

F H W A REGION NO.	STATE	FED. AD PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD		5	6

INTERSECTION OPERATION

- MD 198 (Sandy Spring Road)/Van Dusen Road Intersection: there will be no changes to the existing operation of the Intersection.
- MD 198 (Sandy Spring)/Eleventh Street Intersection: there will be no changes to the existing operation of the Intersection.
- The MD 198 EB (Gorman Avenue)/Seventh Street Intersection is to operate under its existing phasing.
- The MD 198 EB (Gorman Avenue)/Fourth Street Intersection is to operate under its existing phasing.
- The MD 198 EB (Gorman Avenue)/U.S. 1 SB Intersection is to operate under its existing phasing.
- The MD 198 WB (Talbot Avenue)/Seventh Street Intersection is to operate under its existing phasing.
- The MD 198 WB (Talbot Avenue)/Fourth Street Intersection is to operate under its existing phasing.
- The MD 198 WB (Talbot Avenue)/U.S. 1 SB Intersection is to operate under its existing phasing.

INTERCONNECTION INSTALLATION

This project consists of two separate systems--(*1) MD 198 (Sandy Spring Road) from Van Dusen Road to Eleventh Street and (*2) MD 198 EB/WB from Seventh Street to US 1 SB. The following explains the installation of each system.

(*1)
12-pair voice grade, telemetry interconnect cable shall be installed underground in new conduit along MD 198 (Sandy Spring Road) from Van Dusen Road to Eleventh Street. The master controller shall be installed at the MD 198 (Sandy Spring Road) (EB)/Van Dusen Road Intersection. Interconnect cable shall be installed as shown on the interconnection plan.

(*2)
12-pair voice grade, telemetry interconnect cable shall be installed overhead along MD 198 EB (Gorman Ave.) from Seventh Street, through Fifth Street and Fourth Street, to US 1 SB. Install 12-pair voice grade, telemetry interconnect cable overhead along MD 198 WB (Talbot Ave.) from Fourth Street, to a location west of Fifth Street. Continue the 12-pair voice grade, telemetry interconnect cable underground in new and existing conduit along MD 198 WB (Gorman Ave.), from a location west of Fifth Street, to Seventh Street. Then, interconnect cable will continue to run underground south on Seventh Street (MD 216), down to MD 198 EB (Gorman Ave.) in new and existing conduit. This system shall be maintained by an existing cabinet located at the MD 198 EB (Gorman Avenue)/US 1 SB Intersection, where necessary equipment will be installed as shown on plans.

CONSTRUCTION DETAILS

- Install new base-mounted cabinet and local controller with all necessary equipment as shown.
- Install new base-mounted cabinet and master controller with all necessary equipment as shown.
- Install 6' x 30' loop detector encased in 1/4" flexible tubing quadrupole type (3-6-3 turns).
- Abandon existing handhole.
- Install electrical handhole.
- Install 1" flexible liquid type electrical conduit (detector wire sleeve).
- Install 2" polyvinyl chloride electrical conduit (schedule 40) (trenched).
- Install 3" polyvinyl chloride electrical conduit (schedule 80) (bored).
- Install 3" polyvinyl chloride electrical conduit (schedule 40) (trenched).
- Install 4" polyvinyl chloride electrical conduit (schedule 80) (bored).
- Remove existing pedestrian signals.
- Install 4" polyvinyl chloride electrical conduit (schedule 80) (slotted).
- Install 12" white crosswalk pavement markings.
- Install 24" white stopline pavement markings as shown.
- Install overhead interconnect cable.
- Install 27' steel pole with 70' mast arm, traffic signal heads, and signs as shown.
- Install 27' steel pole with 60' mast arm, traffic signal heads, signs, and 15' lighting arm and 250-W-HPS luminaire as shown.
- Install 27' steel pole with 70' mast arm, traffic signal heads, signs, and 15' lighting arm and 250-W-HPS luminaire as shown.
- Install 27' steel pole with 50' and 60' mast arms, traffic signal heads, signs, 15' lighting arm and 250-W-HPS luminaire, and pedestrian signal head with push button and signs as shown.
- Use existing conduit.
- Use existing handhole.
- Remove existing signal pole, signal heads, and signs.
- Remove and salvage local pole mounted controller.
- Install triple micro loop probe set.
- Install 1" electrical conduit - galvanized sleeve.
- Remove and salvage local base-mounted cabinet and controller.
- Install pedestrian signal pole and pedestrian signal heads with pushbuttons and signs as shown.

