PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 113 (WORCESTER HIGHWAY) AND THE WORCESTER COUNTY EDUCATIONAL CENTER IN WORCESTER COUNTY, MARYLAND. US 113 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE US 113 APPROACHES OPERATING CONCURRENTLY AND THE WORCESTER COUNTY EDUCATIONAL CENTER APPROACH OPERATING INDEPENDENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR SOUTHBOUND US 113.

CONTROLLER REQUIREMENTS

FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL TIME-DELAY OUTPUT LOOP DETECTOR AMPLIFIER. 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.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. GENE COFEILL
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 677-4040

MR. JAMES WRIGHT
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 677-4010

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

MR. BRUCE POOLE
ASSISTANT DISTRICT ENGINEER - UTILITY
PHONE: (410) 677-4082

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

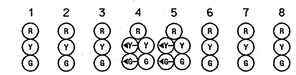
MR. BILLY NICHOLS
CHOPTANK ELECTRIC COOPERATIVE
PHONE: (877) 892-0001

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9003	2	EA	(CONT/CAB/ADD) RELAY (110/120 VOLT) 11 PIN
9016	1	EA	4 CHANNEL DETECTOR AMPLIFIER
9037	2	EA	CABINET "G" TYPE POLE MOUNT
9044	1	EA	CONTROLLER CABINET, SIZE 6
9065	1	EA	NEMA DISCONNECT SWITCH - TYPE 4
9086	1	EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	23	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			- 1 EACH W3-3 (48"x48")
			- 1 EACH D95-25 (30"x30")
9571	60	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 1 EACH ROUTE MARKER ASSEMBLY (30"x51")
			- 1 EACH ROUTE MARKER ASSEMBLY (48"x75")
			- 1 EACH W3-3 (48"x48")
			- 1 EACH D95-25 (30"x30")

