DRILL HOLES

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BORDER REV. DATE: March 27 2008 07

BY: JStorck

MD 24 is considered to run in a North/South direction.

EXISTING SIGN

24 — R 10-5 (24" x 18")

25 — W. MacPhail RD — D-3(2) (VAR. x 16") (Dual-faced)

EXISTING SIGN TO BE REMOVED

29 — R 3-6(R) (30" x 36")

32 — LEFT TURN YIELD ON GREEN — R 10-12 (30" x 36")

EXISTING SIGNS TO BE RELOCATED

26 — LEFT ON GREEN ARROW ONLY — R 10-5 (24" x 18")

27 — W. MacPhail RD — D-3(2) (VAR. x 16") (Dual-faced)

31 — ONLY — R 3-5(L) (30" x 36")

PROPOSED SIGNS

28,33 — ONLY — R 3-5(L) (30" x 36")

30 — ONLY — R 3-5(R) (30" x 36")

W. MACPHAIL ROAD — PUSH BUTTON TO CROSS W. MACPHAIL ROAD — START CROSSING WATCH FOR TURNING CARS — DON'T START FINISH CROSSING IF STARTED — TIME REMAINING TO FINISH CROSSING — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — R 10-3(1) 9" x 15" (To Be Installed With Pushbutton)

MD 24 — PUSH BUTTON TO CROSS MD 24 — START CROSSING WATCH FOR TURNING CARS — DON'T START FINISH CROSSING IF STARTED — TIME REMAINING TO FINISH CROSSING — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — R 10-3(1) 9" x 15" (To Be Installed With Pushbutton)

34 — STREET NAME W MACPHAIL TYPE 1

35 — STREET NAME W MACPHAIL TYPE 2

36 — STREET NAME MD 24 TYPE 2

37 — STREET NAME MD 24 TYPE 1

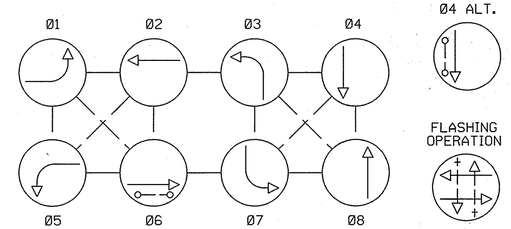
PROPOSED SIGNALS

1,2,5,6,9, 11,14,16,17 — 12" L.E.D.

3,4,7,8,10,12, 13,15,18,19 — 12" L.E.D.

20-23 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

NEMA PHASING



Ø4 ALT.

FLASHING OPERATION

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

These plans are approved for construction for a period of 1 year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a review from the Traffic Engineering Design Division.

CONSTRUCTION DETAILS

A. Install 12 in. x 32 ft. 2-ply steel strain pole with pedestrian signal heads (Note: one 3 in. PVC conduit bend).
B. Use existing steel strain pole, install temporary back guy, 3/8 in. steel span wire, vehicle signal heads, and signs (signal heads and signs to be tethered). Remove existing pedestrian equipment. Remove existing span wire and all attached equipment. Rewire existing luminaire with exisiting tray cable.
C. Use existing steel strain pole, install temporary back guy, 3/8 in. steel span wire, vehicle signal heads, video detection cameras and signs (signal heads and signs to be tethered). Remove existing span wire and all attached equipment and rerun existing signal cable through new conduit and handholes
D. Install 10 ft. steel pedestal pole on break away base with pedestrian pushbutton, and pedestrian pushbutton sign (Note: one 2 in. PVC conduit bend).
E. Install 5 ft. steel pedestal pole on break away base with pedestrian pushbutton, and pedestrian pushbutton sign (Note: one 2 in. PVC conduit bend).
F. Install handhole.
G. Install 4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
H. Install 2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
K. Install 3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
L. Install 4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
M. Install HAPPTPM pavement marking symbol - white (LEFT Arrow)
N. Video detection image.
O. Use existing span wire remove and replace signal heads and signs as shown.
P. Use existing cabinet/controller, install APS central control unit and SHA forces shall retrofit controller equipment to operate video detection equipment. (Note: install two 4 in. PVC conduit bends in existing base).
Q. Use existing handhole, splice new 2-conductor aluminum shielded cables to existing loop wire and rerun new cable to existing cabinet.
R. Use existing handhole, pull back existing interconnect and 2-conductor aluminum shielded cables, rerun in new conduit to cabinet.
S. Use existing handhole.
T. Use existing conduit.
U. Relocate existing sign.
V. Remove existing steel strain pole and all attached equipment and foundation 12 in. below grade and backfill
W. Remove existing 10 ft. steel pedestal pole and all attached equipment.
X. Remove existing handhole.
Y. Cap and abandon existing conduit.
Z. Disconnect and remove existing loop detector cables from handholes, signal structures and controller.
a. Install 12 in. wide pavement marking - white for crosswalk.
b. Install 24 in. wide pavement marking - white for stop line.
c. Install handhole on existing conduit run. Pull back all existing cable, rerun in new conduit back to cabinet.
d. Remove existing pavement marking by grinding.
e. Install 10 in. wide solid yellow pavement marking - for gore area.
f. Install 5 in. wide white solid pavement marking for lane line.
g. Install 5 in. wide white broken pavement marking (10 ft. segment - 30 ft. gap) for lane line.
h. Install 5 in. wide double yellow pavement marking - for center line.
j. Tie to existing markings.

