PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF A EXISTING TRAFFIC SIGNAL AT US 29 (COULUMBIA PIKE) AND EAST RANDOLPH ROAD/ CHERRY HILL ROAD OVERPASS BRIDGE IN MONTGOMERY COUNTY. A MAST ARM POLE WITH A 70 FOOT MAST ARM SHALL BE INSTALLED TO SIGNALIZE THE RIGHT TURN ON RAMP FOR SOUTHBOUND US 29. PEDESTRIAN SIGNAL HEADS SHALL BE REMOVE AND REPLACED WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTIONS AND AUDIBLE/TACTILE PUSHBUTTON STATIONS SHALL BE INSTALLED AT ALL CROSSINGS OF THE BRIDGE.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN AN EXISTING BASE MOUNTED CABINET WAS INSTALLED AT THIS LOCATION. THE INTERSECTION OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. VIDEO DETECTION CAMERAS ARE INSTALLED AT THIS LOCATION FOR THE ACTUATION OF THE LEFT TURNS AND SAMPLING FOR THE MAINLINE (EAST RANDOLPH ROAD/CHERRY HILL ROAD) AND THE SIDE STREET PRESENCE DETECTION OF THE ON RAMPS A AND C. THE VIDEO DETECTION CAMERA FOR RAMP C SHALL BE INSTALLED AND PROGRAMED TO INCLUDE THE PRESENCE DETECTION FOR THE RIGHT TURNS FOR RAMP C.

SPECIAL NOTES

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

PROJECT CONTACTS:

MR. JEFFERY WENTZ, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7359
MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: (301) 513-7304
MR. KEVIN NOWAK, ASSISTANT DISTRICT ENGINEER- CONSTRUCTION
PHONE: (301) 513-7336
MR. AUGI REBISH, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. KAMAL HAMUD, TRAFFIC ENGINEER - MCDPW&T
PHONE: (240) 777-2190

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9032	70' MAST ARM SINGLE X 27' - 0" POLE	EA	1
9067	PEDESTAL POLE 14' WITH T-BASE AND ANCHOR BOLTS	EA	1
9570	SHEET ALUMINUM SIGN GROUND MOUNTED	SF	7
	R10-11b(30"X30")	EA	1
9571	SHEET ALUMINUM SIGN MAST ARM MOUNTED	SF	21
	R10-6(24"X36")	EA	1
	R3-5(30"X36")	EA	2

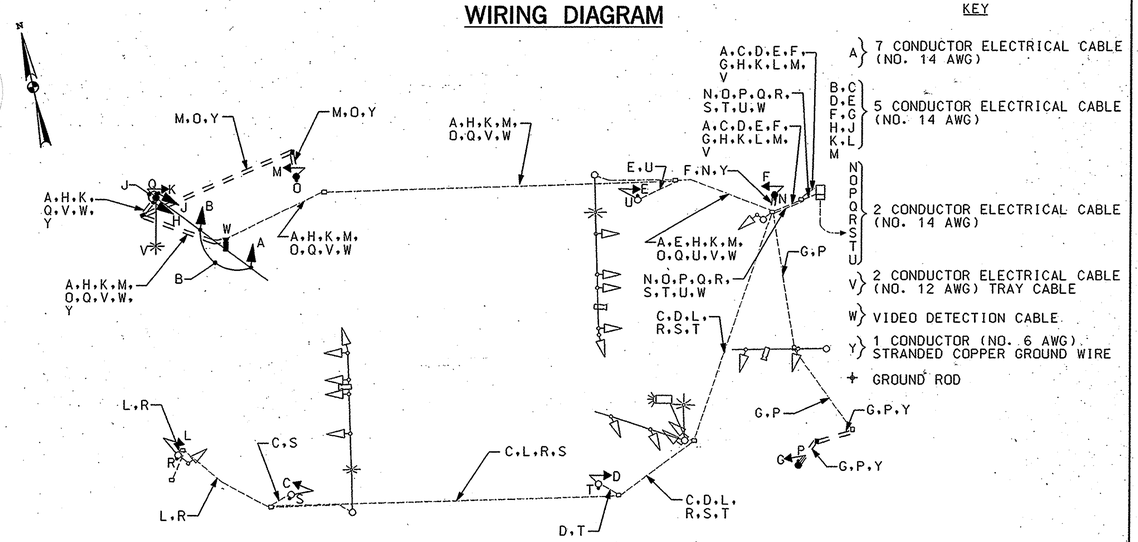
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	2
2002	TEST PIT EXCAVATION	CY	4
5001	5 INCH HEAT APPLIED WHITE OR YELLOW PERM. PREFORM. THERMO. PAVE. MARK.	LF	90
5002	REMOVAL OF EXISTING PEM. PAVE. MARK - ANY WIDTH	LF	300
5005	24 INCH HEAT APPLIED WHITE PERM. PREFORM.THERMO. PAVE. MARK.	LF	50
6001	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	LF	65
6002	4 IN. CONCRETE SIDEWALK	SF	1185
8001	12 IN. (R,Y,G) LED SIGNAL HEAD	EA	13
8002	2 WIRE CENTRAL CONTROL UNIT	EA	1
8008	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	8
8012	INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)	EA	3
8013	INSTALL STEEL STRAIN OR MAST ARM POLE WITH SINGLE OR TWIN MAST ARM (ANY SIZE)	EA	1
8014	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS	EA	8
8022	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT	EA	1
8026	VIDEO DETECTION CAMERA AND CABLE UP TO 500 FEET	EA	1
8034	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED	LF	120
8035	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED	LF	135
8037	WOOD SIGN SUPPORTS UP TO 4 X 6	LF	20
8038	DETECTABLE WARNING SURFACES	SF	55
8039	INSTALL OVERHEAD OR GROUND MOUNTED SIGN - INCLUDING ALL HARDWARE	SF	28
8041	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	205
8047	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	3
8054	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	2140
8056	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	2165
8057	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	465
8058	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE	LF	425
8067	PAINT SHA SUPPLIED POLE AND PEDESTAL POWDER COAT GREEN	EA	1
8000	RELOCATE LUMINAIRE AND LIGHTING ARM	EA	1

