PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 273 (Main Street) and Rising Sun Shopping Center Western Site Access in Cecil County, Maryland. MD 273 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA 5 phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for the westbound movement of MD 273. The MD 273 through movements will operate concurrently. The Western Site Access through movements will operate concurrently with an actuated accessible pedestrian movement across the west leg of the intersection.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection interface, and (1) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

III. SPECIAL NOTE:

The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.

The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

CONTACT LIST

The contact persons for District #2 are as follows:

Mr. Robert Kiel
Assistant District Engineer - Traffic
410-778-3061

Mr. Barry Clothier
District Utility Engineer
410-778-3061

Mr. Terry O. Wright
Assistant District Engineer - Maintenance
410-810-3250

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

Mr. Ed Rodenhizer
Signal Operations Division
410-787-7652

Mr. Bob Snyder
Traffic Operation Division
410-787-7631

The Power Company Representative is:
Conectiv
Juan Owano
410-287-7176
2 Center Dr.
N.E., MD 21901

EQUIPMENT LIST

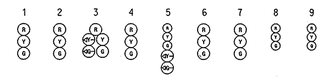
A. S.H.A. furnished equipment material.

None.

B. Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

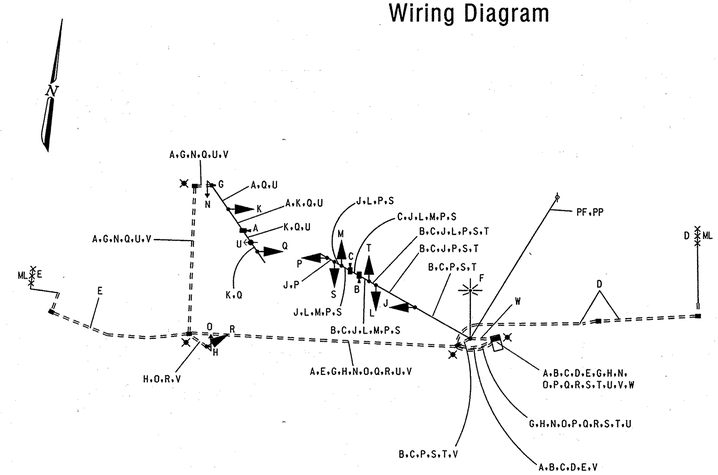
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
1	EA	818	27 ft. steel mast arm pole with a 70 ft. mast arm
1	EA	818	15 ft. "T" steel mono curve steel mast arm pole with a 38 ft. mast arm.
1	EA	818	14 ft. steel pedestal pole with break away transformer base.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, video detection interface, and one (1) four-channel loop detector amplifiers (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
1	EA	---	Central Control Unit for audible pedestrian pushbutton.
2	EA	814	8 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	814	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, five section L.E.D. (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	8 in./12 in., one-way, five section (8 in. R,Y,G/12 in. YA, GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	16 in., one-way, one section L.E.D. (Countdown indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
3	EA	---	Video Detection Camera and cable. (3 - 100 LF)
2	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
2	EA	813	9 in. x 15 in. R10-3(1) pedestrian pushbutton sign.
2	EA	---	Audible pedestrian pushbutton assembly with pushbutton sign.
2	EA	---	Micro-loop probe (set of 3) with 500 lead-in cable.
1	EA	---	3M Opticom detector eye with 100 LF cable.
1	EA	806	20 ft. luminaire arm.
1	EA	806	250 W H.P.S. lamp and luminaire.
4	CY	205	Test pit excavation.
6	EA	811	Handhole.
100	LF	815	Sawcut for signal loop detector.
150	LF	810	1-conductor electrical cable (No. 4 A.W.G.) (3 pieces).
50	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
375	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
500	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
825	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
125	LF	810	Bare copper stranded ground wire (No. 6 A.W.G.).
15	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
15	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
410	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
20	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
175	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - slotted.
10.5	CY	801	Concrete foundation for traffic signal equipment.
4	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Electrical utility service equipment (120/240 V, one phase, three wire system) for an overhead electrical power service as per MD-SHA Typical No. 807.05-01 (200 amp. electrical service).
36	LF	812	4 in. x 6 in. wood sign support.
20	SF	---	Remove and replace of existing concrete sidewalk.

Phase Chart



Phase 2 & 5	R	R	R	G	R	R	R	R	R	
5 Change	R	R	Y	G	Y	R	R	R	R	
Phase 2 & 6	G	G	G	G	G	R	R	R	R	
2 & 6 Change	Y	Y	Y	Y	Y	R	R	R	R	
Phase 4 & 8	R	R	R	R	R	G	G	G	G	
4 & 8 Change	R	R	R	R	R	Y	Y	Y	Y	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	

Wiring Diagram



A, B, C — Video Detector Cable

D, E — Micro-loop Detector Lead-in Cable

F — 2-Conductor Tray Cable (No. 12 A.W.G.)

G, H — 2-Conductor Electrical Cable (No. 14 A.W.G.)

J, M, K, N, L, O — 5-Conductor Electrical Cable (No. 14 A.W.G.)

P, Q, R, S, T — 7-Conductor Electrical Cable (No. 14 A.W.G.)

U — 3M Opticom Cable

V — Bare Copper Ground Wire (No. 6 A.W.G.)

W — 1-Conductor (No. 4 A.W.G.) (3 pieces) for Traffic Signal Electrical Service

PF — Proposed Overhead Electrical Service By CONECTIV

✕ — Proposed Grounding Rod

ML — Micro-loop Detector

PP — Proposed Overhead Phone Service By Verizon.

The Traffic Group, Inc.
Suite H
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410-931-6600
1-800-583-8411
Fax 410-931-6601

GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
SD — STORM DRAIN
G — GAS MAIN
W — WATER MAIN
S — SEWER MAIN
E — ELECTRIC CABLES
A — AERIAL CABLES
T — TELEPHONE CABLES
F — FIBER-OPTIC

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

MD 273 (Main Street) at Western Site Access
Rising Sun Shopping Center

GENERAL INFORMATION SHEET

SCALE N/A DATE May 24, 2007 CONTRACT NO. BW996M82

DESIGNED BY J. Dirndorfer COUNTY CECIL
DRAWN BY J. Dirndorfer LOGMILE
CHECKED BY 5/07 TIMS NO. I-016
FAP NO. N/A TOD NO.

TS NO. 4511-GI | DRAWING - OF | SHEET NO. 2 OF 3

BY: FBrownley

PLOTTED: Thursday, May 24, 2007 AT 10:18 AM
FILE: F:\2005\2005-1012\Des\pSG-N001_MD273wsiteaccess.dgn