PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL, STREET LIGHTING AND HAZARD INDENTIFICATION BEACON AT THE INTERSECTION OF MD 193 (GREENBELT ROAD) AND FRANFORT DRIVE/ SCHOOL EXIT IN PRINCE GEORGE'S COUNTY, MARYLAND. MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 193 APPROACHES OPERATING CONCURRENTLY AND THE FRANKFORT DRIVE/SCHOOL EXIT APPROACHES OPERATING CONCURRENTLY.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE WEST LEG OF MD 193.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS) WITH SYSTEM PACKAGE AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. JEFF WENTZ
PHONE: (301) 513-7358
ASSISTANT DISTRICT ENGINEER - TRAFFIC

MR. WAYNE MOWDY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. AUGIE REBISH
DISTRICT UTILITY ENGINEER
PHONE: (301) 513-7350

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

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9016	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9043	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A G-SIZE POLE MOUNTED CABINET
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	74 S.F.	SHEET ALUMINUM SIGNS, GROUND MOUNTED.
9571	118 S.F.	SHEET ALUMINUM SIGNS MAST ARM/ POLE MOUNTED

SHEET ALUMINUM SIGNS TO CONSIST OF:

- 2 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
- 1 EACH R3-1 SIGN (30 IN. x 30 IN.) - MAST ARM MOUNT
- 1 EACH R3-2 SIGN (30 IN. x 30 IN.) - MAST ARM MOUNT
- 1 EACH R3-5L SIGN (30 IN. x 30 IN.) - MAST ARM MOUNT
- 1 EACH R3-6 SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
- 2 EACH S5-1 SIGN (36 IN. x 72 IN.) - POLE MOUNT
- 2 EACH S4-4(1) SIGN (30 IN. x 15 IN.) - POLE MOUNT
- 1 EACH S1-1 SIGN (36 IN. x 36 IN.) - GROUND MOUNT
- 1 EACH S4-3 SIGN (36 IN. x 12 IN.) - GROUND MOUNT
- 2 EACH S5-2 SIGN (24 IN. x 30 IN.) - GROUND MOUNT
- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS GREENBELT ROAD"
- 4 EACH W3-3 SIGN (36 IN. x 36 IN.) WITH "NEW" PANEL (24 IN. x 24 IN.) AND FLAG - GROUND MOUNT
- 2 EACH M95-1 SIGN (78 IN. x 24 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

