PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROLLER AND SIGNALS WITH VIDEO DETECTION AT THE NEW INTERSECTION OF MD 450 AT GRENVILLE LANE IN PRINCE GEORGE'S COUNTY. MD 450 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

NORMAL OPERATION
THE INTERSECTION WILL OPERATE IN A NEMA-FOUR-PHASE FULLY ACTUATED MODE. THE MOVEMENTS ON MD 450 WILL OPERATE CONCURRENTLY. THE MOVEMENTS ON GRENVILLE LANE WILL OPERATE CONCURRENTLY. THE INTERSECTION CONTROLLER WILL CONNECT WITH THE NEW CONTROLLERS AT THE INTERSECTION OF MD 450 AT HIGHBRIDGE ROAD AND AT THE INTERSECTION OF MD 450 (NEW) AT MD 197.

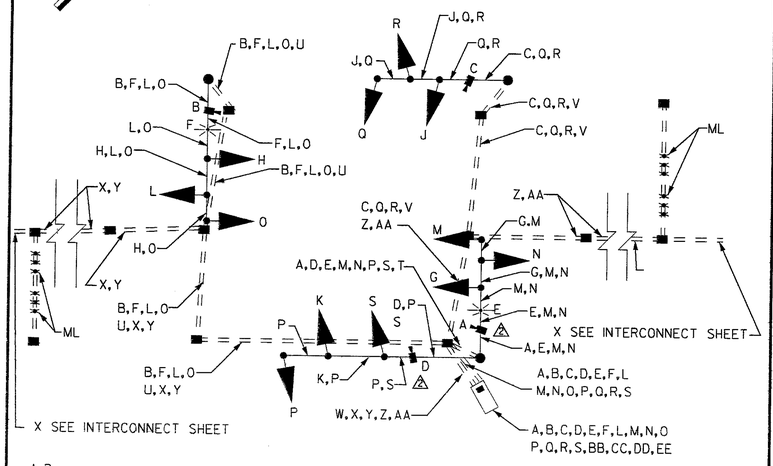
CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, SOLID STATE EIGHT PHASE CONTROLLER WITH SYSTEM PACKAGE, VIDEO DETECTOR RACK, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY HOUSED IN NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

ALL UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE BECAUSE THESE UTILITIES MAY BE MODIFIED PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES 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 EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER IMMEDIATELY.

WIRING DIAGRAM



A,B C,D	VIDEO TRAFFIC DETECTOR CABLE	T,U V,W	NO. 6 AWG BARE STRANDED COPPER GROUND WIRE
E,F	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	X,Y Z,AA	MICRO-LOOP 1000 FT. LEAD IN
G,H J,K	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	BB,CC,DD	ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG)
L,M,N O,P,Q R,S	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	ML	MICRO-LOOP PROBE SET

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CAT CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
971017	816	1 EA.	EIGHT PHASE FULL TRAFFIC ACTUATED SOLID STATE DIGITAL CONTROLLER WITH SYSTEM PACKAGE, HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
△2 973023	813	130 S.F.	SHEET ALUMINUM SIGN TO CONSIST OF: -4 EA. R10-12 (36 IN. X 42 IN.)-MAST ARM MOUNT -2 EA. D3-2 (16 IN. X VAR.)-POLE MOUNT -2 EA. ASSOCIATED SHIELD ASSEMBLY (30 IN. X 51 IN.)-POLE MOUNT -2 EA. ASSOCIATED SHIELD ASSEMBLY (48 IN. X 75 IN.)-POLE MOUNT

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

~~CHARLIE WATKINS~~
[1] ~~DISTRICT ENGINEER~~
~~PHONE: 301-513-7300~~

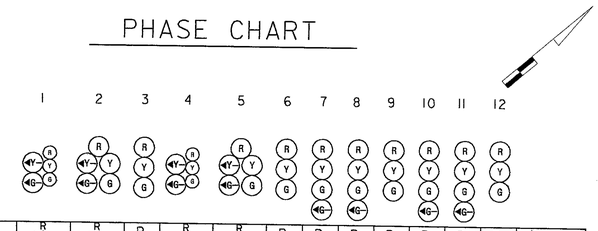
ROBERT SNYDER ASSISTANT DIVISION CHIEF
TRAFFIC OPERATION DIVISION
PHONE: 410-787-7630

