

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW FULL-TRAFFIC-ACTUATED SIGNAL AT THE INTERSECTION OF MD 216 AND BALTIMORE / PILGRIM AVE IN HOWARD COUNTY. TWO EXISTING SHA STREET LIGHT POLES SHALL BE REMOVED AND TWO SIGNAL POLE MOUNTED LIGHTING ARMS AND LUMINAIRES WILL BE ADDED AT THIS INTERSECTION. MD 216 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR BOTH DIRECTIONS OF MD 216 AND PERMISSIVE PHASES FOR BALTIMORE AND PILGRIM AVENUES. THE INTERSECTION WILL NOT HAVE ANY PEDESTRIAN PHASES. THIS SIGNAL WILL BE INTERCONNECTED TO THE TRAFFIC SIGNAL AT THE INTERSECTION OF MAIN STREET AND 7TH STREET.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER WITH TELEMETRY (ASC/2S), VIDEO DETECTION INTERFACE EQUIPMENT, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, FOUR CHANNEL LOOP DETECTOR AMPLIFIER RACK AND ASSOCIATED HARNESS HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET. REPLACE THE EXISTING CONTROLLER AT THE INTERSECTION OF MAIN STREET AND 7TH STREET WITH AN ASC/2M MASTER CONTROLLER.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410)787-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

CONTACT PERSONS FOR DISTRICT # 7 ARE AS FOLLOWS:

MR. JOHN CONCANNON ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (301) 624-8141	MR. RAY JOHNSON ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: (301) 624-8106	MS. ANDREA ABEND UTILITY ENGINEER PHONE: (301) 624-8115
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CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630	MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF TRAFFIC OPERATIONS 410-787-7630
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MR. ED RODENHIZER CHIEF, SIGNAL OPERATIONS 410-787-7650	MR. EUGENE BAILEY CHIEF, SIGN OPERATIONS 410-787-7676
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THE POWER COMPANY IS:

BGE
GAS & ELECTRIC NEW BUSINESS DEPARTMENT
410-850-4620

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
9009	FURNISH 12" X 30' STRAIN POLE	EA	1
9016	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT	EA	1
9042	CONTROLLER, MASTER ASC 10,000 WITH TELEMETRY	EA	2
9044	CONTROLLER CABINET, SIZE 6	EA	1
9045	CONTROLLER, MASTER ASC 10,000 WITH TELEMETRY	EA	1
9086	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
9570	SHEET ALUMINUM SIGNS - GROUND MOUNT	SF	77

- 2 - W3-3(36"X 36") - GROUND MOUNT
- 2 - D-3(3) (72"X42") - GROUND MOUNT
- 1 - W4-2(1)L (36"X36") - GROUND MOUNT
- 2 - D95-25 (24"X 24") - GROUND MOUNT

9571	SHEET ALUMINUM SIGNS - POLE/MAST ARM MOUNT	SF	132
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ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND (48" X 75") POLE MOUNT:
M3-2 (30"X15"), M1-5(1) (48"X36"), M6-1 (30"X24")
ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND (48" X 75") POLE MOUNT:
M3-4 (30"X15"), M1-5(1) (48"X36"), M6-1 (30"X24")
ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND (30" X 51") POLE MOUNT:
M3-2 (24"X12"), M1-5(1) (30"X24"), M6-1 (21"X15")
ONE PIECE SHIELD ASSEMBLY ON A BLACK BACKGROUND (30" X 51") POLE MOUNT:
M3-4 (24"X12"), M1-5(1) (30"X24"), M6-1 (21"X15")

- 4 - D-3(1) (VAR. X 16") - MAST ARM MOUNT
- 2 - R3-6 (30"X36") - MAST ARM MOUNT
- 2 - R3-5(R) (30"X36") - MAST ARM MOUNT

EQUIPMENT LIST "B"

