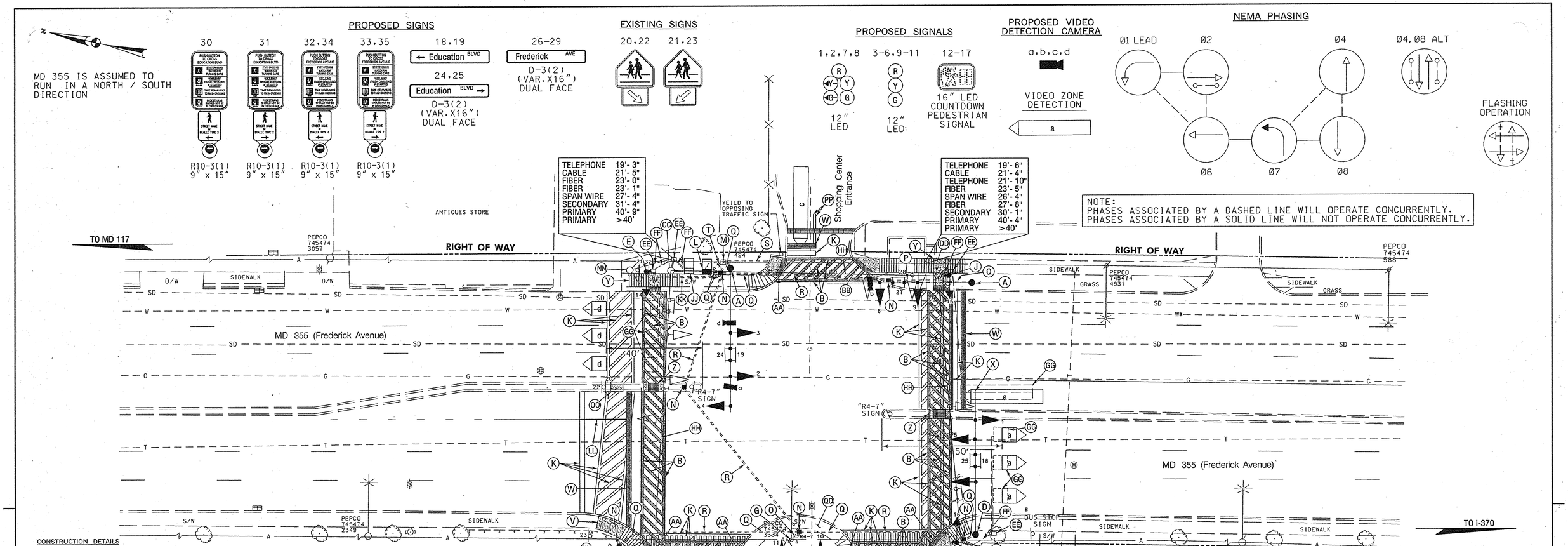

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) POLE WITH A 60 FT. MAST ARM. TRAFFIC SIGNAL HEADS. SIGNS AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).

B. INSTALL 12 IN. HEAT APPLIED. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.

C. INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) POLE WITH A 50 FT. MAST ARM. TRAFFIC SIGNAL HEADS. SIGNS AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).

D. INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) STEEL POLE WITH A 60 (CUT TO 55 FT.) MAST ARM. TRAFFIC SIGNAL HEADS AND SIGNS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).

E. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS FREDERICK AVENUE"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

F. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS EDUCATION BLVD."). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

G. USE EXISTING WOOD UTILITY POLE AND INSTALL 2 IN. ELECTRICAL PVC RISER FOR EXISTING UNDERGROUND INTERCONNECT CABLE. DISCONNECT AND PULL BACK EXISTING INTERCONNECT CABLE FROM BASE MOUNTED CABINET AND RE-FEED IN RISER AND CONDUIT TO NEW BASE MOUNTED CABINET. (SEE WIRING DIAGRAM FOR ADDITIONAL INTERCONNECT DETAILS) CONTRACTOR SHALL CUT THE EXISTING INTERCONNECT CABLE TO ALLOW FOR SUFFICIENT LENGTH OF CABLE TO BE RE-FED TO NEW CABINET TO MAINTAIN COMMUNICATION CONNECTION TO THE SOUTH. REMOVE AND DISPOSE OF ALL UNUSED INTERCONNECT CABLE.

H. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT. AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS EDUCATION BLVD."). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

J. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE. COUNTDOWN PEDESTRIAN SIGNAL HEAD. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS FREDERICK AVENUE"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).

K. REMOVE EXISTING PAVEMENT MARKINGS.

L. INSTALL NEMA SIZE "6" BASE MOUNTED CONTROLLER AND CABINET WITH CONCRETE PAD (INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE.)

M. INSTALL BASE MOUNTED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80. 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.

N. INSTALL HANDHOLE.

O. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

P. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

Q. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.

R. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.

