PROJECT DESCRIPTION

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THIS PROJECT INVOLVES THE INSTALLATION OF A SINGAL SYSTEM CONTROLLER, VIDEO DETECTION, AND THE REPLACEMENT OF TWO SIGNAL HEADS AT THE GUILFORD ROAD/DORSEY RUN ROAD INTERSECTION IN HOWARD COUNTY. GUILFORD ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION, DORSEY RUN ROAD 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 IN A SPLIT-PHASE CONDITION.

THE SIGNAL SHALL BE INTERCONNECTED TO THE EASTBOUND MD 32/DORSEY RUN ROAD AND THE WESTBOUND MD 32/DORSEY RUN ROAD SIGNALIZED INTERSECTIONS TO THE SOUTH.

CONTROLLER REQUIREMENTS

INSTALL A FULL TRAFFIC ACTUATED, EIGHT-PHASE MASTER CONTROLLER IN PROPOSED NEMA 6 BASE-MOUNTED CABINET.

THE PRESENCE AND SAMPLING DETECTION REGIONS SHALL BE MONITORED/ ACTUATED WITH VIDEO-DETECTION CAMERAS. THE ADVANCED DECTION REGIONS SHALL BE MONITORED/ACTUATED WITH MICROLOOP PROBE DETECTORS.

EQUIPMENT LIST "A"

A. Equipment to be Furnished by the Adminstration

Item No.	Item Code	Quantity	Description
	971017	1 EA	Master Controller and NEMA Size 6 Cabinet
	973023	24 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
~~8000~~	~~800000~~	~~700 LF~~	~~F & I Electrical Cable - 1Conductor (NO.1/0 AWG)~~
~~8000~~	~~800000~~	~~330 LF~~	~~F & I Bare Copper Ground Wire (No. 4 AWG)~~
~~8000~~ 8037	~~800000~~ 807202	1 EA	F & I Metered Service Pedestal
8000	800000	1 EA	Install Master Controller and Cabinet - Base Mount
8039 ~~8000~~ 1	800000	40 LF	F & I Electric Cable - 1 Conductor ~~(No. 6 A.W.G.)~~ (No. 4 A.W.G.)
~~8000~~ 8040	800000	20 LF 1	~~F & I #8 AWG Ground Cable~~ F & I #6 AWG Ground Cable
8001	800000	1.1 CY	Concrete Foundation
8014	873001	1EA	Remove and Dispose Existing Equipment
8024	805011	50 LF	F & I 1 Inch Electrical Conduit - Galvanized Sleeve
8029	805118	350 LF ~~390 LF~~	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Bored
8030	805125	180 LF ~~450 LF~~	F & I 2 Inch Schedule 80 Rigid PVC Conduit - Trenched
8031	805135	50 LF ~~250 LF~~	F & I 3 Inch Schedule 80 Rigid PVC Conduit - Trenched
8032	805140	200 LF	F & I 4 Inch Schedule 80 Rigid PVC Conduit - Trenched
~~8038~~ 8037	807400 1	1 EA	~~F & I Electrical Utility Service Equipment~~ 120/240 Volts 60 AMPS
8041	810550	4 EA	F & I Microloop Probe, 500 FT lead in Cable
8045	812002	3 EA ~~4 EA~~	F & I Electrical Handhole
8048	813015	24 SF	Install Overhead Signs
8049	816005	4 EA	F & I Video Detection Camera
8050	816005	4 EA	F & I 250' Foot Video Cable to Controller
8070	860270	6 EA	F & I 8 Inch Vehicular Traffic Signal Head Section
8071	860272	16 EA	F & I 12 Inch Vehicular Traffic Signal Head Section
8079	861107	400 LF	F & I Electrical Cable - 5 Conductor (No.14 AWG)
8080	861108	1200 LF	F & I Electrical Cable - 7 Conductor (No.14 AWG)
8083	862102	130 LF	F & I Saw Cut for Signal (Loop Detector)

EQUIPMENT LIST "C"

C. Equipment to be Remove and Discard

All removed equipment shall become the property of the contractor.

