PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing 3-legged intersection to include a fourth leg (new entrance to Wheaton Plaza) and the installation of a new Traffic Control Signal with advanced detection and sampling cameras at the intersection of University Boulevard and Valley View Avenue/Wheaton Plaza Entrance in Montgomery County.University Boulevard is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA 8-phase, semi-actuated mode, with the north-south approaches running seperately.

III. CONTROLLER REQUIREMENT

1. A semi-traffic-actuated, six-phase NEMA controller with intersection monitor, video detection interface modules and associated harnesses housed in a NEMA size "6" base mounted cabinet. All equipment must be approved by the Office of Traffic and Safety.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

MR. LEE STARKLOFF
ADE TRAFFIC
(301) 513-7359

MR. DENNIS McMAHON
ADE CONSTRUCTION
(301) 513-7345

MR. RICHARD DAFF
DIVISION CHIEF, TOD
(410) 787-7630

BOB GONZALES
PROJECT ENGINEER, DPW
(240) 777-8761

MR. EDWARD RODENHIZER
CHIEF OF SIGNAL OPERATIONS
(410) 787-7652

EQUIPMENT LIST A

A. THE CONTRACTOR SHALL FURNISH THE INTERFACE EQUIPMENT FOR THE CAMERAS AND MONTGOMERY COUNTY SHALL INSTALL THE INTERFACE EQUIPMENT FOR THE CAMERAS.

EQUIPMENT LIST B

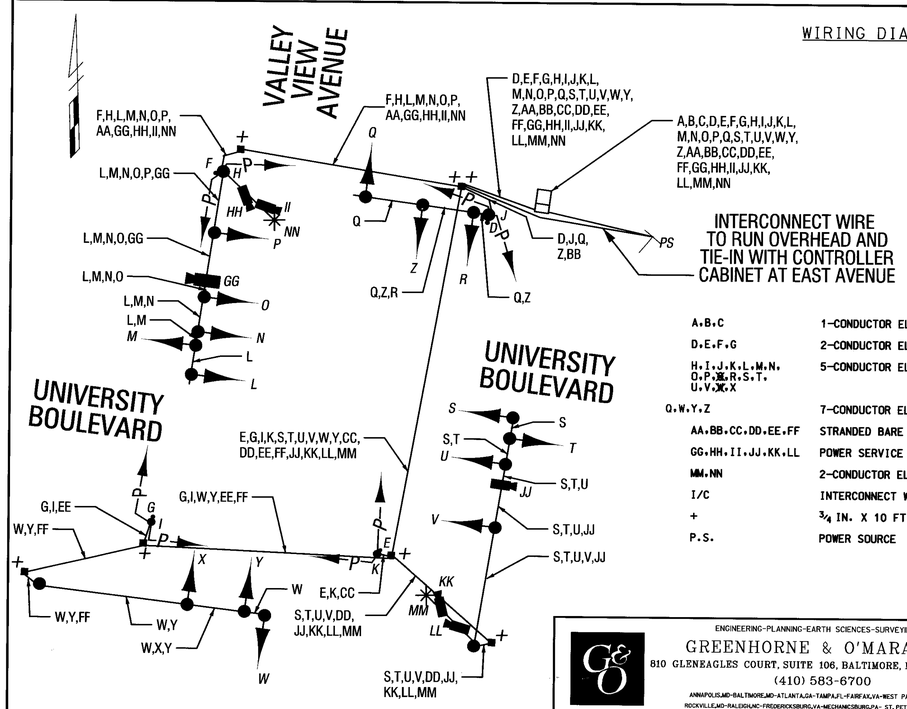
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
4 CY	TEST PIT EXCAVATION
20 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
6 ~~X~~ EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE SECTION (R,Y,G) BLACK-FACED TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING
5 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, THREE SECTION (RA,YA,GA) BLACK-FACED TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING
4 ~~X~~ EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, FOUR SECTION (R,Y,G,GA) BLACK-FACED TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING
4 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, TWO SECTION (WALK, DON'T WALK) PEDESTRIAN SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM POLE MOUNTING
4 EACH	FURNISH AND INSTALL 12 IN., ONE-WAY, TWO SECTION (WALK, DON'T WALK) PEDESTRIAN SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR PEDESTAL POLE MOUNTING
4 EACH	FURNISH AND INSTALL PEDESTRIAN PUSHBUTTON AND R10-4(2) SIGN - "PUSHBUTTON TO CROSS UNIVERSITY BLVD".
117.5 SF	FURNISH AND INSTALL SHEET ALUMINUM SIGNS
	- 2 EACH W3-3 SIGN (36" X 36") & "NEW" PANEL (24"X24") - GROUND MOUNT
	- 1 EACH R3-6 SIGN (30" X 36") - MAST ARM MOUNT
	- 4 EACH R3-5L SIGN (30" X 36") - MAST ARM MOUNT
	- 2 EACH D3-2 SIGN (VAR. X 16") - MAST ARM MOUNT
	- 2 EACH ASSOC. SH. ASSEMBLY (24" X 51") - POLE MOUNT
	- 2 EACH ASSOC. SH. ASSEMBLY (36" X 75") - POLE MOUNT
30 LF	FURNISH AND INSTALL 4 IN. X 4 IN. TREATED WOOD POST
7 EACH	FURNISH AND INSTALL ¾ IN. X 10 FT. GROUND ROD
2 EACH	FURNISH AND INSTALL MAST ARM POLE WITH A 70 FT. MAST ARM
1 EACH	FURNISH AND INSTALL MAST ARM POLE WITH A 60 FT. MAST ARM
1 EACH	FURNISH AND INSTALL MAST ARM POLE WITH A 38 FT. MAST ARM
2 EACH	FURNISH AND INSTALL PEDESTAL POLE
2 EACH	FURNISH AND INSTALL 200 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
1 EACH	SIX PHASE, FULL-ACTUATED, SOLID STATE DIGITAL CONTROLLER HOUSED IN NEMA SIZE "6" BASE MOUNTED CABINET
6 EACH	FURNISH AND INSTALL CAMERA ASSEMBLY
90 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT (TRENCHED)

