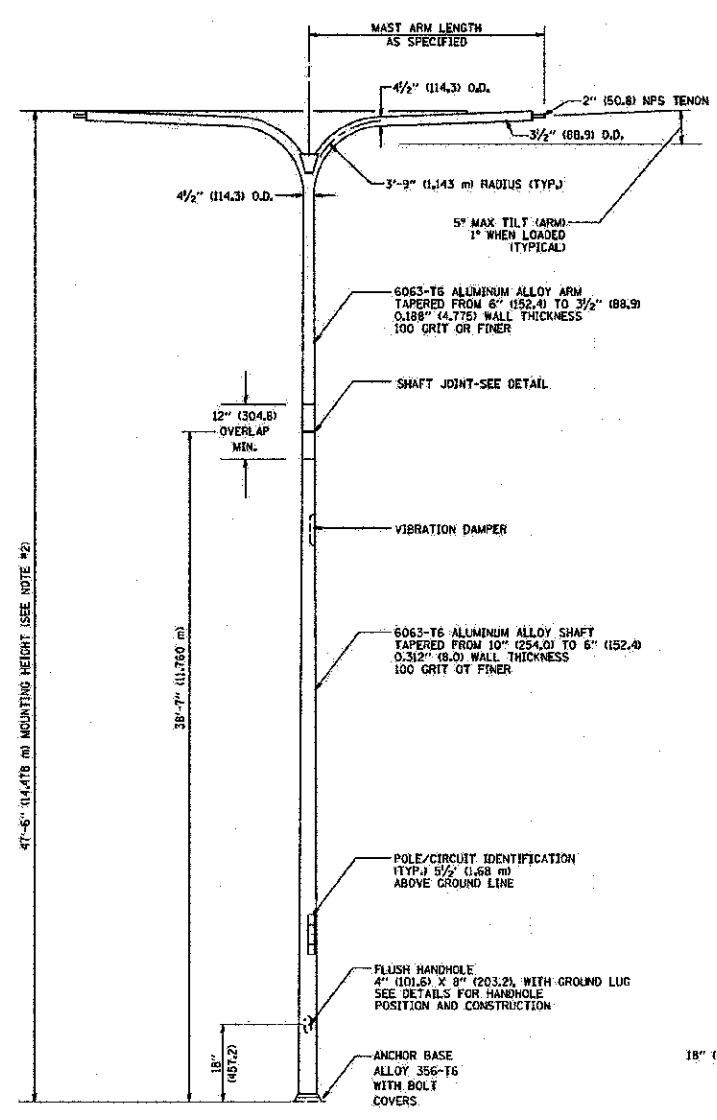
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



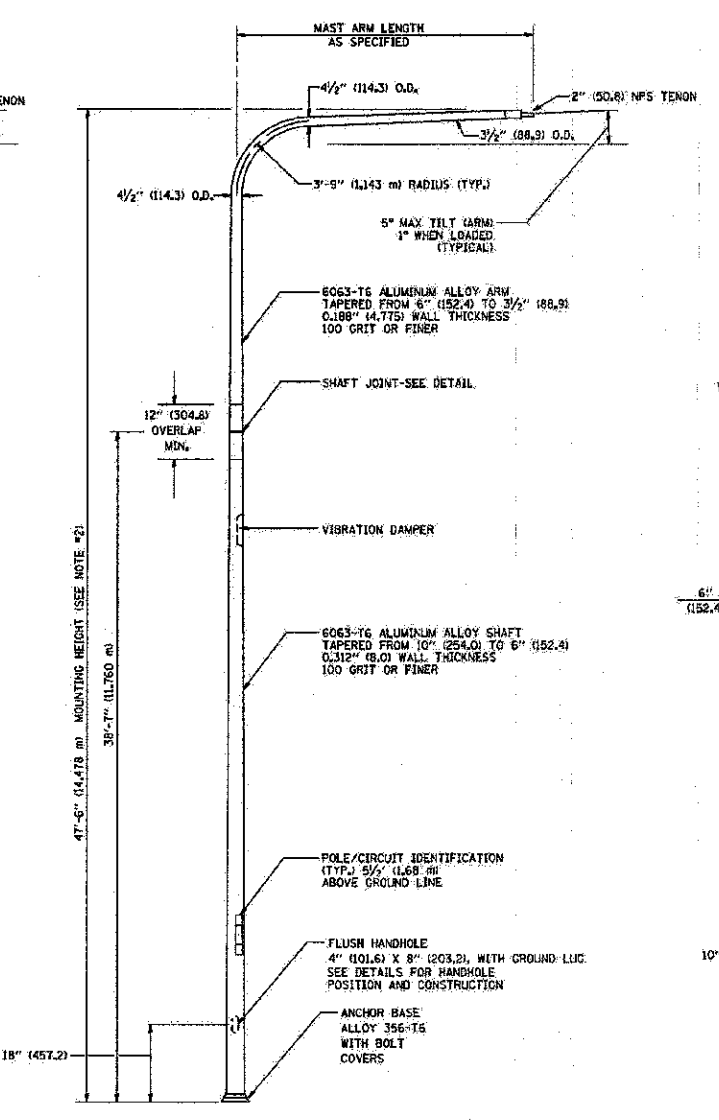
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

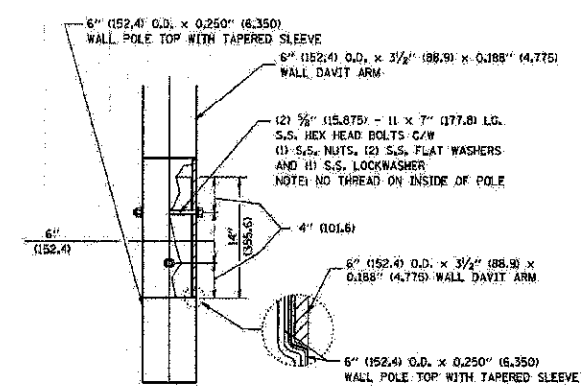


TWIN ARM POLE

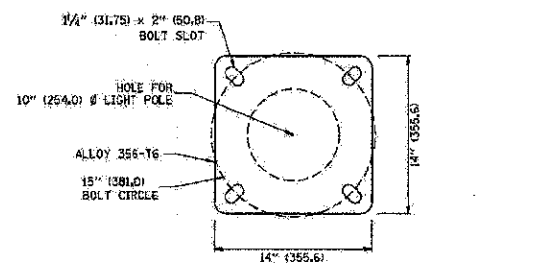


SINGLE ARM POLE

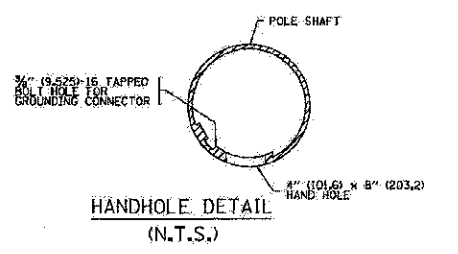
- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED, MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE 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 CONNECTION, BURNBY KE225, T&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. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



DAVIT ARM CONNECTION
[14" (355.6) OVERLAP SHOWN]



LIGHT POLE BASE PLATE DETAIL
(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)



HANDHOLE DETAIL
(N.T.S.)

FILE NAME = C:\P\c\projects\2011-07\Geny_Traffic_Pole\Geny_Traffic_Pole.dwg	USER NAME = drvakogin	DESIGNED - BL	REVISED - D. DREW 05-07-92	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DAVIT LIGHT POLE		F.A.D. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - LEY	REVISED - R. TOMSONS 09-06-00		47'-6" (14.478 m) MOUNTING HEIGHT						
		CHECKED -	REVISED - R. TOMSONS 09-02-03		SCALE: NONE		SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO.	
		DATE -	REVISED - R. TOMSONS 01-18-13							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

FILE NAME = C:\P\c\projects\2011-07\Geny_Traffic_Pole\Geny_Traffic_Pole.dwg

AMES Engineering, Inc.
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1341 Warren Avenue
Downers Grove, IL 60515

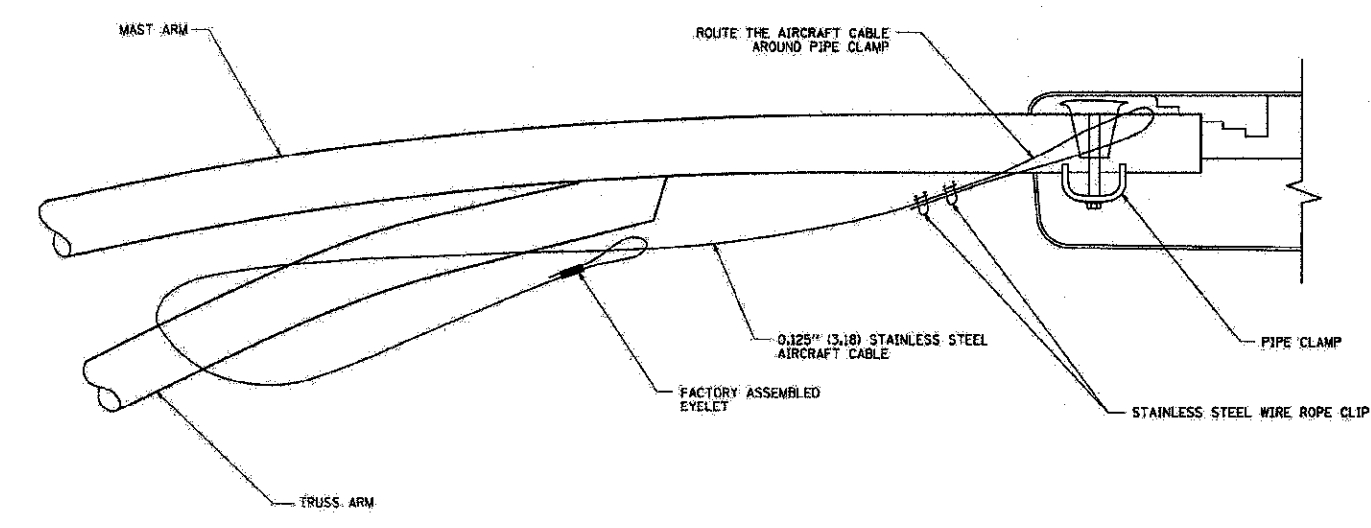
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DRAWN - MSA/RV	REVISED -	
CHECKED - SA	REVISED -	
DATE - 03-22-2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

