

**EXISTING PLANS**

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE IN GARFIELD HEIGHTS, OHIO.

- CUY-2-22.97 (1959)
- CUY-90-23.93 (1999)
- CUY-90-16.22 (2000)
- CUY-90-16.19 (2007)
- CUY-6-12.20 (2014)
- CUY-90-20.01 (2017)
- CUY-90-16.45 (2017)
- CUY-90-21.02 (2019)
- CUY-71-10.44 (1965)
- CUY-71-15.06 (1965)
- CUY-71-17.18 (1965)
- CUY-90-16.24 (1992)
- CUY-71-14.96 (2001)
- CUY-2-(19.51-20.53) (1950)
- LAK-90-(7.65-11.86) (1985)
- CUY-90-24.10/24.63 (2019)
- CUY-322-(1.08-1.39) (1957)
- VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM (2008)

**EXPOSING EXISTING UTILITIES BEFORE DIGGING**

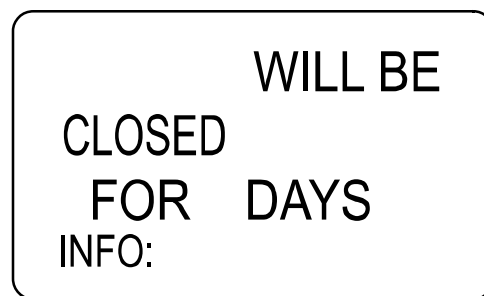
THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE PROXIMITY OF EXISTING AND/OR RELOCATED UTILITY FACILITIES. ALL UTILITIES NEAR SUBSURFACE WORK SHALL BE EXPOSED PRIOR TO DIGGING. CONTRACTOR MUST NOTIFY UTILITY OWNERS (CONTACT INFORMATION ON THIS SHEET) 7 DAYS PRIOR TO DIGGING OVER OR AROUND UNDERGROUND FACILITIES TO GIVE THE OWNER THE OPPORTUNITY TO BE ON-SITE DURING EXPOSING/CONSTRUCTION.

IF, WHILE EXPOSING, CONFLICTS ARE FOUND TO BE PRESENT BETWEEN PROPOSED WORK AND EXISTING UTILITIES, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER AND UTILITY OWNER.

COSTS TO EXPOSE EXISTING UTILITIES SHALL BE INCLUDED IN THE ITEMS OF WORK AFFECTED. THE CONTRACTOR IS REMINDED TO KEEP THEIR OUPS TICKET UPDATED ACCORDING TO INDUSTRY PRACTICES.

**ITEM 614, MAINTAINING TRAFFIC**

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.



W20-H13-60

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

- 659, TOPSOIL 881 CU. YD.
- 659, SEEDING AND MULCHING 7,931 SQ. YD.
- 659, REPAIR SEEDING AND MULCHING 397 SQ. YD.
- 659, INTER-SEEDING 397 SQ. YD.
- 659, COMMERCIAL FERTILIZER 1.78 TON
- 659, LIME 1.64 ACRES
- 659, WATER 44 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**PROTECTION OF RIGHT-OF-WAY LANDSCAPING**

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA.

USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

**PROJECT SURVEY**

THE PROJECT BASE MAPPING DEVELOPED FOR THIS PROJECT UTILIZED RECORD PLANS AND GIS.

TRADITIONAL TOPOGRAPHIC AND BOUNDARY SURVEY WAS NOT PERFORMED.

THE COORDINATES PROVIDED IN THE CONTRACT PLANS FOR THE PROPOSED IMPROVEMENTS ARE BASED ON GRID COORDINATES, WITH RESPECTIVE NORTHING AND EASTING VALUES.

**PROJECT SURVEY (CONTINUED)**

GRID COORDINATES HAVE BEEN PROVIDED FOR EXISTING DEVICES ONLY WHOSE LOCATIONS ARE KNOWN. MISSING GRID COORDINATES FOR THE PROPOSED WRONG WAY SYSTEM DEVICES SHALL BE PROVIDED IN THE NEXT PLAN SUBMISSION.

**ITEM 614, MAINTAINING TRAFFIC**

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

- CHRISTMAS FOURTH OF JULY
- NEW YEAR'S LABOR DAY
- MEMORIAL DAY THANKSGIVING
- PROFESSIONAL SPORTING EVENT

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

**ITEM 614, MAINTAINING TRAFFIC (CONTINUED)**

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

**SCHEDULE OF THROUGH LANES TO BE MAINTAINED**

ALL LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEBSITE:

[WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX](http://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX)

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED. SHOULDER CLOSURES SHALL ONLY BE ALLOWED AT THE TIMES SPECIFIED FOR LANE CLOSURES.

ANY ROADWAY NOT LISTED SHALL NOT HAVE ANY LANE CLOSURES ON WEEKDAYS FROM 6:30AM TO 9:00AM AND 3:00PM TO 6:00PM. CONTACT TROY ONESTI, DISTRICT 12 WORK ZONE TRAFFIC MANAGER, AT (216) 379-5337 IF THERE ARE ANY QUESTIONS.

ROADWAY CLOSURES		
LOCATION	PERMITTED CLOSURES, LANE REDUCTIONS	
	SHORT TERM CLOSURE	PARTIAL WIDTH CLOSURE (MAINTAIN ONE 11' LANE)
ONE-LANE RAMPS	9:00 PM - 5:00 AM	7:00 PM - 5:00 AM
TWO-LANE RAMPS	NOT PERMITTED	7:00 PM - 5:00 AM
LOCAL STREETS - SINGLE LANE	7:00 PM - 5:00 AM*	N/A
LOCAL STREETS - MULTI-LANE	NOT PERMITTED	9:00 AM - 3:00 PM

\*FOR ROADS WITH ONE LANE IN EACH DIRECTION, FLAGGERS MUST BE USED IN ACCORDANCE TO THE TIMES LISTED IN THE TABLE ABOVE FOR LANE CLOSURES.

**RAMP CLOSURES FOR RESURFACING**

THE CONTRACTOR MAY CLOSE ONE RAMP AT A TIME AT EACH LOCATION FOR ELECTRICAL WORK. CLOSURES FOR RAMPS SCHEDULED FOR ELECTRICAL WORK SHALL BE LIMITED ACCORDING TO THE DAYS OF THE WEEK AND HOURS SHOWN IN THE "SCHEDULE OF THROUGH LANES TO BE MAINTAINED" TABLE.

THE MOTORING PUBLIC SHALL BE GIVEN ADVANCE WARNING OF CLOSURES AT LEAST 72 HOURS IN ADVANCE THROUGH THE USE OF EITHER A GROUND MOUNTED FLAT SHEET SIGN OR A PORTABLE CHANGEABLE MESSAGE SIGN. A LEO WITH PATROL CAR (PAID FOR SEPARATELY) SHALL BE USED FOR EACH RAMP CLOSURE AND BE PRESENT FOR THE ENTIRE CLOSURE TIME.

FREEWAY ENTRANCE RAMPS SHALL BE CLOSED WITH A PCMS SUGGESTING A RECOMMENDED DETOUR.

FREEWAY EXIT RAMPS SHALL BE CLOSED WITH A PCMS ROUTING TRAFFIC TO THE NEXT EXIT AND A SECOND PCMS INDICATING A U-TURN AT THE EXIT, UNLESS DIRECTED DIFFERENTLY BY THE PROJECT ENGINEER.

FOR RAMP CLOSURES, ONE OR TWO ADDITIONAL PCMS UNITS WILL BE NEEDED AS DESCRIBED ABOVE. THESE WILL BE IN ADDITION TO THE PCMS UNITS SPECIFIED IN THE PLANS AND SHALL BE INCLUDED FOR PAYMENT IN ITEM 614 MAINTAINING TRAFFIC

NO.	DATE	DESCRIPTION
1	5-18-23	ADDED NOTES
REVISIONS		

GENERAL NOTES

DESIGN AGENCY



DESIGNER  
KWA

REVIEWER  
JGW 2/13/23

PROJECT ID  
113797

SHEET TOTAL  
4 72

**GROUNDING AND BONDING (CONTINUED)**

3. WIRE FOR GROUNDING AND BONDING.

A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

A. A 3/4-INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/ BLACK STRIPE	YELLOW ARROW	NOT USED

**GROUNDING AND BONDING (CONTINUED)**

6. POWER SERVICE AND DISCONNECT SWITCH.

A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE. B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

**ITEM 632, TEST HOLE PERFORMED**

IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER UNDERGROUND UTILITIES WHILE EXCAVATING FOR SIGNAL SUPPORT FOUNDATIONS OR SIMILAR FOUNDATIONS. AFTER ACCURATELY IDENTIFYING THE PROPOSED LOCATION OF THE FOUNDATION, AS SHOWN IN THE PLANS AND AFTER MODIFYING THAT LOCATION, IF NECESSARY, BASED ON THE FIELD MARKING OF UNDERGROUND UTILITY LOCATION, THE CONTRACTOR DISCOVERS A UTILITY CONFLICT DURING THE EXCAVATION OPERATION, THE CONTRACTOR WILL BE COMPENSATED FOR EACH PARTIAL FOUNDATION EXCAVATION ACCORDING TO THE BID PRICE.

