PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH DETECTION UPGRADE AT THE INTERSECTION OF MD 279 (ELKTON RD) AND MD 213 (BRIDGE ST) IN CECIL COUNTY. THE MODIFICATION WILL UPGRADE EXISTING PASSAGE DETECTION LOOPS TO NON-INVASIVE DETECTION AND ADD VIDEO DETECTION CAMERAS. PRESENCE DETECTION LOOPS WILL BE RE-INSTALLED FOR THE WESTBOUND MD 213 APPROACH. MD 279 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION OPERATES IN A NEMA EIGHT (8) PHASE, FULLY ACTUATED MODE. THE MD 279 MOVEMENTS WILL OPERATE CONCURRENTLY WITH CONCURRENT PEDESTRIAN MOVEMENTS ACROSS THE SOUTH LEG OF THE INTERSECTION. MD 213 MOVEMENTS WILL OPERATE CONCURRENTLY WITH AN ACTUATED PEDESTRIAN MOVEMENT ACROSS THE WEST LEG OF THE INTERSECTION.

2. AN EXISTING NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER IN A NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE UTILIZED AT THIS LOCATION. VIDEO DETECTION INTERFACE SHALL BE INSTALLED INTO THE CABINET BY SHA FORCES.

CONTACTS

DISTRICT (DISTRICT 2)

MR. TERRY WRIGHT
DISTRICT ENGINEER
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MR. JEFFERY WENTZ
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-810-3240

MR. BARRY CLOTHIER
DISTRICT UTILITY ENGINEER
410-810-3275

MR. WM NORRIS EMBERT
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410-810-3270

MR. MIKE LEWIS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
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OFFICE OF TRAFFIC AND SAFETY

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VACANT
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
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MR. EDWARD RODENHIZER
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MR. MICHAEL STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7696

[1] EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

	ITEM NO.	QUANTITY	DESCRIPTION
[1]	~~9013~~	~~1 EA~~	~~[UPDATED] 20' LIGHTING ARM, CLAMP ON~~
	9086	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
	9571	20 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			1 EA M1-5(6) 'NORTH MD 279 ->' (30"X48")
			1 EA M1-5(6) 'SOUTH MD 279 ->' (30"X48")

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
8011	2 EA	CONDUIT BEND IN EXISTING FOUNDATION BASE (ANY SIZE)
8022	2 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8023	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	3 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8029	70 LF	1" DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT CONDUIT
8037	140 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8038	185 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8040	20 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8046	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8052	600 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8057	1050 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8058	355 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
[1]	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE (WITH 250 WATT HPS LAMP AND LUMINAIRE) (*)

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 SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATIONS.

(*) SPECIAL NOTE:

THE CONTRACTOR SHALL FURNISH AND INSTALL THE LIGHTING ARM WITHOUT THE 250 WATT HPS LAMP AND LUMINAIRE. THE LIGHTING ARM IS NEEDED FOR MOUNTING THE VIDEO DETECTION CAMERA.

