THE STORMWATER MANAGEMENT PLAN SHOWN HEREON IS APPROVED.

WASHINGTON COUNTY DIVISION OF PUBLIC WORKS DATE

PROPOSED LED SIGNALS

1,4,7,10 — 12/8"
2,5,8,11 — 12"
3,6,9,12 — 12"
13–14 — 16" LED PEDESTRIAN COUNTDOWN SIGNAL HEAD

MD 64 IS ASSUMED TO RUN IN AN EAST–WEST DIRECTION

PROPOSED EQUIPMENT

a,b,c,d,e,f — VIDEO DETECTION ZONE

A,B,C,D — OPTICOM

15 — PUSH BUTTON TO CROSS EASTERN BLVD: 1 START CROSSING WATCH FOR TURNING CARS; 2 DON'T START FINISH CROSSING IF STARTED; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOT BE IN CROSSWALK. EASTERN BLVD IN BRAILLE TYPE 2

16 — PUSH BUTTON TO CROSS EASTERN BLVD: 1 START CROSSING WATCH FOR TURNING CARS; 2 DON'T START FINISH CROSSING IF STARTED; 3 TIME REMAINING TO FINISH CROSSING; 4 PEDESTRIANS SHOULD NOT BE IN CROSSWALK. EASTERN BLVD IN BRAILLE TYPE 2

