

PROJECT DESCRIPTION

THIS PROJECT INVOLVES INSTALLING APS, RELOCATING A MAST ARM POLE, INSTALLATION OF PEDESTAL POLES AND SIDEWALK 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

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

GENERAL NOTES

- ALL EXISTING FOUNDATION TOPS WITHIN EXISTING SIDEWALK SHALL BE REMOVED 2" BELOW SIDEWALK GRADE.
- ALL PROPOSED FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
- 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.
- 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.
- 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%.
- THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- ANY HARDWARE NECESSARY FOR THE INSTALLATION OF RELOCATED TRAFFIC SIGNAL EQUIPMENT SHALL BE INCIDENTAL TO THE PERTINANT RELOCATE PAY ITEM.
- IF EXISTING INTERCONNECT CABLE CANNOT BE REROUTED AS SPECIFIED IN PLANS, OVERHEAD INTERCONNECT CABLE SHALL BE REPLACED BETWEEN PACIFIC AVENUE AND 100TH STREET. OVERHEAD INTERCONNECT QUANTITY HAS BEEN INCLUDED BUT SHALL ONLY BE USED IF RELOCATION IS NOT POSSIBLE.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- THE CONTRACTOR SHALL COORDINATE WITH DISTRICT 1 TRAFFIC TO COORDINATE TRAFFIC SIGNAL TURN OFF AND TEMPORARY STOP CONTROL. CONTRACTOR SHALL VERIFY ANY EVENT OR DATE RESTRICTIONS PRIOR TO TRAFFIC SIGNAL TURN OFF.

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"

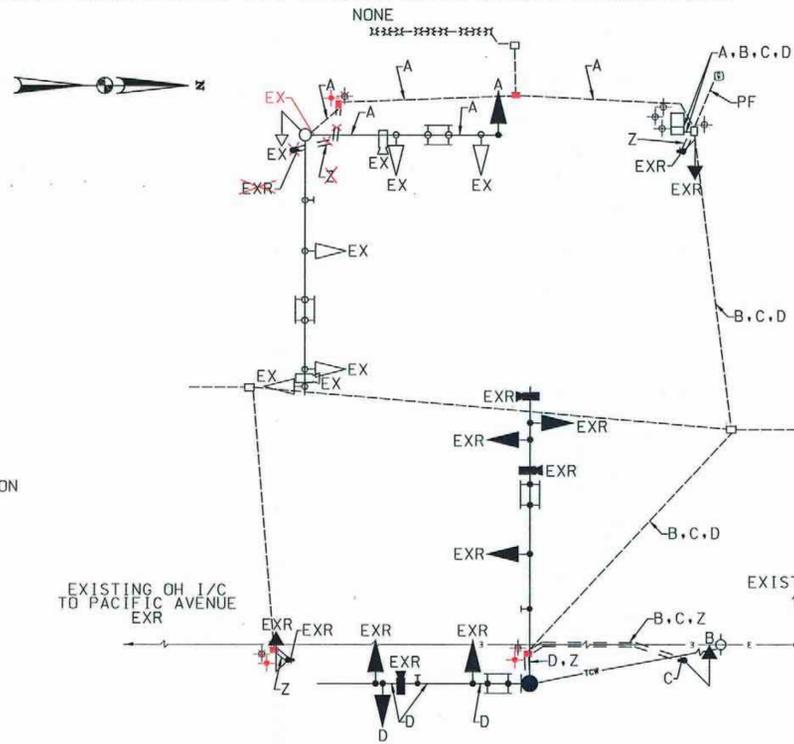
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9571	SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN	SF	59
	2 - D-3(1) (96"x16")		1 - R4-7 (24"x30")
	1 - R3-5 (MOD) (90"x36")		1 - D9-6 (24"x24")
	1 - D11-1 (24"x18")		1 - SPECIAL (WHITE/BLUE) (24"x18")

EQUIPMENT LIST "B"

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1003	MAINTENANCE OF TRAFFIC (PAID FOR ON 36TH GI)	EA	0
2002	TEST PIT EXCAVATION	CY	3
5005	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS ANY WIDTH	LF	1020 390
5006	F & I 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	630 0
5007	F & I 24" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	45
6001	F & I STANDARD TYPE A COMBINATION CURB AND GUTTER 12" GUTTER PAN 8" DEPTH	LF	235 215
6002	F & I 5" CONCRETE SIDEWALK	SF	1075 961
6003	F & I DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	80
8001	F & I 2 WIRE CENTRAL CONTROL UNIT	EA	1
8004	ADJUST EXISTING HANDHOLE TO GRADE INCLUDING COLLAR	EA	4 0
8007	F & I AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS	EA	4
8008	F & I BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	4 3
8021	REMOVE & DISPOSE MATERIAL AND EQUIPMENT PER ASSIGNMENT (PAID FOR ON 36TH GI)	EA	0
8024	F & I TWIN MAST ARM POLE & 50'/70' MAST ARMS ANY 'T' DIMENSION	EA	1
8030	DISCONNECT, PULL-BACK & REROUTE CABLES	LF	1100 1080
8034	F & I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED	LF	100 65
8036	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	59
8038	F & I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	110 70
8040	F & I WEATHER HEAD, 3"	EA	1
8045	F & I ELECTRICAL HANDHOLE	EA	4
8049	F & I 3" DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER	LF	20
8050	F & I 12" LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	3
8052	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	2 1
8054	F & I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	240 200
8056	F & I ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	240 200
8057	F & I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	450
8066	A 12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING (OVERHEAD)	LF	2700*
8067	ARELOCATE EXISTING TRAFFIC SIGNAL (ENTIRE CLUSTER)	EA	5
8068	ARELOCATE EXISTING PED SIGNAL	EA	3
8069	ARELOCATE EXISTING VIDEO CAMERA	EA	3
8071	ARELOCATE EXISTING SIGNS	EA	1
	8000 NEG F & I 6"x6" LANDSCAPE TIMBER	LF	20

EQUIPMENT LIST "C"

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



WIRING KEY

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

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1 & 5 CHANGE	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
PHASE 1 & 6	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
1 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PHASE 2 & 5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
2 & 5 CHANGE	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
PHASE 2 & 6	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PHASE 4 & 8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4 & 8 CHANGE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PHASE 4 ALT & 8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PED CLEARANCE/COUNTDOWN	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4 ALT & 8 CHANGE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PHASE 4 & 8 ALT	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PED CLEARANCE/COUNTDOWN	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4 & 8 ALT CHANGE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	DARK	DARK	DARK						

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS COASTAL HIGHWAY:

- WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS COASTAL HIGHWAY AT 94TH".
- WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

SHA STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION
 MD 528 (COASTAL HWY.) AT 94TH ST. OCEAN CITY, MARYLAND

REVISIONS		GENERAL INFORMATION SHEET	
1	REDLINE NO. 1 03/25/09 MOVE PEDESTAL POLE IN NE CORNER, MODIFY SIDEWALK RAMP WORK IN NE CORNER, REMOVE CROSSWALK INSTALLATION	SCALE	1"=20'
		DATE	NOVEMBER 2008
		CONTRACT NO.	XX4435185
		DESIGNED BY	BJG
		COUNTY	WORCESTER
		DRAWN BY	BJG
		LOGMILE	23052802.97
		CHECKED BY	DAE
		TIMS NO.	J610
		FAP NO.	
		TOD NO.	
TS NO.	I270H-GI	DRAWING	SG-8 OF SG-13
		SHEET NO.	8 OF 13