

**PROJECT DESCRIPTION**

THIS PROJECT INVOLVES MODIFICATION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 528 & 30TH STREET INCLUDING APS PUSHBUTTONS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, LED TRAFFIC SIGNAL HEADS AND VIDEO DETECTION. MD 528 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THIS INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH ALTERNATE PEDESTRIAN PHASES 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 WITH TELEMETRY CABLE 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.

**SPECIAL NOTES**

APS WILL FUNCTION AS FOLLOWS:

TO CROSS COASTAL HIGHWAY:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS PHILADELPHIA AT 30TH. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

**CONTACT PERSONS FOR DISTRICT #1 ARE AS FOLLOWS:**

- MR. KENNETH CIMINO ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (410) 677-4040
- MR. GREG HOLSEY ASSISTANT DISTRICT ENGINEER - CONST. PHONE: (410) 677-4020
- MR. BRUCE POOLE DISTRICT UTILITY ENGINEER PHONE: (410) 677-4082
- MR. JAMES WRIGHT ASSISTANT DISTRICT ENGINEER - MAINT. PHONE: (410) 677-4010
- MR. TERRY MCGEAN TOWN OF OCEAN CITY - CITY ENGINEER PHONE: (410) 289-8845

**CONTACT PERSONS FOR DOTS 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. JOHN COVER OFFICE OF HIGHWAY DESIGN PHONE: (410) 545-8766
- 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	SF	39
	2 - D-3(1) (72"X16")		
	2 - D-3(1) (84"X16")		
	4 - R10-3(1) (9"X15")		

**WIRING KEY**

Q,R,S,T	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	Y,AA	12-PAIR COMMUNICATION CABLE (NO. 19 AWG) SELF-SUPPORTING OVERHEAD
C,F,I,L,M,N,O,P	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	PF	EXISTING OVERHEAD POWER SERVICE BY DELMARVA
A,B,D,E,H,J,K	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
G	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG) 3 RUNS	+	PROPOSED GROUND ROD
U,V,W,X	VIDEO DETECTION CAMERA CABLE (3-CONDUCTOR, NO. 18 AWG)		

**EQUIPMENT LIST "B"**

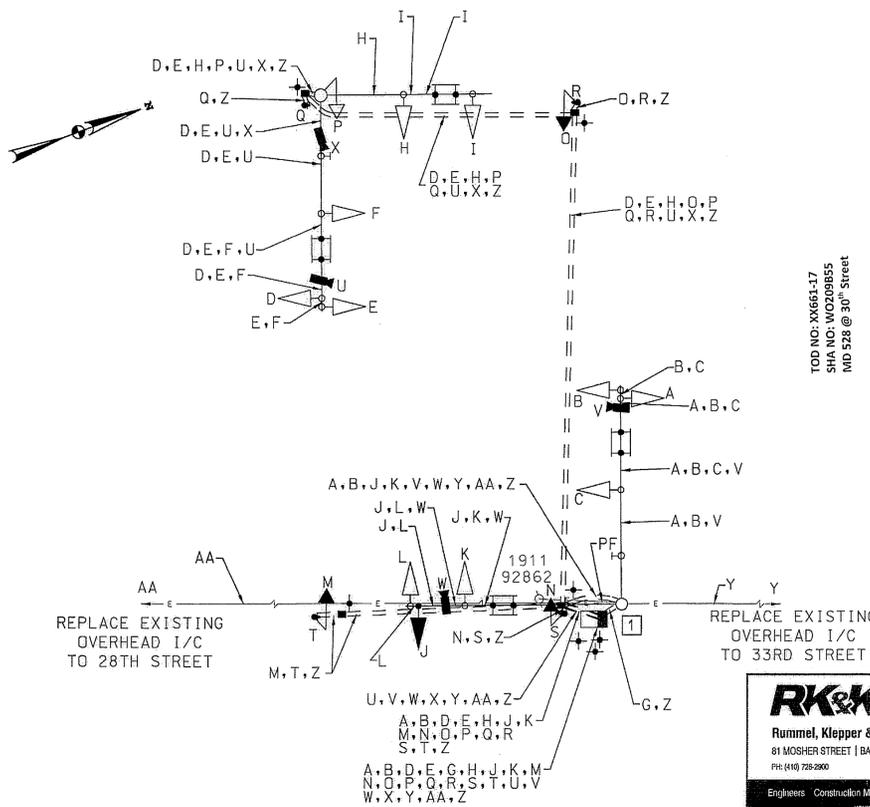
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	3
2002	TEST PIT EXCAVATION	CY	5
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS	LF	1280
5005	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	1020
5006	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	60
6002	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	LF	207
6004	5 INCH CONCRETE SIDEWALK	SF	616
8001	12 INCH LED SIGNAL HEAD SECTION	EA	3
8002	2 WIRE CENTRAL CONTROL UNIT	EA	1
8007	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS	EA	4
8020	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS	EA	3
8028	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	4
8029	REMOVE & DISPOSE MATERIAL & EQUIPMENT PER ASSIGNMENT	EA	1
8034	VIDEO DETECTION CAMERA & CABLE	EA	4
8035	12 PAIR COMMUNICATION CABLE, SELF-SUPPORTING AND/OR JELLY FILLED	LF	2800
8041	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED	LF	200
8043	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED	LF	200
8045	DETECTABLE WARNING SURFACES	SF	60
8046	INSTALL GROUND MOUNT AND/OR OVERHEAD SIGN	SF	39
8048	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	380
8053	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN	LF	100
8054	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	4
8060	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
8062	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	540
8064	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	660
8065	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1500
8073	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
NEG	8 INCH PORTLAND CEMENT CONCRETE FOR DRIVEWAY MIX 6	SY	28
8050	WEATHER HEAD, 3 INCH	EA	1
8052	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS	EA	1
NEG	F&I CONCRETE BOLLARD AND CONCRETE BASE	EA	2

