PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 650 (NEW HAMPSHIRE AVENUE) AND MAHAN ROAD / SCHINDLER DRIVE IN MONTGOMERY COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THIS INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE:

PROJECT CONTACTS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301) 513-7300
~~MR. RALEIGH MEDLEY~~, ASSISTANT DISTRICT ENGINEER-MAINTENANCE (MR. WAYNE MOWDY)
PHONE: (301) 513-7300
MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER-UTILITY
PHONE: (310) 513-7300
MR. RICHARD L. DAFF, Sr., CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. BOBBY GONZALES, TRAFFIC ENGINEER MCDPWT
PHONE: (240) 777-2190
MR. DENNIS McMAHON, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR USING THE MDSHA STANDARD PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
~~900000~~	~~BASE MOUNTED (SIZE 6) CABINET (MSHA SPECIFICATIONS) WITH ECONOLITE ASC II 2100 CONTROLLER, SSM 12 E CONFLICT MONITOR, VIDEO INTERFACE EQUIPMENT, LAU PANEL AND RELAY PACKAGE WIRED TO MONTGOMERY COUNTY SPECIFICATIONS.~~	~~EA~~	~~1~~
973023	FLAT SHEET ALUMINUM SIGNS	SF	~~262~~ ~~264~~ [1] 138.06
	D-3(1) (VAR. X 32")	EA	4
	~~D-3(1) (VAR. X 16")~~	~~EA~~	~~2~~
	~~R10-12 (36"X42")~~	~~EA~~	~~2~~
	R3-5L (30"X36")	EA	~~2~~ ~~5~~ [1] 3
	~~R3-5R (30"X36")~~	~~EA~~	~~2~~
	~~R10-4(MOD.)(12"X9")~~	~~EA~~	~~2~~
	~~GUIDE SHIELD ASSEMBLY (30"X54")~~	~~EA~~	~~2~~
	~~GUIDE SHIELD ASSEMBLY (48"X75")~~	~~EA~~	~~2~~

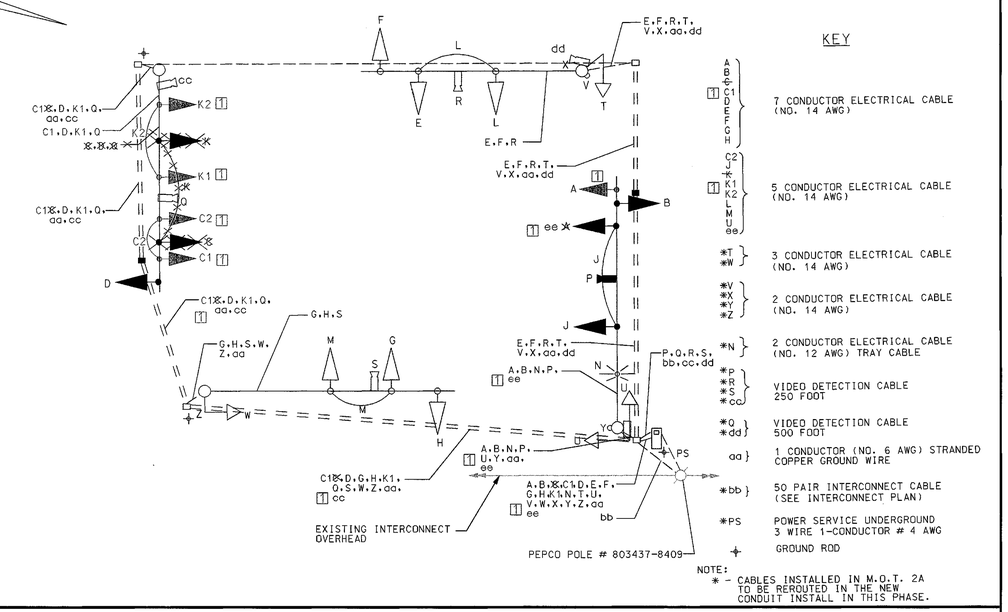
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
~~203030~~	~~TEST PIT EXCAVATION~~	~~CY~~	~~3~~
585462	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH	LF	25
585620	12" HEAT APPL. WHT. THER. PVT. MAR.	LF	~~575~~ 450
585624	24" HEAT APPL. WHT. THER. PVT. MAR.	LF	~~250~~ 185
~~801004~~	~~CONCRETE FOR SIGNAL FOUNDATION~~	~~CY~~	~~16~~
813015	INSTALL OVERHEAD SIGN	SF	~~262~~ ~~264~~ [1] 138.06
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	600
~~805125~~	~~2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED~~	~~LF~~	~~40~~ [1]
~~805135~~	~~3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED~~	~~LF~~	~~60~~
~~805140~~	~~4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED~~	~~LF~~	~~65~~ ~~105~~ [1]
~~807400~~	~~ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS~~	~~EA~~	~~1~~
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	~~4~~ 2
~~860000~~	~~RELOCATE VIDEO DETECTION CAMERA~~	~~EA~~	~~6~~
~~816005~~	~~CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER~~	~~EA~~	~~4~~
~~816010~~	~~CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER~~	~~EA~~	~~2~~
~~818036~~	~~STEEL POLE WITH A SINGLE 50 FOOT MAST ARM~~	~~EA~~	~~1~~
~~818041~~	~~STEEL POLE WITH A SINGLE 60 FOOT MAST ARM~~	~~EA~~	~~1~~
~~831010~~	~~250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL~~	~~EA~~	~~1~~
802501	STRANDED BARE COPPER GROUND WIRE, NO 6 AWG	LF	650
~~837001~~	~~GROUND ROD - 3/4INCH X 10 FOOT LENGHT~~	EA	~~3~~
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	~~48~~ ~~52~~ [1] 24
~~860278~~	~~12 INCH PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT~~	~~EA~~	~~4~~
~~861105~~	~~ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)~~	~~LF~~	~~210~~
~~861106~~	~~ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)~~	~~LF~~	~~400~~
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	~~750~~ ~~915~~ [1] 595
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	~~1600~~ ~~1620~~ [1] 2155
~~861116~~	~~ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)~~	~~LF~~	~~375~~
~~861117~~	~~ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)~~	~~LF~~	~~70~~
~~861403~~	~~15 FOOT LIGHTING ARM~~ ON SIGNAL STRUCTURE	~~EA~~	~~1~~
~~871202~~	~~INSTALL CONTROLLER AND CABINET - BASE MOUNT~~	~~EA~~	~~1~~
800000	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT	LS	1
~~860292~~	~~CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL POLE~~	~~EA~~	~~1~~