PHASE CHART



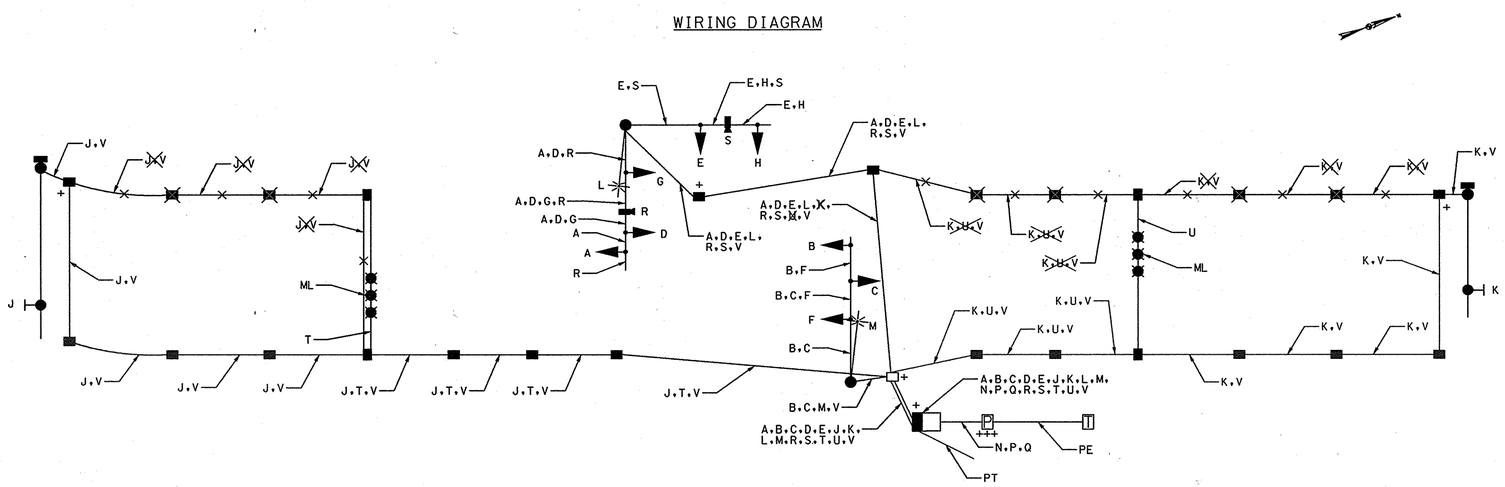
PHASE 2 + 5	R	R	R	G	G	G	R	R	
2 + 5 CHANGE	R	R	R	G	G	G	R	R	
PHASE 2 + 6	G	G	G	G	G	G	R	R	
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	
PHASE 8	R	R	R	R	R	R	G	G	
8 CHANGE	R	R	R	R	R	R	Y	Y	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
1001	3	EA	MAINTENANCE OF TRAFFIC
2002	3	CY	TEST PIT EXCAVATION
5005	150	LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMO PAVEMENT MARKINGS
6004	2	EA	TYPE C TRAFFIC BARRIER END TREATMENT
6006	5	EA	W BEAM BARRIER REFLECTIVE DELINEATORS
NEG	400	LF	TRAFFIC BARRIER W BEAM USING 8 FOOT POSTS
8001	28	EA	12 INCH LED SIGNAL HEAD SECTION R Y G
8007	2	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8017	2	EA	MAST ARM POLE AND 60 FOOT MAST ARM ANY T DIMENSION
8019	1	EA	MAST ARM POLE AND 50 FOOT MAST ARM ANY T DIMENSION
8021	2	EA	NONINVASIVE DETECTOR ANY LENGTH LEAD IN CABLE UP TO 1000 FEET
8022	1	EA	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT PER ASSIGNMENT
8025	1	EA	TWIN MAST ARM POLE AND 50 FOOT / 50 FOOT MAST ARMS ANY T DIMENSION
8026	2	EA	VIDEO DETECTION CAMERA AND CABLE UP TO 500 FEET
8034	2200	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8035	550 ~~400~~	LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8036	40	LF	WOOD SIGN SUPPORTS UP TO 4 X 6 INCHES
8038	83	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN INCLUDING ALL HARDWARE
8040	2600	LF	NO 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1	EA	METERED SERVICE PEDESTAL EMBEDDED
8044	50	LF	ELECTRICAL CABLE 1 CONDUCTOR NO 4 AWG - THHN / THWN
8046	19 ~~17~~	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	5	EA	CUT CLEAN GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8055	100	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	1250	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8057	275	LF	ELECTRICAL CABLE - 2 CONDUCTOR NO 12 AWG TC
8063	2	EA	INSTALL CONTROLLER AND CABINET - POLE MOUNT
8064	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8075	2600	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 12 AWG)
NEG	2	EA	60 INCH X 60 INCH LED "RED SIGNAL AHEAD" SIGN

WIRING DIAGRAM



A,B,C, D,E } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

F,G,H, } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

J,K } 5-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)

L,M } 2-CONDUCTOR ELECTRICAL TRAY CABLE (NO. 12 AWG)

N,P,Q } 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)

R,S } VIDEO DETECTION LEAD-IN CABLE

T,U } MICROLOOP LEAD-IN CABLE

V } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

ML - MICROLOOP PROBE

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

PT - PROPOSED UNDERGROUND TELPHONE SERVICE

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

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:
NONE.

GREEN LINE REVISION NO. 1:

APPROVED, TEAM LEADER — DATE 9/3/08

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

BY: $USERNAME$

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

US 113 (WORCESTER HIGHWAY) AND WORCESTER COUNTY EDUCATIONAL CENTER

TRAFFIC SIGNALIZATION PLAN

SCALE NOT TO SCALE DATE AUGUST 1, 2008 CONTRACT NO. AT9095185

DESIGNED BY BSH /JEH — COUNTY WORCESTER
DRAWN BY CLY — LOGMILE 23011317.01
CHECKED BY MAS — T.I.M.S. NO. J098
F.A.P. NO. — T.O.D. NO.

T.S. NO. 4671 GI — SG-02 OF SG-02 — SHEET NO. 2 OF 2

PLOTTED: $DATETIME$
FILE: I:\9137 - District 4\05 - US 113 Signal\DESIGN\Engineering\PlanSet\pSG-N001_US113 - Green Line No 1.dgn