BORDER REV: DATE: March 27, 2007

BY: John Borkowski Division: P068 Highway Traff GMA Emp

PROJECT DESCRIPTION

I. GENERAL
THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 45 (YORK ROAD) AT INDUSTRY LANE IN BALTIMORE COUNTY. MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION
THIS INTERSECTION OPERATES IN A NEMA SIX-PHASE FULLY-TRAFFIC-ACTUATED MODE. THERE IS EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING FOR THE NORTHBOUND AND SOUTHBOUND MOVEMENTS OF MD 45, AND AN EASTBOUND RIGHT TURN OVERLAP PHASE.
THE EASTBOUND AND WESTBOUND MOVEMENTS OPERATE CONCURRENTLY.
THERE IS AN ALTERNATE PEDESTRIAN PHASE ACROSS THE NORTH LEG OF THE INTERSECTION.
A CONCURRENT PEDESTRIAN PHASE IS PROVIDED ON THE WEST LEG OF INDUSTRY LANE.

III. PEDESTRIAN OPERATION
NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE NORTH, AND WEST LEG OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH: "WAIT TO CROSS YORK AT INDUSTRY , WAIT."

WEST: "WAIT TO CROSS INDUSTRY AT YORK , WAIT."

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

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT 4

MS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-229-2381

MR. MICHAEL PASQUARIELLO
UTILITY ENGINEER
410-229-2341

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-229-2361

MR. JESSE FREE
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-229-2421

BALTIMORE GAS AND ELECTRIC

GAS AND ELECTRIC NEW BUSINESS DEPT.
410-850-4620

OFFICE OF TRAFFIC AND SAFETY

MS. CORREN JOHNSON
CHIEF, TRAFFIC OPERATIONS
410-787-7630

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

MR. ED RODENHIZER
MANAGER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
MANAGER SIGN OPERATIONS
410-787-7670

MR. MIKE STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

2. EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9000	1	EA	QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY INTERFACE PANEL
9000	1	EA	CONTROLLER CABINET, NEMA SIZE "S" WITH CONTROLLER AND VIDEO EQUIPMENT FOR 1-8 CAMERAS
9000	1	EA	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, RACK MOUNT
9000	125	SF	SHEET ALUMINUM SIGNS CONSISTING OF: R3-6L, (30"X36"), 1-EACH, MAST ARM MOUNT R3-5R, (30"X36"), 2-EACH, MAST ARM MOUNT D-3(1), (96"X16"), 2-EACH, MAST ARM MOUNT (DUAL FACED) D-3(1), (96"X16"), 4-EACH, MAST ARM MOUNT M1-5(6), (24"X48"), 1-EACH, POLE MOUNT M1-5(6), (36"X72"), 1-EACH, POLE MOUNT M3-1, (24"X12"), 1-EACH, POST MOUNT M3-1, (30"X15"), 1-EACH, POST MOUNT M1-5, (24"X24"), 1-EACH, POST MOUNT M1-5, (30"X30"), 1-EACH, POST MOUNT M6-1, (21"X15"), 1-EACH, POST MOUNT M6-1, (30"X24"), 1-EACH, POST MOUNT

