MD 189 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

EXISTING SIGNALS & SIGNS

1,2,4,5,10,11 | 3,6,8,9,12 | 13-18 | 19,21 | 20a,22b | 20b,22a | 26,31 | 27,32

← Falls Chapel Way | ← Tuckerman Lane
Tuckerman Lane → | Falls Chapel Way →

R10-12 36" x 42" | D3-2 30" x 90" DUAL FACED | R3-5L(L) 30" x 36" | R3-6(R) 30" x 36"

PROPOSED SIGNALS & SIGNS

7,8 | 15 | 25,30 | 23 | 24 | 28 | 29

R10-12 36" x 42" | SOUTH MARYLAND 189 ASSOCIATED ASSEMBLY SIGN 30" x 51" | NORTH MARYLAND 189 ASSOCIATED ASSEMBLY SIGN 48" x 75" | NORTH MARYLAND 189 ASSOCIATED ASSEMBLY SIGN 30" x 51" | SOUTH MARYLAND 189 ASSOCIATED ASSEMBLY SIGN 48" x 75"

EQUIPMENT LISTS

A. EQUIPMENT TO BE FURNISHED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
	92.3 S.F.	
	1 EACH	ASSOCIATED SHIELD ASSEMBLY SIGN, "NORTH, MARYLAND 189, (RIGHT ARROW)", 30" x 51", POLE MOUNTED HARDWARE
	1 EACH	ASSOCIATED SHIELD ASSEMBLY SIGN, "SOUTH, MARYLAND 189, (LEFT ARROW)", 48" x 75", POLE MOUNTED HARDWARE
	1 EACH	ASSOCIATED SHIELD ASSEMBLY SIGN, "SOUTH, MARYLAND 189, (RIGHT ARROW)", 30" x 51", POLE MOUNTED HARDWARE
	1 EACH	ASSOCIATED SHIELD ASSEMBLY SIGN, "NORTH, MARYLAND 189, (LEFT ARROW)", 48" x 75", POLE MOUNTED HARDWARE
	2 EACH	R10-12 SIGN, 36" x 42", SPAN MOUNTED HARDWARE