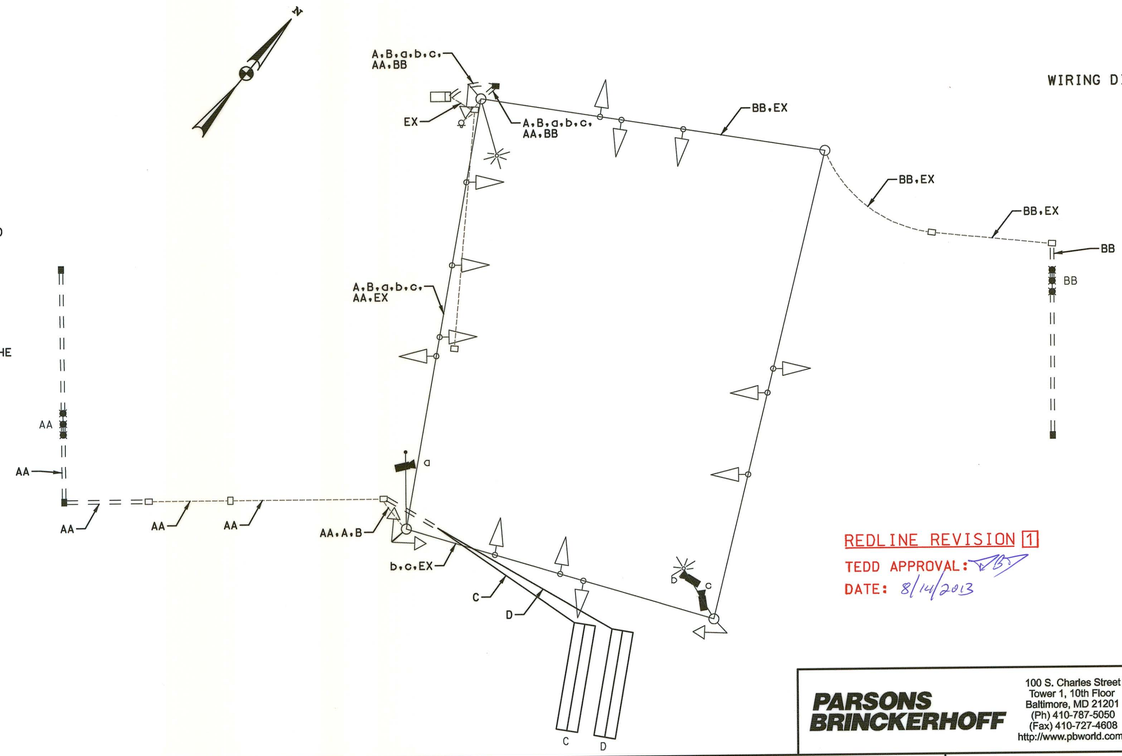
PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Phase 1 & 5	◀G-/R	◀G-/R	R	◀G-/R	◀G-/R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 5 Change	The Controller May Skip to Phases 1 & 6 or 2 & 5 or 2 & 6																
Phase 1 & 6	R	R	R	◀G-/G	◀G-/G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
1 Change	R	R	R	◀Y-/G	◀Y-/G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
Phase 2 & 5	◀G-/G	◀G-/G	G	R	R	R	R	R	R	R	R	R	R	WK	WK	DW	DW
5 Change	◀Y-/G	◀Y-/G	G	R	R	R	R	R	R	R	R	R	R	WK	WK	DW	DW
Phase 2 & 6	G	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW
Ped. Clear	G	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
Phase 3 & 7	R	R	R	R	R	R	R	◀G-/R	◀G-/R	R	◀G-/R	◀G-/R	R	DW	DW	DW	DW
3 & 7 Change	The Controller May Skip to Phases 1 & 6 or 2 & 5 or 2 & 6																
Phase 3 & 8	R	R	R	R	R	R	R	R	R	R	◀G-/G	◀G-/G	G	DW	DW	WK	WK
3 Change	R	R	R	R	R	R	R	R	R	R	◀Y-/G	◀Y-/G	G	DW	DW	WK	WK
Phase 4 & 7	R	R	R	R	R	R	R	◀G-/G	◀G-/G	G	R	R	R	DW	DW	DW	DW
7 Change	R	R	R	R	R	R	R	◀Y-/G	◀Y-/G	G	R	R	R	DW	DW	DW	DW
Phase 4 & 8	R	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 Change	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
4 & 8 Alt.	R	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	WK	WK
Ped. Clear	R	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW
4 & 8 Alt. Change	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
Flashing Operation	FL/Y	FL/Y	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

FIRE HOUSE PRE-EMPTION

Pre-Emption Phase 6	R	R	R	◀G-/G	◀G-/G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
Pre-Emption Clearance	R	R	R	◀Y-/G	◀Y-/G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
Phase 2 & 6 Normal Operation	G	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW

WIRING DIAGRAM



WIRING KEY

A,B	- ELECTRICAL CABLE 2-CONDUCTOR, NO. 14 A.W.G. (ALUMINUM SHIELDED)
C,D	- LOOP WIRE (NO. 14 A.W.G.)
a,b,c,	- VIDEO DETECTION LEAD-IN CABLE
AA,BB	- NON-INVASIVE PROBE LEAD-IN CABLE
EX	- EXISTING SIGNAL CABLE

REDLINE REVISION [1]
TEDD APPROVAL: ~~TDS~~
DATE: 8/14/2013

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

MD 279 (ELKTON RD) AT MD 213 (BRIDGE ST)

ELKTON, MD

GENERAL INFORMATION SHEET

SCALE NTS DATE JUNE 26, 2013 CONTRACT NO. XX6615185

DESIGNED BY JEK
DRAWN BY JEK
CHECKED BY LFW
F.A.P. NO.

COUNTY CECIL
LOGMILE 070207901.18
TIMS NO. L876
TOD NO.

TS NO. 274J-GI | DRAWING SG-02 OF 02 | SHEET NO. 02 OF 02

PLOTTED: Thursday, August 15, 2013 AT 12:00 PM
FILE: J:\DATA\L876\Design Files\MD279 & MD213\pSG_N001-MD 279 @ MD 213.dgn

BY: MKabengele