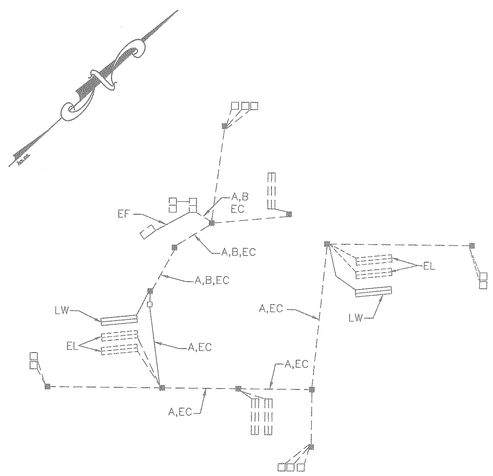
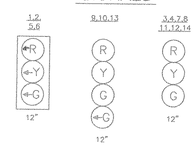


WIRING DIAGRAM

WIRING KEY

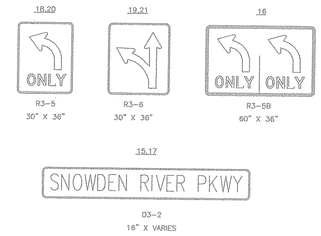
LW – Loopwire (No. 14 AWG.)
A,B – 2–Conductor Electrical Cable (No. 14 AWG. Aluminum Shielded)
EF – Existing Feed
EC – Existing Cable

SIGNALS

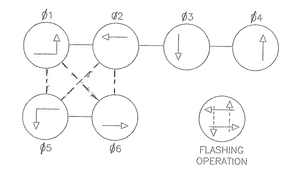


NOTE: SIGNAL 2. IS PROPOSED
ALL OTHERS ARE EXISTING

SIGNS



NEMA PHASING



1. Phases associated by a dashed line will operate concurrently.
2. Phases associated by a solid line will not operate concurrently.

