

**PROJECT DESCRIPTION**

**I. GENERAL**

This project involves the installation of a new traffic signal at the intersection of MD 97 (Georgia Avenue) with the EB MD 200 On-Ramp in Montgomery County.

**II. INTERSECTION OPERATION**

- The intersection is to operate in a NEMA 5-phase, semi-actuated mode. The left turn phases along northbound and southbound MD 97 shall operate with exclusive left turn phasing. Video detection will be installed at this location.

**NOTES**

- For final pavement markings, refer to the pavement marking plans, as applicable; other than those detailed on the plan. All pavement markings shall be installed in accordance with Administration standards.
- The contractor shall be responsible for terminating all signal cable to the appropriate terminals and properly labeling each cable.
- All traffic signal foundations shall be installed at the final sidewalk or curb grade for closed sections.
- The contractor shall be responsible for delivering the video interface equipment to the Montgomery County Signal Shop. County forces will complete the retrofit of all signal equipment.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- Controller and cabinet shall be purchased from Econolite and delivered to the Montgomery County Signal Shop for wiring and testing prior to installation.
- The contractor shall maintain interconnect throughout all construction phases.

**CONTACTS**

**DISTRICT (THREE)**

MR. JEFFREY WENTZ  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
301-513-7318

MR. KEVIN NOWAK  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
301-513-7336

MR. VERNON STINNETT  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
301-513-7304

MR. AUGIE REBISH  
UTILITY ENGINEER  
301-513-7350

**MONTGOMERY COUNTY**

MR. KEITH LORD  
301-279-1971

MR. KAMAL HAMUD  
TRAFFIC ENGINEER - MCTMC  
240-777-8761

**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  
410-787-7670

MS. DARLENE EIDE  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

**EQUIPMENT LIST**

**A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION**

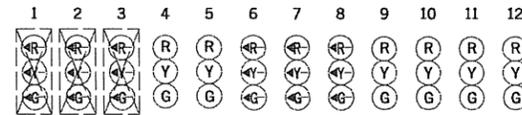
CAT CODE	UNITS	QUANTITY	DESCRIPTION
NONE			

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

CAT CODE	UNITS	QUANTITY	DESCRIPTION
203030	CY	3	TEST PIT EXCAVATION
500000	LF	55	12 INCH WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING
500000	LF	200	24 INCH WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING
800000	EA	3	CONTROL CABLE 300 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
800000	EA	2	CONTROL CABLE 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
800000	EA	1	ECONOLITE CABINET AND CONTROLLER WITH VIDEO INTERFACE
801004	CY	9	CONCRETE FOR SIGNAL FOUNDATIONS
801106	LF	17	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
801605	SF	77	SHEET ALUMINUM SIGNS
802501	LF	475	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805118	LF	180	4 INCH SCHEDULE 80 PVC CONDUIT - BORED
805125	LF	25	2 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED
805135	LF	20	3 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED
805140	LF	340	4 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED
807202	EA	1	METERED SERVICE PEDESTAL
811001	EA	7	FURNISH AND INSTALL ELECTRICAL HANDHOLE
816001	EA	5	VIDEO DETECTION CAMERA
818010	EA	2	14 FOOT BREAKAWAY PEDESTAL POLE
818021	EA	1	STEEL POLE WITH TWIN 50 FOOT MAST ARMS
818036	EA	1	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM
821003	EA	2	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURE
831010	EA	2	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
837001	EA	11	GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH
860284	EA	36	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	LF	550	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	LF	1825	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	LF	780	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
861117	LF	30	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)
866101	EA	1	10 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
866103	EA	1	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE

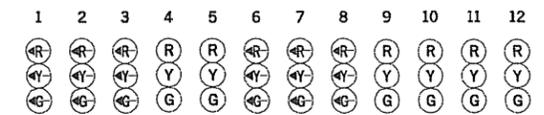


**PHASE CHART (INTERIM)**



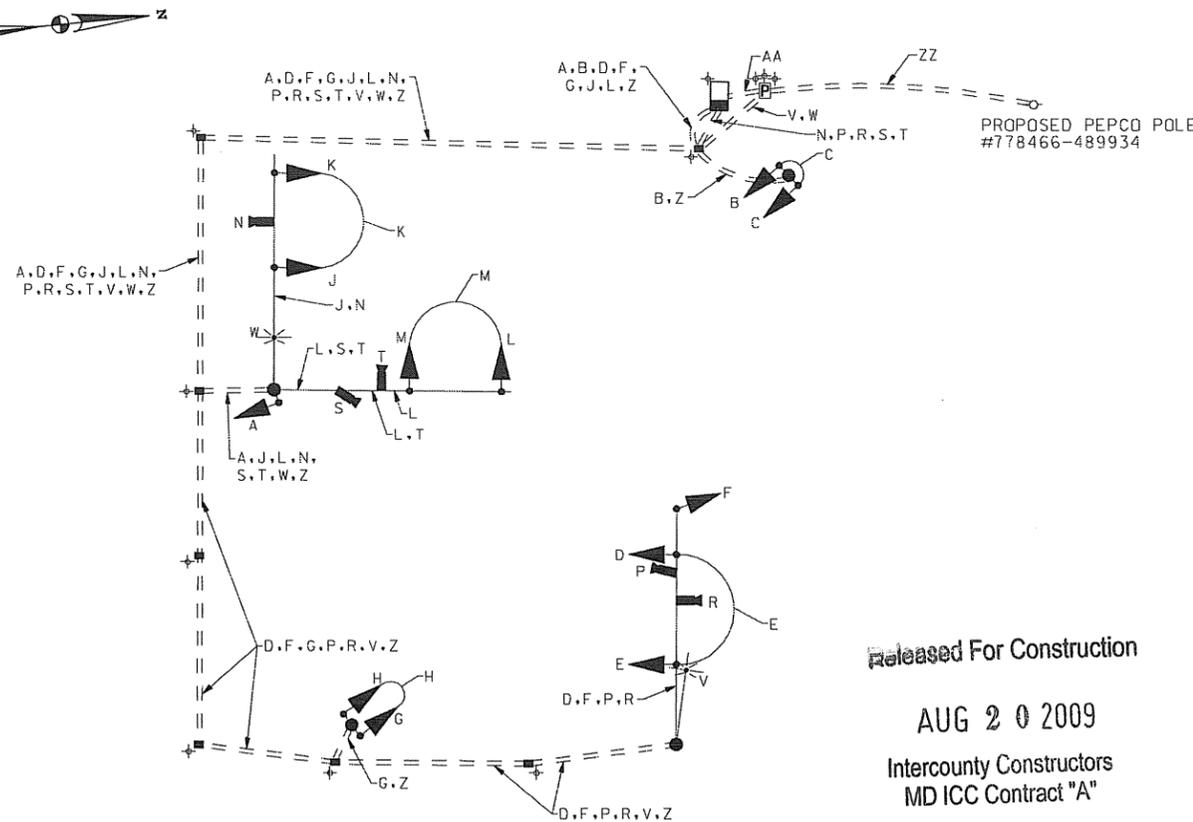
PHASE	B	B	B	R	R	←G-	←G-	←G-	G	G	R	R
PHASE 2 AND 5	B	B	B	R	R	←G-	←G-	←G-	G	G	R	R
2 AND 5 CHANGE				R	R	←Y-	←Y-	←Y-	G	G	R	R
PHASE 2 AND 6	A	A	A	G	G	FL/R	FL/R	FL/R	G	G	R	R
2 AND 6 CHANGE	G	G	G	Y	Y	←R-	←R-	←R-	Y	Y	R	R
PHASE 4	G	G	G	R	R	←R-	←R-	←R-	R	R	G	G
4 CHANGE	E	E	E	R	R	←R-	←R-	←R-	R	R	Y	Y
FLASHING OPERATION	D	D	D	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R

**PHASE CHART (ULTIMATE)**



PHASE	←G-	←G-	←G-	R	R	←G-	←G-	←G-	R	R	R	R
PHASE 1 AND 5	←G-	←G-	←G-	R	R	←G-	←G-	←G-	R	R	R	R
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6												
PHASE 1 AND 6	←G-	←G-	←G-	G	G	←R-	←R-	←R-	R	R	R	R
1 AND 6 CHANGE	←Y-	←Y-	←Y-	G	G	←R-	←R-	←R-	R	R	R	R
PHASE 2 AND 5	←R-	←R-	←R-	R	R	←G-	←G-	←G-	G	G	R	R
2 AND 5 CHANGE	←R-	←R-	←R-	R	R	←Y-	←Y-	←Y-	G	G	R	R
PHASE 2 AND 6	FL/R	FL/R	FL/R	G	G	FL/R	FL/R	FL/R	G	G	R	R
2 AND 6 CHANGE	←R-	←R-	←R-	Y	Y	←R-	←R-	←R-	Y	Y	R	R
PHASE 4	←R-	←R-	←R-	R	R	←R-	←R-	←R-	R	R	G	G
4 CHANGE	←R-	←R-	←R-	R	R	←R-	←R-	←R-	R	R	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R

**WIRING DIAGRAM**



FOR DETAILS ON INTERCONNECT, REFER TO INTERCONNECT PLANS (pSG OF C009 THRU C013).

**KEY**

- A, D, F, G, J, L, N, P, R, S, T, V, W, Z } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- B, C, E, H, K, M } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- N, P, R, S, T } VIDEO DETECTION CABLE
- V, W } 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
- Z } 1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
- AA } 3 WIRE 1 CONDUCTOR (NO. 4 AWG THHN/THWN)
- ZZ } 3 WIRE 250 KCMIL TYPE USE
- + } GROUND ROD

Released For Construction

AUG 20 2009

Intercounty Constructors  
MD ICC Contract "A"

**SEGMENT D  
APPROVED FOR  
CONSTRUCTION**

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 97 (GEORGIA AVENUE) AT  
MD 200 EB ON-RAMP (RAMP "C")/PARK & RIDE  
NORBECK, MARYLAND



**REVISIONS**

- 0 SDSRW-FFD0-40F
- 1 NDC 092

**GENERAL INFORMATION SHEET**

SCALE NOT TO SCALE	DATE OCT. 2007	CONTRACT NO. AT3765960
DESIGNED BY A. GRIFFIN	COUNTY MONTGOMERY	
DRAWN BY A. GRIFFIN	LOGMILE 15009709.22	
CHECKED BY K. BINKER	T. I. M. S. NO. J367X	
F. A. P. NO. AC-NH-ICC-1(1)N	TOD NO.	
TS NO. 4723	DRAWING pSG OF N006	SHEET NO. OF