PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING SIGNAL AT THE INTERSECTION OF MD 414 (OXON HILL ROAD) AND JOHN HANSON LANE IN PRINCE GEORGE'S COUNTY. INSTALLATION OF ACCESSIBLE PEDESTRIAN SIGNALS AND COUNTDOWN PEDESTRIAN SIGNAL HEADS IS PROPOSED ALONG THE SOUTH AND WEST LEGS OF THE INTERSECTION. ADDITIONALLY, MODIFICATION OF THE EXISTING PEDESTRIAN RAMPS IS PROPOSED TO MEET CURRENT ADA REQUIREMENTS. VIDEO DETECTION IS PROPOSED FOR PRESENCE DETECTION. A SINGLE LOOP DETECTOR IS PROPOSED FOR ADDITIONAL LEFT TURN QUEUE DETECTION. NON INVASIVE MICROLOOP DETECTORS ARE PROPOSED FOR MAINLINE SETBACK DETECTION.

MD 414 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR (4) PHASE, FULL-TRAFFIC-ACTUATED MODE. THE EXISTING EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR THE EAST LEG WILL BE CHANGED TO EXCLUSIVE ONLY. THE MD 414 THROUGH MOVEMENTS OPERATE CONCURRENTLY. AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED FOR CROSSING THE WEST LEG OF MD 414.

APS OPERATION

FOR MD 414 (OXON HILL RD.)

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS OXON HILL AT JOHN HANSON, WAIT"
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

FOR JOHN HANSON LN.

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS JOHN HANSON AT OXON HILL, WAIT"
B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

Mr. Venu Nemani
Assistant District Engineer - Traffic (Prince George's County)
Phone: 301-513-7404

Mr. Victor Grafton
District Utility Engineer
Phone: 301-513-7350

Mr. Tom Fountain
Assistant District Engineer - Maintenance
Phone: 301-513-7304

Mr. Kevin Nowak
Assistant District Engineer - Construction
Phone: 301-513-7341

THE CONTACT PERSONS FOR OFFICE OF TRAFFIC AND SAFETY ARE AS FOLLOWS:

Mr. Edward Rodenhizer
SHA Signal Operations Manager
Phone: 410-787-7652

Ms. Corren Johnson
Chief, Traffic Operations Division
Phone: 410-787-7630

The Power Company Representative is:
Potomac Electric Power Company
8300 Old Marlboro Pike
Upper Marlboro, Maryland 20772
Phone: 301-961-5325

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

ITEM NO	QUANTITY	DESCRIPTION
9104	1 EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
9118	2 EA	4 CHANNEL DETECTOR AMPLIFIER
9570	16 SF	SHEET ALUMINUM GROUND MOUNTED SIGN 2 EACH - R4-7 (24" X 30") 1 EACH - R4-7 (18" X 30") 1 EACH - OM1-3 (18" X 18")
9571	15 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 1 EACH - D-3(1) (96" X 16") 4 EACH - R10-3(1) (9" X 15")

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	5 CY	CLASS 2 EXCAVATION
2002	2 CY	TEST PIT EXCAVATION
5003	760 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKING LINES
5004	360 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	66 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	200 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	2100 SF	5 INCH CONCRETE SIDEWALK
6003	45 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	26 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8007	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	4 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8011	1 EA	CONCRETE TESTING
8013	1 EA	EMBEDDED METERED SERVICE PEDESTAL WITH BYPASS SWITCH
8015	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8018	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8026	7 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD-IN UP TO 1000'
8027	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8032	2 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8033	4 LF	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT CONDUIT
8034	180 LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2/O AWG/THHN
8035	1500 LF	12 PAIR COMMUNICATION CABLE (JELLY-FILLED/UNDERGROUND)
8037	450 LF	DISCONNECT, PULL-BACK & REROUTE CABLES
8038	250 LF	ELECTRICAL CABLE - 3-CONDUCTOR (NO. 12 AWG) TYPE T/C
8041	400 LF	UP TO 4 INCH SCHEDULE 80 RIDGED PVC CONDUIT-BORED
8042	45 LF	UP TO 4 INCH SCHEDULE 80 RIDGED PVC CONDUIT-SLOTTED
8043	300 LF	UP TO 4 INCH SCHEDULE 80 RIDGED PVC CONDUIT-TRENCHED
8044	56 LF	WOOD SIGN SUPPORTS UP TO 4 IN. X 4 IN.
8045	31 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8047	700 LF	NO. 6 AWG STANDARD BARE COPPER GROUND WIRE
8050	90 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8051	11 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8057	375 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALIMINUM SHIELDED)
8058	520 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8060	870 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8061	720 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8062	430 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14)
8063	144 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8068	1 EA	LED LAMP AND LUMINAIRE
8069	1 EA	FURNISH AND INSTALL 6 FT. POLE EXTENTION ON EXISTING SIGNAL