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

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	1
2002	TEST PIT EXCAVATION	CY	4
5002	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	270
5005	F&I 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	185
5007	F&I HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW	EA	2
8001	F&I 12 INCH LED SIGNAL HEAD SECTION	EA	32
8004	F&I 8 INCH LED SIGNAL HEAD SECTION	EA	6
8007	F&I 20' LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE	EA	2
8011	F&I CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE	EA	1
8013	INSTALL STEEL STRAIN POLE	EA	2
8016	F&I MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION	EA	1
8017	F&I MAST ARM POLE & 60' MAST ARM ANY 'T' DIMENSION	EA	1
8018	F&I MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION	EA	1
8019	F&I MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION	EA	1
8021	F&I NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'	EA	4
8022	REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT	EA	1
8026	F&I VIDEO DETECTION CAMERA AND CABLE UP TO 500'	EA	4
8029	F&I 12-PAIR COMMUNICATION CABLE, JELLY FILLED	LF	1175
8035	F&I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4"- TRENCHED	LF	1075
8036	F&I SCHEDULE 80 RIGID PVC CONDUIT UP TO 4"- BORED	LF	280
8037	F&I WOOD SIGN SUPPORTS UP TO 4 X 6	LF	38
8039	INSTALL OVERHEAD OR GROUND MOUNTED SIGNS (INCLUDING ALL HARDWARE)	SF	209
8041	F&I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	335
8043	F&I METERED SERVICE PEDESTAL EMBEDDED	EA	1
8045	F&I ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN	LF	50
8047	F&I ELECTRICAL HANDHOLE	EA	9
8056	F&I ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	80
8057	F&I ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1735
8058	F&I ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC	LF	540
8063	F&I STEEL SPAN WIRE - 3/8" DIAMETER	LF	300
8065	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

EQUIPMENT LIST "C"

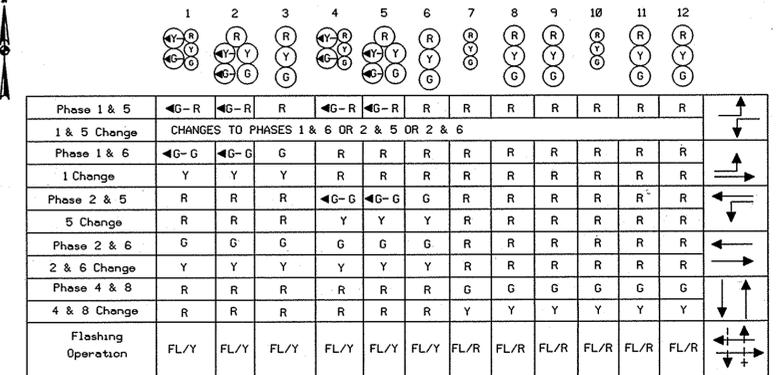
C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.

THE EXISTING LIGHT POLES, LUMINAIRES AND CONTROLLER TO BE REMOVED BY THE CONTRACTOR SHALL BE RETURNED TO SHA. CONTRACTOR SHALL CONTACT MR. RAY JOHNSON OF DISTRICT-7 MAINTENANCE AT (301) 624-8106 TO ARRANGE THE DELIVERY OF EXISTING EQUIPMENT. ALL OTHER MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CONSTRUCTION DETAILS - SHEET #1

- A. INSTALL NEMA SIZE 6 BASE MOUNT CABINET AND CONTROLLER. (NOTE: INSTALL 2 - 2" AND 2 - 4" PVC CONDUIT BENDS.)
- B. INSTALL 27 FT. MAST ARM POLE WITH 70' MAST ARM, VIDEO DETECTION CAMERA, 20' STREET LIGHTING ARM WITH 250 WATT HPS LUMINAIRE AND PHOTOCCELL, LED SIGNAL HEADS AND SIGNS. (NOTE: INSTALL 1-3 IN. PVC CONDUIT BEND IN POLE BASE)
- C. INSTALL 27 FT. MAST ARM POLE WITH 60' MAST ARM, VIDEO DETECTION CAMERA, 20' STREET LIGHTING ARM WITH 250 WATT HPS LUMINAIRE AND PHOTOCCELL, LED SIGNAL HEADS AND SIGNS. (NOTE: INSTALL 1-3 IN. PVC CONDUIT BEND IN POLE BASE)
- D. INSTALL 27 FT. MAST ARM POLE WITH 50' MAST ARM, VIDEO DETECTION CAMERA, LED SIGNAL HEADS AND SIGNS. (NOTE: INSTALL 1-3 IN. PVC CONDUIT BEND IN POLE BASE)
- E. INSTALL 27 FT. MAST ARM POLE WITH 38' MAST ARM, VIDEO DETECTION CAMERA, LED SIGNAL HEADS AND SIGNS. (NOTE: INSTALL 1-3 IN. PVC CONDUIT BEND IN POLE BASE)
- F. INSTALL ELECTRICAL HANDHOLE
- G. INSTALL METERED SERVICE PEDESTAL - EMBEDDED
- H. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
- J. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
- K. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
- L. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
- M. INSTALL NON-INVASIVE MICRO-LOOP PROBE SET WITH 3 IN. CARRIER PIPE, BORED
- N. INSTALL 27' STRAIN POLE WITH 3/8" STRAIN WIRE SPANNING ADJACENT TO BRIDGE OVER PATUXENT RIVER TO THE OTHER 27' STRAIN POLE (SEE INTERCONNECT PLAN)
- P. INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
- Q. USE EXISTING HANDHOLE

