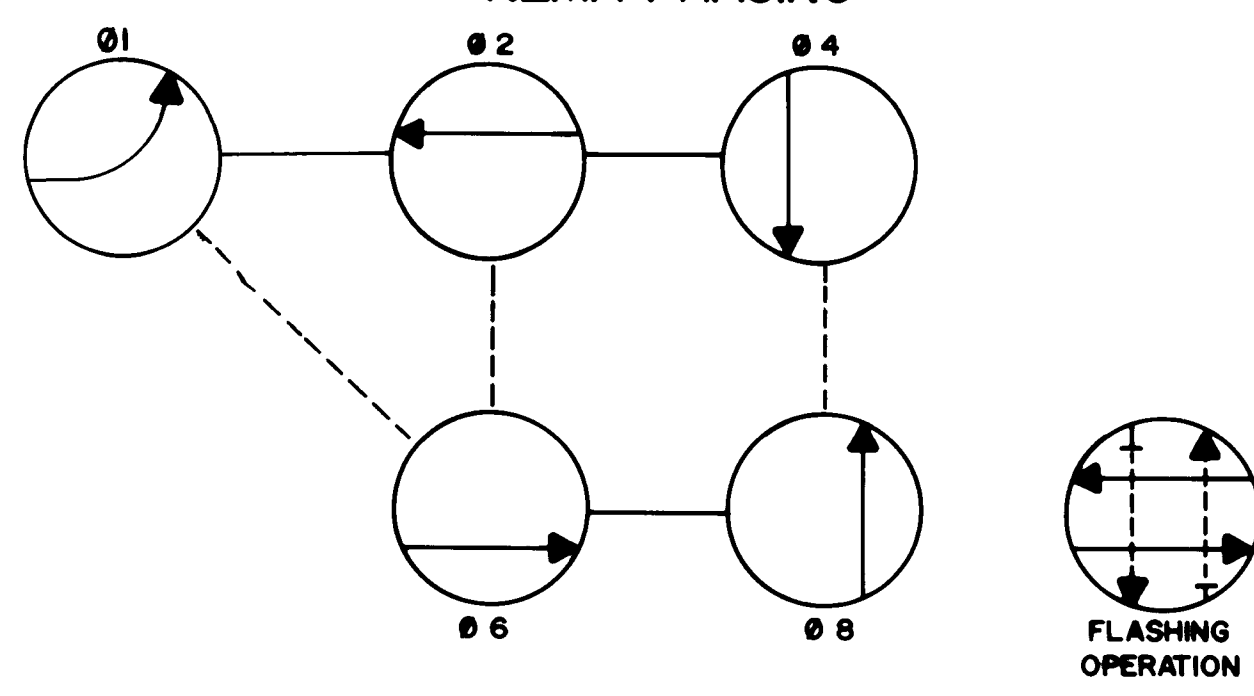


CONSTRUCTION DETAILS

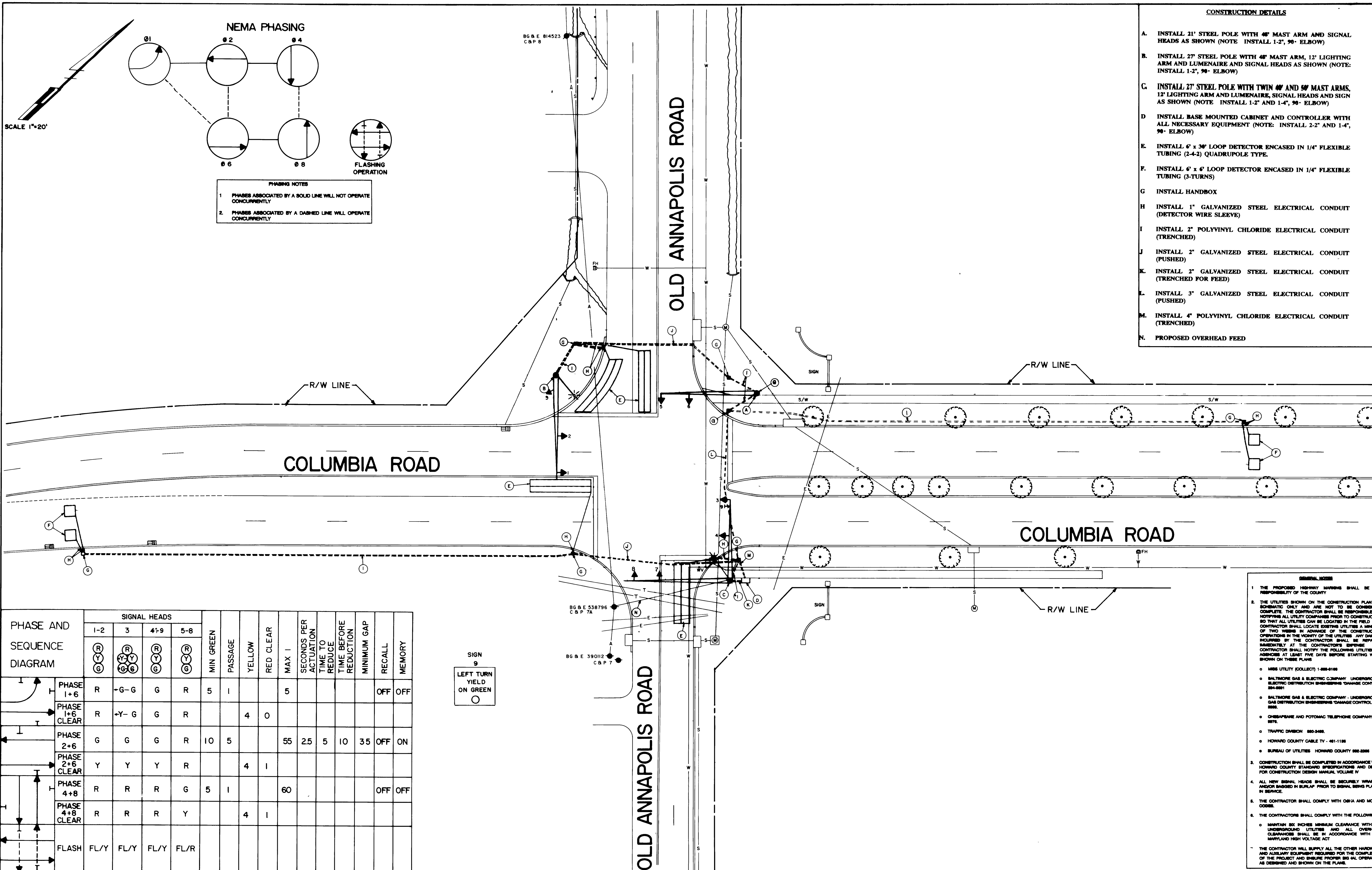
- A. INSTALL 21' STEEL POLE WITH 40' MAST ARM AND SIGNAL HEADS AS SHOWN (NOTE: INSTALL 1-2', 90° ELBOW)
- B. INSTALL 27' STEEL POLE WITH 40' MAST ARM, 12' LIGHTING ARM AND LUMINAIRE AND SIGNAL HEADS AS SHOWN (NOTE: INSTALL 1-2', 90° ELBOW)
- C. INSTALL 27' STEEL POLE WITH TWIN 40' AND 50' MAST ARMS, 12' LIGHTING ARM AND LUMINAIRE, SIGNAL HEADS AND SIGN AS SHOWN (NOTE: INSTALL 1-2' AND 1-4', 90° ELBOW)
- D. INSTALL BASE MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT (NOTE: INSTALL 2-2' AND 1-4', 90° ELBOW)
- E. INSTALL 6" x 30" LOOP DETECTOR ENCASED IN 1/4" FLEXIBLE TUBING (2-4-2) QUADRUPOLE TYPE.
- F. INSTALL 6" x 6" LOOP DETECTOR ENCASED IN 1/4" FLEXIBLE TUBING (3-TURNS)
- G. INSTALL HANDBOX
- H. INSTALL 1" GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE)
- I. INSTALL 2" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED)
- J. INSTALL 2" GALVANIZED STEEL ELECTRICAL CONDUIT (PUSHED)
- K. INSTALL 2" GALVANIZED STEEL ELECTRICAL CONDUIT (TRENCHED FOR FEED)
- L. INSTALL 3" GALVANIZED STEEL ELECTRICAL CONDUIT (PUSHED)
- M. INSTALL 4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (TRENCHED)
- N. PROPOSED OVERHEAD FEED

