TEMPORARY WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWINGS: IN ADDITION TO ODOT CMS 614.04 AND 614.11:

ITEM 614 - WORK ZONE MARKING SIGNS	TOTAL	<u>64</u> EACH
UNEVEN LANES (W8-11-36)		<u>16</u> EACH
NO EDGE LINES (W8-H12a-36)		<u>16</u> EACH
NO PASSING ZONES (W14-3-40)		<u>16</u> EACH
LOW SHOULDER (W8-9-36)		<u>16</u> EACH
ITEM 614 - WORK ZONE STOP LINES, CLASS I (2 APPLICATIONS) ITEM 614 - WORK ZONE CENTER LINES, CLASS I 2 APPLICATIONS)	-	<u>100</u> FT <u>5.00</u> MILE

THE WORK ZONE MARKINGS SHALL BE PLACED IN THE SAME LOCATION AS THE PERMANENT MARKINGS ON THE FINAL SURFACE COURSE

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.05. IN ADDITION, THE FOLLOWING PROVISIONS SHALL APPLY:

1. ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN FOURTEEN (14) DAYS.

2. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE CITY.

FLASHING ARROW PANELS

WHEN FLASHING ARROW PANELS ARE UTILIZED FOR NIGHT LANE CLOSURES, SOLAR, ELECTRIC, OR BATTERY POWERED EQUIPMENT SHALL BE EXCLUSIVELY UTILIZED WHEN LOCATED WITHIN 300 FEET OF ANY RESIDENCE. DIESEL OR GASOLINE POWERED GENERATORS WILL NOT BE PERMITTED IN THESE AREAS, EXCEPT WHEN USED INTERMITTENTLY FOR THE SOLE PURPOSE OF CHARGING INTERNAL BATTERIES WHICH PROVIDE THE PRIMARY POWER FOR THE EQUIPMENT

PLACEMENT OF ASPHALT CONCRETE COURSES

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES AND FOR PAVEMENT WIDENING OPERATIONS.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC. AS PER PLAN.

TEMPORARY TRENCH RESTORATION

TRENCH RESTORATION IN PAVEMENT AREAS FOR THE STORM SEWER CONSTRUCTION (UNTIL THE NEW PAVEMENT IS CONSTRUCTED) SHALL BE IN ACCORDANCE WITH 611. THE ROADWAY SURFACE OVER THE TRENCHES SHALL BE ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR B FOR SHORT PERIODS OF TIME. A MINIMUM OF 2" ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PLACED AT THE TRENCH WITHIN 14 DAYS AS APPROVED BY THE ENGINEER. THE SURFACE SHALL BE MAINTAINED SMOOTH AND FREE OF RUTS, AS APPROVED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT SURFACE RESTORATION FOLLOWING INSTALLATION OF PIPES UNDER ITEM 611.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC <u>15</u> CY

THE ABOVE QUANTITY IS BASED ON A 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC THICKNESS OF 2 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH FOR 611 ITEMS. THE TRENCH WIDTH WAS ASSUMED TO EQUAL THE SPAN TIMES 1.25 PLUS ONE FOOT.

ADDENDUM 1

11/20/23 REVISE WORK ZONE MARKING CLASS

11/16/23 REVISE TRAFFIC SIGNAL MODIFICATIONS NOTE

ADDITIONAL MEASURES, MATERIALS MAY BE REQUIRED TO MAINTAIN A UNIFORM, SMOOTH SURFACE UNTIL THE NEW PAVEMENT IS CONSTRUCTED. PAYMENT FOR THIS WORK INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

TRAFFIC SIGNAL MODIFICATIONS

IN ADDITION TO THE REQUIREMENTS OF MAINTAINING TRAFFIC AT INTE CONTRACTOR SHALL BE REQUIRED TO MODIFY THE EXISTING SIGNAL

THE TRAFFIC SIGNAL INSTALLATION SHALL BE MODIFIED TO OPERATE OF DETECTORS, SIDE STREET APPROACHES TURNED OFF. THIS MODE SH ON THE APPROACHES ARE IN PLACE AND OPERATIONAL.

