

PROJECT DESCRIPTION

THIS PROJECT INVOLVES INSTALLING APS AT THE INTERSECTION, RELOCATION OF THE TRAFFIC CONTROL CABINET, MAST ARM POLE AND RAMP RECONSTRUCTION. MD 528 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THIS INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH AND SOUTH LEGS OF THE INTERSECTION. THE MD 528 LEFT TURNS OPERATE IN EXCLUSIVE-PERMISSIVE PHASING.

CONTROLLER REQUIREMENTS

A FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE FURNISHED BY SHA AND INSTALLED BY THE CONTRACTOR. VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED BY SHA. AN APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1003	MAINTENANCE OF TRAFFIC (36TH, 94TH, MD 90 & 142ND)	EA	3
2002	TEST PIT EXCAVATION	CY	3
5004	F & I 5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT LINE MARKINGS	LF	50
5005	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS ANY WIDTH	LF	780
5006	F & I 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	665
5007	F & I 24" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	60
6001	F & I STANDARD TYPE A COMBINATION CURB AND GUTTER 12" GUTTER PAN 8" DEPTH	LF	104
6002	F & I 5" CONCRETE SIDEWALK	SF	570
6003	F & I DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	50
8001	F & I 2 WIRE CENTRAL CONTROL UNIT	EA	1
8004	ADJUST EXISTING HANDHOLE TO GRADE INCLUDING COLLAR	EA	2
8007	F & I AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS	EA	4
8008	F & I BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	3
8016	F & I MAST ARM POLE & 60' MAST ARM ANY 'T' DIMENSION	EA	1
8021	REMOVE & DISPOSE MATERIAL AND EQUIPMENT PER ASSIGNMENT (36TH, 94TH, MD 90 & 142ND)	EA	1
8030	DISCONNECT, PULL-BACK & REROUTE CABLES	LF	560
8034	F & I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED	LF	85
8036	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	22
8038	F & I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	105
8040	F & I WEATHER HEAD, 3"	EA	1
8042	F & I ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS	EA	1
8043	F & I ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 AWG - THHN/THWN	LF	200
8052	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
8054	F & I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	340
8056	F & I ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	95
8057	F & I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	260
8065	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
8066-A	12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING (OVERHEAD)	LF	2300*
8067-A	RELOCATE EXISTING TRAFFIC SIGNAL (ENTIRE CLUSTER)	EA	3
8068-A	RELOCATE EXISTING PED SIGNAL	EA	3
8069-A	RELOCATE EXISTING VIDEO CAMERA	EA	1
8071-A	RELOCATE EXISTING SIGNS	EA	1

*QUANTITY TO BE USED AS REQUIRED

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME PROPERTY OF THE CONTRACTOR.

PHASING CHART

NO PHASE CHANGE

SPECIAL NOTES

- APS WILL FUNCTION AS FOLLOWS:
- TO CROSS COASTAL HIGHWAY (NORTH LEG):
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS COASTAL HIGHWAY AT 36TH. CROSSWALK ANGLES RIGHT".
 - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- TO CROSS COASTAL HIGHWAY (SOUTH LEG):
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS COASTAL HIGHWAY AT 36TH".
 - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

GENERAL NOTES

1. ALL EXISTING FOUNDATION TOPS WITHIN EXISTING SIDEWALK SHALL BE REMOVED 2" BELOW SIDEWALK GRADE.
2. ALL PROPOSED FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
3. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 TO COORDINATE.
4. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
5. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
6. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
7. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
8. ANY HARDWARE NECESSARY FOR THE INSTALLATION OF RELOCATED TRAFFIC SIGNAL EQUIPMENT SHALL BE INCIDENTAL TO THE PERTINANT RELOCATE PAY ITEM.
9. IF EXISTING INTERCONNECT CABLE CANNOT BE REROUTED AS SPECIFIED IN PLANS, OVERHEAD INTERCONNECT CABLE SHALL BE REPLACED BETWEEN 33RD STREET AND CONVENTION CENTER ROAD. OVERHEAD INTERCONNECT QUANTITY HAS BEEN INCLUDED BUT SHALL ONLY BE USED IF RELOCATION IS NOT POSSIBLE.
10. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.