NEMA PHASING



- PHASING NOTES
1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
 2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SCALE 1"=20'



PHASE AND SEQUENCE DIAGRAM	SIGNAL HEADS				MIN GREEN	PASSAGE	YELLOW	RED CLEAR	MAX I	SECONDS PER ACTUATION	TIME TO REDUCE	TIME BEFORE REDUCTION	MINIMUM GAP	RECALL	MEMORY
	1-2	3	4+9	5-8											
PHASE 1+6	R Y G	-G-G	G	R	5	I			5					OFF	OFF
PHASE 1+6 CLEAR	R	-Y-G	G	R			4	0							
PHASE 2+6	G	G	G	R	10	5			55	2.5	5	10	35	OFF	ON
PHASE 2+6 CLEAR	Y	Y	Y	R			4	I							
PHASE 4+8	R	R	R	G	5	I			60					OFF	OFF
PHASE 4+8 CLEAR	R	R	R	Y			4	I							
FLASH	FL/Y	FL/Y	FL/Y	FL/R											



- GENERAL NOTES
1. THE PROPOSED HIGHWAY MARKINGS SHALL BE THE RESPONSIBILITY OF THE COUNTY.
 2. THE UTILITIES SHOWN ON THE CONSTRUCTION PLAN ARE SCHEMATIC ONLY AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES CAN BE LOCATED IN THE FIELD. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF THE CONSTRUCTION OPERATIONS IN THE VICINITY OF THE UTILITIES. ANY DAMAGE INCURRED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - o MISS UTILITY (COLLECT) 1-888-4168
 - o BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION ENGINEERING "DAMAGE CONTROL" 584-8891
 - o BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION ENGINEERING "DAMAGE CONTROL" 584-8888
 - o CHESAPEAKE AND POTOMAC TELEPHONE COMPANY 781-8976
 - o TRAFFIC DIVISION 882-3488
 - o HOWARD COUNTY CABLE TV - 481-1188
 - o BUREAU OF UTILITIES - HOWARD COUNTY 882-8288
 3. CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION DESIGN MANUAL VOLUME IV.
 4. ALL NEW SIGNAL HEADS SHALL BE SECURELY WRAPPED AND/OR BAGGED IN BURLAP PRIOR TO SIGNAL BEING PLACED IN SERVICE.
 5. THE CONTRACTOR SHALL COMPLY WITH OSHA AND MSHA CODES.
 6. THE CONTRACTORS SHALL COMPLY WITH THE FOLLOWING:
 - o MAINTAIN 300 INCHES MINIMUM CLEARANCE WITH ALL UNDERGROUND UTILITIES AND ALL OVERHEAD CLEARANCES SHALL BE IN ACCORDANCE WITH THE MARYLAND HIGH VOLTAGE ACT.
 - o THE CONTRACTOR WILL SUPPLY ALL THE OTHER HARDWARE AND AUXILIARY EQUIPMENT REQUIRED FOR THE COMPLETION OF THE PROJECT AND ENSURE PROPER SIGNAL OPERATION AS DESIGNED AND SHOWN ON THE PLANS.

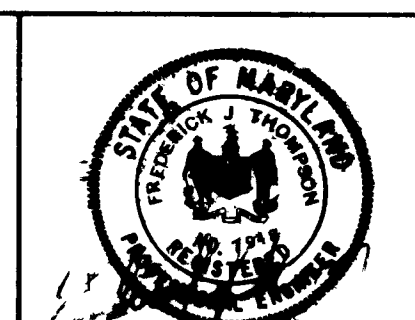
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ...
DIRECTOR OF PUBLIC WORKS DATE 8/21/00

...
CHIEF, BUREAU OF ENGINEERING DATE 8-21-00

C. E. ...
CHIEF, TRAFFIC ENGINEERING DIVISION DATE 8/1/00

A/E GROUP, INC
8845 REISTERSTOWN ROAD
P.O. BOX 117
BARRISON, MARYLAND 21065
(301) 343-1908



DES'T ZAYDEL	RF'S	AS BUILT'S	5/7/01
DRN'T ZAYDEL			
CHK			
DATE 5/19/00	BY NO	REVISION	DATE

TRAFFIC SIGNAL PLAN
COLUMBIA ROAD & OLD ANNAPOLIS ROAD

SCALE AS SHOWN

T-7047

SHEET 2 OF 2