I. GENERAL

This project involves the installation of a temporary traffic signal for Stage 2 MOT at the intersection of MD 144 (Frederick Road) and I-695 SB Ramps in Baltimore county. The temporary traffic shall utilize span wire attached to temporary wood poles.

II. INTERSECTION OPERATION

1. A new base mounted controller cabinet ~~and a UPS cabinet~~ will be installed at this location. This intersection will continue to operate in a fully actuated mode using 5 NEMA phases. Eastbound and Westbound MD 144 (Frederick Road) operates concurrently, while the side street movement operates in a seperate phase. [2]

NOTES

1. For final pavement markings, refer to MOT and /or pavement marking plans, as applicable; other than those detailed on the plan. All pavement markings shall be installed in accordance with Administartion standards.

2. The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly labeling each cable.

3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

5. The contractor shall maintain the continuous operation of all vehicular detectors, and lighting devices. If any device is damaged by the contractor, it shall be repaired within 72 hours by the contractor at no cost to the Administration after notification by the Engineer.

6. The contractor shall contact the SHA Signal Shop at (410)-787-7650 at least 72 hours prior to starting construction for this phase.

CONTACTS

DISTRICT FOUR

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-229-2381
MR. DONALD SCHAEFER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-229-2421
MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-229-2361
MR. MICHAEL PASQUARIELLO
UTILITY ENGINEER
410-229-2341

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
410-787-7670
MS. DARLENE EIDE
SUPPLY OFFICER IV
(SIGNAL SHOP WAREHOUSE)
410-787-7668

EQUIPMENT LIST

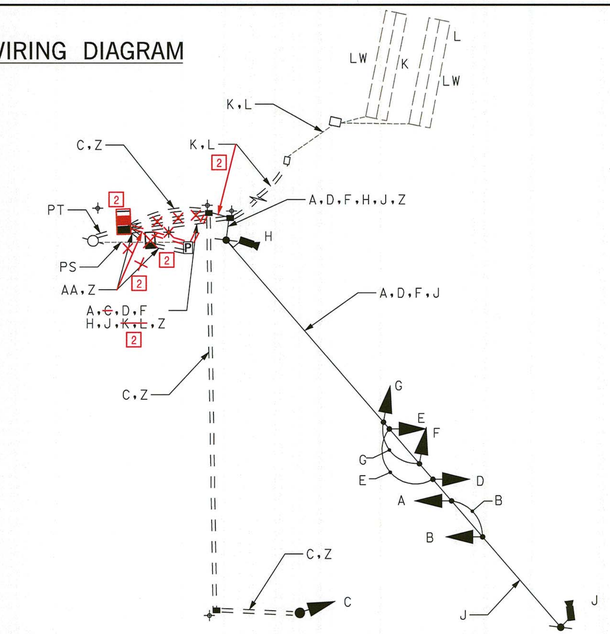
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

ITEM NO./ CAT CODE	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER ASC II WITH TELEMETRY AND RACK MOUNTED AMPLIFIERS.UNINTERRUPTIBLE POWER SUPPLY BASE MOUNTED ~~(SIZE G)~~ CABINET.(SIZE S) [2]
~~900000~~	~~1~~	~~EA~~	~~UNINTURPTED POWER SUPPLY, BASE MOUNTED (SIZE 5 CABINET)~~ [2]
900000	1	EA	VIDEO DETECTION INTERFACE PANEL (FOR UP TO 8 CAMERAS) [2]
973023	20	SF	SHEET ALUMINUM SIGNS CONSISTING OF:
	1	EA	R3-1 (30"X30") SPAN WIRE MOUNT
	1	EA	R3-2 (30"X30") SPAN WIRE MOUNT
	1	EA	R3-5(R) (30"X36") SPAN WIRE MOUNT

