PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new Traffic Control Signal with interconnect at the intersection of MD 212 (Riggs Road) and Ray Road / apartment complex driveway in Prince George's County. MD 212 (Riggs Road) is assumed to run an north-south direction. Video detection shall be used on the west, east and south legs of this intersection.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA five-phase, semi-actuated mode, with the MD 212 (Riggs Road) approaches running concurrently. An Exclusive/Permissive left turn phase shall be provided for the northbound approach of MD 212 (Riggs Road). A pedestrian phase with pushbutton actuation shall be provided across the south leg of 212 (Riggs Road) The Ray Road approach shall also run concurrently with the apartment complex driveway .

2. A full-traffic-actuated, eight-phase controller with two (2) four channel, rack mount loop detector amplifiers, video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

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 the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 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.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

ITEM NO.	DESCRIPTION	QUANTITY
9016	4 CHANNEL DETECTOR AMPLIFIER	2 EA
9042	CONTROLLER ASC/2 WITH TELEMETRY	1 EA
9044	CONTROLLER CABINET, SIZE 6 W/ RACK DETECTOR POWER SUPPLY	1 EA
9086	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	1 EA
9570	SHEET ALUMINUM GROUND MOUNTED SIGN	119 SF ~~95 SF~~ REV 2
	W3-3 NEW "SIGNAL AHEAD" sign, (48" x 48") ground mounted with hardware."	4 EA
	W3-3 NEW "SIGNAL AHEAD" sign, (36" x 36") ground mounted with hardware."	1 EA
	S2-1 "SCHOOL CROSSING (Symbolic)" sign, (36" x 36") ground mounted with hardware.	2 EA
	M6-1 "ARROW" sign, (21"x15"), ground mounted with hardware."	2 EA
9571	SHEET ALUMINUM MAST ARM MOUNTED SIGN	~~71.5 SF~~ ~~73 SF~~ REV 1 49 SF REV 2
	D3-2 "Riggs Rd " sign, (variable x 16")	1 EA
	D3-2 "Ray Rd " sign, (variable x 16")(dual faced)	2 EA
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42").	1 EA
	GUIDE SHIELD ASSEMBLY (48"x75") ~~pole mounted.~~ GROUND MOUNTED REV 2 M3-2 "NORTH(30"X15") M1-5 "MD 212"(48"X36") M6-1 "left arrow "(30"X24")"	1 EA
	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-2 "SOUTH"(24"X12") M1-5 "MD 212"(30"X24") M6-1 "right arrow "(21"X15")"	1 EA
REV 1	PUSHBUTTON SIGN TO READ "PUSHBUTTON TO CROSS RIGGS RD"	2 EA

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	MAINTENANCE OF TRAFFIC	3 EA
2001	CLASS 2 EXCAVATION	2 CY
2002	TEST PIT EXCAVATION	5 CY
5002	5 INCH HEAT APPLIED YELLOW PERMANENT	55 LF
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	50 LF
5005	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	550 LF
5006	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	150 LF
6001	DEPRESS CURB & GUTTER	10 LF
6002	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	10 LF
6004	4 INCH CONCRETE SIDEWALK	160 SF
6006	TRAFFIC BARRIER W BEAM POST NORMAL 6 FOOT LENGTH	3 EA
8001	CONCRETE FOUNDATION	15 CY
8002	12 IN PED SIG HEAD SECTION	4 EA
8005	ADJ/RE-RING EXIST. SP WIRE	1 EA
8006	CONDUIT BEND IN EXISTING FOUNDATION	1 EA
2 ~~8007~~	~~CONTROL CABLE, 100 FOOT, VIDEO DETECTION~~	~~2 EA~~

The contact persons for District #3 (Prince George's County) are as follows:

Mr. Majid Shakib
Assistant District Engineer - Traffic
Phone: (301 513-7358

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

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

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

Mr. Ed Rodenhizer
Signal Shop
410-787-765

Mr. Sonny Bailey
Sign Shop
410-787-7670

The power company representative is:

Mr Richard Chilcoat
PEPCO
8300 Old Marlboro Pike
Upper Marlboro, MD 20772

EQUIPMENT LIST (CONT)

