

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

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect at the intersection of US 301 and MD 227 in Charles County. The modification is necessary due to the widening of MD 227. US 301 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The existing intersection operation shall be modified with the US 301 approaches continuing to run concurrently. The Exclusive/Permissive left turn phases shall remain for both north and southbound US 301. The side street approaches shall operate as a split phase.
- The existing base-mounted cabinet shall be maintained at this intersection.

III. SPECIAL NOTE

All field wiring to the existing controller cabinet shall be terminated to the appropriate controller cabinet connectors by the Contractor and labeled. All other controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	SPEC. SECTION	DESCRIPTION
2 EA	814	12", one-way, one-section (GA) polycarbonate traffic signal head.
14 SF	813	Sheet aluminum signs to consist of: 1 EA R3-5L "LEFT TURN ONLY" sign, (30" x 36") span wire mounted. 1 EA R3-6 "LEFT TURN AND THRU" sign, (30" x 36") span wire mounted.

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

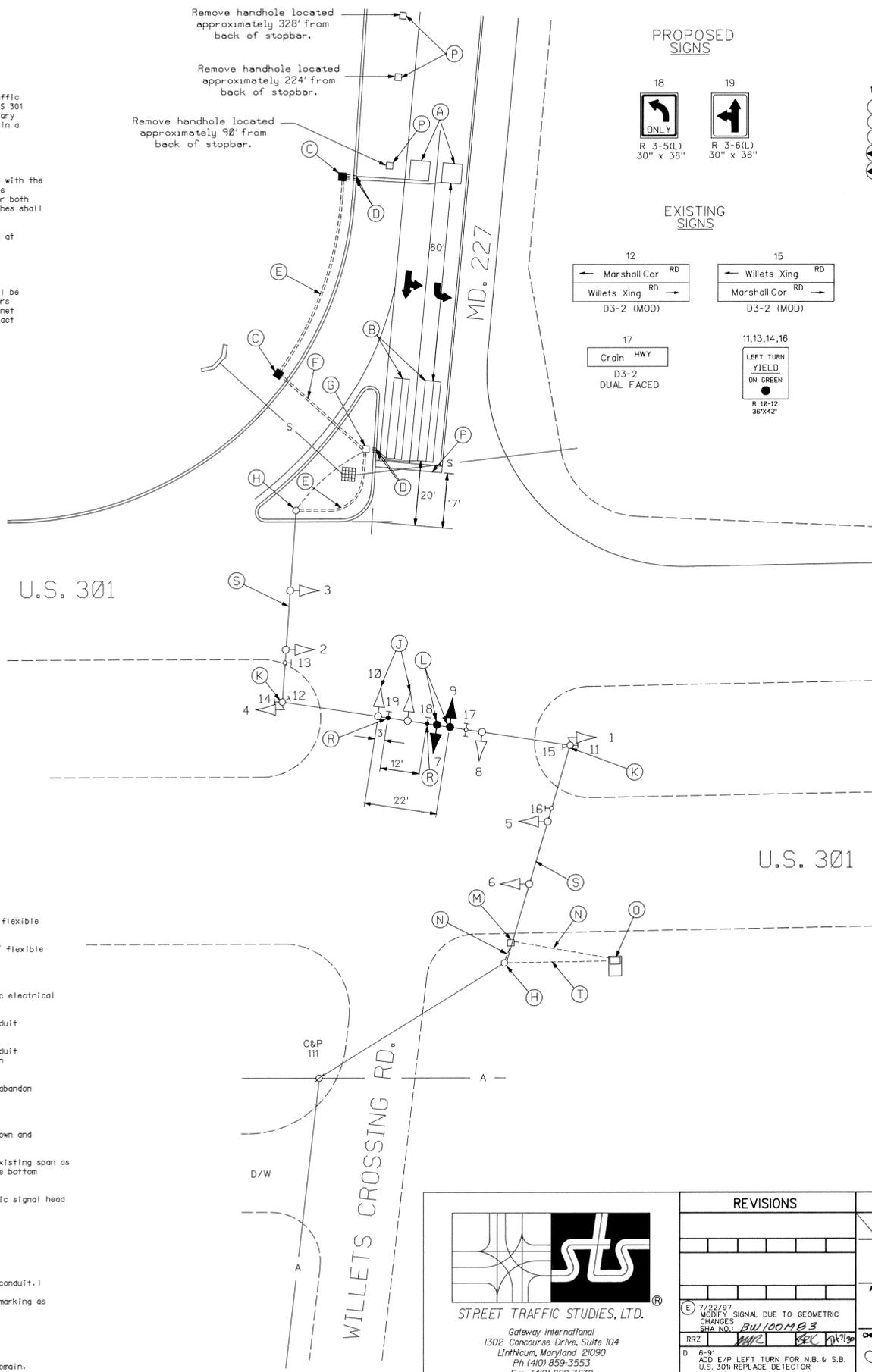
QUANTITY	SPEC. SECTION	DESCRIPTION
LS	106	Mobilization
LS	106	Maintenance of traffic.
100 SF	104	Temporary traffic sign.
2 UD	105	Flashing arrow panels.
25 LF	SP-555	Furnish and install 24" stopline thermoplastic pavement marking.
2 EA	814	Install traffic signal head.
14 SF	813	Install overhead mounted sign.
315 LF	815	Furnish and install sawcut.
15 LF	805	Furnish and install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
165 LF	805	Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
2 EA	811	Furnish and install handhole (frame and cover).
1250 LF	810	Furnish and install loop wire (No. 14 A.W.G.) encased in 1/2" flexible tubing.
1885 LF	810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded).
55 LF	810	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
1 EA	819	Adjust existing span wire.
1 EA	811	Raise existing handhole to grade.
2 EA	822	Remove handhole.