THE CONTRACTOR SHALL BE REQUIRED TO INVITE A VILLAGE REPRESE MODIFICATIONS.

THE CONTRACTOR SHALL CONTACT THE VILLAGE A MINIMUM OF 7 DAY PEDITE THE WORK IN THIS AREA TO LIMIT THE AMOUNT OF TIME THE E

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE PLAN EXCEPT FOR LAW ENFORCEMENT OFFICER WITH PATROL CAR.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC UNDER THE FOLLOWING CONDITIONS.

- 1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQU OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MOL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTI INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY F
- 2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLATION BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF EXISTING SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL OPERATIONAL AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUT AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBER THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAIL ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPM BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SI CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATIS SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION C FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPER MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTEI

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONS THAT IS WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCA WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT. OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CO THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIE SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE VILLAGE OF H BY VILLAGE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO **OF SECTION 105.15**

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTII A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGE SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE ME

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL S

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CO OUTAGE SHALL NOT EXCEED 12 HOURS AND SHALL NOT INCLUDE THE SECTION. WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUC TION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, B "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WH MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUN

- 1 TIME OF NOTIFICATION OF MAI FUNCTION
- 2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
- 3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIS
- 4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILIT 5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER V OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE C FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

ERSECTING ROADS AND DRIVES, AT ALL TIMES, THE INSTALLATION AT HIGH ST./MAIN ST.		
ON A PRETIMED MODE WITH THE OPERATIONAL VEHICLE HALL BE IN OPERATION UNTIL THE NEW DETECTOR LOOPS		
SENTATIVE TO BE PRESENT DURING TRAFFIC SIGNAL		
YS PRIOR TO THE REQUIRED MODIFICATIONS AND SHOULD EX- EXISTING SIGNAL IS MODIFIED FROM NORMAL OPERATIONS.		
E LUMP SUM FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER		
	c	n
IC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT		Ú -
QUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO DIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL TION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE REMOVED OR MODIFIED AND THE WORK ACCEPTED.		ERAL NO
ISTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL INSTALLATION UNTIL THE WORK IS ACCEPTED. THE L THE NEW/PROPOSED SIGNAL INSTALLATION IS IN PLACE AND		פבואם
JTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING SS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. EIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE 'BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. MENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE		טר ואאררוט שבוע
ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL SFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR		
E REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY RATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL R AS POSSIBLE.		IVIAIIN I EINAINUE
ISECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. ATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE		MAIN
THE RESPONSE OF THE CONTRACTOR SHALL BE AS COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM		_
, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE IED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF HEBRON FOR POLICE SERVICES AND MAINTENANCE SERVICES BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS		
IRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO ENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR ETHOD SELECTED.		
Y TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED SYSTEM.		
ONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS E HOURS OF 6:00 AM TO 6:00 PM. ANY SIGNALIZED INTER- CTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNC- BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY		
HICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE	DESIGN AGE	ENCY
NCTIONS INCLUDING:	F	Ē
ST OF PARTS REPAIRED OR REPLACED; TY OF REOCCURRENCE; FULL SERVICE.	DESIGNER	RS
WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION	REVI	^{EWER} 5-30-23
CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID	PROJECT ID 109 SHEET	9934 TOTAL
	1.7	67