PHASE CHART



CONSTRUCTION DETAILS - SHEET #1 CONT'D

- R. USE EXISTING CONDUIT
- S. REMOVE EXISTING SIGN AND SUPPORTS AND INSTALL NEW SIGN ON 4" X 6" WOOD POST
- T. REMOVE EXISTING PAVEMENT MARKINGS
- U. REMOVE EXISTING STREET LIGHT POLE AND FOUNDATION TO 1' BELOW GRADE. REMOVE EXISTING CABLES AND CAP AND ABANDON EXISTING CONDUIT
- V. STUB CONDUIT AT TRANSFORMER BASE. BGE TO MAKE FINAL CONNECTIONS
- W. REMOVE EXISTING GROUND MOUNTED SIGN AND SUPPORT
- X. INSTALL NEW SIGN ON 4" X 6" WOOD POST (DRILLED)
- Y. INSTALL NEW SIGN ON TWO 4" X 6" WOOD POSTS (DRILLED)
- Z. INSTALL WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW

CONSTRUCTION DETAILS - SHEET #2

- AA. USE BASE MOUNTED CABINET (INSTALLED AS PART OF SIGNAL PLAN; SEE SHEET 1 OF 3)
- BB. USE EXISTING CONDUIT
- CC. USE EXISTING TRAFFIC HANDHOLE
- DD. INSTALL ELECTRICAL HANDHOLE
- EE. INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
- FF. USE EXISTING BASE MOUNTED CABINET; INSTALL ONE 2" CONDUIT BEND IN EXISTING FOUNDATION AND REPLACE EXISTING CONTROLLER WITH NEW ASC/2M MASTER CONTROLLER.
- GG. USE EXISTING CONDUIT (INSTALLED AS PART OF SIGNAL PLAN; SEE SHEET 1 OF 3)
- HH. USE EXISTING HANDHOLE (INSTALLED AS PART OF SIGNAL PLAN; SEE SHEET 1 OF 3)
- JJ. INSTALL 27' STRAIN POLE WITH 3/8" STEEL SPAN WIRE SPANNING ADJACENT TO BRIDGE OVER PATUXENT RIVER TO THE OTHER 27' STRAIN POLE
- KK. INSTALL 3/8" STEEL SPAN WIRE
- LL. TRIM TREE LIMBS AS REQUIRED
- MM. USE EXISTING STRAIN POLE (INSTALLED AS PART OF SIGNAL PLAN; SEE SHEET 1 OF 3)
- NN. INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT - BORED
- PP. STUB CONDUIT AT POLE BASE; VERIZON TO MAKE FINAL CONNECTIONS

TOD NO: AT783-23M
SHA No.: HO377A59/B59/M59
MD 216 @ Baltimore Ave/Pilgrim Ave.



RUMMEL, KLEPPER & KAHL, LLP

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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 216 AT BALTIMORE AVE/PILGRIM AVE
LAUREL, MARYLAND

GENERAL INFORMATION SHEET

SCALE 1" = 20'	DATE 12/22/2006	CONTRACT NO. AT7835185
DESIGNED BY T. CHOWDHRY	COUNTY HOWARD	
DRAWN BY T. CHOWDHRY	LOGMILE 13021600.09	
CHECKED BY D. EBY	TIMS NO. H845	
FAP NO.	TOD NO.	
TS NO. 4527-G1	DRAWING	OF
		SHEET NO. 3 OF 3