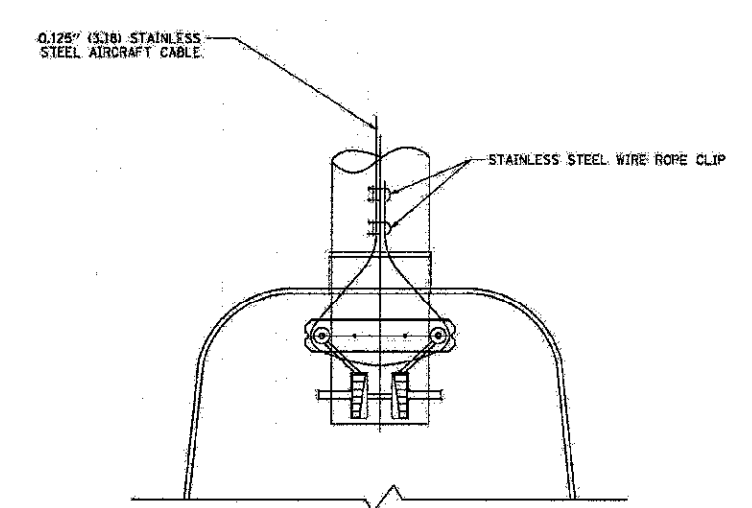
LIGHTING DETAILS			
LIGHT POLE MOUNTING DETAILS			
SCALE:	SHEET NO. 14 OF 24 SHEETS	STA.	TO STA.

F.A.D. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2561	11-00237-12-5P	DUPAGE/COOK	24	14
CONTRACT NO. 63821				
[ILLINOIS] FED. AID PROJECT HSIP-0043 (029)				

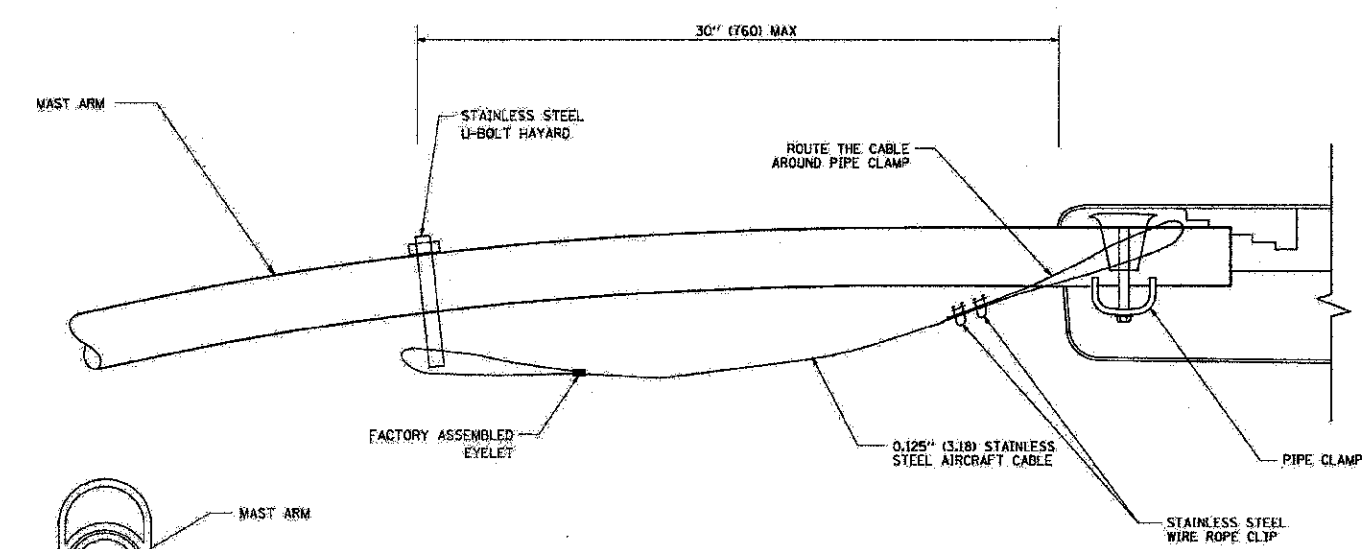
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			



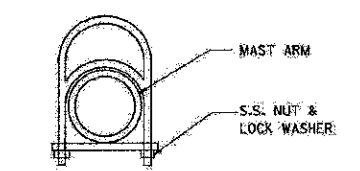
SIDE VIEW (TRUSS ARM)
N.T.S.



BOTTOM VIEW
N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



STAINLESS STEEL U-BOLT HAYARD

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
 3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

REVISIONS	
NAME	DATE
	08/08/03

ILLINOIS DEPARTMENT OF TRANSPORTATION

LUMINAIRE SAFETY CABLE ASSEMBLY

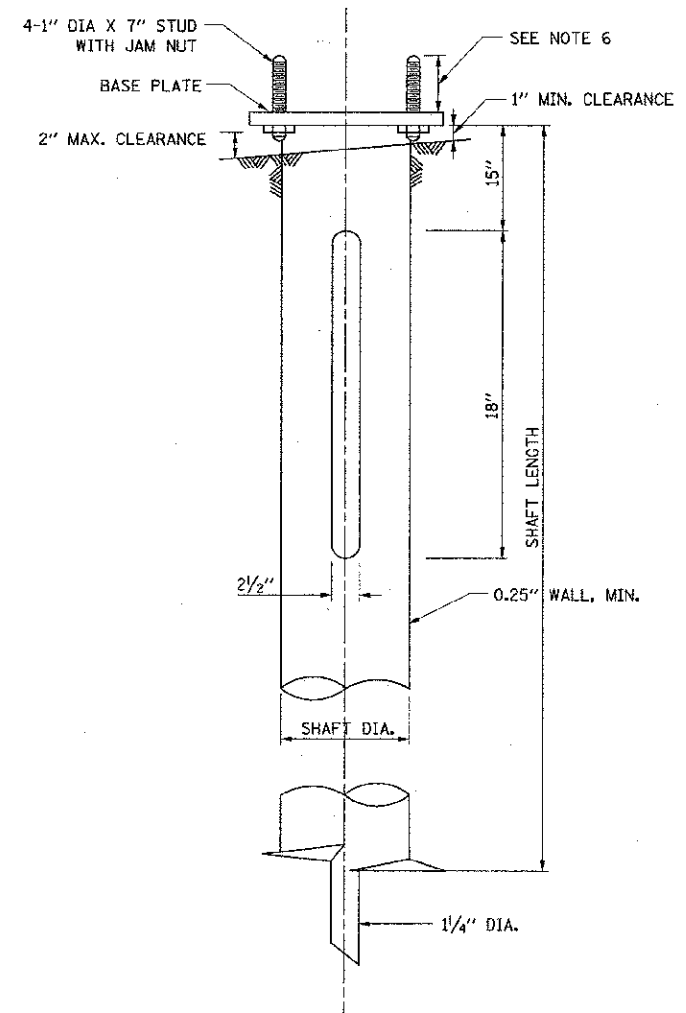
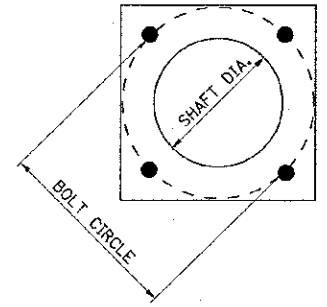
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HORIZ. NONE

DRAWN BY
CHECKED BY
BE-701

FILE NAME: C:\Projects\2011-07\Gary Truss Parkway - STV\Design\Sheet\TC-3 safety cables.dwg

PLOT DATE = 3/14/2013
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PLOT SCALE = 68.2000 in / in
USER NAME = bbeard

AMES Engineering, Inc. CONSULTING ENGINEERS 1341 Warren Avenue Downers Grove, IL 60516	USER NAME = vRenesh DESIGNED - BL DRAWN - MSA/RV CHECKED - SA DATE - 01-21-2013	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY	F.A.U. RTE. = 2561 SECTION = 11-00237-12-SP COUNTY = DUPAGE/COOK TOTAL SHEETS = 24 SHEET NO. = 15
	PLOT SCALE = 68.2000 in / in PLOT DATE = 3/14/2013	SCALE: SHEET NO. OF 27 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT HSP-0043 (029)



HELIX FOUNDATION SIZE

POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASE PLATE
30 FT.	11 1/2"	8 5/8"	6 FT.	12"X12"X1"
31 FT. TO 35 FT.	11 1/2"	8 5/8"	6 FT.	12"X12"X1"
36 FT. TO 40 FT.	15"	8 5/8"	6 FT.	15"X15"X1 1/4"
41 FT. TO 45 FT.	15"	8 5/8"	6 FT.	15"X15"X1 1/4"
46 FT. TO 50 FT.	15"	10"	8 FT.	15"X15"X1 1/4"

METAL HELIX FOUNDATION MATERIALS

ITEM	METAL REQUIREMENT
BASE PLATE	AASHTO M 270M, GRADE 36 (M 270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291 (ASTM A 563) GRADE DH OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

NOTES:

1. ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL SHALL BE GALVANIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
3. ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 MM) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 nm) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
4. THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
5. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
6. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
7. ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
8. METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
9. THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM), METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
10. THE BASE PLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ($\pm 1^\circ$) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC (± 0.188) TO THE SHAFT AXIS.
11. THE PILOT AND SHAFT AXIS SHALL BE CONCENTRIC (± 0.125) AND IN LINE ($\pm 2^\circ$).
12. THE BASE PLATE SHALL BE STAMPED WITH THE MANUFACTURER'S NAME AND DATE OF MANUFACTURE.

