N

US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

EXISTING SIGNS TO BE REMOVED

- PUSH BUTTON TO CROSS WEST PATRICK ST — 9"X12" (2 EA.)
- ONE WAY — 36"X12" (3 EA.)
- ONE WAY — 36"X12" (3 EA.)
- ONLY — 30"X36" (2 EA.)
- Grove Hill Rd — 96"X16" (1 EA.)
- 30"X36" (2 EA.)
- 24"X30" (1 EA.)
- Grove Hill Rd — 96"X16" (1 EA.)
- YIELD TO OPPOSING TRAFFIC WHEN TURNING LEFT — 30"X36" (1 EA.)
- 18"X18" (1 EA.)

PROPOSED SIGNS

34 — W. Patrick ST / WEST 40 EAST — M1-5(4) 78"X36"

32,33 — ONLY — R3-5L 30"X36"

27b,28a — Grove Hill RD — D-3(1) 90"X16" (DUAL FACE)

27a,28b — Grove Hill RD — D-3(1) 90"X16" (DUAL FACE)

35 — W. Patrick ST / EAST 40 WEST — M1-5(4) 78"X36"

29,30,31 — R4-7 @ 15° 24"X30"

EXISTING SIGNALS TO BE REMOVED

16" (4 EA.)

12" (4 EA.)

12" (8 EA.)

PROPOSED LED SIGNALS

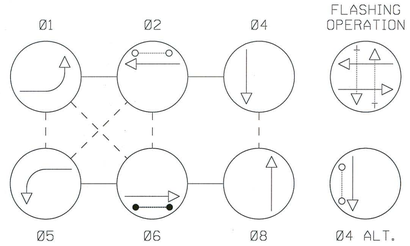
1,2,5,6 — 12"

3,4,7,8, 9,10,11,12 — 12"

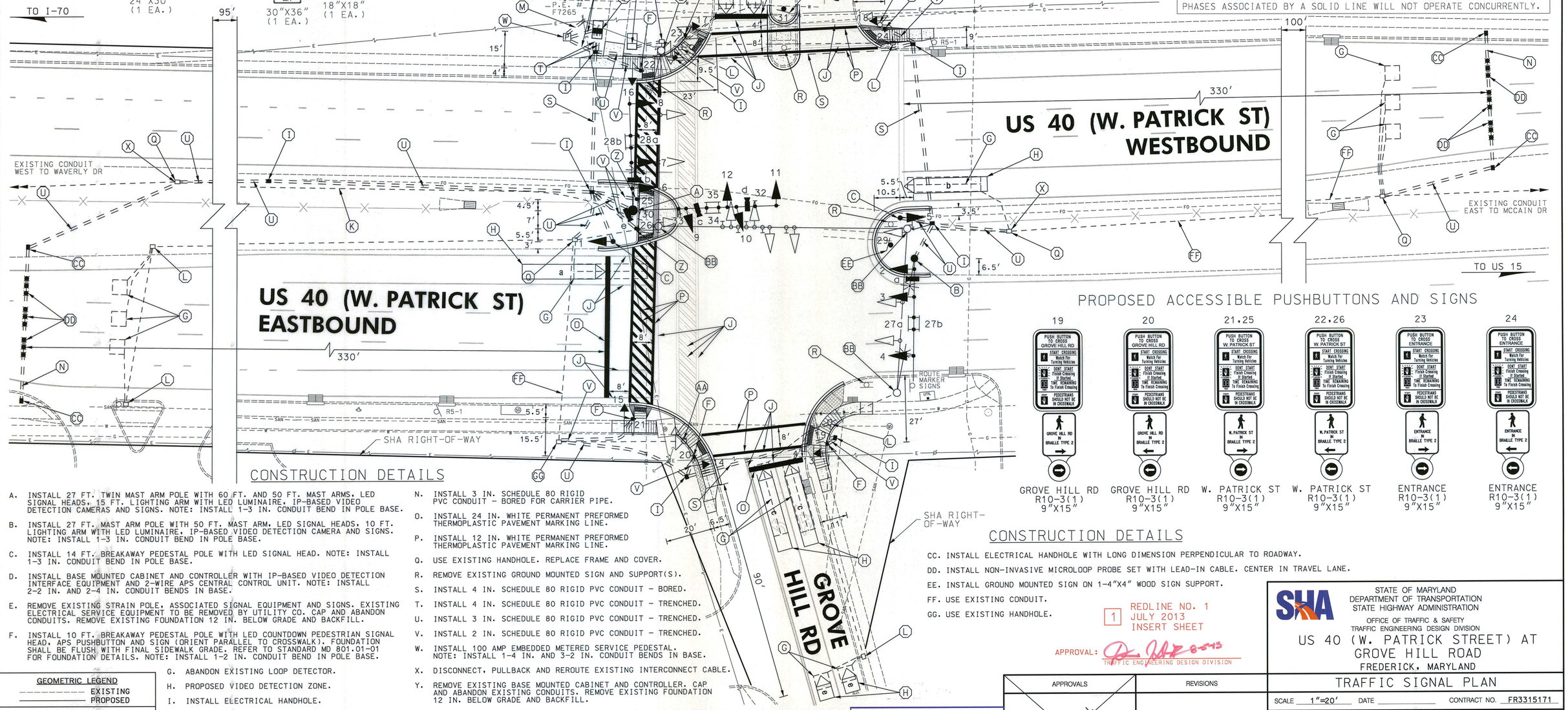
13,14,15, 16,17,18 — 16"

a,b,c,d,e — PROPOSED IP-BASED VIDEO DETECTION

NEMA PHASING



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



PROPOSED ACCESSIBLE PUSHBUTTONS AND SIGNS

CONSTRUCTION DETAILS

A. INSTALL 27 FT. TWIN MAST ARM POLE WITH 60 FT. AND 50 FT. MAST ARMS, LED SIGNAL HEADS, 15 FT. LIGHTING ARM WITH LED LUMINAIRE, IP-BASED VIDEO DETECTION CAMERAS AND SIGNS. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

