PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 220 (McMULLEN HIGHWAY) AND MD 636 (WARRIOR DRIVE) IN ALLEGANY COUNTY, MARYLAND. US 220 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE US 220 APPROACHES OPERATING CONCURRENTLY AND THE MD 636 APPROACH OPERATING INDEPENDENTLY. THE DRIVEWAY APPROACH INDICATION WILL OPERATE IN AN ALTERNATING FLASHING MODE AT ALL TIMES.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND US 220 WITH AN EASTBOUND MD 636 RIGHT-TURN OVERLAP PHASE.

ALTERNATE PEDESTRIAN PHASES ARE PROVIDED ACROSS BOTH THE NORTH AND SOUTH LEGS OF US 220. ACCESSIBLE PEDESTRIAN SIGNALS (APS) WILL BE PROVIDED FOR BOTH CROSSINGS. ALL PEDESTRIAN SIGNAL HEADS WILL BE COUNTDOWN TYPE.

APS MESSAGE:
WAIT: "WAIT TO CROSS MCMULLEN HIGHWAY AT WARRIOR DRIVE"
WALK: RAPID TICK
WALK: "WALK SIGN ON TO CROSS MCMULLEN HIGHWAY"

CONTROLLER REQUIREMENTS

FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL TIME-DELAY OUTPUT LOOP DETECTOR AMPLIFIER, ONE (1) TWO-WIRE CENTRAL CONTROL UNIT, INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, VIDEO DETECTION INTERFACE (1-4 CAMERAS), AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

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

WIRING DIAGRAM

A,B,C,D,E,F — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

G,H,J,K,L,M,N,P — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

Q,R,S,T — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

U,V,W — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

X,Y — VIDEO DETECTION LEAD-IN CABLE

Z,AA — MICROLOOP LEAD-IN CABLE

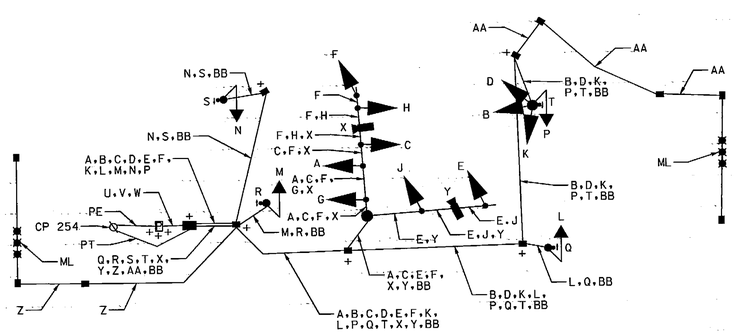
BB — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

ML - MICROLOOP PROBE

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

PT - PROPOSED UNDERGROUND TELPHONE SERVICE

+ - 3/4 IN. X 10 FT. GROUND ROD



McCormick Taylor
Engineers & Planners Since 1946
509 South Exeter Street
4th Floor
Baltimore, Maryland 21202
(410) 662-7400

BY: TIWest

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
963010	1	EA	FOUR CHANNEL TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIER
971017	1	EA	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT
973023	12	SF	SHEET ALUMINUM SIGNS
			- 4 EACH R10-3(1) (9"X15") - POLE MOUNTED
			- 1 EACH D-3(2) (VARIABLEx16") DUAL FACED - MAST ARM MOUNTED
			- 1 EACH D-3(2) (VARIABLEx16") - MAST ARM MOUNTED

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. GEORGE SMALL
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 729-8444

MR. ANTHONY CRAWFORD
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 729-8457

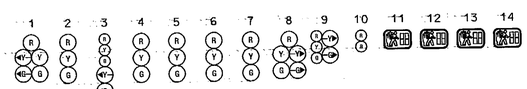
MR. ED RODENHIZER
SUPERVISOR - SIGNAL SHOP
PHONE: (410) 787-7650

MR. DAVE FELKER
ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (301) 729-8439

