

**I. GENERAL PROJECT DESCRIPTION**

This project involves the reconstruction of an existing traffic signal from Span Wire to Mast Arm at the intersection of MD 185 (Connecticut Avenue) at Perry Avenue in Montgomery County, 16 1/2 foot Special "T" Mast Arm poles shall be used in the new design. A new NEMA size 6 controller cabinet and an interconnect splice cabinet shall be installed at the intersection.

**II. INTERSECTION OPERATION**

- The intersection is to operate in a NEMA 5-phasing. The mainline will be MD 185 and the side street is Perry Avenue. Five section Exclusive/Permissive LED signal heads shall be installed for the North Bound approach of MD 185 and three section red/yellow/green ball for all other approaches. Video Detection Camera's shall be installed for the actuation of the left turn for North Bound MD 185, the presence detection for Perry Avenue and the Entrance of the Kaiser Permanente building. Countdown pedestrian signals and Audible/Tactile pedestrian pushbutton stations shall be installed for the North and West crossings of the intersection, with the North leg being an alternate pedestrian crossing.
- MCDPW&T signal shop shall install APS control unit into controller cabinet. The contractor shall deliver the control unit and audible pushbuttons to MCDPW&T Signal Shop for testing and programming. Contact Mr. KAMAL HAMUD at (240)-777-8761.

**III. SPECIAL NOTES**

- All pavement markings shall be installed in accordance with Administration standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly label each cable.
- All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections, highest roadway profile grade for open sections, to meet clearances as specified in the appropriate 800 series Standard Plates. The contractor shall verify ultimate grades prior to the installation of all signal equipment.
- For Montgomery County projects, the contractor shall be responsible for delivering the video interface equipment to the Montgomery County Signal Shop. County forces will complete the retrofit work in the cabinet.
- Disconnecting and splicing of interconnect cable shall be performed by MCDPT&T Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Kamal Hamud Division of Operation at (240) 777-8761 seventy-two hours in advance of intended work.
- 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. Utility lines that are in conflict shall be relocated prior to any signal modification by others to resolve the conflict.
- The contractor shall maintain the continuous operation of all interconnect, vehicular, pedestrian detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.
- APS will function as follows:  
 FOR CONNECTICUT AVENUE  
 a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Connecticut Avenue."  
 b. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.  
 FOR PERRY AVENUE  
 a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Perry Avenue."  
 b. When Walk phase begins, the message will be a rapid tick which will last for the duration of the Walk phase.
- The Contractor Shall Contact Pepco at 301-670-8808 for the Removal of the Existing Power Feed from the Existing Signal Cabinet Prior to the Removal of the Existing Signal Controller Cabinet.
- The contractor when constructing ADA ramps for the driveway entrance for the Kaiser Permanente Building of the intersection the contractor shall construct all ramps to grade level and elevation height of MD 185 (Connecticut Avenue) for wheel chair access.

**CONTACTS**

**DISTRICT**  
(DARRELL B. MOBLEY)  
DISTRICT ENGINEER  
301-513-7311

(JEFFERY WENTZ)  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
301-513-7318

(AUGIE REBISH)  
ASSISTANT DISTRICT ENGINEER - UTILITIES  
301-513-7350

(KEVIN NOWAK & DUANE BERNARD)  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
301-513-7336

(WAYNE MOWDY)  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
301-513-7304

**OFFICE OF TRAFFIC AND SAFETY**  
MR. RICHARD DAFF SR.  
CHIEF, TRAFFIC OPERATIONS  
410-787-7630

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS  
410-787-7630

MR. ED RODENHIZER  
TEAM LEADER SIGNAL OPERATIONS  
410-787-7650

MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
410-787-7670

MS. DARLENE EIDE  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

MR. KAMAL HAMUD  
MCDPW&T DIVISION CHIEF  
240-777-8761

**EQUIPMENT LIST**

**A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION**

ITEM NO.	QUANTITY	DESCRIPTION
9037	1 EA	CABINET "G" TYPE POLE MOUNT
9042	1 EA	CONTROLLER ASC II WITH TELEMETRY
9044	1 EA	CONTROLLER CABINET, SIZE 6
9087	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: 5-8 CAMERAS
9570	47 SF	SHEET ALUMINUM GROUND MOUNTED SIGN
9571	83 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
		R3-5(L)(30" X 36") MAST ARM MOUNTED EA 1
		D-3(1)(VAR. X 16") MAST ARM MOUNTED EA 4
		SHIELD ASSEMBLY SIGN(30" X 51") GROUND MOUNTED EA 2
		SHIELD ASSEMBLY SIGN(48" X 75") GROUND MOUNTED EA 1
		SHIELD ASSEMBLY SIGN(48" X 75") MAST ARM POLE MOUNTED EA 1
		R10-3(1)(9" X 15") PEDESTAL POLE MOUNTED EA 4

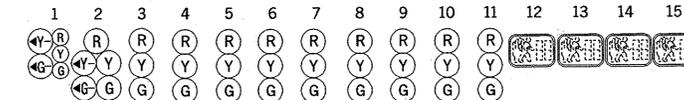
NOTE:  
CABINET "G" TYPE POLE MOUNTED TO BE PICK-UP BY THE CONTRACTOR AT MONTGOMERY COUNTY. CALL MR. KEITH LORD AT (301)-279-1291 PRIOR TO PICK-UP.

