PROJECT DESCRIPTION

I. General

This project involves the modification of an existing traffic control signal at the intersection of US Route 50 and Maryland Route 349 / Isabella Street in Wicomico County. US Route 50 is assumed to run in a east - west direction.

II. Intersection Operation

An eight (8) phase, full-traffic-actuated, solid state digital controller with (4) FOUR-channel loop detector amplifiers and opticom pre-emption housed in a base mounted cabinet are to be installed at this location.

The intersection will operate in a NEMA, six (6) phase, full-traffic-actuated mode. The left turn movements are exclusive only for US 50 and exclusive-permissive for Isabella Street and MD 349. The US 50 movements are to operate concurrently and the Isabella Street and MD 349 movements are not to operate concurrently.

EQUIPMENT LIST 'A'

EQUIPMENT SUPPLIED BY S.H.A.

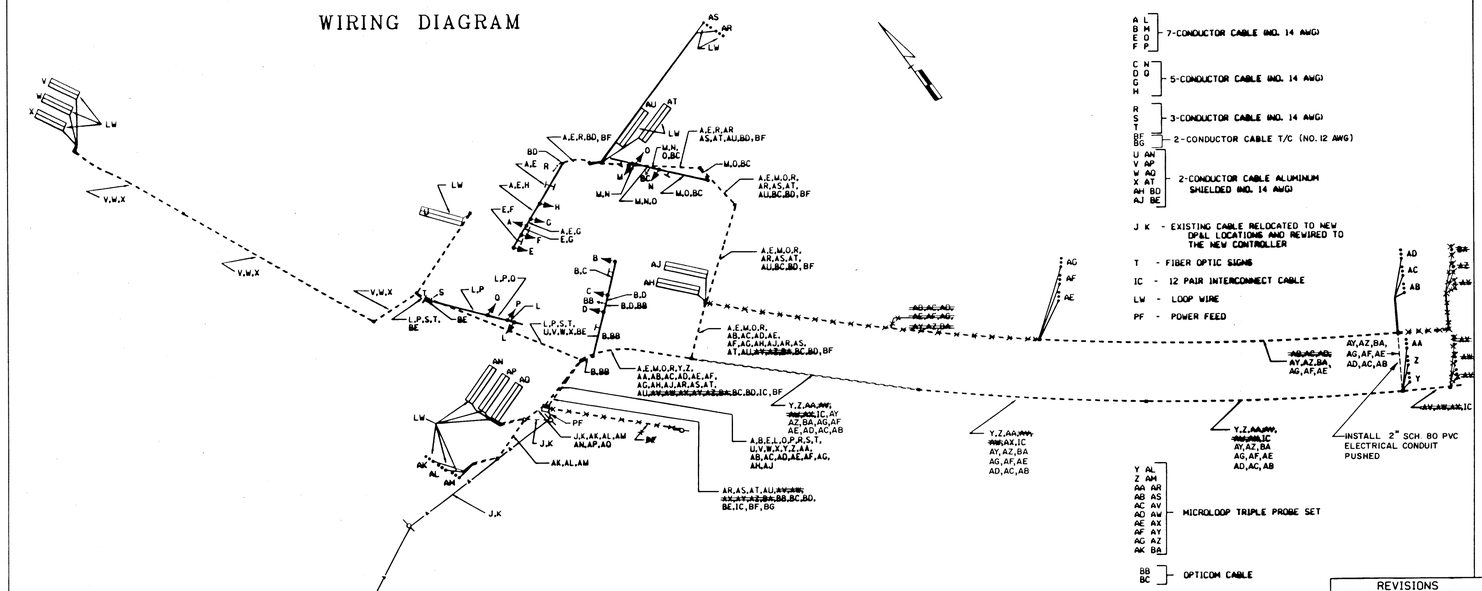
960022	12 INCH ONE WAY 3 SECTION (R,Y,G) SIGNAL HEAD (MAST ARM MOUNTED)	5 EACH
960023	12 INCH ONE WAY 3 SECTION (RA,YA,GA) SIGNAL HEAD (MAST ARM MOUNTED)	4 EACH
960028	12 INCH ONE WAY 5 SECTION (RY,YA,G,GA) SIGNAL HEAD (MAST ARM MOUNTED)	3 EACH
960068	12 INCH ONE WAY 2 SECTION PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)	6 ~~2~~ EACH
900000	INSTALL 8"/12" ONE WAY 5 SECTION (R,Y,YA,G,GA) SIGNAL HEAD (MAST ARM MOUNTED)	2 EACH
900000	FOUR CHANNEL LOOP DETECTOR AMPLIFIER (DELAY OUTPUT)	8 EACH
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT- SYSTEM READY WITH DISCRIMINATOR MODULE	1 EACH
973023	SHEET ALUMINUM SIGNS 4 - R3-5L (30" X 36") 1 - R3-5R (30" X 36") 2 - D3-2 (DUAL FACE) TO READ "ISABELLA STREET" AND "NANTICOKE ROAD" (96" X 16") 1 - W11-2A (48" X 48") 1 - M6-2 (21" X 15")	55.5 S.F.

