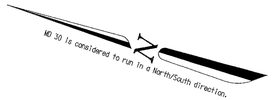
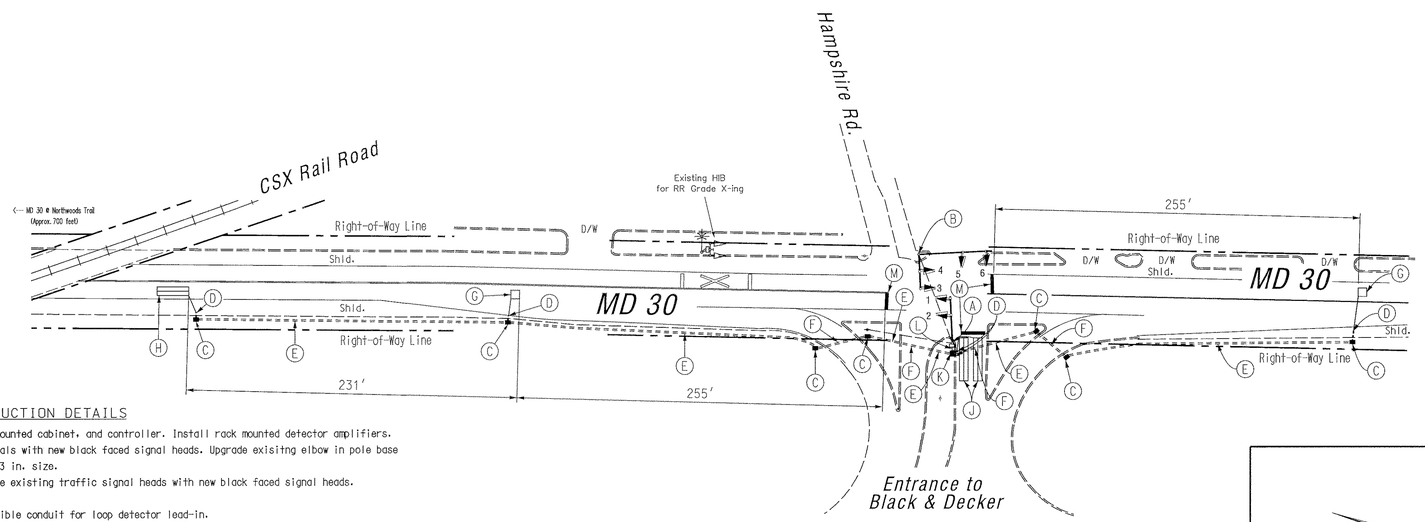
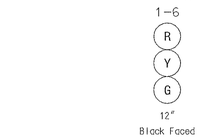
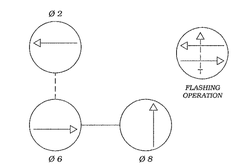




PROPOSED SIGNALS



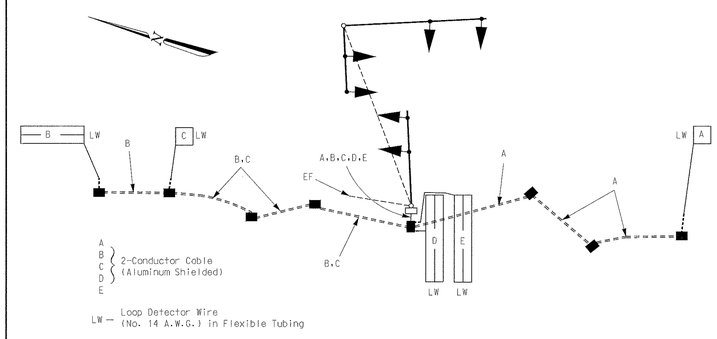
EXISTING NEMA PHASING



Phase Chart

	1	2	3	4	5	6	
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	
Phase 2 & 6	G	G	G	G	R	R	←
2 & 6 Change	Y	Y	Y	Y	R	R	→
Phase 8	R	R	R	R	G	G	↑
8 Change	R	R	R	R	Y	Y	↑
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	↔