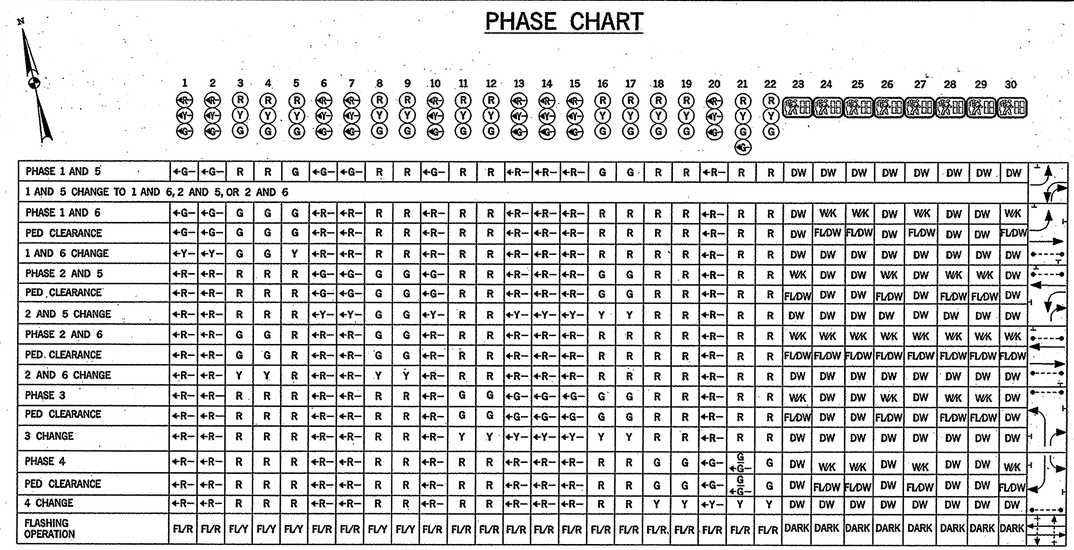
C. MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR EXCEPT FOR ITEMS LISTED BELOW.

DESCRIPTION	UNITS	QUANTITY
VIDEO DETECTION CAMERA	EA	1

WIRING DIAGRAM



PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PHASE 1 AND 5	←G–	←G–	R	R	G	←G–	←G–	R	R	←G–	R	R	←R–	←R–	←R–	G	G	R	R	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																														
PHASE 1 AND 6	←G–	←G–	G	G	G	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	DW	W/K	W/K	DW	W/K	DW	DW	W/K
PED CLEARANCE	←G–	←G–	G	G	G	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	DW	FL/DW	FL/DW	DW	FL/DW	DW	DW	FL/DW
1 AND 6 CHANGE	←Y–	←Y–	G	G	Y	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	R	R	R	←G–	←G–	G	G	←G–	R	R	←R–	←R–	←R–	G	G	R	R	←R–	R	R	W/K	DW	DW	W/K	DW	W/K	W/K	DW
PED CLEARANCE	←R–	←R–	R	R	R	←G–	←G–	G	G	←G–	R	R	←R–	←R–	←R–	G	G	R	R	←R–	R	R	FL/DW	DW	DW	FL/DW	DW	FL/DW	FL/DW	DW
2 AND 5 CHANGE	←R–	←R–	R	R	R	←Y–	←Y–	G	G	←Y–	R	R	←Y–	←Y–	←Y–	Y	Y	R	R	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R–	←R–	G	G	R	←R–	←R–	G	G	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	W/K	W/K	W/K	W/K	W/K	W/K	W/K	W/K
PED. CLEARANCE	←R–	←R–	G	G	R	←R–	←R–	G	G	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	FL/DW	FL/DW	FL/DW	FL/DW	FL/DW	FL/DW	FL/DW	FL/DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	R	←R–	←R–	Y	Y	←R–	R	R	←R–	←R–	←R–	R	R	R	R	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	G	G	←G–	←G–	←G–	G	G	R	R	←R–	R	R	W/K	DW	DW	W/K	DW	W/K	W/K	DW
PED CLEARANCE	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	G	G	←G–	←G–	←G–	G	G	R	R	←R–	R	R	FL/DW	DW	DW	FL/DW	DW	FL/DW	FL/DW	DW
3 CHANGE	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	Y	Y	←Y–	←Y–	←Y–	Y	Y	R	R	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	G	G	←G–	G/←G–	G	DW	W/K	W/K	DW	W/K	DW	DW	W/K
PED CLEARANCE	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	G	G	←G–	G/←G–	G	DW	FL/DW	FL/DW	DW	FL/DW	DW	DW	FL/DW
4 CHANGE	←R–	←R–	R	R	R	←R–	←R–	R	R	←R–	R	R	←R–	←R–	←R–	R	R	Y	Y	←Y–	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 29 AT RANDOLPH ROAD INTERCHANGE IMPROVEMENTS

WHITE OAK, MARYLAND

GENERAL INFORMATION PLAN

SCALE N.T.S. DATE 04/07 CONTRACT NO. AT9105f85

DESIGNED BY S. SMITH
DRAWN BY J. WOOD
CHECKED BY J. WEAVER
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE 15002906.03
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FILE: R:\2004\45 SHA BCS 2004-02B TEDD TRAFFIC\TASK 24 US 29 AT RANDOLPH\DGN\SIGNALS\PSG-N201NEW.DGN