

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 404 (SHORE HIGHWAY) AND MD 16 (HARMONY ROAD)/DOUBLE HILLS ROAD IN CAROLINE COUNTY.

INTERSECTION OPERATION

A CONTROLLER HOUSED IN A POLE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES. EXCLUSIVE/PERMISSIVES LEFT TURN PHASES SHALL BE PROVIDED FOR THE EAST & WEST APPROACHES OF MD 404.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. ROBERT L. KIEL, ASSISTANT DISTRICT ENGINEER - TRAFFIC
 PHONE: (410) 810-3240
 MR. JEFF AMDRIELLO, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
 PHONE: (410) 810-3270
 MR. TERRY O. WRIGHT, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
 PHONE: (410) 810-3250
 MR. BARRY CLOTHIER, UTILITY ENGINEER
 PHONE: (410) 810-3275
 MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
 PHONE: (410) 787-7630

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	BASE MOUNTED CONTROLLER AND CABINET SIZE 6 W/ VIDEO DETECTION INTERFACE EQUIP.	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: R10-12 (30"X36") MAST ARM MOUNT D-3(2) (16" X VAR.) MAST ARM MOUNT GUIDE SHIELD ASSEMBLY (48"X75") R3-5R (30"X36") MAST ARM MOUNT	SF EA EA EA EA	102 2 2 2 1

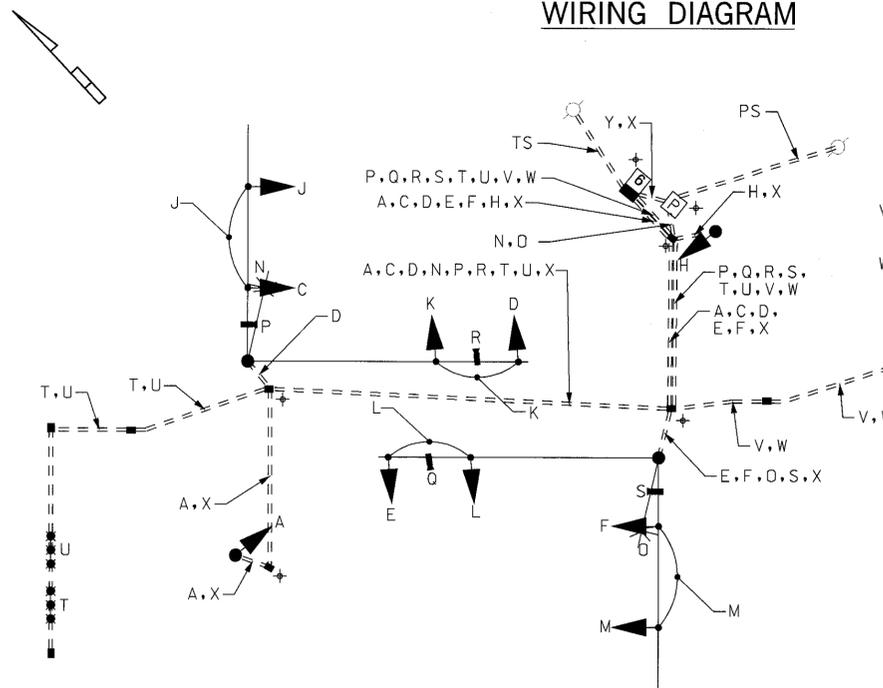
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	4
585624	24 INCH HEAT APPLIED WHITE PERM. PREFORMED THERMO. PAVEMENT MARKINGS	LF	170
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	12
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	350
805115	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	150
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	350
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	60
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	840
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	20
807202	METERED SERVICE PEDESTAL	EA	1
810605	NON INVASIVE DETECTOR, 1000 FOOT, LEAD IN CABLE	EA	4
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	10
813015	INSTALL OVERHEAD SIGN	SF	102
816001	VIDEO DETECTION CAMERA	EA	4
816005	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	2
818050	STEEL POLE WITH TWIN 50 FOOT AND 60 FOOT MAST ARMS	EA	2
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE	EA	2
832017	CABLE 1-CONDUCTOR, NO. 4 AWG, TYPE USE, 600V	LF	20
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	6
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	38
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	90
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	1000
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	400
866104	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	2
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

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

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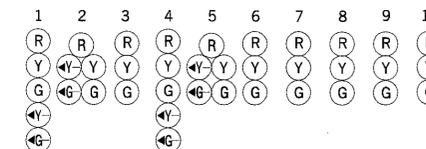
WIRING DIAGRAM



KEY

- H) 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- J) 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- N) 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
- P) VIDEO DETECTION CABLE
- T) NON INVASIVE DETECTOR, LEAD-IN CABLE (1000 FT.)
- Y) 2 WIRE, 1 CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
- X) 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- PS) POWER SERVICE UNDERGROUND (BY OTHERS)
- TS) TELEPHONE SERVICE UNDERGROUND (BY OTHERS)
- +

PHASE CHART



PHASE 1 AND 5	R	←GR	R	R	←GR	R	R	R	R	R
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6										
PHASE 1 AND 6	G	←GG	G	R	R	R	R	R	R	R
1 AND 6 CHANGE	G	←YG	G	R	R	R	R	R	R	R
PHASE 2 AND 5	R	R	R	G	←GG	G	R	R	R	R
2 AND 5 CHANGE	R	R	R	G	←YG	G	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	R	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR

ULTIMATE

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
**MD 404 @ MD 16/
 DOUBLE HILLS ROAD**

GENERAL INFORMATION PLAN

SCALE N.T.S. DATE 2/14/2005 CONTRACT NO. C03215270

DESIGNED BY C. FLEMING COUNTY CAROLINE
 DRAWN BY C. FLEMING LOGMILE 05001612.76
 CHECKED BY S. RENZI T.I.M.S. NO. _____
 F.A.P. NO. _____ TOD NO. _____

DRAWING NO. TS-1378C SHEET NO. OF

SABRA, WANG & ASSOCIATES, INC.
 1504 JOH. AVENUE
 SUITE 180
 BALTIMORE, MD 21227
 (410) 737-6564
 WWW.SABRA-WANG.COM

DRILL HOLES
 BORDER REV. DATE: JUNO 11, 2004
 DRILL HOLES
 DRILL HOLES
 BY: BUSERNOVAE