B. INSTALL 27 FT. MAST ARM POLE WITH 50 FT. MAST ARM, LED SIGNAL HEADS, 10 FT. LIGHTING ARM WITH LED LUMINAIRE, IP-BASED VIDEO DETECTION CAMERA AND SIGNS. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

C. INSTALL 14 FT. BREAKAWAY PEDESTAL POLE WITH LED SIGNAL HEAD. NOTE: INSTALL 1-3 IN. CONDUIT BEND IN POLE BASE.

D. INSTALL BASE MOUNTED CABINET AND CONTROLLER WITH IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT AND 2-WIRE APS CENTRAL CONTROL UNIT. NOTE: INSTALL 2-2 IN. AND 2-4 IN. CONDUIT BENDS IN BASE.

E. REMOVE EXISTING STRAIN POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. EXISTING ELECTRICAL SERVICE EQUIPMENT TO BE REMOVED BY UTILITY CO. CAP AND ABANDON CONDUITS. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

F. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK). FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE.

G. ABANDON EXISTING LOOP DETECTOR.

H. PROPOSED VIDEO DETECTION ZONE.

I. INSTALL ELECTRICAL HANDHOLE.

J. REMOVE EXISTING PAVEMENT MARKING LINE.

K. CAP AND ABANDON EXISTING CONDUIT.

L. REMOVE EXISTING HANDHOLE. CAP AND ABANDON EXISTING CONDUIT(S). BACKFILL TO GRADE.

M. INSTALL 3 (4) IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED. STUB AT UTILITY POLE FOR POWER FEED.

N. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED FOR CARRIER PIPE.

O. INSTALL 24 IN. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE.

P. INSTALL 12 IN. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE.

Q. USE EXISTING HANDHOLE. REPLACE FRAME AND COVER.

R. REMOVE EXISTING GROUND MOUNTED SIGN AND SUPPORT(S).

S. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED.

T. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

U. INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

V. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

W. INSTALL 100 AMP EMBEDDED METERED SERVICE PEDESTAL. NOTE: INSTALL 1-4 IN. AND 3-2 IN. CONDUIT BENDS IN BASE.

X. DISCONNECT, PULLBACK AND REROUTE EXISTING INTERCONNECT CABLE.

Y. REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER. CAP AND ABANDON EXISTING CONDUITS. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

Z. INSTALL 5 FT. BREAKAWAY PEDESTAL POLE WITH APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK). FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE. CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.

AA. REMOVE EXISTING PEDESTAL POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. CAP AND ABANDON CONDUIT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

BB. REMOVE EXISTING STRAIN POLE, ASSOCIATED SIGNAL EQUIPMENT AND SIGNS. CAP AND ABANDON CONDUIT. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

CC. INSTALL ELECTRICAL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO ROADWAY.

DD. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH LEAD-IN CABLE. CENTER IN TRAVEL LANE.

EE. INSTALL GROUND MOUNTED SIGN ON 1-4"X4" WOOD SIGN SUPPORT.

FF. USE EXISTING CONDUIT.

GG. USE EXISTING HANDHOLE.

GEOMETRIC LEGEND
- EXISTING
- PROPOSED

UTILITY LEGEND
- SD — SD — STORM DRAIN
- G — G — GAS MAIN
- W — W — WATER MAIN
- S — S — SEWER MAIN
- E — E — ELECTRIC CABLES
- E — E — AERIAL CABLES
- T — T — TELEPHONE CABLES
- F — F — FIBER-OPTIC

BY: WFW

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www.rkk.com

APPROVALS	
TEAM LEADER	ORIGINAL ON FILE
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

REVISIONS					
B	SIGNAL RECONSTRUCTION. INSTALL APS/CPS SHA NO. XX6505185.TIMS NO. L538			07-2013	
WFW	BJG	WM	DJD	RDB	MLP	CJW
A	INSTALL CPS SHA NO. AT3585185			11-12-2004	
JWA	CJS	WRB	DAB	BRK	TH

1 REDLINE NO. 1 JULY 2013 INSERT SHEET

APPROVAL: [signature] 8-6-13 TRAFFIC ENGINEERING DESIGN DIVISION

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

US 40 (W. PATRICK STREET) AT GROVE HILL ROAD
FREDERICK, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1"=20' DATE _____ CONTRACT NO. FR3315171

DESIGNED BY _____ COUNTY FREDERICK
DRAWN BY S.BLOSS LOGMILE 10004011.92
CHECKED BY N.LEARY TIMS NO. _____
FAP NO. _____ TOD NO. _____

TS NO. 3937B | DRAWING SP-1 OF 2 | SHEET NO. 1A OF 4

PLOTTED: Wednesday, July 24, 2013 AT 02:08 PM
FILE: \\balsrv03\v2008\2008\08148_toddes\Task 118_US 40 Signals\CADD\L538 (GROVE HILL)\pSG-0001_US40@GroveHill_R1.dgn