FILE NAME: C:\Projects\2011-07\Eng. Travis Percey\STW\Design\B1A1\10-10.mxd; dcsal1.dwg

AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warren Avenue
Downers Grove, IL 60516

USER NAME = VRamosh	DESIGNED - BL	REVISED -
PLCT SCALE = 20.000 = 1" = 20.000'	DRAWN - MSA/RV	REVISED -
PLCT DATE = 3/14/2013	CHECKED - SA	REVISED -
	DATE - 01-21-2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LIGHT POLE FOUNDATION, METAL

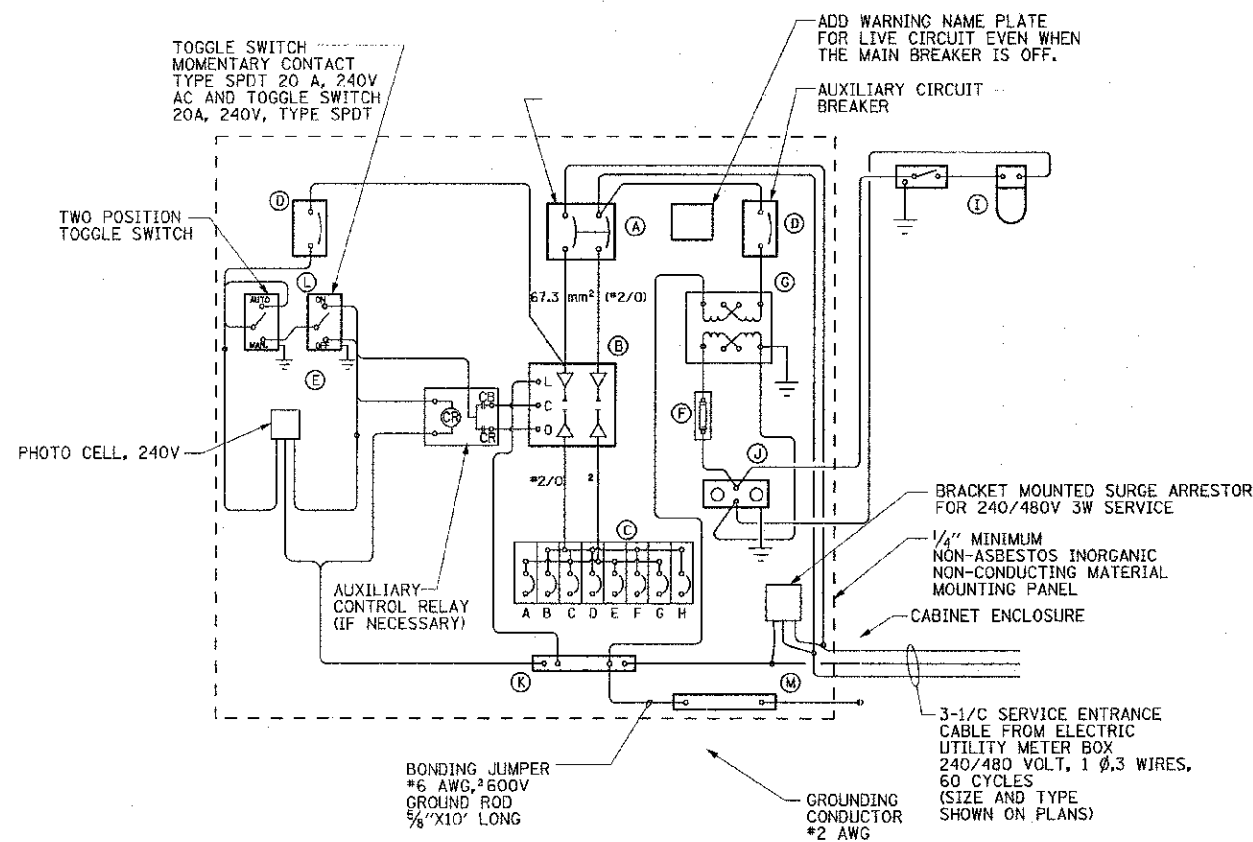
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F.A.D. RTE. 2561	SECTION 11-00237-12-SP	COUNTY DUPAGE/COOK	TOTAL SHEETS 24	SHEET NO. 16
ILLINOIS FED. AID PROJECT HSIP-0043 (029)			CONTRACT NO. 63821	

PANEL EQUIPMENT

BILL OF MATERIAL

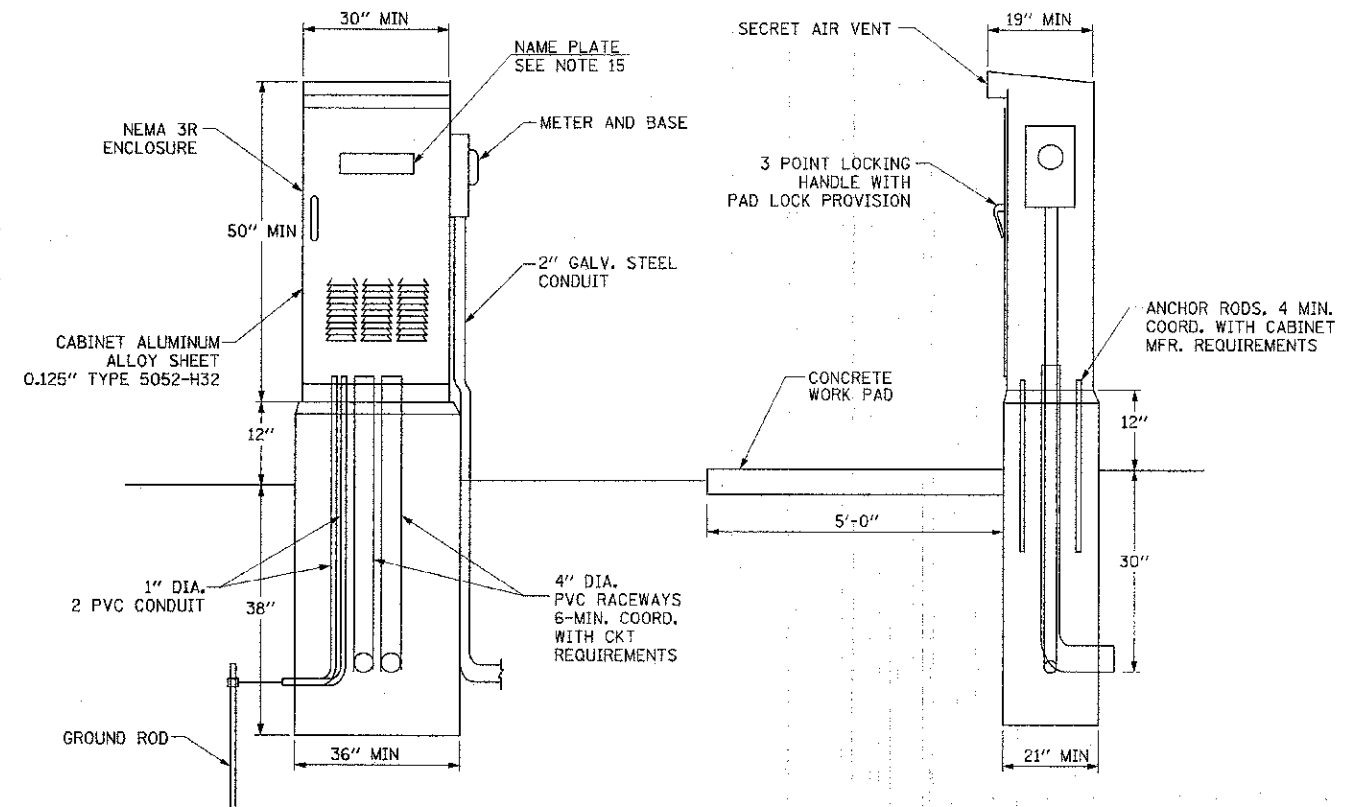
ITEM	QTY.	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100AMP. FRAME, 100AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUITS 240 VOLT, ASCO 920.
C	10	CIRCUIT BREAKERS, 1 POLE, 240V., 100AMP. FRAME 50AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100AMP. FRAME, 15AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22,000 AMP. AT 240 V.
E	1	PHOTOCCELL, 240V
F	1	20A., 120 FUSE
G	1	1.5KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240X480/120X240 VOLT, 60 HZ
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN.
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
K	1	COPPER NEUTRAL BUS 6.35 mm (1/4") X 25.4 mm (1") X 304.8 mm (12") LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS.
L	1	TOGGLE SWITCHES MOUNTED IN 101.6 mm (4") X 101.6 mm (4") BOX.
M	1	COPPER GROUND BUS 6.35 mm (1/4") X 25.4 (1") X 304.8 mm (12") LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS.
N	1	SURGE ARRESTOR