BEFORE THE CONTRACTOR BEGINS THE EXCAVATION AT THE MODIFIED LOCATION, THE CONTRACTOR SHALL VERIFY THAT THERE WILL BE NO OVERHEAD UTILITY CONFLICTS RESULTING FROM THE NEW SIGNAL SUPPORT LOCATION. NEW SUPPORT LOCATIONS ARE TO BE APPROVED BY THE ENGINEER. THE WORK WILL INCLUDE BACKFILLING, COMPACTING, AND RESTORATION OF THE EXCAVATION TO THE SITE'S ORIGINAL CONDITION.

EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT. PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH ITEM 632 TEST HOLE PERFORMED TO BE USED AT THE DIRECTION OF THE ENGINEER.

THE FOLLOWING QUANTITIES ARE TO PERFORM ALL WORK RELATED TO THE TEST HOLES.

632, TEST HOLE PERFORMED	25 EACH
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**ITEM 809E65990, ITS DEVICE, MISC.: HIGH-SPEED ETHERNET RADIO, INSTALL ONLY**

THE CONTRACTOR SHALL INSTALL WIRELESS RADIOS, PROVIDED BY ODOT, AT LOCATIONS SPECIFIED IN THE PLANS. THE RADIOS SHALL BE INSTALLED PER SCD ITS-12.50 ON EXISTING TRAFFIC SIGNAL SUPPORTS AND ITS-11.10 ON EXISTING CAMERA POLES. THE RADIOS SHALL BE ORIENTED TO POINT TOWARD EACH OTHER ON EACH SIDE WHERE RADIO PAIRS ARE TO LINK TOGETHER WIRELESSLY. THE CONTRACTOR SHALL CONNECT THE RADIOS TO THE EXISTING TRAFFIC CABINET WITH OUTDOOR ETHERNET CABLE (SEPARATE PAY ITEM) AND RJ-45 CONNECTORS WHICH SHALL BE TERMINATED IN ACCORDANCE WITH TIA-EIA 568-B AND SUPPLEMENTAL SPECIFICATION 809. THE CONTRACTOR SHALL COORDINATE THE INSTALLS WITH ODOT CENTRAL OFFICE TRAFFIC OPERATIONS ITS LAB (CEN.ITS.LAB@DOT.OHIO.GOV). THE CONTRACTOR SHALL CONNECT THE ETHERNET CABLE INTO A NETWORK SWITCH/ROUTER AS INSTRUCTED BY ODOT AND WORK OVER THE PHONE TO MAKE SURE THE DEVICE IS FUNCTIONING CORRECTLY.

**ITEM 809E65990, ITS DEVICE, MISC.: CCTV IP-CAMERA SYSTEM, FIXED VIEW**

THE CONTRACTOR SHALL PROVIDE AND INSTALL A FIXED VIEW CAMERA CAPABLE OF WRONG WAY ANALYTICS PER SUPPLEMENTAL SPECIFICATIONS 809 AND 909.03.G. THE CAMERA SHALL HAVE A VARIFOCAL LENS WITH ADJUSTMENT BETWEEN 4 MM AND 13MM. THE CAMERA SHALL BE INSTALLED AS SHOWN ON THE PLANS AND ORIENTED AND FOCUSED TO VIEW THE EXIT RAMP AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL CONNECT THE CAMERAS TO THE EXISTING TRAFFIC CABINET WITH OUTDOOR ETHERNET CABLE (SEPARATE PAY ITEM) AND RJ-45 CONNECTORS WHICH SHALL BE TERMINATED IN ACCORDANCE WITH TIA-EIA 568-B. THE CONTRACTOR SHALL DELIVER THE NEW CAMERAS TO THE ODOT ITS LAB FOR INITIAL CONFIGURATION AND LABELING OF THE LOCATION WHERE THEY SHALL BE INSTALLED. THE CONTRACTOR SHALL ALLOW 1 MONTH FOR ODOT TO CONFIGURE THE CAMERAS AND RETURN TO THE CONTRACTOR. UPON INSTALLATION, THE CONTRACTOR SHALL INSTALL THE CAMERA AND CONNECT THE ETHERNET CABLE INTO THE ODOT NETWORK SWITCH PORT, AS INFORMED BY ODOT ITS. THE CONTRACTOR SHALL CALL THE ODOT ITS LAB TO VERIFY THE CAMERA CONNECTION AND VIEWS WHILE ON SITE INSTALLING THE CAMERA. THE CONTRACTOR SHALL ADJUST THE CAMERA ORIENTATION OR LENSES AS NEEDED FOR OPTIMAL VIEWS.

**ITEM 809, WRONG WAY DETECTION SYSTEM, ALTERNATE BID (TAPCO)**

THIS ITEM SHALL BE AN ALTERNATE BID TO PROVIDE A WRONG WAY DETECTION SYSTEM MANUFACTURED/PROVIDED BY TAPCO, TRAFFIC AND PARKING CONTROL CO., INC. THE SAME NOTES AND REQUIREMENTS APPLY FROM ITEM 809, WRONG WAY DETECTION SYSTEM.

**ITEM 809, WRONG WAY DETECTION SYSTEM, ALTERNATE BID (TRAFFICALM)**

THIS ITEM SHALL BE AN ALTERNATE BID TO PROVIDE A WRONG WAY DETECTION SYSTEM MANUFACTURED/PROVIDED BY TRAFFICALM SYSTEMS. THE SAME NOTES AND REQUIREMENTS APPLY FROM ITEM 809, WRONG WAY DETECTION SYSTEM.

**ITEM 809, ITS-CABINET, POLE MOUNTED, AS PER PLAN**

INSTALL AT LOCATIONS WHERE A CABINET IS NEEDED FOR THE ODOT CAMERA/WIRELESS RADIOS. INSTALL ON WOOD POLES WHERE NEEDED AS PER SCD ITS-11.10. CONDUITS WILL NOT BE INSIDE POLE. IT IS NOT NECESSARY TO STUB UP POWER CONDUIT AND/OR COMMUNICATIONS CONDUITS STRAIGHT FROM THE GROUND INTO THE BOTTOM OF THE CABINET. THE CONDUITS SHALL BE RIGID METAL AS PER 725.04 IN THESE SITUATIONS. OTHER CONDUIT RISERS ON POLES THAT GO DOWN AND ENTER THE BOTTOM OF THE CABINET SHALL BE RIGID METAL AS WELL.

**ITEM 630 SIGNING, MISC.: WRONG WAY DETECTION SYSTEM, FURNISH ONLY**

FURNISH ONLY ALL MATERIALS THAT COMPRISE A FUNCTIONAL WRONG WAY DETECTION SYSTEM AS SHOWN IN THE PLANS BUT DESIGNATED "TO BE PERFORMED BY OTHERS." MAKE ARRANGEMENTS FOR DELIVERY OF THESE MATERIALS BY CONTACTING ODOT DISTRICT 12 TRAFFIC SIGNAL AND LIGHTING SUPERVISOR AT 216-584-2296. THE TENTATIVE LOCATION FOR DELIVERY WILL BE THE SIGNAL SHOP AT WARRENSVILLE FULL-SERVICE MAINTENANCE FACILITY, 25609 EMERY ROAD, WARRENSVILLE HEIGHTS, OH 44128.

**ITEM 630 SIGNING, MISC.: WRONG WAY DETECTION SYSTEM, FURNISH ONLY, (ALTERNATE BID TAPCO)**

FURNISH ONLY ALL MATERIALS THAT COMPRISE A FUNCTIONAL WRONG WAY DETECTION SYSTEM AS SHOWN IN THE PLANS BUT DESIGNATED "TO BE PERFORMED BY OTHERS." MAKE ARRANGEMENTS FOR DELIVERY OF THESE MATERIALS BY CONTACTING ODOT DISTRICT 12 TRAFFIC SIGNAL AND LIGHTING SUPERVISOR AT 216-584-2296. THE TENTATIVE LOCATION FOR DELIVERY WILL BE THE SIGNAL SHOP AT WARRENSVILLE FULL-SERVICE MAINTENANCE FACILITY, 25609 EMERY ROAD, WARRENSVILLE HEIGHTS, OH 44128.

