PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE TOTAL RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL, THE ADDITION OF TWO PEDESTRIAN SIGNALS, REPLACING THE EXISTING POLE MOUNTED CONTROLLER CABINET WITH A BASE-MOUNTED CABINET, AND THE REPLACEMENT OF EXISTING ADVANCED DETECTION MIRCRO-LOOP DETECTORS AT THE INTERSECTION OF MD 45 (YORK ROAD) AND SHAWAN ROAD IN BALTIMORE COUNTY. MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE. THERE ARE EXCLUSIVE/PERMISSIVE LEFT TURN PHASES FOR BOTH THE NORTHBOUND AND SOUTHBOUND MOVEMENTS OF MD 45. THE MD 45 THROUGH MOVEMENTS OPERATE CONCURRENTLY. THE SHAWAN ROAD AND SHAWAN PLAZA ENTRANCE MOVEMENTS ARE SPLIT PHASED.

THE SIGNAL WILL CONTINUE TO BE INTERCONNECTED TO THE MD 45/MD 145 (ASHLAND ROAD) AND MD 45/WIGHT AVENUE INTERSECTIONS TO THE SOUTH.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR CHANNEL, TELEMETRY EQUIPMENT, VIDEO DETECTOR SYSTEM, MONITOR WITH BATTERY BACK-UP, AND ASSOCIATED HARNESSES HOUSED IN A NEMA '6' BASE MOUNTED CABINET.

THE PRESENCE AND SAMPLING DETECTION REGIONS SHALL BE MONITORED/ACTUATED WITH VIDEO DETECTION CAMERAS.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

CONTACTS FOR DISTRICT 4:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER, TRAFFIC
410-321-2781/2785

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER, MAINTENANCE
410-321-2761

MS. SUENETTE POPE
UTILITIES ENGINEER
410-321-2841

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

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

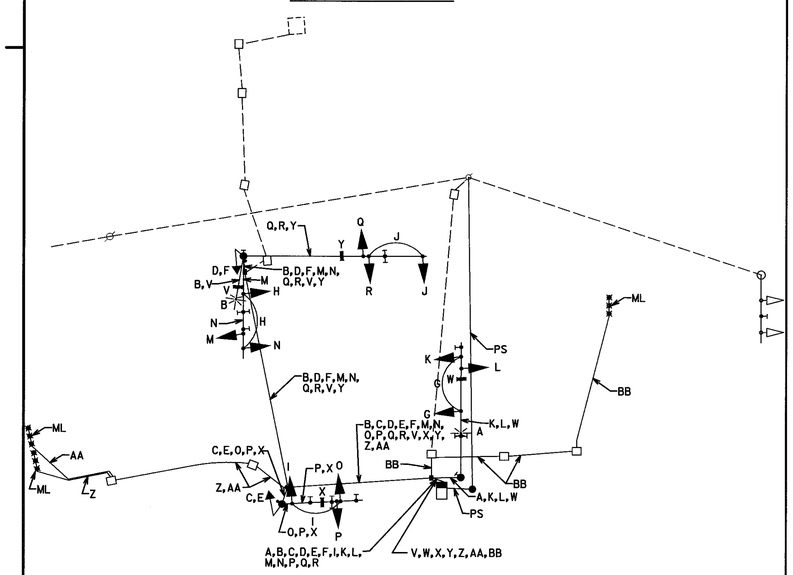
MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676

MR. MIKE STOCKER
SIGNAL SHOP WAREHOUSE
410-787-7696

WIRING DIAGRAM



WIRING KEY

A,B	2-CONDUCTOR ELECTRIC CABLE (NO. 12 AWG) T/C
C,D	2-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)
E,F	3-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)
G,H,I,J	5-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)
K,L,M,N,O,P,Q,R	7-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)
S,T,U	BARE COPPER GROUND WIRE (NO. 6 AWG)
V,W,X,Y	VIDEO DETECTION LEAD-IN CABLE
Z,AA,BB	MICROLOOP PROBE LEAD-IN CABLE
ML	MICROLOOP PROVE SET
PS	PROPOSED POWER SERVICE
⏚	GROUND ROD

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
900000	1 EA	VIDEO INTERFACE EQUIPMENT
900000	1 EA	STEEL POLE WITH TWIN 50 FOOT AND 70 FOOT MAST ARMS
971017	1 EA	EIGHT-PHASE, FULL TRAFFIC ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH SYSTEM PACKAGE AND INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET
973023	124 SF	SHEET ALUMINUM SIGNS: 1 -EA R3-5L (30 IN. X 36 IN.) MAST ARM MOUNT 2-EA R10-12 (36 IN. X 42 IN.) MAST ARM MOUNT 1 -EA W3-3 (48 IN. X 48 IN.) MAST ARM MOUNT 1 -EA R3-6 (30 IN. X 36 IN.) MAST ARM MOUNT 1 -EA ASSOCIATED SHIELD ASSEMBLY (24 IN. X 54 IN.) POLE MOUNTED 1 -EA ASSOCIATED SHIELD ASSEMBLY (36 IN. X 75 IN.) POLE MOUNTED 4-EA D-31) (DUAL FACED) (VARIABLE X 16 IN.) MAST ARM MOUNTED 1-EA M95-1 (72 IN. X 24 IN.) MAST ARM MOUNT
974014	1 EA	STEEL POLE WITH A SINGLE 40 FOOT MAST ARM
974024	1 EA	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM

NOTE: ANCHOR BOLTS FOR THE TRAFFIC SIGNAL POLES SHALL BE SUPPLIED BY THE CONTRACTOR. PAYMENT FOR THE ANCHOR BOLTS SHALL BE INCIDENTAL TO THE "CONCRETE FOR SIGNAL FOUNDATION" PAY ITEM.