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

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
1001	1	EA	MAINTENANCE OF TRAFFIC
2001	31	CY	CLASS 2 EXCAVATION
2002	5	CY	TEST PIT EXCAVATION
5003	530	LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	400	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	130	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	217	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1150	SF	5 INCH CONCRETE SIDEWALK
6003	80	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	34	EA	12 INCH LED SIGNAL HEAD SECTION
8002	1	EA	2-WIRE CENTRAL CONTROL UNIT
8004	6	EA	8 INCH LED SIGNAL HEAD SECTION
8007	1	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8008	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	2	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1	EA	EMBEDDED METERED SERVICE PEDESTAL
8014	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8016	4	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8018	2	EA	MAST ARM POLE AND 38 FEET MAST ARM ANY SIZE "T" DIMENSION
8023	4	EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD-IN CABLE UP TO 1000'
8024	1	EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8027	1	EA	TWIN MAST ARM POLE AND 50'/70' MAST ARMS ANY 'T' DIMENSION
8029	4	EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8031	20	LF	1-CONDUCTOR ELECTRICAL CABLE, NO.2 AWG/THHN
8034	150	LF	DISCONNECT, PULL BACK AND REROUTE CABLES
8039	410	LF	UP TO 4 INCH SCHEDULE 90 RIGID PVC CONDUIT-SLOTTED
8040	1080	LF	UP TO 4 INCH SCHEDULE 90 RIGID PVC CONDUIT-TRENCHED
8041	62	LF	WOOD SIGN SUPPORTS UP TO 4"X6"
8042	125	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	400	LF	NO. 6 AWG STRANDED BARE COPPER WIRE
8047	30	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8048	11	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8052	30	LF	3 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER
8055	620	LF	ELECTRICAL CABLE 2 CONDUCTOR (NO. 14 AWG)
8057	1200	LF	ELECTRICAL CABLE 5 CONDUCTOR (NO. 14 AWG)
8058	1600	LF	ELECTRICAL CABLE 7 CONDUCTOR (NO. 14 AWG)
8064	370	LF	ELECTRICAL CABLE - 3 - CONDUCTOR NO. 12 AWG (B.W.G) TYPE T/C

C. 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.

N

WIRING LEGEND

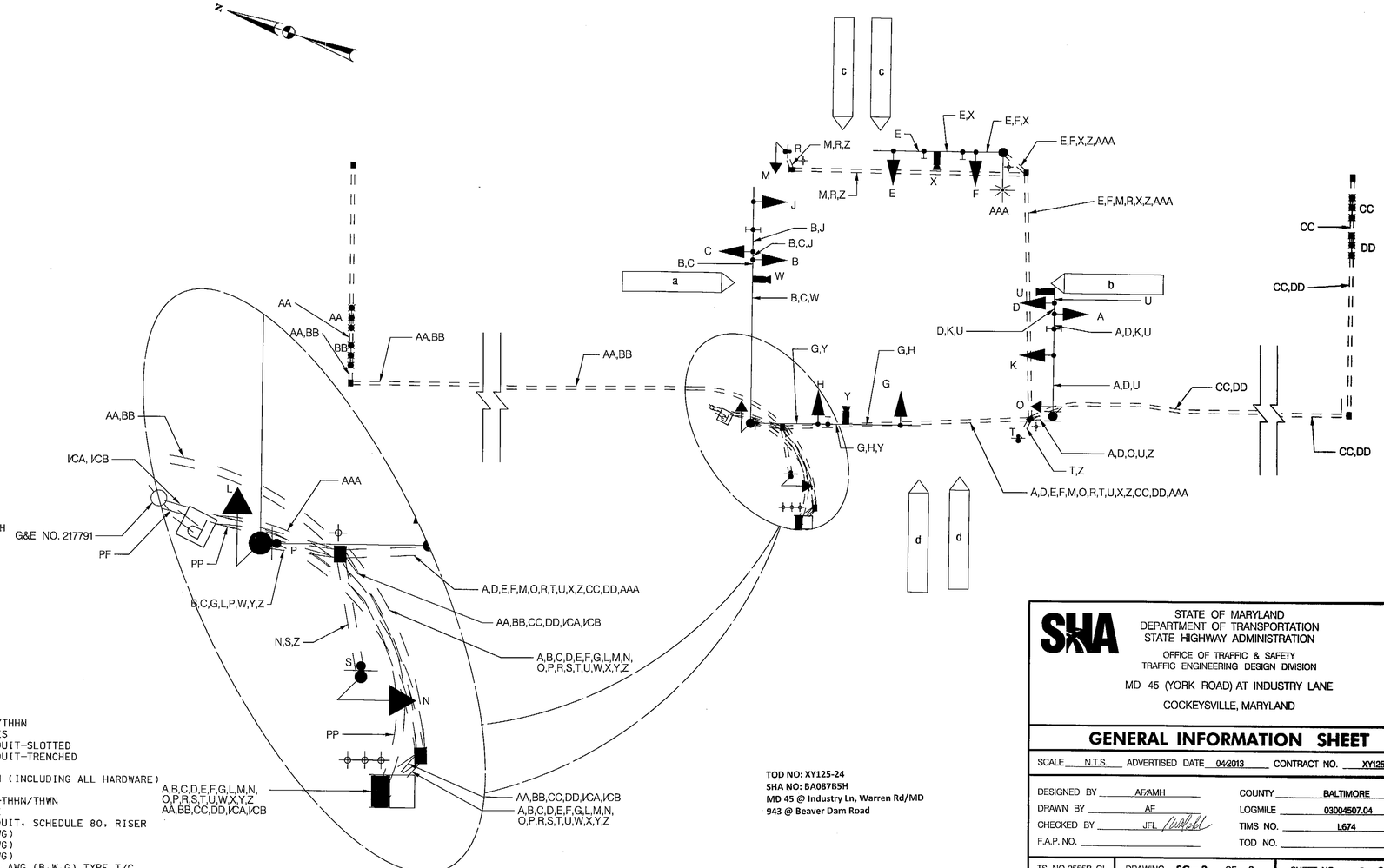
A,B,C,D,E,F,G - 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
H,J,K,L,M,N,O - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
P,R,S,T - 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
AAA - ELECTRICAL CABLE - 3 CONDUCTOR NO. 12 AWG (B.W.G) TYPE T/C
PP - ELECTRICAL CABLE, 3 - 1-CONDUCTOR NO.8 AWG-THHN/THWN
U,W,X,Y - VIDEO DETECTION CONTROL CABLE
AA,BB,CC,DD - NONINVASIVE DETECTOR LEAD-IN
Z - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
PF - 3 - 1-CONDUCTOR ELECTRICAL CABLE, NO. 2/0 AWG/THHN
I/CA,I/CB - INTERCONNECT CABLE
⏚ - GROUND ROD