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

ITEM NO.	QUANTITY	DESCRIPTION
1003	1 EA	MAINTENANCE OF TRAFFIC
2002	4 CY	TEST PIT EXCAVATION
5004	300 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	150 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5007	620 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
6002	330 SF	5 INCH CONCRETE SIDEWALK
8001	1 EA	2 WIRE CENTRAL CONTROL UNIT
8007	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8008	4 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	2 EA	INSTALL STEEL STRAIN OR MAST ARM POLE WITH SINGLE - OR TWIN MAST ARM (AS)
8013	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8016	2 EA	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8018	2 EA	MAST ARM POLE & 50 FT MAST ARM ANY 'T' DIMENSION
8021	1 EA	REM & DISPOSE MAT & EQUIP PER ASSIGN
8025	5 EA	VIDEO DETECTION CAMERA AND CABLE UP TO 500 FEET
8028	50 LF	12 PAIR COMMUNICATION CABLE
8034	210 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8035	145 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8036	60 LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
8037	40 SF	DETECTABLE WARNING SURFACES
8038	47 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8040	360 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EA	METERED SERVICE PEDESTAL EMBEDDED
8044	105 LF	ELECTRICAL CABLE 1 CONDUCTOR NO. 4 AWG-THHN/THWN
8046	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	34 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8054	850 LF	ELECTRICAL CABLE - 2 CONDUCTOR NO. 14 AWG
8056	935 LF	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG
8057	1220 LF	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG
8064	1 EA	INSTALL CABINET - POLE MOUNTED
8065	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

C. IF THE CABINET IS TO BE REMOVED MCDPW&T FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

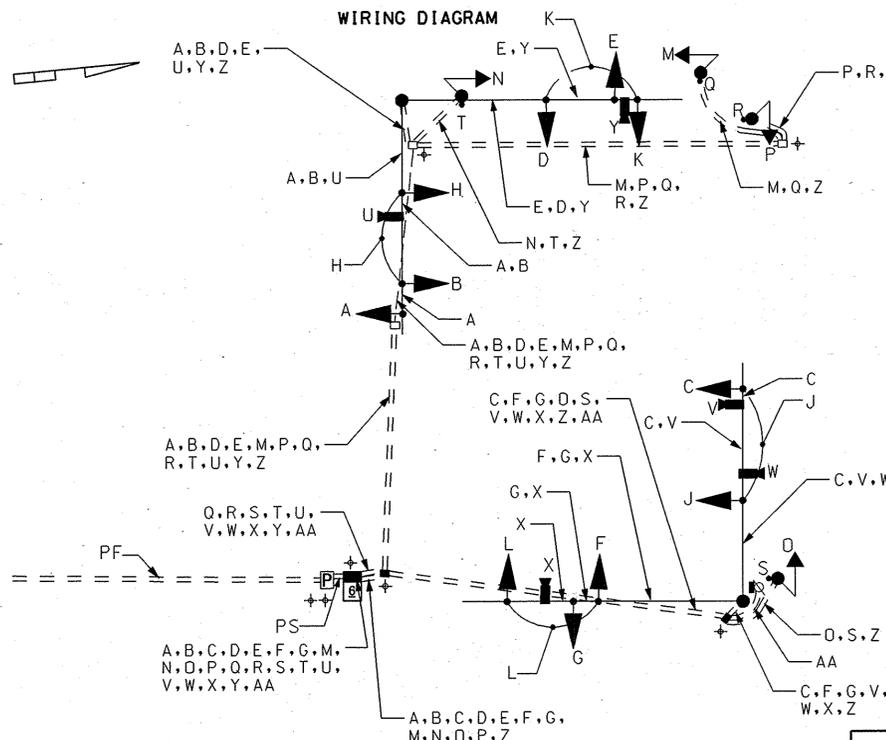
**PHASE CHART**



PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PHASE 1 AND 6	GG	GG	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 6 CHANGE	YG	YG	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	R	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	R	R	R	R	R	R	R	FLDW	FLDW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 AND 8 ALT	R	R	R	R	R	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	G	G	DW	DW	FLDW	FLDW
4 AND 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

**KEY**

- A B C D E F G } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- H J K L M N O P } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- Q R S T } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- U V W X Y } VIDEO DETECTION CABLE
- Z } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- AA } 12 PAIR COMMUNICATION CABLE
- PF } POWER SERVICE UNDERGROUND BY PEPCO
- PS } 2 WIRE 1 CONDUCTOR (NO. POWER FEED
- + } GROUND ROD



**SABRA, WANG & ASSOCIATES, INC.**  
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**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
**MD 185 (CONNECTICUT AVE.) & PERRY AVENUE**  
KENSINGTON, MARYLAND

GENERAL INFORMATION PLAN

SCALE	N.T.S.	DATE	04/2008	CONTRACT NO.	AT9265185
DESIGNED BY	S. SMITH	COUNTY	MONTGOMERY COUNTY		
DRAWN BY	S. SMITH	LOGMILE	15018504.63		
CHECKED BY	J. WEAVER	T.I.M.S. NO.	1196		
F.A.P. NO.		TOD NO.			
TS NO.	3478 A	DRAWING	2 OF 2	SHEET NO.	OF