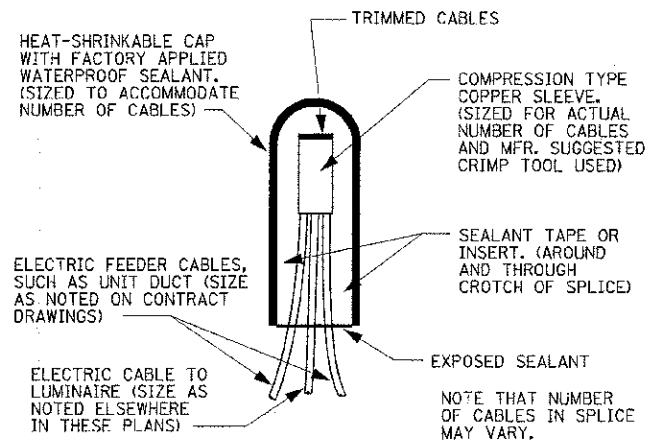
WIRING DIAGRAM

NOTES:

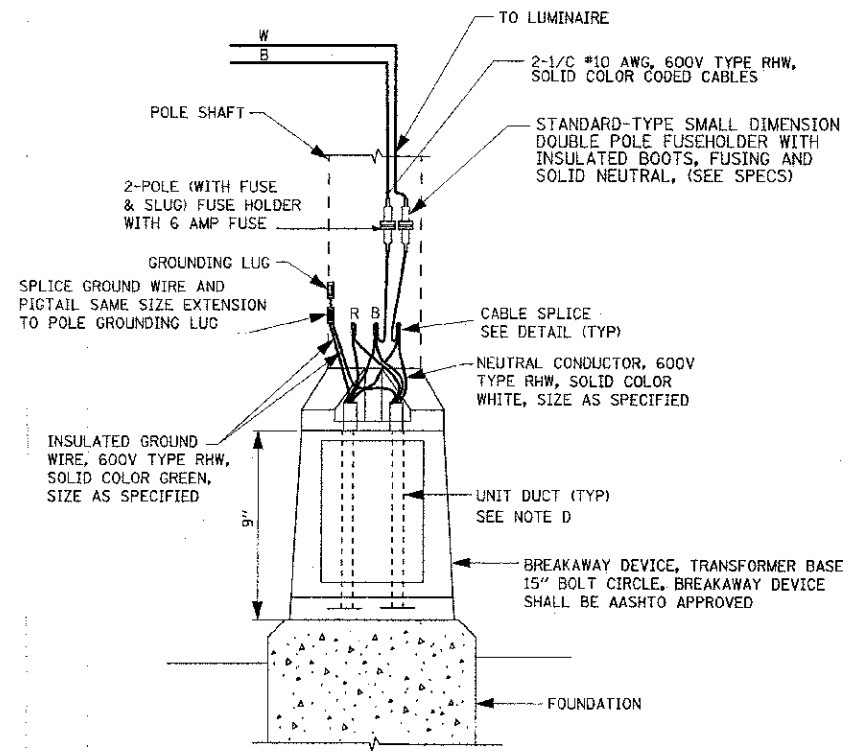
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.
- FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 6.35 mm (1/4") 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".
- 304.8 mm (12") X 406.4 mm (16") STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
- SERVICE DISCONNECT SHOULD HAVE UL LABEL AND THE EQUIPMENT SHOULD BE SUITABLE FOR SERVICE ENTRANCE EQUIPMENT.
- ITEMS A THROUGH N SHOWN IN THE BILL OF MATERIAL SHALL BE INCLUDED IN THE COST OF LIGHTING CONTROLLER.



FILE NAME: C:\Programs\2011\01\10\Drawings\Lighting\Lighting\Lighting.dwg



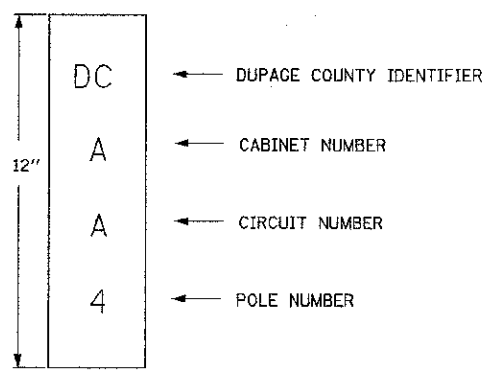
SPLICING DETAIL
N.T.S.



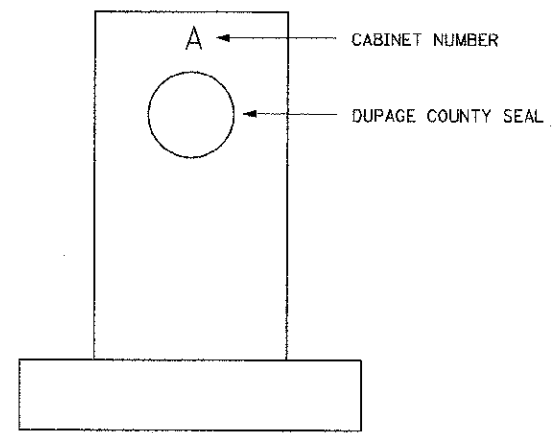
POLE BASE WIRING DIAGRAM
SINGLE MAST ARM
N.T.S.

DUPAGE COUNTY DOT LIGHTING LABEL DETAILS

POLE LABELS



CABINET DETAILS



NOTES

1.) LABELS SHALL CONSIST OF BLACK LETTERS ON A WHITE BACKGROUND

FILE NAME = C:\Projects\11-00237-12\Drawings\11-00237-12-2.mxd

AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warren Avenue
Downers Grove, IL 60515

USCR NAME = 9/Refresh	DESIGNED - BL	REVISED -
PLOT SCALE = 20/8900 m / in.	DRAWN - MSA/RV	REVISED -
PLOT DATE = 3/14/2013	CHECKED - SA	REVISED -
	DATE - 01-21-2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS ELECTRICAL DETAILS

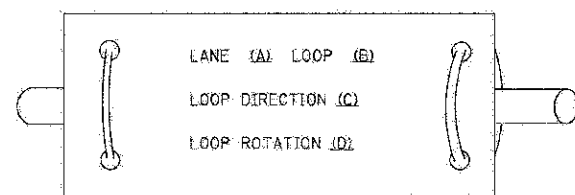
SCALE: SHEET NO. OF 27 SHEETS STA. TO STA.

P.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 63821				
ILLINOIS FED. AID PROJECT HSIP-0043 (029)				

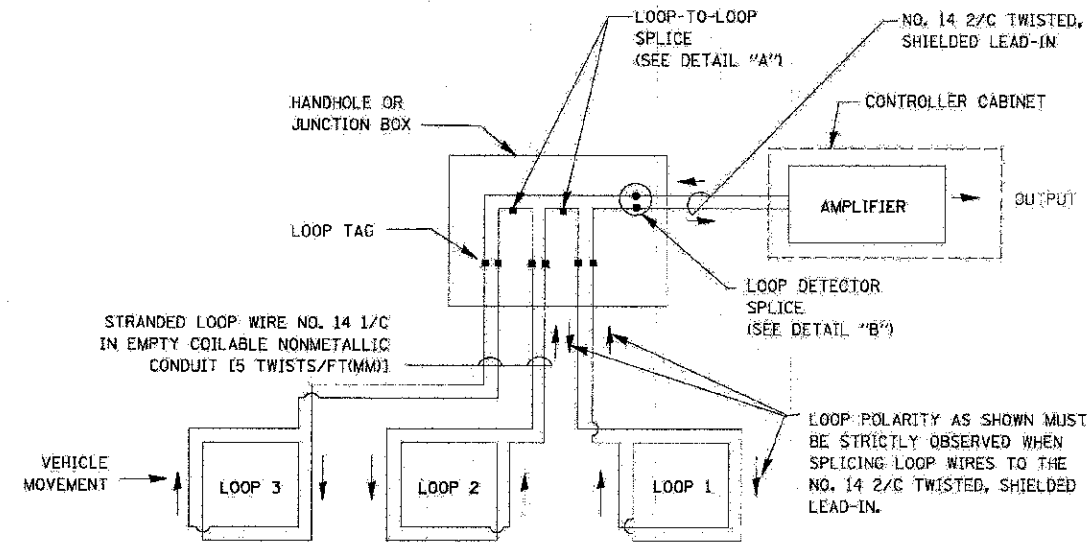
LOOP DETECTOR NOTES

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 DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
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.

LOOP LEAD-IN CABLE TAG

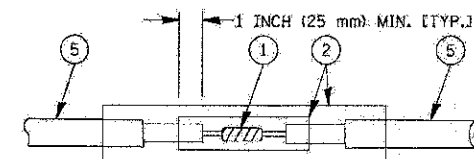


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

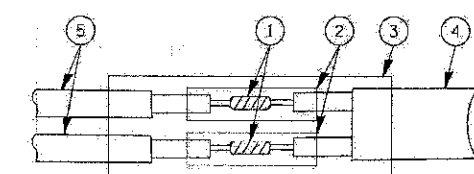


DETECTOR LOOP WIRING SCHEMATIC

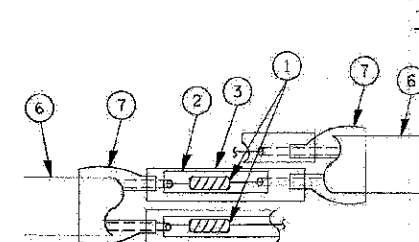
- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



