

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING FULL-COLOR TRAFFIC SIGNAL AT THE INTERSECTION OF US 1 (WASHINGTON BLVD) AT WHISKEY BOTTOM RD. THE INSTALLATION INCLUDES LED SIGNAL HEADS, IP-BASED VIDEO DETECTION CAMERAS AND SIGNS. US 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA EIGHT-PHASE FULL-TRAFFIC-ACTUATED MODE WITH CONCURRENT PEDESTRIAN PHASES FOR THE EAST AND SOUTH LEGS OF THE INTERSECTION. THE US 1 NORTHBOUND AND SOUTHBOUND LEFT TURNS AND WHISKEY BOTTOM RD EASTBOUND AND WESTBOUND LEFT TURNS OPERATE IN EXCLUSIVE-PERMISSIVE PHASING. A PRE-EMPTION PHASE IS PROVIDED FOR THE US 1 SOUTHBOUND APPROACH.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. THE EXISTING APS CENTRAL CONTROL UNIT AND IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL REMAIN. AN OPTICOM DISCRIMINATOR MODULE SHALL BE PROVIDED BY THE CONTRACTOR AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS US 1 (WASHINGTON BOULEVARD):

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

TO CROSS WHISKEY BOTTOM ROAD:

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

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA.		UNIT	QUANTITY
ITEM NO.	DESCRIPTION		
9571	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 8 - D-3(1) 90"x16" 2 - M1-5(6) 24"x48" 2 - M1-5(6) 36"x72" 2 - W3-3a(1) FY 120"x48"	SF	235

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.		UNIT	QUANTITY
ITEM NO.	DESCRIPTION		
1001	MAINTENANCE OF TRAFFIC	EA	2
2001	CLASS 2 EXCAVATION	CY	2
2002	TEST PIT EXCAVATION	CY	5
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS	LF	230
6001	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	LF	18
6002	5 INCH CONCRETE SIDEWALK	SF	172
8001	12 INCH LED SIGNAL HEAD SECTION	EA	44
8004	8 INCH LED SIGNAL HEAD SECTION	EA	12
8005	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER	EA	4
8007	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE	EA	2
8009	BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	1
8012	EMBEDDED METERED SERVICE PEDESTAL	EA	1
8018	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION	EA	2
8021	MICROLOOP PROBE (ANY LENGTH) LEAD- IN CABLE UP TO 1000'	EA	2
8022	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'	EA	2
8023	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)	EA	1
8024	TWIN MAST ARM POLE & 50'/50' MAST ARMS ANY 'T' DIMENSION	EA	1
8028	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH	EA	6
8029	1" DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT CONDUIT	LF	50
8032	4 CONDUCTOR OPTICOM CABLE	LF	355
8033	DISCONNECT, PULL-BACK & REROUTE CABLES	LF	490
8034	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TYPE T/C	LF	395
8037	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	LF	430
8038	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	260
8040	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)	SF	235
8042	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	460
8043	WEATHER HEAD, 3 INCH	EA	1
8045	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN	LF	55
8046	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	3
8047	DISCRIMINATOR MODULE, 4 CHANNEL, NO. 764	EA	1
8049	OPTICOM NO. 721 DETECTOR EYE	EA	1
8050	3 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER	LF	35
8051	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
8053	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	570
8055	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	650
8056	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1900
8058	SAW CUT FOR SIGNAL (LOOP DETECTOR)	LF	45
8069-A	F & I LED LUMINAIRE AND LAMPS	EA	2

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PHASE 1 AND 5	FL/Y	FL/Y	R	R	R	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																					
PHASE 1 AND 6	DARK	DARK	G	G	G	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 6 CHANGE																					
PHASE 2 AND 5	FL/Y	FL/Y	R	R	R	DARK	DARK	G	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
2 AND 5 CHANGE																					
PHASE 2 AND 6	DARK	DARK	G	G	G	DARK	DARK	G	G	G	R	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE																					
2 AND 6 CHANGE																					
PHASE 3 AND 7	FL/Y	FL/Y	R	R	R	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																					
PHASE 3 AND 8	FL/Y	FL/Y	R	R	R	FL/Y	FL/Y	R	R	R	G	G	G	R	R	R	R	DW	DW	DW	DW
3 AND 8 CHANGE																					
PHASE 4 AND 7	FL/Y	FL/Y	R	R	R	FL/Y	FL/Y	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
4 AND 7 CHANGE																					
PHASE 4 AND 8	FL/Y	FL/Y	R	R	R	FL/Y	FL/Y	R	R	R	G	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE																					
4 AND 8 CHANGE																					
PRE-EMPTION	DARK	DARK	G	G	G	DARK	DARK	G	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
PRE-EMPTION CHANGE																					
FLASHING OPERATION	DARK	DARK	FL/Y	FL/Y	FL/Y	DARK	DARK	FL/Y	DARK	DARK	DARK	DARK									

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
- 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 PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
- VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
- DURING CONSTRUCTION, PROPOSED SIGNAL EQUIPMENT SHALL NOT BLOCK EXISTING SIGNAL EQUIPMENT.
- THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.

