

# Parking Management System- Phase 2

PROJECT LIMITS: Summerfest Shuttle Bus  
MILWAUKEE, WISCONSIN

State Project I.D.: 1693-37-70  
FEDERALLY FUNDED CMAQ PROJECT  
DBE: Discretionary



INDEX OF SHEETS  
SEE SHEET 2



SCALE = N.T.S.

ORIGINAL PLANS PREPARED BY  
**JACOBS**  
525 W. MONROE ST. SUITE 200, CHICAGO, IL 60661



SIGNED *CHAD R. HAMMERL* DATE 3/16/2016  
FOR DRAWINGS 1-41

APPROVED FOR CITY OF MILWAUKEE

3/23/16 (Date) *[Signature]* (Signature)

## GENERAL NOTES

### 1. UTILITIES - LOCATIONS/INFORMATION ON PLANS

THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES, AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN, ALL UTILITY LOCATIONS ARE BASED ON THE APPROXIMATE LOCATION SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING CITY ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO FACILITIES RESULTING FROM INACCURATE LOCATING.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF THE DIGGER HOTLINE.

THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.

THE CONTRACTOR MAY OBTAIN, ON REQUEST, PLANS FOR THE EXISTING ELECTRICAL FACILITIES FROM THE CITY.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR LOCATING AND PROVIDING PROTECTION FOR FACILITIES DURING ALL PHASES OF CONSTRUCTION. IF AT ANY TIME, THE FACILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY. THIS WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE.

### 2. CRITICAL PATH WORK SCHEDULE REQUIREMENT

THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A SATISFACTORY PROGRESS SCHEDULE AND CRITICAL PATH SCHEDULE WHICH SHOW THE PROPOSED SEQUENCE OF WORK AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE.

### 3. SIGNING

SIGN LOCATIONS MAY VARY FROM THE LOCATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY UTILITIES AS APPROVED BY THE ENGINEER.

### 4. THE CITY CONTACT PEOPLE FOR THIS CONTRACT ARE AS FOLLOWS:

- GENERAL QUESTIONS OR PLANS: CHRIS FORMAL, INFRASTRUCTURE SERVICES DIVISION, 414-286-2452  
 - UTILITY COORDINATION: TONY KOTECKI, 414-286-2433  
 - CONSTRUCTION INSPECTION: ROGER REED, 414-286-3896; LYNN DES JARDINS, 414-286-0447; BILL FRASCH, 414-286-8673  
 - TRAFFIC SIGNALS: AL NICHOLS, 414-286-5941  
 - HOLLOW SIDEWALKS: JOHN SCHMIDT, 414-286-0467  
 THE CONTRACTOR MUST COORDINATE AND COOPERATE WITH THE CITY AND THE INVOLVED PARTIES AS DIRECTED BY THE CITY.

5. THE ENGINEERING DESIGN IN THESE PLANS IS BASED UPON FIELD INVESTIGATIONS OF CURRENT CONDITIONS AND REVIEW OF EXISTING AS-BUILT DOCUMENTATION. DUE TO THE CHANGING NATURE OF THESE ITEMS, THE ACTUAL CONDITIONS MAY BE DIFFERENT THAN THOSE DEPICTED. THE CONTRACTOR SHALL VERIFY THE EXISTING FIELD CONDITIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND CORRELATE THESE CONDITIONS WITH THE PROPOSED CONSTRUCTION ACTIVITIES OF THIS AND OTHER CONTRACTS. THE CONTRACTOR SHALL IDENTIFY TO THE ENGINEER ANY SIGNIFICANT DIFFERENCES BETWEEN THESE PLANS AND THE EXISTING FIELD CONDITIONS OR PROPOSED CONSTRUCTION THAT COULD IMPACT HIS EFFORTS PRIOR TO BEGINNING WORK. CORRECTIVE ACTIONS FOR PROBLEMS ENCOUNTERED AFTER THE CONTRACTOR HAS BEGUN WORK WILL BE INCLUDED IN THE TASK UNLESS PREVIOUSLY IDENTIFIED TO THE ENGINEER.

6. ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRIC CODE (NEC).

7. THE CONTRACTOR SHALL BE AWARE THAT TEST SOIL BORINGS WERE NOT MADE AT ALL LOCATIONS WHERE ELEMENTS OR RELATED EQUIPMENT ARE TO BE INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE SITE CONDITIONS AT THESE FIELD LOCATIONS BEFORE SUBMITTING BID PROPOSALS.

8. WHENEVER CONDUITS (INCLUDING SPARES) ARE INSTALLED FOR ELECTRICAL POWER CABLE, A POLYETHYLENE PULL ROPE WITH DETECTABLE METALLIC CONDUCTOR SHALL BE INSTALLED WITH THE CONDUIT. ALL PULL-ROPE RELATED COSTS ARE TO BE INCLUDED IN THE BID PRICE FOR CONDUIT.

9. THE QUANTITIES OF RACEWAYS 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.

10. EXACT FIELD LOCATIONS OF EQUIPMENT SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE CARE NOT TO INSTALL EQUIPMENT IN DRAINAGE AREAS.

11. ANY GROUND AREAS DISTURBED DURING THE INSTALLATION OF FIELD DEVICES SHALL BE RE-GRADED AND SEEDED OR HARD-SURFACED AS DIRECTED AND TO THE SATISFACTION OF THE ENGINEER. COST FOR THIS WORK IS TO BE INCLUDED IN THE COST OF EQUIPMENT ITEMS.

12. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CONSTRUCTION METHODOLOGIES, PRODUCT MANUFACTURER SPECIFICATIONS, OWNERS MANUALS, AND USERS MANUALS BEFORE PROCURING AND INSTALLING ANY EQUIPMENT AS PART OF THIS CONTRACT. ALL PROPOSED WORK SHALL BE REVIEWED AND APPROVED BY THE CITY IN CONSULTATION WITH THE DESIGN ENGINEER.

13. NO WORK SHALL BE CONDUCTED BY THE CONTRACTOR ON ANY EXISTING STREET LIGHTING AND COMMUNICATIONS CONDUIT, POLES, OR CONTROLLER CABINETS UNDER JURISDICTION OF THE CITY OF MILWAUKEE WITHOUT FIRST NOTIFYING THE CITY 72 HOURS BEFORE COMMENCING WORK. ALL STREET LIGHTING/COMMUNICATIONS COORDINATION-RELATED WORK SHALL BE COORDINATED BY THE CONTRACTOR WITH THE CITY. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ENSURE THAT POWER AND COMMUNICATION CABLES WITHIN EXISTING STREET LIGHTING AND COMMUNICATIONS CONDUITS, POLES, AND CONTROLLER CABINETS ARE NOT DAMAGED AS A RESULT OF DRILLING OR INSTALLING THE EQUIPMENT SUBSYSTEMS. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE AFFECTED AGENCY.

14. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CITY TO BE CONDUCTED AT THE MUNICIPAL BUILDING (841 NORTH BROADWAY, MILWAUKEE).

#### PARTICIPATING PARKING FACILITY OWNER AND OPERATORS:

BRADLEY CENTER ALEX SPAKMAN FACILITIES MANAGER CPS PARKING 1030 N. 6TH STREET MILWAUKEE, WI 53202 414-227-0892	633. W. WISCONSIN AVE SHARLANE IMPERIAL PARKING 633 WEST WISCONSIN AVENUE MILWAUKEE, WI 53202 414-273-7241
CONVENTION CENTER RAMP (F.K.A BOSTON STORE GARAGE) PROPERTY MANAGER 621 NORTH 5TH STREET MILWAUKEE, WI 53202 414-431-6555	

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE CITY AT THE COMPLETION OF THE PROJECT A SET OF AS-BUILT CONSTRUCTION PLANS.

16. WisDOT SHALL ENSURE A QUALIFIED ARCHAEOLOGIST (PER 48 FR 44738) IS PRESENT TO MONITOR ALL PROJECT RELATED GROUND DISTURBING ACTIVITIES WITHIN THE BOUNDARIES OF THE ARCHAEOLOGICAL SITE(S). THE CONTRACTOR SHALL CONTACT THE ARCHAEOLOGICAL PROGRAM COORDINATOR AT WisDOT, BUREAU OF EQUITY AND ENVIRONMENTAL SERVICES (BEES) TO ARRANGE FOR AN ARCHEOLOGIST TO MONITOR. BEES SHALL BE CONTACTED TWO WEEK IN ADVANCE OF THE BEGINNING OF WORK NOTICE. THE CONTACT AT BEES IS: LYNN CLOUD (608-266-0099) OR JIM BECKER (608-261-0137). THE COST OF THE ARCHEOLOGICAL PROGRAM COORDINATOR WILL BE PAID FOR BY WisDOT. COORDINATION REQUIRED BY THE CONTRACTOR WILL BE INCIDENTAL TO MOBILIZATION.

17. CONTRACTOR SHALL CONTACT CHRIS FORMAL AT THE NUMBER BELOW TO CONFIRM THE LOCATIONS OF ALL DYNAMIC AND STATIC PARKING SIGNS PRIOR TO EXCAVATION FOR SIGN FOUNDATIONS.  
 MR. CHRIS FORMAL  
 CITY OF MILWAUKEE, DEPARTMENT OF PUBLIC WORKS  
 INFRASTRUCTURE SERVICES, PLANNING AND DEVELOPMENTS  
 841 NORTH BROADWAY  
 ROOM 919  
 MILWAUKEE, WISCONSIN, 53202  
 1-(414)-286-2452

18. PER CONSULTATION CODE Q3E17000-2016-SLI-0014 FOR THE PROTECTION OF THE NORTHERN LONG EARED BAT, CLEARING AND GRUBBING WORK IS RESTRICTED UNDER THIS CONSTRUCTION PROJECT.

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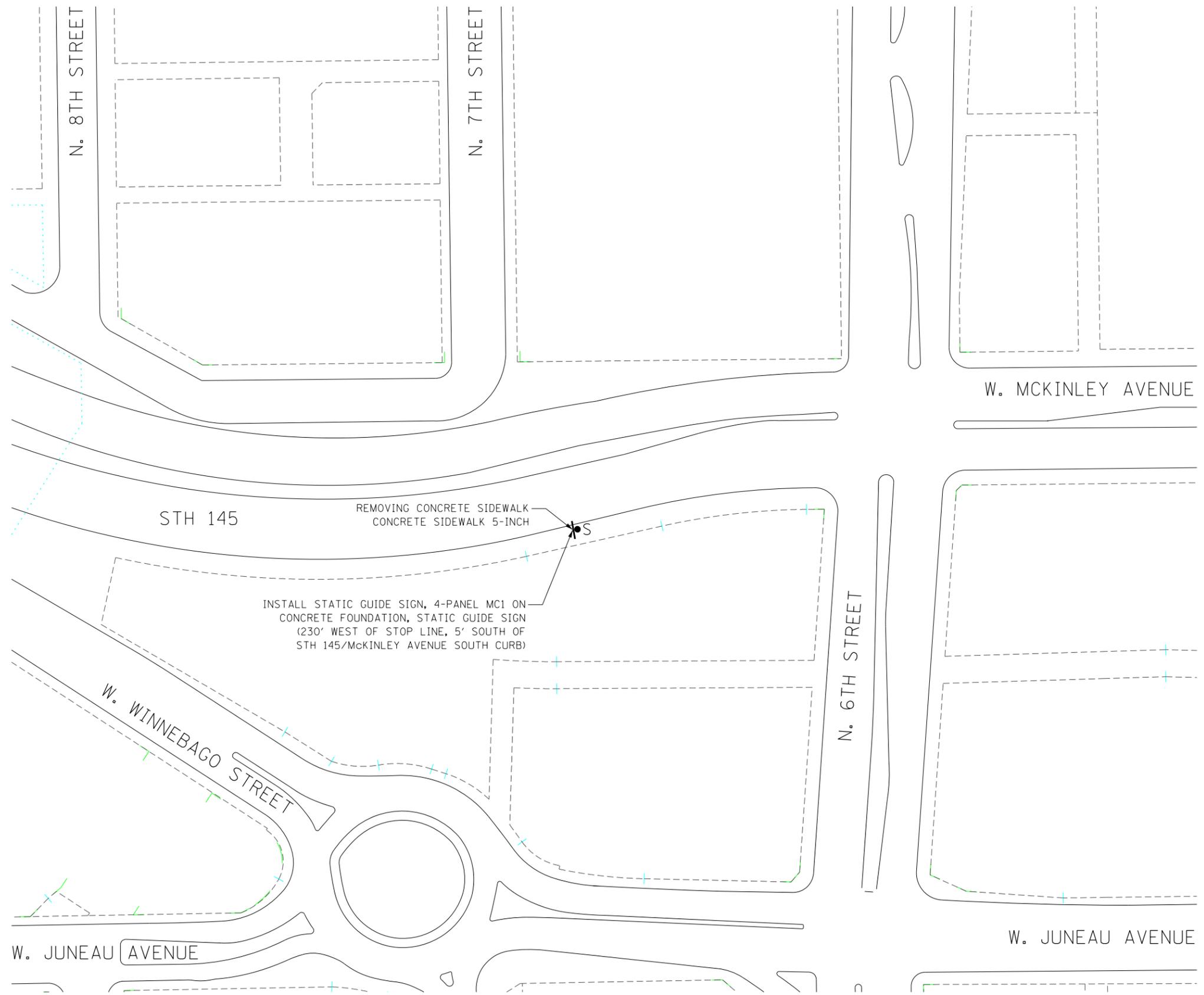


CALL 811 THREE WORK DAYS BEFORE YOU DIG  
 OR TOLL FREE (800) 242-8511  
 HEARING IMPAIRED TDD (800) 542-2289  
 WWW.DIGGERHOTLINE.COM

SUMMARY OF QUANTITIES

CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL
204.0155	REMOVING CONCRETE SIDEWALK	SQ YD	224
602.0410	CONCRETE SIDEWALK 5-INCH	SQ FT	1916
619.1000	MOBILIZATION	EACH	1
643.0100	TRAFFIC CONTROL	EACH	1
652.0605	PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	1606
SPV.0060.001	STATIC GUIDE SIGN, 4-PANEL	EACH	8
SPV.0060.002	STATIC GUIDE SIGN, 4-PANEL DOUBLE SIDED	EACH	1
SPV.0060.003	DYNAMIC GUIDE SIGN, 3-PANEL	EACH	9
SPV.0060.004	SIGN PANEL, 24" X 30"	EACH	20
SPV.0060.005	ELECTRICAL VAULT, 13" x 24" x 18"	EACH	9
SPV.0060.006	TANDEM CIRCUIT BREAKER, 120V, 15/20 AMP, FURNISH ONLY	EACH	9
SPV.0060.007	COMMUNICATION EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	9
SPV.0060.008	REMOVE AND REPLACE EXISTING FORM	EACH	7
SPV.0090.001	ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 10 GND	FOOT	2568
SPV.0060.010	CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	9
SPV.0060.011	CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	9
SPV.0060.012	SCANNET XML SCRIPT LICENSE	EACH	6
SPV.0060.013	INSTALL CONDUIT INTO EXISTING MANHOLE	EACH	4



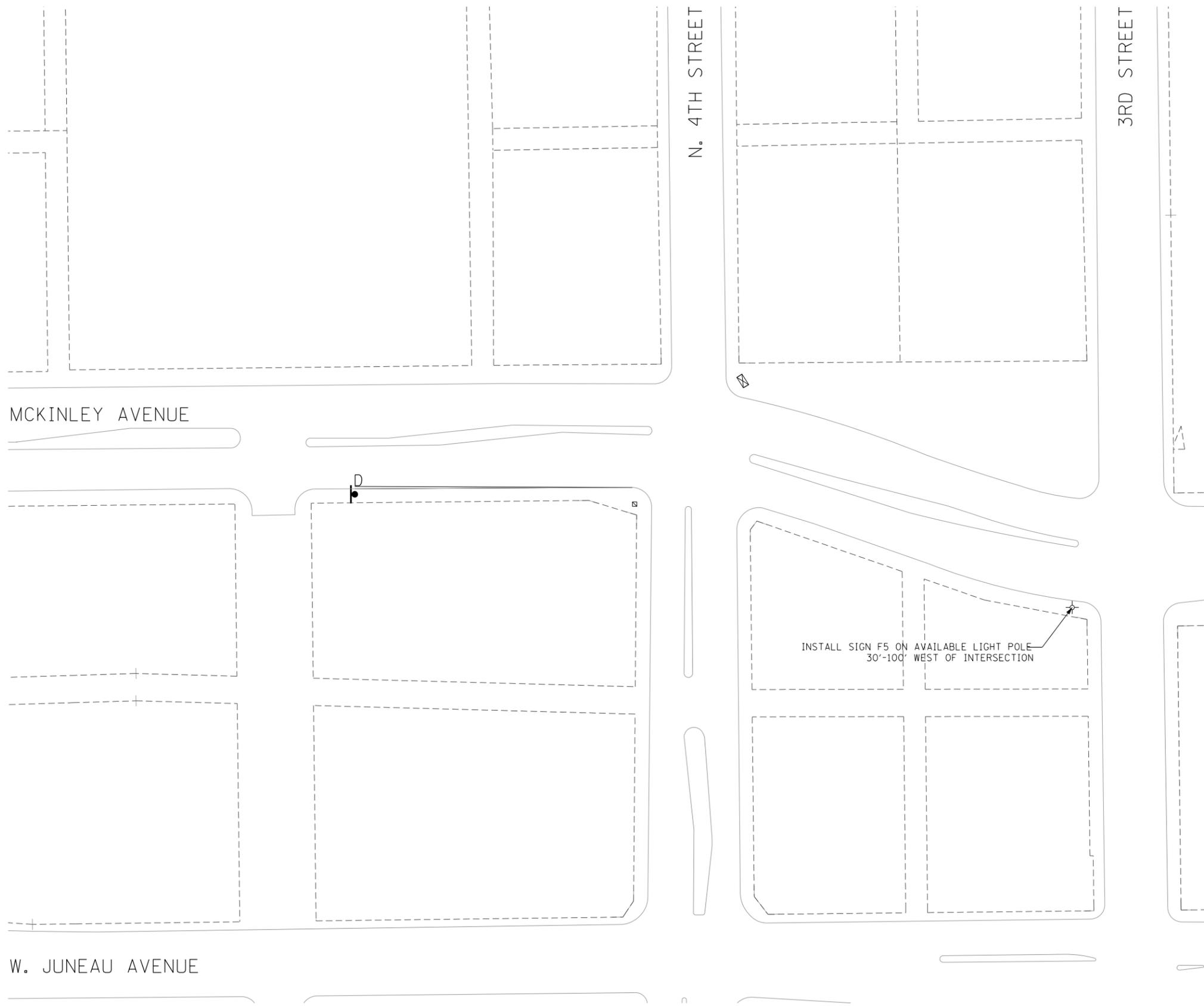


PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SO YD	4
CONCRETE SIDEWALK 5-INCH	SO FT	36
STATIC GUIDE SIGN, 4-PANEL	EACH	1
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1



LEGEND

EXISTING	PROPOSED	
	 S	STATIC GUIDE SIGN
	 D	DYNAMIC GUIDE SIGN
		ELECTRICAL VAULT
		CONDUIT, SIZE AND TYPE AS SPECIFIED
		TRAFFIC SIGNAL CABINET
		STREET LIGHT POLE
		R.O.W.

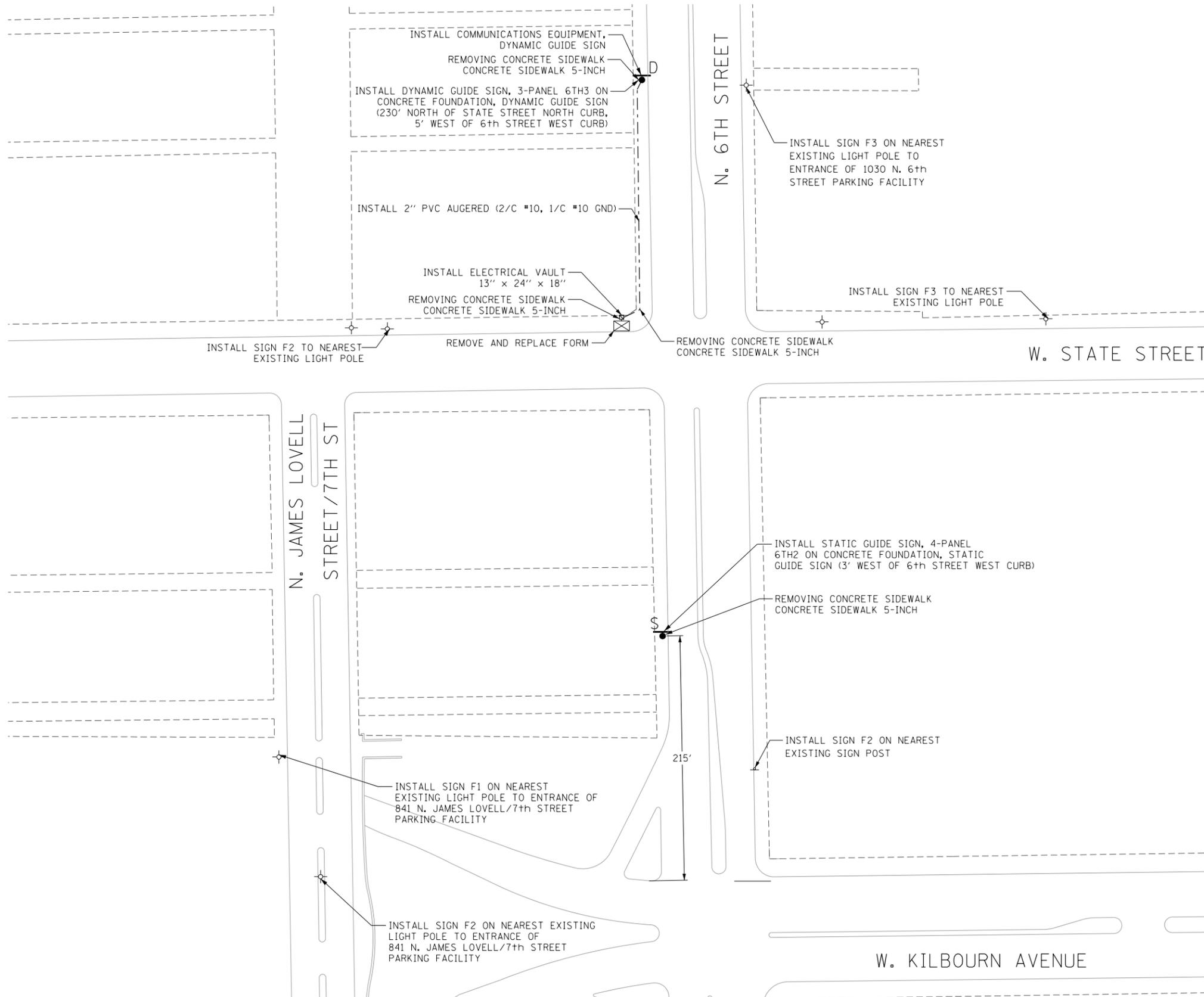


PAY ITEM	UNIT	QUANTITY
SIGN PANEL, 24" X 30"	EACH	1



LEGEND

EXISTING	PROPOSED	
	S	STATIC GUIDE SIGN
	D	DYNAMIC GUIDE SIGN
		ELECTRICAL VAULT
		CONDUIT, SIZE AND TYPE AS SPECIFIED
		TRAFFIC SIGNAL CABINET
		STREET LIGHT POLE
		R.O.W.



PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	28
CONCRETE SIDEWALK 5-INCH	SQ FT	252
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	230
STATIC GUIDE SIGN, 4-PANEL	EACH	1
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	1
SIGN PANEL, 24" x 30"	EACH	6
ELECTRICAL VAULT 13" x 24" x 18"	EACH	1
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMP, FURNISH ONLY	EACH	1
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	1
REMOVE AND REPLACE FORM	EACH	1
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 10 GND	FOOT	260
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	1



LEGEND

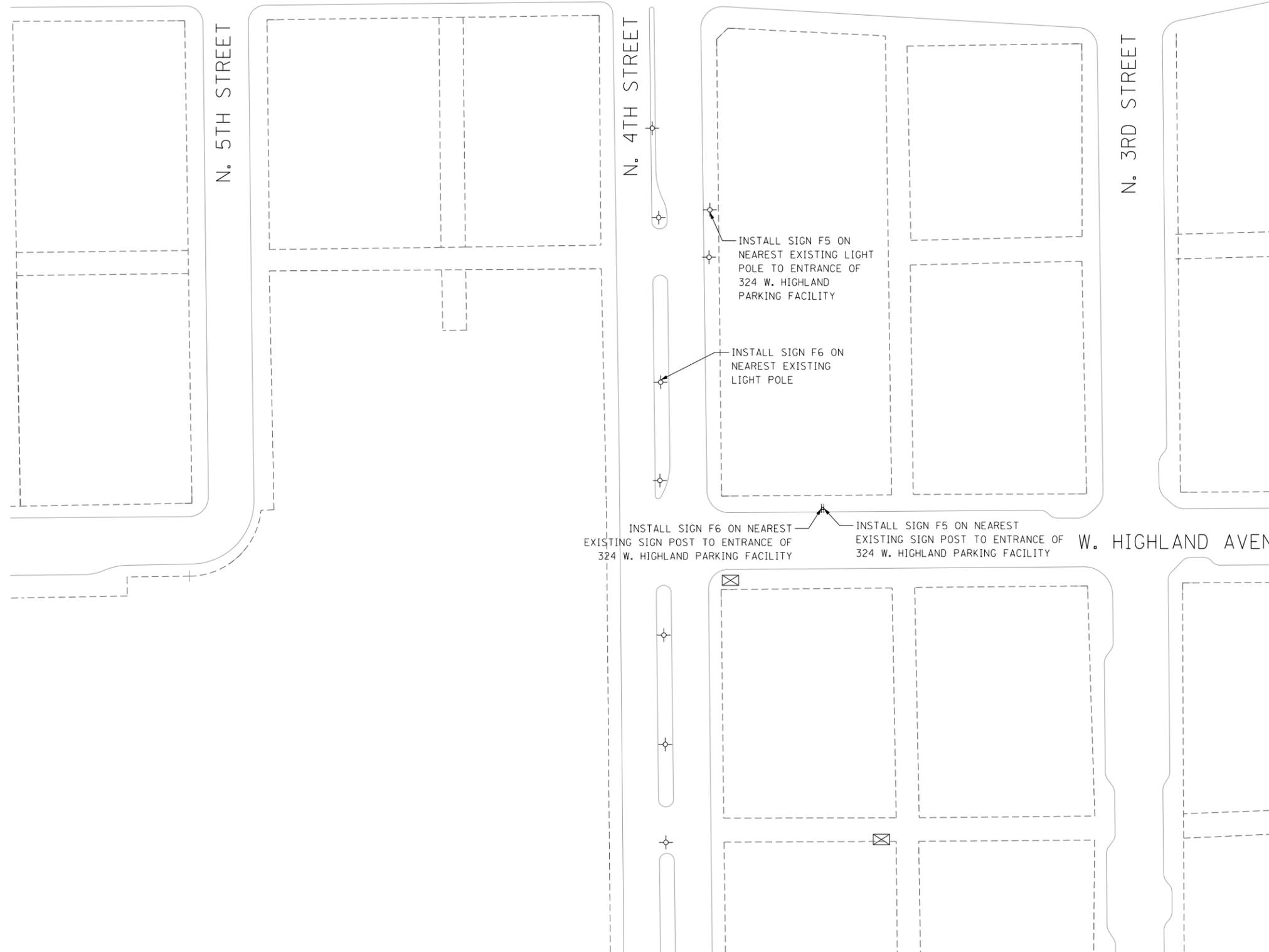
EXISTING	PROPOSED		
		—S	STATIC GUIDE SIGN
		—D	DYNAMIC GUIDE SIGN
		□	ELECTRICAL VAULT
		---	CONDUIT, SIZE AND TYPE AS SPECIFIED
		⊠	TRAFFIC SIGNAL CABINET
		⊙	STREET LIGHT POLE
		---	R.O.W.

W. JUNEAU AVENUE

N. 5TH STREET

N. 4TH STREET

N. 3RD STREET



INSTALL SIGN F5 ON NEAREST EXISTING LIGHT POLE TO ENTRANCE OF 324 W. HIGHLAND PARKING FACILITY

INSTALL SIGN F6 ON NEAREST EXISTING LIGHT POLE

INSTALL SIGN F6 ON NEAREST EXISTING SIGN POST TO ENTRANCE OF 324 W. HIGHLAND PARKING FACILITY

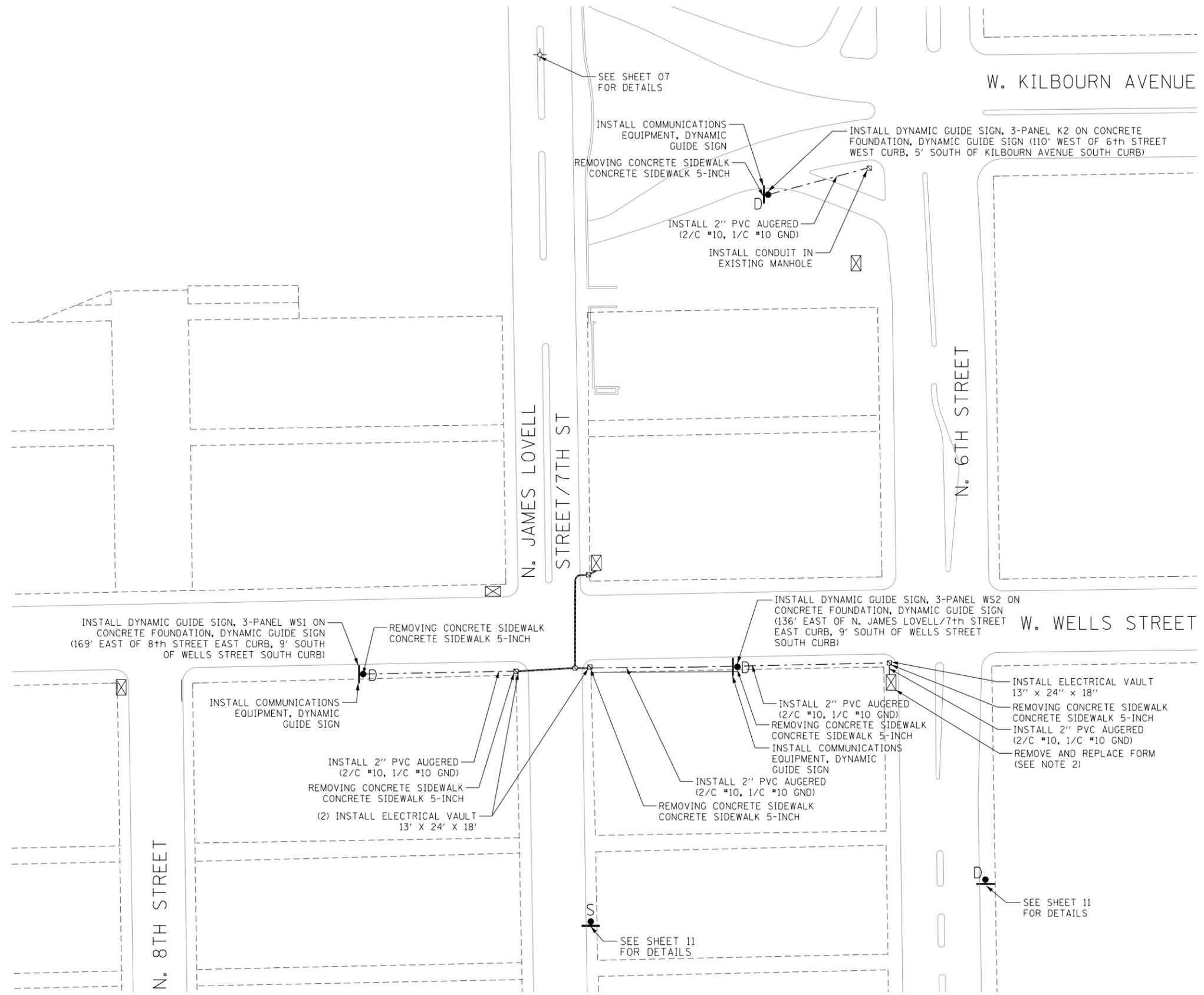
INSTALL SIGN F5 ON NEAREST EXISTING SIGN POST TO ENTRANCE OF 324 W. HIGHLAND PARKING FACILITY

PAY ITEM	UNIT	QUANTITY
SIGN PANEL, 24" x 30"	EACH	4



LEGEND

EXISTING	PROPOSED	
		STATIC GUIDE SIGN
		DYNAMIC GUIDE SIGN
		ELECTRICAL VAULT
		CONDUIT, SIZE AND TYPE AS SPECIFIED
		TRAFFIC SIGNAL CABINET
		STREET LIGHT POLE
		R.O.W.



NOTE:  
 1. CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS WILL ASSIST THE CONTRACTOR WITH THE PULLING OF CABLES THROUGH EXISTING CITY OWNED CONDUIT  
 2. EXISTING TRAFFIC SIGNAL CONTROLLER ON NORTHEAST CORNER OF JAMES LOVELL AND WELLS STREET ON STATE OF WISCONSIN PROPERTY. ALL NEW INFRASTRUCTURE INSTALLED AS PART OF THIS PROJECT SHALL BE INSTALLED ON CITY OF MILWAUKEE RIGHT OF WAY.

PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	60
CONCRETE SIDEWALK 5-INCH	SQ FT	540
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	520
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	3
ELECTRICAL VAULT 13" x 24" x 18"	EACH	3
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMPS, FURNISH ONLY	EACH	3
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	3
REMOVE AND REPLACE FORM	EACH	1
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 10 GND	FOOT	845
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	3
INSTALL CONDUIT IN EXISTING MANHOLE	EACH	1



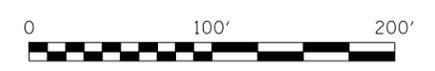
LEGEND

EXISTING	PROPOSED		
		—S	STATIC GUIDE SIGN
		—D	DYNAMIC GUIDE SIGN
		□	ELECTRICAL VAULT
		---	CONDUIT, SIZE AND TYPE AS SPECIFIED
		⊗	TRAFFIC SIGNAL CABINET
		○	STREET LIGHT POLE
		---	R.O.W.



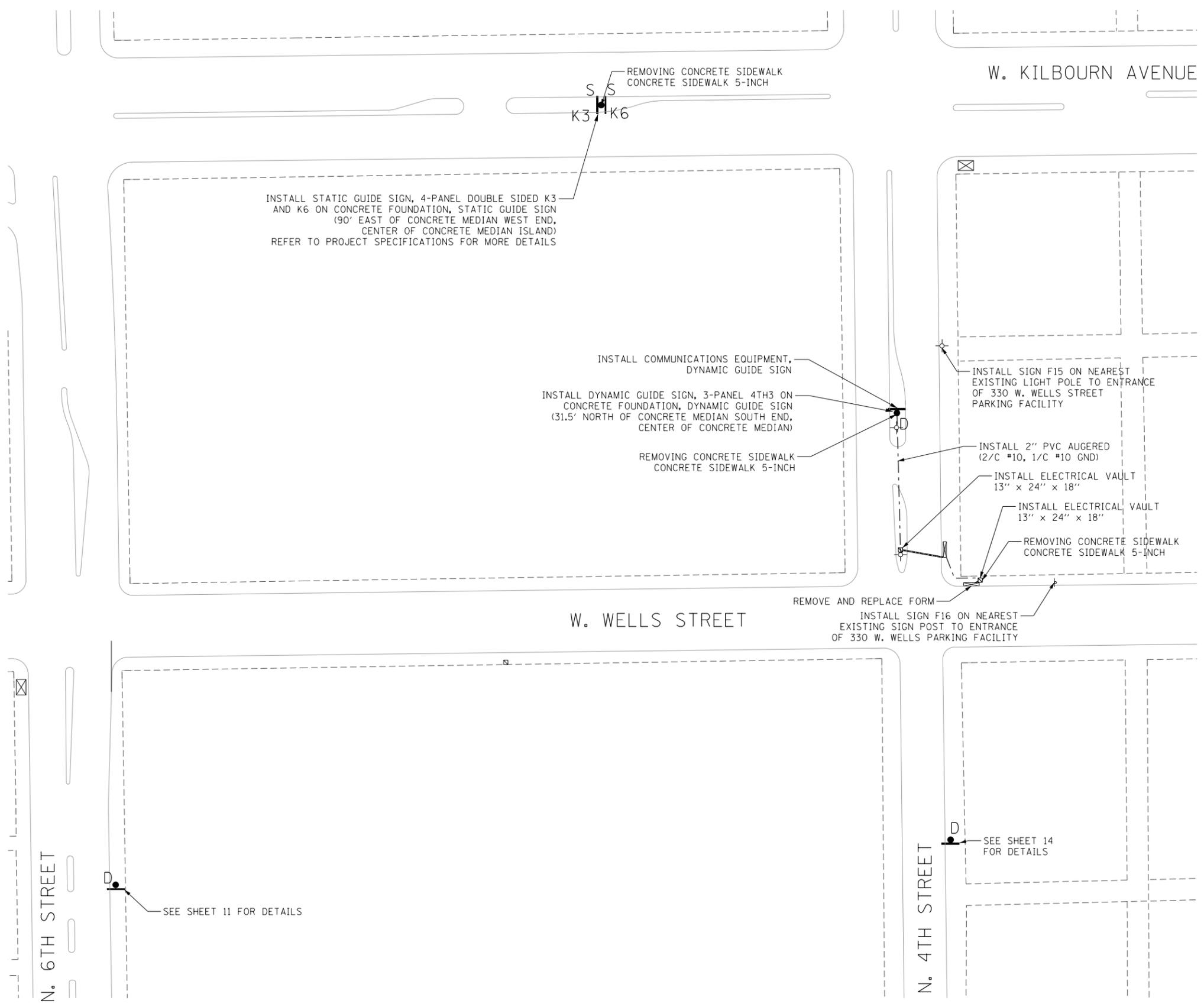
NOTE:  
CITY OF MILWAUKEE DEPARTMENT OF  
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EXISTING CITY OWNED CONDUIT

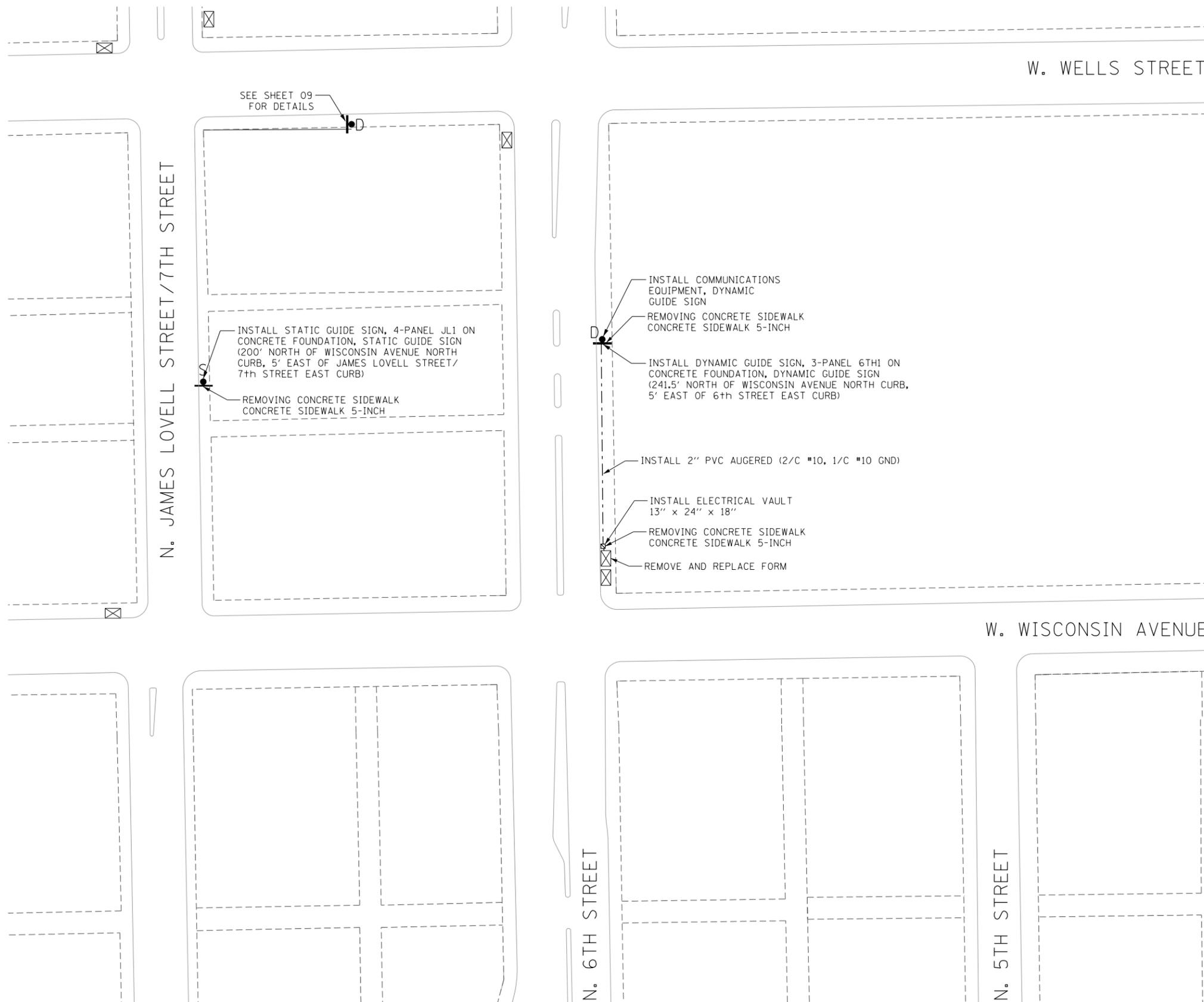
PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	28
CONCRETE SIDEWALK 5-INCH	SQ FT	152
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	186
STATIC GUIDE SIGN, 4-PANEL DOUBLE SIDED	EACH	1
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	1
SIGN PANEL, 24" x 30"	EACH	2
ELECTRICAL VAULT 13" x 24" x 18"	EACH	2
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMP, FURNISH ONLY	EACH	1
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	1
REMOVE AND REPLACE FORM	EACH	1
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 10 GND	FOOT	312
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	1



LEGEND

EXISTING	PROPOSED		
	—S	STATIC GUIDE SIGN	
	—D	DYNAMIC GUIDE SIGN	
	□	ELECTRICAL VAULT	
—	---	CONDUIT, SIZE AND TYPE AS SPECIFIED	
⊗		TRAFFIC SIGNAL CABINET	
⊙		STREET LIGHT POLE	
---		R.O.W.	





PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	32
CONCRETE SIDEWALK 5-INCH	SQ FT	288
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	170
STATIC GUIDE SIGN, 4-PANEL	EACH	1
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	1
ELECTRICAL VAULT 13" x 24" x 18"	EACH	1
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMPS, FURNISH ONLY	EACH	1
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	1
REMOVE AND REPLACE FORM	EACH	1
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 10 GND	FOOT	197
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	1

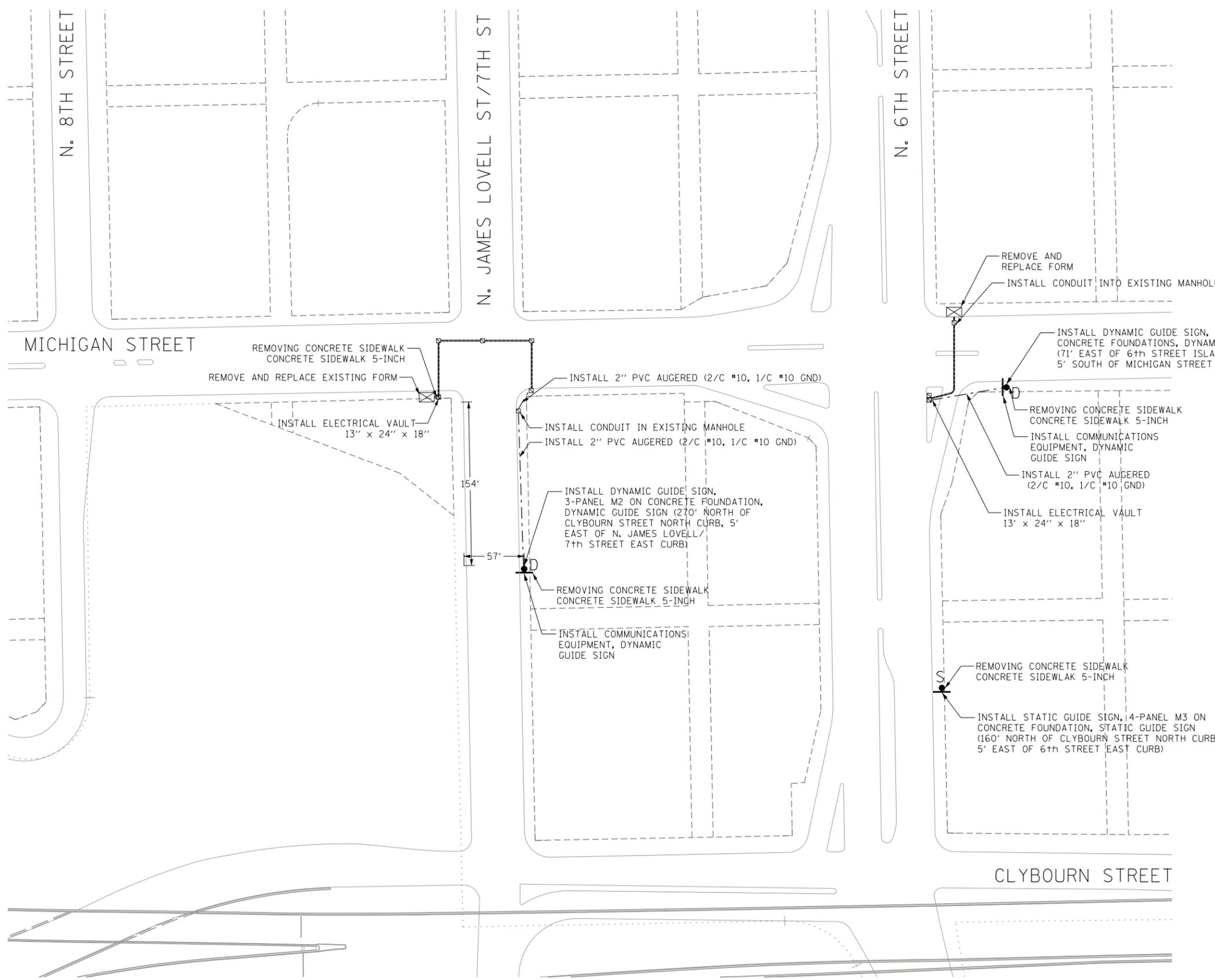


LEGEND

EXISTING	PROPOSED	
	■ S	STATIC GUIDE SIGN
	■ D	DYNAMIC GUIDE SIGN
□	□	ELECTRICAL VAULT
---	---	CONDUIT, SIZE AND TYPE AS SPECIFIED
⊗	⊗	TRAFFIC SIGNAL CABINET
○	○	STREET LIGHT POLE
---	---	R.O.W.



NOTE:  
CITY OF MILWAUKEE DEPARTMENT OF  
PUBLIC WORKS WILL ASSIST THE CONTRACTOR  
WITH THE PULLING OF CABLES THROUGH  
EXISTING CITY OWNED CONDUIT

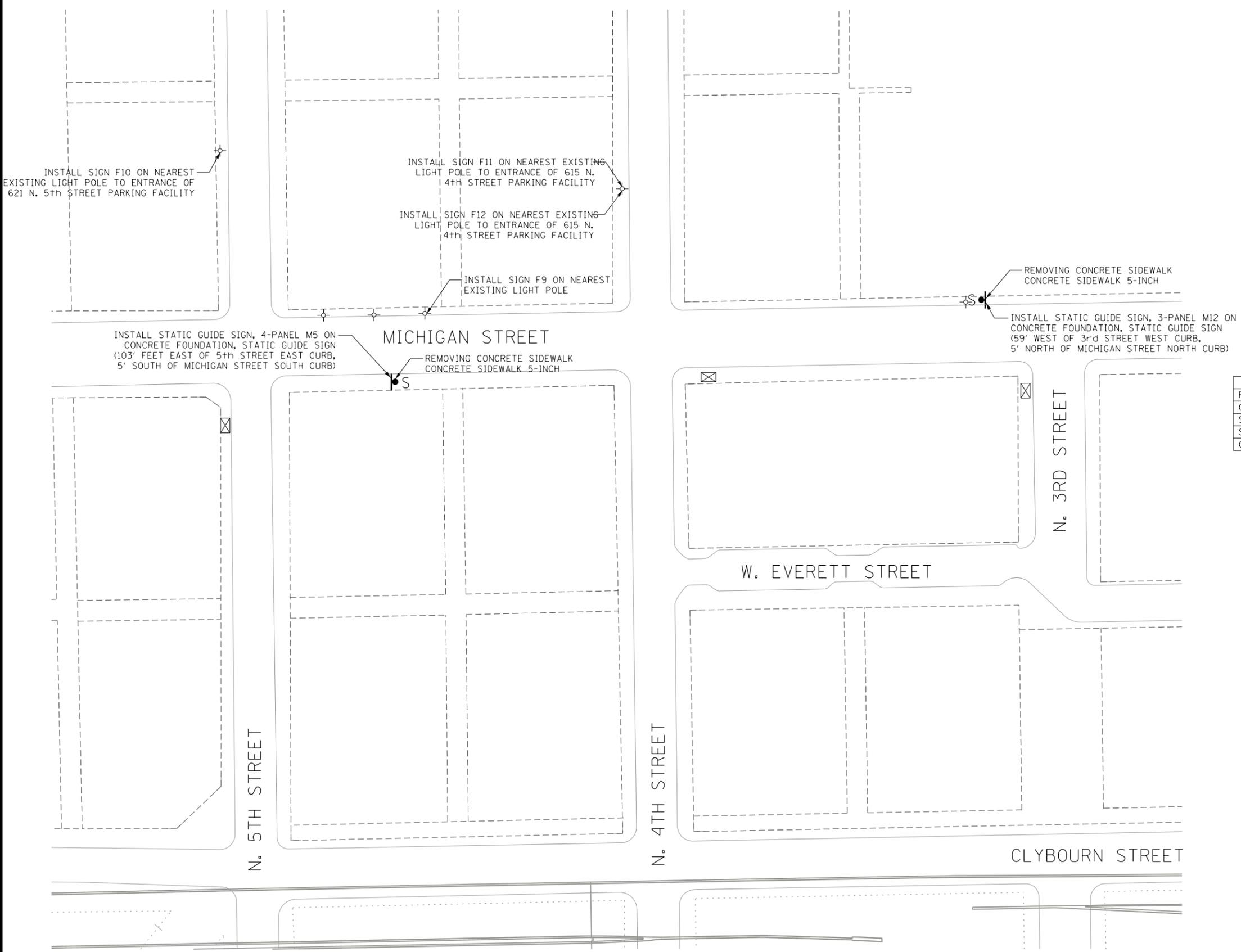


PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	44
CONCRETE SIDEWALK 5-INCH	SQ FT	396
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	225
STATIC GUIDE SIGN, 4-PANEL	EACH	1
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	2
ELECTRICAL VAULT 13" x 24" x 18"	EACH	2
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMP, FURNISH ONLY	EACH	2
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	2
REMOVE AND REPLACE FORM	EACH	2
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO 10 GND	FOOT	649
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	2
INSTALL CONDUIT IN EXISTING MANHOLE	EACH	2



LEGEND

EXISTING	PROPOSED		
	—S	STATIC GUIDE SIGN	
	—D	DYNAMIC GUIDE SIGN	
	□	ELECTRICAL VAULT	
	---	CONDUIT, SIZE AND TYPE AS SPECIFIED	
	⊗	TRAFFIC SIGNAL CABINET	
	○	STREET LIGHT POLE	
	---	R.O.W.	

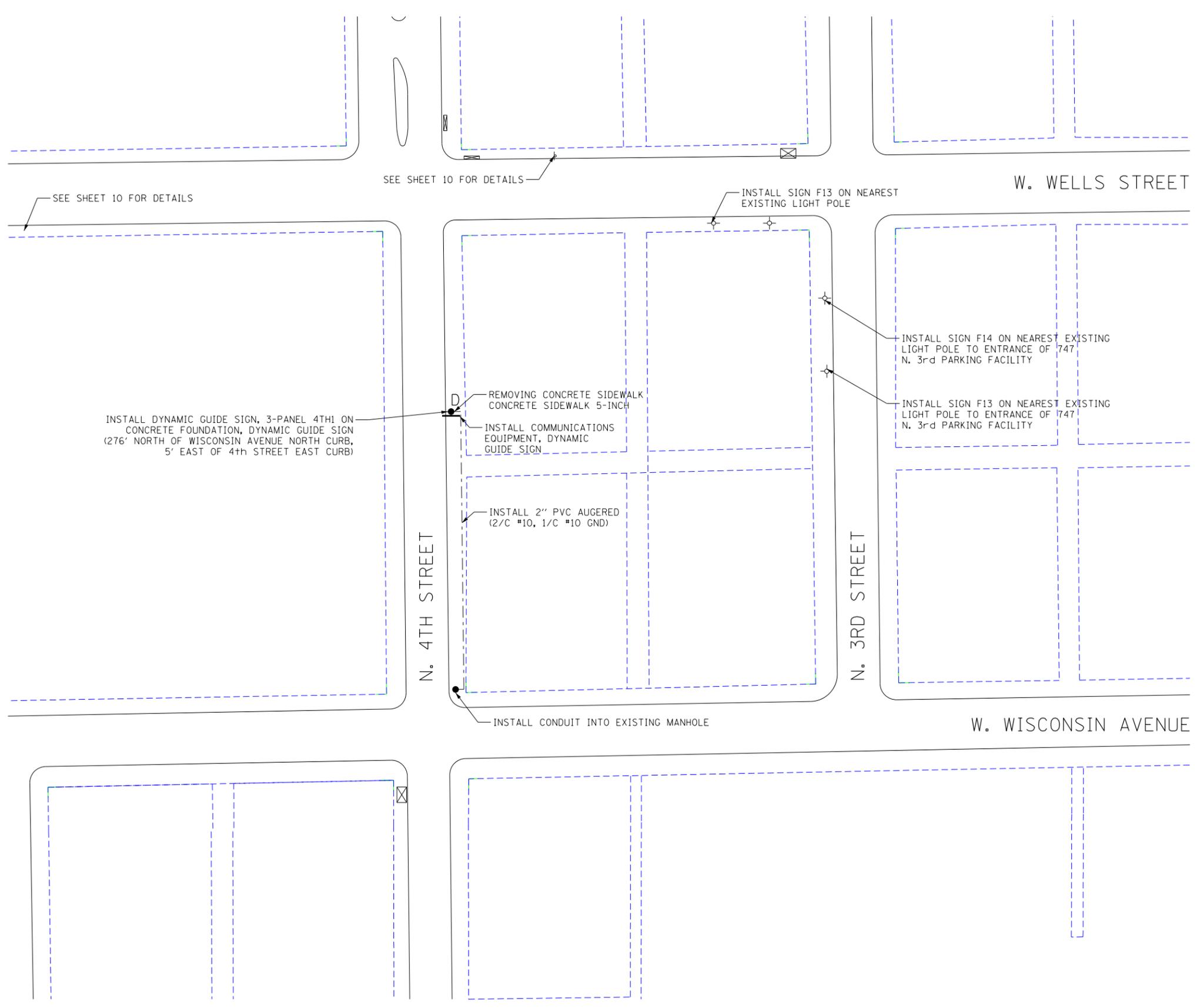


PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	8
CONCRETE SIDEWALK 5-INCH	SQ FT	72
STATIC GUIDE SIGN, 4-PANEL	EACH	2
SIGN PANEL, 24" x 30"	EACH	4
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	2



LEGEND

EXISTING	PROPOSED		
	—S	STATIC GUIDE SIGN	
	—D	DYNAMIC GUIDE SIGN	
□	□	ELECTRICAL VAULT	
—	---	CONDUIT, SIZE AND TYPE AS SPECIFIED	
⊠		TRAFFIC SIGNAL CABINET	
⊙		STREET LIGHT POLE	
---		R.O.W.	



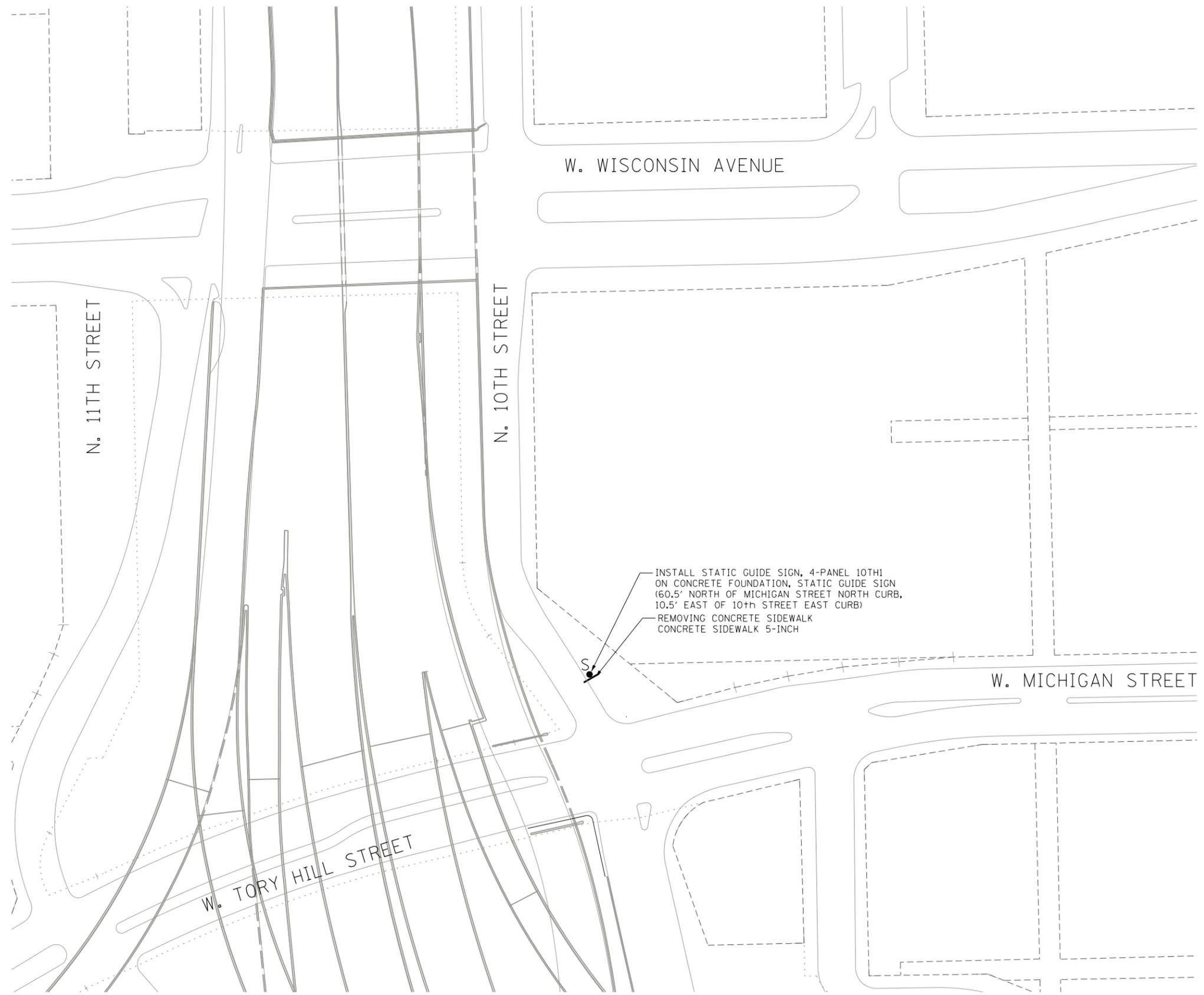
NOTE:  
 CITY OF MILWAUKEE DEPARTMENT OF  
 PUBLIC WORKS WILL ASSIST THE CONTRACTOR  
 WITH THE PULLING OF CABLES THROUGH  
 EXISTING CITY OWNED CONDUIT

PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	20
CONCRETE SIDEWALK 5-INCH	SQ FT	180
PVC SCHEDULE 80 CONDUIT AUGERED, 2-INCH	FOOT	275
DYNAMIC GUIDE SIGN, 3-PANEL	EACH	1
SIGN PANEL, 24" x 30"	EACH	3
TANDEM CIRCUIT BREAKER, 120V, 15/20 AMPS, FURNISH ONLY	EACH	1
COMMUNICATIONS EQUIPMENT, DYNAMIC GUIDE SIGN	EACH	1
REMOVE AND REPLACE FORM	EACH	1
ELECTRIC CABLE IN CONDUIT, 2/C NO. 10, 1/C NO. 1 GND	FOOT	305
CONCRETE FOUNDATION, DYNAMIC GUIDE SIGN	EACH	1
INSTALL CONDUIT INTO EXISTING MANHOLE	EACH	1



LEGEND

EXISTING	PROPOSED	
	—S	STATIC GUIDE SIGN
	—D	DYNAMIC GUIDE SIGN
□	□	ELECTRICAL VAULT
—	---	CONDUIT, SIZE AND TYPE AS SPECIFIED
⊗		TRAFFIC SIGNAL CABINET
⊙		STREET LIGHT POLE
---		R.O.W.



PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	4
CONCRETE SIDEWALK 5-INCH	SQ FT	36
STATIC GUIDE SIGN, 4-PANEL	EACH	1
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1



LEGEND

EXISTING	PROPOSED	
		STATIC GUIDE SIGN
		DYNAMIC GUIDE SIGN
		ELECTRICAL VAULT
		CONDUIT, SIZE AND TYPE AS SPECIFIED
		TRAFFIC SIGNAL CABINET
		STREET LIGHT POLE
		R.O.W.

W. WELLS STREET

W. WISCONSIN AVENUE

N. 11TH STREET

N. 10TH STREET

INSTALL STATIC GUIDE SIGN, 4-PANEL 10TH2  
ON CONCRETE FOUNDATION, STATIC GUIDE SIGN  
(362' NORTH OF WISCONSIN AVENUE NORTH CURB,  
5' EAST OF 10th STREET EAST CURB)

REMOVING CONCRETE SIDEWALK  
CONCRETE SIDEWALK 5-INCH

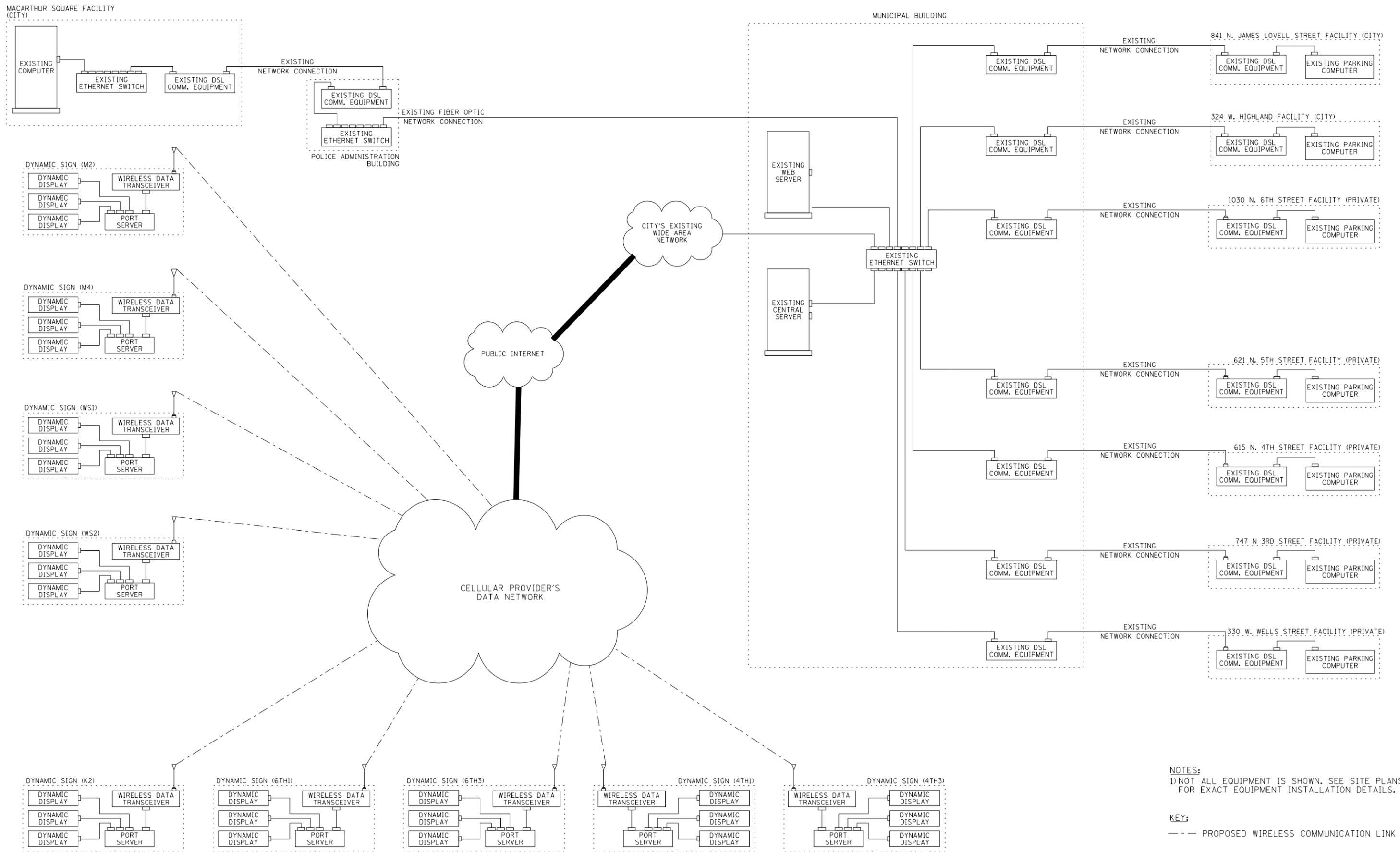


PAY ITEM	UNIT	QUANTITY
REMOVING CONCRETE SIDEWALK	SQ YD	4
CONCRETE SIDEWALK 5-INCH	SQ FT	36
STATIC GUIDE SIGN, 4-PANEL	EACH	1
CONCRETE FOUNDATION, STATIC GUIDE SIGN	EACH	1



