DRILL HOLES

BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

[1] This project involves the modification of an existing Traffic Control Signal at the intersection of MD 355 and Travis Ave/ ~~Post Preserve Rd in~~ Spectrum Ave in Montgomery County. A fourth leg shall be added to the intersection. An additional video detection camera shall be added for the ~~Post Preserve Rd~~ Spectrum Ave leg. Countdown pedestrian signals with audible pushbuttons shall be installed across the north, east and west legs of this intersection. MD 355 is assumed to run a north-south direction.

II. INTERSECTION OPERATION

[1] 1. The intersection shall operate in a NEMA six-phase, semi-actuated mode, with the MD 355 approaches running concurrently. The existing Exclusive/Permissive left turns shall remain along the northbound and southbound approaches of MD 355. A concurrent right turn shall remain for eastbound Travis Ave. Countdown pedestrian phases with audible push button activation shall be provided across the north, east and west approaches. The Travis Ave / ~~Post Preserve Rd~~ Spectrum Ave approaches shall operate concurrently.

2. The existing full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in NEMA size "6" base-mounted cabinet shall remain.

3. The Montgomery County Signal Shop shall install an APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming. (Keith Lord (301)279-1291)

III. 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. 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.

IV. APS will function as follows:

[1] ~~FOR POST PRESERVE ROAD~~ SPECTRUM AVENUE

a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce " Wait to cross ~~Post Preserve~~ Spectrum at Frederick. wait."

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

[1] FOR TRAVIS AVENUE

a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce " Wait to cross Travis at Frederick. wait."

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

[1] FOR FREDERICK ROAD

a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce " Wait to cross Frederick at Travis. wait."

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

[1] FOR FREDERICK ROAD

a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce " Wait to cross Frederick at ~~Post Preserve~~ Spectrum Ave. wait."

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Vernon Stinnett Jr.
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Keith Lord
Chief, Montgomery County Signal Shop
301-279-1291

Mr. Sonny Bailey
Chief, Sign Shop
410-787-7676

Mr. Kamal Hamud
Mont. County TMC Center
240-777-8761

The power company representative is:

Mr. Steve Custer
PEPCO Customer Design
201 W Gude Dr.
Rockville, MD 20850
Phone: 301 548-4333

EQUIPMENT LIST

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

SPEC. NUMBER	DESCRIPTION	QUANTITY
973023	SHEET ALUMINUM SIGNS GROUND MOUNTED	6 SF
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS FREDERICK RD".)	2 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS TRAVIS AVE".)	2 EA
	[1] Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO ~~CROSS POST PRESERVE RD~~ SPECTRUM AVE".)	2 EA
973023	SHEET ALUMINUM SIGNS OVERHEAD	113 SF
	D3-(1) "Travis AVE 100> (arrow) / (arrow) Travis AVE <100" sign, (variable x 16") dual faced. (span mount)	1 EA
	D3-(1) "Frederick RD 18600> / (Frederick RD <18600" sign, (variable x 16") dual faced. (span mount)	2 EA
	[1] D3-(1) "~~Post Preserve RD~~ Spectrum Ave (arrow) / (arrow) ~~Post Preserve RD~~ Spectrum Ave" sign, (variable x 16") dual faced. (span mount)	1 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36") (span mount)	1 EA
	GUIDE SHIELD ASSEMBLY (48"x72") pole mounted. NORTH / MD 355 / LEFT ARROW	1 EA
	GUIDE SHIELD ASSEMBLY (30"x48") pole mounted. SOUTH / MD 355 / RIGHT ARROW	1 EA
	GUIDE SHIELD ASSEMBLY (48"x72") pole mounted. SOUTH / MD 355 / LEFT ARROW	1 EA
	GUIDE SHIELD ASSEMBLY (30"x48") pole mounted. NORTH / MD 355 / RIGHT ATRROW	1 EA