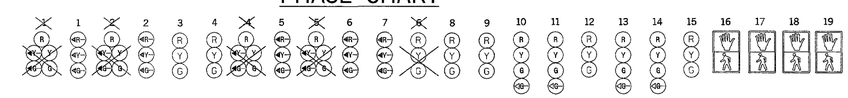
C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

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

WIRING DIAGRAM



PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 1 AND 5	~~G~~	~~G~~	R	R	~~G~~	~~G~~	~~G~~	~~R~~	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																			
PHASE 1 AND 6	~~GG~~	~~G~~	G	G	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	~~GG~~	~~G~~	G	G	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
1 AND 6 CHANGE	~~YG~~	~~Y~~	Y	Y	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 5	~~R~~	~~R~~	R	R	~~GG~~	~~G~~	~~GG~~	~~G~~	~~G~~	~~G~~	G	R	R	R	R	DW	DW	DW	DW
2 AND 5 CHANGE	~~R~~	~~R~~	R	R	~~YG~~	~~Y~~	~~YG~~	~~Y~~	~~Y~~	~~G~~	Y	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	~~G~~	~~R~~	G	G	~~G~~	~~R~~	~~G~~	~~R~~	~~R~~	~~G~~	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	~~G~~	~~R~~	G	G	~~G~~	~~R~~	~~G~~	~~R~~	~~R~~	~~G~~	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	~~Y~~	~~R~~	Y	Y	~~Y~~	~~R~~	~~Y~~	~~R~~	~~R~~	~~Y~~	Y	R	R	R	R	DW	DW	DW	DW
PHASE 3	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R		R	G ◁G	G ◁G	G	R	DW	DW	DW	DW
3 CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R		R	Y	Y	Y	R	DW	DW	DW	DW
PHASE 4	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	G ◁G	G ◁G	G	DW	DW	DW
4 CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	Y	Y	Y	DW	DW	DW
PHASE 4 ALT	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	G ◁G	G ◁G	G	DW	DW	WK
PED CLEARANCE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	G ◁G	G ◁G	G	DW	DW	FL/DW
4 ALT CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	~~R~~	~~R~~	R	R	R	R	R	Y	Y	Y	DW	DW	DW
FLASHING OPERATION	~~FL/Y~~	FL/R	FL/Y	FL/Y	~~FL/Y~~	FL/R	~~FL/Y~~	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

SG 4

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

MD 650 (NEW HAMPSHIRE AVENUE) AND MAHAN ROAD /SCHINDLER DRIVE

DRAWN BY: S. SMITH	F.A.P. NO. SEE TITLE SHEET	TS NO. 701 B	SHEET NO.
CHECKED BY: K. RINIKER	S.H.A. NO. M0900517I		
SCALE: NTS	COUNTY: MONTGOMERY	T.I.M.S. NO. E966	161 OF 223
DATE: JUNE 2004	LOG MILE: I5065002.04		

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