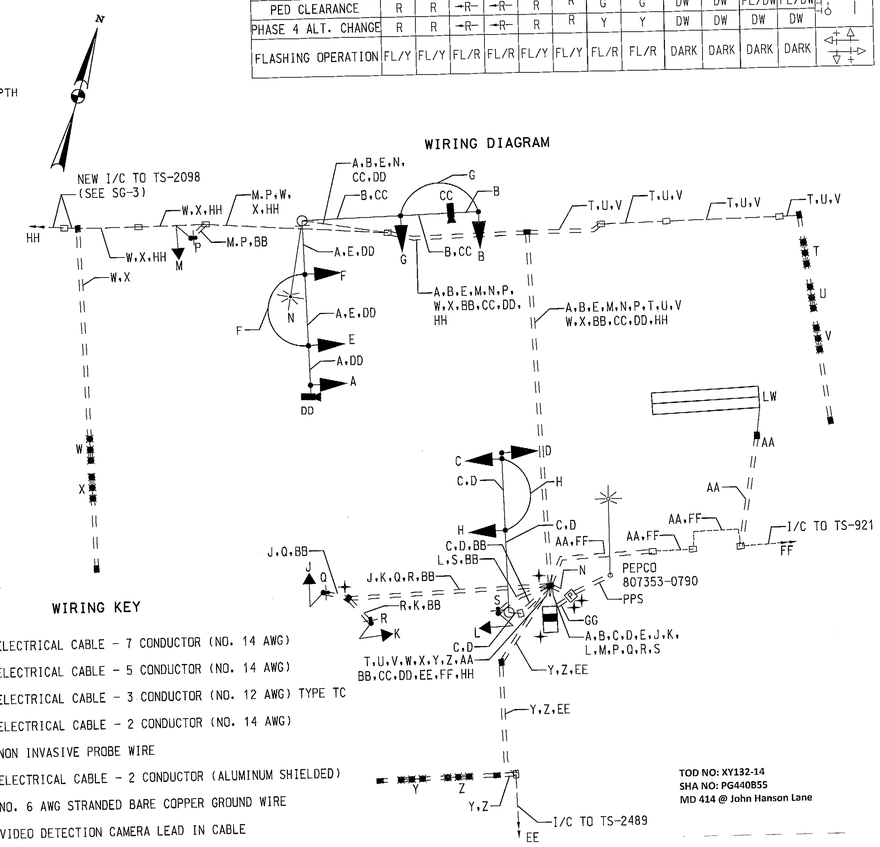
EQUIPMENT LIST 'C'

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.

PHASE CHART

PHASE CHART	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2 + 5	R	R	→G←	→G←	G	G	R	→G←	DW	DW	DW	DW
PHASE 5 CHANGE	R	R	→Y←	→Y←	G	G	R	→Y←	DW	DW	DW	DW
PHASE 2 + 6	G	G	→R←	→R←	G	G	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	→R←	→R←	G	G	R	R	FL/DW	FL/DW	DW	DW
PHASE 2 + 6 CHANGE	Y	Y	→R←	→R←	Y	Y	R	R	DW	DW	DW	DW
PHASE 4	R	R	→R←	→R←	R	R	G	G	DW	DW	DW	DW
PHASE 4 CHANGE	R	R	→R←	→R←	R	R	Y	Y	DW	DW	DW	DW
PHASE 4 ALT.	R	R	→R←	→R←	R	R	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	→R←	→R←	R	R	G	G	DW	DW	FL/DW	FL/DW
PHASE 4 ALT. CHANGE	R	R	→R←	→R←	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK

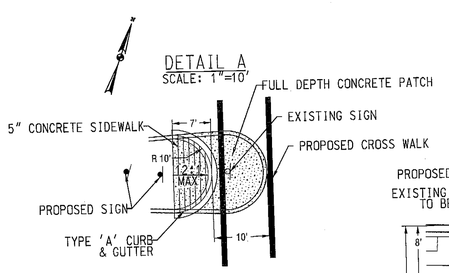
WIRING DIAGRAM

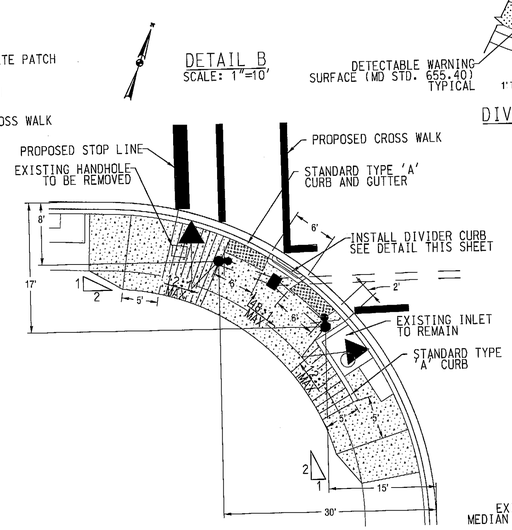


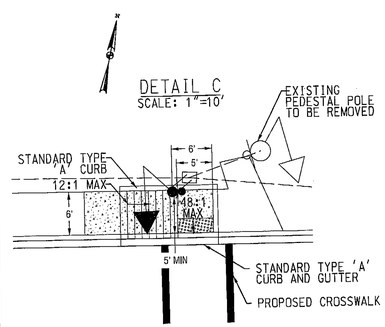
WIRING KEY

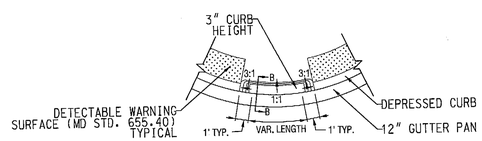
A,B,C,D	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
E,F,G,H,J,K,L,M	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
N	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) TYPE TC
P,Q,R,S	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
T,U,V,W,X,Y,Z	NON INVASIVE PROBE WIRE
AA	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
BB	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
CC,DD	VIDEO DETECTION CAMERA LEAD IN CABLE
EE,FF	REROUTE INTERCONNECT CABLE
GG	ELECTRICAL CABLE - 3-1 CONDUCTOR NO. 8 AWG-THIN/THWN
HH	12 PAIR COMMUNICATION CABLE UNDERGROUND
LW	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
PPS	PROPOSED POWER SOURCE (ELECTRICAL CABLE - 1 CONDUCTOR, NO. 2 AWG, 3 WIRE. 3 RUNS WITH 3-30 FT COILS SLACK CABLE AT UTILITY POLE. FINAL SERVICE CONNECTIONS SHALL BE MADE BY PEPCO FORCES)
M	METERED SERVICE PEDESTAL
+	3/4 IN. X 10FT. GROUND ROD

TOD NO: XY132-14
SHA NO: PG440B55
MD 414 @ John Hanson Lane

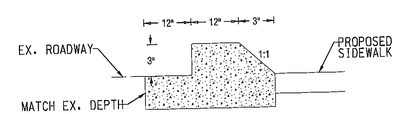




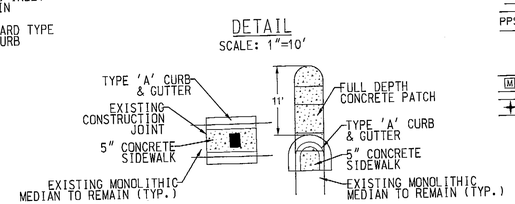




DIVIDER CURB DETAILS
N.T.S.



DIVIDER CURB DETAIL SECTION B-B
N.T.S.



RJM ENGINEERING, INC.
CONSULTING ENGINEERS
ELLICOTT CITY, MARYLAND

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 414 (Oxon Hill Road) at John Hanson Lane
OXON HILL, MARYLAND

GENERAL INFORMATION SHEET

SCALE NTS ADVERTISED DATE June 2013 CONTRACT NO. XY1325185

DESIGNED BY J. Gordon
DRAWN BY J. Gordon
CHECKED BY P. Westcott
F.A.P. NO.
COUNTY PRINCE GEORGE'S
LOGMILE 16041401.30
TIMS NO. J724
TOD NO.

TS NO. 2114C-GI | DRAWING SG-2 OF 3 | SHEET NO. 2 OF 3

PLOTTED: Monday, June 24, 2013 AT 08:58 AM
FILE: P:\SHA\MD 414 at John Hanson Lane\2013-06 PSE\pSG-N000_MD414.dgn

BY: Jermaine -