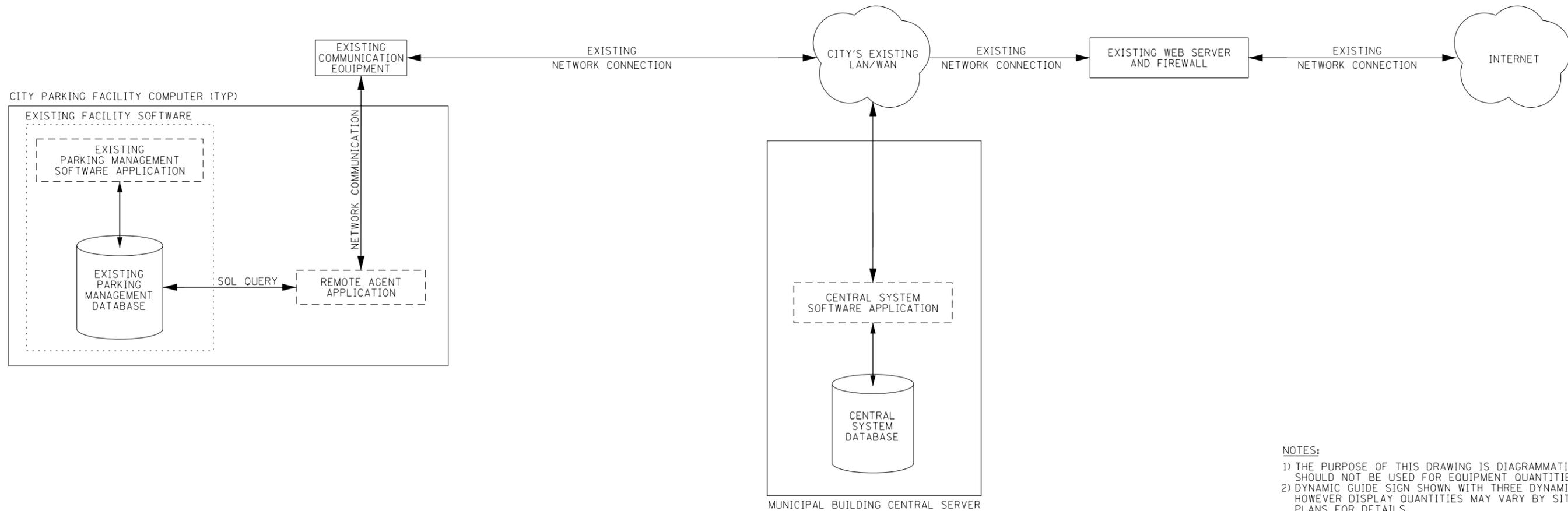
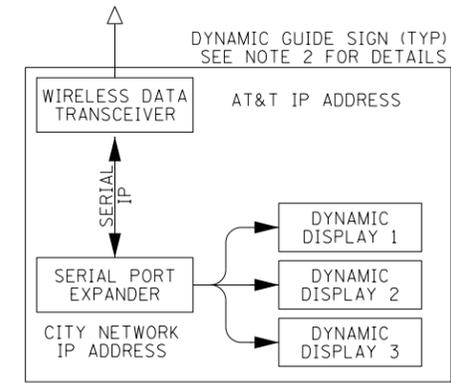
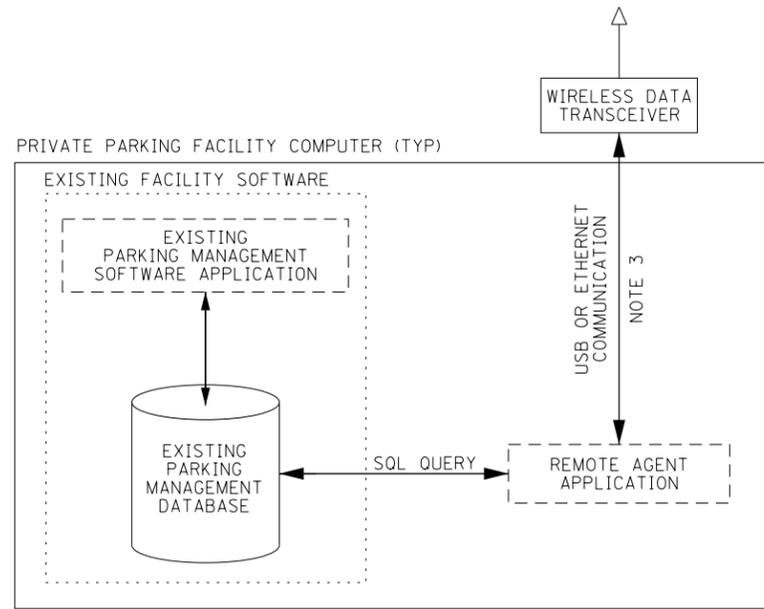
LEGEND

EXISTING	PROPOSED	
		STATIC GUIDE SIGN
		DYNAMIC GUIDE SIGN
		ELECTRICAL VAULT
		CONDUIT, SIZE AND TYPE AS SPECIFIED
		TRAFFIC SIGNAL CABINET
		STREET LIGHT POLE
		R.O.W.



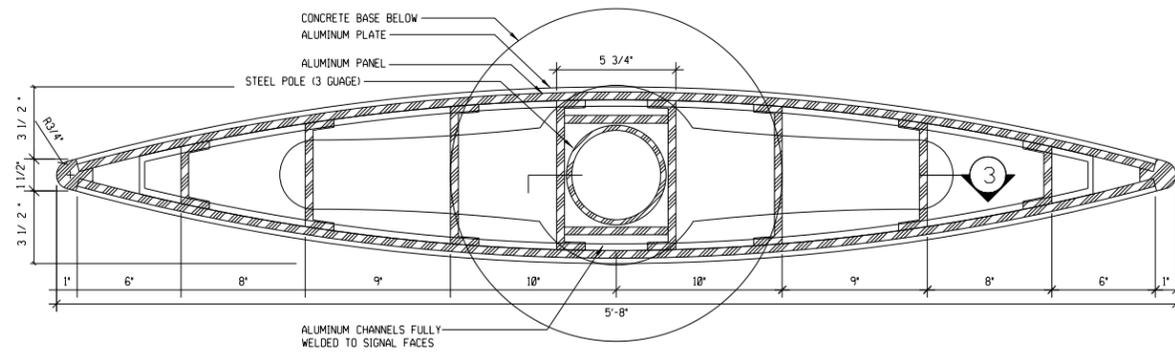
**NOTES:**  
 1) NOT ALL EQUIPMENT IS SHOWN. SEE SITE PLANS FOR EXACT EQUIPMENT INSTALLATION DETAILS.

**KEY:**  
 - - - PROPOSED WIRELESS COMMUNICATION LINK

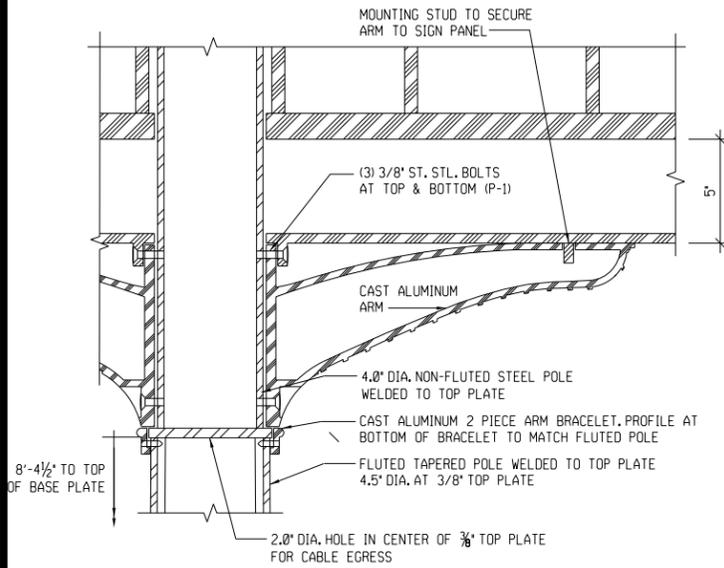


- NOTES:
- 1) THE PURPOSE OF THIS DRAWING IS DIAGRAMMATIC AND SHOULD NOT BE USED FOR EQUIPMENT QUANTITIES.
  - 2) DYNAMIC GUIDE SIGN SHOWN WITH THREE DYNAMIC DISPLAYS, HOWEVER DISPLAY QUANTITIES MAY VARY BY SITE. SEE SITE PLANS FOR DETAILS.
  - 3) FOR ETHERNET CONNECTION, CROSSOVER CABLE MAY BE REQUIRED