**ITEM 630 SIGNING, MISC.: WRONG WAY DETECTION SYSTEM, FURNISH ONLY, (ALTERNATE BID TRAFFICALM)**

FURNISH ONLY ALL MATERIALS THAT COMPRISE A FUNCTIONAL WRONG WAY DETECTION SYSTEM AS SHOWN IN THE PLANS BUT DESIGNATED "TO BE PERFORMED BY OTHERS." MAKE ARRANGEMENTS FOR DELIVERY OF THESE MATERIALS BY CONTACTING ODOT DISTRICT 12 TRAFFIC SIGNAL AND LIGHTING SUPERVISOR AT 216-584-2296. THE TENTATIVE LOCATION FOR DELIVERY WILL BE THE SIGNAL SHOP AT WARRENSVILLE FULL-SERVICE MAINTENANCE FACILITY, 25609 EMERY ROAD, WARRENSVILLE HEIGHTS, OH 44128.

DESIGN AGENCY



DESIGNER  
KWA

REVIEWER  
JGW 2/13/23

PROJECT ID  
113797

SHEET TOTAL  
7 72

NO.	DATE	DESCRIPTION
1	5-18-23	ADDED NOTES
REVISIONS		




1	5-18-23	ADDED SIGNS WITH NOTES
NO.	DATE	DESCRIPTION
REVISIONS		

SHEET NO.	LOCATION	DISTANCE	621		625		625		625		625		625		630		630		630		632		632		632		632		632		646		809		809		809		809		
			FT	EACH	EACH	FT	FT	FT	EACH	EACH	FT	FT	EACH	EACH	FT	FT	EACH	EACH	EACH	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH	FT	EACH	EACH		
38	LOCATION 10 - IR-71 SB AT W. 25TH ST		11	33																																					
38	P1 TO PB3	11			11					11																															
38	PB3 TO PB2	52							52																																
38	PB2 TO P2	10			10					10																															
38	PB2 TO PB1	143			143					143																															
38	PB1 TO P3	7			7					7																															
38	PB1 TO PB4	222			222					222																															
38	PB4 TO PB5	130			130					130																															
38	PB5 TO PB6	115							115																																
38	PB6 TO P4	6			6					6																															
38	PB5 TO POWER SERVICE	9			9					9																															
38	R1																																								
40	LOCATION 11 - IR-71 NB AT QUIGLEY ROAD		11	22																																					
40	POWER SERVICE TO PB1	23			23					23																															
40	PB1 TO P5	16			16					16																															
40	PB1 TO PB2	68			68					68																															
40	PB2 TO PB3	85			85					85																															
40	PB3 TO PB4	60							60																																
40	PB4 TO P6	18			18					18																															
40	R1																																								
40	R2																																								
43	LOCATION 12 - IR-90 WB AT W. 14TH ST		11	22																																					
43	P1 TO PB3	9			9					9																															
43	PB3 TO PB1	170			170					170																															
43	PB1 TO P4	7			7					7																															
43	PB1 TO PB2	43							43																																
43	PB2 TO P3	6			6					6																															
43	PB2 TO PB4	131			131					131																															
43	PB4 TO P2	8			8					8																															
43	PB1 TO PB5	207			207					207																															
43	PB5 TO PB6	73							73																																
43	PB6 TO P5	8			8					8																															
43	PB6 TO PB7	140			140					140																															
43	PB7 TO EX. POWER SERVICE	53			53					53																															
43	R1																																								
43	R2																																								
		1830	110	1487					343	1487																															

CUY-71-90-WRONG WAY SIGNS  
 MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 5/19/2023 TIME: 8:34:08 AM USER: Brigham  
 G:\Clients\ODOT\Safety Design Projects\_112342\Task 5 CUY 17190 PID 113797\113797-400-Engineering\Traffic\Sheets\113797\_IS004.dgn

TRAFFIC SUBSUMMARY

DESIGN AGENCY  
  
 WOOLPERT  
 ONE EASTON OVAL  
 SUITE 400  
 COLUMBUS, OH 43219  
 T 614-476-6000

DESIGNER  
 JTB

REVIEWER  
 JGW 2/13/23

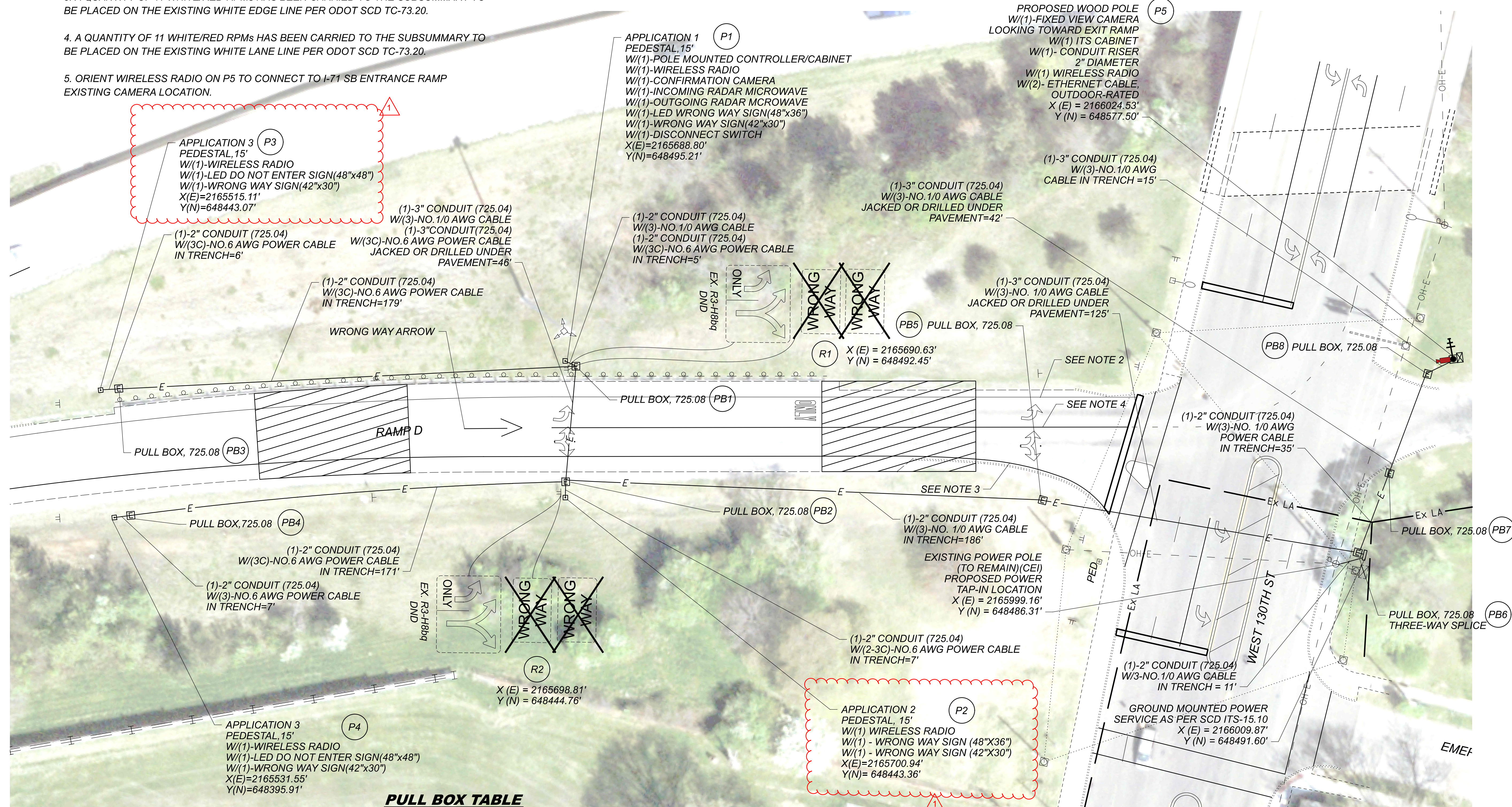
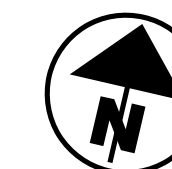
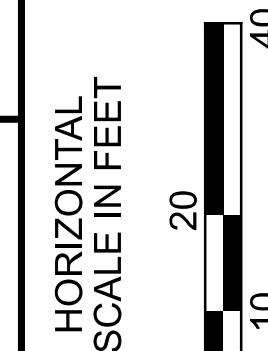
PROJECT ID  
 113797

SHEET TOTAL  
 12 72

NOTES:

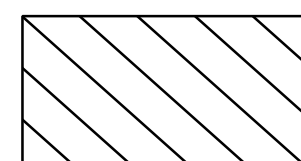
- REFER TO SURVEY PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.
- A QUANTITY OF 11 YELLOW/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING YELLOW EDGE LINE PER ODOT SCD TC-73.20.
- A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE EDGE LINE PER ODOT SCD TC-73.20.
- A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE LANE LINE PER ODOT SCD TC-73.20.
- ORIENT WIRELESS RADIO ON P5 TO CONNECT TO I-71 SB ENTRANCE RAMP EXISTING CAMERA LOCATION.

