

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES UPGRADING THE EXISTING ICB TO A FULL TRAFFIC SIGNAL AT THE INTERSECTION OF US 40 (BALTIMORE NATIONAL PIKE) AND MD 17 (WOLFVILLE ROAD) IN FREDERICK COUNTY, DUE TO THE ADDITION OF LEFT TURN LANES FOR BOTH APPROACHES ON US 40. NEW BLACK-FACED LED TRAFFIC SIGNALS WILL REPLACE THE EXISTING TRAFFIC SIGNAL HEADS. VIDEO DETECTION IS PROPOSED FOR SIDE STREET PRESENCE DETECTION AND NON-INVASIVE MICROLOOP PROBES FOR MAINLINE SET-BACK DETECTION. US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE.

CONTROLLER REQUIREMENTS

THE EXISTING POLE MOUNTED CONTROLLER AND ASSOCIATED HARNESSES SHALL REMAIN. THE SHA SIGNAL SHOP SHALL INSTALL ONE (1) VIDEO DETECTION INTERFACE AND ONE (1) 4 CHANNEL DETECTOR AMPLIFIER WITHIN THE EXISTING POLE MOUNTED CABINET.

PHONE DROP

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

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

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

Ms. Andrea Abend
District Utility Engineer
Phone: 301-624-8115

Mr. Ray Johnson
Assistant District Engineer - Maintenance
Phone: 301-624-8105

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

Mr. Edward Rodenhizer
Chief, SHA Traffic Signal Shop
Phone: 410-787-7650

The Power Company Representative is:
Allegheny Power
10435 Downsville Pike
Hagerstown, MD 21740-1766
Phone: 1-800-255-3443

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9016	1 EA	4 CHANNEL DETECTOR AMPLIFIER
9086	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	198 SF	SHEET ALUMINUM SIGNS: 4 EA - D95-25 (24 IN. X 24 IN.) 4 EA - W3-3, FY, (48 IN. X 48 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-4 "WEST", M1-4a "US 40", M6-1 "RIGHT ARROW" (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-2 "EAST", M1-4a "US 40", M6-1 "RIGHT ARROW" (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-2 "EAST", M1-4a "US 40", M6-1 "LEFT ARROW" (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-4 "WEST", M1-4a "US 40", M6-1 "LEFT ARROW" (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-1 "NORTH", M1-5 "MD 17", M6-1 "RIGHT ARROW" (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-3 "SOUTH", M1-5 "MD 17", M6-1 "RIGHT ARROW" (24 IN. X 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-1 "NORTH", M1-5 "MD 17", M6-1 "LEFT ARROW" (36 IN. X 75 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY M3-3 "SOUTH", M1-5 "MD 17", M6-1 "LEFT ARROW" (36 IN. X 75 IN.) 1 EA - M4-5 (24 IN. X 12 IN.) 1 EA - M1-1 (24 IN. X 24 IN.) 1 EA - M6-1 (21 IN. X 15 IN.) "RIGHT ARROW"

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QUANTITY	DESCRIPTION
1001	1 LS	MAINTENANCE OF TRAFFIC
2002	2 CY	TEST PIT EXCAVATION
5005	85 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
8001	24 EA	12 INCH LED SIGNAL HEAD SECTION
8011	1 EA	CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE
8021	2 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT.
8022	1 EA	REMOVE & DISPOSE OF MATERIALS & EQUIPMENT PER ASSIGNMENT
8027	2 EA	VIDEO DETECTION (TERRA) CAMERA AND CABLE UP TO 500 FEET
8029	30 LF	1 INCH GALVANIZED RISER
8036	900 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES- TRENCHED
8037	185 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES- BORED
8038	255 LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
8040	198 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	20 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8043	1 EA	WEATHER HEAD, 3 IN.
8048	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8057	100 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	300 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