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

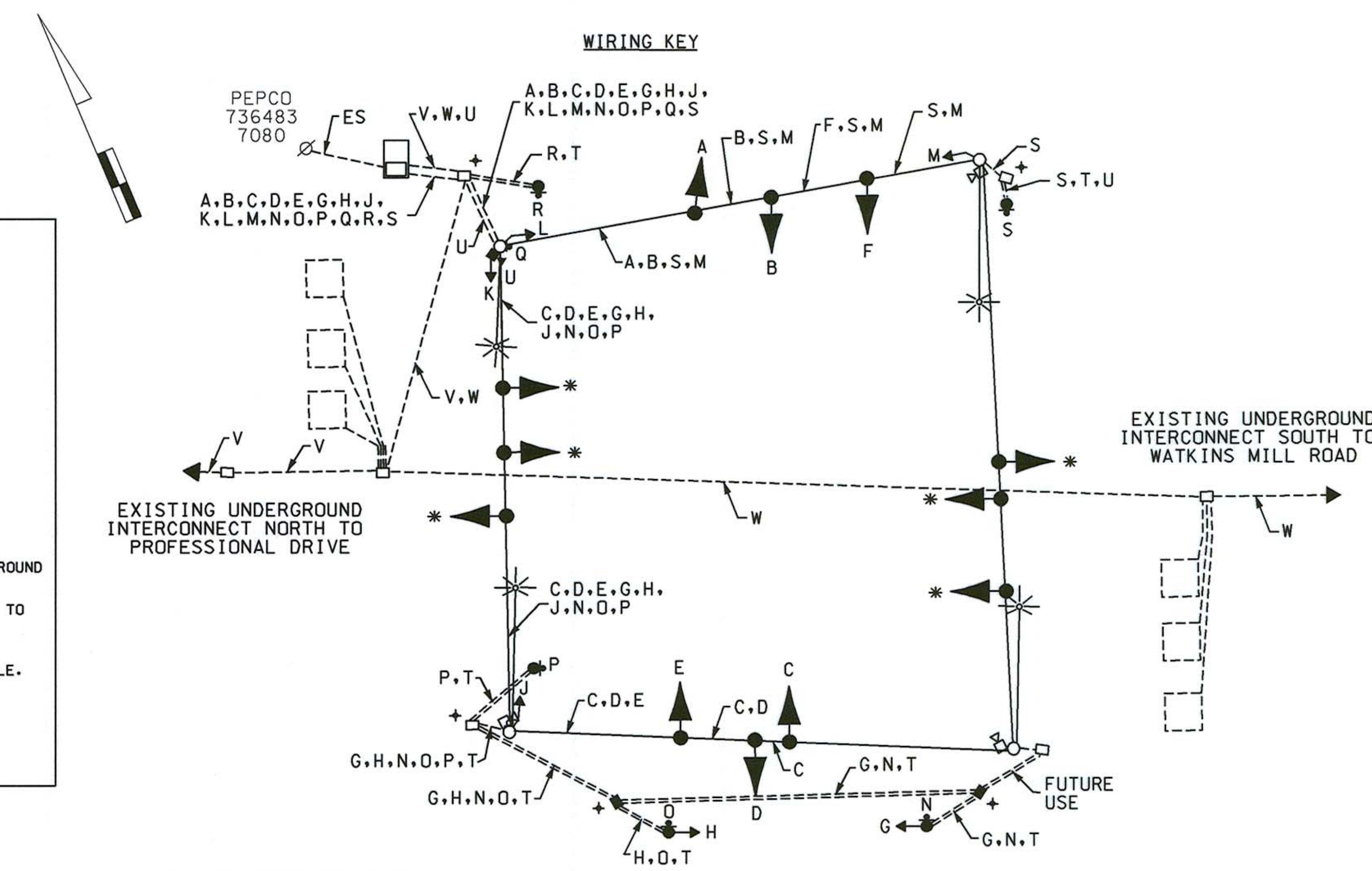
SPEC. NUMBER	DESCRIPTION	QUANTITY
114280	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS, ANY WIDTH	360 LF
203030	TEST PIT EXCAVATION	4 CY
585612	PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKING ARROWS (right)	2 EA
585617	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	200 LF
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	520 LF
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	185 LF
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	20 SF
800000	16" COUNTDOWN PEDESTRIAN SIGNAL HEAD	6 EA
800000	ROTATE LIGHTING ARM.	2 EA
800000	5 FOOT BREAKAWAY PEDESTAL POLE.	3 EA
800000	TERRA VIDEO CAMERA DETECTOR WITH CONTROL CABLE (UP TO 500').	1 EA
800000	2-WIRE CONTROL UNIT	1 EA
800000	AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGN.	6 EA
800000	4" SCHEDULE 80 PVC (2ND CONDUIT IN ONE TRENCH)	95 LF
801004	CONCRETE FOR SIGNAL FOUNDATION	2 CY
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	220 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	125 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	95 LF
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	2 EA
813014	INSTALL GROUND MOUNTED SIGN	6 SF
813015	INSTALL OVERHEAD SIGN	113 SF
818004	10 FOOT BREAKAWAY PEDESTAL POLE	2 EA
837001	GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH	5 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	48 EA
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	1400 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	1355 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	1200 LF
873001	REMOVE AND SALVAGE EXISTING EQUIPMENT	LUMP SUM

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 & 5	←G/R	←G/R	R	←G/R	←G/R	R	R	R	R	R/G→	R	R/G→	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																		
PHASE 1 & 6	←G/G	←G/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 6 CHANGE	←Y/G	←Y/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	←G/G	←G/G	G	R	R	R	R/G→	R	R/G→	DW	DW	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	←Y/G	←Y/G	G	R	R	R	R/Y→	R	R/Y→	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	W	W
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 ALT	R	R	R	R	R	R	Y	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	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING KEY

- ✱ - USE EXISTING WIRING
- A, B, C, D, E - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- F, G, H, J, K, L, M - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- N, O, P, Q, R, S - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- T - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- U - CONTROL CABLE (CAMERA TO CONTROLLER) UP TO 500'
- V, W - EXISTING 50-PAIR VOICE GRADE INTERCONNECT CABLE.
- + - GROUND ROD
- ES - EXISTING UNDERGROUND ELECTRICAL SERVICE BY PEPCO TO REMAIN



[1] Redline Revision Dated August 10th, 2011

SHA MDOT - SHA O.O.T.S.
S.H.A. Approval Date 8/11/2011
T.S. # 3555B T.I.M.S. # J905

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 355 (FREDERICK RD) AND TRAVIS AVE / ~~POST PRESERVE RD~~ [1] SPECTRUM AVE

GAITHERSBURG, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 11/2/09 CONTRACT NO.

DESIGNED BY R R ZACHERL COUNTY MONTGOMERY
DRAWN BY W J NIES LOGMILE 15035516.28
CHECKED BY TIMS NO. J905
F.A.P. NO. AC-NH-G-5113(10)C TOD NO.

TS NO. 3555B DRAWING NO. 2 OF 2 SHEET NO. OF

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy. N.W.
Glen Burnie, MD 21061
Ph (410) 590-5500
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FILE: $FILE$

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