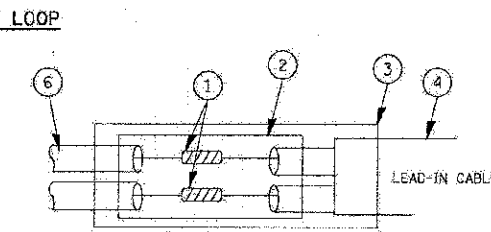
DETAIL "A" LOOP-TO-LOOP SPLICE



DETAIL "B" LOOP-TO-CONTROLLER SPLICE



DETAIL "A" LOOP-TO-LOOP SPLICE



DETAIL "B" LOOP-TO-CONTROLLER SPLICE

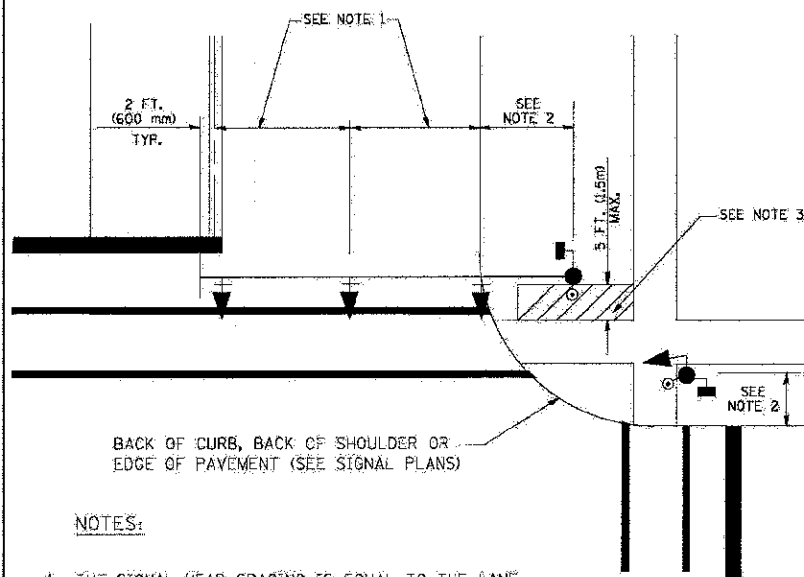
LOOP DETECTOR SPLICE

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

FILE NAME =	USER NAME = bgsdpl	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	P.A.U. RFE =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLT SCALE = 5/8" = 1'-0"	DRAWN - BCK	REVISD -	2561			11-00237-12-SP	DUPAGE/COOK	24	19	
PLT DATE = 11/4/2009	CHECKED - DAD	REVISD -	TS-05			CONTRACT NO. 23821				
	DATE = 10-28-09	REVISD -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
				SCALE: NONE	SHEET NO. 1 OF 6 SHEETS	STA. N/A	TO STA. N/A			

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

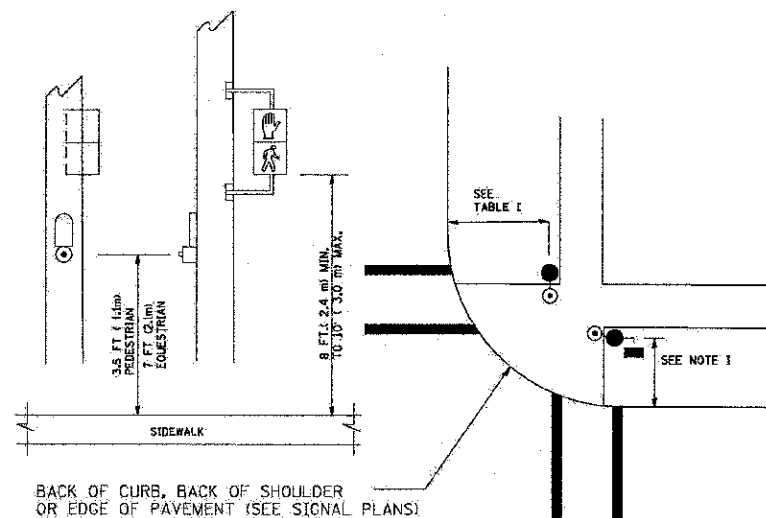
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

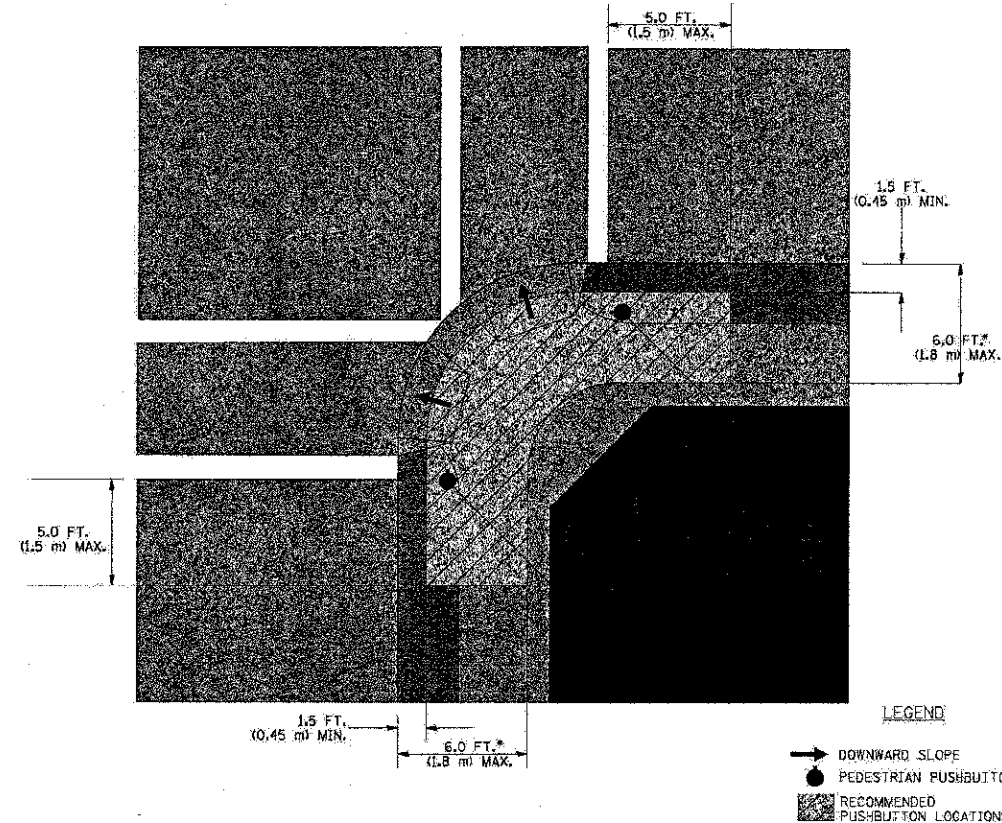
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- 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) SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

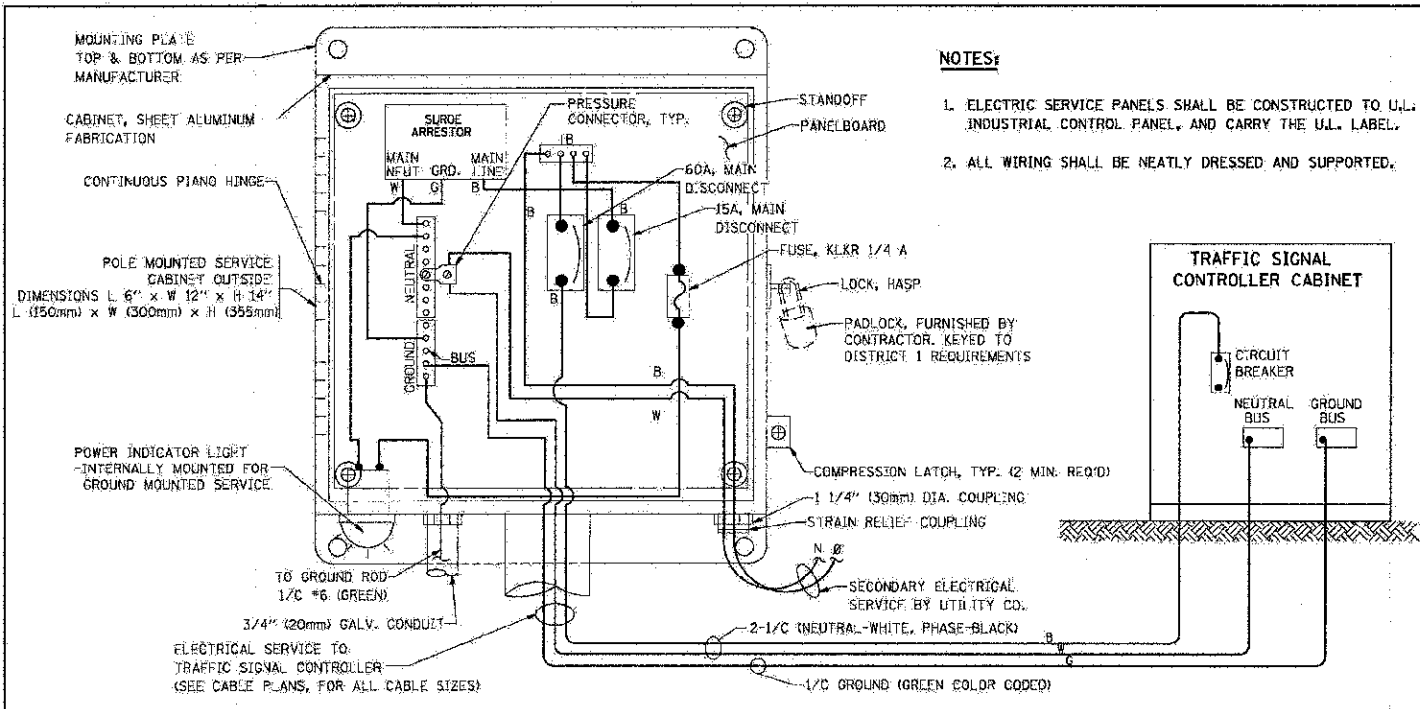
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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 19 FT (5.8 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

