F H W A REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 528 (OCEAN HIGHWAY) AND 41 ST. STREET /CONVENTION CENTER ENTRANCE IN WICOMICO COUNTY. MD 528 IS ASSUMED TO RUN IN A NORTH–SOUTH DIRECTION

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX–PHASE, FULL–TRAFFIC–ACTUATED MODE, WITH THE MD 528 APPROACHES OPERATING CONCURRENTLY AND THE 41 ST. STREET APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE–PERMISSIVE LEFT TURN PHASES WILL BE PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 528

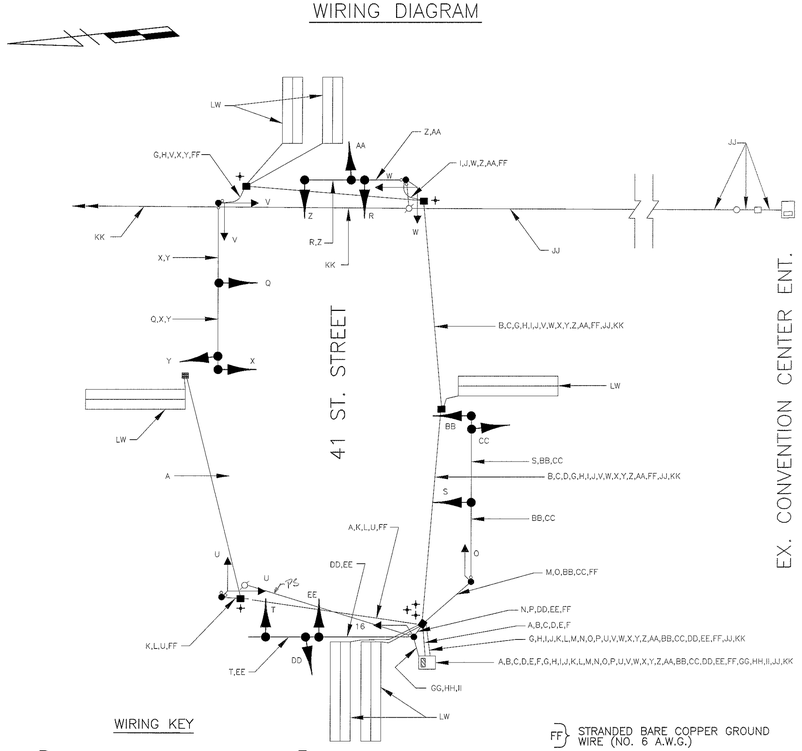
ALTERNATE PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE NORTH AND SOUTH LEGS OF MD 528 AND THE EAST AND WEST LEGS OF 41 ST. STREET

THIS SIGNAL WILL BE HARDWIRED INTERCONNECTED TO THE EXISTING OCEAN CITY 'B' SYSTEM

CONTROLLER REQUIREMENTS

INSTALL A FULL–TRAFFIC–ACTUATED, EIGHT–PHASE CONTROLLER WITH TWO (2) FOUR–CHANNEL, TIME–DELAY–OUTPUT LOOP DETECTOR AMPLIFIERS, RACK MOUNT, TELEMETRY MODULE AND RACK DETECTOR SYSTEM HOUSED IN A BASE MOUNTED CABINET

WIRING DIAGRAM



WIRING KEY

- A B C D E F — 2–CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED) NO. 14 A.W.G.
- G H I J K L M N — 2–CONDUCTOR ELECTRICAL CABLE NO. 14 A.W.G.
- O P — 3–CONDUCTOR ELECTRICAL CABLE NO. 14 A.W.G.
- Q R S T U V W — 5–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- X Y Z AA BB CC DD EE — 7–CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- FF — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- G H I — 1–CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- JJ — 12–PAIR INTERCONNECT CABLE
- KK — EXISTING 12–PAIR INTERCONNECT CABLE (TO BE REMOVED AND RE–INSTALLED)
- LW — LOOP WIRE (NO. 14 A.W.G.)
- PS — PROPOSED OVERHEAD ELECTRIC SERVICE BY DP&L
- + — 3/4 IN. X 10 FT. GROUND ROD

