PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of existing Traffic Control Signals at the intersection of US 1 and Queensbury Road in Prince George's County. US 1 is assumed to run a north-south direction. The signal shall be interconnected to MD 410 (East West Hwy) to the north and Oglethorpe Street to the south. [1] Countdown pedestrian signal heads with audible pushbuttons shall be installed across all legs of this intersection

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA five-phase, semi-actuated mode, with the US 1 approaches running concurrently. An Exclusive/Permissive left turn phase shall be provided for the northbound approach of US 1. ~~A pedestrian phase with pushbutton actuation shall be provided across the north leg of US 1.~~ The pedestrian phases across Queensbury Road shall be on recall. The Queensbury Road approaches shall also run concurrently. Detection shall be provided via video detection. [1] Pedestrian phases with pushbutton actuation shall be provided across both legs of US 1.

2. A full-traffic-actuated, eight-phase controller with 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.

EQUIPMENTLIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop).	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	63 SF
	D3-2 "Queensbury Rd " sign, (variable x 16")	2 EA
	I-7 "Train Station (Symbolic)" sign, (24" x24").	1 EA
	M3-2 "EAST" sign, (24" x 12").	1 EA
	M6-1 "ARROW" sign, (21" x 15").	1 EA
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42").	1 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36").	1 EA
	R3-5L "LEFT TURN ONLY" sign, (30" x 36").	2 EA
	R3-6R "RIGHT TURN AND THRU (Symbolic), sign, (30" x 36").	1 EA

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

	ITEM NO.	DESCRIPTION	QUANTITY
[1]	2001	Class 2 Excavation.	3.5 ~~2~~ C.Y.
	2002	Test Pit Excavation	8 C.Y.
[1]	5001	5" white heat applied permanent preformed thermoplastic pavement marking.	~~215~~ 315 L.F.
	5002	5" yellow heat applied permanent preformed thermoplastic pavement marking.	385 L.F.
	5003	Remove existing pavement markings - any width.	725 L.F.
	5005	12" white heat applied permanent preformed thermoplastic pavement marking.	670 L.F.
	5006	24" white heat applied permanent preformed thermoplastic pavement marking.	100 L.F.
	5008	Heat applied permanent preformed thermoplastic pavement marking arrow.	6 EA
[1]	6001	Furnish and install depressed curb and gutter.	40 ~~30~~ L.F.

EQUIPMENTLIST

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

	ITEM NO.	DESCRIPTION	QUANTITY
[1]	6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	125 ~~105~~ L.F.
[1]	6004	4" concrete sidewalk.	740 ~~620~~ S.F.
[1]	8001	Furnish and install concrete for signal foundation.	20 ~~16~~ C.Y.
[1]	~~8002~~	~~Furnish and install 12" pedestrian signal head section~~	~~12 EA~~
	8008	Pre-manufactured camera to controller (200' length) cable	3 EA
	8015	Furnish and install 16' pole w/ special 15' T dimension and 60' mast arm.	1 EA
[1]	8018	Furnish and install breakaway pedestal pole (10').	5 ~~4~~ EA
	8019	Remove and dispose of existing material and equipment per assignment.	1 EA
	8022	Furnish and install 16' pole w/ special 15' T dimension and twin 50'/60' mast arms.	1 EA
[1]	8027	Detectable warning system (truncated domes).	56 ~~40~~ SF
[1]	8028	Remove and replace decorative brick sidewalk	95 ~~90~~ S.F.
[1]	8031	Furnish and install No. 6 AWG stranded bare copper ground wire.	665 ~~605~~ L.F.
	8034	Furnish and install 3" electrical conduit - galvanized riser.	70 L.F.
	8035	Furnish and install 3" weatherhead.	2 EA
	8039	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched.	25 L.F.
[1]	8040	Furnish and install 3" schedule 80 rigid polyvinyl chloride - trenched.	150 ~~115~~ L.F.
	8041	Furnish and install 4" schedule 80 rigid polyvinyl chloride - trenched.	60 L.F.
	8044	Furnish and install 4" schedule 80 rigid polyvinyl chloride - slotted.	200 L.F.
	8046	Metered service pedestal.	1 EA
	8048	Furnish and install electrical cable 1-conductor No. 4 AWG THHN/THWN.	25 L.F.
	8054	Furnish and install electrical handhole.	7 EA
	8057	Install overhead sign.	63 S.F.
	8058	Furnish and install video detector camera.	3 EA
	8075	Furnish and install ground rod -3/4" x 10'.	8 EA
	8076	Furnish and install 8" vehicular traffic signal head section.	3 EA
	8077	Furnish and install 12" vehicular traffic signal head section	28 EA
[1]	8083	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	955 ~~315~~ L.F.
[1]	8085	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	1105 ~~960~~ L.F.
	8086	Furnish and install electrical cable - 7 conductor (No. 14 AWG).	750 L.F.
[1]	Neg. ~~8090~~	Pedestrian ~~pushbutton and~~ R10-4(1) sign. (Note: Sign to read "PUSHBUTTON TO CROSS BALTIMORE AVE".)	4 ~~2~~ EA
	8096	Install controller and cabinet base mount.	1 EA
	Neg.	Furnish and install electrical cable - 1 conductor (No. 250 KCMIL)	180 L.F.
[1]	Neg.	LED 16" countdown pedestrian signal head.	8 EA
[1]	Neg.	Pedestrian R10-4(1) sign. (Note: Sign to read "PUSHBUTTON TO CROSS QUEENSBURY RD".)	4 EA
[1]	Neg.	2 wire Central Control unit	1 EA
[1]	Neg.	Audible/tactile pedestrian pushbutton.	8 EA
2k5 [1]	8018	Furnish and install breakaway pedestal pole (4').	1 EA