EQUIPMENT LIST 'B'

EQUIPMENT FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

120500	MAINTENANCE OF TRAFFIC	LUMP SUM
120610	ARROW PANEL	5 U.D.
130850	MOBILIZATION	LUMP SUM
230030	TEST PIT EXCAVATION	10 C.Y.
~~585414~~	~~12" WHITE REFLECTIVE THERMO. PAVEMENT MARKINGS~~	~~1300 L.F.~~
~~585416~~	~~24 INCH WHITE REFLECTIVE THERMO. PAVEMENT MARKINGS~~	~~200 L.F.~~
~~585446~~	~~PERMANENT PREFORMED PAVEMENT MARKING LETTER~~	~~28 EA.~~
~~585448~~	~~PERMANENT PREFORMED PAVEMENT MARKING ARROW~~	~~7 EA.~~
801004	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION	22 C.Y.
802501	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE	50 L.F.
805125	FURNISH AND INSTALL 2 INCH SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED	1200 ~~1500~~ L.F.
805140 ~~805135~~	FURNISH AND INSTALL 4 ~~3~~ INCH SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED	300 L.F.
805150	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	450 L.F.
805160	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	100 L.F.
807205	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (B-9)	1 EACH
811001	FURNISH AND INSTALL - ELECTRICAL HANDHOLE	19 ~~17~~ EACH
813014	INSTALL GROUND MOUNTED SIGN	50 S.F.
813015	INSTALL OVERHEAD SIGN	50 S.F.
822002	FURNISH AND INSTALL 12 PAIR COMMUNICATION CABLE, JELLYFILLED	1500 L.F.
822500	USE EXISTING PLAN ON DISK AND AS-BUILT FOR TRAFFIC SIGNAL	1 EACH
837001	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIA. X 10 FEET LENGTH	4 EACH
860022	INSTALL 12 INCH ONE WAY 3 SECTION (R,Y,G) SIGNAL HEAD (MAST ARM MOUNTED)	5 EACH
860023	INSTALL 12 INCH ONE WAY 3 SECTION (RA,YA,GA) SIGNAL HEAD (MAST ARM MOUNTED)	4 EACH
860028	INSTALL 12 INCH ONE WAY 5 SECTION (R,Y,YA,G,GA) SIGNAL HEAD (MAST ARM MOUNTED)	3 EACH
860068	INSTALL 12 INCH ONE WAY 2 SECTION PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)	2 EACH
861104	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (ALUM. SHIELDED)	5150 L.F.
861106	FURNISH AND INSTALL ELECTRICAL CABLE 3 CONDUCTOR (NO. 14)	650 L.F.
861107	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)	600 L.F.
861108	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)	2500 L.F.
862101	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEX. TUBING (NO. 14 A.W.G.)	4750 L.F.
862102	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)	1375 L.F.
865001	FURNISH AND INSTALL PUSHBUTTON AND SIGN	2 EACH
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	1 EACH
800000	FURNISH AND INSTALL 27' STEEL POLE WITH 70' MAST ARM	4 EACH
800000	REMOVAL OF EXISTING EQUIPMENT TO BE SALVAGED	LUMP SUM
800000	DELIVERING OF SALVAGED EQUIPMENT AND MATERIAL	LUMP SUM
800000	REMOVAL AND DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT	LUMP SUM
800000	MICRO LOOP PROBE SET 1000 FT	1 EACH
800000	MICRO LOOP PROBE SET 500 FT	3 EACH
800000	FURNISH AND INSTALL OPTICOM DETECTOR EYE	2 EACH
800000	FURNISH AND INSTALL OPTICOM CABLE	600 L.F.
800000	REROUTE EXISTING CABLE FOR HIB SIGNAL HEADS	LUMP SUM
800000	INSTALL 8"/12" ONE WAY 5 SECTION (R,Y,YA,G,GA) SIGNAL HEAD (MAST ARM MOUNTED)	2 EACH
800000	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	75 L.F.
800000	REMOVE, STORE AND RELOCATE FIBER-OPTIC SIGN	LUMP SUM
861116	FURNISH AND INSTALL ELECTRICAL CABLE 2 CONDUCTOR (NO. 12 AWG)	550 L.F.
866104	FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	2 EACH
800000	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - PUSHED	200 L.F.
811002	REMOVE EXISTING ELECTRICAL HANDHOLE	2 EACH

