PROJECT DESCRIPTION

GENERAL
THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 24 (ROCK SPRINGS ROAD) AND MD 23 (EAST-WEST HIGHWAY) INCLUDING INTERSECTION LIGHTING ON MD 24 IN HARFORD COUNTY. MD 24 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION
NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA (6) SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH MD 24 APPROACHES OPERATING CONCURRENTLY, WITH EXCLUSIVE/PERMISSIVE LEFT TURN PHASING PROVIDED FOR THE NORTHBOUND MD 24 APPROACH. MD 23 APPROACHES WILL OPERATE CONCURRENTLY, AND EXCLUSIVE/PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR THE WESTBOUND MD 23 APPROACH.

PROJECT CONSTRUCTION
WORK WILL INCLUDE RELOCATING STRAIN POLES, INSTALLING VIDEO DETECTION AND REPLACING ADVANCE DETECTION.

CONTROLLER REQUIREMENTS

THE EXISTING FULLY-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A NEMA SIZE 6" BASE MOUNTED CABINET WILL BE UTILIZED.

PROJECT CONTACTS

CONTACTS FOR DISTRICT 4:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781/2785

MS. SUENETTE POPE
DISTRICT UTILITIES ENGINEER
PHONE: (410) 321-2841

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 321-2761

CONTACTS FOR 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
410-787-7676

MR. MIKE STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA AND INSTALLED BY THE CONTRACTOR.

SPEC NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
813	973023	36 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF:
			- 2 EACH R10-12 (42"x36") SPAN WIRE MOUNT
			- 2 EACH R3-5(R) (30"x36") SPAN WIRE MOUNT
818	900000	2 ~~1~~ EA.	- 1 EACH 12 INCH X 30 FOOT STRAIN POLE
~~818~~	~~900000~~	~~1 EA.~~	~~- 1 EACH 12-INCH X 32 FOOT STRAIN POLE~~
---	900000	1 EA.	- 1 EACH VIDEO INTERFACE EQUIPMENT, 1-4 CAMERAS

NOTE TO SIGNAL SHOP:

ALL SIGNALS RELATED TO THIS PROJECT HAVE EXISTING DETECTOR RACKS.

EQUIPMENT LIST "B"

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

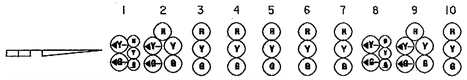
SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
205	203030	2 C.Y.	TEST PIT EXCAVATION
556	585624	150 L.F.	24 IN. HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
801	801004	6 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
804	837001	2 EACH	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
~~805~~	~~805011~~	~~20 L.F.~~	~~1 INCH ELECTRICAL CONDUIT GALVANIZED SLEEVE~~
805	805050	2 EACH	WEATHER HEAD, 3 INCH
805	805125	1200 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805135	730 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
~~805~~	~~805160~~	~~35 L.F.~~	~~1 INCH LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE~~
806	831010	1 EACH	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
810	802501	75 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
~~810~~	~~861104~~	~~2100 L.F.~~	~~ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)~~
810	861107	150 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO.14 A.W.G.)
810	861108	1250 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 A.W.G.)
810	861116	400 L.F.	ELECTRICAL CABLE- 2 CONDUCTOR (NO.12 A.W.G.)
~~810~~	~~862101~~	~~2800 L.F.~~	~~LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO.14 A.W.G.)~~
811	811001	~~14~~ 17 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813	813015	36 S.F.	INSTALL OVERHEAD SIGN
814	860270	6 EACH	8 INCH VEHICULAR TRAFFIC POLYCARBONATE SIGNAL HEAD SECTION
814	860272	32 EACH	12 INCH VEHICULAR TRAFFIC POLYCARBONATE SIGNAL HEAD SECTION
~~815~~	~~862102~~	~~800 L.F.~~	~~SAW-CUT FOR SIGNAL (LOOP DETECTOR)~~
818	866103	~~1~~ 2 EACH	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
818	867204	2 EACH	INSTALL STRAIN POLE, ANY SIZE
819	869101	540 L.F.	STEEL SPAN WIRE - 1/4 INCH DIAMETER
819	869102	540 L.F.	STEEL SPAN WIRE - 3/8 INCH DIAMETER
——	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT
——	810605	4 EACH	NON-INVASIVE DETECTOR, 1000 FT LEAD IN CABLE
——	810610	210 L.F.	NON-INVASIVE DETECTOR CARRIER PIPE
816	816001	4 EACH	VIDEO DETECTION CAMERA
816	816005	3 EACH	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816	816010	1 EACH	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

