PROJECT DESCRIPTION

GENERAL
THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 191 (BRADLEY BOULEVARD) AND ARLINGTON ROAD IN MONTGOMERY COUNTY. IN ADDITION, ACCESSIBLE PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS WILL BE INSTALLED FOR THE NORTH, SOUTH AND WEST LEG PEDESTRIAN CROSSINGS. SIDE STREET SPLIT PHASING WILL BE INSTALLED FOR NORTH AND SOUTHBOUND ARLINGTON ROAD.

MD 191 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION
THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, SEMI-ACTUATED TRAFFIC MODE. SPLIT PHASING WILL BE INSTALLED FOR THE SIDE STREET. THE EXISTING WESTBOUND EXCLUSIVE/PERMISSIVE PHASING WILL REMAIN. THE EASTBOUND EXCLUSIVE PHASING WILL BE REPLACED BY EXCLUSIVE/PERMISSIVE PHASING. THE EXISTING MAINLINE AND ALTERNATE SIDE STREET PEDESTRIAN PHASES WILL REMAIN. THE EXISTING WB CONCURRENT RIGHT TURN W/ PHASE 3 WILL REMAIN.

CONTROLLER REQUIREMENTS
INSTALL NEW BASE MOUNTED CABINET AND FOUNDATION. THE MONTGOMERY COUNTY SIGNAL SHOP WILL INSTALL THE CONTROLLER, ALL ASSOCIATED HARNESSES, ONE (1) 2 WIRE CENTRAL CONTROL UNIT AND ONE (1) VIDEO DETECTION INTERFACE EQUIPMENT WITH IN THE CABINET.

APS WILL FUNCTION AS FOLLOWS:

FOR BRADLEY BOULEVARD

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE 'WAIT TO CROSS BRADLEY [illegible] AT ARLINGTON [illegible]

B. WHEN THE 'WALK' PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE 'WALK' PHASE.

FOR ARLINGTON ROAD

A. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE 'WAIT TO CROSS ARLINGTON [illegible] AT BRADLEY [illegible]

B. WHEN THE '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 / OOTS ARE AS FOLLOWS:

District #3

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

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

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

Mr. Kevin Nowak
Assistant District Engineer - Construction
Phone: 301-513-7336

Mr. Kamal Hamud
Montgomery County Traffic Engineering
Phone: 240-777-8761

Office Of Traffic & Safety

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

Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
410-787-7630

Mr. Edward Rodenhizer
Team Leader Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Team Leader Sign Operations
410-787-7670

The Power Company Representative is:
Potomac Electric Power Company
8300 Old Marlboro Pike
Upper Marlboro, Maryland 20772
Phone: 301-961-5325

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO.	QUANTITY	DESCRIPTION
9044	1 EA	[UPDATED] CONTROLLER CABINET, SIZE 6
9086	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	72 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
		1 EA - SHIELD ASSEMBLY (30 IN. x 51 IN.) 'EAST MD 191, RIGHT ARROW'
		1 EA - SHIELD ASSEMBLY (30 IN. x 51 IN.) 'WEST, MD 191, RIGHT ARROW'
		1 EA - SHIELD ASSEMBLY (48 IN. x 75 IN.) 'EAST, MD 191, LEFT ARROW'
		1 EA - SHIELD ASSEMBLY (48 IN. x 75 IN.) 'WEST, MD 191, LEFT ARROW'
9571	21 SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGNS:
		2 EA - R10-3(1) (9 IN. x 15 IN.) 'PUSH BUTTON TO CROSS BRADLEY BLVD'
		4 EA - R10-3(1) (9 IN. x 15 IN.) 'PUSH BUTTON TO CROSS ARLINGTON RD'
		2 EA- R3-6 (30"x36")

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
1003	3 EA	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2002	8 CY	TEST PIT EXCAVATION
5004	415 LF	12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	130 LF	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	10 LF	5 INCH WHITE OR YELLOW HEAT APPLIED PERMANENT PAVEMENT LINE MARKINGS
5007	400 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
6001	170 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	875 SF	5 INCH CONCRETE SIDEWALK
8001	1 EA	2 WIRE CENTRAL CONTROL UNIT
8007	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
8008	5 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8013	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION - POLE MOUNT
8015	1 EA	MAST ARM POLE & 38 FT MAST ARM ANY 'T' DIMENSION
8018	1 EA	MAST ARM POLE & 50 FT MAST ARM ANY 'T' DIMENSION
8021	1 EA	REMOVE & DISPOSE OF EQUIPMENT PER ASSIGNMENT
8022	1 EA	TWIN MAST ARM POLE & 50 FT/60 FT MAST ARMS ANY 'T' DIMENSION
8025	4 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8028	150 LF	12 - PAIR COMMUNICATION CABLE
8034	725 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
8035	200 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
8036	52 LF	WOOD SIGN SUPPORTS UP TO 4 x 6
8037	80 SF	DETECTABLE WARNING SURFACES
8038	93 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
8040	400 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EA	METERED SERVICE PEDESTAL EMBEDDED
8030	150 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8046	6 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	50 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8052	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8054	1100 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	1100 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1200 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8065	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