LOCATION 04



**PULL BOX TABLE**

PULL BOX #	COORDINATES		SIZE
	X (E)	Y (N)	
1	2165693.33	648494.17	18"
2	2165699.67	648449.38	18"
3	2165521.81	648445.27	18"
4	2165537.61	648398.17	18"
5	2165882.33	648484.57	18"
6	2166006.49	648491.21	18"
7	2166011.56	648525.43	18"
8	2166017.25	648566.50	18"



- APPROXIMATE DETECTION AREA

NO.	DATE	DESCRIPTION
1	5-18-23	ADDED SIGNS WITH NOTES
REVISIONS		

NOTES:

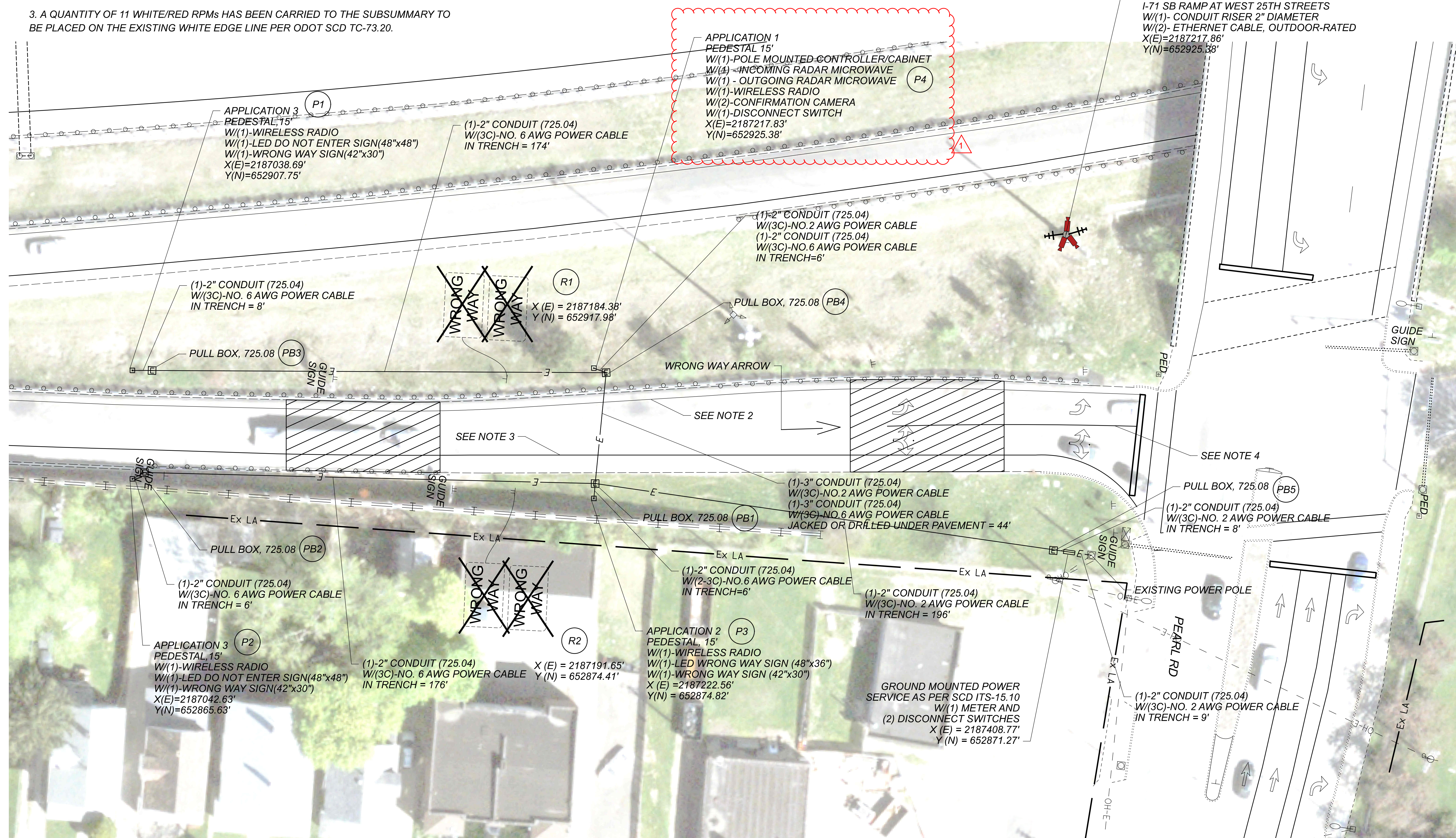
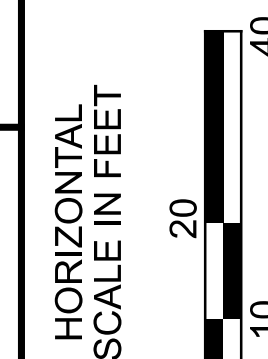
1. REFER TO SURVEY PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.

2. A QUANTITY OF 11 YELLOW/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING YELLOW EDGE LINE PER ODOT SCD TC-73.20.

3. A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE EDGE LINE PER ODOT SCD TC-73.20.

4. A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE LANE LINE PER ODOT SCD TC-73.20.

LOCATION 09



PULL BOX TABLE

PULL BOX #	COORDINATES		SIZE
	X (E)	Y (N)	
1	2187222.51	652880.63	18"
2	2187047.05	652868.52	18"
3	2187046.34	652908.39	18"
4	2187222.75	652924.06	18"
5	2187403.61	652973.60	18"

- APPROXIMATE DETECTION AREA

TRAFFIC CONTROL PLAN  
 I.R. 71 NB AT PEARL RD / W 25TH STREET

DESIGN AGENCY  
  
 WOOLPERT  
 ONE EASTON OVAL  
 SUITE 400  
 COLUMBUS, OH 43219  
 T 614-476-6000

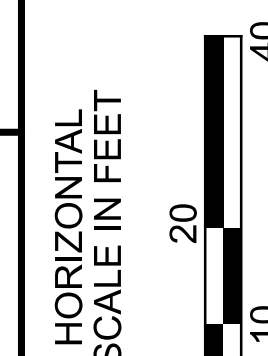
DESIGNER	JTB
REVIEWER	JGW 2/13/23
PROJECT ID	113797
SUBSET	0
TOTAL	0
SHEET	36
TOTAL	72

NO.	DATE	DESCRIPTION
1	5-18-23	ADDED NOTES
REVISIONS		

- NOTES:
- REFER TO SURVEY PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.
  - A QUANTITY OF 11 YELLOW/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING YELLOW EDGE LINE PER ODOT SCD TC-73.20.
  - A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE EDGE LINE PER ODOT SCD TC-73.20.
  - A QUANTITY OF 11 WHITE/RED RPMs HAS BEEN CARRIED TO THE SUBSUMMARY TO BE PLACED ON THE EXISTING WHITE LANE LINE PER ODOT SCD TC-73.20.
  - THERE IS AN UPCOMING BRIDGE PROJECT THAT AFFECTS THIS LOCATION. THE CONTRACTOR SHALL FURNISH ALL MATERIALS THAT COMPRISE A FUNCTIONAL WRONG WAY DETECTION SYSTEM AS SHOWN IN THE PLANS BUT DESIGNATED "TO BE PERFORMED BY OTHERS."

MATCHLINE A

LOCATION 11



TRAFFIC CONTROL PLAN  
 I.R. 71 NB AT QUIGLEY RD.