EX.1. ITO AL 611 06400 140 FT 4* CONDUT, TYPE IL TRAFFIC SIGNAL 626 25244 106 FT CONDUT, TYPE IL CONDUT, TYPE IL 626 25408 20 FT CONDUT, TYPE IL CONDUT, TYPE IL 626 25604 23 FT CONDUT, TYPE IL CONDUT, TYPE IL 625 25604 35 FT CONDUT, TYPE IL CONDUT, TYPE IL 625 25604 35 FT CONDUT, TYPE IL CONDUT, TYPE IL 625 25604 70 FT TRENCH TRENCH 625 3000 9 EACH PULID BX, T25 06, 326 18 625 3000 7 EACH PUENCUAR SIGNAL HEAD, (ED), 326 CTON, 12* LENS, 1-WAN 632 20507 8 EACH PUENCUAR SIGNAL HEAD, (ED), 326 CTON, 12* LENS, 1-WAN 632 20601 8 EACH PUENCUAR SIGNAL HEAD, (ED), 326 CTON, 12* LENS, 1-WAN 632 40600 201 FT SIGNAL CABLE, 2 CONDUCTOR, NO, 14	UNIT	GRAND	ITEM	ITEM		PARTICIPATION			/			NUMBER			SHEET		
225 25244 106 FT CONDUT, 1-W, 72 50 51 225 25449 20 FT CONDUT, 27, 72 50 51 225 25449 23 FT CONDUT, 27, 72 50 51 225 25844 23 FT CONDUT, 27, 72 50 51 225 25944 23 FT CONDUT, 7, 72 50 51 225 25902 206 FT CONDUT, 7, 72 50 51 225 25902 206 FT CONDUT, 7, 72 50 51 225 30530 7 EACH GROUND ROD FT 225 30501 1 EACH GROUND ROD FT 225 30507 8 EACH GROUND ROD AS PER PLAN FT 232 20500 8 EACH VPEDESTRIAN SIGNAL HEAD (LED). 75 52 64 FT 322 25010 8 EACH VPEDESTRIAN SIGNAL HEAD FE 323 40700 8 EACH COVERING OF PEDESTRIAN SIGNAL HEAD FE 323 40700 8		TOTAL	EXT.		(X)		02/CMQ/ 21/HBRN	01/S<2/05/ HBRN	58	28-34	24-27	22-23	21	14-17	8-13		
225 25244 106 FT CONDUT, 1-147, 252,051 225 25449 20 FT CONDUT, 27, 273,051 225 25449 23 FT CONDUT, 27, 273,051 225 25544 23 FT CONDUT, 27, 273,051 225 25644 23 FT CONDUT, 7, 273,051 225 25902 208 FT CONDUT, 7, 273,051 225 25902 208 FT CONDUT, 7, 273,051 225 30530 7 EACH GROUND ROD Conduction Recent	FT	140	00400	611			140		140								
895 29498 20 FT CONDUT, 2-12, 726, 651 895 22594 23 FT CONDUT, 3, 726, 651 895 22694 35 FT CONDUT, 3, 726, 651 895 22690 200 FT CONDUT, 3, 726, 651 895 22690 200 FT CONDUT, 3, 726, 651 895 22690 200 FT CONDUT, 3, 726, 651 895 22690 207 FT TPENCH 825 32001 1 EACH PULL DOX, 725, 63, 572 F19 825 32001 1 EACH PULD DOX, 72, 72, 726, 651 826 36010 207 FT UNDERCOUND WADK, 640, 572 F144 822 26010 8 EACH VENCULAR SIGNAL HEAD, LED, 172 F12, F145, F144 832 26011 8 EACH PEDESTIAN SIGNAL HEAD, LED, 20 CUNTDOWN, AU 832 26001 8 EACH PEDESTIAN SIGNAL HEAD, LED, 20 CUNTDOWN, AU 832 26001 8 EACH PEDESTIAN SIGNAL H							106		140			106					
925 25412 23 FT CONDUT, 2-72, 725,061 925 25504 23 FT CONDUT, 3-725,061 925 25602 208 FT CONDUT, 4-725,061 925 25602 208 FT CONDUT, 4-725,061 926 26000 207 FT TRENCH 926 30500 7 EACH PULL BOX, 720,061,502,164 926 320001 1 EACH PULL BOX, 720,061,502,164 925 32001 1 EACH PERCH PULL BOX, 720,065,902,144 926 32001 8 EACH VERICUAR SIGNAL READ (LED), 749,250,070,070,000,000,000,000,000,000,000,0							20					20					
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ENGINEER

THE TERM "ENGINEER" AS NOTED IN THE PLANS SHALL BE CONSIDERED "ODOT AND THE VILLAGE OF HEBRON ENGINEER".

