PROJECT DESCRIPTION

I. GENERAL:

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 108 AND SIGNAL BELL DRIVE / AUTO DRIVE IN HOWARD COUNTY. EXISTING SIGNAL HEADS SHALL BE REPLACED WITH LED SIGNAL HEADS. EXISTING PEDESTRIAN EQUIPMENT IS TO BE REPLACED WITH LED COUNTDOWN PEDESTRIAN SIGNALS AND AUDIBLE PEDESTRIAN PUSHBUTTONS. LOOP DETECTORS SHALL BE REPLACED BY VIDEO DETECTION. ADVANCE DETECTION SHALL BE REPLACED BY MICROLOOP PROBES. ADD ROUTE SHIELD ASSEMBLIES FOR NORTHBOUND SIGNAL BELL DRIVE APPROACH.

MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION:

THE INTERSECTION OPERATES IN A NEMA SIX PHASE FULL-TRAFFIC-ACTUATED MODE WITH MD 108 APPROACHES OPERATING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT TURN PHASES SHALL BE PROVIDED FOR BOTH APPROACHES OF MD 108. THE WIN KELLY AUTO PARK DRIVEWAY AND THE PARK AND RIDE/FIRE STATION ACCESS ROAD APPROACHES SHALL OPERATE CONCURRENTLY. PEDESTRIAN PHASES ARE PROVIDED TO CROSS THE NORTH AND WEST LEGS OF THE INTERSECTION. SIGNAL PRE-EMPTION IS HARD-WIRED FROM THE FIRE STATION SOUTH OF THE INTERSECTION ON SIGNAL BELL LANE.

III. CONTROLLER REQUIREMENTS:

THE EXISTING BASE MOUNTED CONTROLLER SHALL BE USED. SHA FORCES WILL INSTALL THE CENTROL CONTROL UNIT AND THE VIDEO DETECTION INTERFACE.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

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

MS. ANDREA ABEND
DISTRICT UTILITY ENGINEER
301-624-8115

MR. RAY JOHNSON
DISTRICT 7 MAINTENANCE
301-624-8105

THE CONTACT PERSONS FOR
OFFICE OF TRAFFIC AND SAFETY:

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATION SECTION
PHONE: 410-787-7652

MR. ROBERT SNYDER
ASST. CHIEF, TRAFFIC OPERATION DIVISION
410-787-7631

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE STATE HIGHWAY ADMINISTRATION.

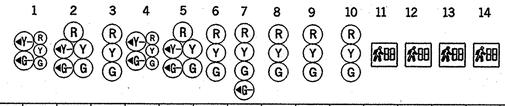
CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
900000	2	EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
973023	39	SF	SHEET ALUMINUM SIGNS CONSISTING OF:
			2 EA - R10-3(1) (9"X15") PEDESTAL POLE MOUNT
			2 EA - R10-3(1) (9"X15") SIGNAL POLE MOUNT
			1 EA - ROUTE MARKER ASSEMBLY (30"X51")
			1 EA - ROUTE MARKER ASSEMBLY (48"X75")

EQUIPMENT LIST "B"

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

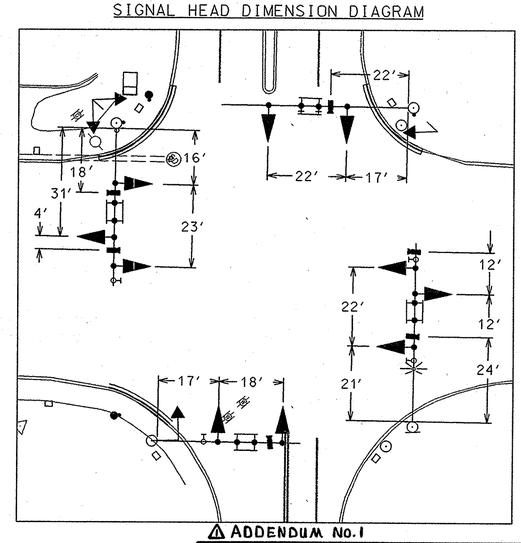
CATEGORY CODE NO.	QUANTITY	UNIT	DESCRIPTION
120500	1	LS	MAINTENANCE OF TRAFFIC
203030	1	CY	TEST PIT EXCAVATION
585620	265	LF	12" HEAT APPLIED WHITE PERM. PREFORMED THERM PAVEMENT MARKING
585624	75	LF	24" HEAT APPLIED WHITE PERM. PREFORMED THERM PAVEMENT MARKING
800000	1	EA	2-WIRE CENTRAL CONTROL UNIT
800000	4	EA	ACCESSIBLE PEDESTRIAN PUSHBUTTON AND SIGN
800000	4	EA	16" LED COUNTDOWN PEDESTRIAN HEAD SECTION
800000	6	EA	8" LED SIGNAL HEAD SECTION
801004	4	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	20	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805118	165	LF	4" SCHEDULE 80 PVC CONDUIT-BORED
805135	20	LF	3" SCHEDULE 80 PVC CONDUIT-TRENCHED
801607	39	SF	INSTALL SHEET ALUMINUM SIGNS
810555	2	EA	MICROLOOP PROBE WITH 1000 FOOT LEAD IN CABLE
816001	5	EA	VIDEO DETECTION CAMERA
816005	3	EA	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
816010	2	EA	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
818004	2	EA	10 FOOT BREAKAWAY PEDESTAL POLE
821003	2	EA	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURE
837001	2	EA	GROUND ROD - 3/4" DIAMETER X 10' LENGTH
860284	33	EA	12" LED SIGNAL HEAD SECTION
860292	2	EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	320	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	360	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 AND 5	←G|R	←G|R	R	←G|R	←G|R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 CHANGE	TO 1 AND 6 OR 2 AND 5										DW	DW	DW	DW
PHASE 1 AND 6	←G|G	←G|G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
1 CHANGE	←Y|G	←Y|G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	←G|G	←G|G	G	R	R	R	R	DW	DW	DW	DW
5 CHANGE	R	R	R	←Y|G	←Y|G	G	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FIRE STATION PREEMPTION	R	R	R	R	R	R	G ←G	G	R	R	DW	DW	DW	DW
PREEMPTION CHANGE	R	R	R	R	R	R	Y	Y	R	R	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	DARK	DARK	DARK	DARK