N

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 AND 5	<G	<G	R	<G	<G	R	R	R-G>	R	R	DW	DW	DW	DW
PHASE 1 AND 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 1 AND 6, OR 2 AND 5, OR 2 AND 6													
PHASE 2 AND 5	<G-G	<G-G	G	R	R	R	R	R-G>	R	R	DW	DW	DW	DW
PHASE 5 CHANGE	<Y-G	<Y-G	G	R	R	R	R	R-Y>	R	R	DW	DW	DW	DW
PHASE 1 AND 6	R	R	R	<G-G	<G-G	G	R	R	R	R	DW	DW	DW	DW
PHASE 1 CHANGE	R	R	R	<Y-G	<Y-G	G	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	DW	DW	WK	WK
PED. CLEARANCE	G	G	G	G	G	G	R	R	R	R	DW	DW	FDW	FDW
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW
PHASE 4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
ALT. PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	WK	WK	DW	DW
PED. CLEARANCE	R	R	R	R	R	R	G	G	G	G	FDW	FDW	DW	DW
ALT. PHASE 4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FY	FY	FY	FY	FY	FY	FR	FR	FR	FR	DARK	DARK	DARK	DARK

WIRING DIAGRAM



TOD NO: XY125-24
SHA NO: BA0878SH
MD 45 @ Industry Ln, Warren Rd/MD 943 @ Beaver Dam Road

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

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

MD 45 (YORK ROAD) AT INDUSTRY LANE
COCKEYSVILLE, MARYLAND

GENERAL INFORMATION SHEET

SCALE N.T.S. ADVERTISED DATE 04/2013 CONTRACT NO. XY1255185

DESIGNED BY AF/AMH
DRAWN BY AF
CHECKED BY JFL
F.A.P. NO.
COUNTY BALTIMORE
LOGMILE 03004507.04
TIMS NO. L674
TOD NO.

TS NO.2555B-GI | DRAWING SG-3 OF 3 | SHEET NO. 3 OF 9

PLOTTED: "11:43 AM on Thursday, April 04, 2013"
FILE: M:\2003\01090619.64\drawings\pSG-N001_MD45&INDUSTRY.dgn