PLAN AND SPECIFICATION COMPLIANCE

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL DEVICES IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, THE 2023 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND ITS SUPPLEMENTAL SPECIFICATIONS, OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE HL AND TC STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE ODOT BUREAU OF DESIGN SERVICES (SUPPLEMENTS THE PLAN SPECIFICATIONS).

TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL MEET OR EXCEED THE STANDARDS SPECIFIED IN THE FOLLOWING DOCUMENTS:

- A. SPECIFICATIONS LISTED IN THIS PLAN.
- B. APPLICABLE SECTIONS OF NEMA STANDARDS, PUBLICATION NO. TS2-1998 (OR CURRENT NEMA ISSUE) AND/OR TS1-1989.
- C. 2023 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS 625, 632, 633. 725, 732, 733 AND SUPPLEMENTAL SPECIFICATIONS 816 AND 907.

IN CASE OF A CONFLICTING SPECIFICATION STATEMENT THE SPECIFICATION DOCUMENT HIERARCHY SHALL BE IN THE ORDER LISTED FROM (A) HIGHEST TO (C) LOWEST.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS. MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT AND VIDEO DETECTION EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM AEP AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. THE FOLLOWING QUANTITY OF ITEM 611 - 4" CONDUIT, TYPE E IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

611, 4" CONDUIT, TYPE E	<u>_140</u> F	Т
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ITEM 625 - GROUND ROD, AS PER PLAN

IN ADDITION TO CMS ITEM 625.16. THIS ITEM SHALL CONSIST OF FURNISHING AND RUNNING OF A SEVEN STRAND No.4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CONTROLLER CABINET.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

THE PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF CMS 632.09 AND 732.06 ALONG WITH THE FOLLOWING REQUIREMENTS;

A. THE PUSHBUTTON HOUSING SHALL BE YELLOW.

- B. THE PUSHBUTTON SHALL BE A VANDAL-RESISTANT NON-MOTION PIEZO TYPE AS MANUFACTURED BY POLARA OR CAMPBELL OR AN APPROVED EQUAL.
- C. THE R10-3E, 9" x 15" SIGNS SHALL BE SUPPLIED WITH THE PEDESTRIAN PUSHBUTTONS.
- D. PROVIDE SPEECH WALK MESSAGES FOR "WAIT' "MAIN STREET. WALK SIGN IS ON TO CROSS MAIN STREET" AND "HIGH STREET. WALK SIGN IS ON TO CROSS HIGH STREET".
- E. FURNISH PUSHBUTTONS THAT ARE RATED AS WATERPROOF AND WHICH INCORPORATE A SOLID NEOPRENE RUBBER GASKET TO SEAL ITSELF AGAINST MOISTURE
- F. SEAL THE PUSHBUTTONS HOUSING TO THE SIGNAL SUPPORT, PEDESTAL OR POLE WITH SILICONE.
- G. THE PUSHBUTTON HOUSING SHALL BE YELLOW IN COLOR.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER EACH FOR ITEM - 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL THIS ITEM INCLUDING PEDESTRIAN CROSSING SIGNS COMPLETE AND ACCEPTED IN PLACE.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

- SIGNAL SECTIONS: 1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
- 2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCAR-BONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
- 3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

a. SIGNAL HOUSING SHALL BE BLACK.

MOUNTING HARDWARE

- 1. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE (COLOR) LENS LOCATED IN FRONT OF THE MAST ARM.
- 2. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.

