PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF US 1 AND MD 147 IN HARFORD COUNTY. IT INVOLVES THE INSTALLATION OF A NEW STEEL POLES, MAST ARMS, SIGNS, TRAFFIC SIGNAL HEADS AND DETECTORS. US 1 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION IS TO OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE. THERE WILL BE AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH THE NORTH AND SOUTHBOUND MOVEMENTS OF US 1. THE SIDE STREETS SHALL OPERATE IN A SPLIT PHASE.

CONTROLLER REQUIREMENTS

AN EIGHT PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER, AND INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSON FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT
ENGINEER - TRAFFIC
(410) 321-2781

MR. MICHAEL PASQUARIELLO
DISTRICT UTILITY ENGINEER
(410) 321-2841

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT
ENGINEER - MAINTENANCE
(410) 321-2764

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
(410) 787-7630

EQUIPMENT LIST "B"

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

CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	LS	MAINTENANCE OF TRAFFIC
203030	2	CY	TEST PIT EXCAVATION
585424	1 ~~132~~ 150	LF	24" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING
800000	12	EA	8" LED SIGNAL R,Y,G HEAD SECTION
800000	1	LS	REMOVE AND DIPOSE OF EXISTING MATERIALS & EQUIPMENT
801004	10	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	1 ~~202~~ 210	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805105	85	LF	2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805115	45	LF	3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805118	1 ~~350~~ 355	LF	4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
805125	50	LF	2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	682	LF	3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	50	LF	4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805160	50	LF	F&I 1" LIQ TIGHT FLEX NON-METALLIC ELECT DETECTOR WIRE SLEEVE
807202	1	EA	200 AMP METERED SERVICE PEDESTAL
810550	6	EA	MICROLOOP PROBE - 500 FT LEAD IN CABLE
810601	2	EA	NON-INVASIVE DETECTOR - 500 FT LEAD IN CABLE
811001	8	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	94	SF	INSTALL OVERHEAD SIGN
816001	4	EA	VIDEO DETECTION CAMERA
816005	2	EA	CONTROL CABLE, 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER
816010	2	EA	CONTROL CABLE, 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER
818051	2	EA	27 FT. STEEL POLE W/50 FT. & 70 FT. MAST ARM
831010	2	EA	250 WATT HIGH PRESS SOD LAMP & LUM W/PHOTO CELL
831010	2	EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
837001	4	EA	GROUND ROD 3/4 IN. DIA. X 10 FT. LENGTH
860284	36	LF	12 INCH LED VEHICULAR TRAFF SIGNAL HEAD SECTION
861107	90	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG.)
861108	780	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG.)
861116	250	LF	ELECTRICAL CABLE - 2 CONDUCTOR NO. 12 AWG TRAY CABLE
861117	25	EA	3 WIRE, 1 CONDUCTOR (NO. 4 AWG.)
862102	100	EA	SAW CUT FOR SIGNAL
866104	1	LF	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
871202	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNTED

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 & 5	R/◄G	R/◄G	R	R/◄G	R/◄G	R	R	R	R	R	R	R
1 & 5 CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5 OR PHASE 2 & 6												
PHASE 1 & 6	◄G/G	◄G/G	G	R	R	R	R	R	R	R	R	R
1 CHANGE	◄Y/Y	◄Y/Y	Y	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	◄G/G	◄G/G	G	R	R	R	R	R	R
5 CHANGE	R	R	R	◄Y/Y	◄Y/Y	Y	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	◄G/G	◄G/G	G	R	R	R
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	◄G/G	◄G/G	G
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
973023	94	SF	SHEET ALUMINUM SIGN SPAN WIRE MOUNTED TO CONSIST OF:
			1 1-EA ~~2-EA~~ R3-6(L) (30" X 36")
			1 3-EA ~~2-EA~~ R3-5 (L) (30" X 36")
			4- EA D-3 (72" X 32")
963010	1	EA	4-CHANNEL TIMEDELAY OUTPUT DETECTOR AMPLIFIER
90000	1	EA	VIDEO DETECTION INTERFACE EQUIPMENT; 1-2 CAMERAS
971017	1	EA	8 PHASE (FULLY ACTUATED) CONTROLLER AND CABINET -BASE MOUNTED

