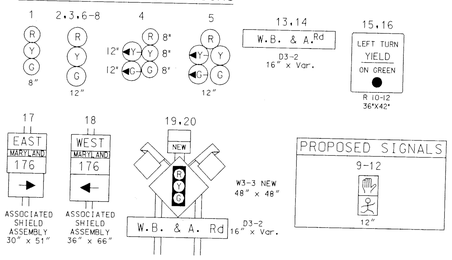
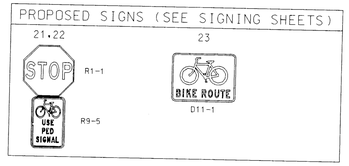
F H W A REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

EXISTING SIGNALS & SIGNS



PROPOSED SIGNALS

PROPOSED SIGNS (SEE SIGNING SHEETS)



PROJECT DESCRIPTION

I. GENERAL

THIS PART OF THE PROJECT INVOLVES THE INSTALLATION OF PEDESTRIAN SIGNALS FOR THE SOUTH, AND WEST LEGS OF THE INTERSECTION OF MD 176 AND W.B. & A. RD. MD 176 RUNS IN A EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THIS INTERSECTION IS EQUIPPED WITH EIGHT PHASE FULLY ACTUATED CONTROLLER HOUSED IN A BASE MOUNTED CABINET. THE CONTROLLER WILL USE FOUR PHASES OUT OF EIGHT WITH AN EXCLUSIVE/ PREMISSIVE LEFT TURN PHASE FOR WESTBOUND MD 176. THERE WILL BE A PEDESTRIAN MOVEMENT FOR THE WEST, AND SOUTH LEGS OF THE INTERSECTION.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	QUANTITY	SPEC. SECTION	DESCRIPTION
9001	2 EACH	817	PUSHBUTTON AND R10-3C SIGN, "PUSH BUTTON TO CROSS DORSEY RD.", 12" x 9", PEDESTAL MOUNTED HARDWARE
9002	2 EACH	814	12" ONE WAY, TWO SECTION PEDESTRIAN SIGNAL HEAD, PEDESTAL MOUNTED HARDWARE
9003	1 EACH	814	12" TWO WAY, TWO SECTION PEDESTRIAN SIGNAL HEAD, PEDESTAL MOUNTED HARDWARE
9004	2 EACH	STD. 815.01 & 815.02	MICROLOOP TRIPLE PROBE SET (500 FT.)

EQUIPMENT LISTS (CONT.)

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

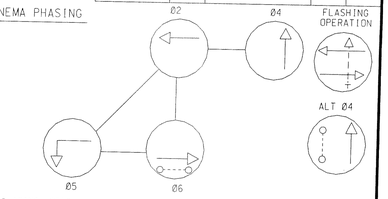
ITEM NO.	QUANTITY	SPEC. SECTION	DESCRIPTION
2001	1 C.Y.	205	TEST PIT EXCAVATION
5001	945 L.F.	STD. 951.03	F & I 12" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5002	65 L.F.	STD. 951.03	F & I 24" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5003	70 L.F.	STD. 951.03	REMOVE EXISTING PAVEMENT MARKING - ANY WIDTH
8001	1.5 C.Y.	801	F & I CONCRETE FOUNDATION
8002	3 EACH	STD. 818.17 & 818.18	F & I 14' BREAKAWAY PEDESTAL POLE AND BASE (NOTE: 4- 1" x 90" ANCHOR BOLTS)
8003	3 EACH	814	INSTALL SIGNAL HEAD (ANY TYPE)
8004	2 EACH	STD. 815.01 & 815.02	INSTALL MICROLOOP TRIPLE PROBE SET

EQUIPMENT LISTS (CONT.)