LAMPS:

LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL BE PROVIDED FOR ALL SIGNAL LENS TYPES AND SHALL BE 12" IN SIZE AND BE MANUFACTURED BY EITHER GE OR DIALIGHT.

VISORS:

SHALL BE CUTAWAY STYLE AS INDICATED IN THE PLANS AND BLACK IN COLOR AS APPROVED BY THE VILLAGE

BACKPLATES:

SHALL BE PROVIDED AS PER 732.22.

ODOT/VILLAGE OF HEBRON WILL MEASURE "VEHICULAR SIGNAL HEAD, (LED), BY TYPE, POLYCARBONATE, AS PER PLAN" BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, DIMMERS, AND LAMPS AS SPECIFIED.

ITEM 632 - PEDESTRIAN S

IN ADDITION TO THE REQ THE FOLLOWING REQUIR

1. SIGNAL HEADS AND VIS POLYCARBONATE PLAS

2. PIPE. SPACERS AND FIT POLYCARBONATE PLAS GALVANIZED STEEL OR

3. PROPER EXTERIOR CO OF COLORED PLASTIC

I AMPS

1. LED, LIGHT EMITTING D FOR ALL SIGNAL LENS GE OR DIALIGHT.

HOUSING: 1. SIGNAL HOUSING SHAL

VISORS: 1. SHALL BE CUTAWAY ST IN COLOR.

ODOT/VILLAGE OF HEBRC (LED), TYPE D2, COUNTDC UNITS FURNISHED AND IN SUPPORT AND MOUNTING LAMPS AS SPECIFIED.

ITEM 632 - POWER SERVIC

POWER SERVICE SHALL B FOLLOWING EXCEPTIONS.

1. THE METER BASE MOU THE CENTER OF THE ME

2. THE CONTRACTOR SHA

3 ALL POWER SERVICES OPERATED BYPASS.

DISCONNECT SWITCH EN 632 - POWER SERVICE AS MASTER NO. 4BKA OR WIL BRASS AND KEYING SHAL

THE CONTRACTOR SHALL FOR INFORMATION REGA ORDERING POLES. THE C SCHEDULING ANY INSPEC SERVICE HOOK UP. THE C POWER COMPANY FOR TH CIRCUMSTANCES SHALL COMPANY'S CIRCUITS. TH THE CONTRACTOR IS RES THE PAYING OF ALL FEES.

ITEM 632 - REMOVAL OF T

THE EXISTING TRAFFIC SI MESSENGER WIRE, POLES ACCORDANCE WITH CMS SHALL BE SALVAGED IN A

STORE THE FOLLOWING I SIGNAL & PEDESTRIAN CONFLICT MONITORS. SIGNAL CABLE, POWER

ITEMS TO BE SALVAGED S LOCATION TO BE SPECIFI

THE CONTRACTOR SHALL ITEMS.

THE CONTRACTOR SHALL SO AS NOT TO DAMAGE I

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JSER:

ADDENDUM 1

11/16/23 REVISE ITEM 632 POWER SERVICE NOTE

	·
SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AUDIBLE	
QUIREMENTS OF CMS 632 AND 732, REMENTS SHALL ALSO APPLY:	
ISORS SHALL BE CONSTRUCTED OF STIC AND MEET ITE SPECIFICATIONS.	
ITTINGS CONSTRUCTED OF STIC MAY BE USED IN LIEU OF R ALUMINUM.	
OLORS SHALL BE OBTAINED BY USE MATERIAL RATHER THAN PAINTING.	
DIODE, SIGNAL LAMP UNITS SHALL BE PROVIDED TYPES AND BE MANUFACTURED BY EITHER	
LL BE BLACK IN COLOR.	
TYLE AS INDICATED IN THE PLANS AND BLACK	ŝ
ON WILL MEASURE ITEM 632 - PEDESTRIAN SIGNAL HEAD OWN, AUDIBLE BY THE NUMBER OF COMPLETE NSTALLED, AND WILL INCLUDE ALL G HARDWARE, CLOSURE CAPS, AND	TRAFFIC SIGNAL NOTE
ICE, AS PER PLAN	<u>0</u>
BE AS PER CMS ITEM 632 AND SCD TC-83.10 WITH THE S:	IC SI
UNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO IETER BASE FROM THE GROUND.	AFF
IALL SUPPLY THE NECESSARY METER BASES.	L L
S SHALL BE METERED. THE METER SHALL HAVE A LEVER	
ICLOSURES, FURNISHED IN ACCORDANCE WITH CMS ITEM S PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO ILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR LL BE TO THE VILLAGE OF HEBRON MASTER.	
L CONTACT THE METER SECTION OF THE POWER COMPANY ARDING THE METER BASE INSTALLATION PRIOR TO CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND CTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE HE ELECTRICAL SERVICE CONNECTION. UNDER NO THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER HE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. SPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND S. (SEE ALSO ODOT CMS 632.24.)	
Σ	
TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	
SIGNAL INSTALLATION, INCLUDING SIGNAL HEADS, CABLE, ES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN S 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS ACCORDANCE WITH THE LISTING GIVEN HEREIN.	DESIGN AGENCY
ITEMS FOR SALVAGE: N HEADS, PUSH BUTTONS, DETECTOR UNITS, CONTROLLERS, , PULL BOXES, SPAN WIRE HANGERS AND SIGNS, POLES, R CABLE AND MESSENGER WIRE.	F Er
SHALL BE DELIVERED TO THE VILLAGE OF HEBRON AT A IED BY THE VILLAGE OF HEBRON (740)-928-2261.	
L GIVE 24 HOURS ADVANCED NOTICE OF DELIVERY OF SALVAGED	DESIGNER PRS REVIEWER
L REMOVE, STORE AND DELIVER MATERIALS IN A CAREFUL MANNER ITEMS TO BE SALVAGED.	ALP 5-30-23 PROJECT ID 109934 SHEET TOTAL
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ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THIS PROJECT REQUIRES CONSTRUCTION OF MAST ARM SIGNAL SUPPORTS AND MAST ARM FOUNDATIONS IN LOCATIONS WHICH CONTAIN EXISTING UNDERGROUND UTILITIES. ORDERS FOR SIGNAL SUPPORTS SHALL BE PLACED SYSTEMATICALLY AFTER THEIR RESPECTIVE FOUNDATIONS HAVE BEEN CONSTRUCTED UNLESS WRITTEN PERMISSION HAS BEEN GIVEN BY ODOT/VILLAGE OF HEBRON ENGINEER TO ORDER SUPPORTS AT AN EARLIER DATE. FOUNDATIONS THAT HAVE BEEN CONSTRUCTED SHALL BE PROTECTED AS PER SECTION 107.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

WITHIN TWO [2] WEEKS OF RECEIVING A SIGNED CONTRACT, THE CONTRACTOR SHALL LAYOUT THE PERIMETER OF EACH FOUNDATION THEN CONTACT OUPS [811, 1-800-362-2764], AND OGPUPS 11-800-925-0988], A MEETING BETWEEN THE CONTRACTOR, VILLAGE OF HEBRON ENGINEER AND A REPRESENTATIVE FROM THE MAINTAINING AGENCY WILL BE HELD ON SITE NO LATER THAN TWO [2] WEEKS AFTER THE OUPS NOTIFICATION. BASED UPON THE PRIORITIES DETERMINED AT THIS MEETING, THE CONTRACTOR WILL CONSTRUCT FOUNDATIONS BEGINNING WITH THE HIGHEST PRIORITY FIRST.