CONTACT PERSONS FOR DISTRICT #1 ARE AS FOLLOWS:

MR. GENE COFIELL ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (410) 677-4040
 MR. RAVINDRA GANVIR ASSISTANT DISTRICT ENGINEER - CONSTRUCTION PHONE: (410) 677-4020

MR. JAMES WRIGHT ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 677-4010

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410)787-7630
 MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF TRAFFIC OPERATIONS PHONE: (410)787-7630

MR. ED RODENHIZER CHIEF, SIGNAL OPERATIONS PHONE: (410)787-7650
 MR. EUGENE BAILEY CHIEF, SIGN OPERATIONS PHONE: (410)787-7676

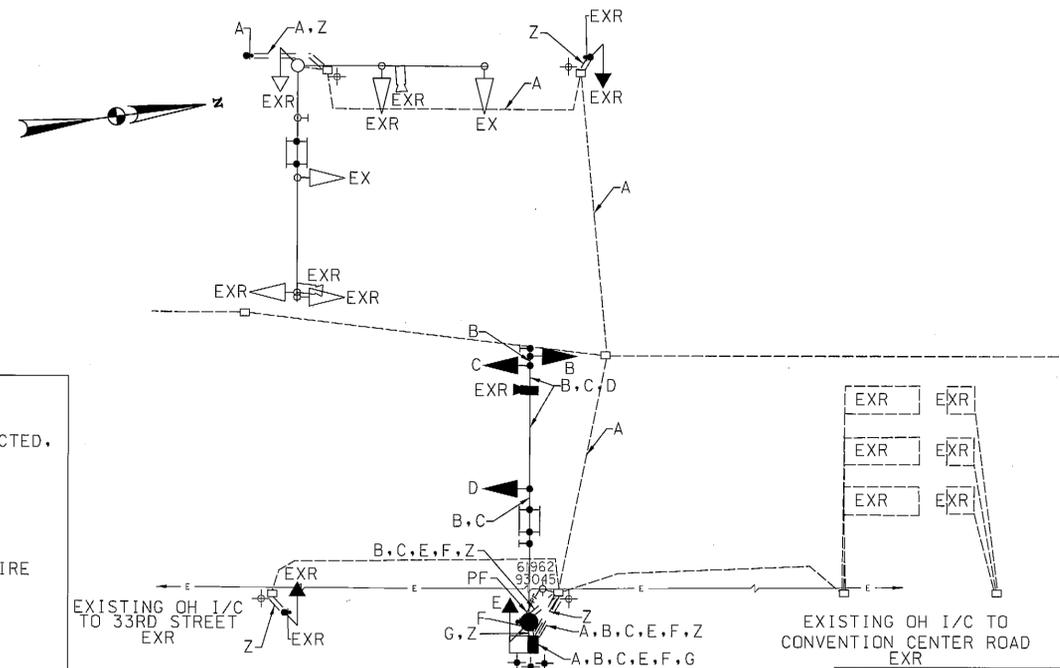
EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9042	CONTROLLER ASC II WITH TELEMETRY	EA	1
9044	CONTROLLER CABINET, SIZE 6	EA	1
9086	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
9571	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN 2 - D-3(1) (96"X16")	SF	22

WIRING KEY

A,F	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	EXR	EXISTING CABLE TO BE DISCONNECTED, PULLED BACK & REROUTED
D,E	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	EX	EXISTING CABLE TO REMAIN
B,C	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	PF	RELOCATED OVERHEAD POWER SERVICE BY DELMARVA
G	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG) 3 RUNS	Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
		⊕	EXISTING GROUND ROD
		⊕	PROPOSED GROUND ROD



TOD NO: XX443-05
 SHA NO: W0409A52/C52
 MD 528 @ 36TH, MD 90, 94TH ST, 142 ST

SHA STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION
MD 528 (COASTAL HWY.) AT 36TH ST.
 OCEAN CITY, MARYLAND

REVISIONS	GENERAL INFORMATION SHEET		
	SCALE 1"=20'	DATE NOVEMBER 2008	CONTRACT NO. XX4435185
	DESIGNED BY BJC	COUNTY WORCESTER	
	DRAWN BY BJC	LOGMILE 23052806.22	
	CHECKED BY DAE	TMS NO.	
	FAP NO.	TOD NO.	
TS NO. 2314B-GI	DRAWING SG-2	OF SG-13	SHEET NO. 2 OF 13

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