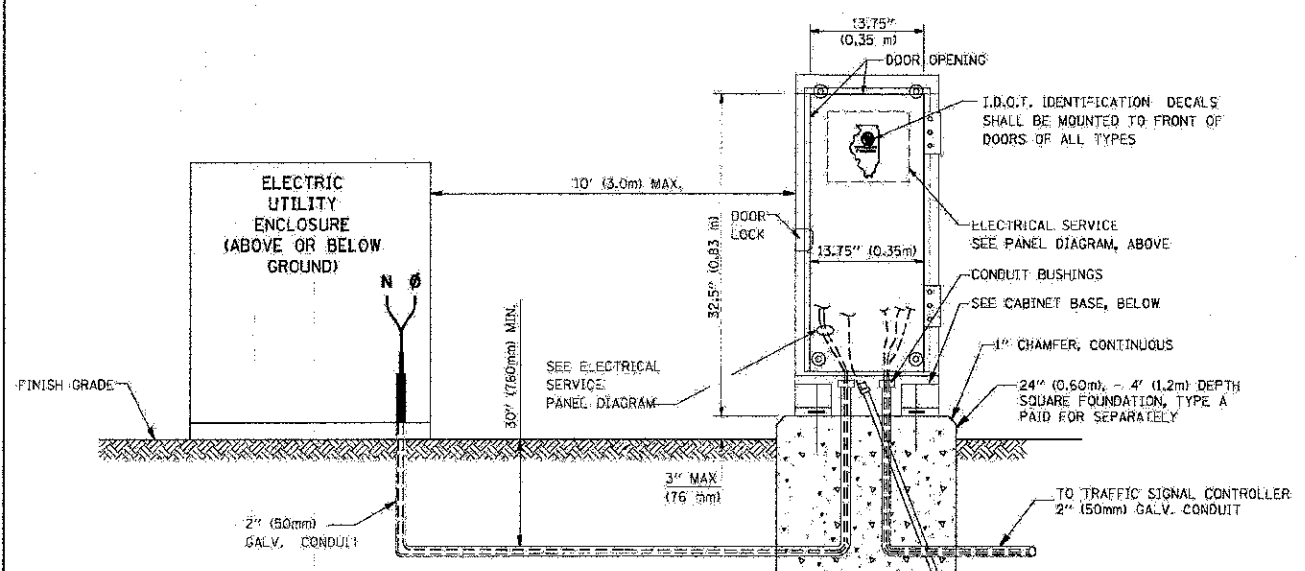
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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.

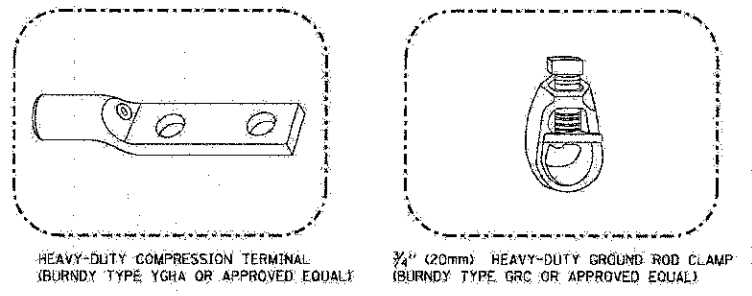
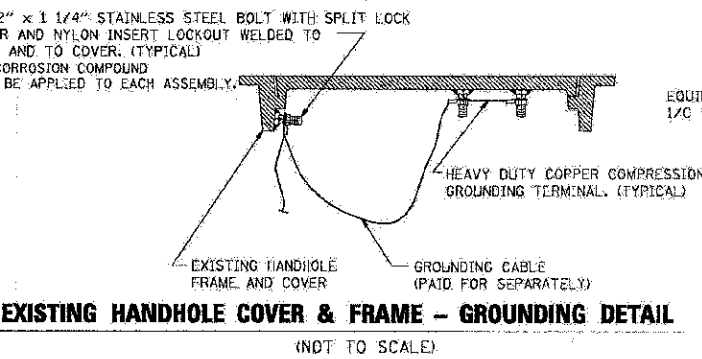
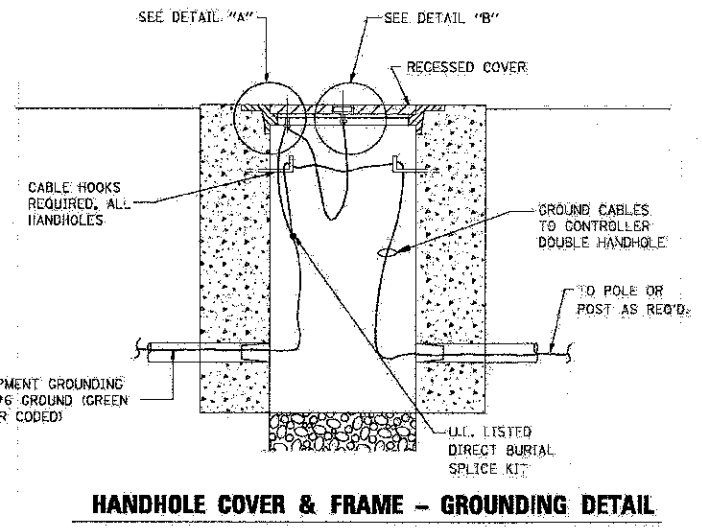
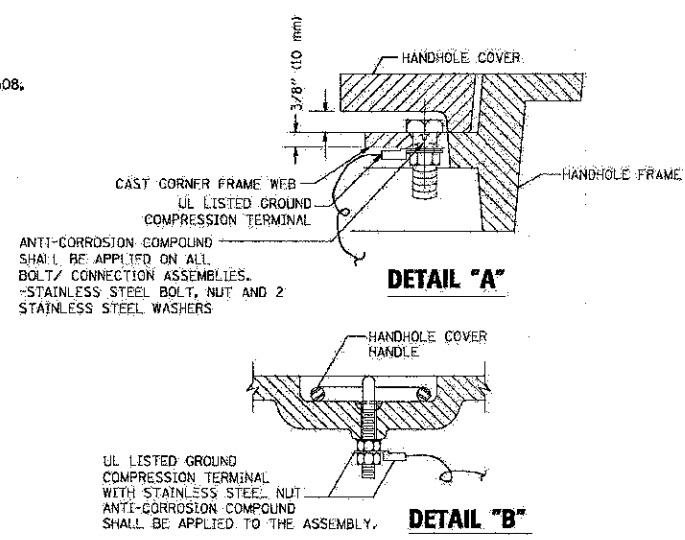


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

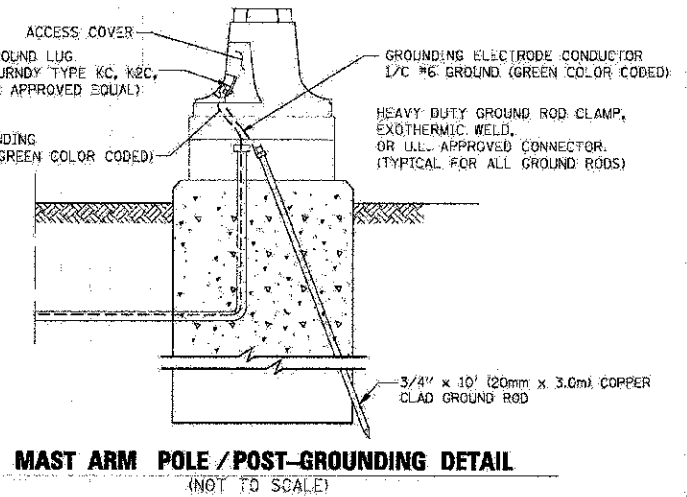


SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)

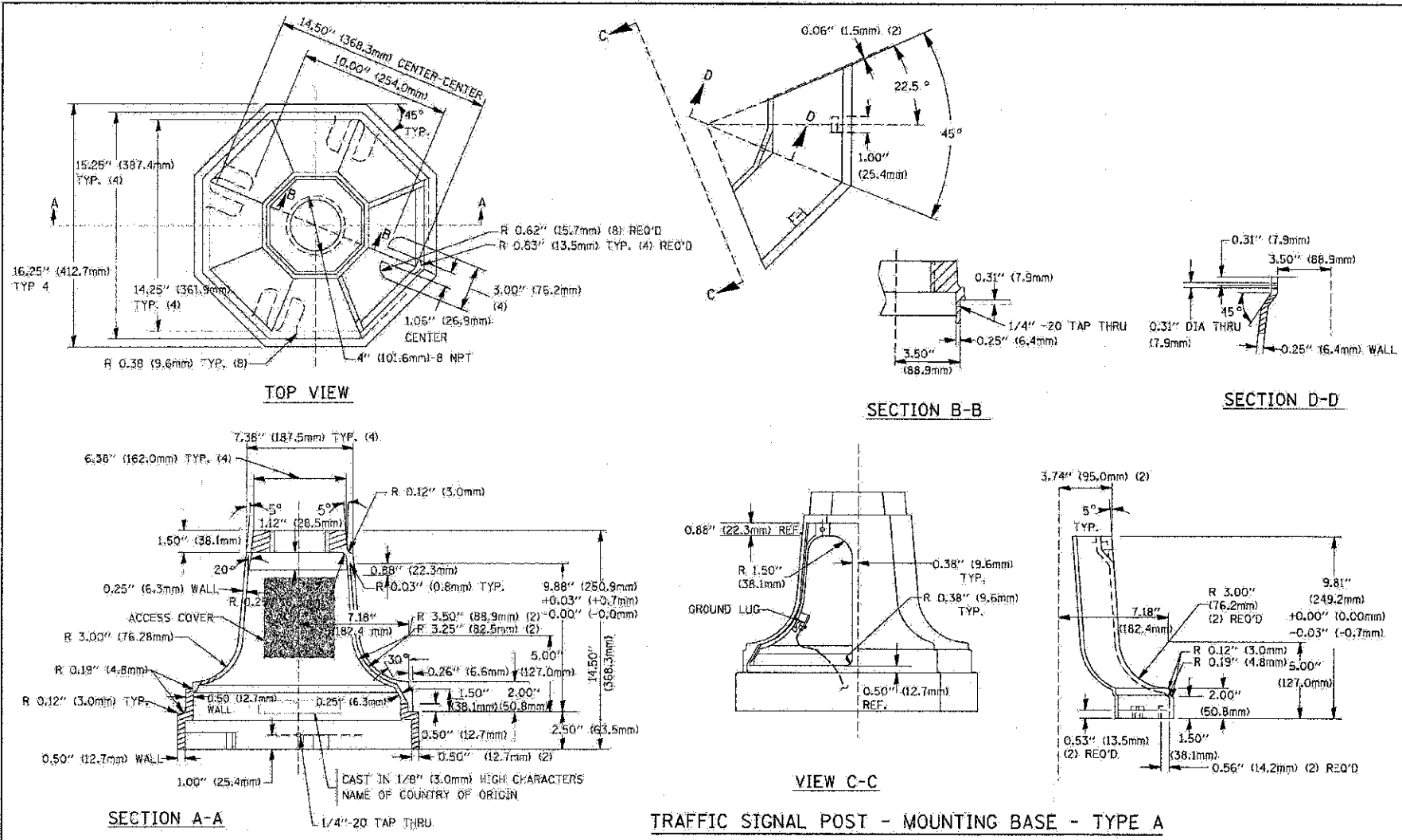
CABINET - BASE BOLT PATTERN (NOT TO SCALE)



