PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A TRAFFIC SIGNAL AT MD 414 (OXON HILL ROAD)/SB MD 210 OFF RAMP (WEST LOOP)/BALD EAGLE ROAD. THIS INTERSECTION WILL BE INTERCONNECTED WITH MD 414/ SOUTH ROAD AND NB MD 210 OFF RAMP (EAST CONNECTOR) VIA COMMUNICATION CABLE. INTERSECTION LIGHTING WILL ALSO BE PROVIED AT THIS LOCATION. IT IS ASSUMED THAT MD 414 (OXON HILL ROAD) RUNS IN AN EAST-WEST DIRECTION. A FLASHING BEACON WILL BE INSTALLED ALONG THE EASTBOUND APPROACH TO THIS INTERSECTION. THE POSTED SPEED LIMIT IS 30 MPH.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE OPERATION, FULLY-ACTUATED MODE. MD 414 (OXON HILL ROAD), BALD EAGLE ROAD AND SB MD 210 OFF RAMP (WEST LOOP) WILL OPERATE IN SEPARATE PHASES. AN EXCLUSIVE LEFT-TURN PHASE WILL BE PROVIDED FOR BOTH THE EASTBOUND AND WESTBOUND MD 414 (OXON HILL ROAD) APPROACHES.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, SOLID STATE EIGHT-PHASE CONTROLLER WITH TELEMETRY MODULE, LOOP DETECTOR AMPLIFIER AND VIDEO TRAFFIC DETECTION SYSTEM HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT 3 ARE:
MR. BRIAN YOUNG
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7358

MR. AUGUSTINE REBISH
ASSISTANT DISTRICT ENGINEER - UTILITIES
301-513-7350

MR. WAYNE MOWDY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

THE POWER COMPANY REPRESENTATIVES ARE:
MR. RICHARD CHILCOAT
POTOMAC ELECTRIC POWER COMPANY
- ELECTRIC SERVICE
301-967-5805

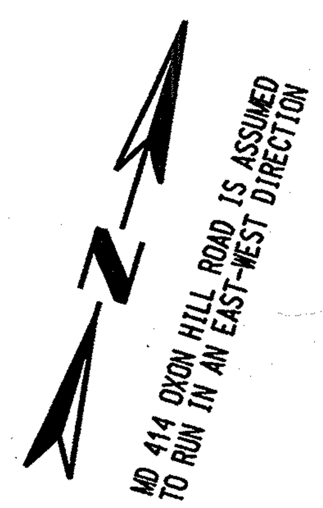
MR. JOE NICE
POTOMAC ELECTRIC POWER COMPANY
- RELOCATIONS
202-388-2581

THE CONTACT PERSONS FOR THE OFFICE OF TRAFFIC AND SAFETY ARE:
MR. RICHARD DAFF
DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SYNDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7631