**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. CONTRACTOR SHALL RETURN ALL VIDEO DETECTION CAMERAS REMOVED FROM THE INTERSECTION TO SHA SIGNAL SHOP.



TOD NO: XX661-L7  
SHA NO: W0209855  
MD 528 @ 30' Street

**RK&K**  
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**PHASING CHART**

NO PHASE CHANGE

**GENERAL NOTES**

1. ALL EXISTING FOUNDATION TOPS WITHIN EXISTING SIDEWALK SHALL BE REMOVED 2" BELOW SIDEWALK GRADE AND NEW SIDEWALK SHALL BE INSTALLED TO BE FLUSH WITH FINAL 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
10. 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.
11. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
12. THE CONTRACTOR SHALL VERIFY ALL POLE LOCATIONS PRIOR TO INSTALLATION.
13. VIDEO DETECTION CAMERA LOCATION/ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
14. THE CONTRACTOR SHALL CAP AND ABANDON CONDUIT FEEDING SIGNAL EQUIPMENT THAT IS REMOVED.
15. ADA REQUIRES THAT ANY ABRUPT CHANGE IN ELEVATION IN SIDEWALK BE LESS THAN 1/4".
16. VIDEO DETECTION CAMERAS FOR EAST AND WEST APPROACHES SHALL BE CHECKED IN THE FIELD BY THE ENGINEER PRIOR TO PERMANENT INSTALLATION TO ELIMINATE ANY POSSIBLE TELECOMMUNICATION CABLE CONFLICTS.
17. THE CONTRACTOR SHALL ENSURE ALL UNDERGROUND UTILITIES ARE MARKED PRIOR TO TRAFFIC SIGNAL STAKEOUT. THE CONTRACTOR SHALL ENSURE ALL UNDERGROUND UTILITIES ARE MARKED AND STAKEOUT HAS OCCURED PRIOR TO TRAFFIC SIGNAL TURN OFF.
18. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED.

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 528 (PHILADELPHIA AVE.) AT 30TH ST.  
OCEAN CITY, MARYLAND

REVISIONS	GENERAL INFORMATION SHEET
	SCALE NONE DATE JUNE 2011 CONTRACT NO. XX6615185
	DESIGNED BY BJJ COUNTY WORCESTER
	DRAWN BY BJJ LOGMILE 23052806.59
	CHECKED BY BLB TMS NO. L284
	FAP NO. TOD NO.
TS NO. 2260D-GI	DRAWING SG-2 OF 4 SHEET NO. 2 OF 8