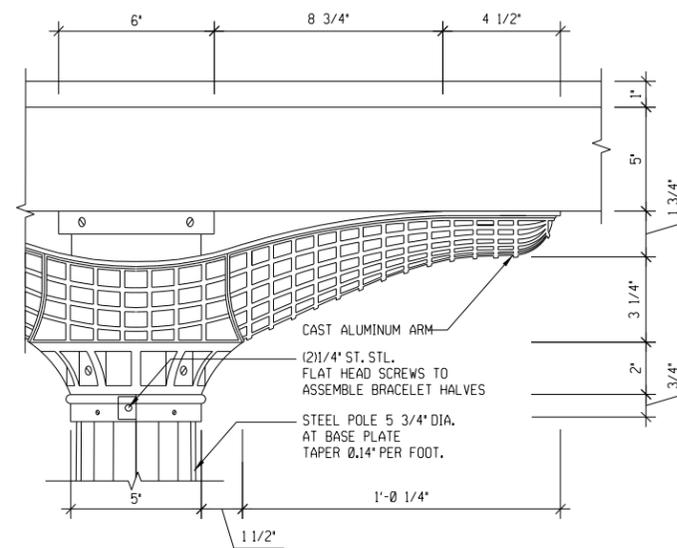
SYSTEM MODEL  
NOT TO SCALE



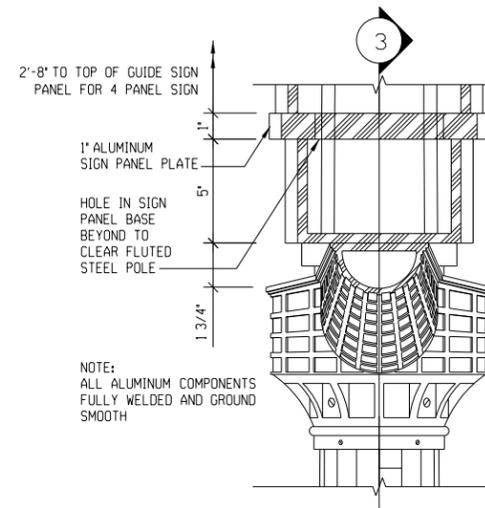
DETAIL 2  
PLAN - SIGN PANEL



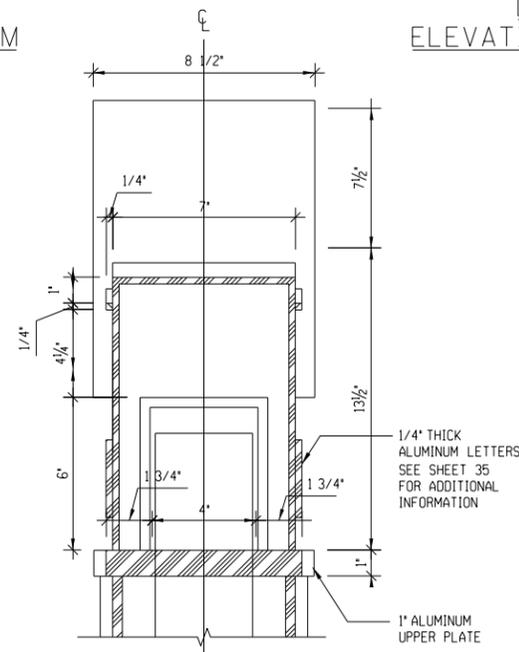
DETAIL 3  
SECTION - SIGN ARM



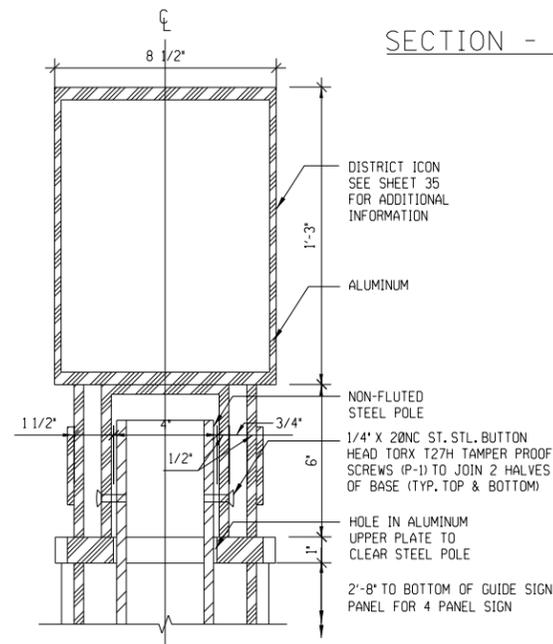
DETAIL 4  
ELEVATION - SIGN ARM



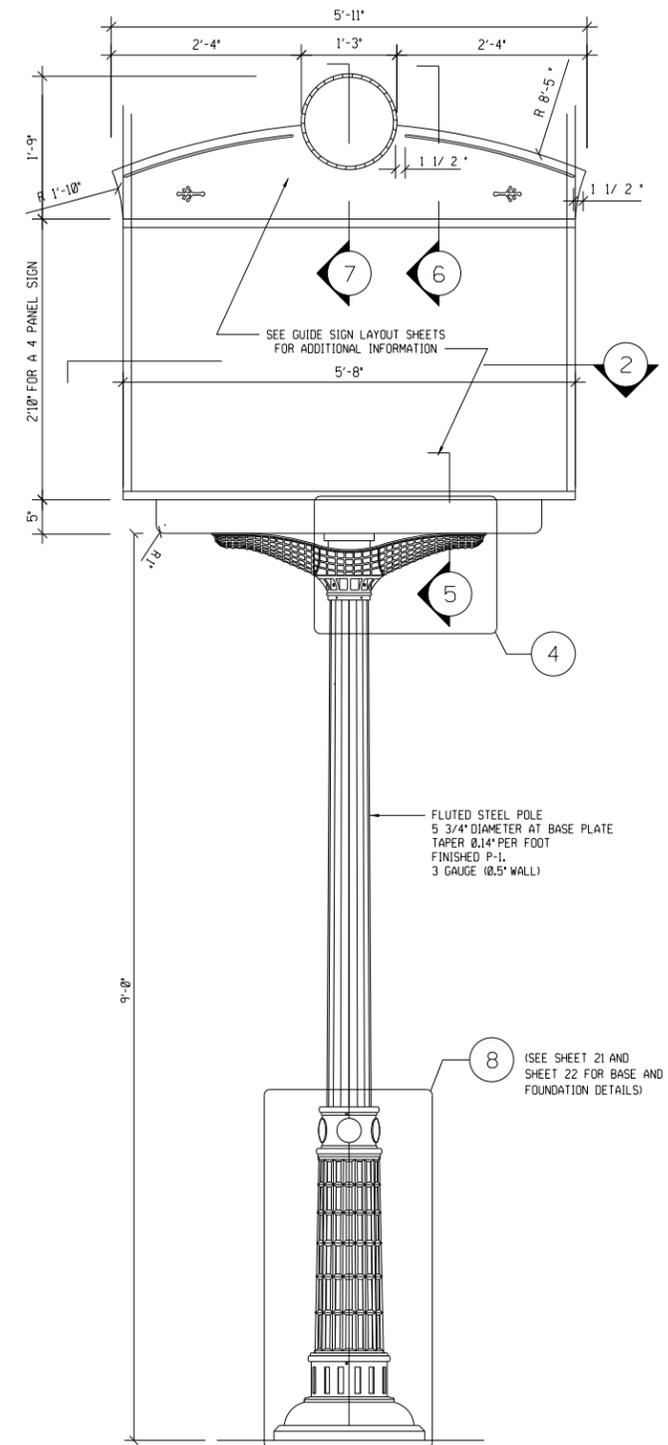
DETAIL 5  
SECTION - SIGN ARM AND PANEL



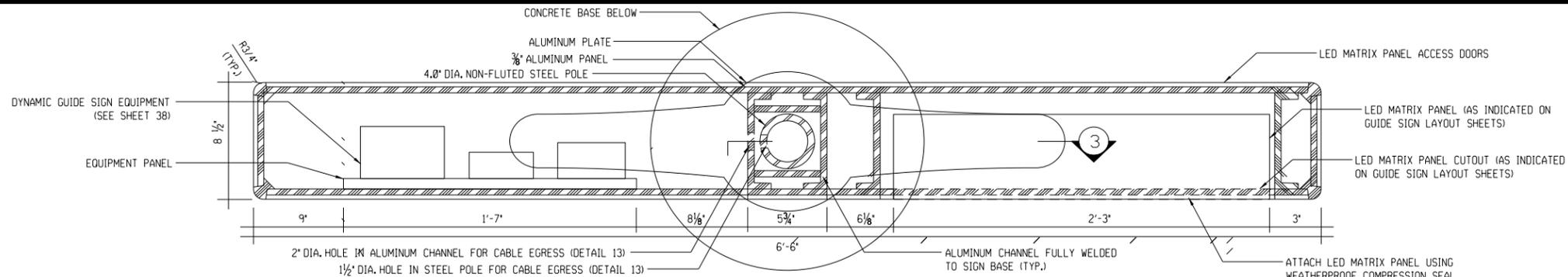
DETAIL 6  
SECTION - SIGN PANEL



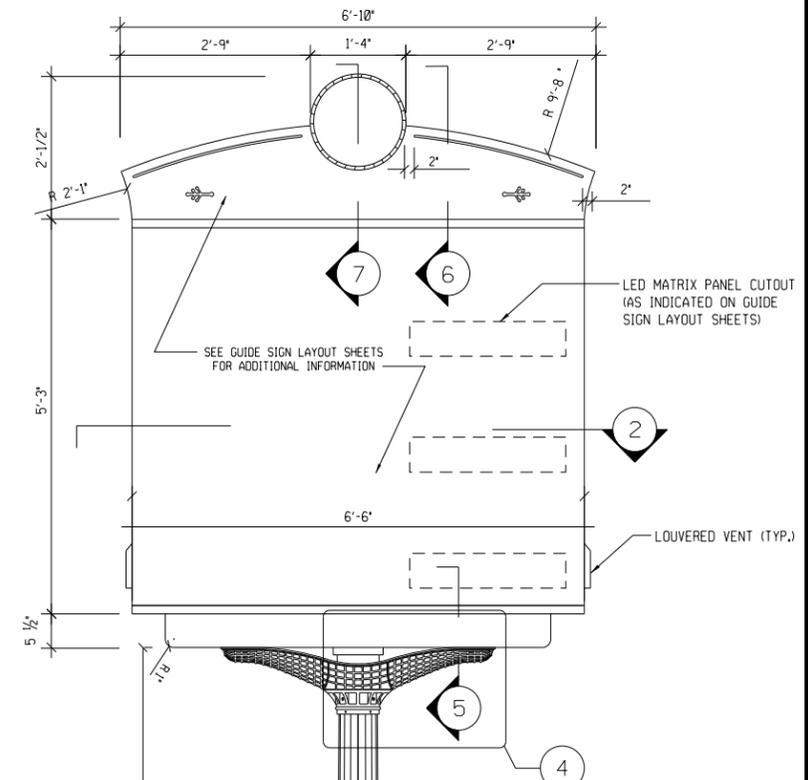
DETAIL 7  
SECTION - SIGN PANEL



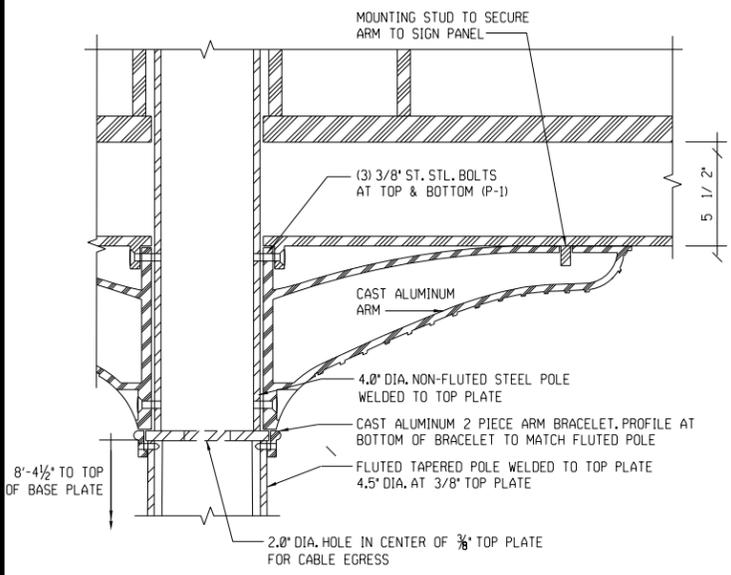
DETAIL 1  
ELEVATION - GUIDE SIGN



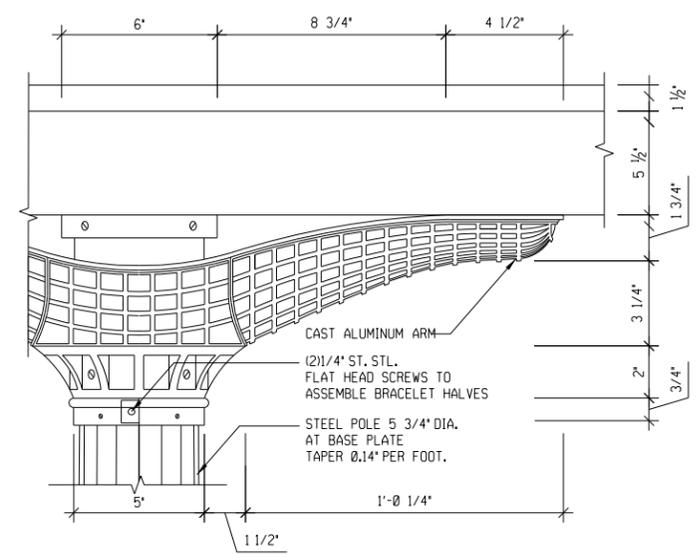
DETAIL 2  
PLAN - SIGN PANEL



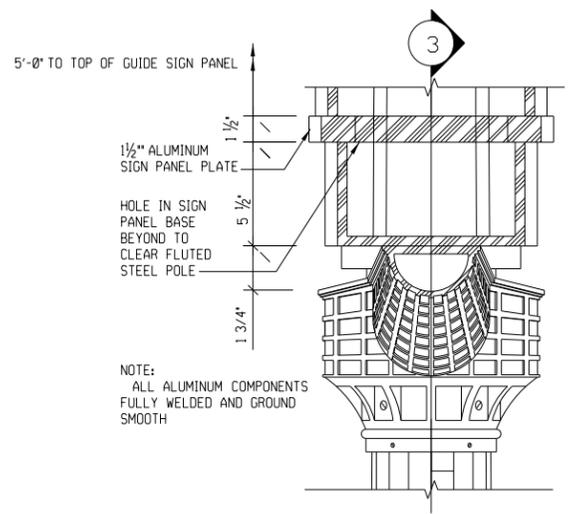
DETAIL 1  
ELEVATION - GUIDE SIGN



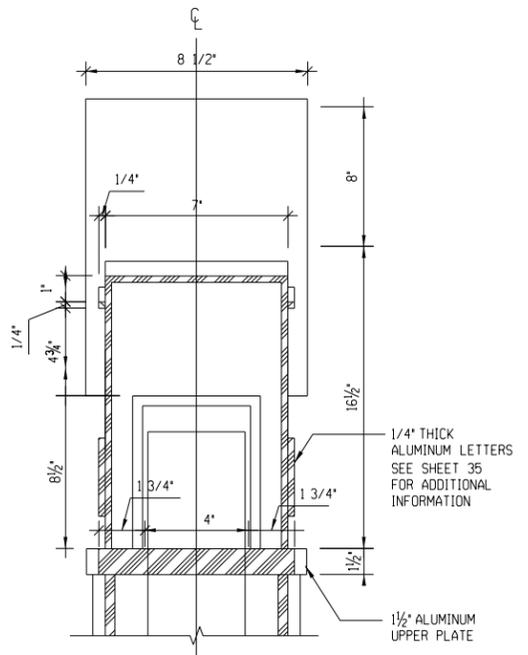
DETAIL 3  
SECTION - SIGN ARM



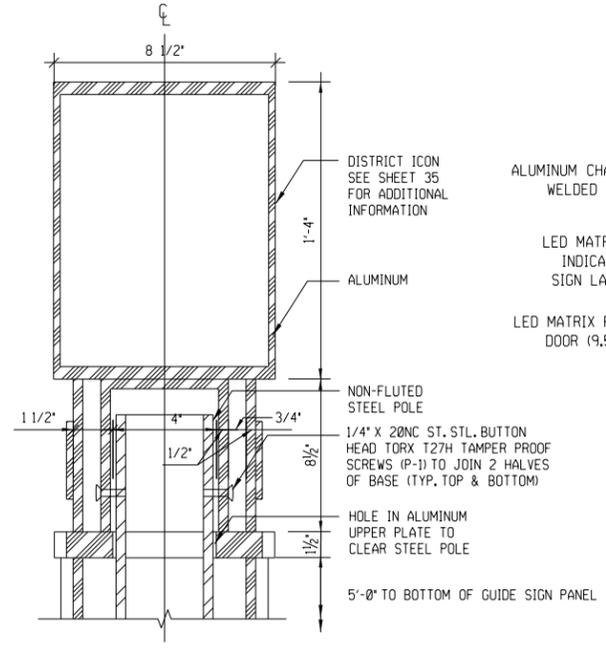
DETAIL 4  
ELEVATION - SIGN ARM



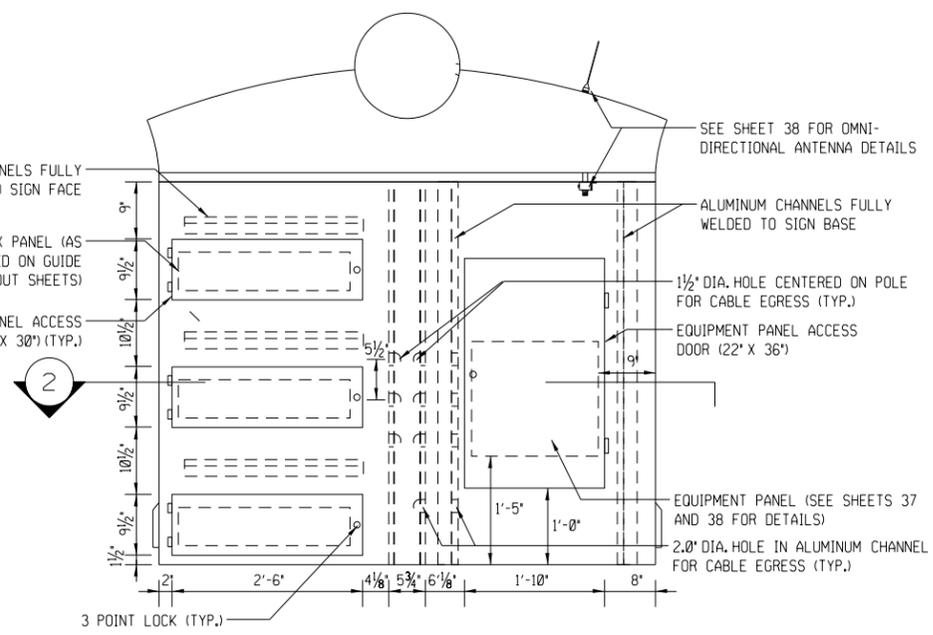
DETAIL 5  
SECTION - SIGN ARM AND PANEL



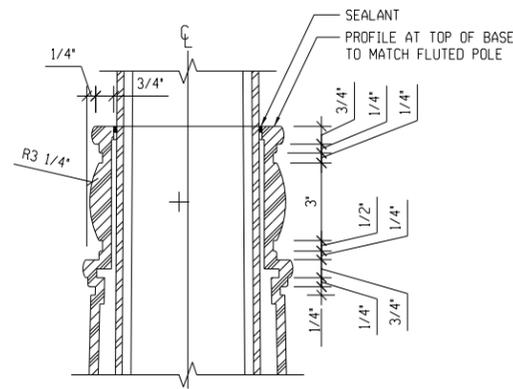
DETAIL 6  
SECTION - SIGN PANEL



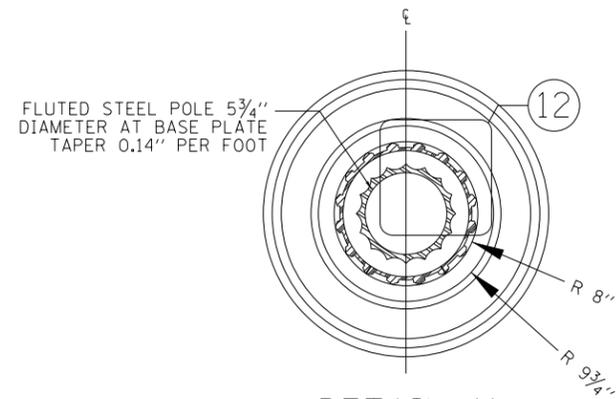
DETAIL 7  
SECTION - SIGN PANEL



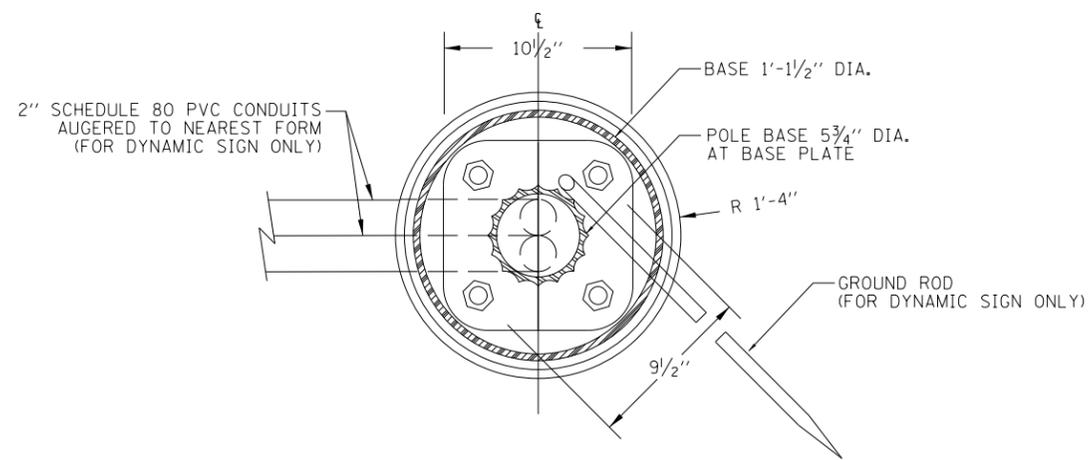
DETAIL 13  
ELEVATION - SIGN PANEL (REAR)



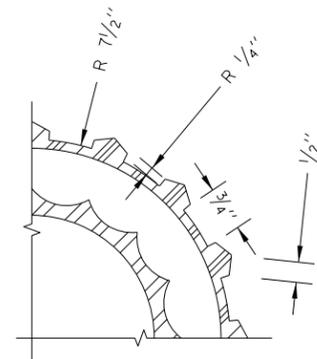
DETAIL 9  
SECTION - SIGN BASE



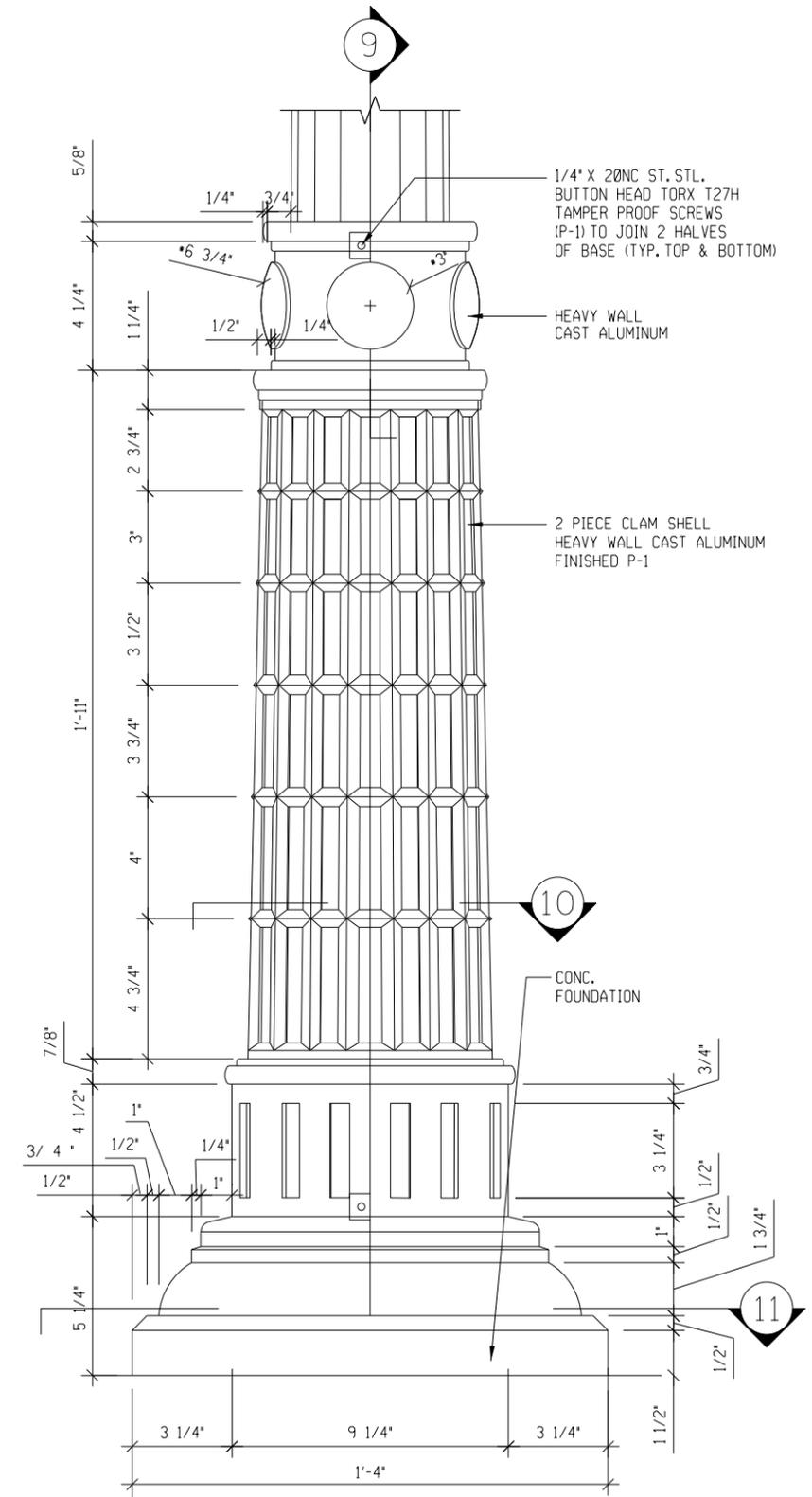
DETAIL 11  
PLAN - SIGN BASE



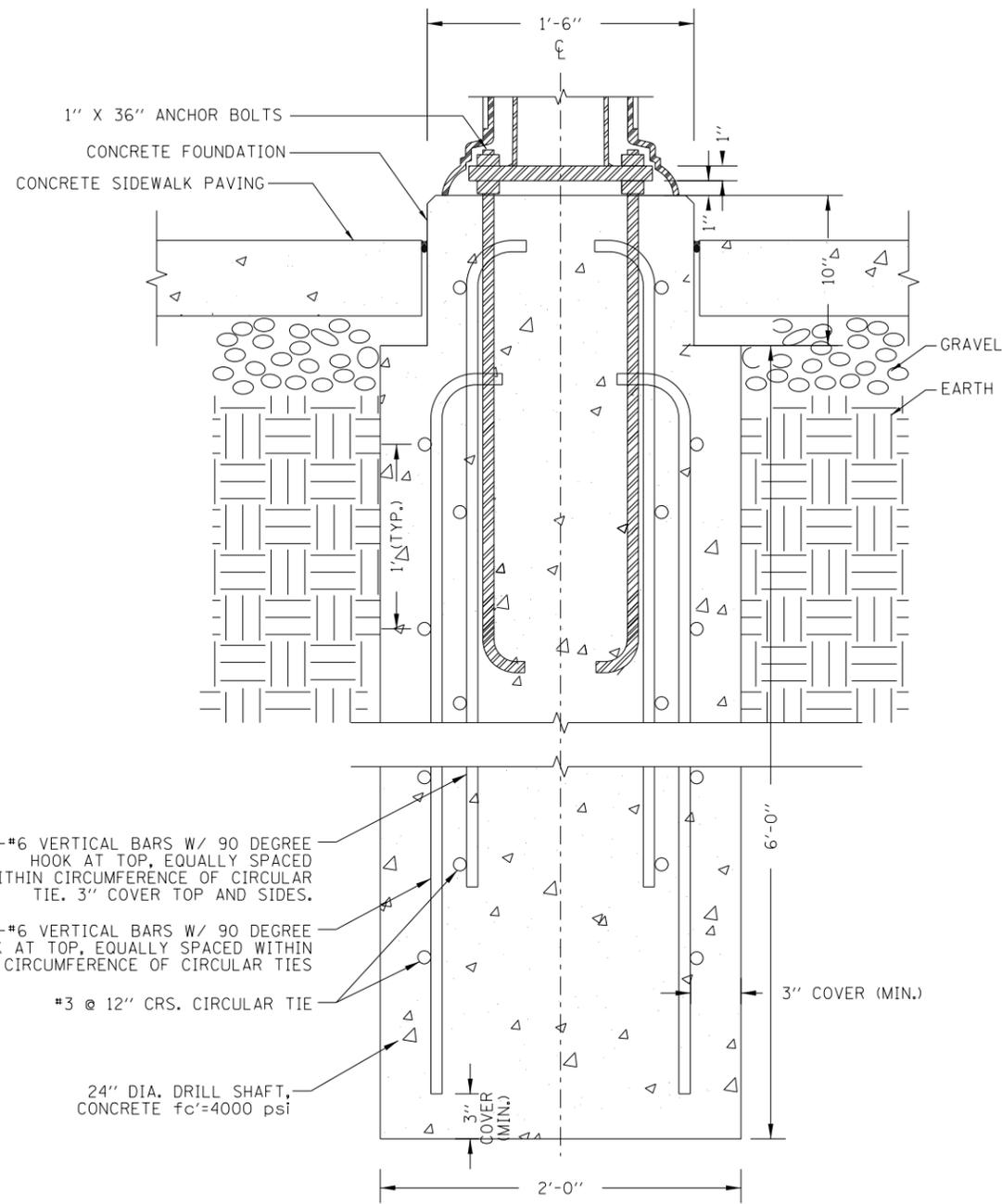
DETAIL 10  
PLAN - SIGN BASE



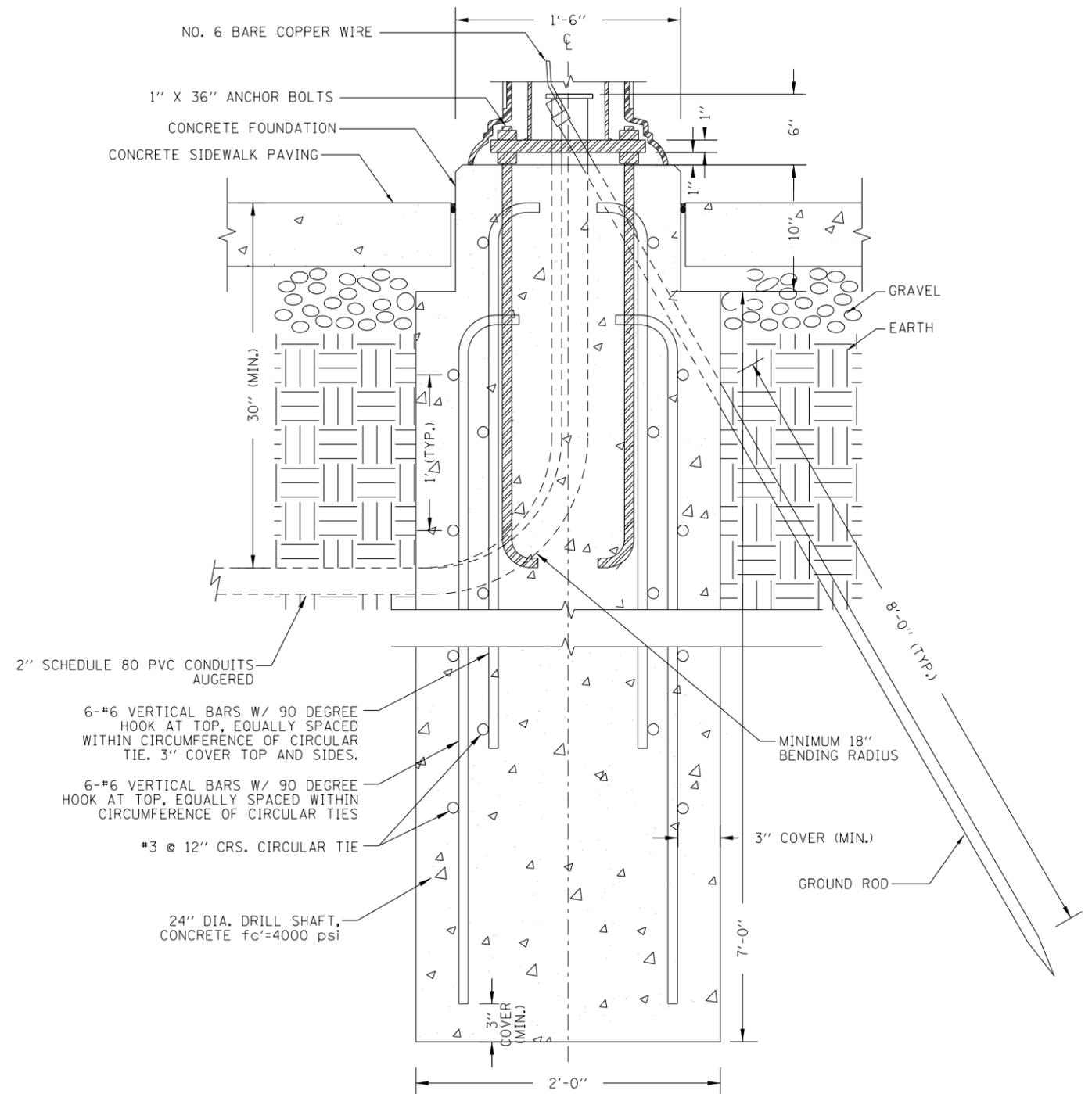
DETAIL 12  
PLAN - SIGN BASE



DETAIL 8  
ELEVATION - SIGN BASE



CONCRETE FOUNDATION DETAIL  
(STATIC GUIDE SIGN)



