PROJECT DESCRIPTION

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THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AT THE WESTBOUND MD 32 RAMP/DORSEY RUN ROAD INTERSECTION IN HOWARD COUNTY. MD 32 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION. DORSEY RUN IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE DORSEY RUN ROAD APPROACHES RUNNING CONCURRENTLY.

EXCLUSIVE LEFT-TURN PHASING SHALL BE PROVIDED FOR NORTHBOUND DORSEY RUN ROAD.

THE SIGNAL SHALL BE INTERCONNECTED TO THE EASTBOUND MD32/DORSEY RUN ROAD INTERSECTION TO THE SOUTH, AND THE DORSEY RUN/GUILFORD ROAD SIGNALIZED INTERSECTION TO THE NORTH.

CONTROLLER REQUIREMENTS

INSTALL A FULL TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER AND ASSOCIATED EQUIPMENT IN A NEMA "6" BASE MOUNTED CABINET. THE PRESENCE AND SAMPLING DETECTION REGIONS SHALL BE MONITORED/ACTUATED WITH VIDEO-DETECTION CAMERAS, AND THE ADVANCED DETECTION REGIONS SHALL BE MONITORED/ ACTUATED WITH MICRO-LOOP PROBE DETECTORS, EXCEPT FOR THE NORTHBOUND DORSEY RUN ROAD APPROACH WHICH SHALL BE MONITORED WITH A VIDEO DETECTOR CAMERA.

EQUIPMENT LIST "A"

A. Equipment to be Furnished by the Adminstration

Item No.	Item Code	Quantity	Description
	971017	1 EA	Eight Phase (fully Actuated) Controller and NEMA Size 6 Cabinet - Base Mount
	973023	64 SF	Sheet Aluminum Signs
	900000	1 EA	Video Interface Equipment (1 to 4 Cameras)

EQUIPMENT LIST "B"

B. Equipment to be Furnished and/or installed by the Contractor

Item No.	Item Code	Quantity	Description
1001	100000	3 EA	Maintenance of Traffic
6004	655104	290 SF	4 Inch Concrete Sidewalk
~~8000~~	~~800000~~	~~860 LF~~	~~F & I Electrical Cable - 1 Conductor (No.1/0 AWG)~~
~~8000~~	~~800000~~	~~430 LF~~	~~F & I Bare Copper Ground Wire (No.4 AWG)~~
8001	800000	[1] 11.5 CY	F & I Concrete for Signal Foundation
8013	800000	1 EA	F & I Pedestal Pole Any Size - 14 Foot
8021	801106	32 LF	F & I Wood Sign Support 4 Inch x 6 Inch
8022	802501	550 LF	F & I No.6 AWG Stranded Bare Copper Ground Wire
8024	805011	20 LF	F & I 1 Inch Electrical Conduit - Galvanized Sleeve
8031	805135	230 LF	F & I 3 Inch Schedule 80 Rigid PVC Conduit - Trenched
8032	805140	520 LF ~~220 LF~~	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Trenched
8035	805155	350 LF ~~680 LF~~	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Slotted
~~8038~~	807400	[1] 1 EA	~~F & I Electrical Utility Service Equipment 120/240 Volts 60 AMPS~~
8041	810550	2 EA	F & I Microloop Probe, 500 FT lead in Cable
8045	812002	8 EA ~~12 EA~~	F & I Electrical Handhole
8047	813014	26 SF	Install Ground Mounted sign
8048	813015	38 SF	Install Overhead Signs
8049	816005	4 EA	F & I Video Detection Camera
8050	816005	1 EA	F & I 250' Foot Video Cable to Controller
8051	816010	3 EA	F & I 500' Video Cable to Controller
8059	818050	1 EA	F & I Steel Pole with a Twin 50' And 60' Mast Arm
8061	822001	1 EA	F & I Steel Pole with a Single 70' Mast Arm
8064	831010	2 EA	F & I 250 Watt H.P.S. Lamp & Luminaire Rectangular
8069	837001	5 EA	F & I Ground Rod - ¾" Diameter x 10 Foot Length
8071	860272	30 EA	F & I 12 Inch Vehicular Traffic Signal Head Section
8074	860292	3 EA	Cut, Clean, Galvanize and Cap Traffic Signal Structure
8079	861107	1500 LF	F & I Electrical Cable - 5 Conductor (No.14 AWG)
8081	861116	390 LF	F & I Electrical Cable - 2 Conductor (No.12 AWG) Tray Cable
8083	862102	70 LF	F & I Saw Cut for Signal (Loop Detector)
8085	866103	2 EA	F & I 15' Foot Bracket Arm for Signal Structure
8090	871202	1 EA	Install Controller and Cabinet-Base Mount

EQUIPMENT LIST "C"