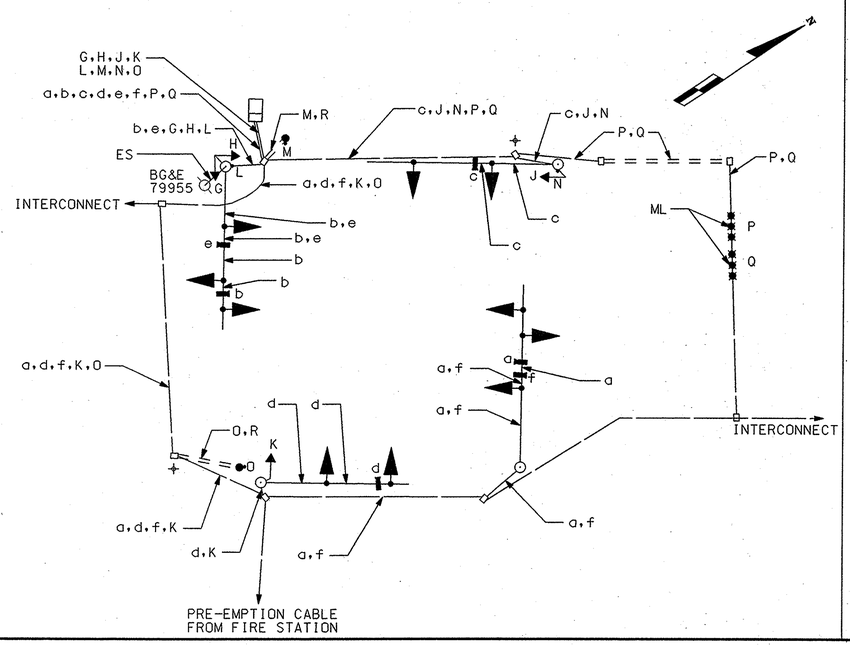
SIGNAL HEAD DIMENSION DIAGRAM



⚠ ADDENDUM No. 1

WIRING DIAGRAM

NOTE: USE EXISTING SIGNAL WIRE TO CONNECT PROPOSED LED VEHICULAR SIGNAL HEADS.



WIRING KEY

a, f	500' VIDEO DETECTION LEAD IN CABLE
b, c, d, e	250' VIDEO DETECTION LEAD IN CABLE
G, H, J, K	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
L, M, N, O	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
P, Q	NON-INVASIVE MICROLOOP PROBE WITH 1,000' LEAD IN CABLE
R	NO. 6 AWG STRANDED COPPER GROUND WIRE
ML	NON-INVASIVE MICROLOOP PROBE
+	PROPOSED GROUND ROD
ES	EXISTING OVERHEAD ELECTRICAL SERVICE

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

MD 108 AND
AUTO DRIVE /SIGNAL BELL LANE

GENERAL INFORMATION SHEET

SCALE 1" = 20' DATE 3/19/07 CONTRACT NO. H03585177

DESIGNED BY SJW COUNTY HOWARD
DRAWN BY SJW LOGMILE 13010803.85
CHECKED BY AJM T.I.M.S. NO. 1021
F.A.P. NO. TOD NO.

DRAWING NO. TS- 3409B-GI SHEET NO. 25 OF 27

PLOTTED: Monday, March 19, 2007 AT 10:00 AM
FILE: Z:\Project\06-0020 Century Engineering-MD SHA\Task 3 MD 108\CADD\04-PS&E Plans 3-19-07\pSG-P003_md108.dgn