CONCRETE FOUNDATION DETAIL  
(DYNAMIC GUIDE SIGN)











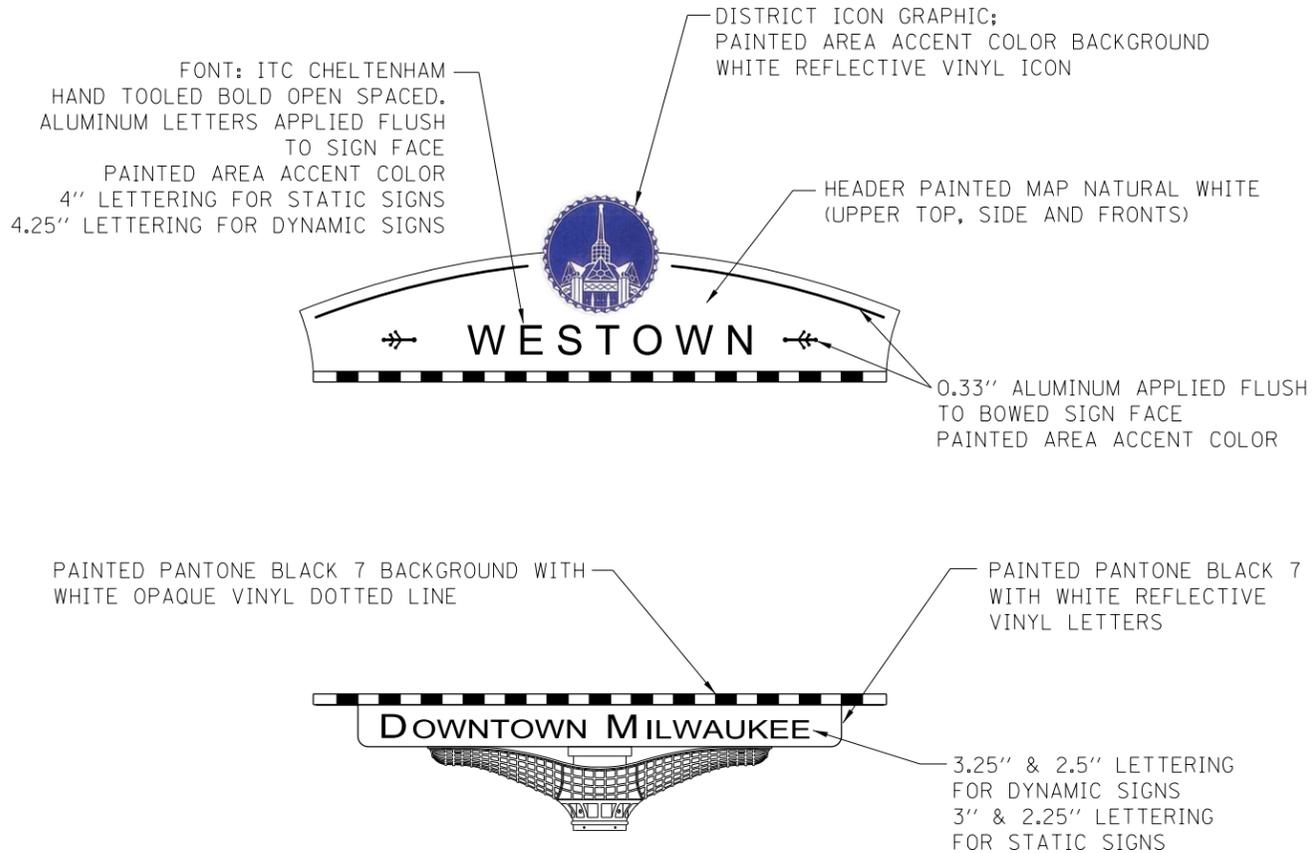




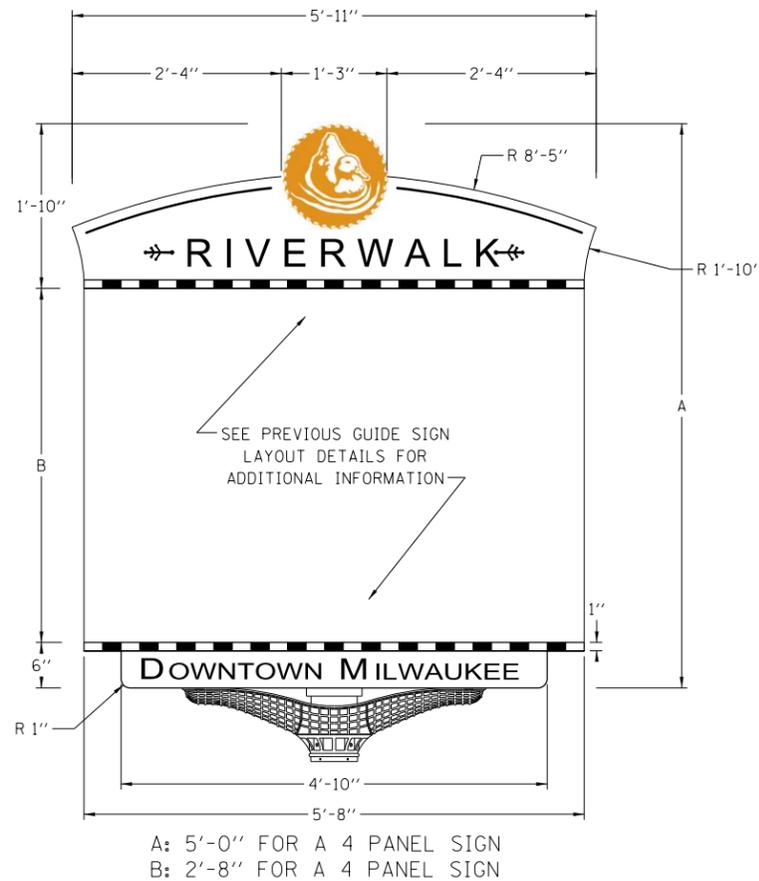




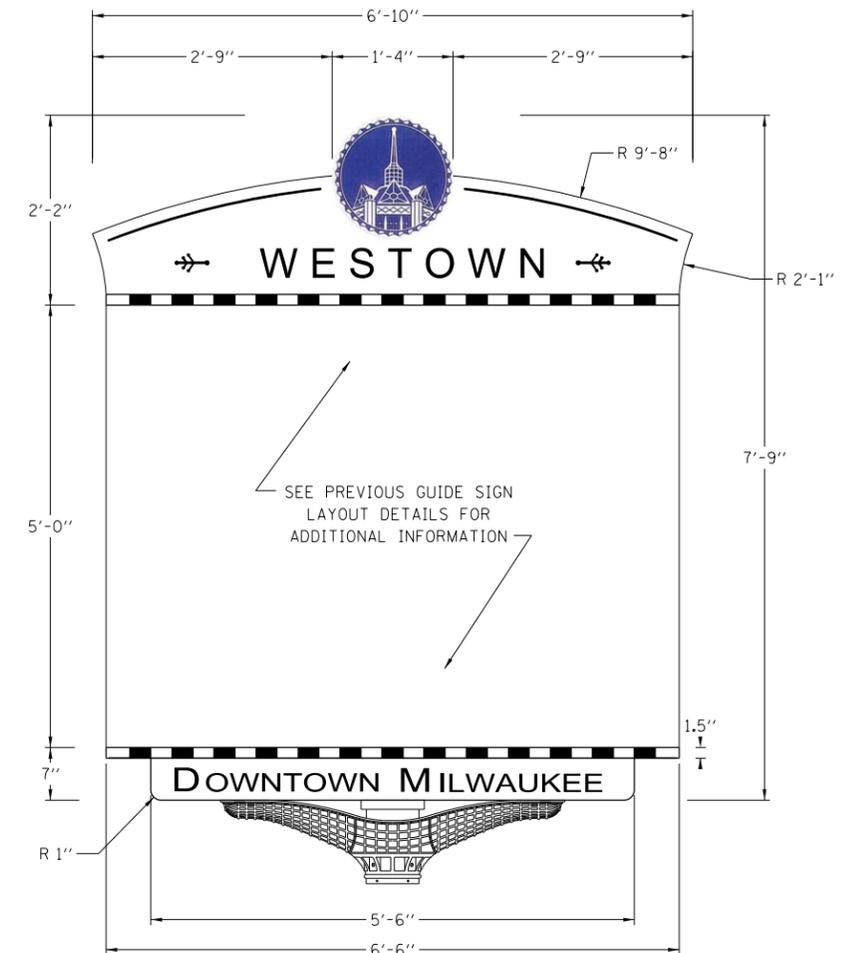
## DIRECTIONAL SIGN CROWN AND FOOTER



## STATIC SIGN



## DYNAMIC SIGN



## COLOR STANDARDS

THE CONTRACTOR IS RESPONSIBLE FOR MATCHING ALL COLORS TO THE COLOR SPECIFICATIONS LISTED BELOW. ACTUAL PANTONE (COATED) CHIPS CORRESPONDING TO THE NUMBERS BELOW SHOULD BE USED TO REQUEST CUSTOM MATCH PAINTS. ACTUAL COLOR FINISHED ON SIGNAGE ARE TO BE MATTE OR LOW LUSTER (NOT SHINY OR GLOSSY) AND EXCLUSIVELY A PREMIUM ACRYLIC POLY URETHANE.

PANTONE BLACK 7  
MAP BRUSHED ALUMINUM  
MAP NATURAL WHITE SATIN  
ENGINEER GRADE WHITE VINYL (7 YR)  
OPAQUE WHITE VINYL (7 YR)

### Area Accent Colors

WESTOWN: PANTONE 287 BLUE  
RIVERWALK: PANTONE 145 ORANGE  
EAST TOWN: RAL 3003 BURGUNDY RED  
THIRD WARD: PANTONE 555 GREEN  
LAKEFRONT: PANTONE 307 CYAN

## FONT STANDARDS

FONT SUBSTITUTIONS ARE NOT ACCEPTABLE.  
THE CONTRACTOR SHALL PURCHASE ALL FONTS AS SPECIFIED

FONT: CLEARVIEWONE MEDIUM COMPRESSED  
FUNCTION: PARKING FACILITY INFORMATION  
AVAILABLE FROM: TERMINAL DESIGN, 718-246-7069, TYPE@TERMINALDESIGN.COM

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj  
Kk Ll Mm Nn Oo Pp Qq Rr Ss  
Tt Uu Vv Ww Xx Yy Zz  
0123456789

FONT: ITC CHELTENHAM HANDTOOLED BOLD  
FUNCTION: DISTRICT INFORMATION  
AVAILABLE FROM: ITC, INTERNATIONAL TYPEFACE CORP.,  
866-823-5828, WWW.ITCFONTS.COM

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj  
Kk Ll Mm Nn Oo Pp Qq Rr Ss  
Tt Uu Vv Ww Xx Yy Zz  
0123456789

## DISTRICT ICONS

DISTRICT ICONS WILL BE PLACED IN THE CROWN OF EACH DIRECTIONAL SIGN CORRESPONDING WITH THE DISTRICT WHERE THE SIGN IS LOCATED. THE CITY WILL PROVIDE THE CONTRACTOR WITH THE ICONS IN ELECTRONIC FORMAT (EPS, AI OR PDF FORMAT)



WESTOWN



RIVERWALK



EAST TOWN

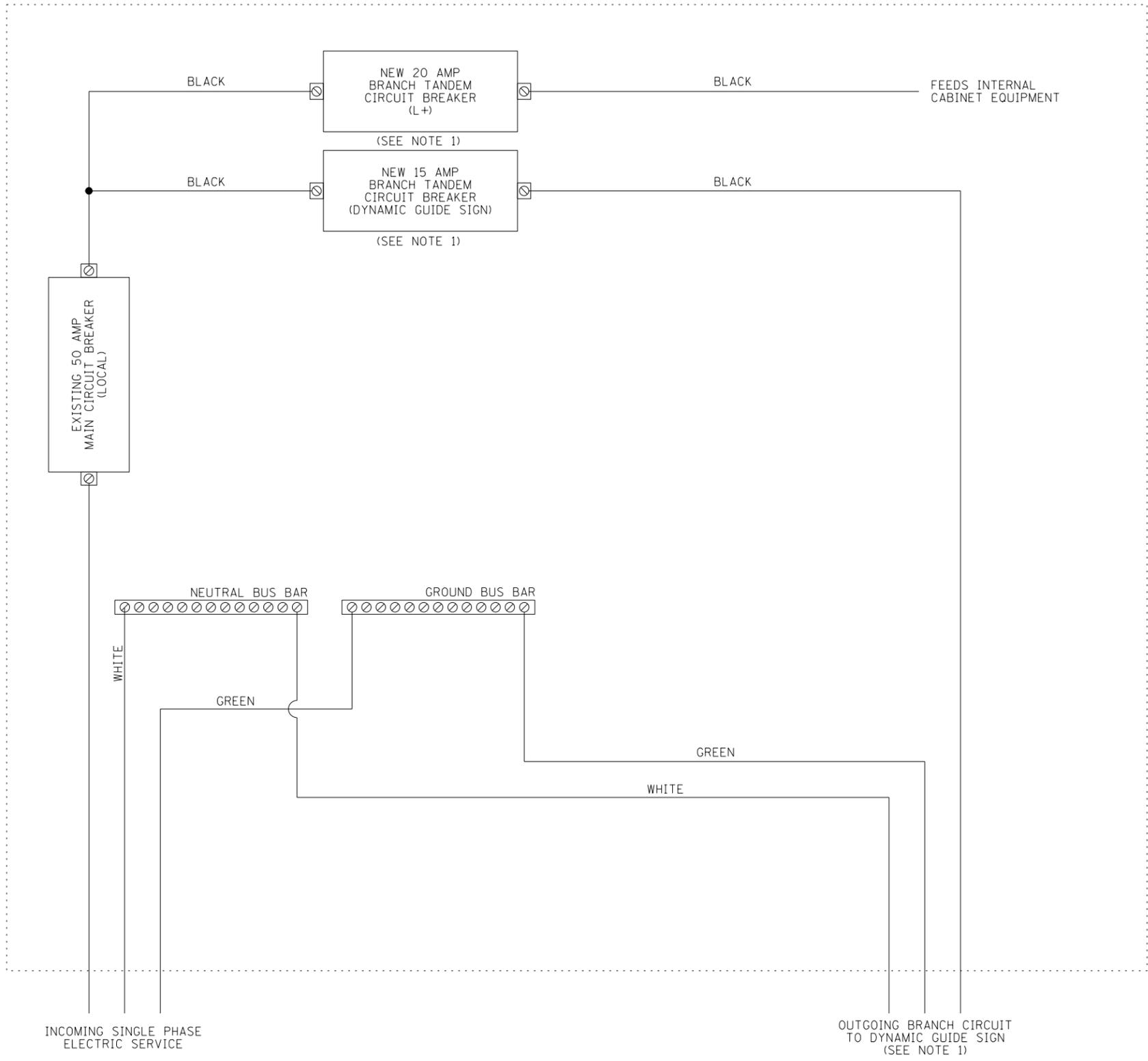


THIRD WARD



LAKEFRONT

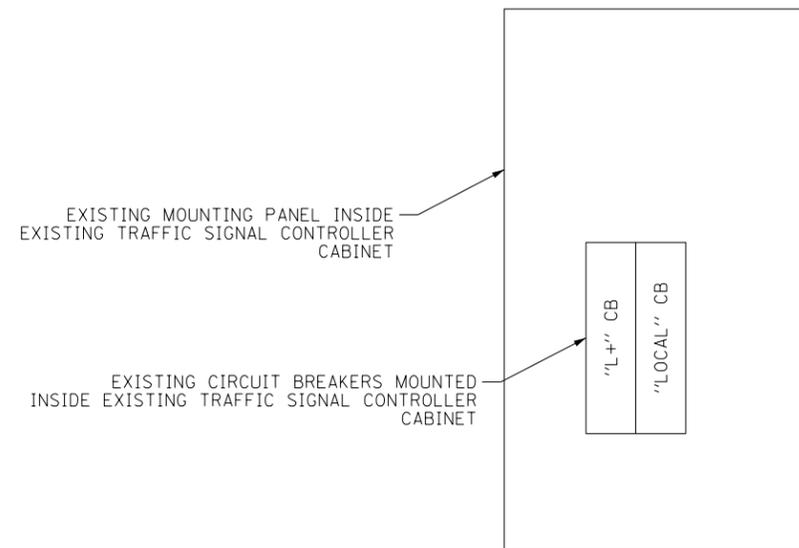
EXISTING TRAFFIC SIGNAL CONTROLLER CABINET



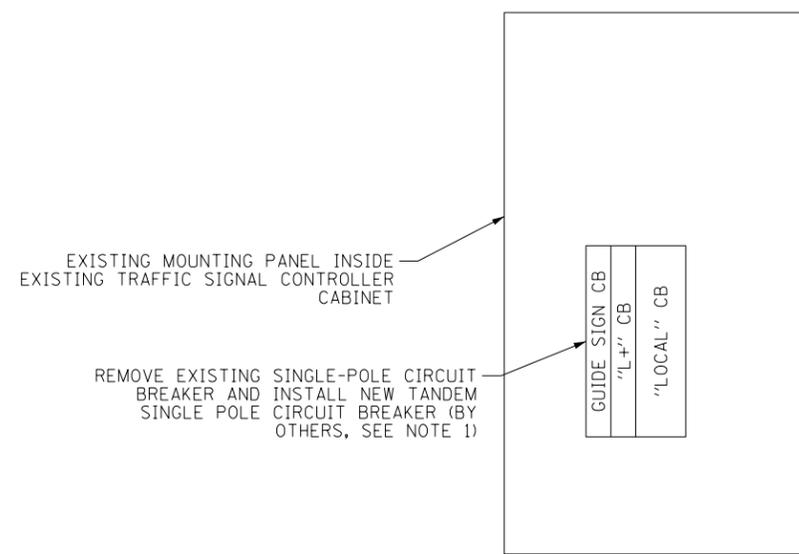
WIRING DIAGRAM  
NOT TO SCALE

FOR INFORMATION ONLY

SEE NOTE 1



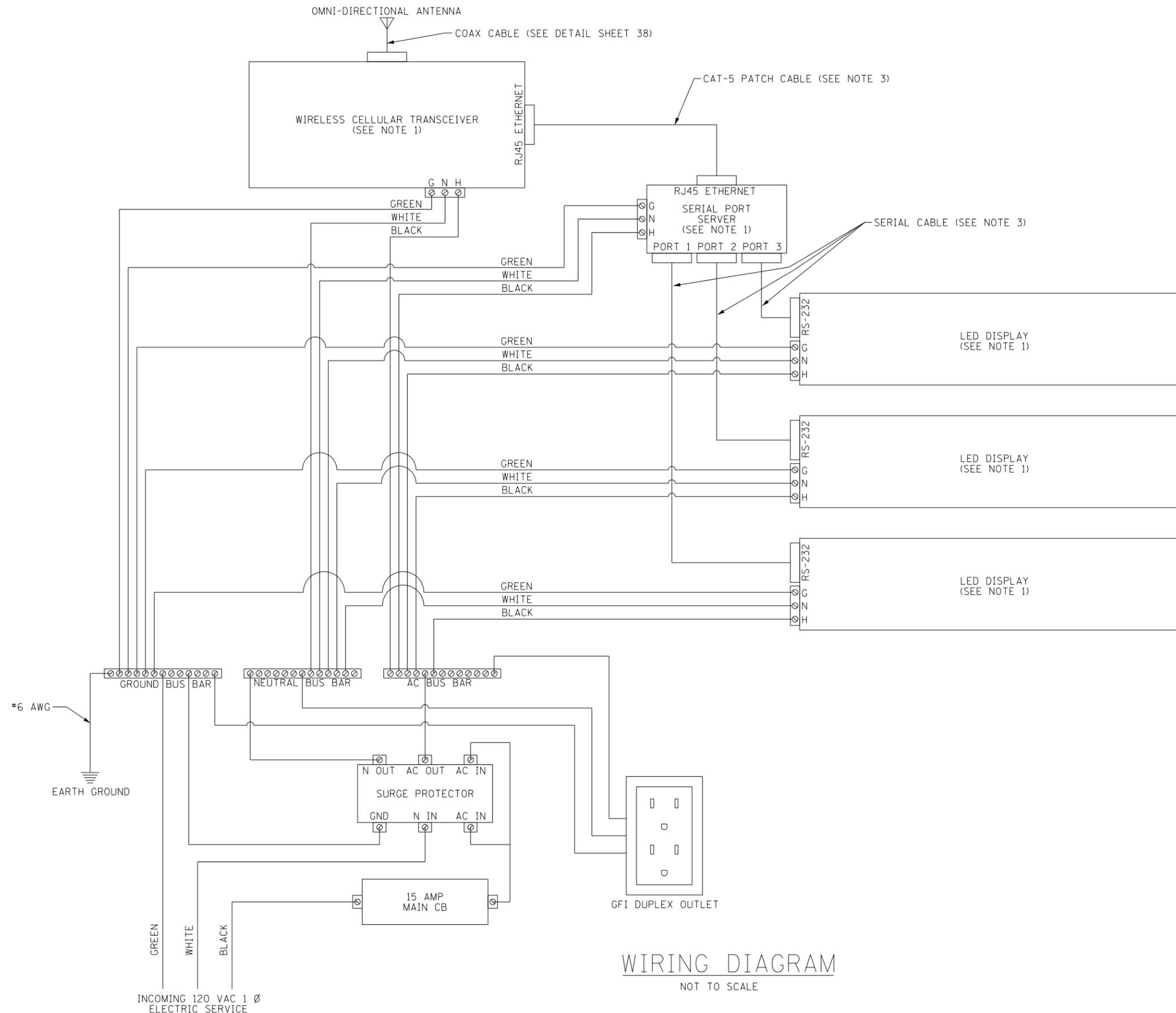
EXISTING CABINET LOAD CENTER  
NOT TO SCALE