RALEIGH MEDLEY
ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: 301-513-7304

MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: 301-513-7358

AUGIE REBISH
△2 ASSISTANT DISTRICT ENGINEER-UTILITIES
PHONE: 301-513-7350

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1+5	R G Y	R G Y	R	R G Y	R G Y	R	R	R	R	R	R	R
1+5 CHANGE	R G Y	R G Y	R	R G Y	R G Y	R	R	R	R	R	R	R
PHASE 2+6	G	G	G	G	G	G	R	R	R	R	R	R
2+6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R G G	R G G	G	R	R	R
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	G G	G G	G
4 CHANGE	R	R	R	R	R	R	R	R	R	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	FL / R

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT CODE NUMBER	SPEC. SECTION	QUANTITY	DESCRIPTION
203030	205	△2 3 C.Y.	TEST PIT EXCAVATION
585620	556	150 L.F.	12 IN. HEAT APPLIED THERMOPLASTIC WHITE PAVEMENT MARKING
585624	556	150 L.F.	24 IN. HEAT APPLIED THERMOPLASTIC WHITE PAVEMENT MARKING
801004	801	△2 14 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
802501	805	370 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810010	810	45 L.F.	ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 AWG)
811001	811	12 EA.	ELECTRICAL HANDHOLE
813015	813	△2 130 S.F.	INSTALL OVERHEAD SIGN
818051	818	1 EA.	27 FT. STEEL POLE WITH TWIN 50/70 FT. MAST ARMS
831010	806	2 EA.	250 WATTS HPS LUMINAIRE WITH PHOTOCELL
837001	804	4 EA.	GROUND ROD 3/4 IN. X 10 FT. LENGTH
838003	807	1 EA.	CONTROL AND DISTRIBUTION EQUIPMENT (120/240V 1 PHASE, 3 WIRE SYSTEM)
860270	814	6 EA.	8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860272	814	△2 42 EA.	12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	810	135 L.F.	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 AWG)
861108	810	1740 L.F.	ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 AWG)
861116	810	405 L.F.	ELECTRICAL 2-CONDUCTOR (NO. 12 AWG)
866104	818	2 EA.	20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
866204	818	1 EA.	△2 27 FT. STEEL POLE WITH 50 FT. MAST ARM
866204	818	1 EA.	27 FT. STEEL POLE WITH 60 FT. MAST ARM
870163	805	66 L.F.	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-TRENCHED
870164	805	110 L.F.	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-BORED
870166	805	765 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT TRENCHED
870167	805	162 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELETRICAL CONDUIT-BORED
870168	805	76 L.F.	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT-SLOTTED
871117	816	1 EA.	INSTALL CONTROLLER AND CABINET-BASE MOUNT
800000	805	1 L.S.	VIDEO TRAFFIC DETECTION SYSTEM
800000	805	4 EA.	VIDEO TRAFFIC DETECTOR 500 FT CABLE
800000	810	4 EA.	MICRO-LOOP NON INVASIVE PROBE SET WITH 1000 FT. LEAD IN

EQUIPMENT LIST "C"

△2 NONE

[1] REDLINE NO. 1 5/6/02

△2 ADDENDUM #2 10/11/2001

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION SHEET
MD 450 - MD 193 TO STONYBROOK DRIVE
MD 450 AT GRENVILLE LANE - ULTIMATE

DRAWN BY: MB	F.A.P. NO. SEE TITLE SHEET	TS NO.	SHEET NO.
CHECKED BY: STB	S.H.A. NO. PG9005571		
SCALE: NONE	COUNTY: PRINCE GEORGE'S	T.I.M.S. NO. D 538	418 OF 545
DATE: OCTOBER 2001	LOG MILE:		

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