Wiring Diagram



CONSTRUCTION DETAILS

A. Use existing steel pole, pole mounted cabinet, and controller. Install rack mounted detector amplifiers. Replace existing traffic signals with new black faced signal heads. Upgrade exisitng elbow in pole base and condulet into cabinet to 3 in. size.
B. Use existing steel pole. Replace existing traffic signal heads with new black faced signal heads.
C. Install handhole.
D. Install 1 in. liquid tight flexible conduit for loop detector lead-in.
E. Install 2 in. polyvinyl chloride [Schedule 80] electrical conduit – trenched.
F. Install 2 in. polyvinyl chloride [Schedule 80] electrical conduit – bored under roadway.
G. Install 6 ft. x 6 ft. vehicle loop detector (4 turns).
H. Install 6 ft. x 22 ft. quadrupole type vehicle loop detector (3-6-3 turns).
J. Install 6 ft. x 30 ft. quadrupole type vehicle loop detector (3-6-3 turns).
K. Replace existing handhole.
L. Install 3 in. polyvinyl chloride [Schedule 80] electrical conduit – trenched (existing conduit to be removed).
M. Replace existing stop lines (as located by the Engineer).

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new loop detectors and replacement of existing signal heads at the intersection of MD 30 and the Black & Decker Entrance in Carroll County, Maryland. MD 30 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

Presently the MD 30 through movements operate concurrently. The Black & Decker movements operate alone.

The existing cabinet and controller are to be utilized. The existing loop detector amplifiers are to be replaced with 4-channel rack mounted detection.

EQUIPMENT LIST

A. Equipment to be furnished and installed by the MD- SHA Signal Shop.

Item No.	Quantity	Units	Description
9002	2	EA	Detector amplifier 4-ch rack mount.
9003	1	EA	Detector panel.
9004	1	EA	Detector rack power supply.

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

Item No.	Quantity	Units	Description
1001	1	EA	Maintenance of Traffic.
5004	45	LF	24 in. white HAPPTPM
8021	415	LF	Sawcut for signal loop detector.
8023	40	LF	1 in. liquid tight flexible non-metalic conduit - sleeve
8024	675	LF	2 in. [Schedule 80] PVC electrical conduit - trenched.
8026	135	LF	2 in. [Schedule 80] PVC electrical conduit - bored.
8027	10	LF	3 in. [Schedule 80] PVC electrical conduit- trenched
8033	8	EA	Electrical handhole
8040	1575	LF	Loop detector wire encased in flexible tubing (No. 14 AWG)
8041	1350	LF	Electrical cable - 2-conductor (aluminum shielded).
8060	1	EA	Remove/dispose of existing material/equipment per assignment.
8061	1	EA	Conduit bend in existing base
8084	18	EA	12 in. black faced vehicular traffic signal head section - mast arm.
Neg.	1	EA	Replace existing condulet with 3 in. condulet.

CONTACT LIST

The contact persons for District #7 are as follows:

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District Engineer
301-624-8101

Mr. John Concannon
Assistant District Engineer - Traffic
301-624-8140

Mr. Jim Buckalew
Assistant District Engineer - Utility
301-624-8115

Mr. Dave Coyne
Assistant District Engineer - Maintenance
301-624-8105

Mr. Richard L. Doff
Chief, Traffic Operations Division
410-787-7630

GEOMETRIC LEGEND

EXISTING GEOMETRICS
PROPOSED GEOMETRICS

The Traffic Group
The Traffic Group, Inc.
410-931-6600
Fax 410-931-6601

REVISIONS

APPROVALS

Amy K. Beale
TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION

6/15/01
ASST. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

6.15.01
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

6.15.01 BRK
DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(Traffic Signal Plan)

MD 30 and Black & Decker Entrance

DRAWN BY:	F. Brownley	F.A.P. NO.	N/A	TS NO. 3182-B	SHEET NO.
CHECKED BY:		S.H.A. NO.	XX1005785		
SCALE:	1" = 50'	COUNTY:	Carroll	T.I.M.S. NO. E-349	1 OF 1
DATE:	June 11, 2001	LOG MILE:	06003001.15		

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