PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 700 (MARTIN BLVD) AND MIDDLE RIVER RD IN BALTIMORE COUNTY. EXISTING STRAIN POLES AND SPAN WIRE SHALL BE REPLACED WITH NEW MAST ARM SIGNAL POLES WITH LED SIGNAL HEADS, VIDEO DETECTION CAMERAS, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS. MD 700 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA 6 PHASE FULLY-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR NB/SB MD 700. THE NB AND SB THROUGH MOVEMENTS OF MD 700 OPERATE CONCURRENTLY AND THE EB AND WB MIDDLE RIVER MOVEMENTS OPERATE AS A SPLIT PHASE. AN ALTERNATE PEDESTRIAN PHASE WITH COUNTDOWN PEDESTRIAN SIGNALS AND AUDIBLE/TACTILE PEDESTRIAN SIGNAL SHALL BE INSTALLED ACROSS THE SOUTH LEG OF MD 700.

A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, TELEMETRY CABLE AND ALL NECESSARY EQUIPMENT HOUSED IN A NEMA SIZE '6' BASE-MOUNTED CABINET SHALL BE INSTALLED AT THIS INTERSECTION.

III. APS NOTES

TO CROSS MD700:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON WILL ANNOUNCE "WAIT TO CROSS MARTIN AT MIDDLE RIVER."

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

IV. INTERCONNECT NOTES

SEE SHEET SP-33 OF 39 FOR INTERCONNECT DETAILS AND QUANTITIES

CONTACTS

DISTRICT

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-321-2781

MR. DONALD SCHAEFER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-321-2821

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-321-2761

MR. MICHAEL PASQUARIELLO
ASSISTANT DISTRICT ENGINEER - UTILITIES
410-321-2841

MR. DAVID CASTLE
BALTIMORE GAS & ELECTRIC - ELECTRICAL SERVICE
1-800-233-1854

OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

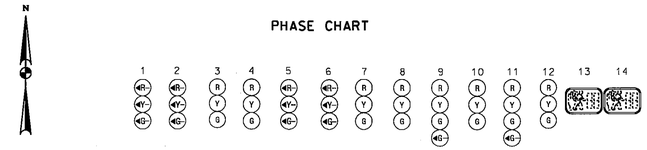
MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7670

MS. DARLENE EIDE
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 + 5	◄G-	◄G-	R	R	◄G-	◄G-	R	R	R	R	R	R	DW	DW
1 + 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 1 + 6 OR 2 + 5 OR 2 + 6													
PHASE 1 + 6	◄G-	◄G-	G	G	R	R	R	R	R	R	R	R	DW	DW
1 CHANGE	◄Y-	◄Y-	G	G	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 + 5	R	R	R	R	◄G-	◄G-	G	G	R	R	R	R	DW	DW
5 CHANGE	R	R	R	R	◄Y-	◄Y-	G	G	R	R	R	R	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	G	G	R	R	R	R	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	G	G	R	R	R	R	DW	DW
PHASE 3	R	R	R	R	R	R	Y	Y	G ◄G-	G	R	R	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	Y	Y	R	R	DW	DW
PHASE 3 ALT	R	R	R	R	R	R	R	R	G ◄G-	G	R	R	WK	WK
PHASE 3 PED CLEAR	R	R	R	R	R	R	R	R	G ◄G-	G	R	R	FL/DW	FL/DW
ALT 3 CHANGE	R	R	R	R	R	R	R	R	Y	Y	R	R	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	R	G ◄G-	G	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