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	2 EACH	12 IN., ONE–WAY, TWO–SECTION (DONT WALK–WALK) PEDESTRIAN SIGNAL HEAD WITH CUT AWAY VISORS – POLE MOUNT
9002	2 EACH	DETECTOR AMPLIFIER, 4–CHANNEL RACK MOUNT
9004	1 EACH	DETECTOR RACK POWER SUPPLY
9014	6 EACH	12 IN., ONE–WAY, THREE–SECTION (R,Y,G,) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9016	2 EACH	12 IN., ONE–WAY, FIVE–SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9019	2 EACH	8 IN./12 IN., ONE–WAY, FIVE–SECTION (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9022	2 EACH	8 IN., ONE–WAY, THREE–SECTION (R,Y,G,) TRAFFIC SIGNAL HEAD WITH ADJUSTABLE BRACKET FOR MAST ARM MOUNTING AND TUNNEL VISORS.
9029	1 EACH	12 IN., TWO–WAY, TWO–SECTION (DONT WALK–WALK) PEDESTRIAN SIGNAL HEAD WITH CUT AWAY VISORS – PEDESTAL MOUNT
9037	2 EACH	12 IN., TWO–WAY, TWO–SECTION (DONT WALK–WALK) PEDESTRIAN SIGNAL HEAD WITH CUT AWAY VISORS – POLE MOUNT
9081	1 EACH	CABINET – ~~INTERSECTION MONITOR~~, SIZE 6
9089	164 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		– 4 EACH D3–2 SIGN (VARIABLE X 32 IN.) – MAST ARM MOUNT
		– 2 EACH W3–3 SIGN (48 IN. X 48 IN.) WITH "NEW" PANEL (30 IN.X 30 IN.) – GROUND MOUNT
		– 2 EACH R10–12 SIGN (36 IN. X 42 IN.) – MAST ARM MOUNT
		– 1 EACH R3–5L SIGN (30 IN. X 36 IN.) – MAST ARM MOUNT
9087	1 EACH	CONTROLLER – ASC II WITH TELEMETRY MODULE
9096	8 EACH	PUSHBUTTON AND R10–3C SIGN
		–4 EACH – PUSH BUTTON TO CROSS "OCEAN HWY."
		–4 EACH – PUSH BUTTON TO CROSS "41 ST. STREET"

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 + 5	DW G	DW G	R	DW G	DW G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, 2 + 5 OR 2 + 6																			
PHASE 1 + 6	R	R	R	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	R	R	R	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	G	G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	G	G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6 ALT.	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 + 6 ALT. CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT.	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	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	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	6 C.Y.	TEST PIT EXCAVATION
2003	9 C.Y.	CLASS 1–A EXCAVATION
5003	620 L.F.	12 IN. WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5004	175 L.F.	24 IN. WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5013	25 L.F.	REMOVE EXISTING PAVEMENT MARKINGS
6001	460 S.F.	4 IN. CONCRETE SIDEWALK
8001	19 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	1 EACH	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE
8006	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8011	20 EACH	INSTALL SIGNAL HEAD
8018	8 EACH	INSTALL PUSHBUTTON AND SIGN
8020	1 EACH	INSTALL CONTROLLER AND CABINET – BASE MOUNT
8021	620 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL
8023	50 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON–METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	50 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT – TRENCHED
8030	25 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT – TRENCHED
8031	320 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT – SLOTTED
8033	6 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	6 EACH	FURNISH AND INSTALL GROUND ROD– 3/4 IN. DIAMETER X 10 FT. LENGTH
8038	800 L.F.	FURNISH AND INSTALL 12–PAIR COMMUNICATION CABLE, SULF SUPPORTING (OVERHEAD)
8040	2400 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	720 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 A.W.G.)
8042	1080 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE – 2 CONDUCTOR (NO. 14 A.W.G.)
8043	90 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE – 3 CONDUCTOR (NO. 14 A.W.G.)
8044	620 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE– 5 CONDUCTOR (NO. 14 A.W.G.)
8045	1440 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE– 7 CONDUCTOR (NO. 14 A.W.G.)
8049	380 L.F.	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
8050	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE –1 CONDUCTOR (NO. 4 A.W.G.) THNN/THWN
8052	72 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS (4 IN. X 6 IN.)
8053	46 S.F.	INSTALL GROUND MOUNTED MOUNTED SIGNS
8054	118 S.F.	INSTALL OVERHEAD MOUNTED SIGNS
8064	1 EACH	USE EXISTING DISK AND AS–BUILT TRAFFIC CONTROL DEVICE
8069	30 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT – GALVANIZED RISER
8070	1 EACH	CONTROL AND DISTRIBUTION EQUIPMENT
8081	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 38 FT. MAST ARM
8082	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND 50 FT. MAST ARM
8083	2 EACH	FURNISH AND INSTALL MAST ARM POLE AND 60 FT. MAST ARM
NEG.	580 L.F.	REMOVE AND RE–INSTALL OVERHEAD INTERCONNECT CABLE

TRAFFIC CONCEPTS, INC.
Brightview Business Center
8258 Veterans Highway
Suite 19B
Millersville, MD 21108
(410) 987–0427

REVISIONS	APPROVALS	REVISIONS
	ASSISTANT DIVISION CHIEF	
	ASST. DISTRICT ENGINEER, TRAFFIC	
	CHIEF, TRAFFIC ENGINEERING DESIGN DIV.	
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY	

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

GENERAL INFORMATION SHEET

MD 528 (OCEAN HIGHWAY) AND 41 ST. STREET / CONVENTION CENTER ENT.

DATE: 7–29–97	DRAWN BY: T. ZAYDEL	F.A.P. NO.		PLAN SHEET NO.:	SHEET NO.
SCALE: NONE	DESIGNED BY: T. ZAYDEL	S.H.A. NO.	AW277A52/AW277B52	TS–3728GI	2 OF 2
APPROVED BY:	CHECKED BY: K. SCHMID	COUNTY	WICOMICO		