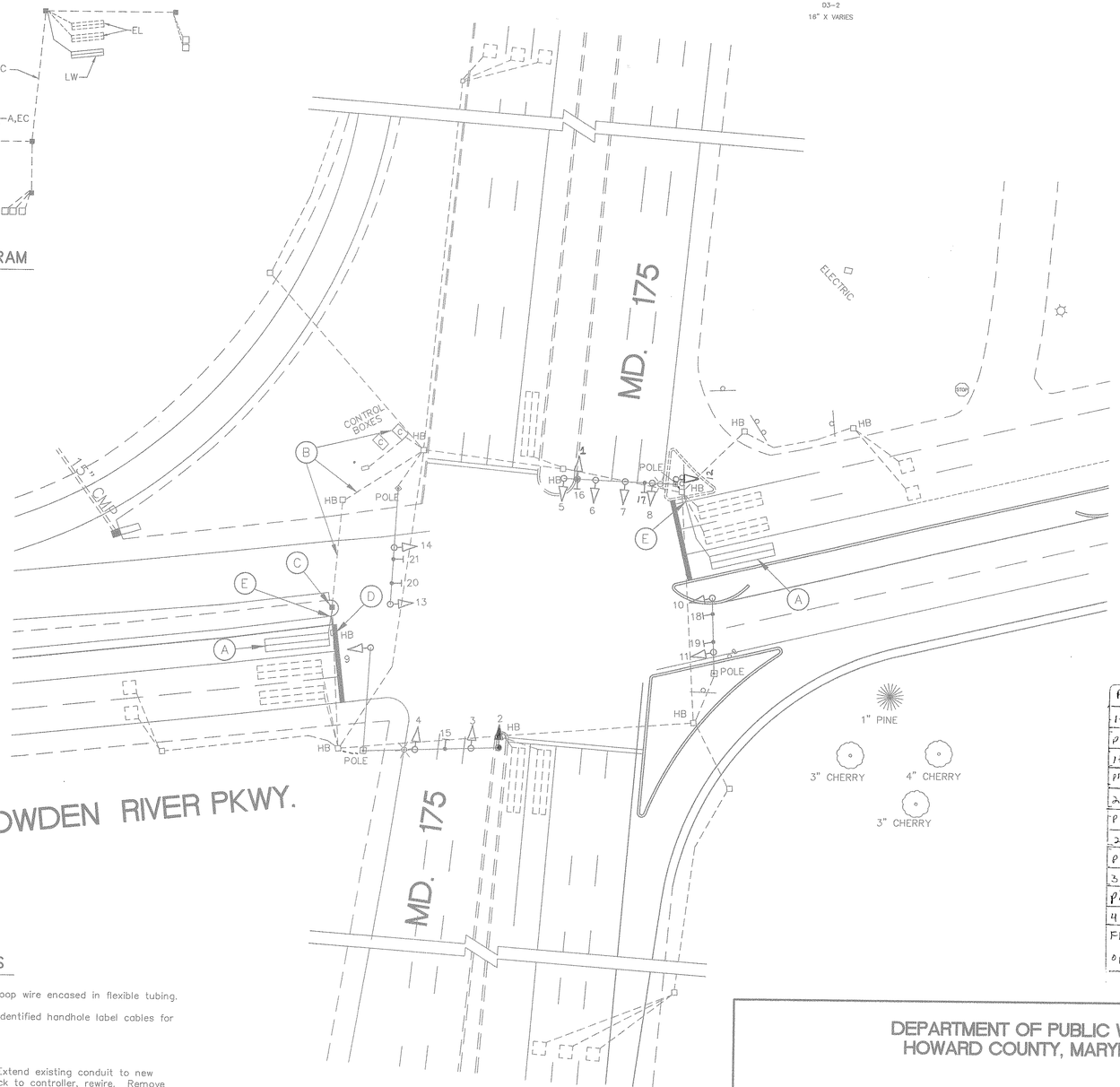
GENERAL NOTES

1. SPECIFICATIONS – All work on this project shall be done in accordance with the requirements of the Maryland Department of Transportation, State Highway Administration's Standard Specifications for construction and materials, dated October 1993, revisions or additions thereto and the special provisions.
2. STANDARD DETAILS – Standard details referred to on the plans shall be those of the MD. State Highway Administration's Book of Standards. It will be the Contractor's responsibility to have in his possession the latest up to date MSHA Standard Plates as of the date of advertisement for this project.
3. All conduit and handboxes are existing. The approximate locations of these are shown on the plans. It is the Contractor's responsibility to verify their exact locations.
4. Existing Detector Loops in the area of the proposed detector loops are shown on the plans in their approximate locations. The Contractor shall be responsible for determining the exact location of the loops to insure that they are not damaged during construction. The final location of the detectors may be adjusted to match the location of the existing loops, if necessary.
5. Permanent Pavement Markings are to be installed after the loop detectors are installed.
6. This revision involves the installation of additional left turn lanes on Snowden River PKWY. There will be a brief signal shut down to achieve this revision. In the near future there will be a signal reconstruction under another contract.

EQUIPMENT LIST

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
8001	F/I 1" LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT SLEEVE	10 LF.
8002	F/I LOOP WIRE NO. 14AWG THWN	944 LF
8003	F/I SAW CUT FOR SIGNAL (LOOP DETECTOR)	230 LF.
8004	F/I ELECTRICAL HANDHOLE	1 EA.
8005	F/I 2–CONDUCTOR ELECTRICAL CONDUIT CABLE NO. 14 AWG. ALUMINUM SHIELDED	424 LF.
8006	DISCONNECT CABLES FROM CONTROLLER, PULL BACK TO HANDBOX, LABELING, EXTENDING EXISTING CONDUIT, REPULL CABLES BACK TO CONTROLLER AND REWIRE	LS
8007	REMOVE EXISTING HANDHOLE	1 EA.



phase chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Phase 1+5	G	G	R	R	G	G	R	R	R	R	R	R	R	R
1+5 Change	Controller may skip to phases 1+6, 2+5 or 2+6													
Phase 1+6	G	G	G	G	R	R	R	R	R	R	R	R	R	R
1+6 Change	Y	Y	Y	Y	R	R	R	R	R	R	R	R	R	R
Phase 2+5	R	R	R	R	G	G	G	G	R	R	R	R	R	R
2+5 Change	R	R	R	R	Y	Y	Y	Y	R	R	R	R	R	R
Phase 2+6	R	R	G	G	R	R	G	G	R	R	R	R	R	R
2+6 Change	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R
Phase 3	R	R	R	R	R	R	R	R	G	G	G	R	R	R
3 Change	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R
Phase 4	R	R	R	R	R	R	R	R	R	R	R	G	G	G
4 Change	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y
Flashing operation	FY/R	FY/R	FY/Y	FY/Y	FY/R	FY/R	FY/Y	FY/Y	FY/R	FY/R	FY/R	FY/R	FY/R	R/R

CONSTRUCTION NOTES

A. Install 6' x 30' quadruple loop detector (2–4–2 turns) loop wire encased in flexible tubing.
B. Disconnect existing cables and pull them back into the identified handhole label cables for rewiring.
C. Install new handhole into existing conduit run.
D. Protect existing cables until new handhole is in place. Extend existing conduit to new handhole, repull existing cables to new handhole and back to controller, rewire. Remove existing handhole.
E. Install 1" liquid tight flexible non–metallic conduit sleeve.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS – DATE

CHIEF, BUREAU OF ENGINEERING – DATE

CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. – DATE

CHIEF, BUREAU OF HIGHWAYS – DATE

3-26-97
Date

STATE OF MARYLAND
JOHANNE RAY HEINRICHS
PROFESSIONAL ENGINEER
No. 14920

JOHANNE RAY HEINRICHS
Professional Engr. No. 14920

Date	No	Revision Description
9/96	1397E	ADD Left turn to Snowden River PKWY SHA# BW 957M82

OWNER/DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(410) 992–3694

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
813 MAIDEN CHOICE LANE, SUITE 300
BALTIMORE, MARYLAND 21228
(410) 247–8833 FAX 247–9397

AREA
MD. RTE 175 / SNOWDEN RIVER PARKWAY INTERSECTION IMPROVEMENTS

TITLE
SIGNAL MODIFICATION PLAN

SIGNAL # 13017503.52

Des By	E.M.P.	Scale	1" = 30'	Proj No	SIGPLAN.DWG 96–021
Drn By	D.R.B.	Date	MARCH 1997	DRAWING NO	9 OF 9
Chk By	H.R.P.	Approved	April 1997		