CONSTRUCTION DETAILS

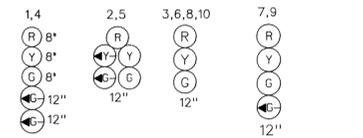
- Install 6' x 6' loop detector encased in 1/2" flexible tubing (4-turns).
- Install 6' x 30' loop detector encased in 1/2" flexible tubing quadrupole type (3-6-3).
- Install handhole.
- Install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
- Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
- Install 2" polyvinyl chloride electrical conduit (Schedule 80) (trenched prior to installation of proposed geometrics).
- Raise existing handhole to grade. (Cap and abandon attached conduit.)
- Use existing steel strain pole.
- Relocate existing signal head on span as shown and rewire. (See Wiring Diagram.)
- Use existing steel strain pole. Raise the existing span as necessary to attain proper clearance from the bottom of the signal heads to the road.
- Install new 1-section (GA) to existing traffic signal head as shown.
- Use existing handhole.
- Use existing conduit.
- Use existing cabinet.
- Remove handhole. (Cap and abandon attached conduit.)
- Install 24" stopline thermoplastic pavement marking as shown.
- Install sign on existing span as shown.
- Use existing span wire.
- Existing underground electrical service to remain.

UTILITY LEGEND

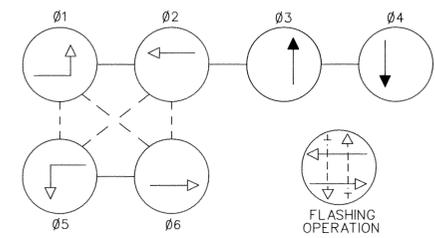
— G — G —	GAS MAIN
— W — W —	WATER MAIN
— S — S —	SEWER MAIN
— E — E —	ELECTRIC CABLES
— A — A —	AERIAL CABLES
— T — T —	TELEPHONE CABLES



EXISTING SIGNALS

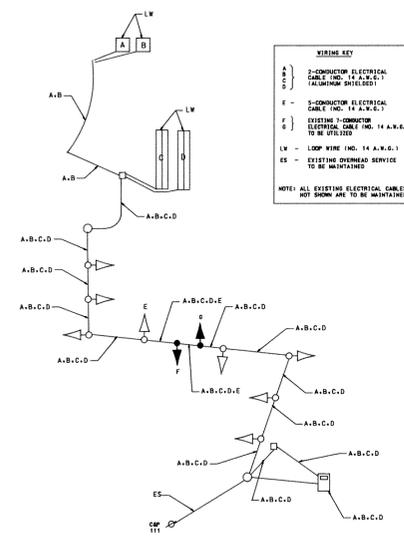


NEMA PHASING



- Phasing Notes:
1.) Phases associated by a dashed line will operate concurrently.
2.) Phases associated by a solid line will not operate concurrently.

WIRING DIAGRAM



PHASE CHART

PHASE	1	2	3	4	5	6	7	8	9	10
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R
1 & 5 CHANGE	R	R	R	R	R	R	R	R	R	R
PHASE 1 & 6	R	R	R	R	R	R	R	R	R	R
1 CHANGE	R	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	R	R	R	R	R	R	R
5 CHANGE	R	R	R	R	R	R	R	R	R	R
PHASE 2 & 6	R	R	R	R	R	R	R	R	R	R
2 & 6 CHANGE	R	R	R	R	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	R
3 CHANGE	R	R	R	R	R	R	R	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	R
4 CHANGE	R	R	R	R	R	R	R	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

ST
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REVISIONS	APPROVALS
7/22/97 MODIFY SIGNAL DUE TO GEOMETRIC CHANGES SHA NO. BW100MB3	ASST. CHIEF TEDD SECTION
RRZ WMC SEC WKL	ASST. DISTRICT ENGINEER, TRAFFIC
D 6-91 ADD E/P LEFT TURN FOR N.B. & S.B. U.S. 301; REPLACE DETECTOR SHA NO. _____	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
WM	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
U.S. 301 AND MD 227 / WILLETS CROSSING ROAD

DRAWN BY: M. KAPLAN	COUNTY: CHARLES	TS NO. 1443 E	SHEET NO. 1 OF 1
CHECK BY: A. BUDNICHUK	LOG MILE: 08030119.76	T.I.M.S. NO.	
DATE: 7-30-76	F.A.P. NO.		
SCALE: 1" = 20'	S.H.A. NO. CH-492-501-585		