PROJECT DESCRIPTION

I. General

This project involves the reconstruction of an existing traffic control signal at the intersection of MD 410 (East-West Hwy) and 23rd Avenue in Prince George's County, Maryland. MD 410 is considered to run in the east/west direction.

II. Intersection Operation

1. The intersection shall continue to operate in a NEMA seven-phase, full-actuated mode. There will be an exclusive/permissive left turn phases for the eastbound and westbound movements of MD 410. MD 410 through movements shall continue to operate concurrently. Southbound 23rd Avenue has an exclusive/permissive left turn phase. Pedestrian signal heads shall be installed along the east leg of the intersection.

2. A full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall remain in operation at this intersection.

III. Special Notes

1. The Contractor shall be responsible for terminating all signal cables, 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.

PROJECT CONTACTS

The contact persons for District #3 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. Sonny Bailey
Supervisor Sign Operations
Phone: 410-787-7670
Mr. Ed Rodenhizer
Supervisor, Signal Operations
Phone: 410-787-7650

EQUIPMENT LIST

A. Equipment to be supplied by the State of Maryland.

Item No.	Description	Unit	Quantity
9571	SHEET ALUMINUM OVERHEAD MAST ARM / POLE MOUNTED SIGN	SF	151
	Associated shield assembly (48"x 75") POLE MOUNTED	EA	2
	D-3(2) (23rd Ave) (VAR.X16") MAST ARM MOUNTED	EA	4
	Associated shield assembly (30"x 51") POLE MOUNTED	EA	2
	R3-5(L) (30"x 36") MAST ARM MOUNTED	EA	1
	R3-6(L) (30"x 36") MAST ARM MOUNTED	EA	1
9000	QUICK CONNECT BLOCK	EA	1
9000	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1

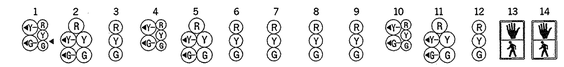
B. Equipment to be Furnished and/or installed by the Contractor.

Item No.	Description	Unit	Quantity
1002	Maintenance of Traffic	EA	2
2002	Test Pit Excavation	CY	4
6003	F & I Standard Type A Combination Curb and Gutter 12" Gutter Pan 8" Depth	LF	55
6005	F & I 4" Concrete Sidewalk	SF	15
8001	F & I Concrete Foundation	CY	12
8003	F & I 12" Green or Red LED Signal Head	EA	30
8004	F & I 12" Yellow LED Signal Head	EA	18
8019	F & I 16" LED Countdown Pedestrian	EA	2
8011	F & I Conduit Bend in Existing Foundation	EA	2
8013	F & I Control Cable, 200', Video Detection	EA	2
8014	F & I Control Cable, 300', Video Detection	EA	1
8016	F & I Control Cable, 500', Video Detection	EA	1
8027	Remove & Dispose Material & Equipment per Assignment	LS	1
8038	Remove-Reset Decorative Brick Sidewalk	SF	30
8041	F & I No. 6 AWG Stranded Bare Copper Ground Wire	LF	420
8048	F & I 3" Schedule 80 Rigid PVC Conduit-Bored	LF	~~330~~ 230
8049	F & I 4" Schedule 80 Rigid PVC Conduit-Bored	LF	~~420~~ 640
8051	F & I 3" Schedule 80 Rigid PVC Conduit-Trenched	LF	~~410~~ 200
8052	F & I 4" Schedule 80 Rigid PVC Conduit-Trenched	LF	5
8057	F & I Metered Service Pedestal	EA	1
8059	F & I Electrical Cable 1-Conductor No. 4 AWG-THHN/THWN	LF	45
8063	F & I Noninvasive Detector, 500' Lead in Cable	EA	5
8065	F & I Electrical Handhole	EA	~~10~~ 9
8068	Install Overhead Sign	SF	151
8069	F & I Video Detection Camera	EA	4
8074	F & I Steel Pole With A Single 38' Mast Arm	EA	2
8075	F & I Steel Pole With A Single 50' Mast Arm	EA	2
8087	F & I Ground Rod -3/4" Diameter x 10' Length	EA	6
8095	F & I Electrical Cable - 2 Conductor (No. 14 AWG)	LF	150
8097	F & I Electrical Cable - 5 Conductor (No. 14 AWG)	LF	375
8098	F & I Electrical Cable - 7 Conductor (No. 14 AWG)	LF	2050
8102	F & I Pushbutton and Sign	EA	1

