

PROJECT DESCRIPTION

I. GENERAL:

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 28 (NORBECK ROAD) AND EMORY LANE/BEL PRE ROAD IN MONTGOMERY COUNTY.

MD 28 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION:

THE EXISTING TRAFFIC SIGNAL WILL CONTINUE TO OPERATE IN A SEMI-ACTUATED MODE USING FOUR (4) NEMA PHASES.

MAINLINE MD 28 OPERATES CONCURRENTLY WITH PERMISSIVE LEFT TURNS. A PEDESTRIAN MOVEMENT CROSSING THE NORTH AND SOUTH LEGS IS ON RECALL DURING THIS PHASE. EMORY LANE AND BEL PRE ROAD OPERATE SEPARATELY IN SIDE STREET SPLIT MODE WITH PROTECTED LEFT TURNS IN EACH DIRECTION. AN ACTUATED PEDESTRIAN MOVEMENT IS AVAILABLE FOR THE EAST LEG DURING THE NORTHBOUND PHASE. THIS INTERSECTION IS PART OF THE MD 28 INTERCONNECT SIGNAL SYSTEM.

PEDESTRIAN CROSSINGS SHALL BE UPGRADED TO INCLUDE APS/CS SIGNALS AND ADA RAMPS. VIDEO DETECTION SHALL BE ADDED FOR THE EMORY LANE AND BEL PRE APPROACHES.

PROJECT CONTACTS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

MISS ANYESHA MOOKHERJEE
ASST. DISTRICT ENGINEER-TRAFFIC
PHONE: 301-513-7404

MR. EDWARD RODENHIZER
MANAGER, SIGNAL OPERATIONS
PHONE: 410-787-7650

MR. TOM FOUNTAIN
ASST. DISTRICT ENGINEER-MAINTENANCE
PHONE: 301-513-7304

MR. SONNY BAILEY
MANAGER, SIGN OPERATIONS
PHONE: 410-787-7670

MR. VICTOR GRAFTON
UTILITY ENGINEER
PHONE: 301-513-7350

MR. MIKE STOCKER
OOTS, SIGNAL WAREHOUSE
PHONE: 410-787-7668

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

MR. KAMAL HAMLID
TEAM LEADER, TRAFFIC SIGNALS
MONTGOMERY COUNTY DOT
DIVISION OF TRAFFIC ENGINEERING
AND OPERATIONS
PHONE: 240-777-8761

POWER COMPANY REPRESENTATIVE - PEPCO:
MR. RICHARD CHILCOAT, SERVICE ASSOCIATE
PEPCO ENGINEERING
8300 OLD MARLBORO PIKE
UPPER MARLBORO MARYLAND 20772
PHONE: 301-967-5805, FAX: 301-967-5820
EMAIL: RACHILCOAT@PEPCO.COM

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR USING THE STANDARD PLATES FOR TRAFFIC CONTROL FROM SECTION MD 104.00 OF THE SHA BOOK OF STANDARDS FOR HIGHWAYS & INCIDENTAL STRUCTURES.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

900000	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT 1-8 CAMERAS
900000	6 SF	SHEET ALUMINUM MAST ARM /POLE MOUNTED SIGNS CONSISTING OF:
	2 EA	R10-3(1) PUSHBUTTON SIGN (9"X 15") POLE MOUNT "TO CROSS NORBECK ROAD"
	2 EA	R10-3(1) PUSHBUTTON SIGN (9"X 15") POLE MOUNT "TO CROSS EMORY LANE"
	2 EA	R10-3(1) PUSHBUTTON SIGN (9"X 15") POLE MOUNT "TO CROSS BEL PRE ROAD"

EQUIPMENT LIST "B"

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

CATEGORY CODE NO. QUANTITY DESCRIPTION

160000	1 EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	5 CY	CLASS 2 EXCAVATION
203030	4 CY	TEST PIT EXCAVATION
585621	352 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	90 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	450 LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES ANY WIDTH
600000	82 LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
655105	540 SF	5 INCH CONCRETE SIDEWALK
655120	51 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	25 SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	25 SY	TURFGRASS SOD ESTABLISHMENT
800000	1 EA	APS 2-WIRE CENTRAL CONTROL UNIT
800000	6 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	320 LF	ELECTRICAL CABLE- 3 CONDUCTOR (NO.12 AWG) (B,W,G) TYPE TC
800000	3 EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS
800000	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	2 EA	IP-BASED VIDEO DETECTION CAMERA AND ANY LENGTH LEAD-IN CABLE
800000	1 EA	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	240 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	130 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	6 EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	6 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1 EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	470 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
811001	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
881105	800 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO.14 AWG)
881107	800 LF	ELECTRICAL CABLE- 5 CONDUCTOR (NO.14 AWG)

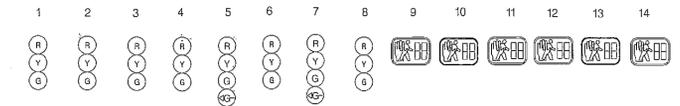
EQUIPMENT LIST "C"

ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING KEY

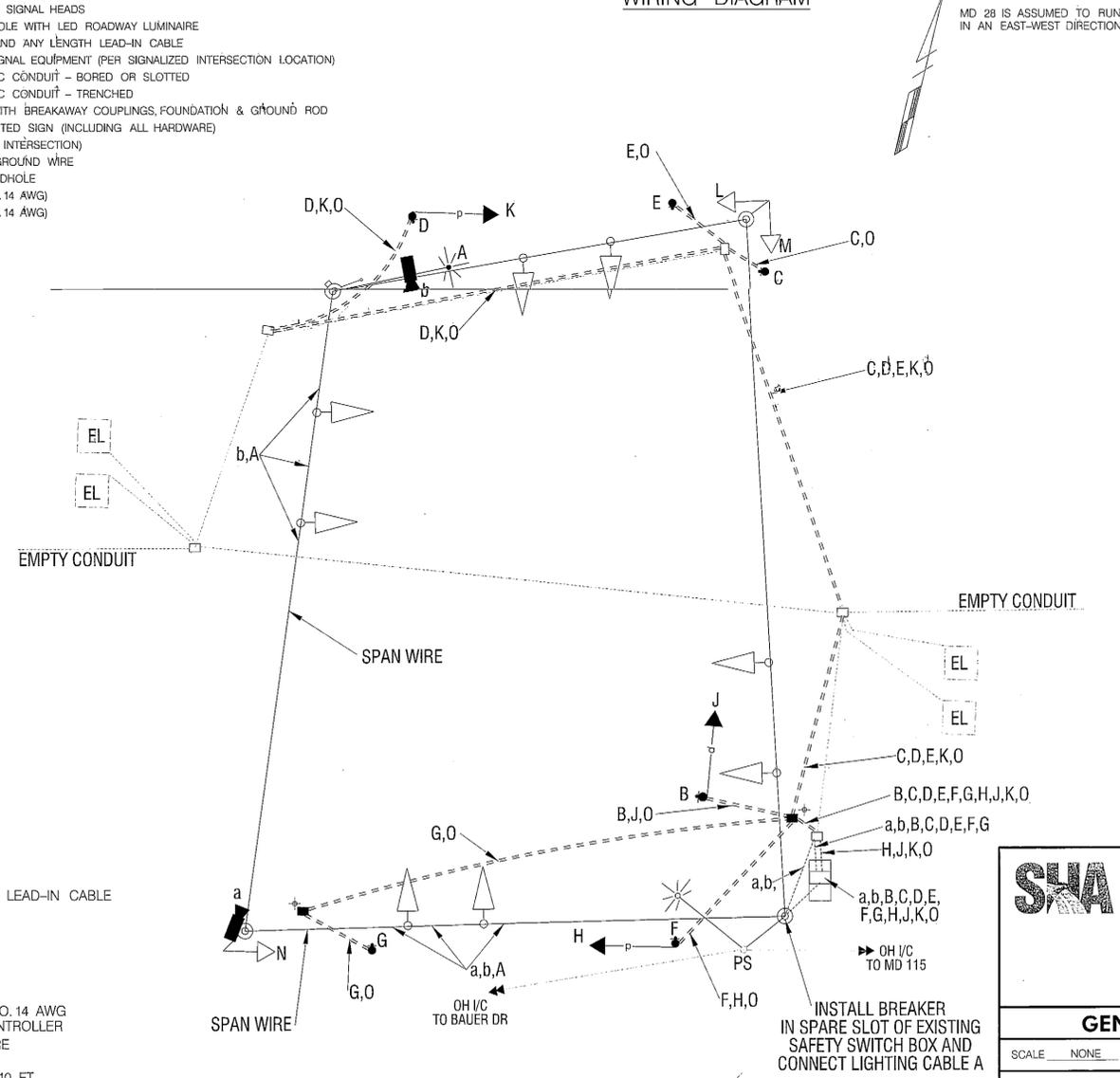
- a,b - VIDEO DETECTION CAMERA LEAD-IN CABLE
- A - 3 CONDUCTOR NO.12 AWG TRAY CABLE
- B,C,D,E,F,G - 2 CONDUCTOR NO.14 AWG ELECTRICAL CABLE
- H,J,K - 5 CONDUCTOR NO.14 AWG ELECTRICAL CABLE
- L,M,N - EXISTING 5 CONDUCTOR NO.14 AWG ELECTRICAL CABLE TO CONTROLLER
- O - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- ± - GROUND ROD (3/4" DIA. X 10 FT. LENGTH)
- PS - EXISTING SERVICE FEED
- EL - EXISTING DETECTOR LOOPS

PHASE CHART



PHASE 2 + 6	G	G	G	G	R	R	R	R	DW	DW	WK	WK	WK	WK
PED CLEAR	G	G	G	G	R	R	R	R	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	Y	DW	DW	DW	DW	DW	DW
PHASE 3 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	Y	Y	R	R	WK	WK	DW	DW	DW	DW
PED CLEARANCE	R	R	R	R	Y	Y	R	R	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 4 ALT CHANGE	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



SNA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 28 (NORBECK ROAD)
AND EMORY LANE/BEL PRE ROAD
ROCKVILLE, MD

GENERAL INFORMATION PLAN

SCALE: NONE ADVERTISED DATE: APRIL 2013 CONTRACT NO.: XY1515185

DESIGNED BY: PMH COUNTY: MONTGOMERY
DRAWN BY: PMH LOGMILE: 15002825.54
CHECKED BY: W5 TOD NO.: L803
F.A.P. NO.: TOD NO.:

TS NO. 1926 A DRAWING SG-3 OF 3 SHEET NO. 3 OF 3

WAE Williams Associates Engineers
Williams Associates-Engineers, P.A.
777 State Route 3 N, Suite D
Gambroils, Maryland 21054
Phone: 410-728-1004
Facsimile: 410-728-1009