PHASING SEQUENCE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PHASE 01 & 05	◀G–	◀G–	R	R	◀G–	◀G–	◀G–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 01 & 05 CHANGE	◀Y–	◀Y–	R	R	◀Y–	◀Y–	◀Y–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 01 & 06	◀G–	◀G–	G	G	◀R–	◀R–	◀R–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 01 & 06 CHANGE	◀Y–	◀Y–	Y	Y	◀R–	◀R–	◀R–	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 02 & 05	◀R–	◀R–	R	R	◀G–	◀G–	◀G–	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 02 & 05 CHANGE	◀R–	◀R–	R	R	◀Y–	◀Y–	◀Y–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 02 & 06	◀R–	◀R–	G	G	◀R–	◀R–	◀R–	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	◀R–	◀R–	G	G	◀R–	◀R–	◀R–	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
PHASE 02 & 06 CHANGE	◀R–	◀R–	Y	Y	◀R–	◀R–	◀R–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 04	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	G ◀G– ~~X~~	G ◀G–	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 04 CHANGE	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 04 ALT	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	G ◀G– ~~X~~	G ◀G–	G	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PED CLEAR	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	G ◀G– ~~X~~	G ◀G–	G	R	R	R	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW
PHASE 04 ALT CHANGE	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 03	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	R	R	R	G ◀G– ~~X~~	G ◀G–	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 03 CHANGE	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 03 ALT	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	R	R	R	G ◀G– ~~X~~	G ◀G–	G	DW	DW	DW	DW	WK	DW	DW	WK
PED CLEAR	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	R	R	R	G ◀G– ~~X~~	G ◀G–	G	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW
PHASE 03 ALT CHANGE	◀R–	◀R–	R	R	◀R–	◀R–	◀R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/◀R–	FL/◀R–	FL/Y	FL/Y	FL/◀R–	FL/◀R–	FL/◀R–	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



A,B,C	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
D,E,F,G	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
H,I,J,K,L,M,N, O,P,~~Q~~,R,S,T, U,V,~~W~~,X	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
Q,W,Y,Z	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
AA,BB,CC,DD,EE,FF	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
GG,HH,II,JJ,KK,LL	POWER SERVICE FOR CAMERA
MM,NN	2-CONDUCTOR ELECTRICAL CABLE TYPE T/C (NO. 12 A.W.G.)
I/C	INTERCONNECT WIRE
+	¾ IN. X 10 FT. GROUND ROD
P.S.	POWER SOURCE

EQUIPMENT LIST B CONTINUED

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

QUANTITY	DESCRIPTION
40 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT (TRENCHED)
50 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT (TRENCHED)
350 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT (SLOTTED)
6 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
2810 ~~3330~~ LF	FURNISH AND INSTALL ELECTRICAL CABLE-5 CONDUCTOR (NO.14 AWG)
870 ~~280~~ LF	FURNISH AND INSTALL ELECTRICAL CABLE-7 CONDUCTOR (NO. 14 AWG)
680 LF	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
540 LF	FURNISH AND INSTALL ELECTRICAL CABLE-2 CONDUCTOR (NO. 14 AWG)
30 LF	FURNISH AND INSTALL ELECTRICAL CABLE-1 CONDUCTOR (NO. 4 AWG)
250 LF	FURNISH AND INSTALL INTERCONNECT WIRE
400 LF	FURNISH AND INSTALL CABLE-2 CONDUCTOR TYPE T/C (NO. 12 A.W.G.)
1510 LF	FURNISH AND INSTALL POWER SERVICE FOR CAMERA
2 EACH	FURNISH AND INSTALL 4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT (BEND)
2 EACH	FURNISH AND INSTALL 2 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT (BEND)

TS-2

REVISIONS

1	REVISION #1 CHANGE SIGNAL HEADS #10 AND #13 TO 4-SECTION	8-29-03

ENGINEERING-PLANNING-EARTH SCIENCES-SURVEYING
GREENHORNE & O'MARA, INC.
810 GLENEAGLES COURT, SUITE 106, BALTIMORE, MARYLAND 21286
(410) 583-6700
ANNAPOLIS,MD-BALTIMORE,MD-ATLANTA,GA-TAMPA,FL-FAIRFAX,VA-WEST PALM BEACH,FL
ROCKVILLE,MD-RALEIGH,NC-FREDERICKSBURG,VA-MECHANICSBURG,PA- ST. PETERSBURG,FL

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
Traffic Signal Plan
MD 193 AT VALLEY VIEW AVENUE

DRAWN BY:	NS	F.A.P. NO.		TS NO. 4208	SHEET NO. 2 OF 2
CHECKED BY:	CJP	S.H.A. NO.	BW996M82		
SCALE:	1" = 20'	COUNTY:	MONTGOMERY	T.I.M.S. NO. F443	
DATE:	AUGUST 1, 2002	LOG MILE:	15019300.95		

J:/TRANS/Rockville Office/Wheaton Plaza/2D/valleyviewsignal-sh2.dgn
~~MAY 13, 2003 10:00~~ AUGUST 29, 2003 10:00