MD 231 (HALLOWING POINT ROAD) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

## PROPOSED SIGNS

9,10 — J. W. Williams RD — D-3(1) (VAR.x16") DUAL FACED

11 — WEST MARYLAND 231 — SHIELD ASSEMBLY (30"x51")

12 — YIELD — R1-2 (36"x36")

13 — EAST MARYLAND 231 — SHIELD ASSEMBLY (48"x75")

14 — Hallowing Point RD — D-3(1) (VAR.x16") DUAL FACED

## TEMPORARY SIGNS

15,16 — NEW — W3-3(NEW) (36"x36") LOCATE 800' IN ADVANCE OF THE STOP LINES

## EXISTING SIGN TO BE REMOVED

REMOVE THE EXISTING R1-1 "STOP SIGN" ON J.W. WILLIAMS ROAD AFTER THE TRAFFIC SIGNAL IS ENERGIZED AND OPERATIONAL.

## PROPOSED SIGNALS

3-8: R Y G — 12"

2: R Y G — 12"

1: R Y G — 12"/8"

## PROPOSED DETECTION CAMERAS

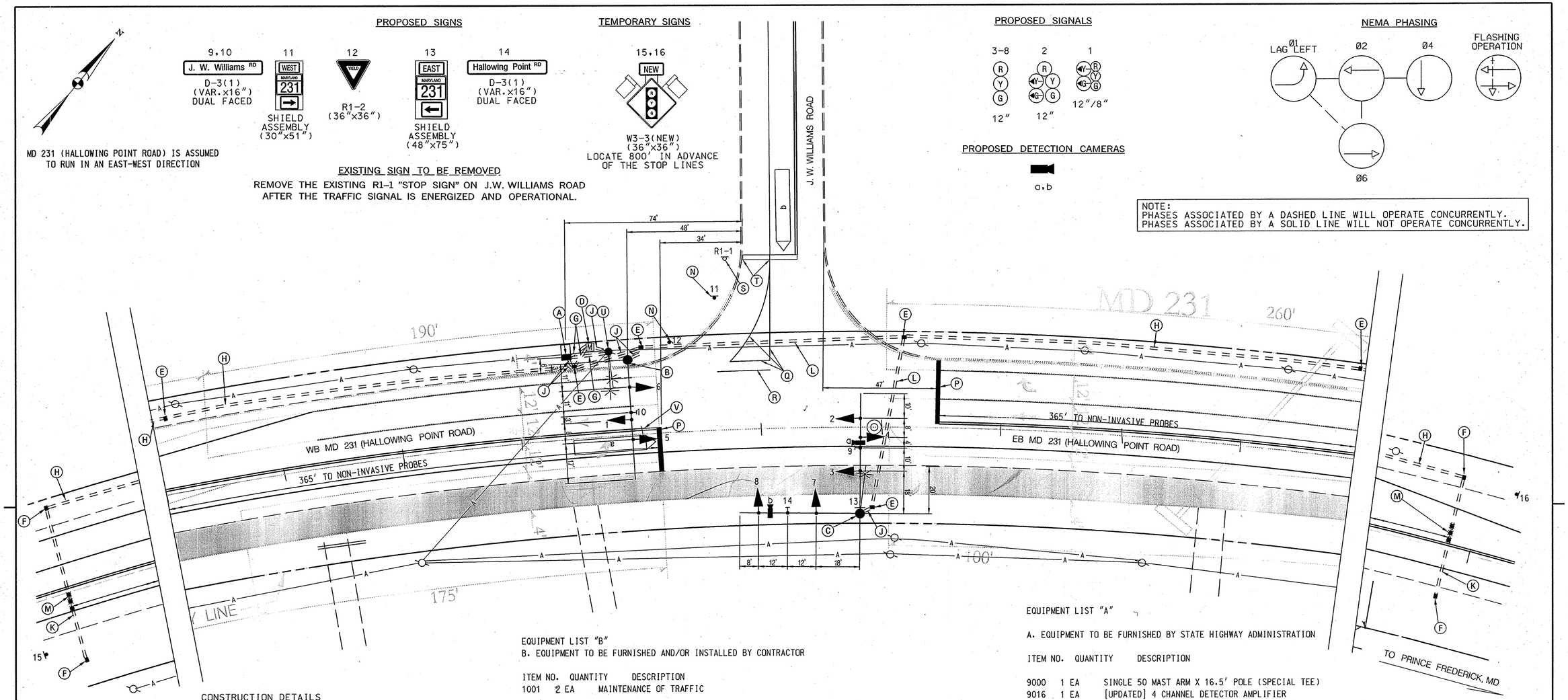
a,b

## NEMA PHASING

LAG Ø1 LEFT, Ø2, Ø4, Ø6

FLASHING OPERATION

NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.