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7652

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7676



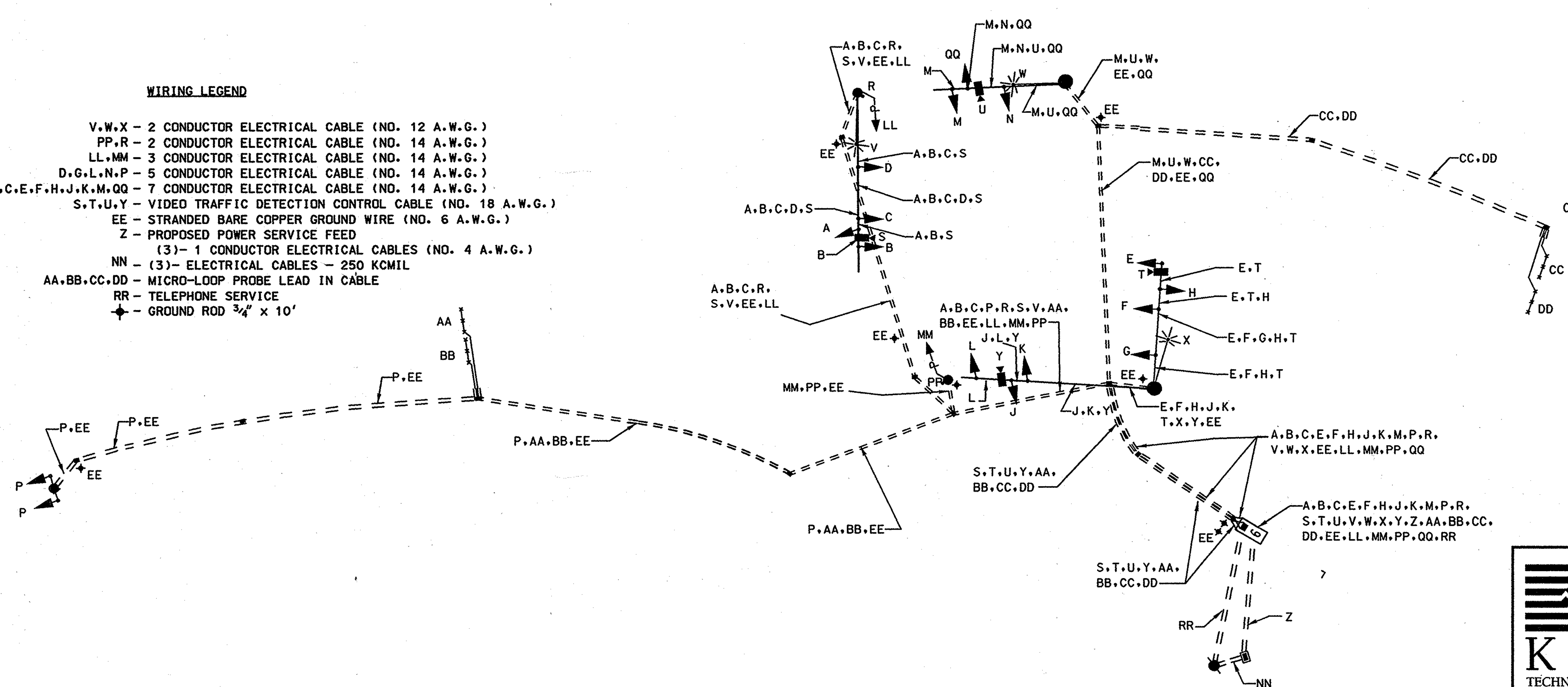
PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	←G	←G	R	R	←G	←G	R	R	R	R	R	R	R	R	DW	DW
CHANGES TO PHASES: 1 & 6, 2 & 5, OR 2 & 6																
PHASE 1 & 6	←G	←G	G	G	←R	←R	R	R	R	R	R	R	R	R	DW	DW
1 CHANGE	←Y	←Y	G	G	←R	←R	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 & 5	←R	←R	R	R	←G	←G	G	G	R	R	R	R	R	R	DW	DW
5 CHANGE	←R	←R	R	R	←Y	←Y	G	G	R	R	R	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	←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	Y	Y	DW	DW
ALT. PHASE 3	←R	←R	R	R	←R	←R	R	R	R	R	R	←G / G	←G / G	G	W	W
PED CLEAR	←R	←R	R	R	←R	←R	R	R	R	R	R	←G / G	←G / G	G	FL / DW	FL / DW
ALT. 3 CHANGE	←R	←R	R	R	←R	←R	R	R	R	R	R	Y	Y	Y	DW	DW
PHASE 4	←R	←R	R	R	←R	←R	R	R	←G / G	←G / G	G	R	R	R	DW	DW
4 CHANGE	←R	←R	R	R	←R	←R	R	R	Y	Y	Y	R	R	R	DW	DW
FLASHING	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

WIRING DIAGRAM
NOT TO SCALE

WIRING LEGEND

V,W,X - 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
PP,R - 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
LL,MM - 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
D,G,L,N,P - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
A,B,C,E,F,H,J,K,M,QQ - 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
S,T,U,Y - VIDEO TRAFFIC DETECTION CONTROL CABLE (NO. 18 A.W.G.)
EE - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
Z - PROPOSED POWER SERVICE FEED
(3)- 1 CONDUCTOR ELECTRICAL CABLES (NO. 4 A.W.G.)
NN - (3)- ELECTRICAL CABLES - 250 KCMIL
AA,BB,CC,DD - MICRO-LOOP PROBE LEAD IN CABLE
RR - TELEPHONE SERVICE
- GROUND ROD 3/4" x 10'



EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE MDSHA.