DESIGN AGENCY  
**WOOLPERT**  
 ONE EASTON OVAL  
 SUITE 400  
 COLUMBUS, OH 43219  
 T 614-476-6000

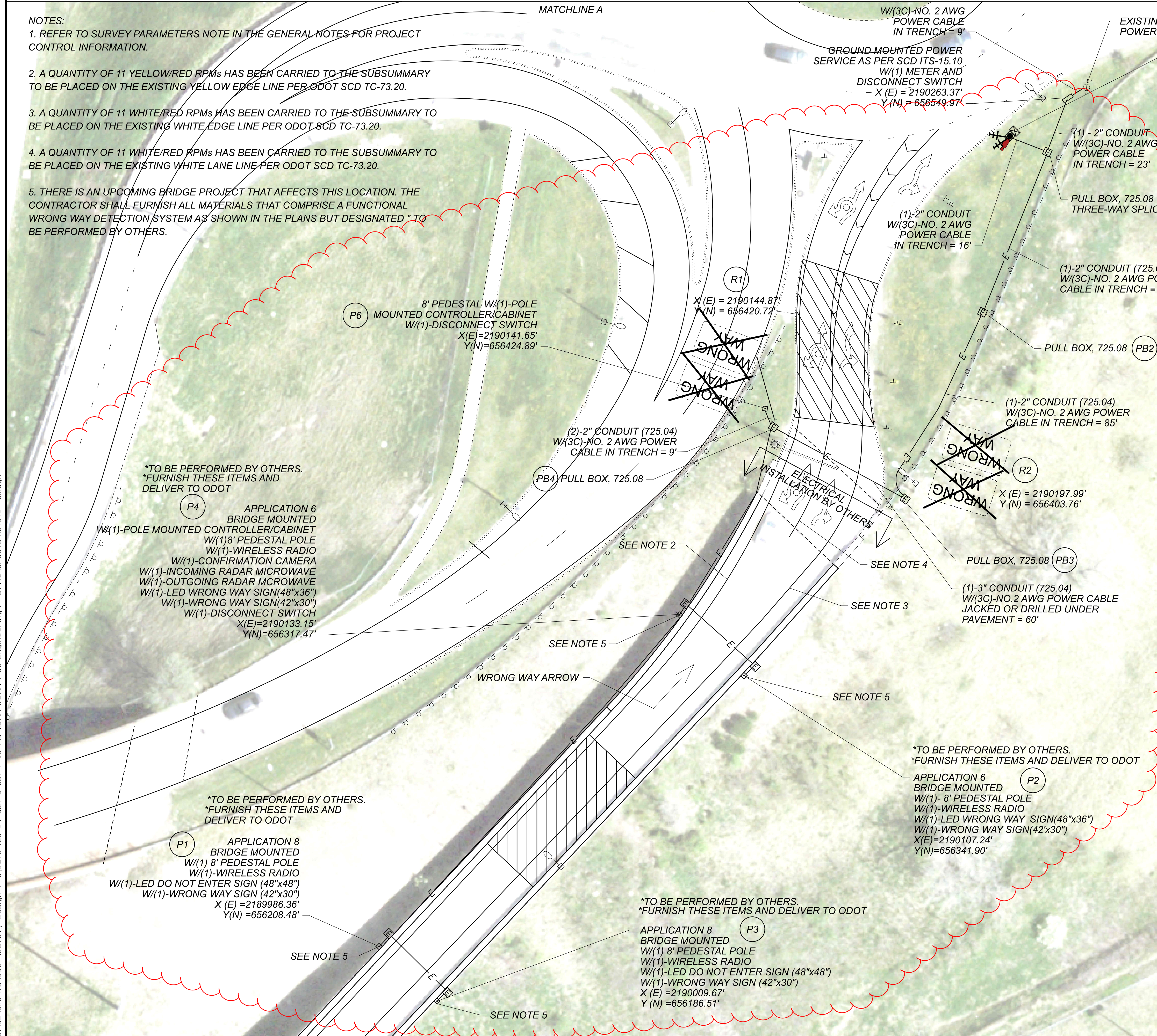
DESIGNER: JTB  
 REVIEWER: JGW 2/13/23  
 PROJECT ID: 113797

SUBSET	TOTAL
0	0
SHEET	TOTAL
40	72

PULL BOX TABLE

PULL BOX #	COORDINATES		SIZE
	X (E)	Y (N)	
1	2190254.62'	656528.37'	18"
2	2190228.55'	656463.90'	18"
3	2190198.29'	656388.27'	18"
4	2190144.49'	656417.83'	18"

NO.	DATE	DESCRIPTION
REVISIONS		



\*TO BE PERFORMED BY OTHERS.  
 \*FURNISH THESE ITEMS AND DELIVER TO ODOT

P4 APPLICATION 6  
 BRIDGE MOUNTED  
 W(1)-POLE MOUNTED CONTROLLER/CABINET  
 W(1)8' PEDESTAL POLE  
 W(1)-WIRELESS RADIO  
 W(1)-CONFIRMATION CAMERA  
 W(1)-INCOMING RADAR MICROWAVE  
 W(1)-OUTGOING RADAR MICROWAVE  
 W(1)-LED WRONG WAY SIGN(48"x36")  
 W(1)-WRONG WAY SIGN(42"x30")  
 W(1)-DISCONNECT SWITCH  
 X(E)=2190133.15'  
 Y(N)=656317.47'

\*TO BE PERFORMED BY OTHERS.  
 \*FURNISH THESE ITEMS AND DELIVER TO ODOT

P1 APPLICATION 8  
 BRIDGE MOUNTED  
 W(1) 8' PEDESTAL POLE  
 W(1)-WIRELESS RADIO  
 W(1)-LED DO NOT ENTER SIGN (48"x48")  
 W(1)-WRONG WAY SIGN (42"x30")  
 X (E) =2189986.36'  
 Y(N) =656208.48'

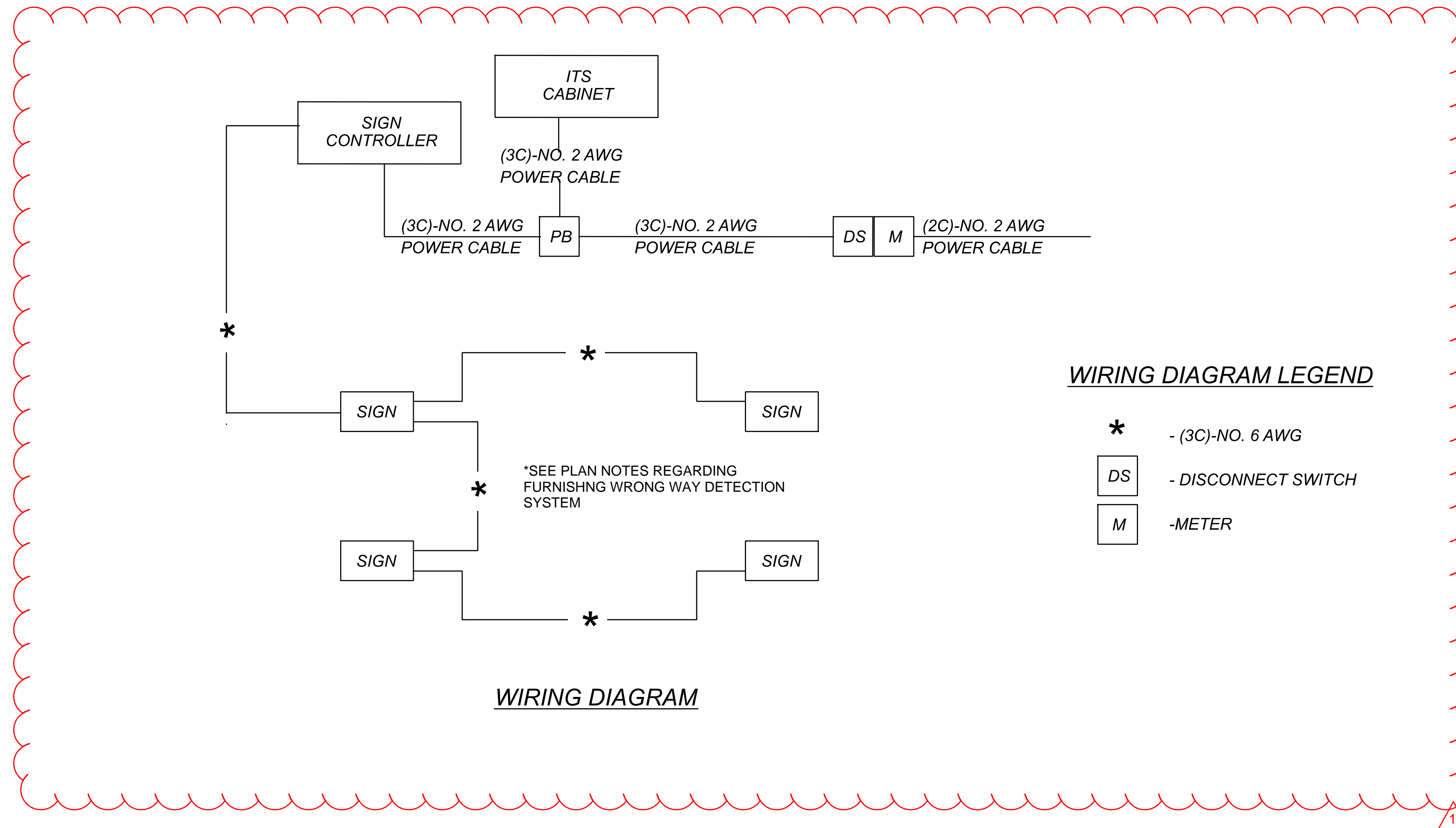
\*TO BE PERFORMED BY OTHERS.  
 \*FURNISH THESE ITEMS AND DELIVER TO ODOT

P3 APPLICATION 8  
 BRIDGE MOUNTED  
 W(1) 8' PEDESTAL POLE  
 W(1)-WIRELESS RADIO  
 W(1)-LED DO NOT ENTER SIGN (48"x48")  
 W(1)-WRONG WAY SIGN (42"x30")  
 X (E) =2190009.67'  
 Y (N) =656186.51'