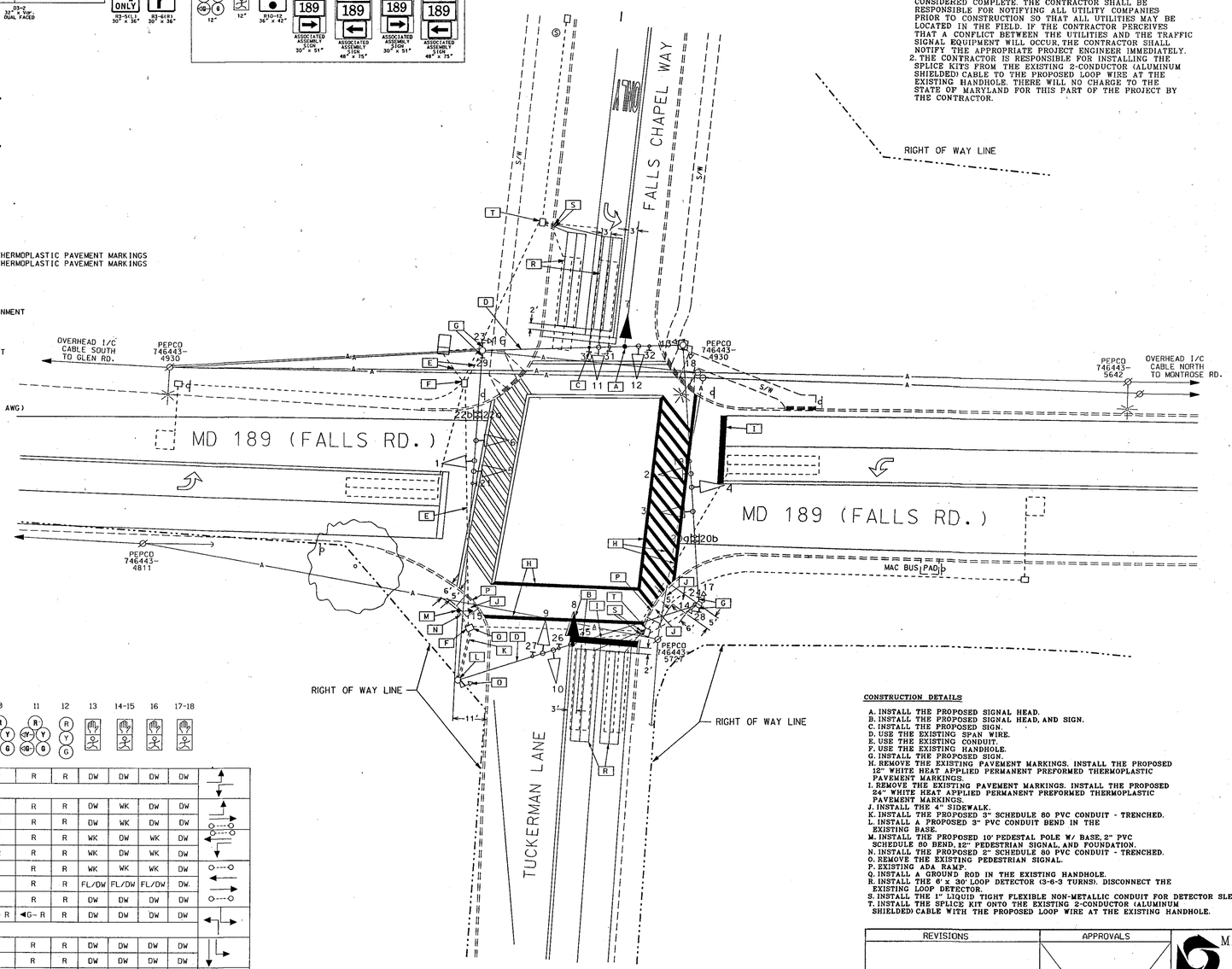
B. EQUIPMENT TO BE FURNISHED AND/ OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
5003	480 L.F.	F & I 12" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5004	50 L.F.	F & I 24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	530 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
6003	110 S.F.	F & I 4" CONCRETE SIDEWALK
8001	1 EACH	F & I 12" PEDESTRIAN SIGNAL HEAD
8009	1 EACH	F & I 10' BREAKAWAY PEDESTAL & BASE
8010	1 EACH	INSTALL CONDUIT BEND IN EXISTING BASE
8013	1 EACH	REMOVE AND DISPOSE OF EXISTING EQUIPMENT PER ASSIGNMENT
8016	10 L.F.	F & I 2" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8021	1 C.Y.	F & I CONCRETE FOR SIGNAL FOUNDATION
8023	10 L.F.	F & I NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8029	20 L.F.	F & I 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8034	20 L.F.	F & I 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8043	92.3 S.F.	INSTALL OVERHEAD MOUNTED SIGN
8050	1 EACH	F & I GROUND ROD - 3/4" x 10'
8053	10 EACH	F & I 12" VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8057	160 L.F.	F & I ELECTRICAL CABLE - 3-CONDUCTOR (NO. 14 AWG)
8059	380 L.F.	F & I ELECTRICAL CABLE - 7-CONDUCTOR (NO. 14 AWG)
8060	1,710 L.F.	F & I LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8061	470 L.F.	F & I SAWCUT FOR SIGNAL (LOOP DETECTOR)

C. EQUIPMENT TO BE REMOVED AND RETURNED TO THE SHA

ITEM NO.	QUANTITY	DESCRIPTION

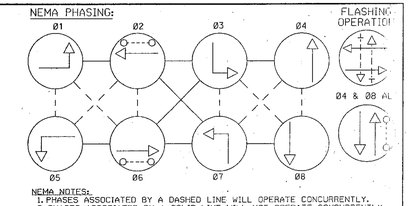
ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR



NOTES TO THE CONTRACTOR

1. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. 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 APPROPRIATE PROJECT ENGINEER IMMEDIATELY.
2. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE SPLICE KITS FROM THE EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED) CABLE TO THE PROPOSED LOOP WIRE AT THE EXISTING HANDHOLE. THERE WILL NO CHARGE TO THE STATE OF MARYLAND FOR THIS PART OF THE PROJECT BY THE CONTRACTOR.

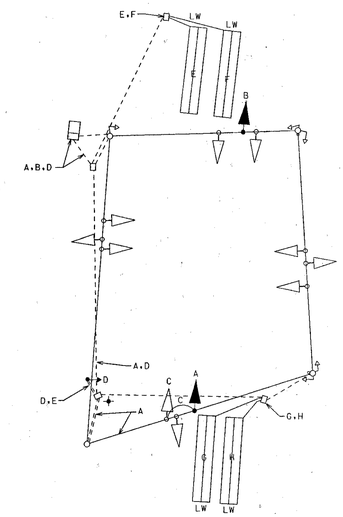
NEMA PHASING:



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

WIRING DIAGRAM

A-B = 7-CONDUCTOR CABLE (NO. 14 AWG)
C = USE EXISTING 5-CONDUCTOR CABLE (NO. 14 AWG)
D = 3-CONDUCTOR CABLE (NO. 14 AWG)
E-H = USE THE EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED) CABLE
I = NO. 6 AWG STRANDED BARE COPPER WIRE
♦ = GROUND ROD