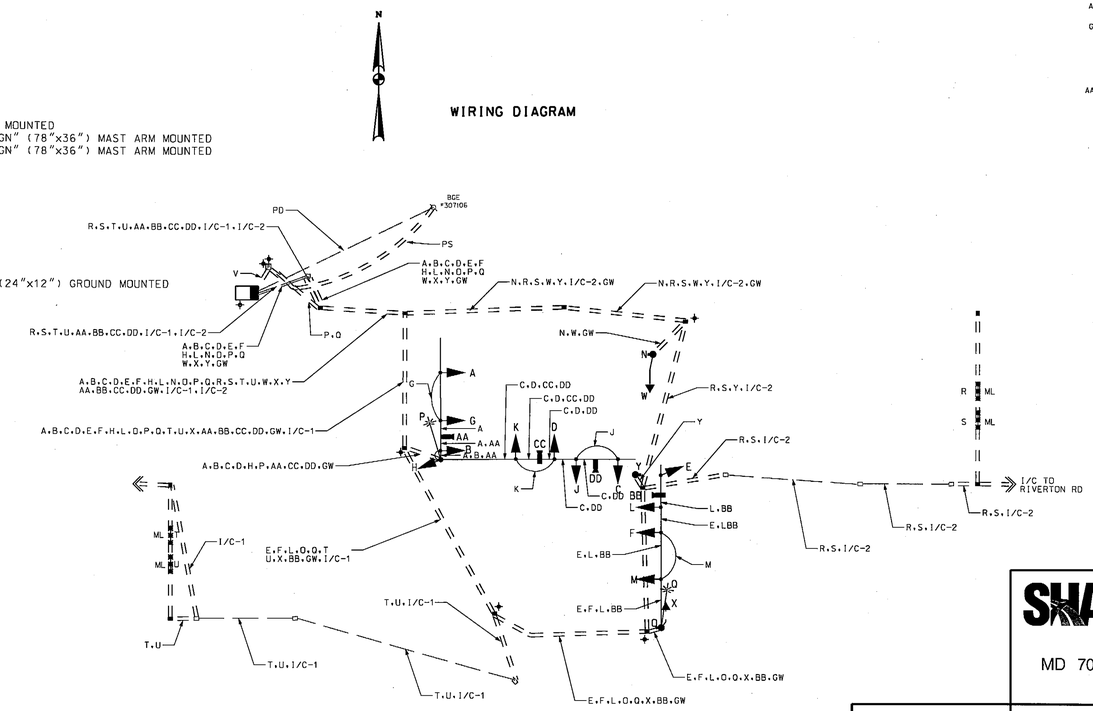
CAT CODE	QUANTITY	DESCRIPTION
900000	1 EA	[UPDATED] 4 CHANNEL DETECTOR AMPLIFIER
900000	1 EA	[UPDATED] CONTROLLER ASC II WITH TELEMETRY
900000	1 EA	[UPDATED] CONTROLLER CABINET, SIZE 6
900000	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
900000	81 SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
		2 EA D-3(1) "MIDDLE RIVER RD" STREET SIGN - DUEL FACED (VAR.x16") MAST ARM MOUNTED
		1 EA M95-1(MOD) "MD 700, WEST RIGHT ARROW, EAST LEFT ARROW, MARTIN BLVD SIGN" (78"x36") MAST ARM MOUNTED
		1 EA M95-1(MOD) "MD 700, EAST RIGHT ARROW, WEST LEFT ARROW, MARTIN BLVD SIGN" (78"x36") MAST ARM MOUNTED
		1 EA R3-5L "LEFT ONLY" SIGN (30"x36") MAST ARM MOUNTED
		1 EA R3-6L "LEFT THRU ARROW/LEFT TURN ARROW" (30"x36") MAST ARM MOUNTED
		3 EA R10-3(1) "PEDESTRIAN PUSH BUTTON SIGN" (9"x15") POLE MOUNTED
900000	70 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
		2 EA R4-7 "KEEP RIGHT" (24"x30") GROUNT MOUNTED
		2 EA D3-2(1) "MIDDLE RIVER RD NEXT SIGNAL" SIGN (VARx36")
		1 EA R6-1(R) "ONE WAY" SIGN (36"x12") GROUND MOUNTED
		1 EA R6-1(L) "ONE WAY" SIGN (36"x12") GROUND MOUNTED
		3 EA W11(A)-2 "CROSSING" SIGN (30"x30"): W16-7p "DIAGONAL RIGHT ARROW" (24"x12") GROUND MOUNTED

