PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE FULL RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AT THE INTERSECTION OF MD 202 (LARGO ROAD) AND KETTERING DRIVE IN PRINCE GEORGE'S COUNTY, MARYLAND. MD 202 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE PHASE, FULLY TRAFFIC ACTUATED MODE WITH THE MD 202 APPROACHES OPERATING CONCURRENTLY AND THE KETTERING DRIVE APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE SOUTHBOUND MD 202 APPROACH. THE WESTBOUND KETTERING DRIVE RIGHT-TURN MOVEMENT OPERATES CONCURRENTLY WITH THE SOUTHBOUND MD 202 LEFT-TURN. INTERCONNECT IS PROVIDED ALONG MD 202 BETWEEN CAMPUS WAY TO THE NORTH AND WHITE HOUSE ROAD TO THE SOUTH, WITH THE MASTER LOCATION KETTERING DRIVE.

A NEW AUDIBLE PEDESTRIAN ACTUATED PHASE WILL BE PROVIDED ACROSS THE SOUTH LEG OF MD 202 AND THE EAST AND WEST LEGS OF KETTERING DRIVE.

APS MESSAGE FOR CROSSING MD 202 (LARGO ROAD) FROM CURBSIDE:
A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS LARGO AT KETTERING. SECOND PUSHBUTTON IN MEDIAN. WAIT".
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING MD 202 (LARGO ROAD) FROM MEDIAN:
A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS LARGO AT KETTERING. WAIT".
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR KETTERING DRIVE:
A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS KETTERING AT LARGO. WAIT.
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

A NEW NEMA TYPE 'S' BASE MOUNTED CABINET AND A FULL TRAFFIC ACTUATED EIGHT-PHASE ASC III MASTER/LOCAL CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, FOUR CHANNEL LOOP DETECTOR AMPLIFIER, AND 2 WIRE CENTRAL CONTROL UNIT.

SPECIAL NOTE

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

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. FELECIA MURPHY
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. VERNON STINNETT
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

MR. ED RODENHIZER
SUPERVISOR - SIGNAL SHOP
PHONE: (410) 787-7650

MR. VICTOR GRAFTON
ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (301) 513-7350

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

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET TYPE 'S' WITH VIDEO DETECTION INTERFACE EQUIPMENT: 1-8 CAMERAS
900000	1	EA	ASC III MASTER/LOCAL CONTROLLER
900000	1	EA	FOUR CHANNEL LOOP DETECTOR AMPLIFIER
973023	172	SF	SHEET ALUMINUM SIGNS
			- 2 EACH D-3(1) "KETTERING DR" (VAR.x16") DUAL FACED - MAST ARM MOUNTED
			- 2 EACH D-3(1) "LARGO RD" (VAR.x16") DUAL FACED - MAST ARM MOUNTED
			- 1 EACH D3-2(1) (72"x36") - GROUND MOUNTED
			1 - 2 EACH M1-5 (30"x24") - GROUND MOUNTED
			1 - 1 EACH M3-1 (24"x12") - GROUND MOUNTED
			1 - 1 EACH M3-3 (24"x12") - GROUND MOUNTED
			- 2 EACH M1-5(6) (30"x48") - POLE MOUNTED
			- 2 EACH M1-5(6) (48"x72") - POLE MOUNTED
			- 1 EACH R3-5R (30"x36") - MAST ARM MOUNTED
			1 - 1 EACH R4-7 (24"x30") - GROUND MOUNTED
			1 - 2 EACH R5-1 (36"x36") - GROUND MOUNTED
			- 3 EACH R6-1(L) (36"x12") - GROUND MOUNTED
			- 3 EACH R6-1(R) (36"x12") - GROUND MOUNTED
			- 1 EACH R6-1(L) (36"x12") - POLE MOUNTED
			- 1 EACH R6-1(R) (36"x12") - POLE MOUNTED
			- 8 EACH R10-3(1) (9"x15") - POLE MOUNTED