B. EQUIPMENT TO BE SUPPLIED AND/ OR INSTALLED BY THE CONTRACTOR. (CONT.)

ITEM NO.	QUANTITY	SPEC. SECTION	DESCRIPTION
8005	2 EACH	817	INSTALL PUSHBUTTON AND SIGN
8006	425 L.F.	815	F & I SAWCUT
8007	180 L.F.	805	F & I 1" ELECTRICAL CONDUIT GALVANIZED SLEEVE
8008	1,530 L.F.	810	F & I LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8009	115 L.F.	810	F & I ELECTRICAL CABLE - 2-CONDUCTOR (ALUMINUM SHIELDED)
8010	600 L.F.	810	F & I ELECTRICAL CABLE - 2-CONDUCTOR (NO. 14 AWG)
8011	415 L.F.	810	F & I ELECTRICAL CABLE - 3-CONDUCTOR (NO. 14 AWG)
8012	245 L.F.	810	F & I ELECTRICAL CABLE - 5-CONDUCTOR (NO. 14 AWG)
8013	3 EACH	804	F & I GROUND ROD
8014	4 EACH	811	F & I HANDHOLE
8015	260 L.F.	805	F & I 2" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
8016	150 L.F.	805	F & I 2" SCHEDULE 80 RIGID PVC CONDUIT - PUSHED
8017	60 L.F.	810	F & I ELECTRICAL CABLE - 1 CONDUCTOR (NO. 6 AWG)

NEMA PHASING

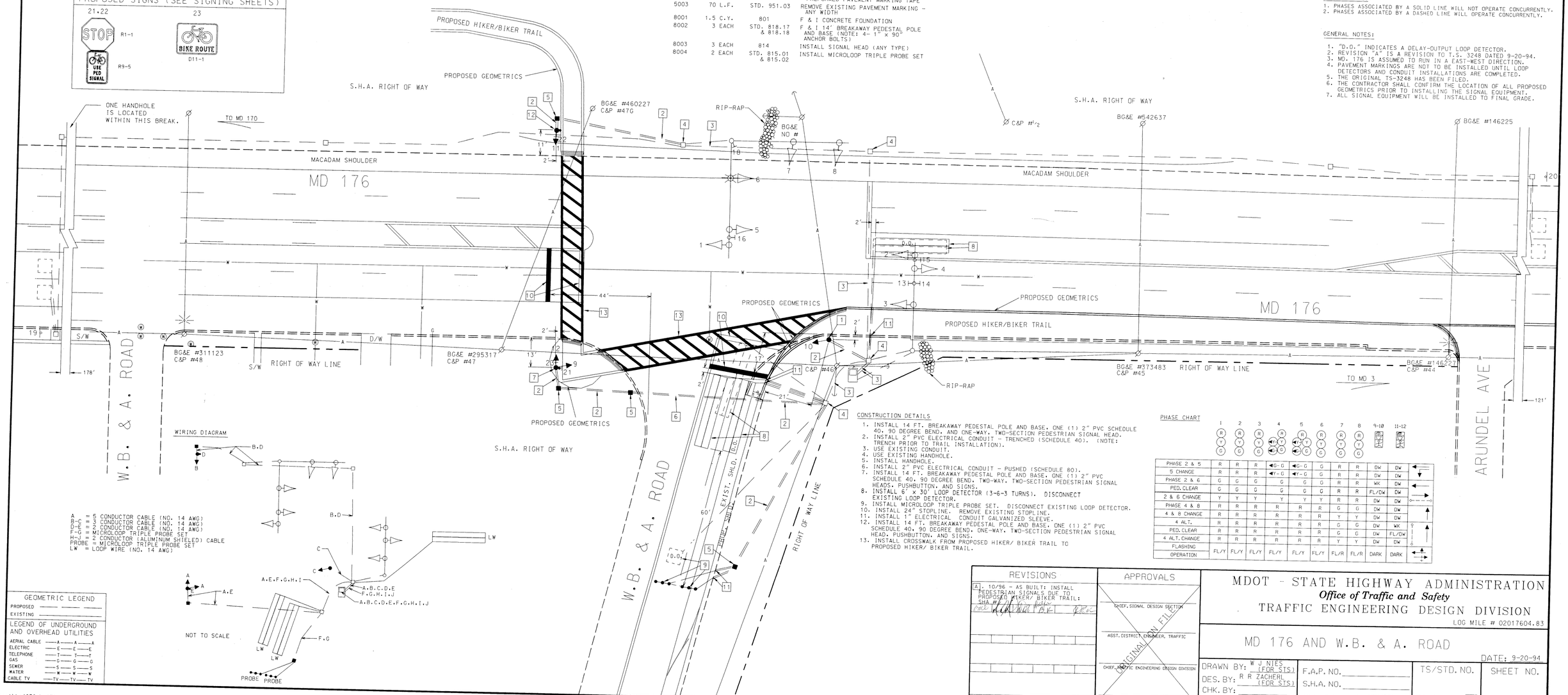


PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

GENERAL NOTES:

1. "D.O." INDICATES A DELAY-OUTPUT LOOP DETECTOR.
2. REVISION "A" IS A REVISION TO T.S. 3248 DATED 9-20-94.
3. MD. 176 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.
4. PAVEMENT MARKINGS ARE NOT TO BE INSTALLED UNTIL LOOP DETECTORS AND CONDUIT INSTALLATIONS ARE COMPLETED.
5. THE ORIGINAL TS-3248 HAS BEEN FILED.
6. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL PROPOSED GEOMETRICS PRIOR TO INSTALLING THE SIGNAL EQUIPMENT.
7. ALL SIGNAL EQUIPMENT WILL BE INSTALLED TO FINAL GRADE.



CONSTRUCTION DETAILS

1. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE AND BASE, ONE (1) 2" PVC SCHEDULE 40, 90 DEGREE BEND, AND ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD.
2. INSTALL 2" PVC ELECTRICAL CONDUIT - TRENCHED (SCHEDULE 40). (NOTE: TRENCH PRIOR TO TRAIL INSTALLATION).
3. USE EXISTING CONDUIT.
4. USE EXISTING HANDHOLE.
5. INSTALL HANDHOLE.
6. INSTALL 2" PVC ELECTRICAL CONDUIT - PUSHED (SCHEDULE 80).
7. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE AND BASE, ONE (1) 2" PVC SCHEDULE 40, 90 DEGREE BEND, TWO-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEADS, PUSHBUTTON, AND SIGNS.
8. INSTALL 6' x 30' LOOP DETECTOR (3-6-3 TURNS). DISCONNECT EXISTING LOOP DETECTOR.
9. INSTALL MICROLOOP TRIPLE PROBE SET. DISCONNECT EXISTING LOOP DETECTOR.
10. INSTALL 24" STOPLINE. REMOVE EXISTING STOPLINE.
11. INSTALL 1" ELECTRICAL CONDUIT GALVANIZED SLEEVE.
12. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE AND BASE, ONE (1) 2" PVC SCHEDULE 40, 90 DEGREE BEND, ONE-WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD, PUSHBUTTON, AND SIGNS.
13. INSTALL CROSSWALK FROM PROPOSED HIKER/ BIKER TRAIL TO PROPOSED HIKER/ BIKER TRAIL.

PHASE CHART

	1	2	3	4	5	6	7	8	9-10	11-12
PHASE 2 & 5	R	R	R	◀G-G	◀G-G	G	R	R	DW	DW
5 CHANGE	R	R	R	◀Y-G	◀Y-G	G	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	WK	DW
PED. CLEAR	G	G	G	G	G	G	R	R	FL/DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	DW	DW
PHASE 4 & 8	R	R	R	R	R	G	G	G	DW	DW
4 & 8 CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW
4 ALT.	R	R	R	R	R	G	G	G	DW	WK
PED. CLEAR	R	R	R	R	R	G	G	G	DW	FL/DW
4 ALT. CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

REVISIONS
A. 10/96 - AS BUILT: INSTALL PEDESTRIAN SIGNALS DUE TO PROPOSED HIKER/ BIKER TRAIL: SHA #

APPROVALS

CHIEF, SIGNAL DESIGN SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, OFFICE OF TRAFFIC AND SAFETY

ORIGINAL ON FILE

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic and Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG MILE # 02017604.83

MD 176 AND W.B. & A. ROAD

DATE: 9-20-94

DRAWN BY: W J NIES (FOR STS)	F.A.P. NO.	TS/STD. NO.	SHEET NO.
DES. BY: R R ZACHERL (FOR STS)	S.H.A. NO.		
CHK. BY:			
SCALE: 1"= 20'	COUNTY ANNE ARUNDEL	TS-3248 A	1 OF 1

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