\*TO BE PERFORMED BY OTHERS.  
 \*FURNISH THESE ITEMS AND DELIVER TO ODOT

P2 APPLICATION 6  
 BRIDGE MOUNTED  
 W(1)- 8' PEDESTAL POLE  
 W(1)-WIRELESS RADIO  
 W(1)-LED WRONG WAY SIGN(48"x36")  
 W(1)-WRONG WAY SIGN(42"x30")  
 X(E)=2190107.24'  
 Y(N)=656341.90'

- APPROXIMATE DETECTION AREA



WIRING DIAGRAM LEGEND

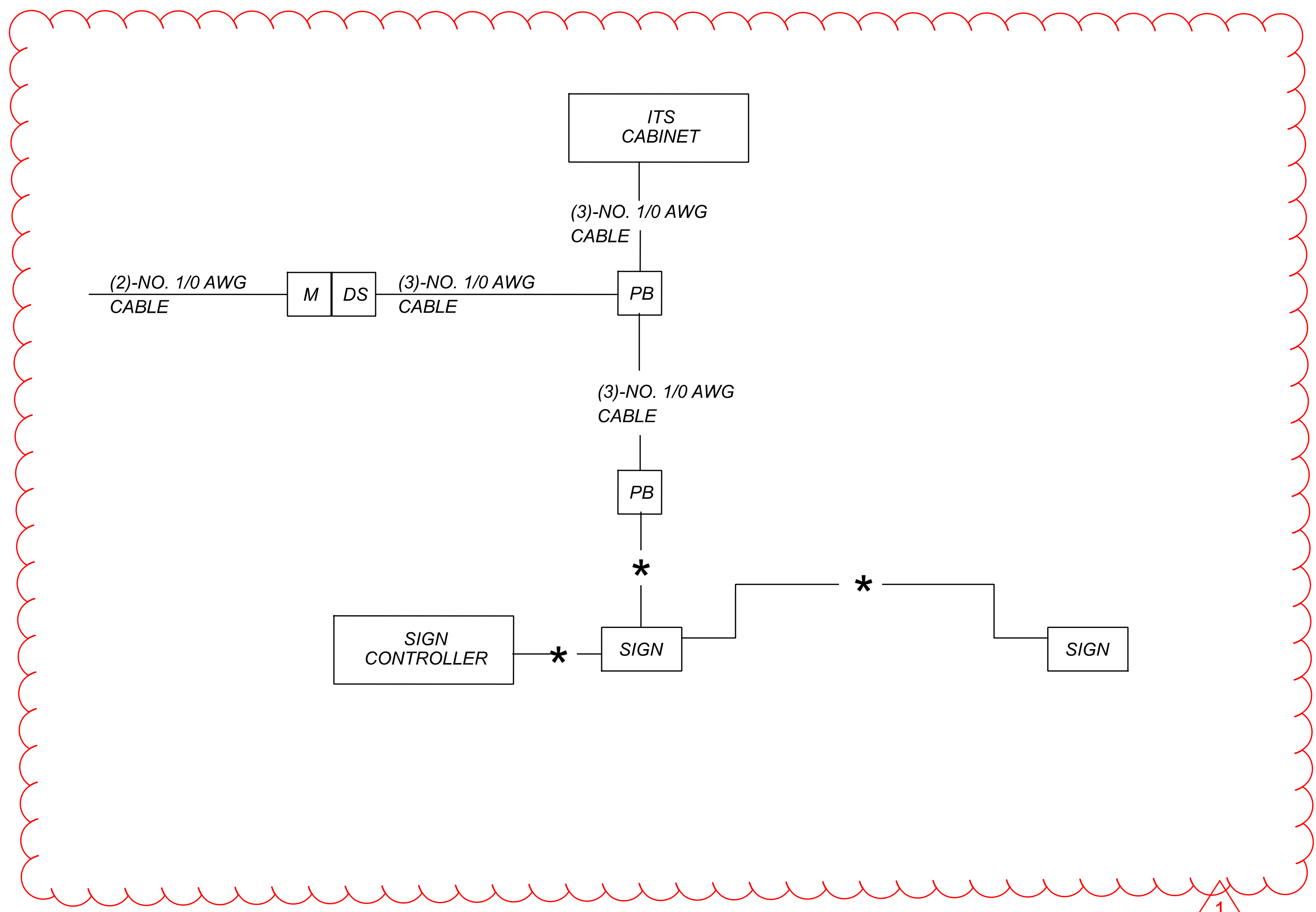
- \* - (3C)-NO. 6 AWG
- DS - DISCONNECT SWITCH
- M - METER

WIRING DIAGRAM

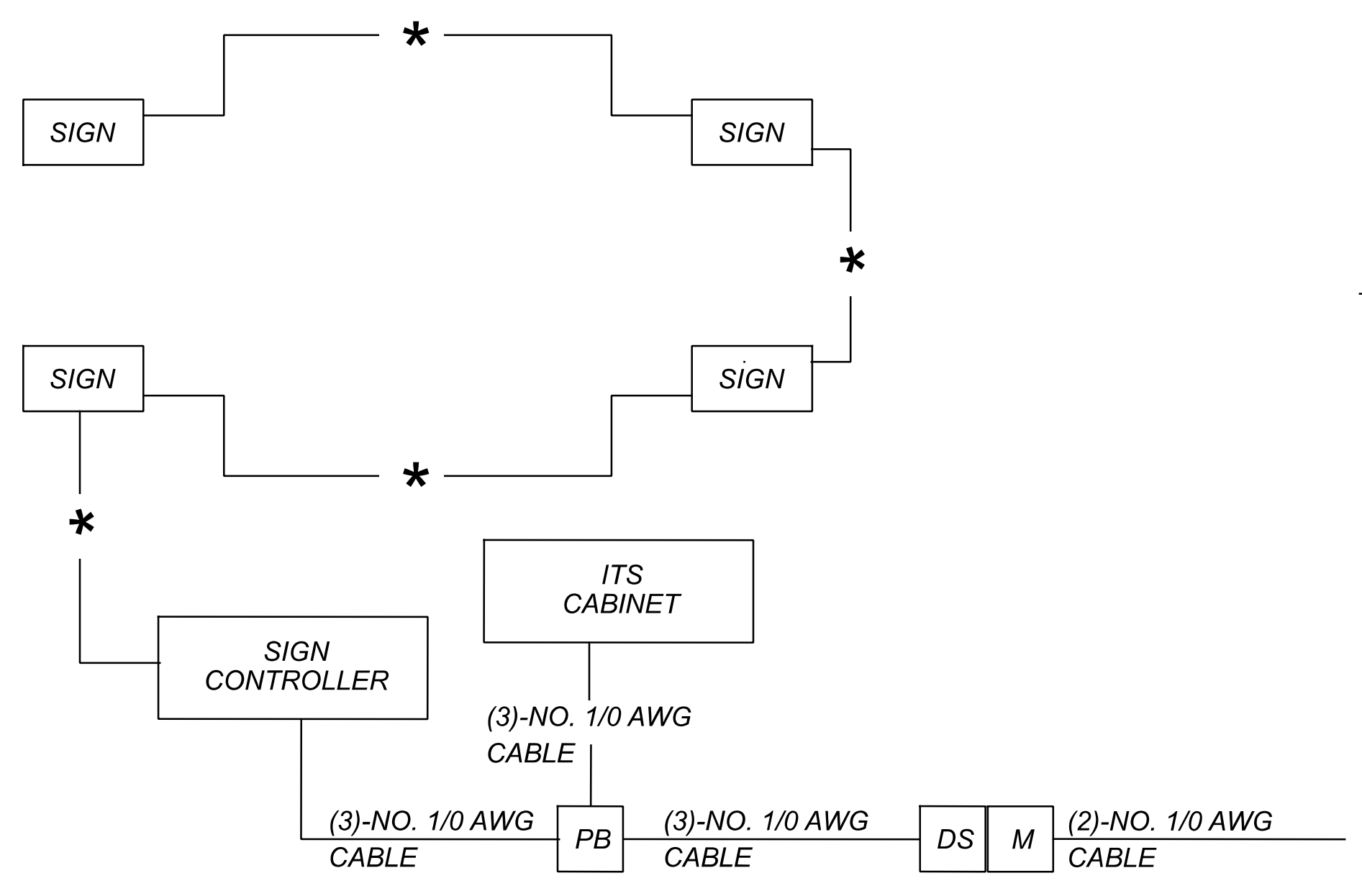
NO.	DATE	DESCRIPTION	SUBSET	TOTAL
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REVISIONS			41	72

