

DRILL HOLES

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BRIDGE REV. DATE: June 1, 2004

PROJECT DESCRIPTION

- I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with street lighting and interconnect at the intersection of MD 3 Bus (Crain Hwy) and Aquahart Rd / Thelma Ave in Anne Arundel County. The existing span wire signal shall be replaced with a new mast arm traffic signal, APS / CPS along with video detection shall also be installed at this location. MD 3 Bus (Crain Hwy) is assumed to run a north-south direction.
- II. INTERSECTION OPERATION
 - The intersection is to operate in a NEMA seven-eight, fully-actuated mode, with the MD 3 Bus (Crain Hwy) approaches continuing to run concurrently. New Exclusive left turn phases shall now be provided for both approaches of MD 3 Bus (Crain Hwy). New Countdown pedestrian phases with audible pushbutton actuation shall be provided across both legs of MD 3 Bus (Crain Hwy). New Countdown pedestrian phases with audible pushbuttons across Aquahart Rd and Thelma Ave shall be on recall. The Exclusive/Permissive left turn phase for the Aquahart Rd shall remain in operation. A new Exclusive/Permissive left turn phase shall be added for the Thelma Ave approach. The Aquahart Rd / Thelma Ave approaches shall also continue to run concurrently.
 - A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
 - SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming.
- III. SPECIAL NOTES
 - The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
 - All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7652 seven-two hours in advance of intended work.
 - 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.
 - All unused cables shall be removed from existing conduit.

The contact persons for District #5 and SHA are as follows:

- Ms. Kim Tran
Assistant District Engineer - Traffic
Phone: (410) 841-1019
- Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630
- Mr. John Mays
Assistant District Engineer - Maintenance
Phone: (410) 841-1013
- Mr. Ed Rodenhizer
Manager, Signal Operations Section
410-787-7652
- Mr. Mike Huber
Assistant District Engineer - Utility
Phone: (410) 841-1039
- Mr. Sonny Bailey
Manager, Sign Shop Operations
410-787-7676
- The power company representative is:
Baltimore Gas and Electric
1068 N Front Street
Baltimore, MD 21202
410-637-8713

EQUIPMENT LIST

ITEM NO.	DESCRIPTION	QUANTITY
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9045	Controller master ASC 2M with telemetry.	1 EA
9086	Video detection interface equipment: 5-8 cameras (To be installed by signal shop).	1 EA
9570	Sheet aluminum signs to consist of: (ground mount)	48 SF
	GUIDE SIGN	1 EA
	M3-3 "SOUTH" (30"x15")	
	M1-5(2) "BUSINESS 3" (36"x36")	
	M6-1 "left arrow" (30"x21")	
	GUIDE SIGN	1 EA
	M3-3 "SOUTH" (24"x12")	
	M1-5(2) "BUSINESS 3" (24"x24")	
	M6-1 "right arrow" (21"x12")	
	S1-1 "School" sign, (36"x36") FY/G	2 EA
	W16-Tp(L) "Arrow" sign, (24"x12") FY/G	1 EA
	W16-Tp(R) "Arrow" sign, (24"x12") FY/G	1 EA
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	70 SF
	D-3(1) "Crain HWY" sign, (variable x 16") mast arm mount	2 EA
	D-3(1) "(arrow) Aquahart RD / Aquahart RD (arrow)" dual faced sign (variable x 16") mast arm mount.	1 EA