## CONSTRUCTION DETAILS

A. INSTALL TRAFFIC SIGNAL CONTROLLER AND CABINET.
B. INSTALL 16.5' SIGNAL POLE (15' TEE) WITH A SINGLE 50' MAST ARM, TRAFFIC SIGNAL HEADS AND SIGN.
C. INSTALL 27' SIGNAL POLE WITH TWIN 50'/50' MAST ARMS, TRAFFIC SIGNAL HEADS, SIGNS, 15' LIGHTING ARM WITH 250 WATT HPSV LUMINAIRE AND VIDEO DETECTION CAMERA.
D. INSTALL METERED SERVICE PEDESTAL.
E. INSTALL ELECTRICAL HANDHOLE.
F. INSTALL ELECTRICAL HANDHOLE (LONG DIMENSION PERPEDICULAR TO ROADWAY FOR NON-INVASIVE PROBES).
G. INSTALL 2" SCHEDULE 80 PVC ELECTRICAL CONDUIT - TRENCHED.
H. INSTALL 3" SCHEDULE 80 PVC ELECTRICAL CONDUIT - TRENCHED.
J. INSTALL 4" SCHEDULE 80 PVC ELECTRICAL CONDUIT - TRENCHED.
K. INSTALL 3" SCHEDULE 80 PVC ELECTRICAL CONDUIT - BORED.
L. INSTALL 4" SCHEDULE 80 PVC ELECTRICAL CONDUIT - BORED.
M. INSTALL NON-INVASIVE PROBE SET WITH 1000' LEAD-IN.
N. INSTALL GROUND MOUNTED SIGN ON DRILLED 4"x6" WOOD POSTS.
P. INSTALL 24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS (STOP LINE).
Q. INSTALL 10" WHITE THERMOPLASTIC PAVEMENT MARKINGS.
R. INSTALL 5" WHITE THERMOPLASTIC PAVEMENT MARKINGS.
S. REMOVE EXISTING STOP SIGN.
T. REMOVE PORTION OF EXISTING STOP LINE.
U. EXISTING LEASED LIGHT IS TO BE UPGRADED TO 250 WATT HPSV LUMINAIRE BY OTHERS.
V. INSTALL 5" DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKINGS.

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

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 1001 | 2 EA | MAINTENANCE OF TRAFFIC |
| 2002 | 3 CY | TEST PIT EXCAVATION |
| 5001 | 280 LF | 5 INCH HEAT APPLIED WHITE OR YELLOW PERMAMENT PREFORMED THERMOPLASTIC PAVEMENT MARKING |
| 5005 | 44 LF | 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS |
| 8001 | 25 EA | 12 INCH LED SIGNAL HEAD SECTION |
| 8004 | 3 EA | 8 INCH LED SIGNAL HEAD SECTION |
| 8007 | 1 EA | ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE |
| 8013 | 2 EA | INSTALL STEEL STRAIN OR MAST ARM POLE WITH SINGLE OR TWIN MAST ARMS ANY SIZE |
| 8021 | 2 EA | NONINVASIVE DETECTOR ANY LENGTH LEAD IN CABLE UP TO 1000 FT |
| 8026 | 2 EA | VIDEO DETECTION CAMERA AND CABLE UP TO 500 FOOT |
| 8035 | 860 LF | SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES TRENCHED |
| 8036 | 325 LF | SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES BORED |
| 8037 | 70 LF | WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH |
| 8039 | 103 SF | INSTALL OVERHEAD OR GROUND MOUNTED SIGN INCLUDING ALL HARDWARE |
| 8041 | 255 LF | NO 6 AWG STRANDED BARE COPER GROUND WIRE |
| 8043 | 1 EA | METERED SERVICE PEDESTAL EMBEDDED |
| 8046 | 70 LF | ELECTRICAL CABLE 1 CONDUCTOR NO 4 AWG THHN / THWN |
| 8047 | 11 EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 8056 | 100 LF | ELECTRICAL CABLE - 5 CONDUCTOR NO 14 AWG |
| 8057 | 813 LF | ELECTRICAL CABLE - 7 CONDUCTOR NO 14 AWG |
| 8058 | 300 LF | ELECTRICAL CABLE - 2 CONDUCTOR NO 12 AWG TC |
| 8065 | 1 EA | INSTALL CONTROLLER AND CABINET - BASE MOUNT |

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

| ITEM NO. | QUANTITY | DESCRIPTION |
|---|---|---|
| 9000 | 1 EA | SINGLE 50 MAST ARM X 16.5' POLE (SPECIAL TEE) |
| 9016 | 1 EA | [UPDATED] 4 CHANNEL DETECTOR AMPLIFIER |
| 9024 | 1 EA | [UPDATED] 50/50 MAST ARM TWIN X 27' - 0" POLE |
| 9042 | 1 EA | [UPDATED] CONTROLLER ASC II WITH TELEMETRY |
| 9044 | 1 EA | [UPDATED] CONTROLLER CABINET, SIZE 6 |
| 9086 | 1 EA | [UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS |
| 9570 | 47 SF | [UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN |
| 9571 | 58 SF | [UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN |

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

MD 231 (HALLOWING POINT ROAD) AT J.W. WILLIAMS ROAD
BARSTOW, MARYLAND

# SIGNAL PLAN

| APPROVALS | REVISIONS |
|---|---|
| TEAM LEADER — 10-2-06 | |
| ASST. DIV. CHIEF — 10-2-06 | |
| DIVISION CHIEF — 10/2/06 | |
| OFFICE DIRECTOR — 10/2 | |

SCALE 1" = 20' DATE SEPT. 30, 2006 CONTRACT NO. AT9155185

DESIGNED BY SMH 3.31.06
DRAWN BY SMH
CHECKED BY MAR
FAP NO. SEE TITLE SHEET

COUNTY CALVERT
LOGMILE 04023104.33
TIMS NO. H430
TOD NO.

TS NO. 4525 | DRAWING --- OF | SHEET NO. 1 OF 1

PLOTTED: Friday, September 29, 2006 at 8:31:18 AM
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BY: shollie1