- Use existing pole mounted cabinet and controller (Identify wiring in cabinet). Install telemetry panel and harness, quick connect block, ASC telemetry module, and one amplifier. Replace existing bend with 4" bend. Install 3" weatherhead.
- Connect underground power source to new local controller and cabinet.
- Use existing pole mounted cabinet and controller (Identify wiring in cabinet). Install telemetry panel and harness, quick connect block, ASC telemetry module, and one amplifier. Replace existing bend with 3" bend. Install 3" weatherhead.
- Use existing pole mounted cabinet and controller (Identify wiring in cabinet). Install telemetry panel and harness, quick connect block, and ASC telemetry module. Replace existing bend with 4" bend. Install 3" weatherhead.
- Abandon existing conduit.
- Use existing utility pole for cable run.
- Install 27' steel pole with 70' mast arm, traffic signal heads, and signs and replace opticom detector as shown.
- Install new pole mounted cabinet for flashing hazard identification beacons. Install 3" weatherhead.
- Use existing strain pole for cable run.
- Install new pole mounted cabinet for flashing hazard identification beacons.
- Use existing span wire for cable run, rerig as necessary.
- Install 2" polyvinyl chloride (Schedule 80) electrical conduit (slotted).
- Install 4" polyvinyl chloride (Schedule 80) electrical conduit (trenched).
- Use existing pole mounted cabinet and controller (Identify wiring in cabinet). Install 3" weatherhead.

EQUIPMENT LIST A

EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

QUANTITY	SPEC. SECTION	DESCRIPTION
2 Each	814	12", one way, five-section (R,Y,A,Y,G,A,G) signal head - mast arm mount.
2 Each	814	8"/12", one way, five-section (R,Y,A,Y,G,A,G) signal head - pole mount.
12 Each	814	12", one way, three-section (R,Y,G) signal head - mast arm mount.
1 Each	814	8", one way, three-section (R,Y,G) signal head - mast arm mount.
1 Each	814	8", one way, three-section (R,Y,G) signal head - pole mount.
2 Each	814	12", one way, four-section (R,Y,G,G,A) signal head - mast arm mount.
215 S.F.	813	Sheet aluminum signs to consist of the following: R3-5L "LEFT TURN ONLY (ARROW)" sign, (30"x36") mast arm mount.
3 Each		R10-12 "Left Turn Yield on Green" sign, (36"x42") mast arm mount.
7.5 S.F.		
2 Each		D3, "Van Dusen RD" single face sign, (16"xVariable) mast arm mount.
10.5 S.F.		
4 Each		D3, "(arrow) Eleventh ST" single face sign, (16"xVariable) mast arm mount.
16 S.F.		
2 Each		D3, "Eleventh ST (arrow)" single face sign, (16"xVariable) mast arm mount.
16 S.F.		
2 Each		R10-3C, "PUSH BUTTON TO CROSS SANDY SPRING ROAD" sign, (9"x12") signal pole mount.
0.75 S.F.		
2 Each		R10-3C, "PUSH BUTTON TO CROSS ELEVENTH STREET" sign, (9"x12") signal pole mount.
0.75 S.F.		
2 Each		S2-1, "SCHOOL CROSSING" sign, (36"x36") post mount.
9 S.F.		
2 Each		M6-2, "(ARROW)" sign, (21"x15") post mount.
2.2 S.F.		
4 Each		R4-7, "KEEP RIGHT (ARROW)" sign, (24"x30") post mount.
5 S.F.		
1 Each		R3-7, "Right Lane Must Turn Right" sign, (30"x30") post mount.
6.25 S.F.		
2 Each	814	12" one-way, two section pedestrian signal-pedestal mount.
2 Each	814	12" one-way, two section pedestrian signal-pole mount.
1 Each	816	Traffic responsive master controller and cabinet - base mount.
2 Each	816	Eight-phase (fully actuated) controller and cabinet - base mount.
2 Each	816	Two circuit flasher and cabinet - pole mount.
17 Each	816	2-channel, loop detector amplifier.
4 Each	816	Detector panel.
4 Each	816	Telemetry module.
4 Each	816	Quick connect terminal block.
4 Each	816	Suppression board with harness.
1 Each	816	Opticom detector.