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

MR. MARTY DUNNINGTON
ALLEGHENY POWER
PHONE: (301) 759-5709

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 + 6	G	G	G	R	R	R	R	R	R	FL/R	DW	DW	DW	DW
1 + 6 CHANGE	G	G	G	R	R	R	R	R	R	FL/R	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	R	R	R	R	FL/R	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	FL/R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	G	G	G	G	FL/R	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	Y	Y	FL/R	DW	DW	DW	DW
OVERLAP 'A'	G	G	G	R	R	R	R	R	R	FL/R	DW	DW	DW	DW
OVERLAP 'A' CHANGE	G	G	G	R	R	G	G	R	R	FL/R	DW	DW	WK	WK
PHASE 4 ALT 1	R	R	R	R	R	R	R	R	R	FL/R	DW	WK	WK	DW
PED CLEARANCE	R	R	R	R	R	R	R	R	R	FL/R	DW	FL/DW	FL/DW	DW
4 ALT 1 CHANGE	R	R	R	R	R	R	R	R	R	FL/R	DW	DW	DW	DW
PHASE 4 ALT 2	R	R	R	R	R	G	G	G	G	FL/R	WK	DW	DW	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	FL/R	FL/DW	DW	DW	FL/DW
4 ALT 2 CHANGE	R	R	R	R	R	Y	Y	Y	Y	FL/R	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	DARK	DARK	DARK	DARK

NOTE: SIGNAL HEAD #10 WILL OPERATE IN AN ALTERNATING FLASHING MODE AT ALL TIMES

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
203030	2.5	CY	TEST PIT EXCAVATION
585621	300	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE (CROSSWALK)
585625	100	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE (STOPLINE)
800000	8	EA	8 INCH VEHICULAR TRAFFIC LED SIGNAL HEAD SECTION
800000	4	EA	16 INCH PEDESTRIAN LED SIGNAL HEAD SECTION - POLE MOUNT (COUNTDOWN)
800000	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	1	EA	2-WIRE CENTRAL CONTROL UNIT (APS)
800000	1	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
801004	10	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	325	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805135	425	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	175	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805145	60	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
805150	250	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
805155	200	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
807202	1	EA	METERED SERVICE PEDESTAL
810010	50	LF	ELECTRICAL CABLE - 1-CONDUCTOR NO. 4 AWG-THHN/THWN
810550	1	EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
810555	1	EA	MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE
811001	12	EA	INSTALL ELECTRICAL HANDHOLE
813015	12	SF	INSTALL OVERHEAD SIGN
816001	2	EA	VIDEO DETECTION CAMERA
816005	2	EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA CONTROLLER
818004	3	EA	10 FOOT BREAKAWAY PEDESTAL POLE
818010	1	EA	14 FOOT BREAKAWAY PEDESTAL POLE
818021	1	EA	STEEL POLE WITH TWIN 50 FOOT MAST ARMS
821003	5	EA	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURE
837001	8	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860284	29	EA	12 INCH VEHICULAR TRAFFIC LED SIGNAL HEAD SECTION
861105	525	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	850	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1100	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
871117	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

SHA FORCES SHALL REMOVE THE EXISTING 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.

SHA

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

US 220 FROM MD 53 TO 0.41 MILES NORTH OF MD 636
PHASE I (CRESAPTOWN)

GENERAL INFORMATION - US 220 @ MD 636

SCALE NOT TO SCALE DATE OCTOBER 21, 2008 CONTRACT NO. AL8795184

DESIGNED BY BSH
DRAWN BY CLY
CHECKED BY JEH
F.A.P. NO. SEE TITLE SHEET
COUNTY ALLEGANY COUNTY
LOGMILE
T.I.M.S. NO. G971
T.O.D. NO.

T.S. NO. 1852 B GI | SG-02 OF SG-04 | SHEET NO. 105 OF 121

PLOTTED: Thursday, October 09, 2008 AT 02:05 PM
FILE: I:\5089\05 - us 220\design\engineering\planset\p5G-N001_US220.dgn