

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 355 (FREDERICK AVENUE) AND EDUCATION BLVD. IN MONTGOMERY COUNTY, MARYLAND. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULLY ACTUATED MODE WITH THE MD 355 (FREDERICK AVE.) APPROACHES OPERATING CONCURRENTLY AND THE EDUCATION BLVD./SHOPPING CENTER ENTRANCE APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR NORTHBOUND MD 355 AND EASTBOUND EDUCATION BOULEVARD.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MD 355 (FREDERICK AVE.) AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS EDUCATION BLVD.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

1. MD 355 AND EDUCATION BOULEVARD

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS FREDERICK AVENUE AT EDUCATION BOULEVARD" *

WALK: RAPID TICK

WALK: "WALK SIGN ON TO CROSS FREDERICK AVENUE"

2. EDUCATION BOULEVARD AND MD 355

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS EDUCATION BOULEVARD AT FREDERICK AVENUE" *

WALK: RAPID TICK

WALK: "WALK SIGN ON TO CROSS EDUCATION BOULEVARD"

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
 ** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), SYSTEM PACKAGE AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9044	1 EACH	EIGHT-PHASE, FULL TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	50 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH D-3(2) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT - 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS FREDERICK AVENUE" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS EDUCATION BLVD."

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

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 THE PROPERTY OF THE CONTRACTOR.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAYBE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)	STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)	
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)	

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. JEFF WENTZ, MONTGOMERY PHONE: (301) 513-7318 ASSISTANT DISTRICT ENGINEER - TRAFFIC	MR. KAMAL HAMUD MONTGOMERY COUNTY TMC PHONE: (240) 777-8761 MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630
MR. WAYNE MOWDY ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (301) 513-7305	
MR. AUGIE REBISH DISTRICT UTILITY ENGINEER PHONE: (301) 513-7350	

EQUIPMENT LIST "B"

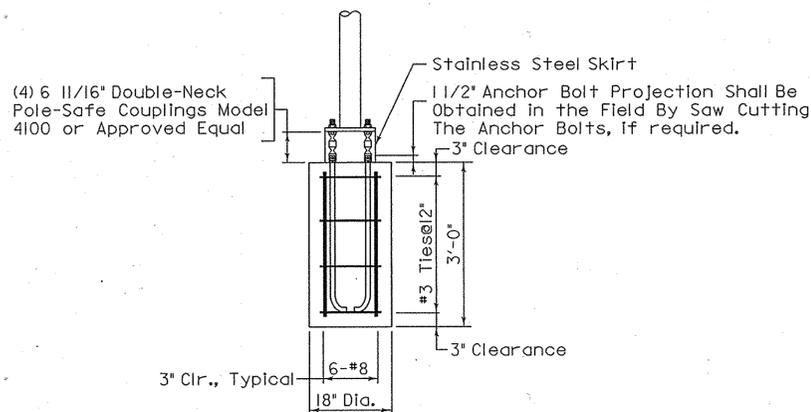
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EACH	MAINTENANCE OF TRAFFIC
2001	25 C.Y.	CLASS 2 EXCAVATION
2002	12 C.Y.	TEST PIT EXCAVATION
5001	40 L.F.	5 INCH HEAT APPLIED WHT OR YEL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5002	1400 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS-- ANY WIDTH
5004	1525 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	125 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
6001	25 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1425 S.F.	4 INCH CONCRETE SIDEWALK
8001	41 EACH	12 INCH LED SIGNAL HEAD SECTION (R.Y.G)
8002	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8008	6 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8012	6 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8014	6 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8017	3 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8019	1 EACH	MAST ARM POLE & 50 FT MAST ARM ANY 'T' DIMENSION
8022	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8026	4 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8032	200 L.F.	DISCONNECT, PULL-BACK & REROUTE CABLES
8034	270 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8035	350 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8031	145 L.F.	CABLE - 1 CONDUCTOR, 250 KCML, CU, USE
8038	170 S.F.	DETECTABLE WARNING SURFACES
8039	50 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
8041	625 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8043	1 EACH	METERED SERVICE PEDESTAL EMBEDDED
8045	80 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8047	5 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8052	2 EACH	CUT, CLEAN, GALVANIZÉ AND CAP TRAFFIC SIGNAL STRUCTURE
8054	1300 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	1400 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1725 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8065	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

PHASE CHART

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

MODIFIED PEDESTAL POLE FOUNDATION



TOD NO: XX444-12
 SHA NO: MO526A56/B56
 MD 355@ EDUCATION BLD

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 355 (Frederick Avenue) and
 Education Boulevard

GENERAL INFORMATION SHEET

SCALE <u>NONE</u>	ADVERTISED DATE <u>5/01/2008</u>	CONTRACT NO. <u>AT9105185</u>
DESIGNED BY <u>S. Bloss</u>	COUNTY <u>Montgomery</u>	
DRAWN BY <u>S. Bloss</u>	LOGMILE <u>15035513.85</u>	
CHECKED BY <u>N. Leary</u>	TIMS NO. <u>H639</u>	
F.A.P. NO. <u></u>	TOD NO. <u></u>	
TS NO. 2542C	DRAWING TSP-3	OF 3 SHEET NO. 3 OF 3

WR&A
 Whitman, Requardt and Associates, LLP
 Engineers, Architects and Planners
 801 South Carolina Street
 Baltimore, Maryland 21231
 410-235-3450

BY: jrasmusen