IF A UTILITY OR OTHER CONFLICT EXISTS WHICH REQUIRES THAT A MAST ARM SUPPORT BE CONSTRUCTED AT A LOCATION OTHER THAN WHAT IS INDICATED IN THE PLAN. THE MAINTAINING AGENCY AND THE ENGINEER SHALL DETERMINE WHETHER THE SPECIFIED MAST ARM SUPPORT SIZE IS APPROPRIATE. IF A LARGER MAST ARM SUPPORT IS REQUIRED, WITHIN TEN [10] WORKING DAYS, THE MAINTAINING AGENCY WILL PROVIDE THE CONTRACTOR WITH REVISED SUPPORT DATA. THE CONTRACTOR SHALL NOT ORDER THE SUPPORTS PRIOR TO RECEIVING THIS DATA. SUPPORT FOUNDATION LOCATIONS SHALL BE ADJUSTED ONLY WHEN APPROVED BY THE ENGINEER. IF THE MAST ARM SUPPORT DESIGN IS MODIFIED DUE TO REVISED FOUNDATION LOCATION. THE REVISED MAST ARM DESIGN WILL BE PAID FOR IN THE FINAL CHANGE ORDER TO THE PROJECT.

THE CONTRACTOR IS ADVISED TO LOCATE AND CONSTRUCT THE MAST ARM FOUNDATIONS AS SOON AS POSSIBLE IN ORDER TO PROVIDE AMPLE LEAD TIME TO ORDER THE MAST ARMS. ALL FOUNDATIONS SHALL BE EXCAVATED WITH EXTREME CAUTION AS APPROVED BY THE ENGINEER. NO TIME EXTENSIONS SHALL BE GRANTED FOR DELAYS WHICH ARE CAUSED BY THE CONTRACTOR'S FAILURE TO PLAN FOUNDATION WORK AS SOON AS POSSIBLE IN THE CONTRACTOR'S PROGRESS SCHEDULE.

THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING AN ADDITIONAL 3" CONDUIT ELL IN THE FOUNDATION AND CAPPING IT FOR FUTURE USE. LOCATIONS AND OREINTATIONS OF ADDITIONAL CONDUITS WILL BE AS SPECIFIED IN THE PLANS.

PAYMENT FOR ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO EXCAVATE AND BUILD THE FOUNDATION SYSTEM, COMPLETE IN PLACE AND ACCEPTED.

GROUNDING AND BONDING

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THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- 1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
- A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (CMS 725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (CMS 725.051 OR CMS 725.052), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
- C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
- D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
- E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
- F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

GROUNDING AND BONDING (CONTINUED)

2. CONDUITS.

- A. THE CMS 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
- B. THE CMS 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
- C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

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 ¾ 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:

CON	ID.	VEHICLE	<u>PEDESTRIAN</u>
NO.	<u>COLOR</u>	SIGNAL	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

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 SPICE.
- 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.

GROUNDING AND BONDING (CONTINUED)

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 - COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 12, AS PER PLAN OR ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 13, AS PER PLAN

IN ADDITION TO PROVISIONS OF THE ODOT CMS, FURNISH AND INSTALL ORNAMENTAL SIGNAL SUPPORTS AS SPECIFIED IN THE PLANS. THE SIGNAL SUPPORT DESIGNER SHALL PROVIDE DRAWINGS OF A SIGNAL SUPPORT WITH STRUCTURAL ASPECTS OF THE DESIGN AND MATERIALS IN COMPLIANCE WITH THE 2013 AASHTO STANDARD SPECIFICATIONS, WITH 2022 INTERIM REVISIONS, FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS. THE SIGNAL SUPPORT SHALL BE ASTM A595 GRADE A WITH A MINIMUM YIELD STRENGTH OF 50 KSI.