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

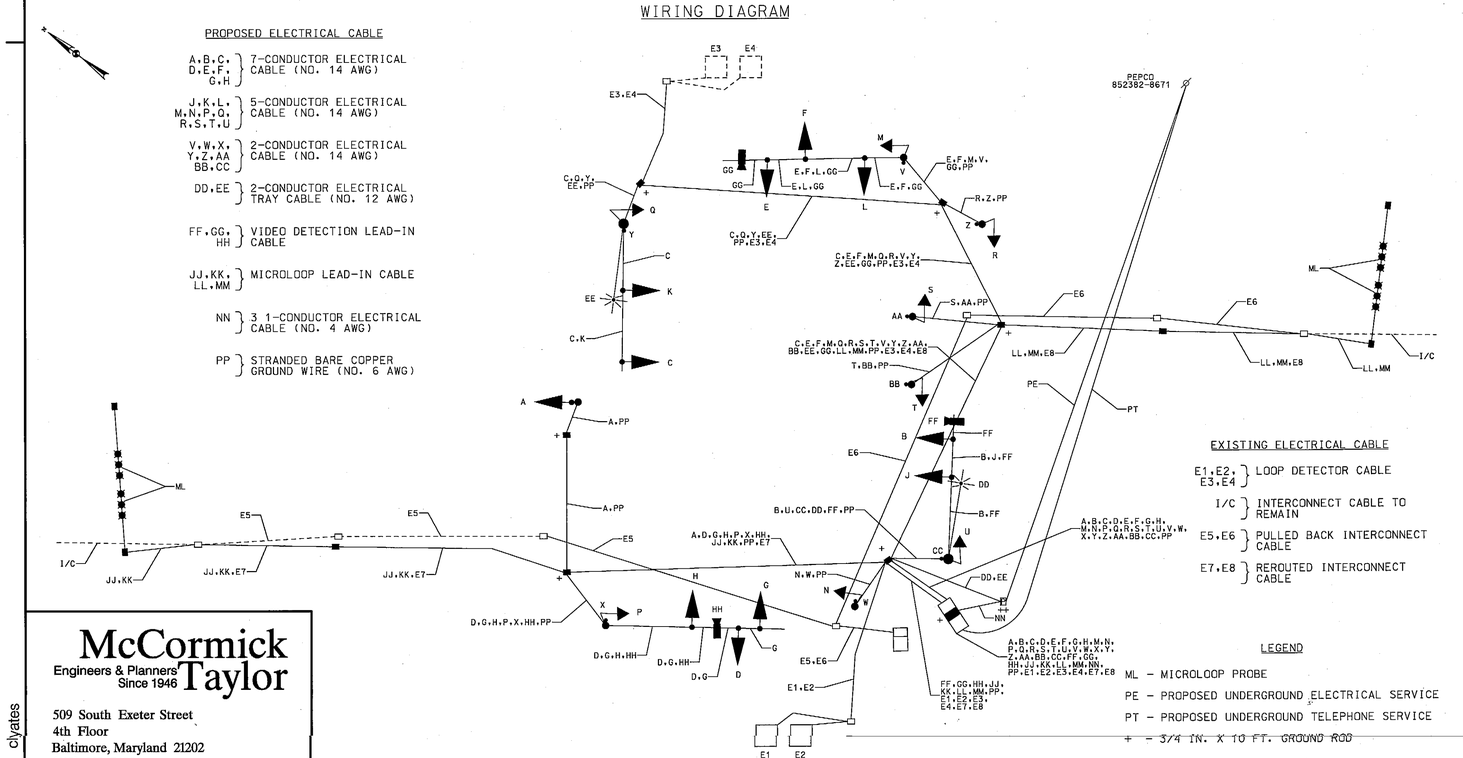
EXISTING SIGNAL CONTROLLERS AND ALL ASSOCIATED EQUIPMENT IN CABINETS.

EQUIPMENT LIST "B"

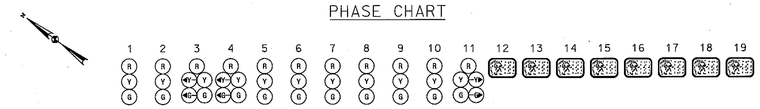
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
203030	5	CY	TEST PIT EXCAVATION
585412	1600	LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
585424	200	LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
800000	3	EA	8 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
800000	1	EA	2-WIRE CENTRAL CONTROL UNIT
800000	8	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
800000	8	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	1	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
800000	3	EA	VIDEO DETECTION CAMERA AND CABLE
800000	2000	LF	DISCONNECT AND REROUTE EXISTING CABLE
801004	21	CY	CONCRETE FOR SIGNAL FOUNDATION
801104	1 135	LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
801106	30	LF	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
802501	750	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	300	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805135	1000	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	200	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805115	400	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805118	600	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
807500	1	EA	EMBEDDED METERED SERVICE PEDESTAL
810010	50	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
810605	4	EA	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE
811001	12	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
811002	7	EA	REMOVE ELECTRICAL HANDHOLE
813014	1 61	SF	INSTALL GROUND MOUNTED SIGN
813015	111	SF	INSTALL OVERHEAD SIGN
813022	1 18	SF	REMOVE EXISTING GROUND MOUNTED SIGNS
818004	4	EA	10 FOOT BREAKAWAY PEDESTAL POLE
818006	1	EA	20 FOOT BREAKAWAY PEDESTAL POLE
818036	2	EA	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
818052	2	EA	STEEL POLE WITH SINGLE 70 FOOT MAST ARM
831010	2	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
837001	9	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860284	36	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	1200	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1400	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1800	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	400	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
866104	2	EA	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871020	1	EA	INSTALL TRAFFIC RESPONSIVE MASTER CONTROLLER AND CABINET - BASE MOUNT

WIRING DIAGRAM



PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 2 + 5	R	R	←G-/G	←G-/G	G	R	R	R	R	R	R/-G→	DW	DW	DW	DW	DW	DW	DW	DW
5 CHANGE	R	R	←Y-/G	←Y-/G	G	R	R	R	R	R	R/-Y→	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	W	W	W	W
PED CLEARANCE	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

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

MD 202 (LARGO ROAD) AT KETTERING DRIVE
LARGO, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE FEBRUARY 16, 2012 CONTRACT NO. PG8965177

DESIGNED BY NJM COUNTY PRINCE GEORGE'S
DRAWN BY NJM LOGMILE 16020206.28
CHECKED BY BSH T.I.M.S. NO. L126
F.A.P. NO. T.O.D. NO.

1 ADDENDUM NO. 1 / /12

T.S. NO. 3243B-GI SG-02 OF SG-02 SHEET NO. 34 OF 34

PLOTTED: Thursday, March 08, 2012 AT 02:30 PM
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