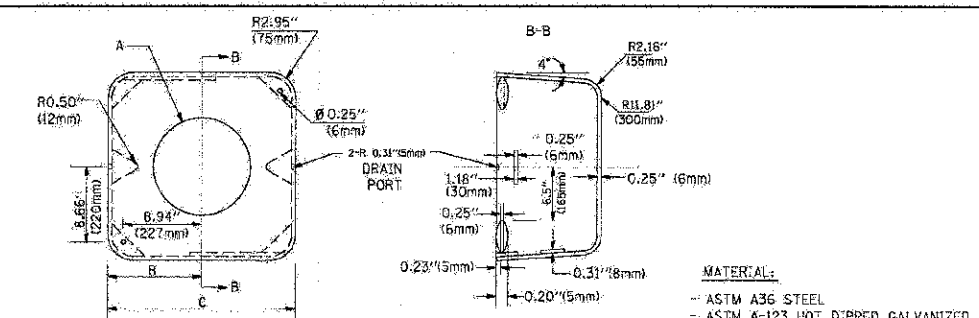
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



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



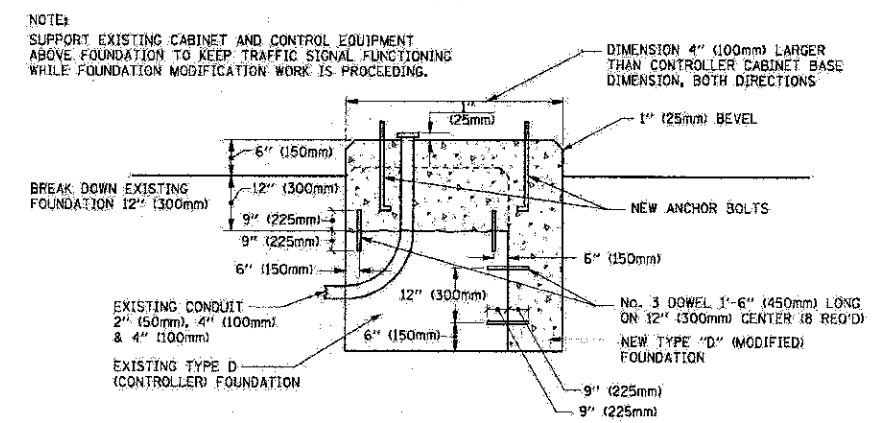
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



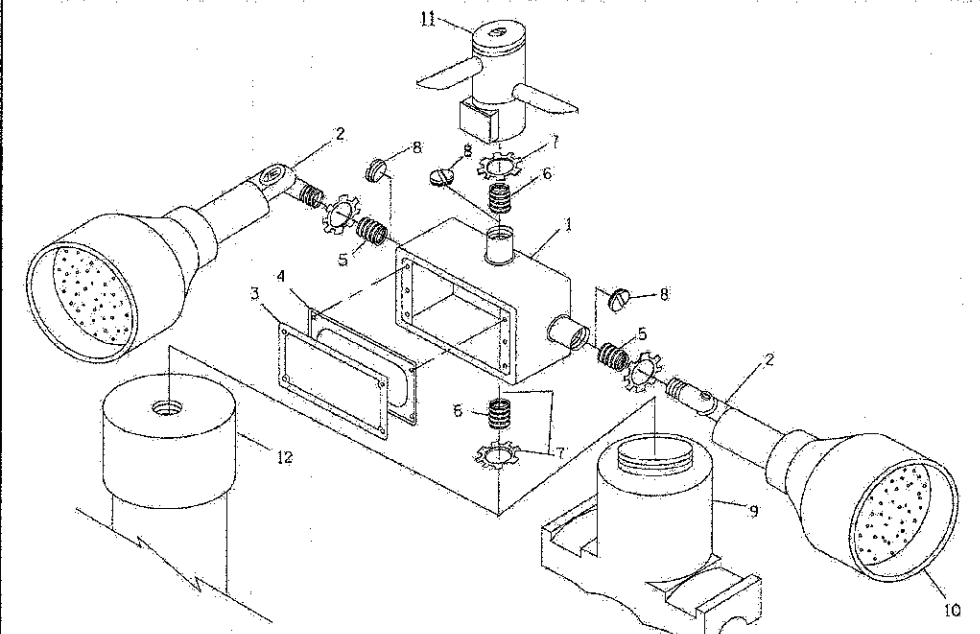
	A	B	C	HEIGHT	WEIGHT
VARIABLES	VARIES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	VARIES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31kg)
VARIABLES	VARIES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37kg)
VARIABLES	VARIES	18.5\"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

SHROUD

- NOTES:
- 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.
 - THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
 - THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

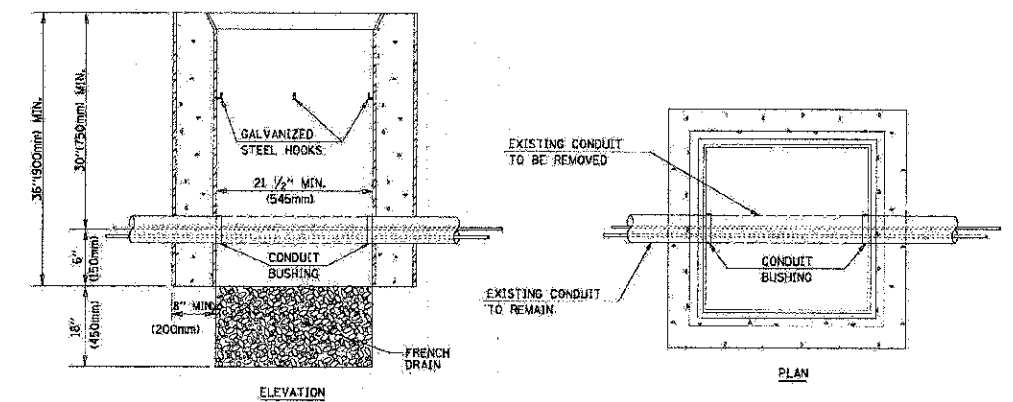


MODIFY EXISTING TYPE "D" FOUNDATION



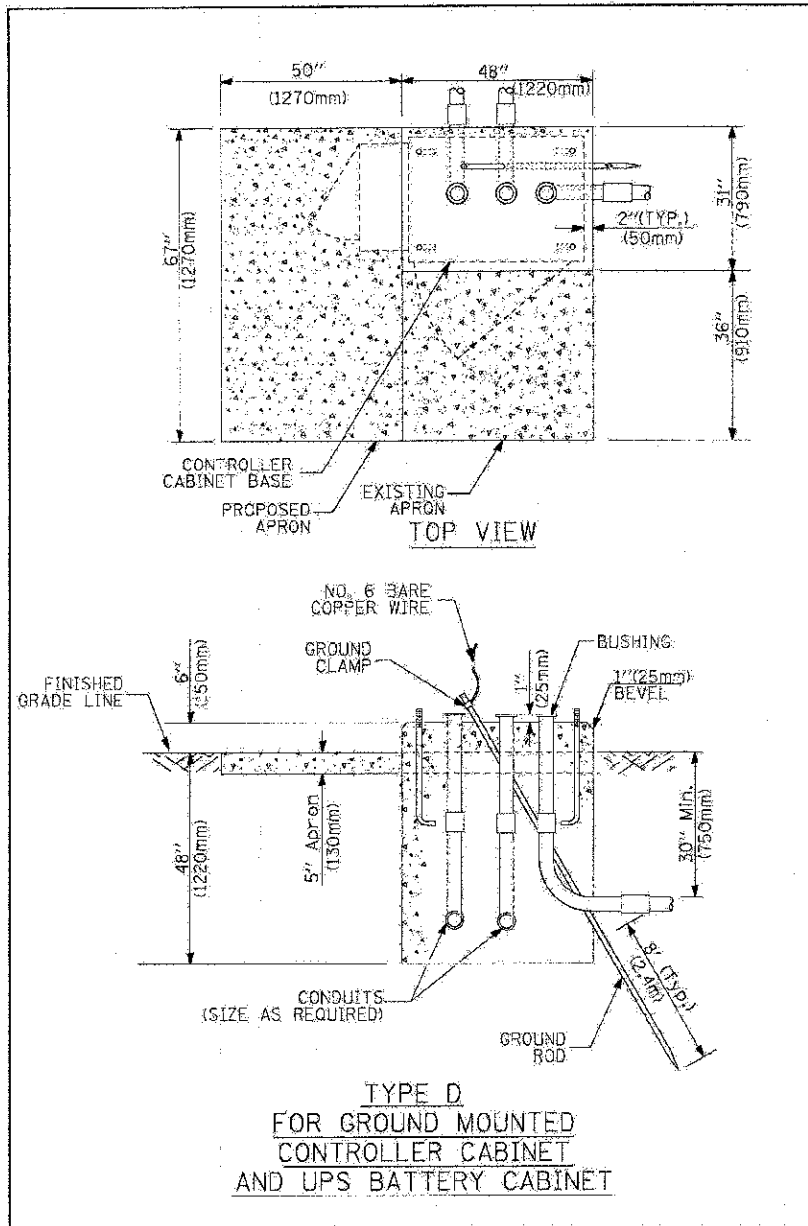
ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU. IN. (0.000344 CU. M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR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

- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-11" SADDLE BRACKET OR EQUIVALENT
 - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

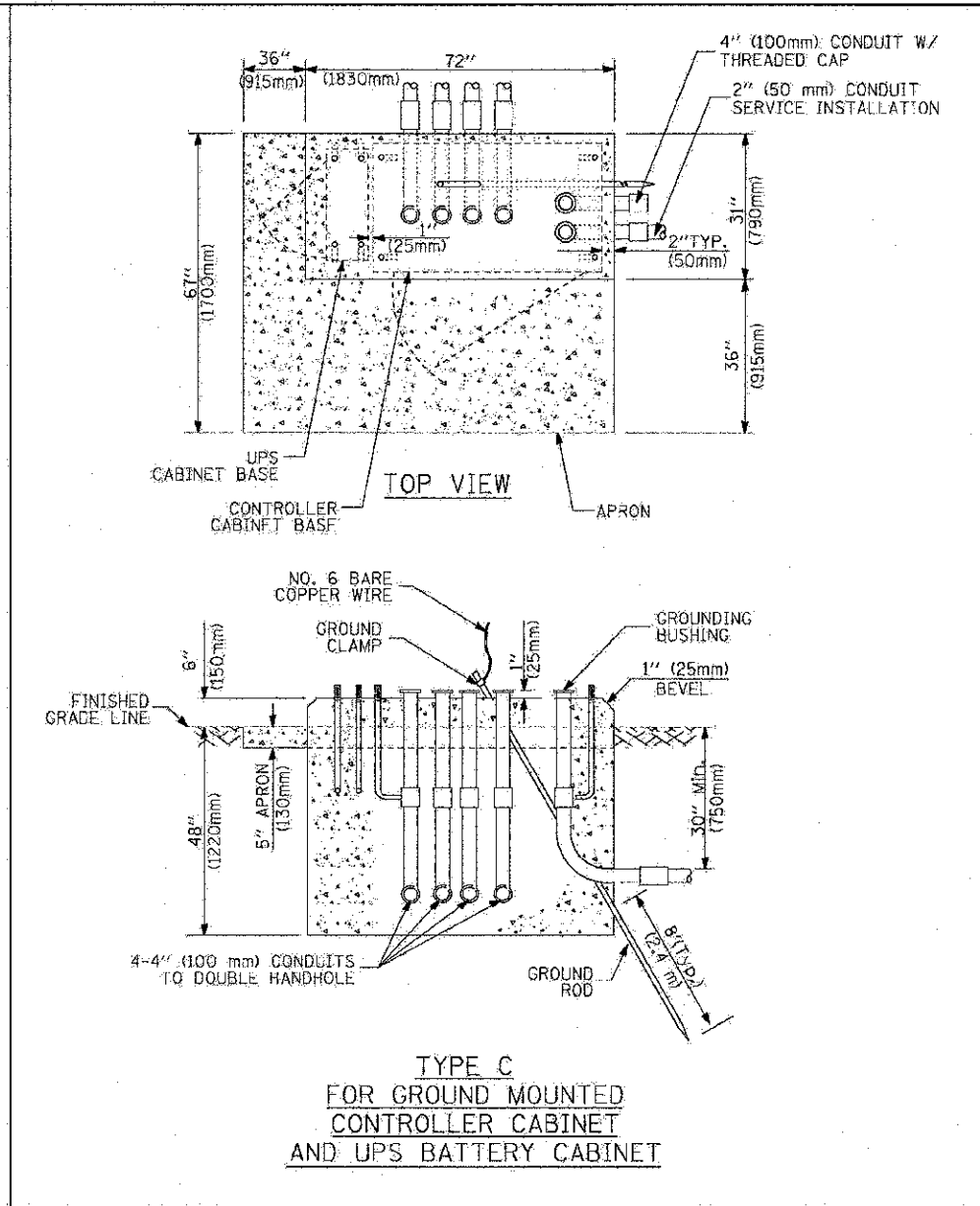


- NOTES:
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
 - REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

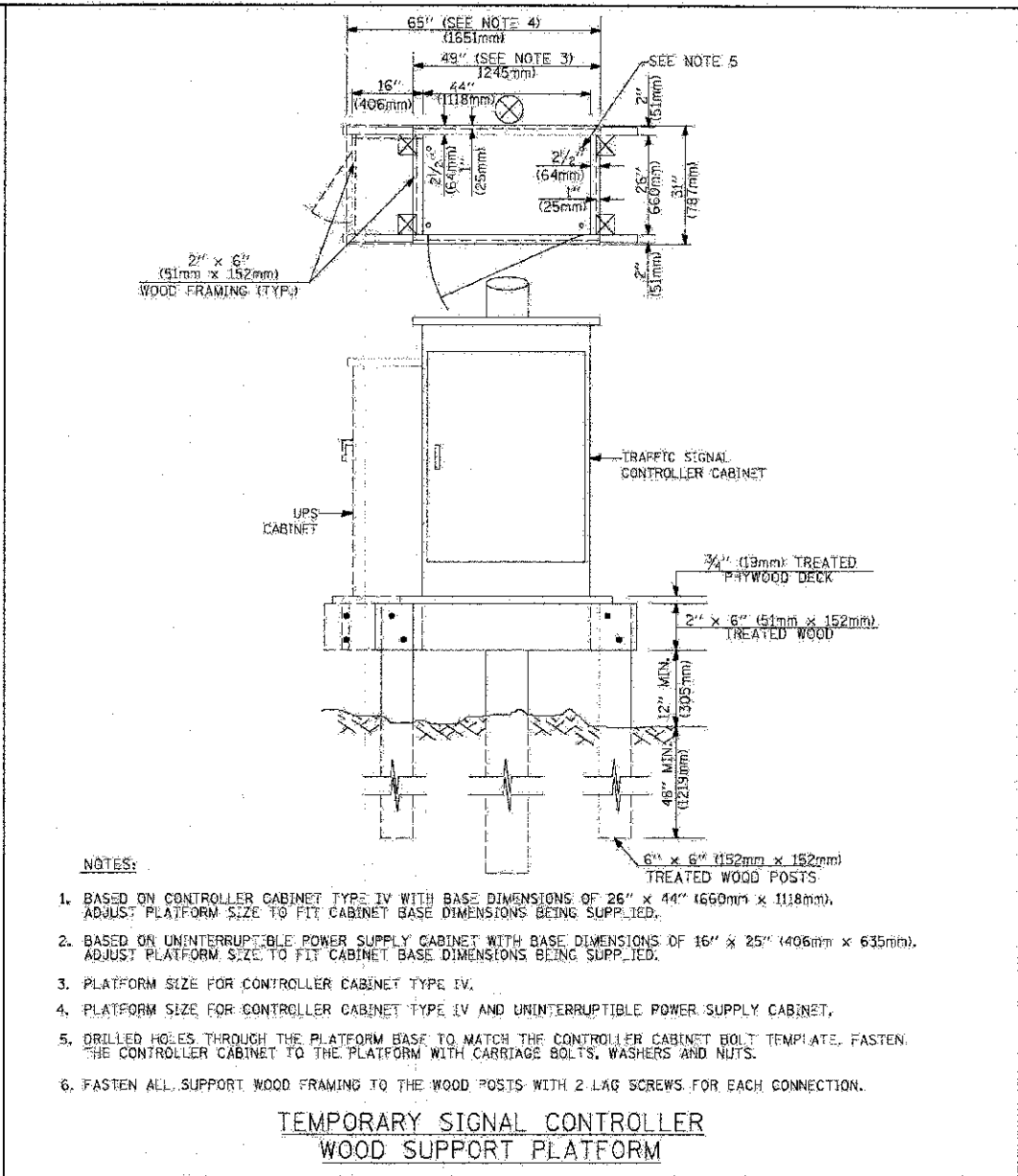
HANDHOLE TO INTERCEPT EXISTING CONDUIT



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



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



- NOTES:**
- 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.
 - 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.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
 - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
 - DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARTRIDGE BOLTS, WASHERS AND NUTS.
 - 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	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPLDG. DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	619
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	619
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	31'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7122
Greater than or equal to 50' (15.2 m) and less than 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7122
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7122
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8125
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8125

- NOTES:**
- 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 kpc). 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.
 - Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 - Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 - For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