- 4. GALLOPING: NO

SUBMIT, TO THE ENGINEER PRIOR TO INCORPORATION: TWO COPIES OF THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS. WHICH IDENTIFY AND DESCRIBE EACH MANUFACTURED SIGNAL SUPPORT AND SIGNAL SUPPORT ITEM WHICH IS BEING INCORPORATED INTO THE CONSTRUCTION. THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS SHALL EACH BE REVIEWED, SEALED, STAMPED, AND DATED BY ONE OHIO REGISTERED PROFESSIONAL ENGINEERS. PAYMENT FOR ITEM 632 "COMBINATIÓN SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 12, AS PER PLAN OR ITEM 632 "COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 13. AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE AND SHALL INCLUDE ALL SIGNAL SUPPORT DESIGN, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

THE ORNAMENTAL MAST ARM SIGNAL SUPPORTS SHALL BE AS MANUFACTURED BY AMERON POLE PRODUCTS (TULSA, OK) INCLUDING A 36" WASHINGTON DECORATIVE CLAM SHELL BASE BY SPRING CITY ELECTRICAL (SPRING CITY, PA) TO MATCH THE EXISTING STREET LIGHTING POLES. THE SIGNAL SUPPORT UPRIGHTS AND MAST ARMS SHALL BE TAPERED AND ROUND. THE POLE MAST ARMS SHALL BE A SMOOTH TAPERED DESIGN WITH A 60" UPSWEEP (15' MAST ARM ATTACHMENT) AS SHOWN ON THE POLE DETAILS IN THE PLANS. THE TOP OF THE UPRIGHT SHALL BE FITTED WITH A SPRING CITY EDGEWATER DECORATIVE SPIKE FINIAL. THE DECORATIVE CLAM SHELL BASE SHALL BE MADE FROM CAST DUCTILE IRON PER ASTM A536-84 GRADE 65-45-12. THE POLES AND ARMS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 FOLLOWED BY A POWDER COAT OF OGF SUPER WET GLOSS BLACK THERMOSETTING SUPER DURABLE POWDER. THE POLE FINISH SHALL INCLUDE A 5-YEAR WARRANTY PER ODOT SS 916. THE POLE FINISH SHALL BE EQUAL TO FEDERAL 595B COLOR #17038 GLOSS BLACK. ALL MATERIALS SUPPLIED SHALL BE MANUFACTURED IN ACCORDANCE WITH THE BUY AMERICA PROVISIONS OF 23 CFR 635,410(C)(6), FHWA BUY AMERICA 23 U.S.C. 313 REQUIREMENTS AND THE BUILD AMERICA, BUY AMERICA (BABA) REQUIREMENTS. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATION 632, 732, AND TC-83.20 PEDESTAL POLE BY HEIGHT, SHALL BE MANUFACTURED AS FOLLOWS TO MATCH THE EXISTING STREET LIGHTING POLES: THE POLE SHALL BE HAPCO ARLEN 17 SERIES STRAIGHT ALUMINUM POLE WITH A 12 FLUTE CROSS SECTION. THE TOP OF THE POLE SHALL BE FITTED WITH A POLE CAP OR TENON AS REQUIRED. THE POLES SHALL BE POWDER COATED PER AAMA 2604 (SUPER DURABLE). ALL STEPS INVOLVED IN THE FINISHING OF THE STRUCTURES SHALL BE COMPLETED AT THE LOCATION AT WHICH THE POLES WERE MANUFACTURED. THE POLE FINISH SHALL INCLUDE A 5-YEAR WARRANTY PER ODOT SS 916. THE POLE COLOR SHALL BE EQUAL TO FEDERAL 595B COLOR #17038 GLOSS BLACK (HAPCO P742). THE PEDESTAL ASSEMBLY SHALL BE HAPCO POLE PRODUCTS PART NUMBER A7S-08B4-4-SF12-P742

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.

THE FOLLOWING DESIGN PARAMETERS SHALL BE USED: 1. BASIC WIND SPEED = 90 MPH 2. DESIGN LIFE = 25 YEARS 3. FATIGUE CATEGORY = III 5. TRUCK INDUCED GUST: NO

ITEM 632 - PEDESTAL, 8", TRANSFORMER BASE

11/16/23

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REVISE	ITEM	632	SIGNAL	SUPPORT.	PEDESTAL	NOTES

TRAFFIC SIGNAL NOTES



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