PROJECT DESCRIPTION

GENERAL

This project involves the modification of an existing traffic control signal. The modification consists of the addition of pedestrian phases across the south and west legs of the intersection. MD 648 is assumed to run in a north-south direction.

INTERSECTION OPERATION

1. The intersection is to continue operating in a NEMA eight-phase fully actuated mode, with exclusive/permissive left turns on all approaches. Pedestrian phases with pushbutton actuation shall be provided across the south leg of MD 170 (phase-4) and across the east leg of MD 648 (phase-2). MD 648 approaches run concurrently. The MD 170 approaches also run concurrently.
2. The existing NEMA size "6" base mounted cabinet shall be utilized.

SPECIAL NOTES

1. The contractor shall be responsible for terminating all cables to the appropriate terminals and shall properly label each cable.

EQUIPMENT LISTS

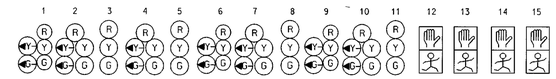
A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9000	12", one-way, two-section (DW.W) symbolic pedestrian signal head having proper post top adapter for pedestal mounting and cutaway visors.	2 EA
9000	12", two-way, two-section (DW.W) symbolic pedestrian signal head with adjustable bracket for pole mounting and cutaway visors.	1 EA
9096	Pedestrian pushbutton and R10-3C sign. (Note: Sign to read "PUSHBUTTON TO CROSS CAMP MEADE RD".)	2 EA
9096	Pedestrian pushbutton and R10-3C sign. (Note: Sign to read "PUSHBUTTON TO CROSS BALTO-ANNAP BLVD".)	2 EA

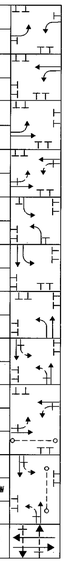
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
2001	Test pit excavation.	1 C.Y.
5003	12" white heat applied permanent preformed thermoplastic pavement marking.	275 L.F.
5004	24" white heat applied permanent preformed thermoplastic pavement marking.	35 L.F.
5007	Remove existing pavement markings - any width.	30 L.F.
8001	Furnish and install concrete for signal foundation.	2 C.Y.
8003	Furnish and install breakaway pedestal pole (any size).	2 EA
8011	Install signal head (any type).	4 EA
8018	Install pushbutton and sign.	4 EA
8021	Furnish and install saw cut for signal (loop detector).	250 L.F.
8022	Furnish and install 1" electrical conduit galvanized sleeve.	25 L.F.
8024	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched	50 L.F.
8027	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	85 L.F.
8033	Furnish and install electrical handhole.	2 EA
8034	Furnish and install ground rod - 3/4" x 10'.	2 EA
8040	Furnish and install loop wire encased in flexible tubing (No. 14 AWG).	950 L.F.
8041	Furnish and install electrical cable - 2 conductor (aluminum shielded).	110 L.F.
8042	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	600 L.F.
8043	Furnish and install electrical cable - 3 conductor (No. 14 AWG).	420 L.F.
8044	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	100 L.F.
8048	Furnish and install No. 6 AWG stranded bare copper ground wire.	50 L.F.

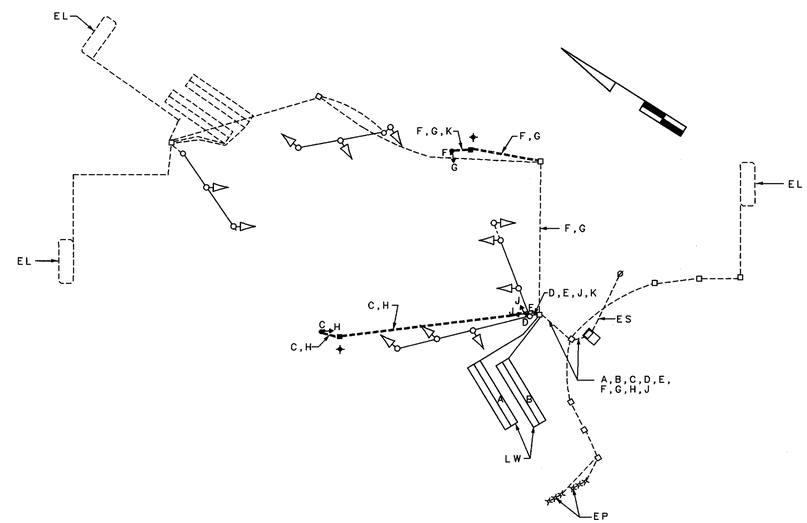
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PHASE 1 & 5	◀G-/R	◀G-/R	R	◀G-/R	R	R	R	R	R	R	R	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6															
PHASE 1 & 6	◀G-/G	◀G-/G	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 6 CHANGE	◀Y-/G	◀Y-/G	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	◀G-/G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	◀Y-/G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 3 & 7	R	R	R	R	R	◀G-/R	◀G-/R	R	◀G-/R	◀G-/R	R	DW	DW	DW	DW
CHANGES TO PHASES 3 & 8, OR 4 & 7 OR 4 & 8															
PHASE 3 & 8	R	R	R	R	R	R	R	R	◀G-/G	◀G-/G	G	DW	DW	DW	DW
3 & 8 CHANGE	R	R	R	R	R	R	R	R	◀Y-/G	◀Y-/G	G	DW	DW	DW	DW
PHASE 4 & 7	R	R	R	R	R	◀G-/G	◀G-/G	G	R	R	R	DW	DW	DW	DW
4 & 7 CHANGE	R	R	R	R	R	◀Y-/G	◀Y-/G	G	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 2 & 6 ALT	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 ALT CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 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	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERTION	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



WIRING DIAGRAM



WIRING KEY

- A, B } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G) ALUMINUM SHIELDED
- C, D, E, F } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- G, H } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- J - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- K - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING
- EP - EXISTING PROBE
- LW - LOOP WIRE (NO. 14 A.W.G.)
- ES - EXISTING UNDERGROUND SERVICE BY BGE
- ✦ - GROUND ROD

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

3713G1 .dgn

REVISIONS
©12-13-99 INSTALLATION OF PED HEADS AND PUSHBUTTONS AND ADJUSTMENT TO LOOP DETECTION TO HANDLE NEW XWALKS — RRZ
B 7-27-83 ADDITION OF EP LEFT TURN ON MD 170 — TMZ
A 7-210-83 ASBUILT — TMZ

APPROVALS

ORIGINAL ON FILE

ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION
MD 648 AND MD 170

DRAWN BY: D. DODA	F.A.P. NO.		TS NO. 1408C	SHEET NO. 2 OF 2
CHECKED BY:	S.H.A. NO.	AA-215-501-595		
SCALE: 1"= 20'	COUNTY:	ANNE ARUNDEL	T.I.M.S. NO. D558	
DATE: 5/5/76	LOG MILE:	0.20 17.90		

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