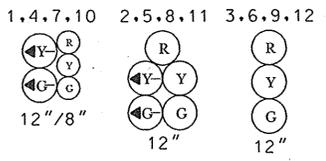


PROPOSED VIDEO DETECTION CAMERA



SIGNAL HEADS



13-16



PROPOSED STEP DOWN TRANSFORMER BY SMECO FORCES

BILLINGSLEY ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

CONSTRUCTION DETAILS

- A. INSTALL 27 FT. STEEL POLE WITH A 70 FT. (CUT TO 65 FT.) MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 20 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
- B. INSTALL 27 FT. STEEL POLE WITH A 50 FT. (CUT TO 45 FT.) MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 20 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
- C. INSTALL 27 FT. STEEL POLE WITH A 70 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
- D. INSTALL 27 FT. STEEL POLE WITH A 60 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN POLE BASE).
- E. INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH CONCRETE PAD. (INSTALL 2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE POLYVINYL CHLORIDE ELECTRICAL CONDUIT BENDS IN CABINET BASE.)
- F. INSTALL HANDHOLE.
- G. INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
- H. REMOVE EXISTING STOP LINE.
- J. INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN.
- K. INSTALL MICROLOOP PROBE SET WITH 1,000 FT. LEAD-IN.
- L. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT STEP DOWN TRANSFORMER FOR USE BY SMECO FORCES.

CONSTRUCTION DETAILS CONTINUED

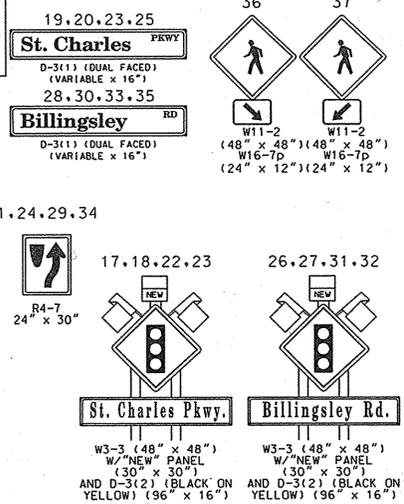
- M. INSTALL 3 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- N. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- O. INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (BORED).
- P. INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE).
- Q. INSTALL W3-3 "SIGNAL AHEAD" SIGN (48 IN. x 48 IN.) WITH "NEW" PANEL AND FLAGS AND D-3(2) "BILLINGSLEY RD" BLACK ON YELLOW (96 IN. x 16 IN.) ON TWO 4 IN. x 6 IN. TREATED WOOD POSTS APPROXIMATELY 550 FT. IN ADVANCE OF THE INTERSECTION ON ST. CHARLES PKWY.
- R. INSTALL W3-3 "SIGNAL AHEAD" SIGN (48 IN. x 48 IN.) WITH "NEW" PANEL AND FLAGS AND D-3(2) "ST. CHARLES PKWY" BLACK ON YELLOW (96 IN. x 16 IN.) ON TWO 4 IN. x 6 IN. TREATED WOOD POST APPROXIMATELY 475 FT. IN ADVANCE OF THE INTERSECTION ON BILLINGSLEY ROAD.
- S. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
- T. REMOVE EXISTING PAVEMENT MARKING (ARROW).
- U. INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE CONDUIT BEND IN PEDESTAL BASE.
- V. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS BILLINGSLEY ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- W. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNALS, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS BILLINGSLEY ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- X. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ST. CHARLES PKWY"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- Y. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS ST. CHARLES PKWY"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).
- Z. INSTALL W11-2 SIGN (48 IN. x 48 IN.) ON TWO 4 IN. x 6 IN. TREATED WOOD POSTS.
- AA. INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK).
- BB. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- CC. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.21) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- DD. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
- EE. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED).
- FF. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.11) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- GG. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.22) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
- HH. INSTALL 2 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND TELEPHONE SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT CONTROLLER CABINET FOR FUTURE USE.
- JJ. REMOVE EXISTING R1-1 SIGN AND SUPPORT.
- KK. REMOVE EXISTING R1-1 SIGN.
- LL. REMOVE EXISTING R3-7R SIGN AND SUPPORT.
- MM. INSTALL R4-7 SIGN (24 IN. x 30 IN.) MOUNTED ON ONE 4 IN. x 6 IN. TREATED WOOD POST.

THE TRAFFIC SIGNALIZATION IMPROVEMENTS, ON SHEETS TS-1 AND TS-2, ARE SHOWN FOR COORDINATION PURPOSES ONLY. THE SIGNALIZATION IMPROVEMENTS WILL BE BUILT UNDER A SEPARATE CONTRACT. THE SIGNALIZATION IMPROVEMENTS MUST BE COMPLETED AND OPERATIONAL PRIOR TO OPENING THE ROAD IMPROVEMENTS, PROPOSED UNDER THIS CONTRACT, TO PUBLIC USE.

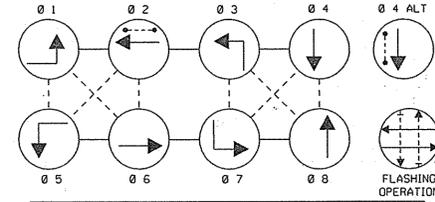
EXISTING SIGNS TO BE REMOVED



SIGNS



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.

SPECIAL NOTE:
 CONTRACTOR SHALL INSTALL CONDUIT AT SUFFICIENT DEPTH TO AVOID DISTURBANCE DURING ROADWAY CONSTRUCTION. CONDUIT SHALL BE INSTALLED PRIOR TO BEGINNING ROADWAY CONSTRUCTION.

GENERAL NOTES

1. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO THE CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
2. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
3. INSTALL CONDUIT AND LOOP DETECTORS PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS. REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR ADDITIONAL DETAILS.
4. VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
5. ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
6. THE SIGNAL CONTRACTOR SHALL DETERMINE IF ANY WORK BY OTHER CONTRACTORS CAN NOT BE COMPLETED UNTIL INSTALLATION OF SIGNAL EQUIPMENT IS COMPLETE. THE SIGNAL CONTRACTOR SHALL NOTIFY OTHER CONTRACTORS OF THIS WORK.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09, AND FIG. 4E-02 AND THE LATEST EDITION OF THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK UNTIL THE CONFLICT IS RESOLVED. IF NECESSARY, A WAIVER SHALL BE OBTAINED, SIGNED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.



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LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES

AERIAL CABLE	A
ELECTRICAL	E
TELEPHONE	T
GAS	G
SEWER	SS
STORM DRAIN	SD
WATER	W
CABLE TV	TV

REVISIONS	APPROVALS
	 MARK BAKER TEAM LEAD, TRAFFIC ENGINEERING DESIGN DIVISION 5-1-08
	 RICK BAKER ASSY. TRAFFIC ENGINEERING DESIGN DIVISION
	 WENDY WOOD CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	 CO. SMITH DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
 Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNALIZATION PLAN
BILLINGSLEY ROAD AT ST. CHARLES PARKWAY

DRAWN BY: B. DONOWAY	F.A.P. NO. ***	TS NO. TS-1	SHEET NO. 105 OF 129
CHECKED BY: N. LEARY	S.H.A. NO. ***	T.I.M.S. NO. 1704X	
SCALE: 1" = 20'	COUNTY: CHARLES	LOG MILE: ***	
DATE: 12-7-07			