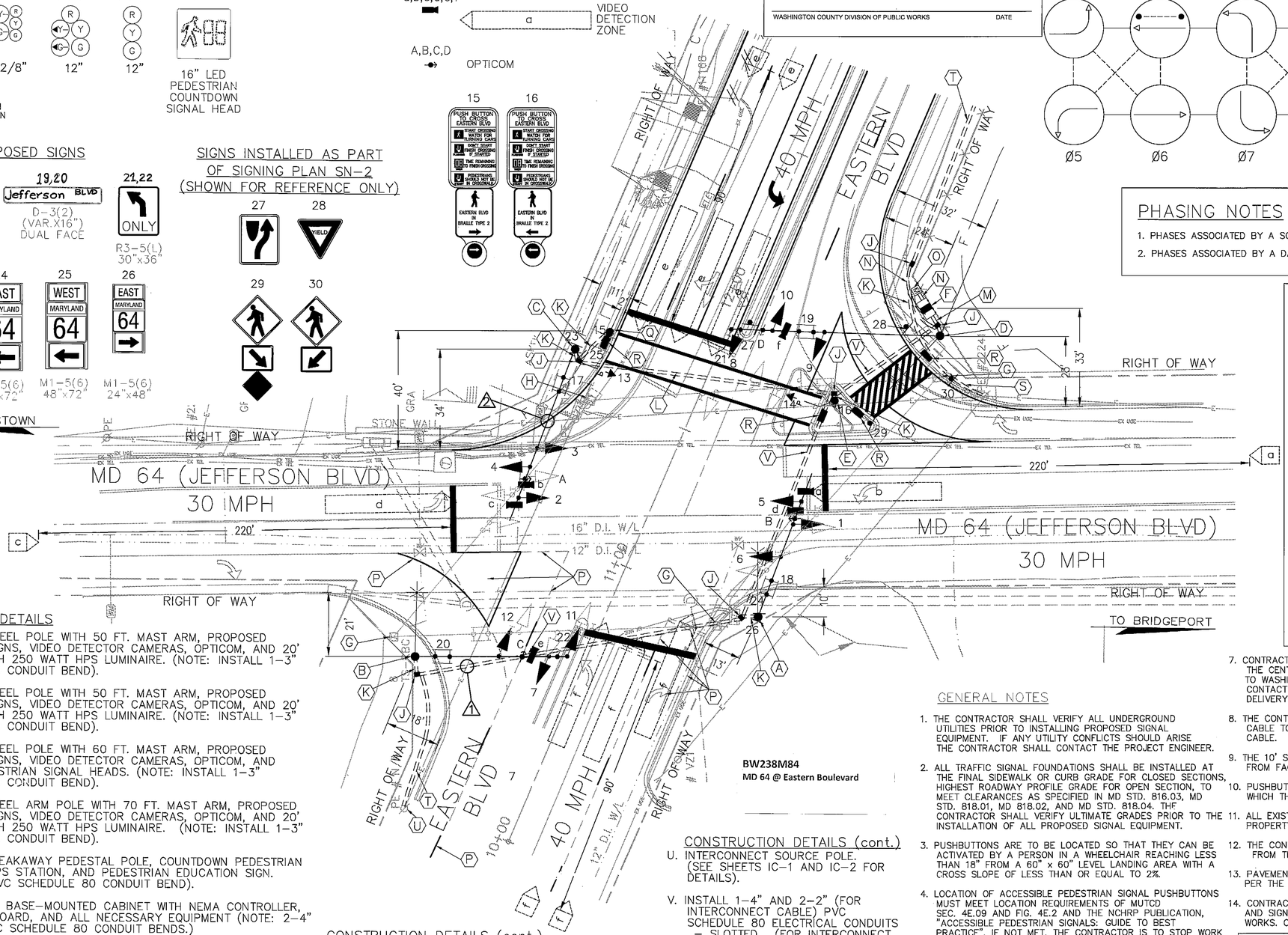
PROPOSED SIGNS

17,18 — Eastern BLVD — D-3(2) (VAR.X16") DUAL FACE
19,20 — Jefferson BLVD — D-3(2) (VAR.X16") DUAL FACE
21,22 — ONLY — R3-5(L) 30"x36"

SIGNS INSTALLED AS PART OF SIGNING PLAN SN–2 (SHOWN FOR REFERENCE ONLY)

27, 28, 29, 30

23 — WEST MARYLAND 64 — M1-5(6) 24"x48"
24 — EAST MARYLAND 64 — M1-5(6) 48"x72"
25 — WEST MARYLAND 64 — M1-5(6) 48"x72"
26 — EAST MARYLAND 64 — M1-5(6) 24"x48"



NEMA PHASING

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8

FLASHING OPERATION
PRE–EMPTION A
PRE–EMPTION B
PRE–EMPTION C
PRE–EMPTION D

PHASING NOTES

1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
2. PHASES ASSOCIATED BY A DASHED LINE MAY/WILL OPERATE CONCURRENTLY

UTILITY HEIGHTS

NOTE: HEIGHTS WILL CHANGE WITH UTILITY RELOCATION PLAN. UTILITIES ARE DESIGNED TO ACCOMMODATE SIGNAL EQUIPMENT AS SHOWN.

AERIAL CABLE DETAIL 1

PRIMARY	OVER 35'
SECONDARY	29' 5"
COMM	25' 3"
COMM	22' 4"
COMM	18' 6"
GRADE	

AERIAL CABLE DETAIL 2

PRIMARY	OVER 35'
SECONDARY	31' 1"
COMM	27' 1"
COMM	25' 11"
COMM	23' 4"
GRADE	

CONSTRUCTION DETAILS

A. INSTALL 27 FT. STEEL POLE WITH 50 FT. MAST ARM, PROPOSED SIGNAL HEADS, SIGNS, VIDEO DETECTOR CAMERAS, OPTICOM, AND 20' LIGHTING ARM WITH 250 WATT HPS LUMINAIRE. (NOTE: INSTALL 1–3" PVC SCHEDULE 80 CONDUIT BEND).

B. INSTALL 27 FT. STEEL POLE WITH 50 FT. MAST ARM, PROPOSED SIGNAL HEADS, SIGNS, VIDEO DETECTOR CAMERAS, OPTICOM, AND 20' LIGHTING ARM WITH 250 WATT HPS LUMINAIRE. (NOTE: INSTALL 1–3" PVC SCHEDULE 80 CONDUIT BEND).

C. INSTALL 27 FT. STEEL POLE WITH 60 FT. MAST ARM, PROPOSED SIGNAL HEADS, SIGNS, VIDEO DETECTOR CAMERAS, OPTICOM, AND COUNTDOWN PEDESTRIAN SIGNAL HEADS. (NOTE: INSTALL 1–3" PVC SCHEDULE 80 CONDUIT BEND).