S. INSTALL 4 IN. SCHEDULE 80. POLYVINYL CHLORIDE ELECTRICAL CONDUIT TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE. CAP AND MARK CONDUIT 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.

T. INSTALL 2 IN. SCHEDULE 80. PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.

U. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE (CUT TO 5 FT.) WITH BREAKAWAY BASE. (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON SHEET TSP-3) AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLEDWITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS FREDERICK AVENUE"). (INSTALL 1-3 IN. SCHEDULE 80. 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN PEDESTAL BASE).

V. REMOVE EXISTING SIDEWALK RAMP AND INSTALL 4 IN. CONCRETE SIDEWALK AND COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02,TYPE 'A').

W. INSTALL 24 IN. HEAT APPLIED. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.

CONSTRUCTION DETAILS CONTINUED

X. CUT. CLEAN. GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.

Y. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.13) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).

Z. INSTALL CUT-THROUGH MEDIAN (STANDARD NO. MD 655.21) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).

AA. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).

BB. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.11) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).

CC. REMOVE EXISTING STRAIN POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

DD. REMOVE EXISTING STRAIN POLE AND PEDESTRIAN SIGNAL HEAD. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

EE. REMOVE EXISTING HANDHOLE.

FF. CAP AND ABANDON EXISTING CONDUIT.

GG. ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS. HANDHOLES. SIGNAL STRUCTURES AND CONTROLLER.

HH. REMOVE EXISTING SPAN WIRE AND ALL ASSOCIATED EQUIPMENT.

JJ. REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. SHA SIGNAL SHOP SHALL BE NOTIFIED TO REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET.

KK. REMOVE EXISTING SIDEWALK AND INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. REPLACE 4 IN. CONCRETE SIDEWALK.

LL. INSTALL 5 IN. HEAT APPLIED. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING.

MM. INSTALL 4 IN CONCRETE SIDEWALK.

NN. REMOVE EXISTING PEDESTAL POLE. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

OO. REMOVE EXISTING CONCRETE MEDIAN CUT THROUGH. INSTALL 4 IN. CONCRETE SIDEWALK AND COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02 TYPE 'A').

PP. INSTALL 5 IN. HEAT APPLIED. YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING.

QQ. REMOVE EXISTING CONCRETE SIDEWALK AND BACKFILL AND SEED.

GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03. MD 818.01. MD 818.02. MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
4. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
5. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
7. THE CONTRACTOR SHALL NOT CUT MAST ARM AS INDICATED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
8. 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%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON. NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
11. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP PUBLICATION. "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET. THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED. APPROVED BY THE DIRECTOR. OFFICE OF TRAFFIC AND SAFETY.
12. THE CONTRACTOR IS TO DELIVER ALL APS EQUIPMENT TO THE MONTGOMERY COUNTY SIGNAL SHOP FOR PROGRAMMING AND TESTING. CONTACT MR. KEITH LORD TO COORDINATE 301-279-1971.
13. INSTALL CONDUIT PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS.
14. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.
15. REFER TO SHEET 3 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

SPECIAL NOTE:

THE CONTRACTOR SHALL NOT BLOCK VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF MAST ARM. IF NEW MAST ARM CANNOT BE INSTALLED DUE TO CONFLICT WITH EXISTING SIGNAL INDICATIONS OR SPAN WIRES. A SIGNAL OUTAGE SHALL OCCUR DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.

WR&A
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Engineers, Architects and Planners
801 South Caroline Street
Baltimore, Maryland 21231
410-235-3450

APPROVALS

TEAM LEADER
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR

ORIGINAL ON FILE

REVISIONS

C	RECONSTRUCT TRAFFIC SIGNAL AND INSTALL AUDIBLE PEDESTRIAN SIGNALS CONTRACT NO. AT9105185 BRD NML	04/30/08
B	SHA NO. AT7825185 SIGNAL MOD. ADD COUNTDOWN PEDESTRIAN SIGNALS ACROSS MD 355 SVA SAS	07/01/05
A	AS BUILT ADD PEDESTRIAN MOVEMENT TO PHASE 4 07-5-3-92 SAS	04-94

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (Frederick Avenue) and
Education Boulevard

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' ADVERTISED DATE Redrawn 4/94 CONTRACT NO. AT9105185

DESIGNED BY R R ZACHERL (STS) COUNTY Montgomery
DRAWN BY BRUCE THOM. WHN (STS) LOGMILE 15035513.85
CHECKED BY DLA D. DODA '2-7-89 % TIMS NO. H639
F.A.P. NO. N/A TOD NO. N/A

TS NO. 2542C | DRAWING TSP - 1 OF 1 | SHEET NO. 1 OF 3

PLOTTED: 05-01-2008
FILE: n:\31556-050\cadd\pSG-P001_h639.dgn

TOD NO: XX444-12
SHA NO: MO526A56/B56
MD 355@ EDUCATION BLD

BY: jrasmussen