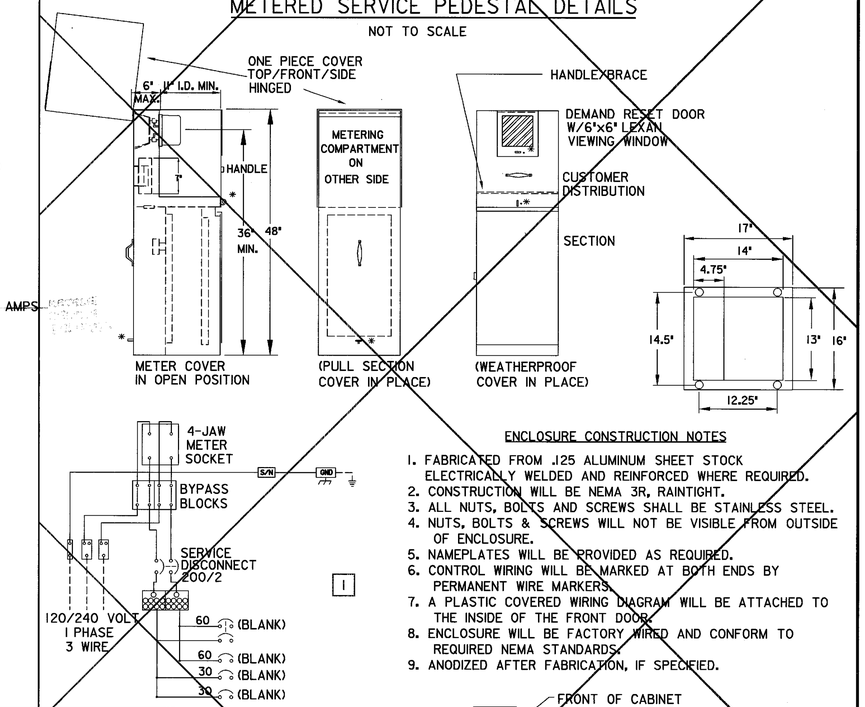
EQUIPMENT LIST "D"