ITEM NO QUANTITY DESCRIPTION

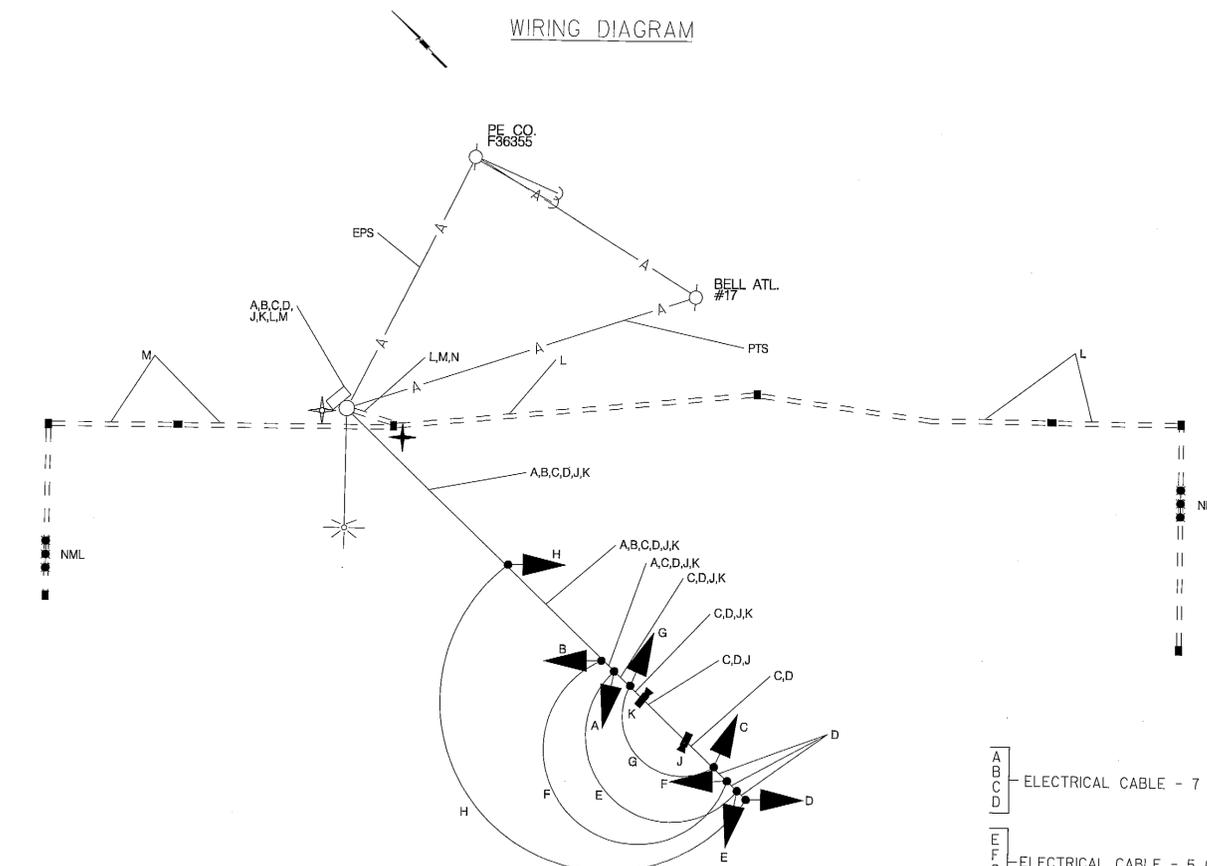
NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

PHASE CHART

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

TOD NO: AX142-25
SHA NO: FR21051/851
US 40 @ MD 17

WIRING DIAGRAM



- A B C D - ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
- E F G H - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
- J K - ELECTRICAL CABLE - 3 CONDUCTOR (NO. 18 AWG)
- L - NON-INVASIVE MICROLOOP PROBE
- M - LEAD-IN CABLE, 500 FOOT
- N - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- NML - NON-INVASIVE MICROLOOP PROBE
- PTS - PROPOSED OVERHEAD TELEPHONE SERVICE TO BE INSTALLED BY OTHERS
- EPS - EXISTING OVERHEAD POWER SOURCE
- ⊕ - EXISTING GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
- ⊕ - PROPOSED GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH

BY: DRIBANCN

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SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
US 40 (BALTIMORE NATIONAL PIKE) AT
MD 17 (WOLFVILLE ROAD)

GENERAL INFORMATION

SCALE NONE DATE 6/2009 CONTRACT NO. AX1425185

DESIGNED BY MCG COUNTY FREDERICK
DRAWN BY MCG LOGMILE 10004009.11
CHECKED BY BAB CSW T.I.M.S. NO. H901
F.A.P. NO. TOD NO.

DRAWING NO. **TS-4531A - GI** SHEET NO. **2 OF 2**