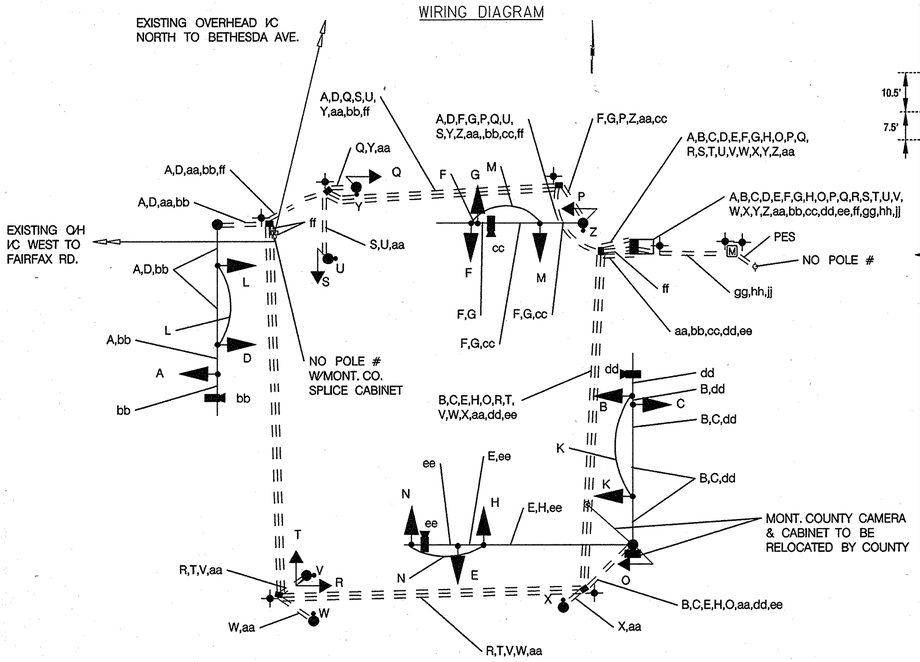
EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

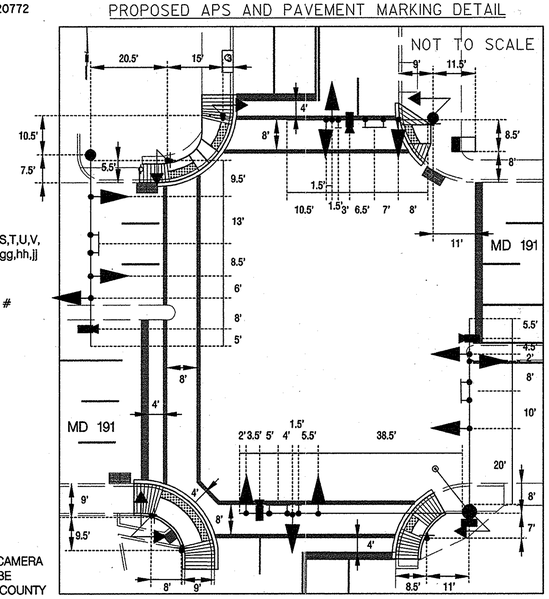
ITEM NO.	QUANTITY	DESCRIPTION

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

WIRING DIAGRAM



PROPOSED APS AND PAVEMENT MARKING DETAIL



PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 AND 5	+GR	+GR	R	+GR	+GR	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																		
PHASE 1 AND 6	+GG	+GG	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1 CHANGE	+YG	+YG	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	+GG	+GG	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 5 CHANGE	R	R	R	+YG	+YG	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	+GG	+GG	G	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R/G→	R	R	R	+GG	+GG	G	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	R	R	R	R/Y→	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT.	R	R	R	R	R	R/G→	R	R	R	+GG	+GG	G	DW	DW	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	R/G→	R	R	R	+GG	+GG	G	DW	DW	DW	DW	FL/DW	FL/DW
PHASE 4 ALT. CHANGE	R	R	R	R	R	R/Y→	R	R	R	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

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

K,L,M,N,O,P,Q,R,S,T — ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

U,V,W,X,Y,Z — ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)

aa — NO. 6 STRANDED BARE COPPER GROUND WIRE

bb, cc — CONTROL CABLE - 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER

dd, ee — CONTROL CABLE - 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER

ff — 12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)

PES — PROPOSED ELECTRICAL SERVICE

gg, hh, jj — PROPOSED POWER SERVICE FEED, ELECTRICAL CABLE 3-1 CONDUCTOR, NO. 4 AWG

PROPOSED GROUND ROD - 3/4 IN. DIAMETER X 10 FOOT LENGTH

TOD No. XX444-02
SHA No. MO526A52/B52

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

MD 191 (BRADLEY BOULEVARD)
AT ARLINGTON ROAD

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 6/2008 CONTRACT NO. XX4445185

DESIGNED BY MCG — COUNTY MONTGOMERY
DRAWN BY MCG — LOGMILE 15019105.97
CHECKED BY BAB — TIMS NO. 1618
F.A.P. NO. — TOD NO.

TS NO.4385B-GI | DRAWING SG-02 OF 02 | SHEET NO. 2 OF 2

STV Incorporated
engineers / architects / planners / construction managers
7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

BY: guiliamc

PLOTTED: Wednesday, June 11, 2008 AT 02:46 PM
FILE: I:\PROJECTS\0312513\0312513_0079\Drawings\TRA\pSG-N001_mdl191.dgn