

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC SIGNAL WITH APS AND CPS UPGRADES AND UPGRADING TO VIDEO DETECTION AND LED SIGNAL HEADS AT THE INTERSECTION OF MD 193 (UNIVERSITY BLVD) AND GRANDVIEW AVENUE IN MONTGOMERY COUNTY. MD 193 IS CONSIDERED TO RUN IN AN EAST-WEST DIRECTION. VIDEO DETECTION IS TO BE USED ON THE EASTBOUND, NORTHBOUND AND SOUTHBOUND APPROACHES.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA 5 PHASE SEMI-ACTUATED MODE. THE EASTBOUND LEFT TURNS AND SOUTHBOUND RIGHT TURNS WILL OPERATE WITH PROTECTED/PERMISSIVE PHASING. AUDIBLE PEDESTRIAN SIGNALS SHALL BE INSTALLED IN ALL QUADRANTS OF THE INTERSECTION AND SHALL CONTROL CROSSING ALONG ALL FOUR LEGS OF THE INTERSECTION ONLY. NEW CURB AND GUTTER AND SIDEWALK WITH ADA RAMPS AND DETECTABLE WARNING SURFACE MATERIAL SHALL BE INSTALLED IN ALL FOUR QUADRANTS OF THE INTERSECTION.

SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
2. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAL HAMUD AT (240) 777-8761 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.
3. ALL UNDERGROUND AND OVERHEAD 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.
4. APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 193

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

TO CROSS GRANDVIEW AVENUE

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

5. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

- MR. JEFFREY WENTZ, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318
- MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (301) 513-7350
- MR. VERNON STINNETT, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304
- MR. RICHARD D. DAFF SR., CHIEF - TRAFFIC OPERATIONS DIVISIONS
PHONE: (410) 787-7630

- THE POWER COMPANY REPRESENTATIVE IS:
- MR. STEVE CUSTER
POTOMAC ELECTRIC POWER COMPANY
8300 OLD MARLBORO PIKE
UPPER MARLBOR, MARYLAND 20772
PHONE: (301) 548-4333
- MR. KAMAL HAMUD, CHIEF TRAFFIC OPERATIONS DIVISION
MONTGOMERY COUNTY
PHONE: (240) 777-8761
- MR. KEITH LORD
MONTGOMERY COUNTY
PHONE: (301) 279-1291
- MR. SONY BAILEY
SIGN SHOP
PHONE: (410) 787-7676

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	VIDEO DETECTION INTERFACE EQUIP. (1-4 CAMERAS)	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: R10-3(1) (9"x15") POLE MOUNT GUIDE SHIELD ASSEMBLY (30"x51") GUIDE SHIELD ASSEMBLY (48"x75")	EA EA EA EA	80 2 2 2