EQUIPMENT LIST "C"

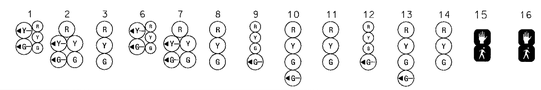
C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

EXISTING CONTROLLER AND INTERNAL EQUPMENT

EXISTING VIDEO DETECTION CAMERAS

ALL OTHER SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.

PHASE CHART



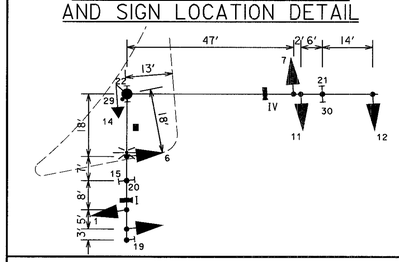
PHASE 1 + 5	R G	R G	R	R G	R G	R	R	R	R	R	R	R	DW	DW	
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6. PHASE 2 + 5 OR PHASE 2 + 6														
PHASE 1 + 6	G G	G G	G	R	R	R	R	R	R	R	R	R	DW	DW	
1 + 6 CHANGE	Y Y	Y Y	Y	R	R	R	R	R	R	R	R	R	DW	DW	
PHASE 2 + 5	R	R	R	G G	G G	G	R	R	R	R	R	R	DW	DW	
2 + 5 CHANGE	R	R	R	Y Y	Y Y	Y	R	R	R	R	R	R	DW	DW	
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	
PHASE 3	R	R	R	R	R	R	G G	G G	G	R	R	R	DW	DW	
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	
PHASE 4	R	R	R	R	R	R	R	R	R	G G	G G	G	WK	WK	
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	
PHASE 3 ALT.	R	R	R	R	R	R	G G	G G	G	R	R	R	WK	WK	
PEDESTRIAN CLEAR	R	R	R	R	R	R	R	R	R	G	G	G	FL/DW	FL/DW	
3 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	WK	WK	
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	

EQUIPMENT LIST "B"

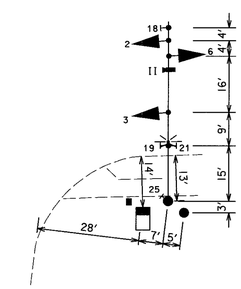
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	SPECIFICATION NUMBER	QUANTITY	DESCRIPTION
585412	549,556	360 LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
585424	549,556	140 LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
655105	603	55 SF	5 INCH CONCRETE SIDEWALK
800000	800	1 LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
800000	800	150 LF	DISCONNECT, PULL BACK AND REROUTE CABLE
801004	801	15 CY	CONCRETE FOR SIGNAL FOUNDATION
802501	804	310 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805018	805	20 LF	3 INCH ELECTRICAL CONDUIT - GALVANIZED RISER
805050	805	1 EA	WEATHER HEAD, 3 INCH
805125	805	10 LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
805135	805	90 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
805140	805	95 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
805155	805	170 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- SLOTTED
807202	807	1 EA	METERED SERVICE PEDESTAL
807400	807	1 EA	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS
810550	810,815	3 EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
811001	811	3 EA	FURNISH AND INSTALL ELECTRIC HANDHOLE
811002	811	1 EA	REMOVE ELECTRICAL HANDHOLE
813015	813	124 SF	INSTALL OVERHEAD SIGN
816001	800	4 EA	VIDEO DETECTION CAMERA
816005	800	4 EA	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
831010	806	2 EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
837001	804	4 EA	GROUND ROD- 3/4 INCH DIAMETER X 10 FOOT LENGTH
860270	814	12 EA	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860272	814	38 EA	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860278	814	4 EA	12 INCH PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT
860292	825	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	810	295 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO. 14 AWG)
861106	810	305 LF	ELECTRICAL CABLE- 3 CONDUCTOR (NO. 14 AWG)
861107	810	675 LF	ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 AWG)
861108	810	780 LF	ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 AWG)
861116	810	310 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 AWG) T/C
862102	815	195 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
865001	817	2 EA	PUSHBUTTON AND SIGN
866103	808	2 EA	15 FOOT LIGHT ARM ON SIGNAL STRUCTURE
866204	818	2 EA	INSTALL STEEL POLE AND SINGLE MAST ARM, ANY SIZE
866205	818	1 EA	INSTALL STEEL POLE AND TWIN MAST ARM, ANY SIZE
871202	816	1 EA	INSTALL CONTROLLER AND CABINET- BASE MOUNTED

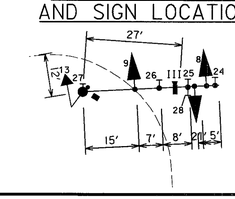
SW TRAFFIC SIGNAL HEAD AND SIGN LOCATION DETAIL



NE TRAFFIC SIGNAL HEAD AND SIGN LOCATION DETAIL



SE TRAFFIC SIGNAL HEAD AND SIGN LOCATION DETAIL



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Towson, Maryland 21204

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

MD 45 (YORK ROAD) AT SHAWAN ROAD
SIGNAL PLAN SHEET 6

SCALE N.T.S. DATE 1/05 CONTRACT NO.

DESIGNED BY F.A.E. COUNTY BALTIMORE
DRAWN BY F.A.E. LOGMILE 03004509.21
CHECKED BY M.J.A. T.I.M.S. NO. G857
F.A.P. NO. TOD NO.

DRAWING NO. 3007D SHEET NO. OF

Friday, April 15, 2005 AT 01:36 PM

BY: $USERNAME$