PROPOSED CABINET LOAD CENTER  
NOT TO SCALE

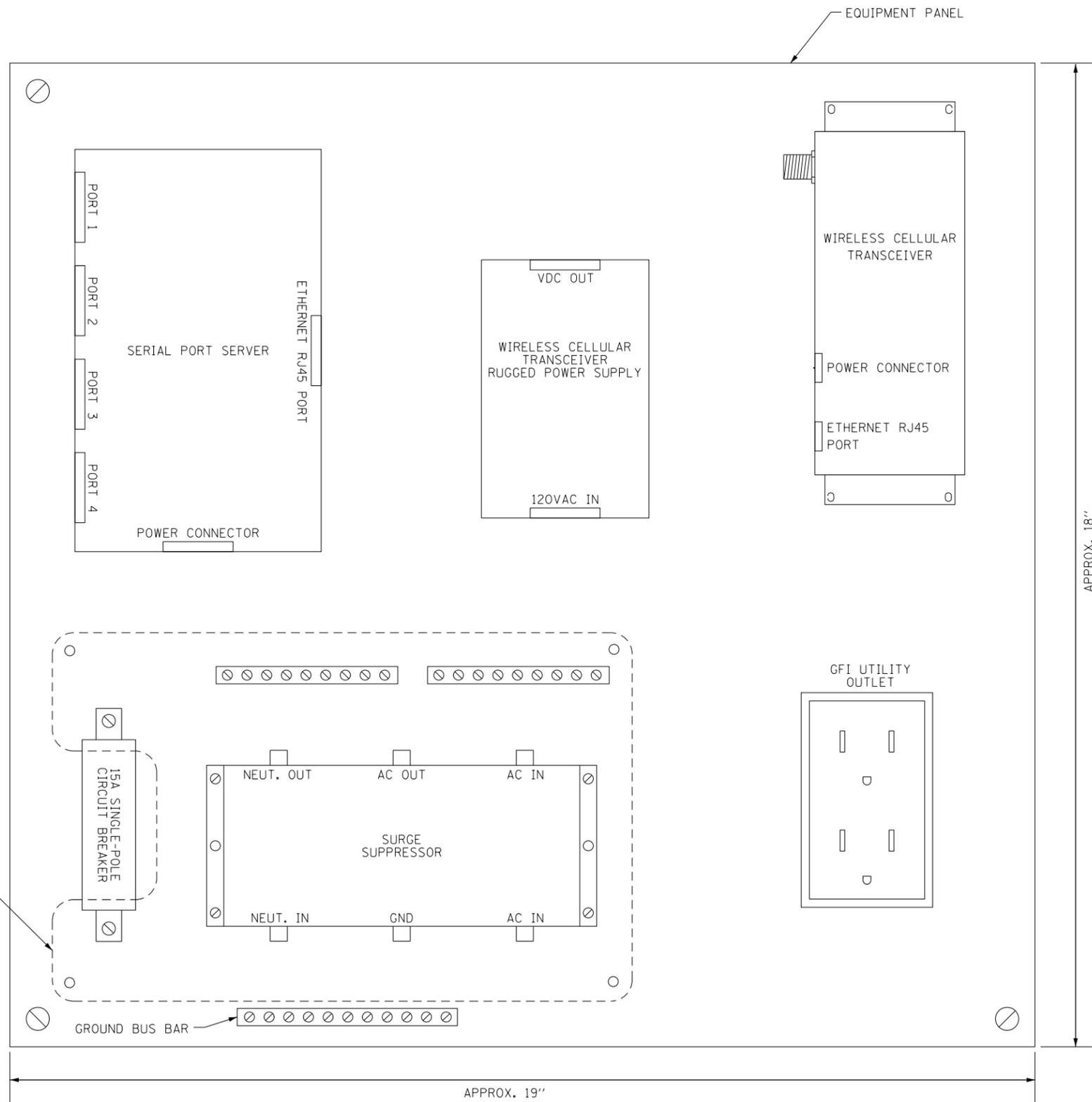
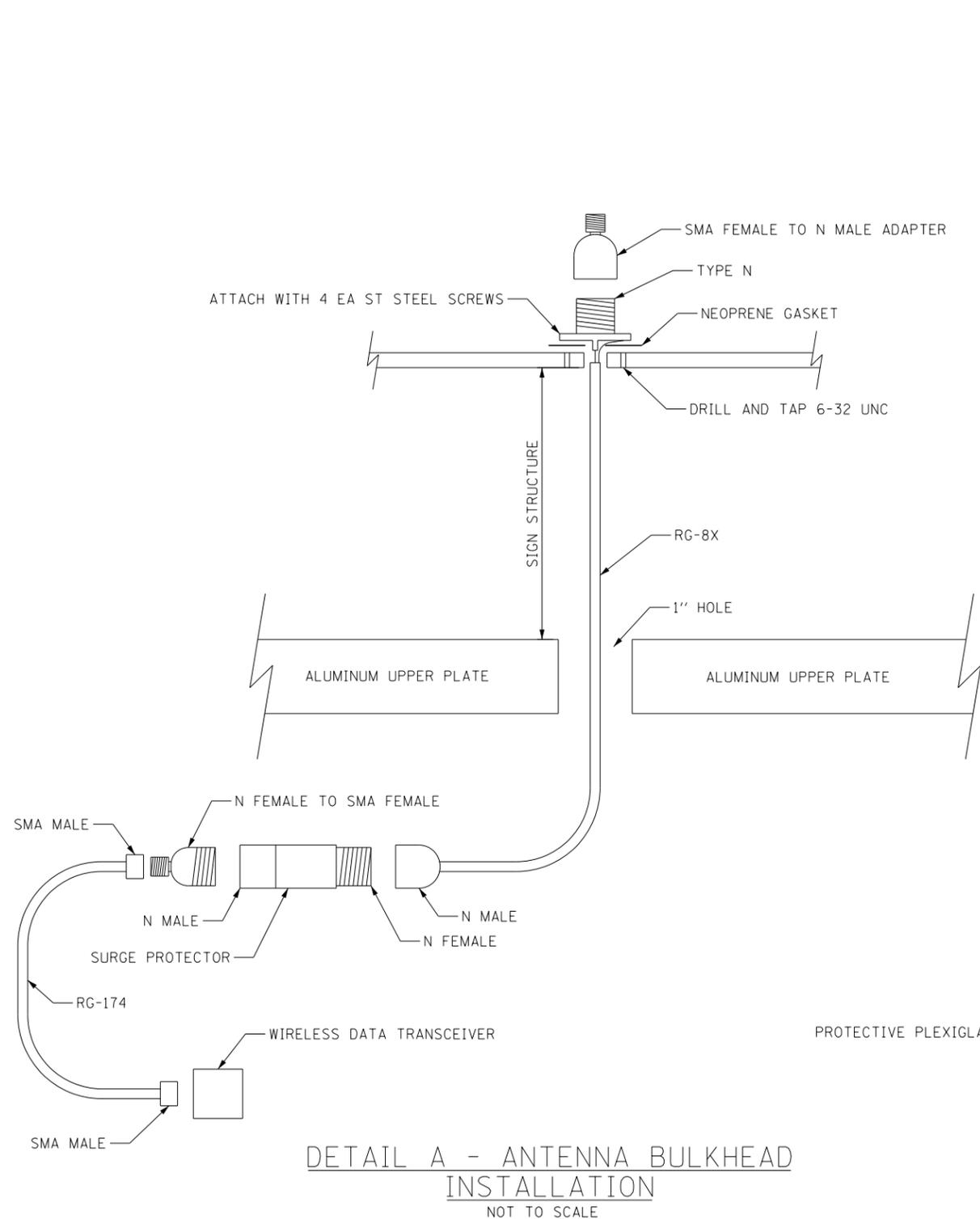
NOTES:

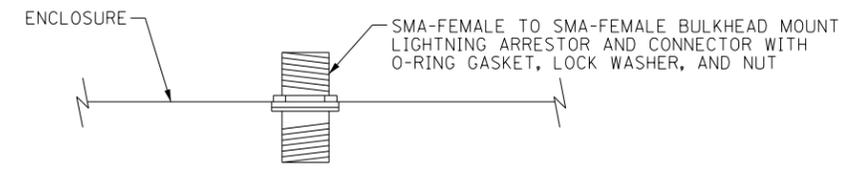
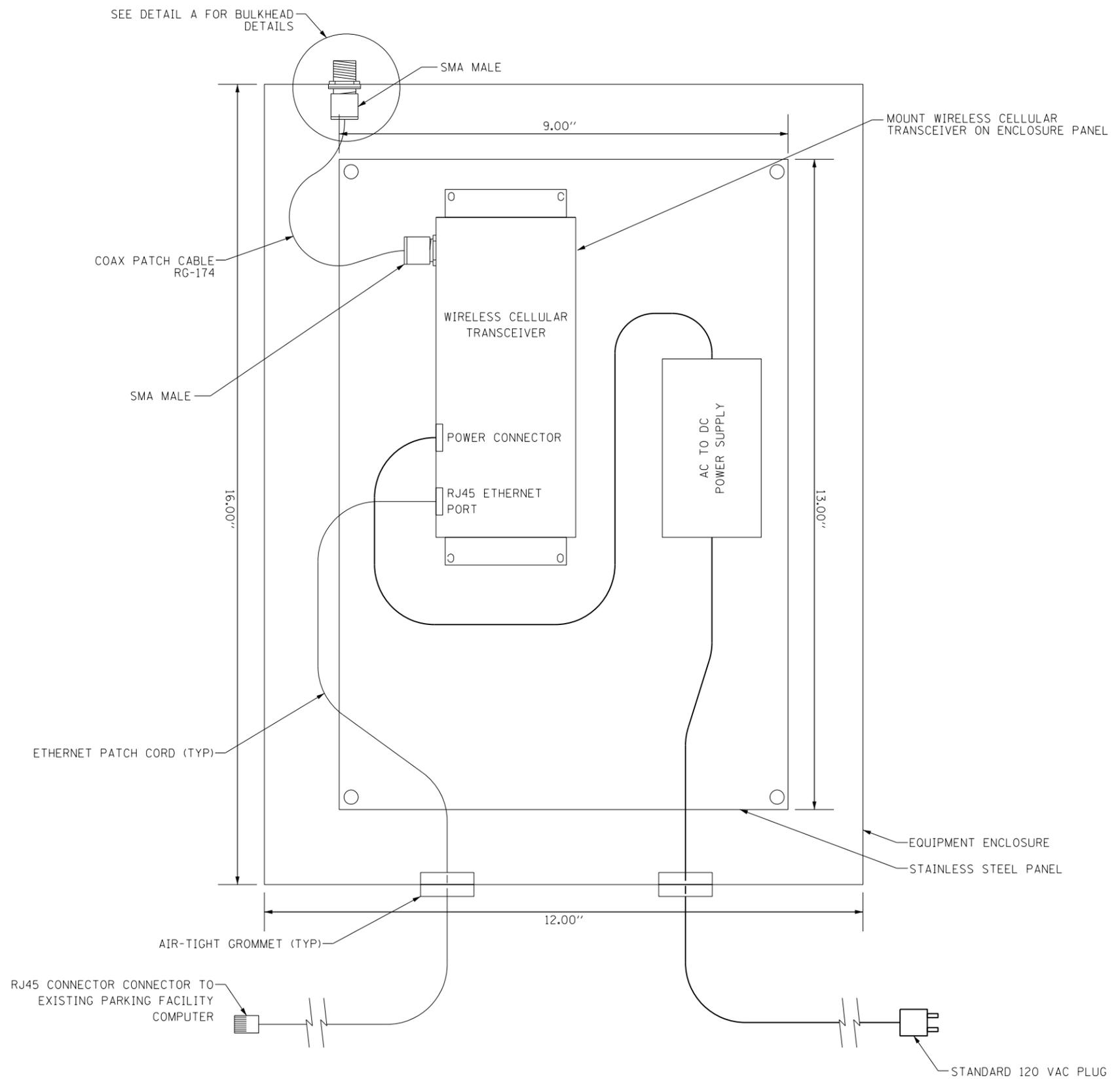
- 1) ALL WORK SHOWN ON THIS SHEET TO BE PERFORMED BY CITY STAFF. CONTRACTOR TO COIL POWER CABLE IN FIBERGLASS VAULT AND FURNISH TANDEM CIRCUIT BREAKER.



**WIRING DIAGRAM**  
NOT TO SCALE

- NOTES:**
- 1) A POWER MODULE TO CONVERT FROM AC TO DC POWER MAY BE USED IF REQUIRED BY THE EQUIPMENT.
  - 2) ALL POWER CONDUCTORS SHALL BE #14 AWG UNLESS OTHERWISE NOTED.
  - 3) WIRING SHALL BE ADAPTED FOR EQUIPMENT BEING SUPPLIED. IF REQUIRED, CONTRACTOR SHALL PROVIDE A NULL MODEM/CROSS-OVER CABLE.

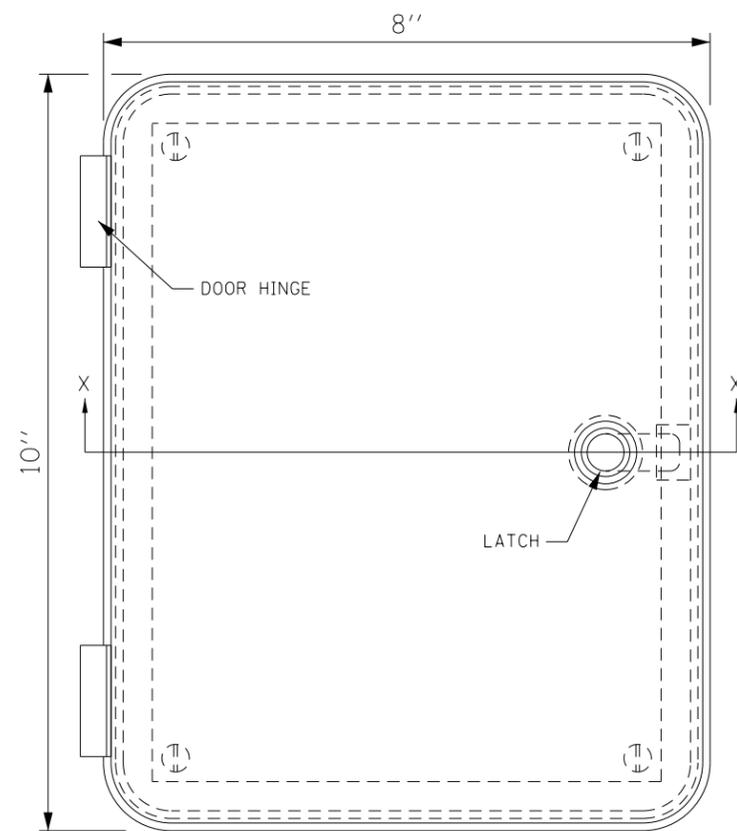




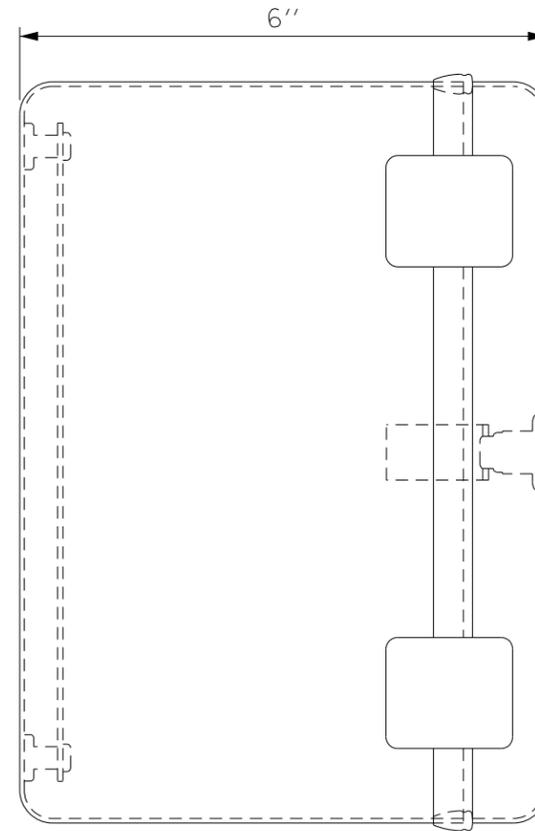
DETAIL A - ANTENNA BULKHEAD  
INSTALLATION  
NOT TO SCALE

- NOTES:
- 1) EQUIPMENT ENCLOSURE, INDOOR AND EQUIPMENT ENCLOSURE, OUTDOOR ARE MOUNTED WITHIN EXISTING PARKING FACILITY STRUCTURE.
  - 2) CONTRACTOR TO DRILL HOLE IN ENCLOSURE AND PROVIDE NECESSARY CONDUIT FITTINGS OR AIR-TIGHT GROMMET AS INDICATED IN THE SITE PLANS OR DIRECTED BY THE ENGINEER.

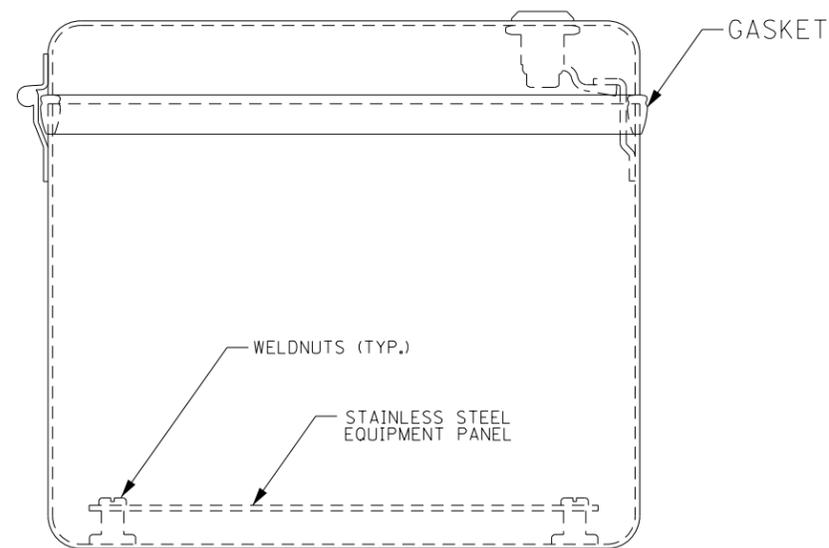
COMMUNICATION EQUIPMENT ENCLOSURE,  
INDOOR, LAYOUT  
NOT TO SCALE



FRONT VIEW



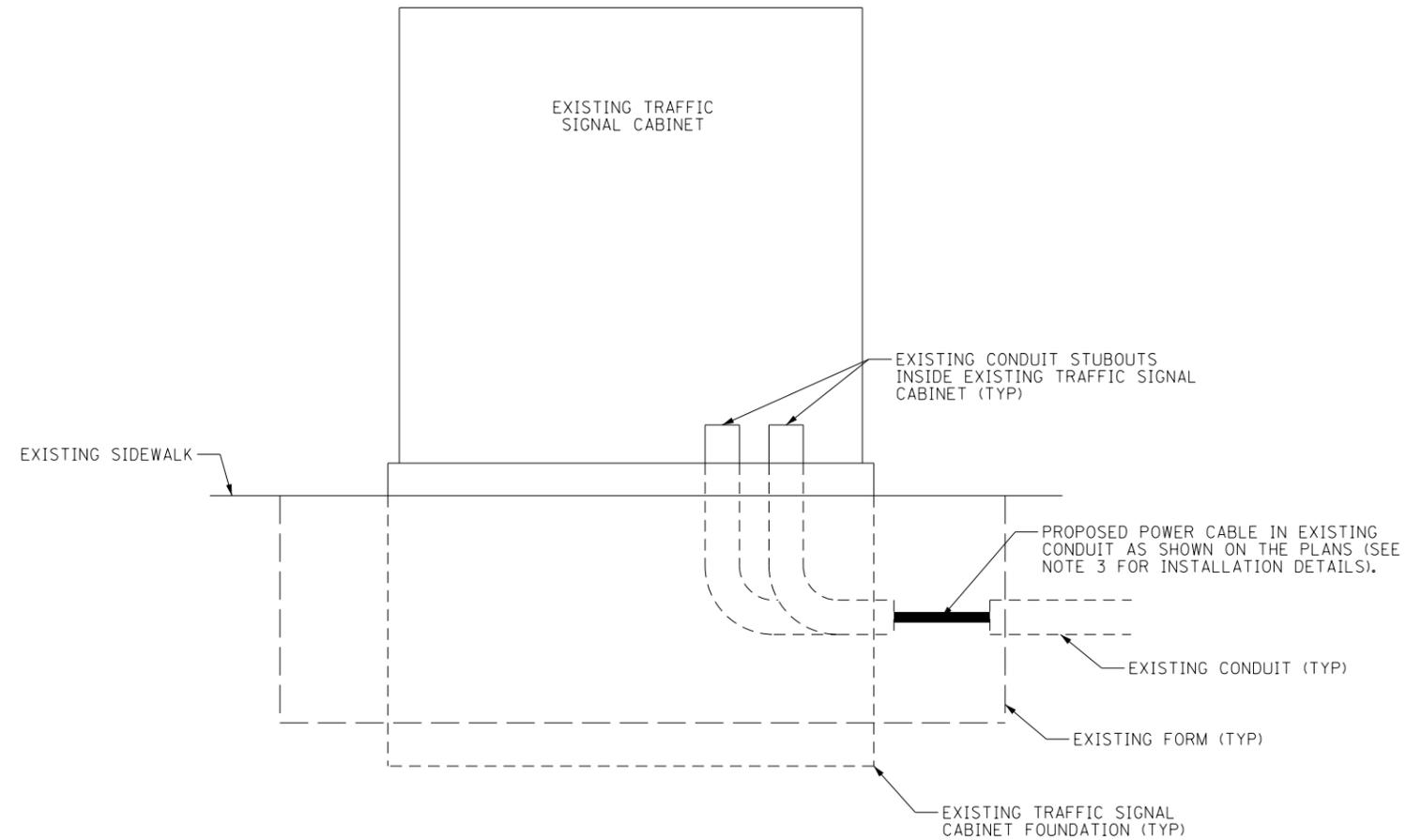
SIDE VIEW



SECTION X-X

COMMUNICATION EQUIPMENT ENCLOSURE,  
INDOOR DETAIL  
NOT TO SCALE

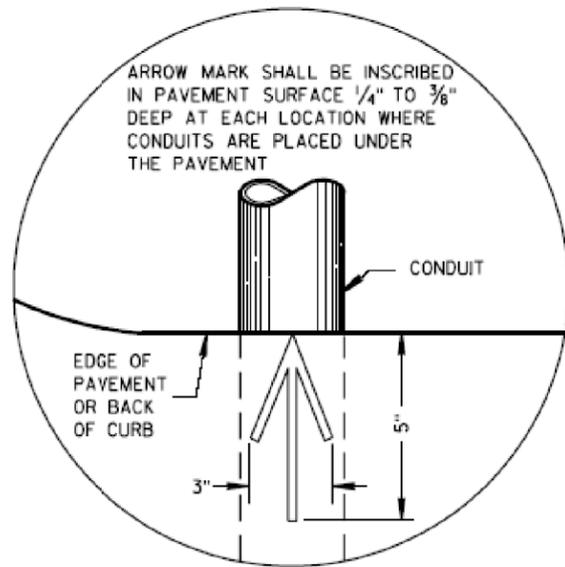
NOTES:  
1) THE COMMUNICATION EQUIPMENT ENCLOSURE, INDOOR SHALL BE INSTALLED AT THE PARKING FACILITIES AT LOCATIONS INDICATED ON INDIVIDUAL SITE PLANS.