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14-15	16	17-18
PHASE 1 & 5	◄G-R	◄G-R	R	◄G-R	◄G-R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6															
PHASE 1 & 6	◄G-G	◄G-G	G	R	R	R	R	R	R	R	R	R	DW	WK	DW	DW
1 CHANGE	◄Y-G	◄Y-G	G	R	R	R	R	R	R	R	R	R	DW	WK	DW	DW
PHASE 2 & 5	R	R	R	◄G-G	◄G-G	G	R	R	R	R	R	R	WK	DW	WK	DW
5 CHANGE	R	R	R	◄Y-G	◄Y-G	G	R	R	R	R	R	R	WK	DW	WK	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	DW
PED. CLEAR	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	DW.
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 3 & 7	R	R	R	R	R	R	◄G-R	◄G-R	R	◄G-R	◄G-R	R	DW	DW	DW	DW
3 & 7 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8															
PHASE 3 & 8	R	R	R	R	R	R	◄G-G	◄G-G	G	R	R	R	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	◄Y-G	◄Y-G	G	R	R	R	DW	DW	DW	DW
PHASE 4 & 7	R	R	R	R	R	R	R	R	R	◄G-G	◄G-G	G	DW	DW	DW	DW
7 CHANGE	R	R	R	R	R	R	R	R	R	◄Y-G	◄Y-G	G	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
4 & 8 ALT.	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	WK
PED. CLEAR	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	FL/DW
4 & 8 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	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

CONSTRUCTION DETAILS

A. INSTALL THE PROPOSED SIGNAL HEAD.
B. INSTALL THE PROPOSED SIGNAL HEAD, AND SIGN.
C. INSTALL THE PROPOSED SIGN.
D. USE THE EXISTING SPAN WIRE.
E. USE THE EXISTING CONDUIT.
F. USE THE EXISTING HANDHOLE.
G. INSTALL THE PROPOSED SIGN.
H. REMOVE THE EXISTING PAVEMENT MARKINGS. INSTALL THE PROPOSED 12" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
I. REMOVE THE EXISTING PAVEMENT MARKINGS. INSTALL THE PROPOSED 24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
J. INSTALL THE 4" SIDEWALK.
K. INSTALL THE PROPOSED 3" SCHEDULE 80 PVC CONDUIT - TRENCHED.
L. INSTALL A PROPOSED 3" PVC CONDUIT BEND IN THE EXISTING BASE.
M. INSTALL THE PROPOSED 10' PEDESTAL POLE W/ BASE, 2" PVC SCHEDULE 80 BEND, 12" PEDESTRIAN SIGNAL, AND FOUNDATION.
N. INSTALL THE PROPOSED 2" SCHEDULE 80 PVC CONDUIT - TRENCHED.
O. REMOVE THE EXISTING PEDESTRIAN SIGNAL.
P. EXISTING ADA RAMP.
Q. INSTALL A GROUND ROD IN THE EXISTING HANDHOLE.
R. INSTALL THE 6' x 30' LOOP DETECTOR (3-6-3 TURNS). DISCONNECT THE EXISTING LOOP DETECTOR.
S. INSTALL THE 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE.
T. INSTALL THE SPLICE KIT ONTO THE EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED) CABLE WITH THE PROPOSED LOOP WIRE AT THE EXISTING HANDHOLE.

UTILITY LEGEND

—G—G—	GAS MAIN
—W—W—	WATER MAIN
—S—S—	SEWER MAIN
—E—E—	ELECTRIC CABLES
—A—A—	AERIAL CABLES
—T—T—	TELEPHONE CABLES
—D—D—	STORM DRAIN

REVISIONS

C. 01/2003 - INSTALL EXCLUSIVE/ PERMISSIVE LEFT TURN PHASE ALONG EASTBOUND FALLS CHAPEL ROAD
SHA NO. AT2885185 01/14/03

B. 01/22/1999 - AS BUILT
SHA NO. M05715176

A. 10/1996 - REPLACED CONDUIT LOOPS
SHA NO. M5715176
BLOSS

APPROVALS

TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
ASST. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
DIRECTOR, OFFICE OF TRAFFIC & SAFETY

NOT ORIGINAL PLAN

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

MD 189 (Falls Road) and Falls Chapel Way/ Tuckerman Lane
WINTERSET, MARYLAND

DRAWN BY:	F.A.P. NO.	T.S. NO. TS-1569 (C)	SHEET NO.
CHECKED BY:	S.H.A. NO.		
SCALE: 1" = 20'	COUNTY MONTGOMERY	T.I.M.S. NO. F538	1 OF 1
DATE: 03-29-1978	LOG MILE 15018904.68		