EQUIPMENT LIST B

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

QUANTITY	UNIT	SPEC. SECTION	DESCRIPTION
	Each	811	Furnish and install electrical handhole.
22	Each	811	Furnish and install electrical handhole.
4570	L.F.	815	Furnish and install saw cut for signal (loop detector).
155	L.F.	805	Furnish and install 1" liquid tight flexible non-metallic conduit for detector sleeve.
340	L.F.	805	Furnish and install 1" electrical conduit-galvanized sleeve.
2300	L.F.	805	Furnish and install polyvinyl chloride conduit - 2" trenched.
380	L.F.	805	Furnish and install polyvinyl chloride conduit - 2" slotted.
470	L.F.	805	Furnish and install polyvinyl chloride - 3" trenched.
95	L.F.	805	Furnish and install polyvinyl chloride conduit - 3" bored.
110	L.F.	805	Furnish and install polyvinyl chloride - 4" trenched.
240	L.F.	805	Furnish and install polyvinyl chloride - 4" bored.
240	L.F.	805	Furnish and install polyvinyl chloride - 4" slotted.
33	C.Y.	801	Furnish and install concrete for signal foundation.
17	Each	814	Install signal head, any type - mast arm mount.
3	Each	816	Install controller and cabinet-base mount.
3450	L.F.	810	Furnish and install 12-pair communication cable, self-supporting (overhead).
3340	L.F.	810	Furnish and install 12-pair communication cable, jelly-filled (underground).
2	Each		Furnish and install 27' steel pole with twin 50 foot and 70 foot mast arms.
3	Each		Furnish and install 27' steel pole with a single 70 foot mast arm.
1	Each		Furnish and install 27' steel pole with a single 60 foot mast arm.
4	Each	805	Furnish and install conduit bend into existing concrete base (any size and type).
3	Each	807	Furnish and install control and distribution equipment (120/240V, 1 phase 3 wire system).
10	Each	804	Furnish and install ground rod - 3/4 inch diameter x 10 foot length.
9900	L.F.	810	Furnish and install loop wire encased in flexible tubing (No. 14 AW.G.).
2860	L.F.	810	Furnish and install electrical cable-2 conductor (aluminum shielded).
550	L.F.	810	Furnish and install electrical cable-2 conductor (No. 14 AW.G.).
935	L.F.	810	Furnish and install electrical cable-3 conductor (No. 14 AW.G.).
1020	L.F.	810	Furnish and install electrical cable-5 conductor (No. 14 AW.G.).
2200	L.F.	810	Furnish and install electrical cable-7 conductor (No. 14 AW.G.).
1300	L.F.	810	Furnish and install No. 6 AW.G. stranded bare copper ground wire.
830	L.F.	810	Furnish and install electrical cable-2 conductor (No. 12 AW.G.-Type THHN/TRAY).
1	Each		Furnish and install 10 foot breakaway pedestrian pole.
4	Each	817	Install pushbutton and sign.
2	Each	816	Install two circuit flasher and cabinet-pole mount.
5	Each	805	Furnish and install 3" weatherhead.
300	L.F.	SP-555	Furnish and install 12" white permanent preformed pavement marking tape.
370	L.F.	SP-555	Furnish and install 24" white permanent preformed pavement marking tape.
4	Each	806	Furnish and install 250 watt high pressure sodium lamp and luminaire with 15 feet lighting arm.
30	L.F.	805	Furnish and install 2" electrical conduit - PVC riser.
1	Each	XXX	Install opticom detector.
13	Each	XXX	Use existing plan or disk and as-built traffic control devices
13	Each	SP1	Remove and dispose of foundation.
1	Each	SP1	Remove existing equipment.
1	Each	SP1	Delivery of removed material and equipment.
1	Lump sum	SP1	Remove and dispose of existing material and equipment.
51	EACH		FURNISH AND INSTALL MICRO LOOP PROBE SET
3450	L.F.		FURNISH AND INSTALL 12 PAIR INTERCONNECT CABLE - OVERHEAD
3340	L.F.		FURNISH AND INSTALL 12 PAIR INTERCONNECT CABLE - UNDERGROUND

LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES

AL CABLE	— A — A —
TRIC	— E — E —
PHONE	— T — T —
	— G — G —
	— S — S —
	— W — W —
	— TV — TV —

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REVISIONS	APPROVALS
	<i>[Signature]</i> CHIEF, DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	<i>[Signature]</i> CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
MD 198 SYSTEM
DATE JUNE 1996

DRAWN BY: S.A.	F.A.P. NO. CM-STP-000S(S02)E
CHECK BY: R.D.	S.H.A. NO. AW113A59/859.
SCALE: NOT TO SCALE	COUNTY PRINCE GEORGE'S

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