EQUIPMENT LIST

ITEM NO.	DESCRIPTION	QUANTITY
	D-3(1) "(arrow) Thelma AVE / Thelma AVE (arrow)" dual faced sign (variable x 32") mast arm mount.	1 EA
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mounted.	2 EA
	R10-11b "NO TURN ON RED" sign, (24" x 24") mast arm mounted.	1 EA
	M1-5(6) GUIDE SHIELD ASSEMBLY (36"x72") pole mounted, SOUTH / BUSINESS MD 355 / LEFT ARROW	1 EA
	M1-5(6) GUIDE SHIELD ASSEMBLY (24"x48") pole mounted, NORTH / BUSINESS MD 355 / LEFT ARROW	1 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS CRAIN HIGHWAY".)	4 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS AQUAHART ROAD".)	2 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS THELMA AVENUE".)	2 EA
1001	Maintenance of traffic per assignment.	3 EA
2001	Class 2 Excavation.	7 C.Y.
2002	Test Pit Excavation	11 C.Y.
5001	Removal of existing permanent pavement line markings	1200 L.F.
1 5002	5" Heat applied white or yellow permanent pavement marking	75 L.F.
1 5003	Removal of existing permanent pavement marking lines.	75 L.F.
5004	12" white heat applied permanent preformed thermoplastic pavement marking.	1275 L.F.
5005	24" white heat applied permanent preformed thermoplastic pavement marking.	125 L.F.
1 6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	345 L.F.
6002	5" concrete sidewalk.	1300 S.F.
6003	Detectable warning surfaces	124 S.F.
8001	12" LED signal head section.	44 EA
8002	2 wire Central Control unit	1 EA
8004	8" LED signal head section.	6 EA
1 8007	Any size lighting arm on signal pole w/ 250 watt HPS lamp & luminaire.	2 EA
8008	Audible/tactile pedestrian pushbutton station & signs.	8 EA
8009	Breakaway pedestal pole 10'	5 EA
8009	Breakaway pedestal pole 5'	2 EA
8012	Embedded Metered service pedestal.	1 EA
8015	LED 16" countdown pedestrian signal heads.	8 EA
8017	Mast arm pole & 38' mst arm, any "T" dimension.	1 EA
8018	Mast arm pole & 50' mst arm, any "T" dimension.	1 EA
8021	Microloop probe (any length lead in cable).	4 EA
8023	Remove and dispose of existing material & equipment per assignment.	1 EA
8026	Twin mast arm pole & 50'/70' mast arms any "T" dimension.	1 EA
8028	Video detection camera and cable any length.	5 EA
8029	1" electrical conduit - galvanized sleeve or flexible liquid tight.	45 L.F.

EQUIPMENT LIST

ITEM NO.	DESCRIPTION	QUANTITY
	B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR	
8033	Disconnect, pull back and reroute cable.	310 L.F.
1 8034	Electrical cable - 2 conductor (No. 12 AWG), tray cable.	265 -476 L.F.
8036	Schedule 80 rigid PVC conduit up to 4" - bored.	455 L.F.
8038	Schedule 80 rigid PVC conduit up to 4" - trenched.	510 L.F.
8039	Wood sign supports up to 4"x6".	64 L.F.
8040	Install overhead or ground mounted sign. (Includes relocated signs)	169 SF
8042	No. 6 AWG stranded bare copper ground wire.	550 L.F.
8045	Electrical cable 1-conductor No. 8 AWG THHN/THWN.	90 L.F.
8046	Furnish and install electrical handhole.	7 EA
8053	Electrical cable - 2 conductor (No. 14 AWG).	1015 L.F.
8055	Electrical cable - 5 conductor (No. 14 AWG).	1500 L.F.
8056	Electrical cable - 7 conductor (No. 14 AWG).	1425 L.F.
8058	Saw cut for signal (loop detector and sidewalk bump out).	230 L.F.
8062	Install controller and cabinet base mount.	1 EA

EQUIPMENT TO BE REMOVED

SHA Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

1 Redline Revision
Dated October 18, 2011

SHA MDOT - SHA
O.O.T.S.

S.H.A. Approval Date
T.S. # 7440 T.I.M.S. # K238



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

SHA

MD 3 BUSINESS (CRAIN HWY)
AND AQUAHART RD/ THELMA AVE
GLEN BURNIE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 05/12/2011 CONTRACT NO. XX6475185

DESIGNED BY R.R.Z. COUNTY ANNE ARUNDEL
DRAWN BY R.C. LOGMILE 02B00301.99
CHECKED BY [Signature] TMS NO. K238
F.A.P. NO. TOD NO.

TS NO. 7440 DRAWING NO. 4 OF 5 SHEET NO. OF

PLOTTED: #DATE# TIME#
FILE: #FILE#