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

ITEM NO.	DESCRIPTION	QUANTITY
2 8009	CONTROL CABLE, 300 FOOT, VIDEO DETECTION	3 ~~1~~ EA
8018	PED POLE (14')	1 EA
8018	PED POLE (4')	1 EA
8019	REM & DISPOSE MAT & EQUIP PER ASSIGN	1 EA
8020	TWIN MAST ARM POLE (15' T) & 50' MAST ARMS	1 EA
8021	TWIN MAST ARM POLE (15' T) & 50'/60' MAST ARMS	1 EA
8026	DETECTABLE WARNING SURFACES	24 SF
2 8029	WOOD SIGN SUPPORTS 4 INCH X 6 INCH	224 ~~203.5~~ LF
8030	NO. 6 AWG STANDARD BARE COPPER GROUND WIRE	560 LF
8036	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	550 LF
8037	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	560 LF
8038	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	15 LF
2 8039	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED	1390 ~~1355~~ LF
8040	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	40 LF
8045	METERED SERVICE PEDESTAL	1 EA
8047	ELECTRICAL CABLE 1- CONDUCTOR NO. 4 AWG-THHN/THWN	165 LF
8052	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE	6 EA
8053	FURNISH AND INSTALL ELECTRICAL HANDHOLE	19 EA
8055	INSTALL GROUND MOUNTED SIGN	119 SF ~~95 SF~~
8056	INSTALL OVERHEAD SIGN	49 SF ~~73 SF~~ ~~71.5 SF~~ REV 1 REV 2
8057	VIDEO DETECTION CAMERA	3 EA
8069	12 - PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)	3245 LF
8072	CONNECTOR KIT - TYPE I	1 EA
8073	CONNECTOR KIT - TYPE II	1 EA
8074	GROUND ROD -3/4INCH DIAMETER X 10 FOOT LENGTH	5 EA
8075	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	3 EA
8076	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	28 EA
8082	ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG	315 LF
8083	ELECTRICAL CABLE - 3 CONDUCTOR NO. 14 AWG	325 LF
2 8084	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG	160 ~~140~~ LF
2 8085	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG	1335 ~~1110~~ LF
~~8089~~	~~PEDESTRIAN PUSHBUTTON AND R10-4(L) SIGN(NOTE: SIGN TO READ "PUSHBUTTON TO CROSS RIGGS RD)~~	~~2 EA~~ REV 1
8095	INSTALL CONTROLLER AND CABINET - BASE MOUNT	1 EA
REV 1 8105-A	FURNISH AND INSTALL APS PUSHBUTTON	2 EA
8106-A	FURNISH AND INSTALL APS CONTROL UNIT	1 EA

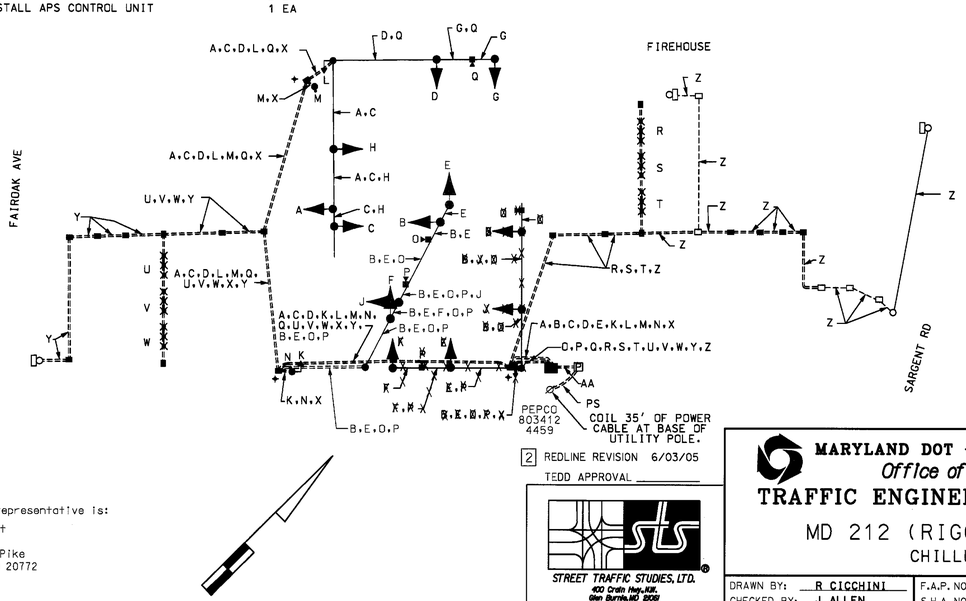
PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
PHASE 1 & 6	G-/G	G-/G	G	R	R	R	R	R	R	DW	DW
1 & 6 CHANGE	Y-/G	Y-/G	G	R	R	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4 & 8	R	R	R	R	R	G	G	G	G	DW	DW
4 & 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

C. EQUIPMENT TO BE REMOVED

All removed signal materials are to become property of the contractor.

WIRING DIAGRAM



2 REDLINE REVISION 6/03/05

TEDD APPROVAL _____

WIRING KEY

- A, B, C, D, E } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- F, G, H, J } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- K, L } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- M, N } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- 2 ~~O, P~~ ~~PRE MANUFACTURED CAMERA TO CONTROLLER CABLE (100')~~
- 2 Q, P } PRE MANUFACTURED CAMERA TO CONTROLLER CABLE (300')
- R, S, T, U, V, W } NON-INVASIVE MICROLOOP LEAD-IN CABLE (1000')
- X - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- Y, Z } 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
- AA - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- PS - PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY PEPCO
- + - GROUND ROD

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy. NW.
Glen Burnie, MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

4680.dgn WT-61

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

MD 212 (RIGGS RD) AND RAY RD
CHILLUM, MARYLAND

DRAWN BY:	R CICCHINI	F.A.P. NO.		TS NO. 4337	SHEET NO. 3 OF 3
CHECKED BY:	J ALLEN	S.H.A. NO.	AT3565185		
SCALE:	NONE	COUNTY:	PRINCE GEORGE'S	T.I.M.S. NO. 0270	
DATE:	9/01/04	LOG MILE:	16021200.60		