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILLIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

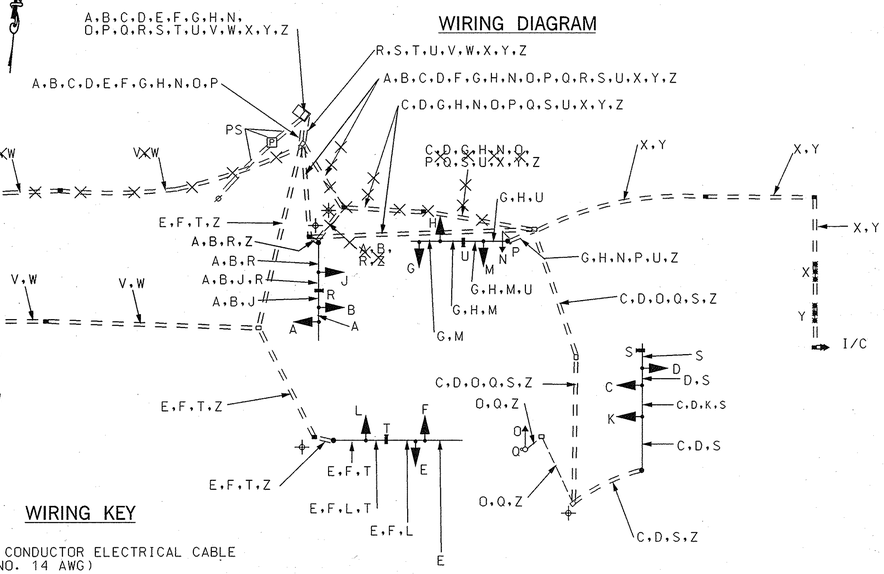
ITEM NO.	DESCRIPTION	UNITS	QUANTITY
	NONE		

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 & 5	R, G	R, G	R	R, G	R, G	R	R	R	R	R	R	R	DW	DW
1 & 5 CHANGE TO PHASE 1 & 6 or PHASE 2 & 5 or PHASE 2 & 6														
PHASE 1 & 6	G, G	G, G	G	R	R	R	R	R	R	R	R	R	DW	DW
1 CHANGE	G, Y	G, Y	G	R	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 & 5	R	R	R	G, G	G, G	G	R	R	R	R	R	R	DW	DW
5 CHANGE	R	R	R	G, Y	G, Y	G	R	R	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 4 AND 7	R	R	R	R	R	R	R	R	R	G, G	G, G	G	DW	DW
4 AND 7 CHANGE	R	R	R	R	R	R	R	R	R	G, Y	G, Y	G	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
PHASE 4 AND 8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW
4 AND 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	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

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E,F,G,H — 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

J,K,L,M,N,O — 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

P,Q — 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

R,S,T,U — VIDEO DETECTION CABLE

V,W,X,Y — NON-INVASIVE MIRCO-LOOP LEAD-IN

Z — 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE

PS — POWER SERVICE UNDERGROUND 3 WIRE 1 CONDUCTOR (NO. 4 AWG)

GROUND ROD

BAI
BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS
9220 RUMSEY ROAD SUITE 110
COLUMBIA, MARYLAND 21045
410-884-3607 410-884-3609(FAX)

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

MD 410 AND 23rd AVE.

GENERAL INFORMATION PLAN

SCALE N.T.S. DATE 6/05 CONTRACT NO. AT5665815

DESIGNED BY M.A. MEARS
DRAWN BY M.A. MEARS
CHECKED BY
F.A.P. NO. AC-STPG-0005(786)E
COUNTY
LOGMILE 16041001.74
T.I.M.S. NO. F-127
TOD NO. 1065C

DRAWING NO. SG-2 OF 2 SHEET NO. 2 OF 12

PLOTTED: $DATETIME$
FILE: $FILE$

BY: $USERNAME$