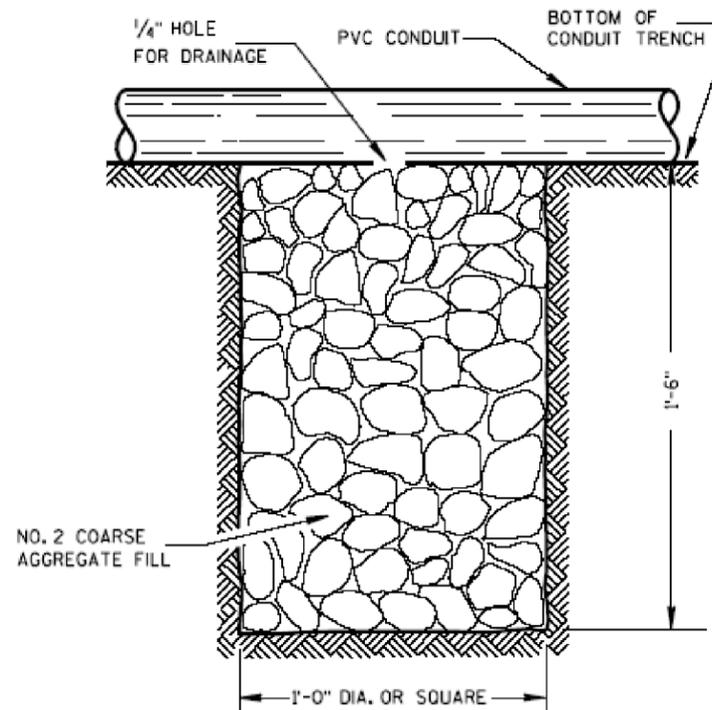
DETAIL A - TYPICAL CABLE BREAKOUT  
NOT TO SCALE

**NOTES:**

- 1) CABLES/CONDUITS SHALL NOT ENTER TOPS OF ENCLOSURES, CABINETS, OR JUNCTION BOXES.
- 2) ALL CABLE TO BE INSTALLED INSIDE CONDUIT UNLESS OTHERWISE NOTED.
- 3) EXISTING CONDUIT MAY NOT EXTEND TO TRAFFIC CABINET FOUNDATION AND MAY TERMINATE UNDERGROUND IN FORM AROUND EXISTING FOUNDATION. CONTRACTOR TO USE NON-DESTRUCTIVE WATER AND VACUUM EXCAVATING TO REMOVE EXISTING FORM AND GAIN ACCESS TO EXISTING BURIED CONDUIT.



**PLAN VIEW  
ARROW MARK**

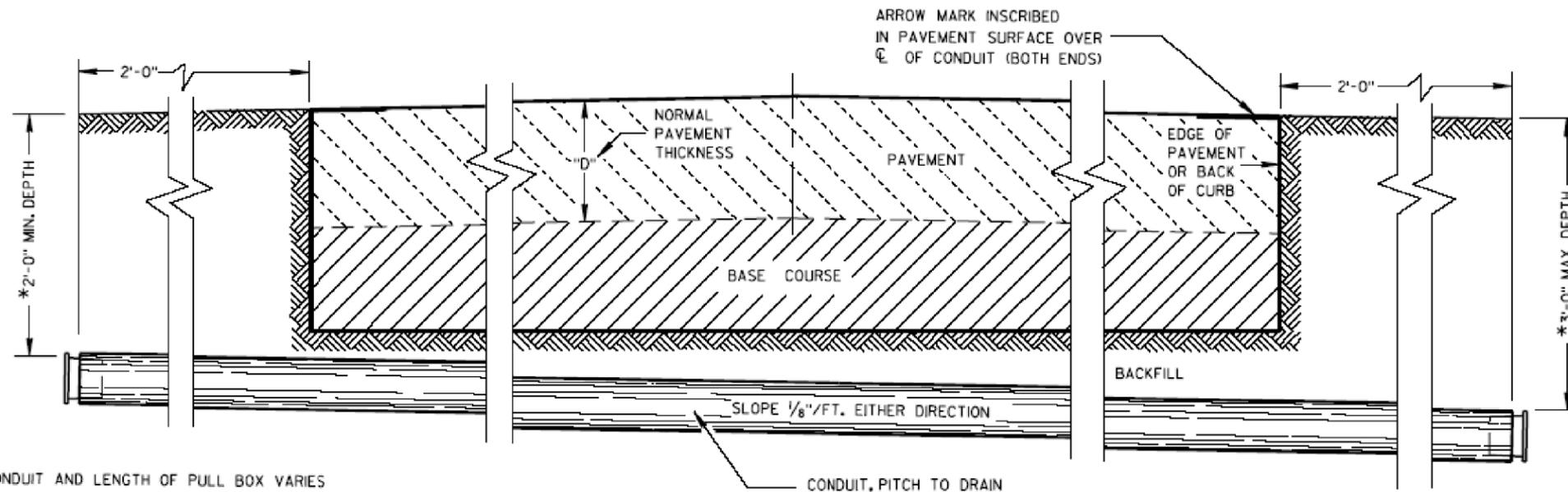


NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

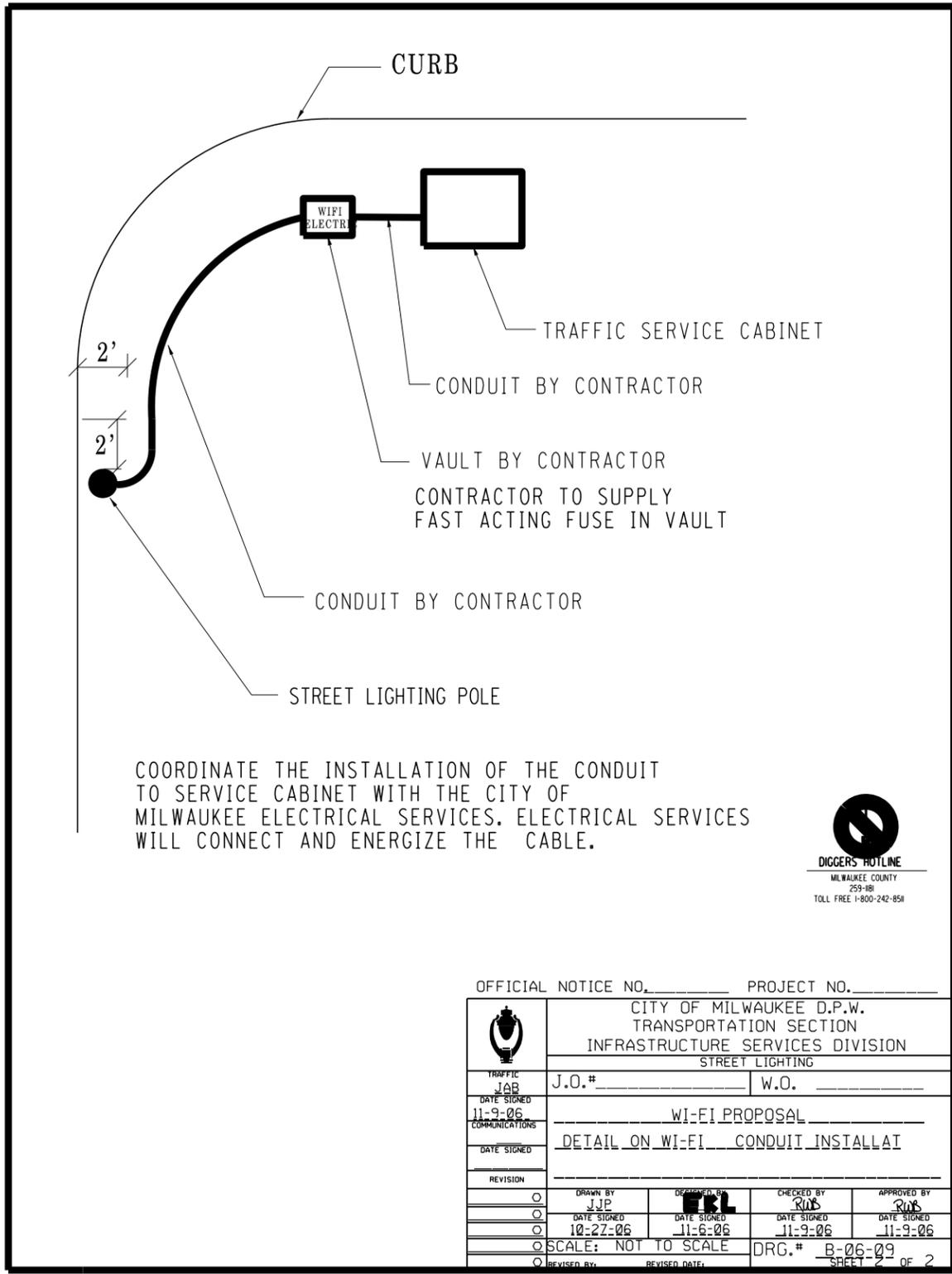
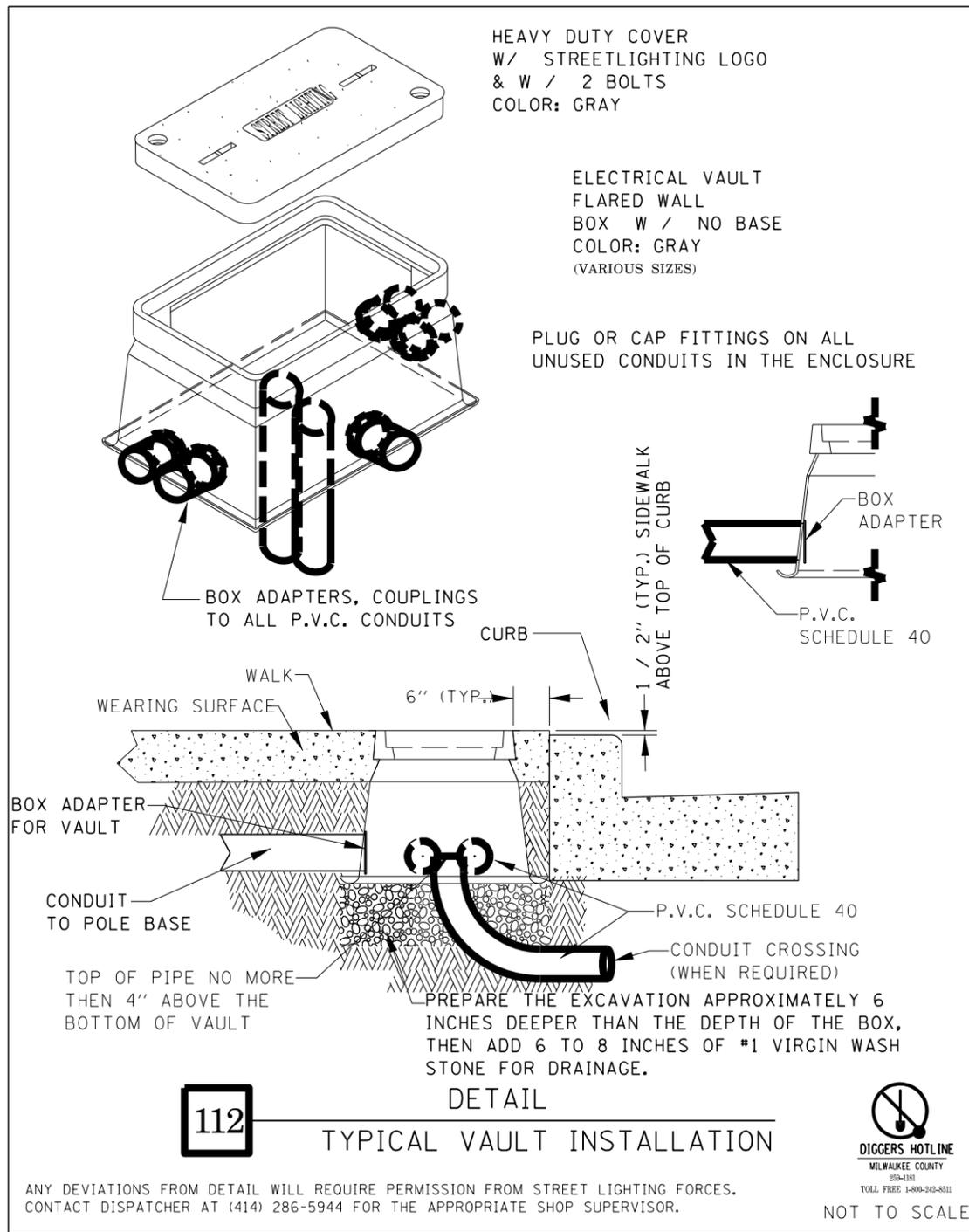
**DRAIN SUMP FOR PVC CONDUIT**

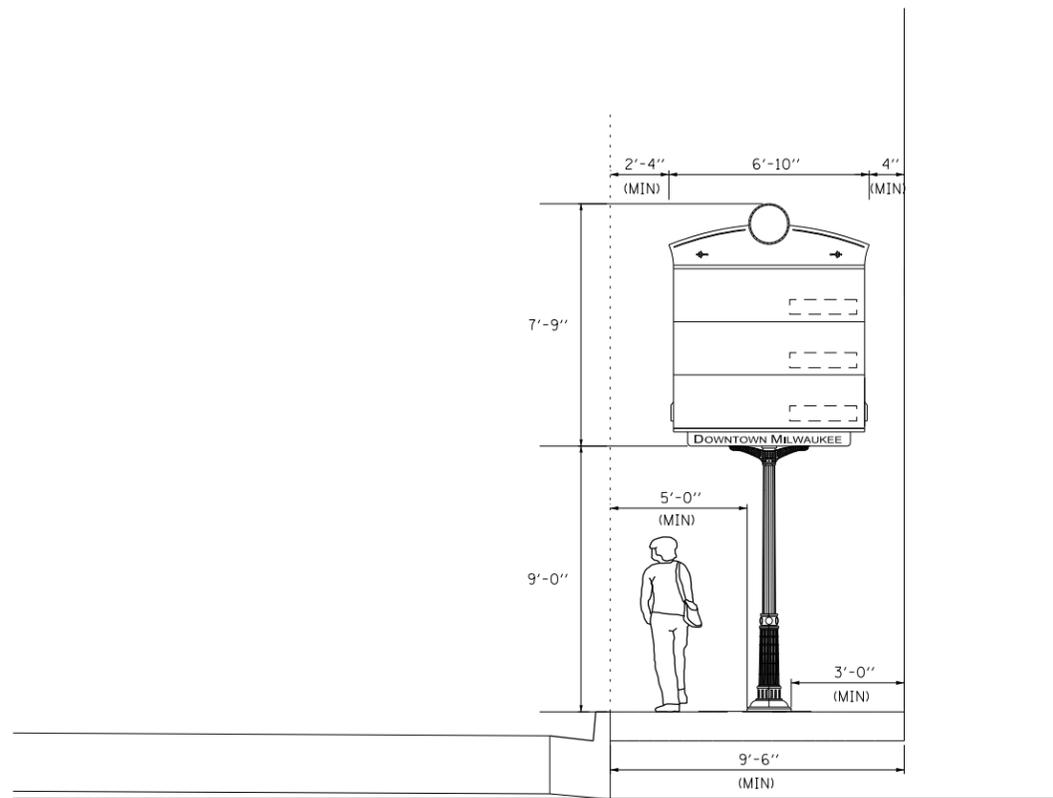
**NOTES:**

- 1) DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- 2) NON METALLIC CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.
- 3) DEPTH OF CONDUIT BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.
- 4) ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- 5) THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO THE INSPECTION OF THE CONDUIT.
- 6) ALL NON METALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.
- 7) NON METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAINED CAPPED OR PLUGGED.
- 8) BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.
- 9) ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NON METALLIC CONDUIT ACCORDING TO NEC 347.5.
- 10) WHEN REQUIRED TO CONNECT NON METALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.
- 11) PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS, AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.
- 12) ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.
- 13) CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX OR FORM TO FORM OR PULL BOX TO FORM, ETC.)
- 14) POLY ROPE OR A PULL WIRE SHALL BE INSTALLED.
- 15) ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, FORM TO FORM, OR PULL BOX TO FORM AS SHOWN ON THE PLANS.

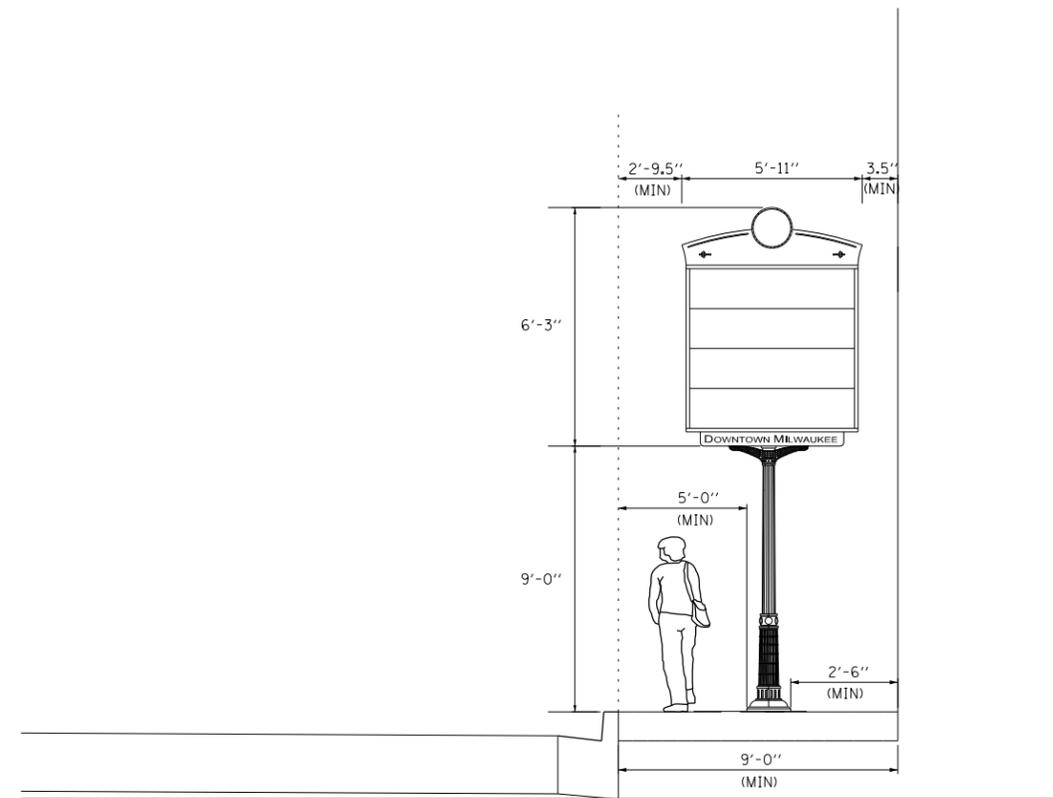


\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4





TYPICAL DYNAMIC SIGN PLACEMENT  
(9.5' WIDTH SIDEWALK OR GREATER)



TYPICAL STATIC SIGN PLACEMENT  
(9.0' WIDTH SIDEWALK OR GREATER)

NOTES:

1. SIGNS SHALL BE PLACED AT LOCATIONS DESIGNATED ON THE SITE PLAN SHEETS. LATERAL PLACEMENT OF THE SIGNS SHOULD FOLLOW THE ABOVE DIMENSIONS WHILE CONSIDERING POTENTIAL CONFLICTS (NEARBY EXISTING SIGN POSTS, TREES, ETC.), MOTORIST VISIBILITY, AND PEDESTRIAN EGRESS AROUND THE SIGNS. PROPOSED SIGN PLACEMENT SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

SCALE: NTS