C. Equipment to Remove and Discard

NONE

EQUIPMENT LIST "D"

D. Equipment that is to be returned to the Administration

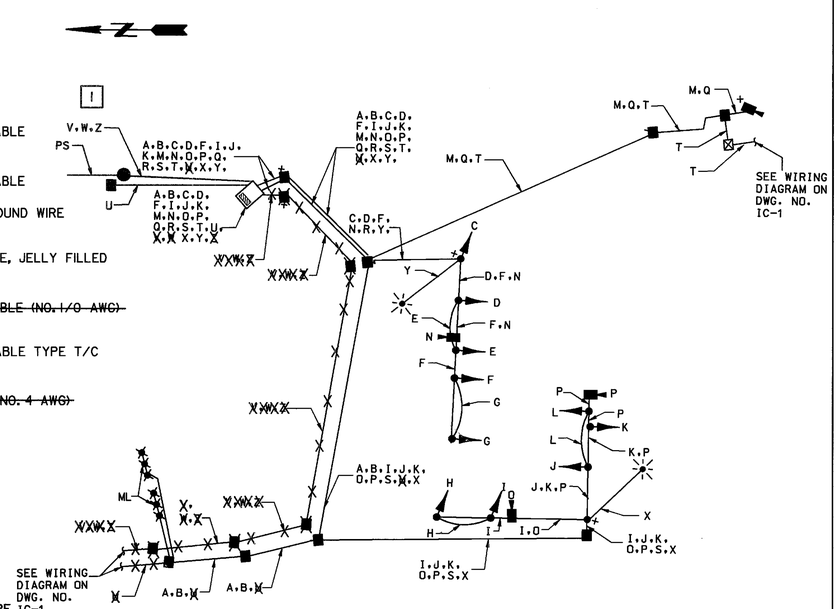
NONE

[1] EQUIPMENT LIST "B" - CONTINUED

B. Equipment to be Furnished and/or installed by the Contractor

Item No.	Item Code	Quantity	Description
8031	800000	40 LF	F & I Electrical Cable - 1 Conductor (No.4 AWG)
8032	800000	20 LF	F & I Bare Copper Ground Wire (No.6 AWG)
8037	807202	1 EA	F & I Metered Service Pedestal

WIRING DIAGRAM



WIRING KEY

A,B	MICRO-LOOP PROBE LEAD-IN
C,D,E,F,G, H,I,J,K,L,	5-CONDUCTOR ELECTRICAL CABLE (NO.14 AWG)
M,N,O,P	VIDEO DETECTION LEAD-IN CABLE
Q,R,S	STRANDED BARE COPPER GROUND WIRE (NO.6 AWG)
T,U	12 PAIR COMMUNICATION CABLE, JELLY FILLED (NO.19 A.W.G.)
[1] ~~V,W~~	~~1-CONDUCTOR ELECTRICAL CABLE (NO.1/0 AWG)~~
X,Y	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO.12 AWG)
[1] ~~Z~~	~~BARE COPPER GROUND WIRE (NO.4 AWG)~~
ML	MICRO LOOP
+	¾ IN. X 10 FT. GROUND ROD
⊠	BRIDGE HANDBOX
PS	POWER SOURCE
●	POWER PEDESTAL
[1] V,W	#4 ELECTRICAL CABLE
Z	#6 BARE COPPER GROUND WIRE

	1	2	3	4	5	6	7	8	9	10
	◄R ◄Y ◄G	◄R ◄Y ◄G	◄R ◄Y ◄G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G
PHASE 1 & 6	◄G	◄G	◄G	G	G	R	R	R	R	R
1 & 6 CHANGE	◄Y	◄Y	◄Y	Y	Y	R	R	R	R	R
PHASE 2 & 6	◄R	◄R	◄R	G	G	G	G	R	R	R
2 & 6 CHANGE	◄R	◄R	◄R	Y	Y	Y	Y	R	R	R
PHASE 4	◄R	◄R	◄R	R	R	R	R	G	G	G
4 CHANGE	◄R	◄R	◄R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R

[1] REVISION NO.1 - SEPARATE POWER SOURCE FOR SIGNAL AT WESTBOUND MD 32 RAMP

DWG. NO. SG-04

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL NOTES AND PROPOSAL ITEMS
WESTBOUND MD 32 RAMPS
AT DORSEY RUN ROAD

DRAWN BY: W.J.M./E.N.B	F.A.P. NO. AC-STPG-000S(904)E	TS NO. 4251	SHEET NO.
CHECKED BY: M.J.A.	S.H.A. NO. AT3585185		
SCALE: N.T.S.	COUNTY: HOWARD	T.I.M.S. NO. D469	4 OF 7
DATE: MAY 2003	LOG MILE: 13003200.05		

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