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	28
PHASE 1 & 5	~~G~~	~~G~~	R	R	~~G~~	~~G~~	R	R			R	R	~~G~~	R	R	R	DW	DW	
1 & 5 CHANGE	~~Y~~	~~Y~~	R	R	~~Y~~	~~Y~~	R	R			R	R	~~Y~~	R	R	R	DW	DW	
PHASE 2 & 6	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G			R	R	R	R	R	R	DW	DW	
2 & 6 CHANGE	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y			R	R	R	R	R	R	DW	DW	
PHASE 3 & 7	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			~~G~~/R	~~G~~/R	R	~~G~~/R	~~G~~/R	R	DW	DW	
3 & 7 CHANGE	CHANGE TO 3&8 OR 4&8 OR 4&7																		
PHASE 3 & 8	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			R	R	R	~~G~~/G	~~G~~/G	G	DW	DW	
3 CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			R	R	R	~~Y~~/G	~~Y~~/G	G	DW	DW	
PHASE 4 & 8	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			G	G	G	G	G	G	W	W	
8 PED CLEAR	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			G	G	G	G	G	G	FL DW	FL DW	
8 CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			Y	Y	Y	Y	Y	Y	DW	DW	
PHASE 4 & 7	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			~~G~~/G	~~G~~/G	~~G~~/G	R	R	R	DW	DW	
4 & 7 CHANGE	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R			~~Y~~/Y	~~Y~~/Y	~~Y~~/Y	R	R	R	DW	DW	
FLASHING OPERATION	FL/~~R~~	FL/~~R~~	FL/Y	FL/Y	FL/~~R~~	FL/~~R~~	FL/Y	FL/Y			FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

NOTE: SIGNALS 9 & 10 FLASH UPON PRE-EMPTION CALL FROM DRAWBRIDGE.
SIGN 28 ILLUMINATES UPON PRE-EMPTION CALL FROM DRAWBRIDGE.
EXISTING OPTICOM PRE-EMPTION WILL REMAIN THE SAME.

TS-2 OF TS-4

KCI TECHNOLOGIES

KCI TECHNOLOGIES INC.
ENGINEERS AND PLANNERS
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
21030-1888
(410) 316-7800

REVISIONS			
D	ADD DRAWBRIDGE WARNING SIGN SHA NO. 10-4-94		
MHZ	SA		
C	INSTALL NEW SIDE STREET 6'x30' LOOP DETECTORS SHA NO. R1-532-502-185 1-3-86		
ERS	SA	SA	
B	REVISED GEOMETRICS- SEE PLAN SHEET 20 OF 25 SHA NO. R1-532-502-185 4-10-85		
TMZ			
A	REGRAB & INTERCONNECTED TO THE US 50 SYSTEM SHA NO. R1-532-502-185 1-1-84		
TMZ			

REVISIONS			
F	ADD LIGHTING STRUCTURE TO PROPOSED STEEL POLE, MODIFY WIRING DIAGRAM 11/97		
PS	GK	JWE	
E	REVISED GEOMETRICS FOR DOUBLE LEFT TURN FROM NB US 50 SHA NO. R1-532-502-177 ADDENDUM NO. 1 6-30-97		
TCC	JWE		

APPROVALS

ORIGINAL

PROJECT MANAGER, SIGNAL DESIGN SECTION

ON

ASST. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

FILE

DIRECTOR, OFFICE OF TRAFFIC & SAFETY

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG MILE: 22005014.517

DRAWN BY: TCC
DES. BY: TCC/GWC
CHK. BY:

GENERAL INFORMATION SIGNAL PLAN FOR US 50 AT MD 349 / ISABELLA STREET

COUNTY: WICOMICO

DATE: APRIL, 1997 | F.A.P. NO. SEE TITLE SHEET | TS/STD. NO. TS-400 E | SHEET NO. 28 OF 29

SCALE: N.A. | S.H.A. NO. WI-627-501-185

M:\01950\10\SP02US50.DGN

JUN 25 10:07:06 1997 G:/PLOTTING/PS7/OCF\XEROX.OCF TIM CONNOR SP02A00.PRF