D. INSTALL 27 FT. STEEL ARM POLE WITH 70 FT. MAST ARM, PROPOSED SIGNAL HEADS, SIGNS, VIDEO DETECTOR CAMERAS, OPTICOM, AND 20' LIGHTING ARM WITH 250 WATT HPS LUMINAIRE. (NOTE: INSTALL 1–3" PVC SCHEDULE 80 CONDUIT BEND).

E. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE, COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS STATION, AND PEDESTRIAN EDUCATION SIGN. (NOTE: 1–3 IN. PVC SCHEDULE 80 CONDUIT BEND).

F. INSTALL A SIZE 'S' BASE–MOUNTED CABINET WITH NEMA CONTROLLER, VIDEO INTERFACE BOARD, AND ALL NECESSARY EQUIPMENT (NOTE: 2–4" PVC AND 2–2" PVC SCHEDULE 80 CONDUIT BENDS.)

G. REMOVE EXISTING STRAIN POLE, SPAN WIRE, FOUNDATION 12" BELOW GRADE, AND ALL EXISTING SIGNAL EQUIPMENT.

H. REMOVE EXISTING STRAIN POLE, SPAN WIRE, POLE MOUNTED CABINET, FOUNDATION 12" BELOW GRADE, AND ALL EXISTING SIGNAL EQUIPMENT.

J. INSTALL HANDHOLE.

K. INSTALL 3" PVC SCHEDULE 80 ELECTRICAL CONDUIT – TRENCHED.

L. INSTALL 4" PVC SCHEDULE 80 ELECTRICAL CONDUIT – SLOTTED.

M. INSTALL 2–4" AND 2–2" PVC (FOR INTERCONNECT CABLE) SCHEDULE 80 ELECTRICAL CONDUIT –TRENCHED.

N. INSTALL 3" PVC SCHEDULE 80 ELECTRICAL CONDUIT – TRENCHED.

CONSTRUCTION DETAILS (cont.)

O. INSTALL METERED SERVICE PEDESTAL. (NOTE: 1–3" PVC BEND WITH 3" CONDUIT TO RELOCATED UTILITY POLE #PE22241, PER UTILITY RELOCATION PLANS).

P. SOUTH OF JEFFERSON BLVD PAVEMENT MARKING ERADICATION AND RE–STRIPING TO BE INSTALLED BY CITY OF HAGERSTOWN FORCES.

Q. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE (CUT TO 5 FT), APS STATION, AND PEDESTRIAN EDUCATION SIGN. (NOTE: 1–3 IN. PVC SCHEDULE 80 CONDUIT BEND).

R. INSTALL DETECTABLE WARNING SURFACE.

S. INSTALL 3" PVC SCHEDULE 80 ELECTRICAL CONDUIT TRENCHED TO BASE OF RELOCATED UTILITY POLE. INSTALL 8' OF CONDUIT STUB OUT AT BASE OF POLE.

T. INTERCONNECT CONDUIT AND CABLE TO BE INSTALLED PER INTERCONNECT PLANS (SEE SHEETS IC–1 AND IC–2 FOR DETAILS).

CONSTRUCTION DETAILS (cont.)

U. INTERCONNECT SOURCE POLE. (SEE SHEETS IC–1 AND IC–2 FOR DETAILS).

V. INSTALL 1–4" AND 2–2" (FOR INTERCONNECT CABLE) PVC SCHEDULE 80 ELECTRICAL CONDUITS – SLOTTED. (FOR INTERCONNECT CABLE SEE SHEETS IC–1 AND IC–2 FOR DETAILS).