SHEET	TOTAL
41	72





1



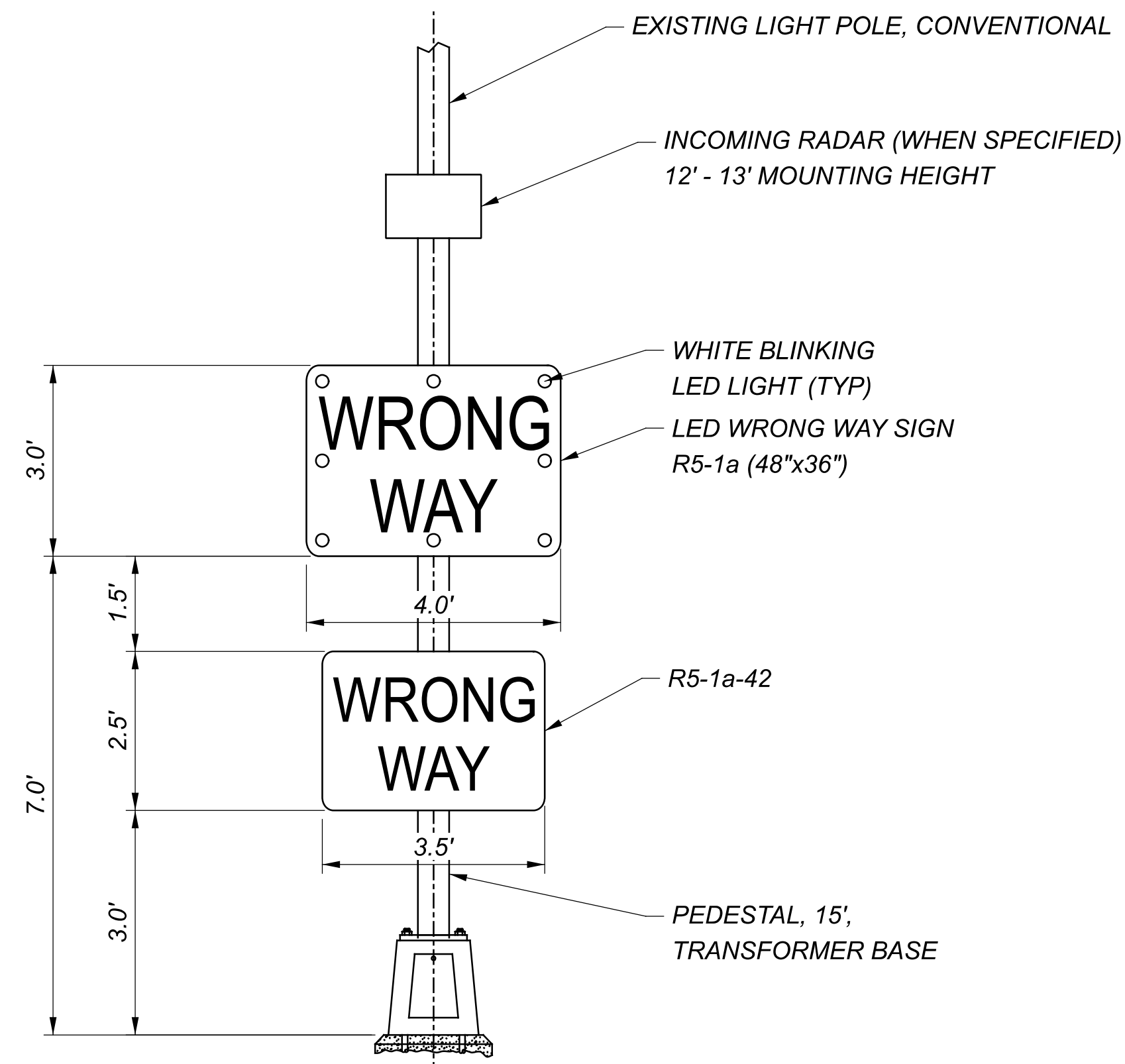
WIRING DIAGRAM

WIRING DIAGRAM LEGEND

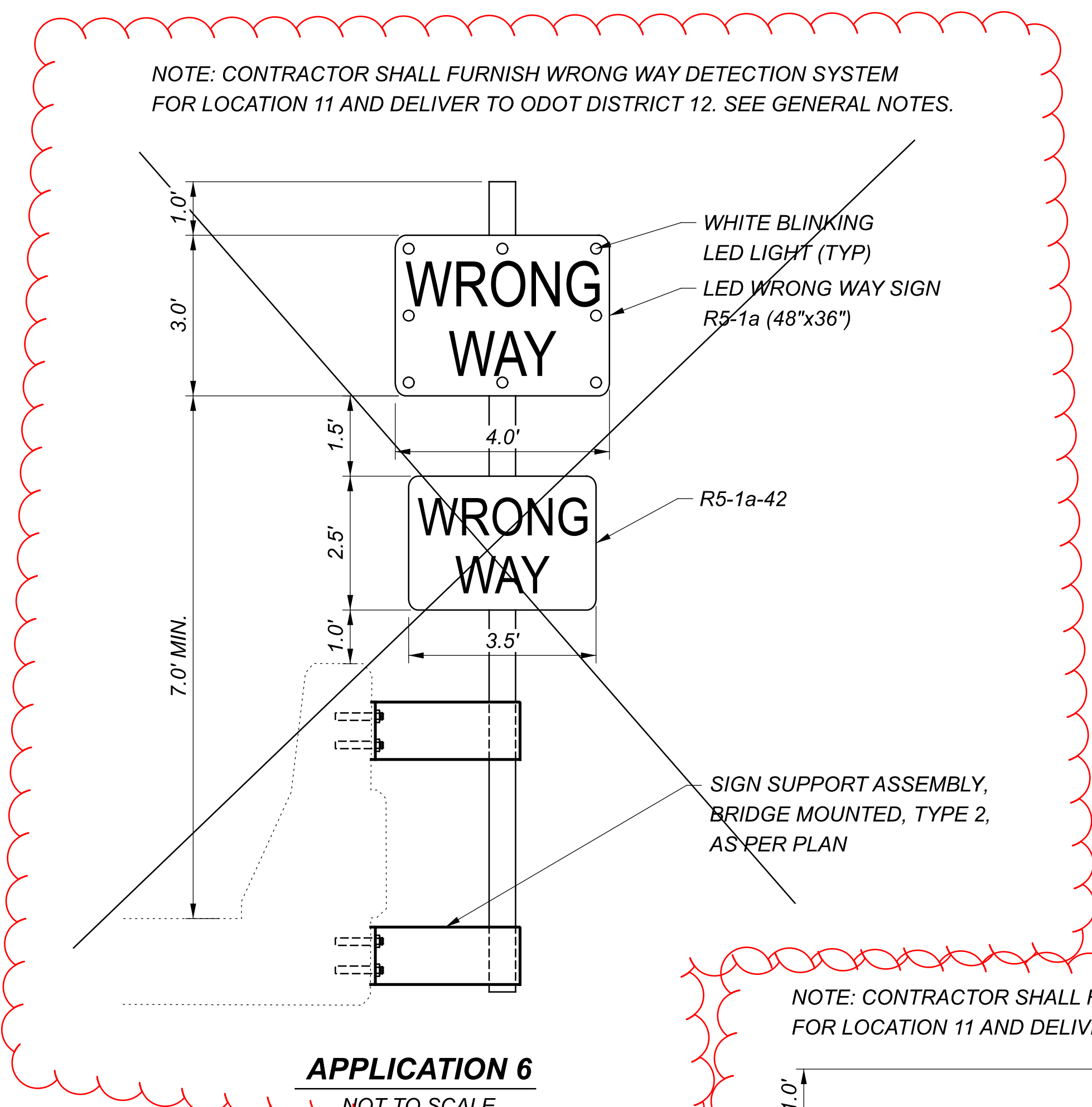
- \* - (3C)-NO. 6 AWG
- DS - DISCONNECT SWITCH
- M - METER