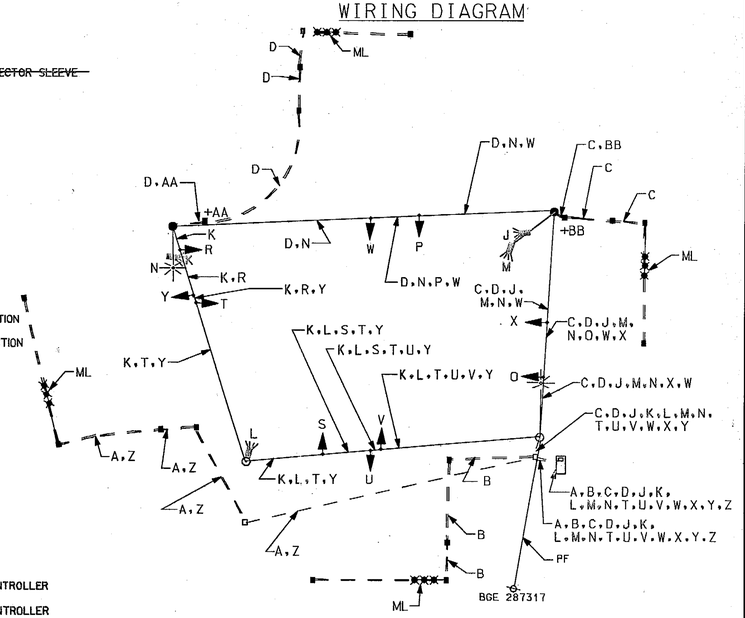
QUANTITY	DESCRIPTION
ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.	

PHASE CHART



	1	2	3	4	5	6	7	8	9	10
PHASE 1+6	G/G	G/G	G	R	R	R	R	R	R	R
1+6 CHANGE	Y/G	Y/G	G	R	R	R	R	R	R	R
PHASE 2+6	G	G	G	G	G	R	R	R	R	R
2+6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R
PHASE 3+8	R	R	R	R	R	R	R	G/G	G/G	G
3+8 CHANGE	R	R	R	R	R	R	R	Y/G	Y/G	G
PHASE 4+8	R	R	R	R	R	G	G	G	G	G
4+8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM



NOTE: THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL UNUSED ELECTRICAL CABLES.

WIRING KEY

A,B,C,D }	MICRO-LOOP PROBE LEAD-IN CABLE
~~E,F,G,H,J,K,L,M }~~	~~2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)~~
N }	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)
O,P,R,S }	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
T,U,V,W,X,Y }	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z }	INTERCONNECT CABLE RELOCATED
AA,BB }	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
+ -	GROUND ROD
LW }	LOOP WIRE (NO. 14 A.W.G.)
ML }	MICRO-LOOP PROBE
PF }	EXISTING POWER FEED
J,K,L,M }	VIDEO DETECTION CAMERA TO CONTROLLER CABLE

1 THIS SHEET FIGURE 18A REPLACES SHEET FIGURE 18.

1 1-08-05 GREENLINE REVISION DUE TO UPGRADE TO VIDEO DETECTION CAMERAS

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 24 (ROCK SPRINGS ROAD) AND
MD 23 (EAST-WEST HIGHWAY)
FIGURE 20A

DESIGNED BY: EJH	F.A.P. NO. SEE TITLE SHEET	TS NO. TS-109B	SHEET NO.
CHECKED BY: BLB	S.H.A. NO. HA2165177		
SCALE: NONE	COUNTY: HARFORD	T.I.M.S. NO. E476	_ OF _
DATE: 11-3-03	LOG MILE: 12002301.88		

01/06/2005
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