C. EQUIPMENT TO BE REMOVED

SHA Forces shall remove the controller and all auxilliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

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
410-787-7652

Mr. Sonny Bailey
Sign Shop
410-787-7670

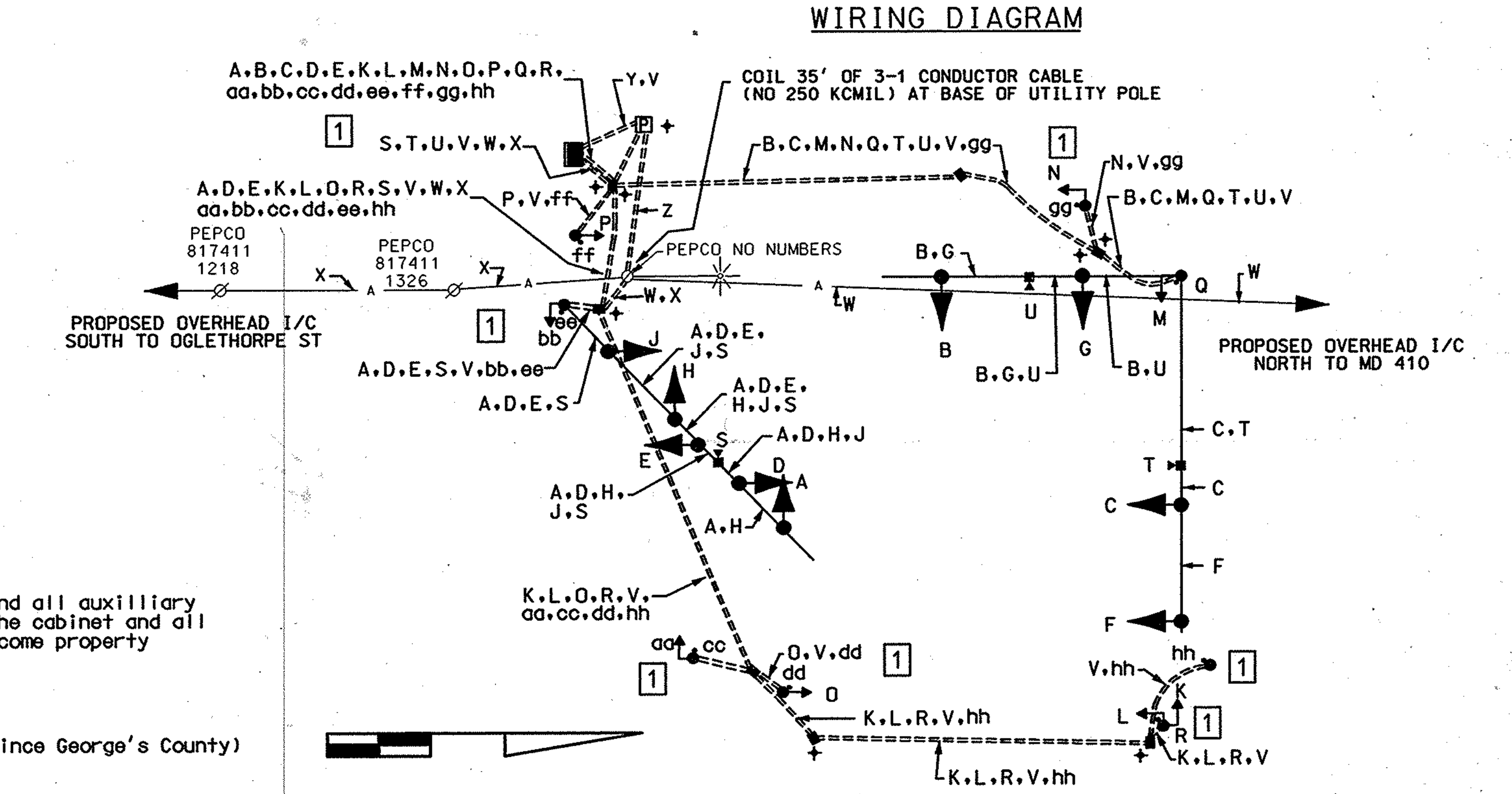
The power company representative is:

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

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	[1] 24	[1] 25
PHASE 1 & 6	◄G-/G	◄G-/G	G	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 & 6 CHANGE	◄Y-/G	◄Y-/G	G	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A, B, C, D, E } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

F, G, H, J, K, L, M, N, O, P, aa, bb } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G) [1]

Q, R, cc, dd, ee, ff, gg, hh } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G) [1]

S, T, U } PRE MANUFACTURED CAMERA TO CONTROLLER CABLE (200')

V - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

W, X } 12-PAIR VOICE GRADE INTERCONNECT CABLE (SELF SUPPORTING)

Y - 2-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

Z - 3-1 CONDUCTOR ELECTRICAL CABLE (NO 250 KCMIL)

+ - GROUND ROD

[1] REDLINE REVISION 11/28/05

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy.,N.W.
Glen Burnie,MD 21061
Ph (410) 590-5500
Fax (410) 590-6637
4695gired.dgn D6-3

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

US 1 AND QUEENSBURY ROAD

DRAWN BY:	RC	F.A.P. NO.		TS NO. 551	SHEET NO. 2 OF 2
CHECKED BY:		S.H.A. NO.	AT5665185		
SCALE:	NONE	COUNTY:	PRINCE GEORGE'S	T.I.M.S. NO. G633	
DATE:	2/15/05	LOG MILE:	16000102.52		

...\4000's\4695\4695bgired.dgn Nov. 29, 2005 10:12:09