WIRING KEY

A,B,C,D,E	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
F,G,H,I	
J,K,L	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M,N,O	
P,Q,R	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
S,T	NON-INVASIVE MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN CABLE
U,V	MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN CABLE
W,X	2-CONDUCTOR ELECTRICAL CABLE, TYPE T/C (NO. 12 AWG)
Y,AA	DISCONNECT, PULLBACK AND REROUTE EXISTING INTERCONNECT COMMUNICATION CABLE
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
BB,CC,DD,EE,FF,GG	IP-BASED VIDEO DETECTION CAMERA CABLE
HH	OPTICOM CABLE, 4-CONDUCTOR (NO. 20 AWG)
II	1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG-THHN/THWN)
PF	PROPOSED UNDERGROUND POWER FEED
EX	USE EXISTING CABLE
⊕	EXISTING GROUND ROD
⊕	PROPOSED GROUND ROD

CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

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MR. JOHN HUCHROWSKI
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
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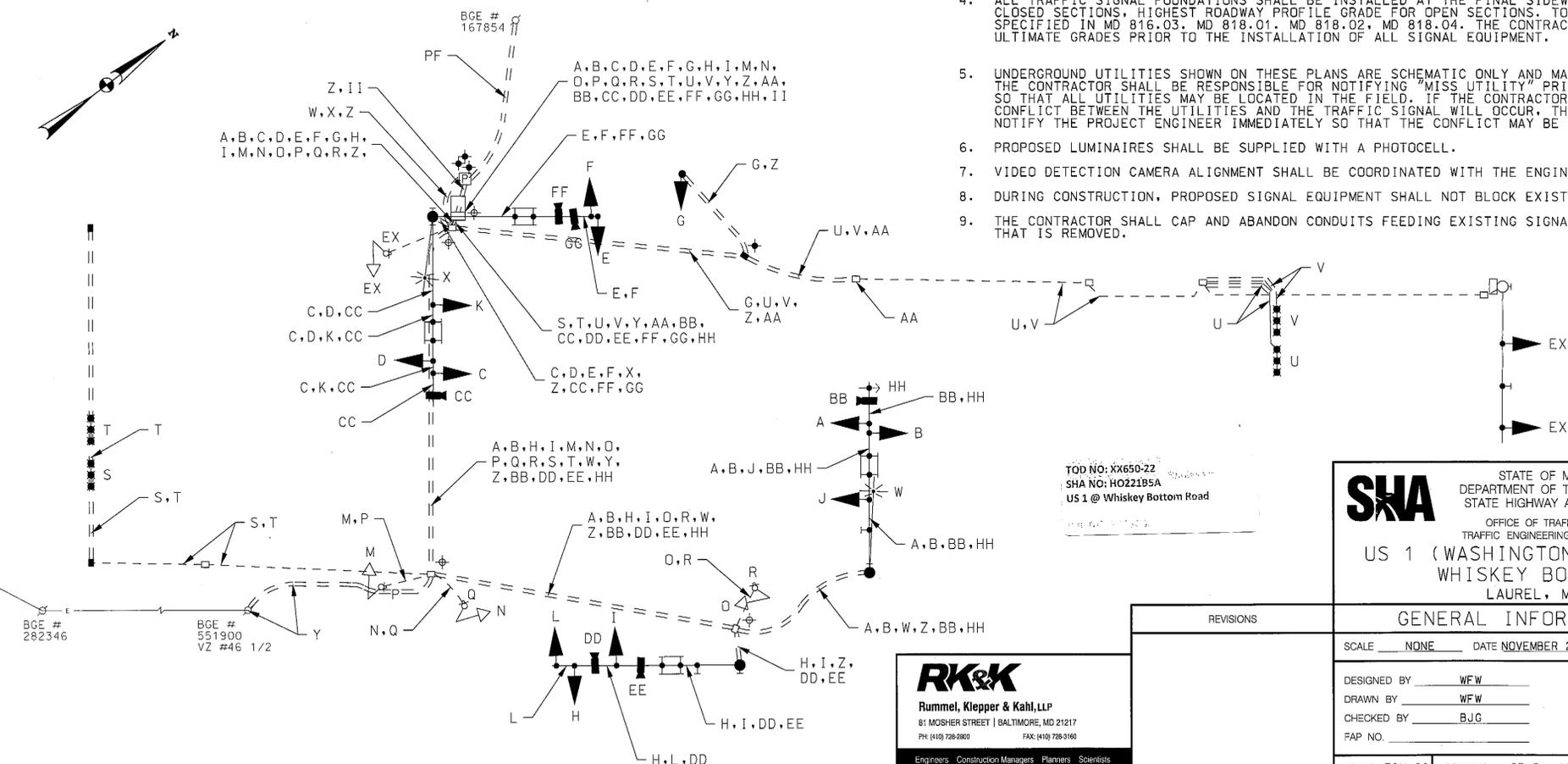
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TOD NO: XX650-22
SHA NO: HO22185A
US 1 @ Whiskey Bottom Road

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
**US 1 (WASHINGTON BOULEVARD) AT
WHISKEY BOTTOM ROAD
LAUREL, MARYLAND**

REVISIONS		GENERAL INFORMATION SHEET	
SCALE	NONE	DATE	NOVEMBER 2012
CONTRACT NO.	XX6505185	DESIGNED BY	WFW
COUNTY	HOWARD	DRAWN BY	WFW
LOGMILE	13000100.97	CHECKED BY	BJG
TIMS NO.	LJ32	FAP NO.	
TOD NO.		TS NO.	79M-G1
DRAWING	SP-2	OF	3
SHEET NO.	2	OF	3

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