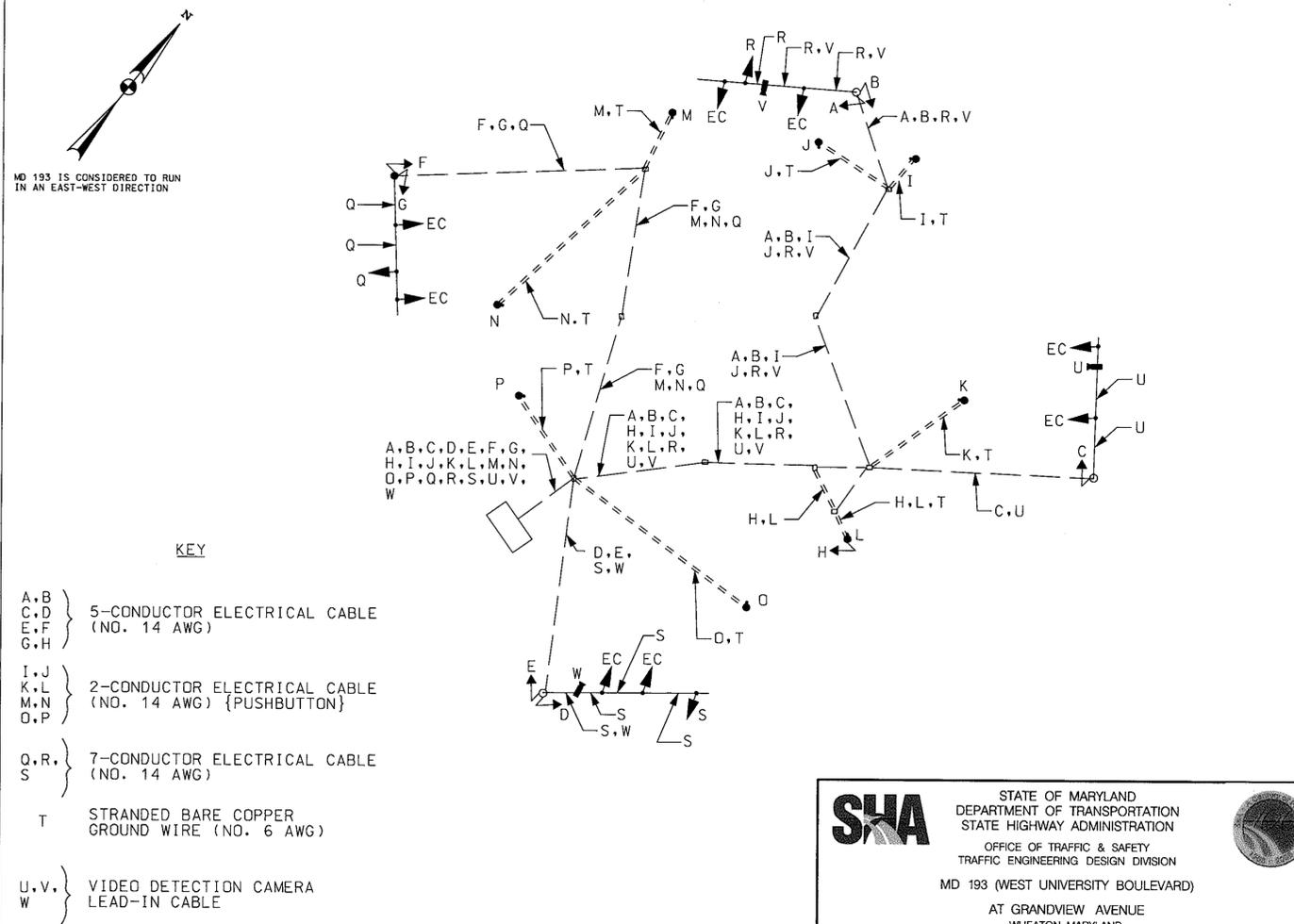
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	2
585412	12 INCH WHITE HEAT APPLIED PREFORMED THERMOPLASTIC PAVEMENT MARKING	LF	600
585424	24 INCH WHITE HEAT APPLIED PREFORMED THERMOPLASTIC PAVEMENT MARKING	LF	150
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON AND SIGN	EA	8
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION	EA	8
800000	2-WIRE CENTRAL CONTROL UNIT	EA	1
801004	CONCRETE FOR SIGNAL FOUNDATIONS	CY	8
801607	INSTALL SHEET ALUMINUM SIGN	SF	80
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	70
805135	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	70
816001	VIDEO DETECTION CAMERA	EA	3
816005	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
816010	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
818004	10 FOOT BREAKAWAY PEDESTAL	EA	8
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	39
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	7
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1800
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1850
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	600

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 1 AND 6	G	G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 CHANGE	G	G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	R	R	R	R	R	R	FLOW	FLOW	FLDW	FLDW	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW							
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G	G	G	DW							
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW							
PHASE 4 AND 8 ALT.	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FLDW	FLDW	FLDW	FLDW
PHASE 4 AND 8 ALT. CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW							
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK							

WIRING DIAGRAM



- KEY**
- A, B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - C, D } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - E, F } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - G, H } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - I, J } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) {PUSHBUTTON}
 - K, L } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) {PUSHBUTTON}
 - M, N } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) {PUSHBUTTON}
 - O, P } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) {PUSHBUTTON}
 - Q, R, S } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - T } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
 - U, V, W } VIDEO DETECTION CAMERA LEAD-IN CABLE

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 193 (WEST UNIVERSITY BOULEVARD)
AT GRANDVIEW AVENUE
WHEATON, MARYLAND

TRAFFIC SIGNAL - GENERAL INFORMATION

SCALE NONE ADVERTISED DATE N/A CONTRACT NO. MO2938786

DESIGNED BY MV COUNTY MONTGOMERY
DRAWN BY LJM LOGMILE 15019301.39
CHECKED BY JWH TMS NO. J98
F.A.P. NO. SEE TITLE SHEET TOD NO.

TS NO. 223 G DRAWING SG-02 OF 10 SHEET NO. OF

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ARCHITECTURE ENGINEERING CONSTRUCTION