D. Equipment that is to be returned to the Administration

NONE

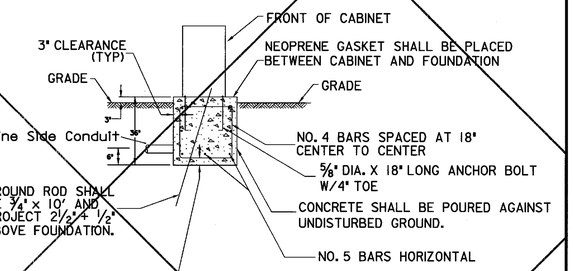
METERED SERVICE PEDESTAL DETAILS

NOT TO SCALE

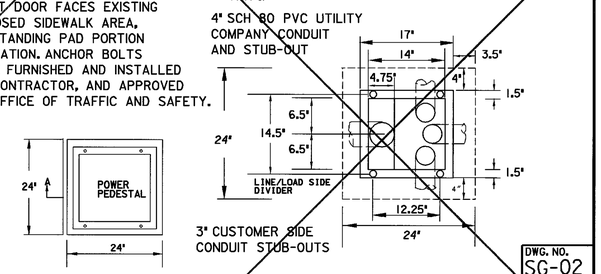


ENCLOSURE CONSTRUCTION NOTES

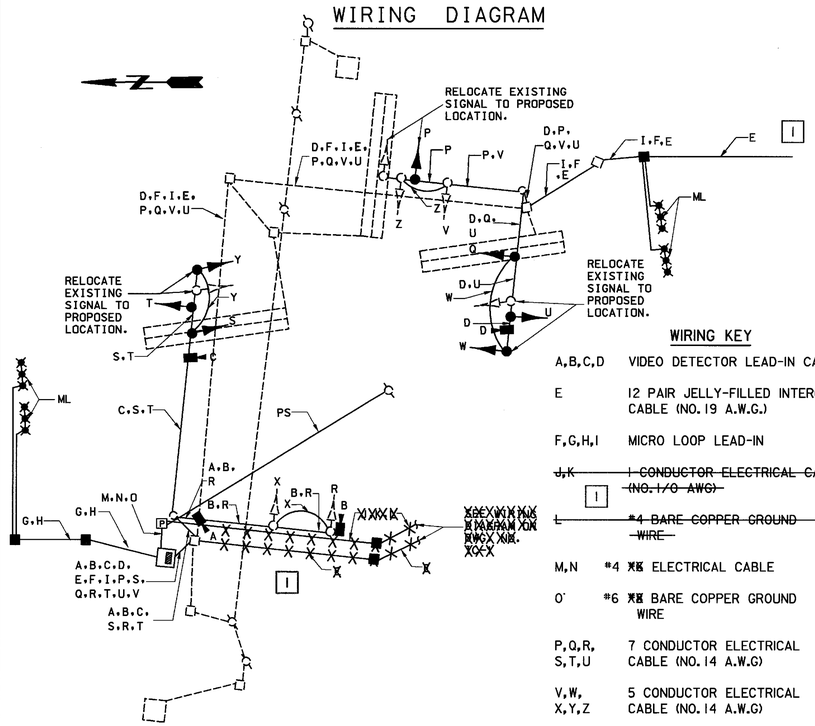
1. FABRICATED FROM .125 ALUMINUM SHEET STOCK ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. CONSTRUCTION WILL BE NEMA 3R, RAINTIGHT.
3. ALL NUTS, BOLTS AND SCREWS SHALL BE STAINLESS STEEL.
4. NUTS, BOLTS & SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. NAMEPLATES WILL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
9. ANODIZED AFTER FABRICATION, IF SPECIFIED.



NOTE:
IF CABINET DOOR FACES EXISTING OR PROPOSED SIDEWALK AREA, DELETE STANDING PAD PORTION OF FOUNDATION. ANCHOR BOLTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, AND APPROVED BY THE OFFICE OF TRAFFIC AND SAFETY.



WIRING DIAGRAM



WIRING KEY

A,B,C,D	VIDEO DETECTOR LEAD-IN CABLE
E	12 PAIR JELLY-FILLED INTERCONNECT CABLE (NO.19 A.W.G.)
F,G,H,I	MICRO LOOP LEAD-IN
~~J,K~~	~~1 CONDUCTOR ELECTRICAL CABLE (NO.1/0 AWG)~~
~~L~~	~~#4 BARE COPPER GROUND WIRE~~
M,N	#4 ~~XX~~ ELECTRICAL CABLE
O	#6 ~~XX~~ BARE COPPER GROUND WIRE
P,Q,R, S,T,U	7 CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G)
V,W, X,Y,Z	5 CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G)
PS	POWER SOURCE

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
PHASE 1 & 6	G ←G	G ←G	G	R	R	R	R	R	R	R	R
1 & 6 CHANGE	Y	Y	Y	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G ←G	G ←G	G	R	R	R	R	R
2 & 5 CHANGE	R	R	R	Y	Y	Y	R	R	R	R	R
PHASE 3 & 8	R	R	R	R	R	R	G	G	R	R	R
3 & 8 CHANGE	R	R	R	R	R	R	Y	Y	R	R	R
PHASE 4 & 7	R	R	R	R	R	R	R	R	G ←G	G ←G	G
4 & 7 CHANGE	R	R	R	R	R	R	R	R	←Y	←Y	Y
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	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	FL/R

	1	2	3	4	5	6	7	8	9	10	11
PHASE 2 & 5	R	R	R	R	R	R	R	R	G ←G	G ←G	G
2 & 5 CHANGE	R	R	R	R	R	R	R	R	←Y	←Y	Y
PHASE 2 & 6	R	R	R	R	R	R	G	G	G	G	G
2 & 6 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y
PHASE 3	R	R	R	G ←G	G ←G	G	R	R	R	R	R
3 CHANGE	R	R	R	Y	Y	Y	R	R	R	R	R
PHASE 4	G ←G	G ←G	G	R	R	R	R	R	R	R	R
4 CHANGE	Y	Y	Y	R	R	R	R	R	R	R	R
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y

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

WHITNEY BAILEY COX MAGNANI
CONSULTING ENGINEERS
849 FAIRMOUNT AVENUE
SUITE 100
BALTIMORE, MD 21286
(410) 512-4500

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. 4653	SHEET NO.
CHECKED BY: M.J.A.	S.H.A. NO. AT3585185		
SCALE: N.T.S.	COUNTY: HOWARD	T.I.M.S. NO. D469	2 OF 7
DATE: MAY 2003	LOG MILE: 13732R00.56		

DWG. NO. SG-02

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