GENERAL NOTES

1. The contractor shall verify all proposed pole locations prior to installation.
2. Pavement markings detailed are proposed and are to be installed by the Contractor in accordance with MD-SHA standards. All other pavement markings are to be considered as existing.
3. Geometrics shall be confirmed prior to the installation of signal equipment. All traffic signal foundations shall be installed at 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.
4. All underground and overhead utilities shown on these plans are schematic and are not to be considered complete. The Contractor shall be responsible for notifying all utility companies prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal equipment will occur, the Contractor shall notify the appropriate Project Engineer immediately.
5. Location of Pedestrian Signal Pushbutton must meet location requirements of MUTCD Sec. 4E.09 & Fig. 4E-2 and the NCHRP publication, "Accessible Pedestrian Signals: Guide to Best Practice".

GENERAL NOTES CONT.

6. Pushbuttons are to be located so that they can be activated by a person in a wheelchair from a 60 in. x 60 in. level landing area. A level landing area is an area with a cross slope of less than or equal to 2%.
7. Pushbuttons are to be located so that a pedestrian in a wheelchair located on red truncated domes on the level landing area, does not have to reach more than 18".
8. If the location of the pedestrian signal pushbutton must be changed. The Contractor shall notify the project engineer to obtain approval for the new location to ensure MUTCD sec. 4E.09 & 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 location until a design Waiver is obtained, and approved by the director, Office of Traffic and Safety.
9. The 10 ft. separation between pushbuttons is to be measured from face of pushbutton to face of pushbutton, not center to center of pole.
10. The Contractor shall be responsible for delivering APS equipment for programing to MD-SHA Signal Shop.
11. All unused cables shall be removed.
12. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
13. THE CONTRACTOR SHALL CONTACT SHA TO SCHEDULE RETROFITTING OF THE CONTROLLER EQUIPMENT IN ORDER TO OPERATE VIDEO DETECTION EQUIPMENT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL VIDEO DETECTION CAMERA CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE SO THAT SHA FORCES CAN MAKE THE FINAL CONNECTIONS.

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GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
STORM DRAIN
GAS MAIN
WATER MAIN
SEWER MAIN
ELECTRIC CABLES
AERIAL CABLES
TELEPHONE CABLES
FIBER-OPTIC

APPROVALS
TEAM LEADER — Original On File
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR

REVISIONS
D Modify ex. traffic signal for exclusive LT for EB/WB and Double LT EB on W. MacPhail Rd SHA No. BW996M82 — 09-13-07 — FDB
C Modify ex. traffic signal to include E/P left turn phase on MacPhail Road SHA No. SF Signal — 2-13-03 — GCP — BEK
B Modified for new geometrics in SW corner. SHA No. BW996M82 — 10-29-98 — JS/FH

PLOTTED: Tuesday, September 25, 2007 AT 10:30 AM
FILE: F:\1994\1994-1117\Des\Traffic\pSG-P003_MD24FINAL.dgn

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

MD 24 (Vietnam Veterans Highway) at W. MacPhail Road

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' — DATE JUNE 20, 1993 — CONTRACT NO. BW-573-802-412

DESIGNED BY J. DIRNDORFER — COUNTY Harford
DRAWN BY — LOGMILE 12002408.53
CHECKED BY — — TIMS NO. H984
FAP NO. N/A — TOD NO. —

TS NO. 3333D — DRAWING — OF — SHEET NO. 1 OF 2