PROJECT DESCRIPTION

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THIS PROJECT INVOLVES REPLACING THE EXISTING PEDESTRIAN SIGNALS WITH COUNTDOWN PEDESTRIAN SIGNALS. INSTALLING AUDIBLE PUSH BUTTONS. AND INSTALLING VIDEO DETECTION AT THE INTERSECTION OF MD 450 (WEST STREET) AND CHINQUAPIN ROUND ROAD IN ANNE ARUNDEL COUNTY. THE MODIFICATIONS INVOLVE INSTALLING A NEW BASE-MOUNTED CONTROLLER AND CABINET. MD 450 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE EXISTING PHASING AT THE INTERSECTION WILL REMAIN. WESTBOUND LEFT TURNS ON MD 450 OPERATE IN EXCLUSIVE/PERMISSIVE MODE. THE NORTHBOUND APPROACH (CHINQUAPIN ROUND ROAD) OPERATES WITH AN EXCLUSIVE PHASE. NORTHBOUND RIGHT TURNS MAY OPERATE WITH OVERLAP DURING THE WESTBOUND EXCLUSIVE LEFT TURN PHASE ON MD 450.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR CHANNEL VIDEO DETECTION RACK, TELEMETRY EQUIPMENT, CONFLICT MONITOR WITH BATTERY BACK-UP, AND ASSOCIATED HARNESSES HOUSED IN A NEMA '6' BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

CONTACTS FOR DISTRICT 5:

MS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER, TRAFFIC
410-841-1003

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER, MAINTENANCE
410-841-1013

MR. JOHN S. MAYS
UTILITIES ENGINEER
410-841-1039

CONTACTS FOR 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
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676

MR. MIKE STOCKER
SIGNAL SHOP WAREHOUSE
410-787-7696

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
900000	1 EA	VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS)
971017	1 EA	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH SYSTEM PACKAGE AND INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP. HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION. 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

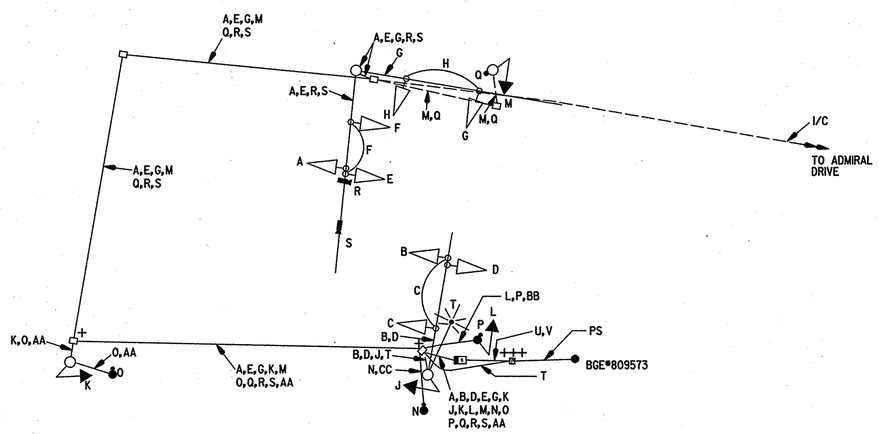
NONE

EQUIPMENT LIST "B"

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

CATEGORY CODE NO.	SPECIFICATION NUMBER	QUANTITY	DESCRIPTION
585412	549,556	670 LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
585424	549,556	130 LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
[illegible]	[illegible]	[illegible]	[illegible]
800000	814	4 EA	16 INCH LED PEDESTRIAN COUNTDOWN SIGNAL HEAD
800000	817	4 EA	AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON & SIGN ASSEMBLY
800000	816	1 EA	FURNISH AND INSTALL CONTROL UNIT 2 WIRE APS
801004	801	5 CY	CONCRETE FOR SIGNAL FOUNDATION
801706	801	8 SF	REMOVE SIGNS FROM EXISTING OVERHEAD STRUCTURE
802501	804	165 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	805	5 LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	805	240 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	805	85 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805155	805	190 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
807202	807	1 EA	METER SERVICE PEDESTAL
810010	810	5 LF	ELECTRICAL CABLE- 1 CONDUCTOR NO. 4 AWG
816001	800	2 EA	VIDEO DETECTION CAMERA
816010	800	2 EA	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
818004	818,821	3 EA	10 FOOT BREAKAWAY PEDESTAL POLE
832021	804	5 LF	NO. 4 AWG STRANDED BARE COPPER GROUND WIRE
837001	804	5 EA	GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH
861105	810	510 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO. 14 AWG)
861107	810	570 LF	ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 AWG)
861108	810	1100 EA	ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 AWG)
861116	810	70 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE
871202	816	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

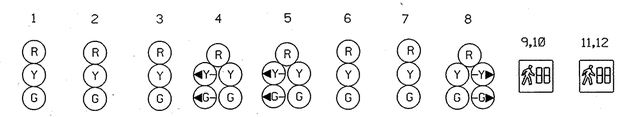
WIRING DIAGRAM



WIRING KEY

A,B,D,E,G	7-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	T	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
C,F,H,J,K L,M	5-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	U	1 CONDUCTOR (2 WIRE) NO. 4 AWG
N,O,P,Q	2-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	V	NO. 4 AWG STRANDED BARE COPPER GROUND WIRE
R,S	VIDEO DETECTION LEAD-IN CABLE	PS	POWER SERVICE
AA,BB,CC	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE		
+	GROUND ROD		

PHASING DIAGRAM



	1	2	3	4	5	6	7	8	9,10	11,12
Phase 2 & 5	R	R	R	◀G-G	◀G-G	G	R	-G▶	DW	DW
5 Change	R	R	R	◀Y-G	◀Y-G	G	R	-Y▶	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	WK	DW
Ped. Clear	G	G	G	G	G	G	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	DW	DW
Phase 4	R	R	R	R	R	R	G	G	DW	DW
Phase 4 Change	R	R	R	R	R	R	Y	Y	DW	DW
Phase 4 Alt.	R	R	R	R	R	R	G	G	DW	WK
Ped. Clear	R	R	R	R	R	R	G	G	DW	FL/DW
Phase 4 Alt. Change	R	R	R	R	R	R	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

NOTE: NO CHANGE TO EXISTING OPERATION

SG02

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 450 (WEST STREET) AT CHINQUAPIN ROUND ROAD
ANNAPOLIS, MARYLAND

REVISION C CONSULTANT

WALLACE, MONTGOMERY & ASSOCIATES, LLP
CIVIL AND STRUCTURAL ENGINEERS
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Towson, Maryland 21204
(410) 494-9093, (410) 825-5714 Fax
www.WallaceMontgomery.com

GENERAL INFORMATION SHEET

SCALE NOT TO SCALE DATE 12/2006 CONTRACT NO. AA4495177

DESIGNED BY J.L.R. COUNTY ANNE ARUNDEL
DRAWN BY J.L.R./G.N.C. LOGMILE 02045010.71
CHECKED BY M.J.A. T.I.M.S. NO. H822
F.A.P. NO. TOD NO.

DRAWING NO. TS - 1415C SHEET NO. 32 OF 37

PLOTTED: Tuesday, November 07, 2006 AT 12:18 PM
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