

PROJECT DESCRIPTION

I. GENERAL:

THIS PROJECT INVOLVES UPGRADING THE INTERCONNECT OF TWO (2) TRAFFIC SIGNALS ALONG MD 140, LOCATED AT BRIAN DANIEL CT./WOODFIELD CT. AND AT GORES MILL ROAD IN BALTIMORE COUNTY. WORK WILL ENTAIL INSTALLING INTERCONNECT CONDUIT AND CABLE, INSTALLING VIDEO DETECTION CAMERAS FOR SAMPLING AND PRESENCE DETECTION, UPGRADING EXISTING TRAFFIC SIGNAL HEADS AND ASSOCIATED WIRING, AND INSTALLING NEW MICRO LOOP PROBES FOR THE EXTENSION LOOPS. WORK WILL ALSO INVOLVE REPLACING POLE-MOUNTED CONTROLLER CABINETS WITH BASE-MOUNTED CONTROLLER CABINETS AND METERED PEDESTAL SERVICE. EXISTING POLE BASES WILL BE RE-GROUTED WHERE REQUIRED AND ANY STREET LIGHTING ON THE SIGNAL POLES WILL BE RE-WIRED.

MD 140 IS CONSIDERED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION:

THE INTERSECTION SHALL BE INTERCONNECTED WITH 12-PAIR COMMUNICATION CABLE. THE INTERSECTION OPERATES IN A NEMA 5 PHASE FULL TRAFFIC ACTUATED MODE. MD 140 THROUGH MOVEMENTS OPERATE CONCURRENTLY. THE LEFT TURN FROM MD 140 EASTBOUND OPERATES AS EXCLUSIVE/PERMISSIVE PHASING. BRIAN DANIEL CT./WOODFIELD CT. MOVEMENTS OPERATE CONCURRENTLY. SAMPLING DETECTION SHALL BE PROVIDED ON THE FAR SIDE OF THE INTERSECTION FOR BOTH EASTBOUND AND WESTBOUND MD 140. NON-INVASIVE MICRO LOOP PROBES SHALL PROVIDE ADVANCE DETECTION ON MD 140.

III. SPECIAL NOTES:

THE EXISTING NEMA EIGHT-PHASE FULL-ACTUATED, POLE-MOUNTED CONTROLLER WILL BE REPLACED WITH A NEMA EIGHT-PHASE FULL-ACTUATED BASE-MOUNTED CABINET AND CONTROLLER CONTAINING ALL THE NECESSARY EQUIPMENT.

PHONE SERVICE FOR THE SAMPLING STATIONS WILL BE OBTAINED FROM POLE # C&P 645. A 2-INCH CONDUIT WILL BE INSTALLED FROM AN EXISTING HANDHOLE ON THE CURRENT UNDERGROUND INTERCONNECT RUN TO FACILITATE TELEPHONE SERVICE BACK TO THE CONTROLLER CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR THE SHA ARE AS FOLLOWS:

MS. ERIN KUHN
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ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS DIVISION
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EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9001	1 EA.	VIDEO DETECTION CAMERA INTERFACE FOR 1-4 CAMERAS. HOUSED IN A NEMA SIZE '6' BASE-MOUNTED CABINET.
9002	1 EA.	ASC II CONTROLLER
9571	50 SF.	SHEET ALUMINUM MAST ARM/POLE-MOUNTED SIGNS

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA.	MAINTENANCE OF TRAFFIC
2002	1 CY.	TEST PIT EXCAVATION
8001	31 EA.	12" LED SIGNAL (EACH HEAD)
8004	3 EA.	8" LED SIGNAL (EACH HEAD)
8011	1 EA.	METERED SERVICE PEDESTAL
8019	5 EA.	NON-INVASIVE MICRO LOOP PROBE SET WITH 1,000' LEAD-IN CABLE
8022	1 EA.	REMOVAL AND DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT
8027	4 EA.	VIDEO DETECTOR CAMERA WITH LEAD IN CABLE TO CONTROLLER
8032	150 LF.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" (BORED)
8033	80 LF.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" (SLOTTED)
8034	200 LF.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" (TRENCHED)
8038	420 LF.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8043	150 LF.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG THHN/THWN (3 WIRES)
8044	6 EA.	ELECTRICAL HANDHOLE
8058	150 LF.	ELECTRICAL CABLE 5-CONDUCTOR NO. 14 AWG
8059	1500 LF.	ELECTRICAL CABLE 7-CONDUCTOR NO. 14 AWG
8060	500 LF.	ELECTRICAL CABLE 2-CONDUCTOR NO. 12 AWG/TC
8067	1 EA.	INSTALL BASE-MOUNTED CABINET

EQUIPMENT LIST "C"

SHA WILL REMOVE THE CONTROLLER AND AUXILIARY EQUIPMENT FROM THE EXISTING CABINET. THE CABINET AND ALL OTHER REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