CAT. CODE	QUANTITY		DESCRIPTION
900000	1	EA	VIDEO INTERFACE EQUIPMENT FOR 1 TO 4 CAMERAS
963010	1	EA	FOUR CHANNEL LOOP DETECTOR AMPLIFIER, ROCK MOUNT
971017	1	EA	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET-BASE MOUNT
973023	146	SF	SHEET ALUMINUM SIGNS CONSISTING OF: -4 EACH D3-2 (VAR.X16") LEFT ARROW BALD EAGLE ROAD- MAST ARM MOUNT RIGHT ARROW BALD EAGLE ROAD- MAST ARM MOUNT OXON HILL ROAD (DUAL FACE) - MAST ARM MOUNT -2 EACH ASSOCIATED SHIELD ASSEMBLY (30"X51") WEST MD 414 RIGHT ARROW - POLE MOUNT EAST MD 414 RIGHT ARROW - POLE MOUNT -2 EACH ASSOCIATED SHIELD ASSEMBLY (48"X75") WEST MD 414 LEFT ARROW - POLE MOUNT EAST MD 414 LEFT ARROW - POLE MOUNT -1 EACH R3-5L (30"X36") - MAST ARM MOUNT -1 EACH R3-5R (30"X36") - MAST ARM MOUNT -1 EACH R3-6L (30"X36") - MAST ARM MOUNT -1 EACH W3-3 (36"X36") - POLE MOUNT

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

CAT. CODE	QUANTITY		DESCRIPTION
120500	1	LS	MAINTENANCE OF TRAFFIC
203030	7	CY	TEST PIT EXCAVATION
585620	450	LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
585624	150	LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801004	15	CY	CONCRETE FOR SIGNAL FOUNDATION
801607	146	SF	INSTALL SHEET ALUMINUM SIGN
802501	1000	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805135	550	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	100	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805125	50	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
810010	250	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
811001	12	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
807202	1	EA	METERED SERVICE PEDESTAL
816001	4	EA	VIDEO DETECTION CAMERA
818004	1	EA	10 FOOT BREAKAWAY PEDESTAL POLE
818051	1	EA	STEEL POLE WITH TWIN 50 FOOT AND 38 FOOT MAST ARMS
818036	2	EA	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
818052	1	EA	STEEL POLE WITH A SINGLE 38 FOOT MAST ARM
831010	3	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL
833062	10	LF	4 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER
837001	7	EA	GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH
860272	48	EA	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861106	650	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	900	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	3400	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	1000	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
866104	3	EA	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871117	1	EA	INSTALL EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET- BASE MOUNT
810550	4	EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
805115	350	LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- BORED
800000	60	LF	ELECTRICAL CABLE - 250 KCMIL
805118	300	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- BORED
865001	2	EA	PUSHBUTTON AND SIGN R10-4(1)- "PUSH BUTTON TO CROSS OXON HILL ROAD..."
861105	650	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
833050	10	LF	2 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER
818010	1	EA	14 FOOT BREAKAWAY PEDESTAL POLE
805160	25	LF	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
800000	2	EA	VIDEO TRAFFIC DETECTION CONTROL CABLE, 300 FEET
800000	1	EA	VIDEO TRAFFIC DETECTION CONTROL CABLE, 400 FEET
800000	1	EA	VIDEO TRAFFIC DETECTION CONTROL CABLE, 500 FEET
860278	2	EA	12 INCH PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT COUNTDOWN TYPE
860282	2	EA	12 INCH PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT COUNTDOWN TYPE
862102	100	LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)

C. ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.
NOTE: NO EQUIPMENT IS TO BE RETURNED TO MDSHA. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR BECOME THE PROPERTY OF THE CONTRACTOR.

GREEN LINE NO. 1
JUNE 29, 2007

4 ADDENDUM NO. 4
MARCH 10, 2005
SHEET REPLACED

SP-18 OF SP-23

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
21030-1888
(410) 316-7800

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION SHEET
MD 414 OXON HILL ROAD AT SB MD 210 OFF RAMP (WEST LOOP)

DRAWN BY:	M. PIERRE	F.A.P. NO.	SEE TITLE SHEET	TS NO. 4371-GI	SHEET NO.
CHECKED BY:	J. LAWRENCE	S.H.A. NO.	PG5075173		
SCALE:	NONE	COUNTY:	PRINCE GEORGE'S	T.I.M.S. NO. E149	298 OF 402
DATE:	12-7-04	LOG MILE:	16041400.00		

PLOTTED: "01:23 PM on Thursday, June 28, 2007"
BY: Aaron Hottenstein Division: Transportation
FILE: m:\1998\01998145\210CGD03 National Harbor.dgn