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. CONTACT ED RODENHIZER AT (410) 787-7650 AT LEAST 72 HOURS PRIOR TO REMOVAL OF EXISTING CONTROLLER TO ARRANGE FOR PICKUP. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

SPECIAL NOTE:

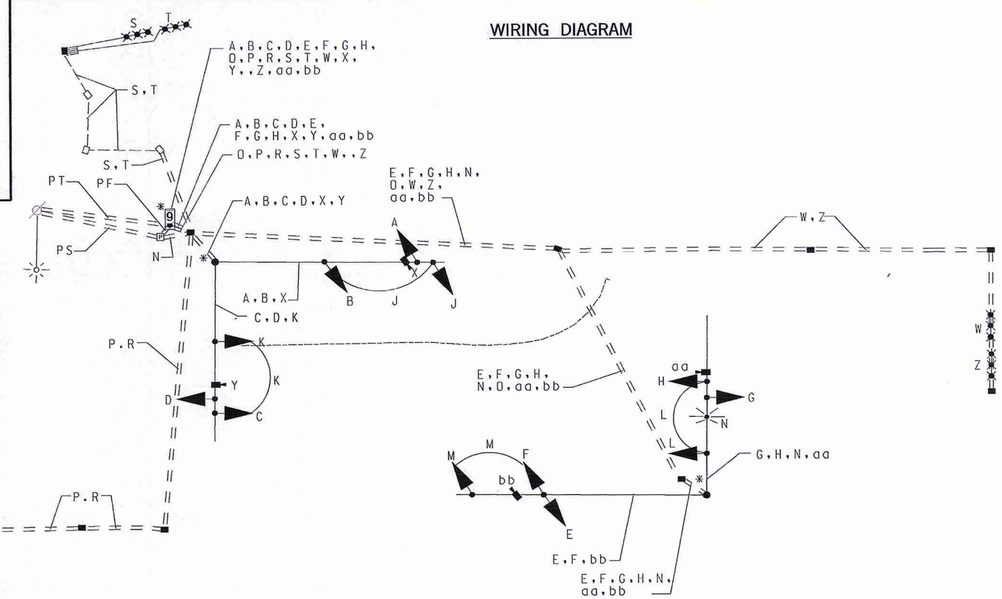
THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT 410-787-7650 TO ARRANGE FOR THE PHONE DROP INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET NUMBER, ZIP CODE, AND TELEPHONE.

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601

SHA MDOT - SHA O.O.T.S.
S.H.A. Approval Date 9-16-08
T.S. # 610 J T.I.M.S. # E-926

1 Greenline Revision Dated September 15, 2008

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E,F,G,H - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J,K,L,M - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
N - 2 CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 AWG)
O - STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
P,R,S,T - MICRO-LOOP PROBE SET WITH 500 FT LEAD-IN
W,Z - NON-INVASIVE DETECTOR WITH 500 FT LEAD-IN
X,Y,aa,bb - VIDEO CAMERA CABLE
PS - PROPOSED UNDERGROUND ELECTRICAL SERVICE
PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
PF - PROPOSED POWER FEED 3 WIRE, 1 CONDUCTOR (NO. 4 AWG)
* - 3/4 IN. X 10 FT. GROUND ROD

PREPARED BY URS HUNT VALLEY, MARYLAND

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

TRAFFIC SIGNAL PLAN
US 1 (BELAIR RD) AND
HARFORD ROAD (MD 147)

SCALE NA DATE 03-2007 CONTRACT NO. HA2525176

DESIGNED BY KJS
DRAWN BY DH
CHECKED BY TAR
F.A.P. NO. N/A
COUNTY HARFORD
LOGMILE 12001002.67
T.I.M.S. NO. E926
TOD NO.

TS NO. 610 J | DRAWING NO. | SHEET NO. 48 OF 48

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