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

CAT CODE	QUANTITY	DESCRIPTION
201032	14 CY	CLASS 2 EXCAVATION
203030	2.5 CY	TEST PIT EXCAVATION
585462	560 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
585620	1190 LF	12 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
585624	65 LF	24 INCH HEAT APPLIED WHITE PERM.-PREF. THERMOPLASTIC PAVEMENT MARKINGS
600000	130 SF	DETECTABLE WARNING SURFACES FOR CURB RAMPS
634300	480 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER, 12 INCH GUTTER 8 INCH DEPTH
655105	950 SF	5 INCH CONCRETE SIDEWALK
800000	2 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION
800000	3 EA	AUDIBLE/TACTILE PEDESTRIAN PUSH BUTTON AND SIGN
800000	1 EA	FURNISH & DELIVER 2 WIRE CENTRAL CONTROL UNIT
800000	765 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - BORED
800000	185 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCH - TRENCHED
800000	4 EA	MICROLOOP PROBE (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
800000	151 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
800000	2 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
800000	1 EA	MAST ARM POLE & 70 FT MAST ARM ANY "T" DIMENSION
800000	1 EA	TWIN MAST ARM POLE & 50 FOOT / 70 FOOT MAST ARMS ANY "T" DIMENSION
800000	2 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
800000	4 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
800000	5 EA	REMOVE SIGNAL POLE FOUNDATION 12" BELOW GRADE
801104	42 LF	WOOD SIGN SUPPORTS 4 INCH x 4 INCH
801106	110 LF	WOOD SIGN SUPPORTS 4 INCH x 6 INCH
802501	450 LF	NO.6 AWG STRANDED BARE COPPER GROUND WIRE
807202	1 EA	METERED SERVICE PEDESTAL EMBEDDED
810010	60 LF	ELECTRICAL CABLE 1-CONDUCTOR, NO.4 AWG THHN/THWN
811001	12 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	38 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860292	1 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	845 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	650 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	2270 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	580 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC
871202	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

C. IF THE CABINET IS TO BE REMOVED 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.

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E,F	7-CONDUCTOR CABLE (NO. 14 AWG)
G,J,K,M,W,X	5-CONDUCTOR CABLE (NO. 14 AWG)
N,O,Y	2-CONDUCTOR CABLE (NO. 14 AWG)
P,Q	2-CONDUCTOR TRAY CABLE (NO. 12 AWG)
AA,BB,CC,DD	VIDEO DETECTION LEAD-IN CABLE
R,S,T,U	NON-INVASIVE DETECTOR LEAD-IN CABLE
V	3-1 CONDUCTOR CABLES (NO.4 AWG THHN/THWN)
GW	GROUND WIRE
PS	PROPOSED SERVICE
PD	EXISTING PHONE DROP
ML	MICROLOOP PROBE
✦	PROPOSED GROUND ROD
✦	EXISTING GROUND ROD
I/C-1	12 PAIR INTERCONNECT TO CEDAR DR/KELSO DR
I/C-2	12 PAIR INTERCONNECT TO WINDLASS RD

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

MD 700 (MARTIN BLVD) @ MIDDLE RIVER RD
MIDDLE RIVER, MARYLAND

GENERAL INFORMATION PLAN

SCALE 1" = 20' DATE 6/1/09 CONTRACT NO. BA1195168

DESIGNED BY K. PERMISOHN COUNTY BALTIMORE COUNTY
DRAWN BY M.WAGNER LOGMILE 03070000.48
CHECKED BY D. MACLEAN TIMS NO. J639
FAP NO. TOD NO.

PARSONS BRINCKERHOFF
100 South Charles Street
Tower 1, 10th Floor
Baltimore, MD 21201-2727
Phone: 410-727-5050
Fax: 410-727-4608

TS NO. 502D GI | DRAWING SP-28 OF 39 | SHEET NO. 2 OF 2

PLOTTED: $DATETIMES
FILE: T:\173089a_District6Traffic\prf\Task 4_TEDD Stimulus\Plans\MD700_MiddleRiver_GI.dgn