DRILL HOLES

BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

This project involves the installation of a bus detection system on Westbound Leland Street at MD 185. The detection system shall be intalled so that a gap in northbound / southbound MD 185 traffic can be created thereby allowing buses to enter MD 185 southbound travel lanes. MD 185 (Connecticut Avenue) runs in a north-south direction.

INTERSECTION OPERATION

MD 185 (Connecticut Ave) and Leland St

When a bus is detected on westbound Leland Street at MD 185 (Connecticut Avenue), a call is sent via interconnect cable to the existing mid-block Pedestrian crossing located on MD 185 approximately 475' south of Leland Street. The Traffic signals will turn to Yellow and then to Red. This will create a gap along northbound MD 185 allowing buses to turn onto MD 185. Additionally, a call is also sent via interconnect cable to the base mounted traffic controller located at the intersection MD 185 and MD 410 (East Wesy Hwy).

MD 185 (Connecticut Ave) and MD 410 (East West Hwy)

The intersection shall continue to operate in a NEMA eight-phase, semi-actuated mode, with the MD 185 (Connecticut Avenue) approaches running concurrently. An Exclusive left turn phase shall continue to be provided for the northbound approach of MD 185 (Connecticut Avenue). An Exclusive/Permissive left turn phase shall continue to be provided for the southbound approach of MD 185 (Connecticut Avenue). The pedestrian phases with pushbutton actuation across both leg of MD 185 (Connecticut Avenue) shall remain in operation. The pedestrian phases across MD 410 (East West Highway) shall remain on recall. Farside sampling stations via video detection shall continue to be provided on all legs of this intersection. Exclusive left turn phases shall remain in operation for both approaches of MD 410 (East West Highway). The MD 410 (East West Highway) approaches shall also continue to run concurrently. A new Bus Pre emption shall be provided. During pre emption, the MD 410 (East West Highway) approaches shall operste concurrently.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR.

There is no equipment to be supplied by Montgomery County.

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

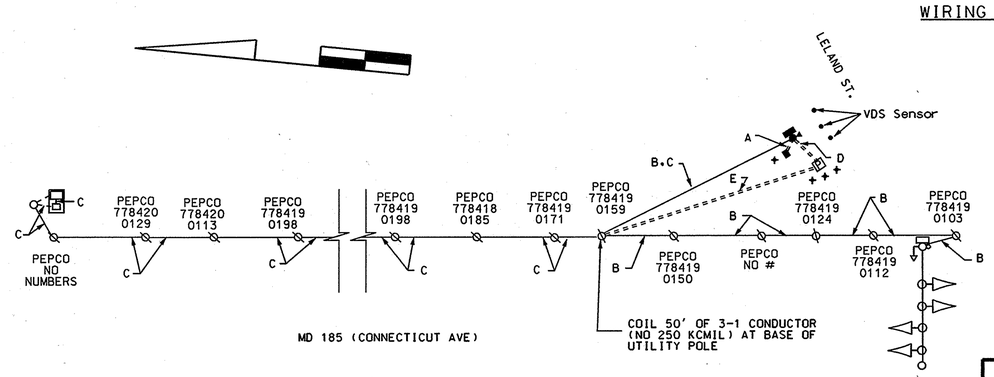
ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of Traffic	1 Day
2002	Test pit excavation.	2 C.Y.
8001	Concrete foundation.	1 C.Y.
8019	2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	20 L.F.
8023	3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	80 L.F.
8043	Ground rod, 3/4" diameter x 10' length with clamp.	4 Each
8051	6-pair telemetry cable - jelly-filled (underground).	1800 L.F.
8075	1-conductor electrical cable (No. 6 A.W.G.) stranded bare copper ground wire.	15 L.F.
8078	3-wire electrical cable (No, 4 A.W.G.)	15 L.F.
8109	3" weatherhead.	1 Each
8113	3/8" steel span wire.	115 L.F.
8131	Traffic signal handbox (pullbox).	1 Each
	20' breakaway pedestal pole with transformer base.	1 EA
	Splice cabinet with telemetry equipment, pole mounted.	1 Each
Neg.	Furnish and install electrical cable - 3 wire, 1 conductor (No. 250 KCMIL)	130 L.F.
Neg.	Metered pedestal service	1 Each
Neg.	VDS Wireless Sensor	3 Each
	VDS Wireless Access Point (Antenna).*	1 Each

MD 410 (EAST WEST HWY)

PHASE CHART (MD 185 AT MD 410)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PHASE 1 & 5	G	G	R	R	G/R	G/R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																								
PHASE 1 & 6	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 & 6 CHANGE	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	R	G/G	G/G	G	R	R	R	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	R	Y/G	Y/G	G	R	R	R	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	R	R	G	G	G	G	G	R	R	R	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	R	R	G	G	G	G	G	R	R	R	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	R	R	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 & 7	R	R	R	R	R	R	R	G	G	G	R	R	G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 3 & 8, 4 & 7 OR 4 & 8																								
PHASE 3 & 8	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 & 8 CHANGE	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 7	R	R	R	R	R	R	R	G	G	G	G	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 & 7 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	G	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 & 8 ALT	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	DW	DW	DW	DW	WK	DW	DW	WK
3 & 8 ALT CHANGE	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	DW	DW	DW	DW	WK	DW	DW	WK
PHASE 4 & 7 ALT	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	DW	WK	WK	DW
4 & 7 ALT CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	DW	WK	WK	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
BUS PRE EMPT	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	DW	DW	DW	DW	DW	DW	DW	DW
BUS PRE EMPT CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

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

B, C - 6-PAIR VOICE GRADE INTERCONNECT CABLE (LASHED TO THE EXISTING INTERCONNECT CABLE)

D - CABLE (NO. 4 A.W.G.) 3-1 CONDUCTOR ELECTRICAL

E - 3-1 CONDUCTOR ELECTRICAL (NO. 250 KCMIL)

+ - GROUND ROD

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 185 at MD 410
MD 185 SOUTH OF ASPEN ST
MD 185 at LELAND STREET
MD 185 at SOUTH OF WOODBINE ST.
CHEVY CHASE, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1"= 20' DATE 01/09/08 CONTRACT NO.

DESIGNED BY R R ZACHERL
DRAWN BY ROB CICCHINI
CHECKED BY JAH
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
TIMS NO. H895
TOD NO.

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

5178G1.dgn

TS NO. 4214C 4219A 1371B | DRAWING NO. 4 OF 4 | SHEET NO. OF

PLOTTED: @DATETIME@
FILE: @FILE@