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

ITEM NO./ CAT CODE	QUANTITY	UNITS	DESCRIPTION
114235	125	LF	12 IN WHITE REMOVEABLE PAVEMENT LINE MARKINGS
114245	75	LF	24 IN WHITE REMOVEABLE PAVEMENT LINE MARKINGS
203030	2	CY	TEST PIT EXCAVATION
800000	1	LS	REMOVE AND DISPOSE EXISTING SIGNAL EQUIPMENT
800000	2	EA	40 FT CLASS II WOOD POLE
800000	4	EA	BACK GUY ANCHOR ASSEMBLY
800000	3	EA	8 IN. LED SIGNAL HEAD SECTION.
800000	700	LF	PULL BACK AND REROUTE EXISTING ALUMINUM SHIELDED CABLES
800000	1	EA	INSTALL BACKUP SYSTEM FOR TRAFFIC SIGNALS
801004	2	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	200	LF	NO. 6 AWG. STRANDED BARE COPPER GROUND WIRE
805050	3	EA	3 IN WEATHER HEAD
805118	110	LF	4 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED
805125	120	LF	2 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED
805135	50	LF	3 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED
805140	100	LF	4 IN PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED
811001	2	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	20	SF	INSTALL OVERHEAD SIGN
816001	2	EA	IP-BASED VIDEO DETECTION CAMERA AND CABLES
818010	1	EA	14 FOOT BREAKAWAY PEDASTAL POLE
832017	125	LF	ELECTRICAL CABLE - 1-CONDUCTOR NO. 4 AWG TYPE USE 600V
833060	90	LF	3 IN PVC SCHEDULE 80 RISERS
837001	7	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FT. LENGTH
860284	22	EA	12 IN. LED SIGNAL HEAD SECTION.
861107	80	LF	ELECTRICAL CABLE - 5 CONDUCTOR NO. 14 AWG.
861108	700	LF	ELECTRICAL CABLE - 7 CONDUCTOR NO. 14 AWG.
869101	160	LF	1/4 IN TETHER WIRE
869102	160	LF	3/8 IN SPAN WIRE
871202	[2] 1-~~2~~	EA	INSTALL CONTROLLER CABINET BASE MOUNTED

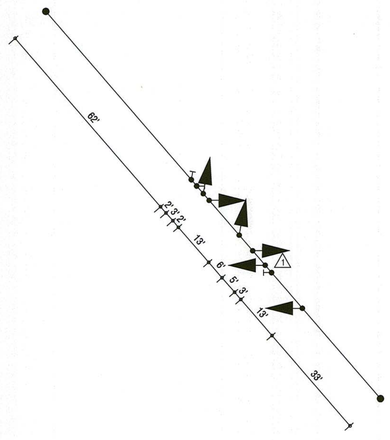
WIRING DIAGRAM



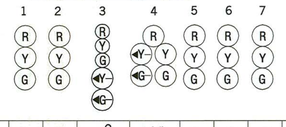
KEY

A, C, D, F	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B, E, G	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
H, J	3 CONDUCTOR CABLE FOR VIDEO DETECTION
K, L	2 CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
Z	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
AA	CABLE, 1 CONDUCTOR (NO. 4 AWG) - 3 RUNS
PS	POWER SERVICE UNDERGROUND
+	GROUND ROD
LW	EXISTING LOOP WIRE
PT	PROPOSED PHONE DROP

SIGNAL HEAD DIMENSIONS



PHASE CHART



PHASE 2 AND 5	R	R	G G	←G/G	G	R	R	
5 CHANGE	R	R	G Y	←Y/G	G	R	R	
PHASE 2 AND 6	G	G	G	G	G	R	R	
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	
PHASE 4	R	R	R	R	R	G	G	
4 CHANGE	R	R	R	R	R	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	

MOT STAGE 2

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

MD 144 (FREDERICK ROAD) AT I-695 SB RAMPS
INTERCHANGE RECONSTRUCTION

GENERAL INFORMATION SHEET

SCALE NTS DATE SEPTEMBER 2010 CONTRACT NO. BA7275380

DESIGNED BY J. PALADUGU
DRAWN BY J. PALADUGU
CHECKED BY K. RINIKER
F.A.P. NO. SEE TITLE SHEET

COUNTY BALTIMORE
LOGMILE 00314404.04
T.I.M.S. NO.
TOD NO.

TS NO. 4381A DRAWING NO. pSG OF N002 SHEET NO. 187 OF 235

[1] NOVEMBER 3, 2010
CHANGES IN THE SIGNAL DIMENSIONS AND SIGNAL HEAD PLACEMENT
[2] REDLINE REVISION NO. 2, 08192011

SABRA, WANG & ASSOCIATES, INC.
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SUITE 160
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PLOTTED: Friday, August 19, 2011 AT 02:22 PM
FILE: R:\2005\42 SHA BCS 2004-18B Prel_Engrg URS\Task 8 MD 144\dwg\Signals\Redline 2\pSG-N002_MD144-Wade.dgn
BY: khodges