

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT MD 216 AND CREST ROAD IN HOWARD COUNTY. MD 216 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION. INTERSECTION LIGHTING AND INTERCONNECT SHALL BE PROVIDED.

INTERSECTION OPERATION

I. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN AN EIGHT PHASE FULL-TRAFFIC-ACTUATED MODE WITH THE MD 216 APPROACHES OPERATING CONCURRENTLY AND THE CREST ROAD APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR THE MD 216 APPROACHES AND THE CREST ROAD APPROACHES.

CONTROLLER REQUIREMENTS

A FULLY-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER IN A BASE-MOUNTED SYSTEM READY CABINET HOUSED IN A NEMA SIZE *6" BASE MOUNTED CABINET.

PROJECT CONTACTS

CONTACTS FOR DISTRICT 7:

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8140

MR. JAMES BUCKALEW
DISTRICT UTILITIES ENGINEER
PHONE: (301) 624-8115

MR. DAVE COYNE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 624-8105

THE POWER COMPANY REPRESENTATIVE:
MR. BILL HARTMAN
BG&E POWER COMPANY
PHONE: (410) 291-3570

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

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

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

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

MS. DARLENE EIDE
SIGNAL SHOP WAREHOUSE
410-787-7668

EQUIPMENT LIST "B"

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

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
585620	1 L.S.	12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
585624	1 L.S.	24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801004	1 L.S.	CONCRETE FOR SIGNAL FOUNDATION
801104	1 L.S.	WOOD SIGN SUPPORTS 4 INCH X 4 IN" H
802501	1 L.S.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805011	1 L.S.	1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVE
805118	1 L.S.	4" SCHEDULE 80 RIGID PVC CONDUIT - BORED
805135	1 L.S.	3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805140	1 L.S.	4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805160	1 L.S.	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807205	1 L.S.	ELECTRIC UTILITY SERVICE EQUIPMENT 120/240V 60 AMPS
810550	1 L.S.	MICROLOOP PROBE SET WITH 500 FT. LEAD-IN
810555	1 L.S.	MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN
811001	1 L.S.	ELECTRICAL HANDHOLE
818014	1 L.S.	STEEL POLE WITH A SINGLE 60 FT. MAST ARM
818052	1 L.S.	STEEL POLE WITH A SINGLE 70 FT. MAST ARM
831010	1 L.S.	250 WATT HIGH PRESSURE SODIUM LUMINAIRE WITH PHOTOCCELL
837001	1 L.S.	GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
860270	1 L.S.	8 IN. TRAFFIC SIGNAL HEAD SECTION
860272	1 L.S.	12 IN. TRAFFIC SIGNAL HEAD SECTION
860278	1 L.S.	12 IN. PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT
861104	1 L.S.	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861105	1 L.S.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1 L.S.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1 L.S.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	1 L.S.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
862101	1 L.S.	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
862102	1 L.S.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
865001	1 L.S.	PUSHBUTTON AND SIGN
866104	1 L.S.	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871117	1 L.S.	INSTALL 8 PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNTED

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	DESCRIPTION
NONE	

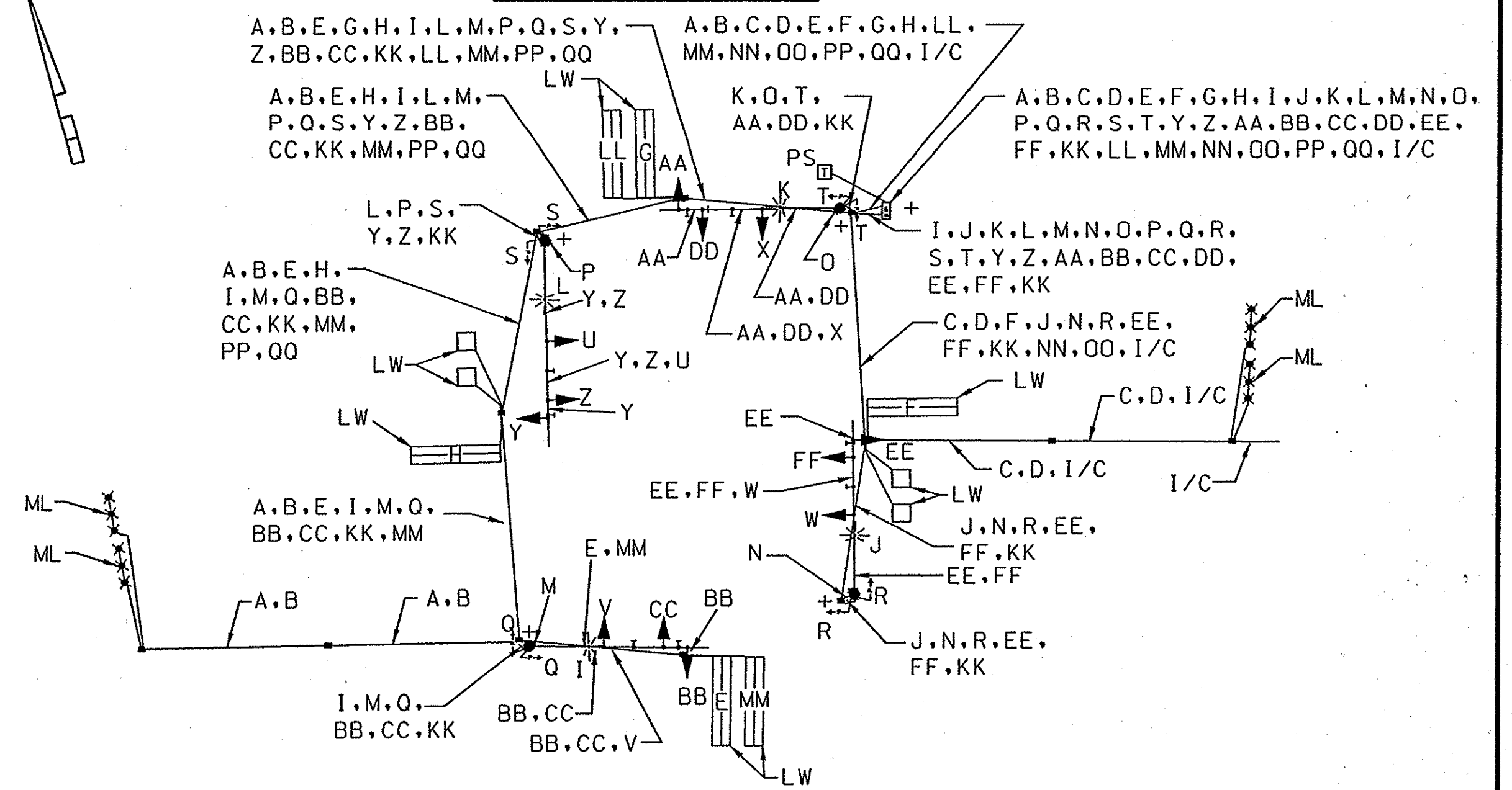
NOTES: 1. THE CONTRACTOR SHALL NOTIFY THE SHA AT 410-787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

2. ALL EQUIPMENT TO BE REMOVED AND NOT LISTED ABOVE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER IF ANY UTILITY CONFLICTS SHOULD ARISE.
- LOOP DETECTORS, MICROLOOP PROBES, AND CONDUITS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF FINAL PAVEMENT SURFACE.
- ALL TRAFFIC SIGNAL STRUCTURE FOUNDATIONS AND HANDHOLES SHALL BE INSTALLED TO THE PROPOSED FINAL GRADE.

WIRING DIAGRAM



WIRING KEY

A, B, C, D } MICRO-LOOP LEAD-IN	O, R, S, T } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	I/C - 12 PAIR JELLY FILLED INTERCONNECT (SEE INTERCONNECT PLAN)
E, F, G, H, LL, MM, NN, OO, PP, QQ } 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)	Y, Z, AA, BB, CC, DD, EE, FF } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	PS - POWER SERVICE UNDERGROUND
I, J, K, L } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)	KK } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)	ML - MICRO-LOOP PROBE SET
M, N, O, P } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)		+ - 3/4 IN. X 10 FT. GROUND ROD
		LW - LOOP WIRE (NO. 14 A.W.G.)

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1+5	G-/R	G-/R	R	G-/R	G-/R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																				
PHASE 1+6	G-/G	G-/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1+6 CHANGE	G-/G	G-/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2+5	R	R	R	G-/G	G-/G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2+5 CHANGE	R	R	R	G-/G	G-/G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2+6	G	G	G	G	G	G	R	R	R	R	R	R	WALK	WALK	WALK	WALK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2+6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3+7	R	R	R	R	R	R	G-/R	G-/R	R	G-/R	G-/R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																				
PHASE 3+8	R	R	R	R	R	R	G-/G	G-/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3+8 CHANGE	R	R	R	R	R	R	G-/G	G-/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4+7	R	R	R	R	R	R	R	R	R	G-/G	G-/G	G	DW	DW	DW	DW	DW	DW	DW	DW
4+7 CHANGE	R	R	R	R	R	R	R	R	R	G-/G	G-/G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4+8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4+8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4+8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WALK	WALK	WALK	WALK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4+8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	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	DARK	DARK	DARK	DARK

SG-2



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

MD 216 AND CREST ROAD

GENERAL INFORMATION PLAN



RUMMEL, KLEPPER
& KAHL, LLP

CONSULTING ENGINEERS

81 MOSHER STREET
BALTIMORE, MARYLAND 21217

DESIGNED BY: HEH
CHECKED BY: DAE/BLB
SCALE: NONE
DATE: MAY 21, 2003

F.A.P. NO. AC-STP-G-3605(2N)
S.H.A. NO. H03065171
COUNTY: HOWARD
LOG MILE: J3021603.38

TS NO. TS-4246
T.I.M.S. NO. F-513

SHEET NO. 3 OF 35