NO.	DATE	DESCRIPTION
1	5-18-23	REVISED WIRING DIAGRAM
REVISIONS		

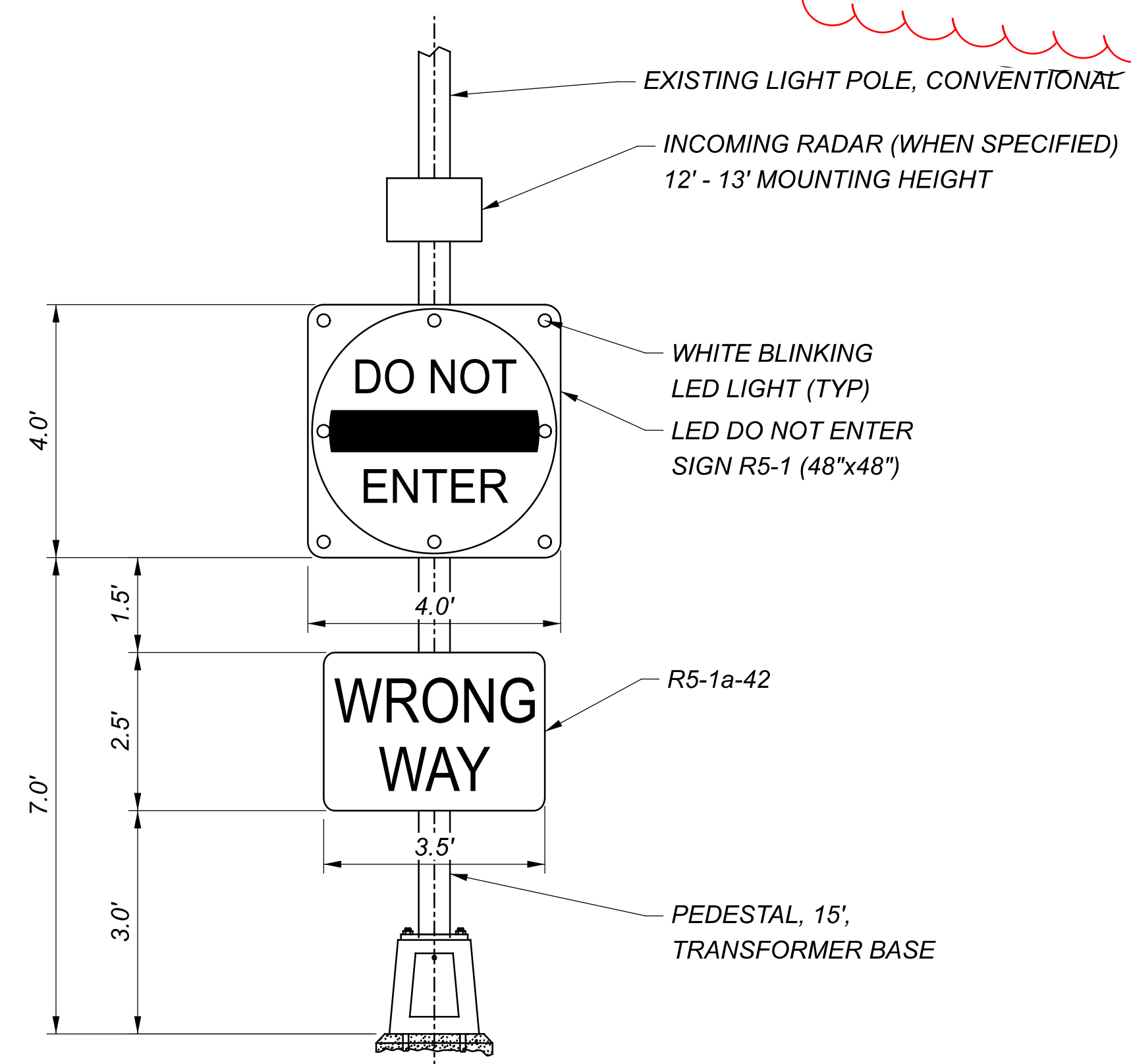
DESIGN AGENCY	
<b>WOOLPERT</b> <small>ADVANCED TRAFFIC CONTROL</small>	
<small>ONE EASTON OVAL SUITE 400 COLUMBUS, OH 43219 T 614-476-6000</small>	
DESIGNER	JTB
REVIEWER	JGW 2/13/23
PROJECT ID	113797
SUBSET	TOTAL
0	0
SHEET	TOTAL
53	72



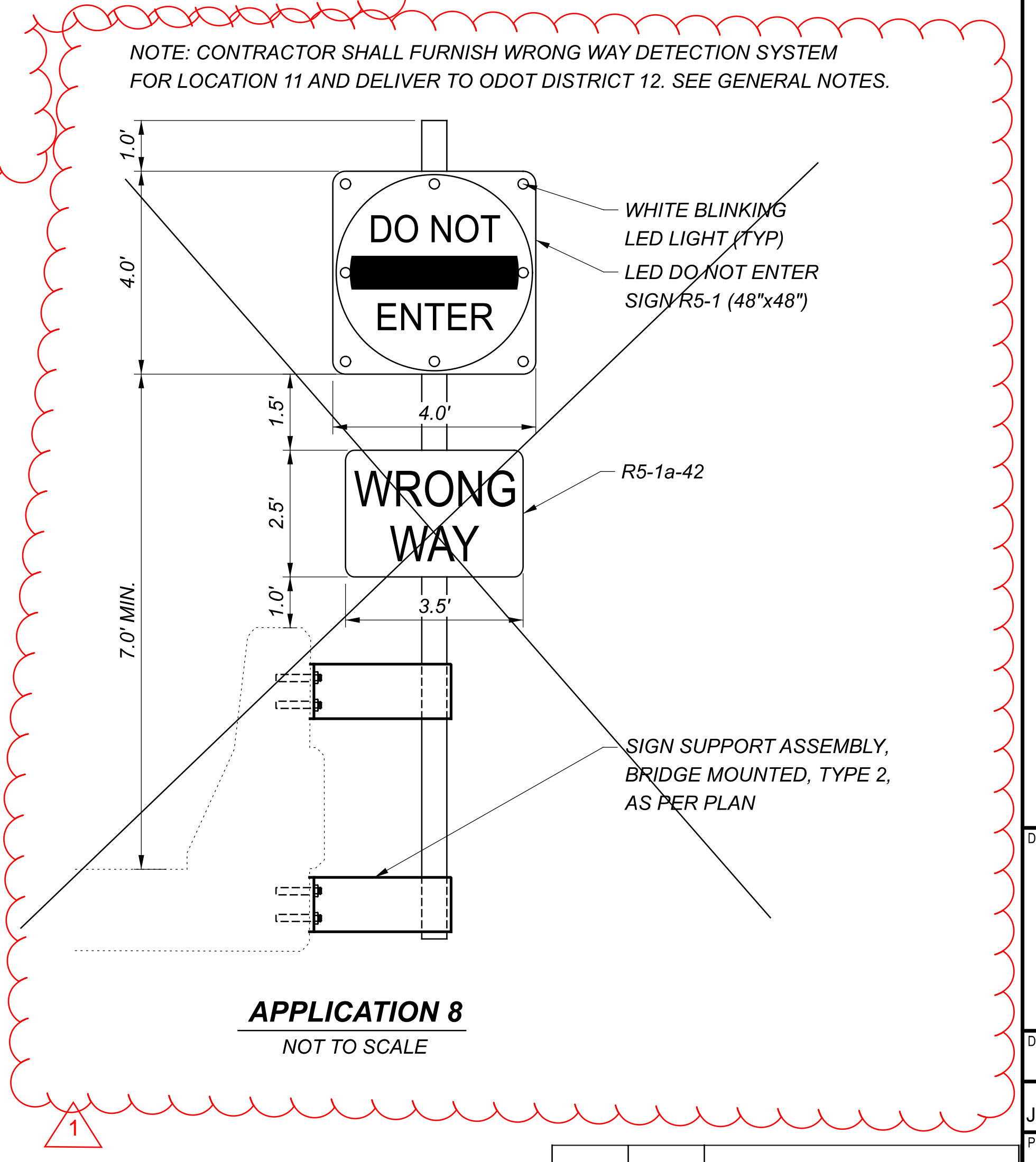
**APPLICATION 5**  
NOT TO SCALE



**APPLICATION 6**  
NOT TO SCALE



**APPLICATION 7**  
NOT TO SCALE



**APPLICATION 8**  
NOT TO SCALE

NO.	DATE	DESCRIPTION
1	5-18-23	REMOVED DETAILS
REVISIONS		

DESIGN AGENCY

1203 WALNUT STREET  
SECOND FLOOR  
CINCINNATI, OH 45202  
T 513-272-6300

DESIGNER  
KWA

REVIEWER  
JGW 2/13/23

PROJECT ID  
113797

SHEET TOTAL  
72 72