GENERAL NOTES

1. 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.
2. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTION, TO MEET CLEARANCES AS SPECIFIED IN MD STD. 816.03, MD STD. 818.01, MD 818.02, AND MD STD. 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL PROPOSED SIGNAL EQUIPMENT.
3. 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%.
4. 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.
5. PROPOSED SIGNAL EQUIPMENT SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE SIDEWALK AND PEDESTRIAN RAMPS, AND THE INSTALLATION OF THE DETECTABLE WARNING SURFACE.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SIGNAL OPERATION DURING THE COMPLETE CONSTRUCTION PERIOD.
7. CONTRACTOR IS RESPONSIBLE FOR THE PURCHASE AND DELIVERY OF THE CENTRAL CONTROL NAVIGATOR UNIT FOR THE CONTROLLER TO WASHINGTON COUNTY HIGHWAYS DEPARTMENT, NORTHERN AVEUNE. CONTACT DAVE SHRADER AT (240)–313–2715 TWO WEEKS PRIOR TO DELIVERY DATE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM 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. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
12. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE UNUSED CABLES FROM THE EXISTING HANDHOLES AND CONDUIT.
13. PAVEMENT MARKINGS AT THE INTERSECTION SHALL BE CONSTRUCTED PER THE SIGNING AND MARKING PLANS (SN–1 TO SN–4).
14. CONTRACTOR TO COORDINATE INSTALLATION OF INTERCONNECT CABLE AND SIGNAL UPGRADE WITH THE CITY OF HAGERSTOWN DEPT. OF PUBLIC WORKS. CONTACT ERIK KLINE AT 301–739–8577, EXT. 117.

GEOMETRIC LEGEND

EXISTING EDGE OF PAVEMENT

UTILITY LEGEND

E	ELECTRIC CABLES
A	AERIAL CABLES
T	TELEPHONE CABLES
FO	FIBER–OPTIC

APPROVALS

TEAM LEADER, TRAFFIC ENGINEERING DIVISION
ASST. CHIEF TRAFFIC ENGINEERING DIVISION
CHIEF TRAFFIC ENGINEERING DIVISION
DIRECTOR, OFFICE OF TRAFFIC & SAFETY

ORIGINAL ON FILE

REVISIONS

(b) SIGNAL RECONSTRUCTION DUE TO GEOMETRIC IMPROVEMENTS WASH. CO. PROJECT #10–205 TIMS #K755 — 4–2–12
SJW | AJM

(c) SHA NO. 855–25006 ADD NEW CONDUIT AND LOOPS SW QUAD DUE TO EASTERN BLVD WIDENING — 5–06
DSU | DD | DD | WH | WH

(d) SHA NO. 855–25006 ADD NEAR SIDE 5–SECTION SIGNALS ON ALL APPROACHES TIMS D386 — 5–99
JAH | MHK | MHK | BKK | TH

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

MD 64 (JEFFERSON BLVD) AT EASTERN BLVD

HAGERSTOWN, MARYLAND

SIGNAL PLAN

SCALE 1"=20' DATE REDRAWN 1/10/91 CONTRACT NO. WAXXXX X

DESIGNED BY E. SIMMERS — COUNTY WASHINGTON
DRAWN BY BRUCE THOMPSON TZ — LOGMILE 21006401.17
CHECKED BY — T.I.M.S. NO. N/A
F.A.P. NO. — TOD NO. TS2123B

DRAWING NO. TS 2123 D — SHEET NO. 1 OF 2

T3 DESIGN, P.C.
3927 OLD LEE HWY
SUITE 101-C
FAIRFAX, VA 22030
PHONE: 703-359-5861
www.t3design.us

NO.	REVISION DESCRIPTION	BY	DATE

DESIGNED BY: S.JW
DRAWN BY: RLO
CHECKED BY: AJM
DATE: 05/12

DIVISION OF PUBLIC WORKS
WASHINGTON COUNTY, MARYLAND
ENGINEERING DEPARTMENT

Washington County Administration Building
80 W. Baltimore St. Hagerstown, MD 21740
Phone: 240-313-2400 Fax: 240-313-2401

EASTERN BOULEVARD WIDENING - PHASE 1

TRAFFIC SIGNAL PLANS
MD 64 AT EASTERN BLVD

SG-1

SCALE 1"=20'

SHEET NO. 43

10-205