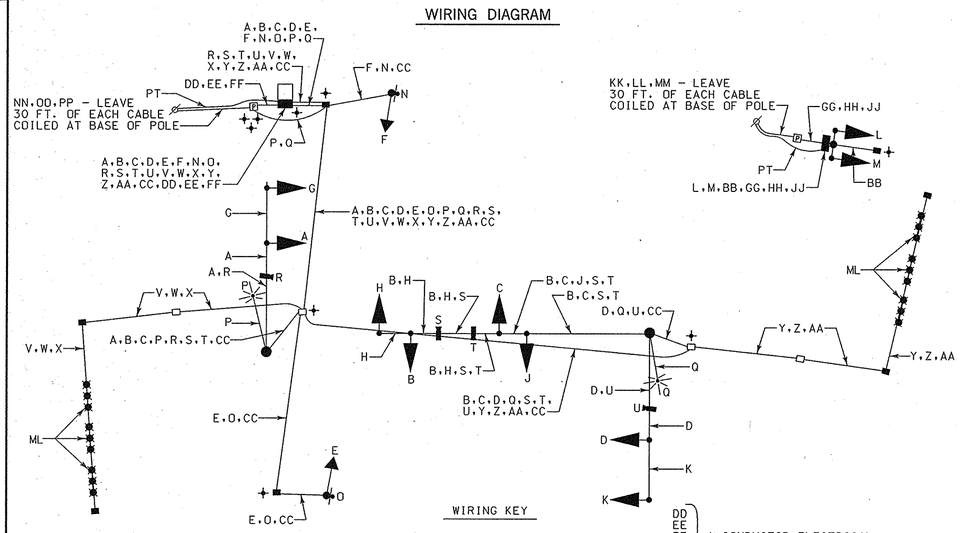
SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EACH	MAINTENANCE OF TRAFFIC
2001	31 C.Y.	CLASS 2 EXCAVATION
2002	6 C.Y.	TEST PIT EXCAVATION
5001	210 L.F.	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5002	450 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	470 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	135 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5007	2 EACH	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS
6002	840 S.F.	4 INCH CONCRETE SIDEWALK
8001	28 EACH	12 INCH LED SIGNAL HEAD SECTION (R,Y,G)
8002	1 EACH	2-WIRE CENTRAL CONTROL UNIT
8005	1 EACH	ADJUST EXISTING HANDHOLE TO GRADE INCLUDING COLLAR
8007	2 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8008	2 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
8009	3 EACH	BREAKWAY PEDESTAL POLE (ANY SIZE)
8014	2 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL
8019	1 EACH	MAST ARM POLE AND 50 FT. MAST ARM ANY 'T' DIMENSION
8021	6 EACH	NONINVASIVE MICROLOOP PROBE (ANY LENGTH) LEAD-IN CABLE UP TO 1000 FT.
8022	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
8024	1 EACH	TWIN MAST ARM POLE & 50 FT/70 FT MAST ARMS ANY 'T' DIMENSION
8026	2 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8029	1700 L.F.	12 - PAIR COMMUNICATION CABLE, SELF-SUPPORTING OR JELLYFILLED
8031	470 L.F.	CABLE - 1 CONDUCTOR, 250 KCML, CU, USE
8032	360 L.F.	DISCONNECT, PULL-BACK & REROUTE CABLES
8034	40 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8035	850 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8036	270 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8037	161 L.F.	WOOD SIGN SUPPORTS UP TO 4 INCH x 6 INCH
8038	58 S.F.	DETECTABLE WARNING SURFACES
8039	204 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8041	360 L.F.	NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8043	2 EACH	METERED SERVICE PEDESTAL EMBEDDED
8045	110 L.F.	ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
8047	7 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8052	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8054	220 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G)
8055	40 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G)
8056	330 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
8057	1020 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
8058	420 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G) TC
8064	1 EACH	INSTALL CONTROLLER AND CABINET - POLE MOUNT
8065	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

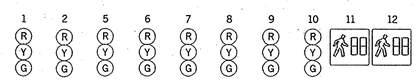
WIRING DIAGRAM



WIRING KEY

- A, B, C, D — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- E, F, G, H, J, K — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- L, M — 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- N, O — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- P, Q — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- R, S, T, U — VIDEO CAMERA DETECTION LEAD-IN CABLE
- V, W, X, Y, Z, AA — MICROLOOP PROBE LEAD-IN
- BB, CC — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- DD, EE, FF, GG, HH, JJ — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- KK, LL, MM, NN, OO, PP — 1-CONDUCTOR, 250 KCML,CU, USE
- ML - MICROLOOP PROBE SET
- PT - PROPOSED UNDERGROUND TELEPHONE SERVICE
- PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE
- ⏚ - 3/4 IN. X 10 FT. GROUND ROD

PHASE CHART



	1	2	5	6	7	8	9	10	11	12
PHASE 2 + 6	G	G	G	G	R	R	R	R	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4 + 8	R	R	R	R	G	G	G	G	DW	DW
4 + 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW
PHASE 4 + 8 ALT	R	R	R	R	G	G	G	G	WK	WK
PED. CLEARANCE	R	R	R	R	G	G	G	G	FL/DW	FL/DW
4 + 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

TOD NO: AT910-09
SHA No.: PG573A54/C54
MD 193 @ Frankfort Drive/Eleanor Roosevelt H.S.

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

MD 193 (Greenbelt Road) and
Frankfort Drive/School Exit

WR&A
Whitman, Requardt and Associates, LLP
801 South Caroline Street
Baltimore, Maryland 21231
(410) 235-3450

GENERAL INFORMATION SHEET

SCALE	NONE	DATE	12/7/2006
CONTRACT NO.	AT9105185		
DESIGNED BY	S. Bloss	COUNTY	Prince George's
DRAWN BY	S. Bloss	LOGMILE	16019307.56
CHECKED BY	N. LEARY	TIMS NO.	H887
FAP NO.		TOD NO.	

TS NO. 4537 | DRAWING TS4 - 4 OF 4 | SHEET NO. 4 OF 4

PLOTTED: Monday, December 11, 2006 AT 10:49 AM
FILE: n:\31556-074\CADD\pSG-N004_h887.dgn

BY: sbloss