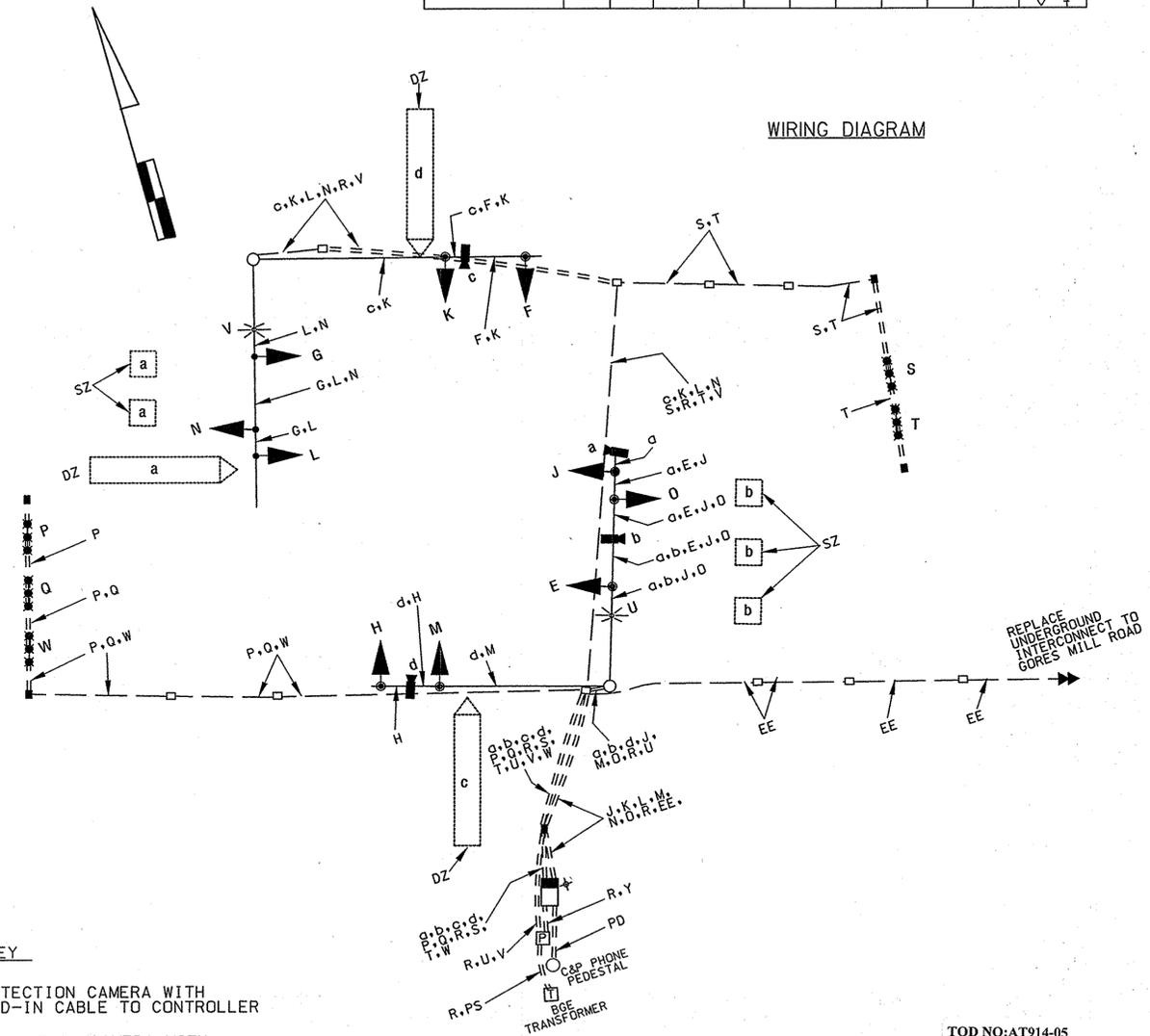
WIRING KEY

- a,d - VIDEO DETECTION CAMERA WITH 250' LEAD-IN CABLE TO CONTROLLER
- b,c - VIDEO DETECTION CAMERA WITH 500' LEAD-IN CABLE TO CONTROLLER
- U,V - ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 AWG) TRAY
- E,F,G,H - ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)
- J,K,L,M,N,O } ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
- Y - ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG THHN/THWN) 3 WIRES
- R - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- P,Q,W } NON-INVASIVE MICRO LOOP PROBE WITH 1,000' LEAD-IN CABLES
- S,T,W } 12-PAIR COMMUNICATION CABLE UNDERGROUND JELLY-FILLED INTERCONNECT

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
Phase 1 + 6	G	G	G	R	R	R	R	R	R	R
1 Change	G	G	G	R	R	R	R	R	R	R
Phase 2+6	G	G	G	G	G	G	R	R	R	R
2 + 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R
Phase 4 + 8	R	R	R	R	R	R	G	G	G	G
4 + 8 Change	R	R	R	R	R	R	Y	Y	Y	Y
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM



TOD NO: AT914-05
SHA NO: BA651A52/D52
MD 140 GORES MILL
RD/BRIAN DANIEL CT

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 140 AT
BRIAN DANIEL CT./WOODFIELD CT.

GENERAL INFORMATION SHEET

SCALE	1" = 20'	DATE	03/18/2008	CONTRACT NO.	AT9145185
DESIGNED BY	NMR	COUNTY	BALTIMORE		
DRAWN BY	MC	LOGMILE	03014011.60		
CHECKED BY	WWW	TIMS NO.	H561		
FAP NO.		TOD NO.			

TS NO. 3629D-GI	DRAWING SG-02 OF 5	SHEET NO. 2 OF 5
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