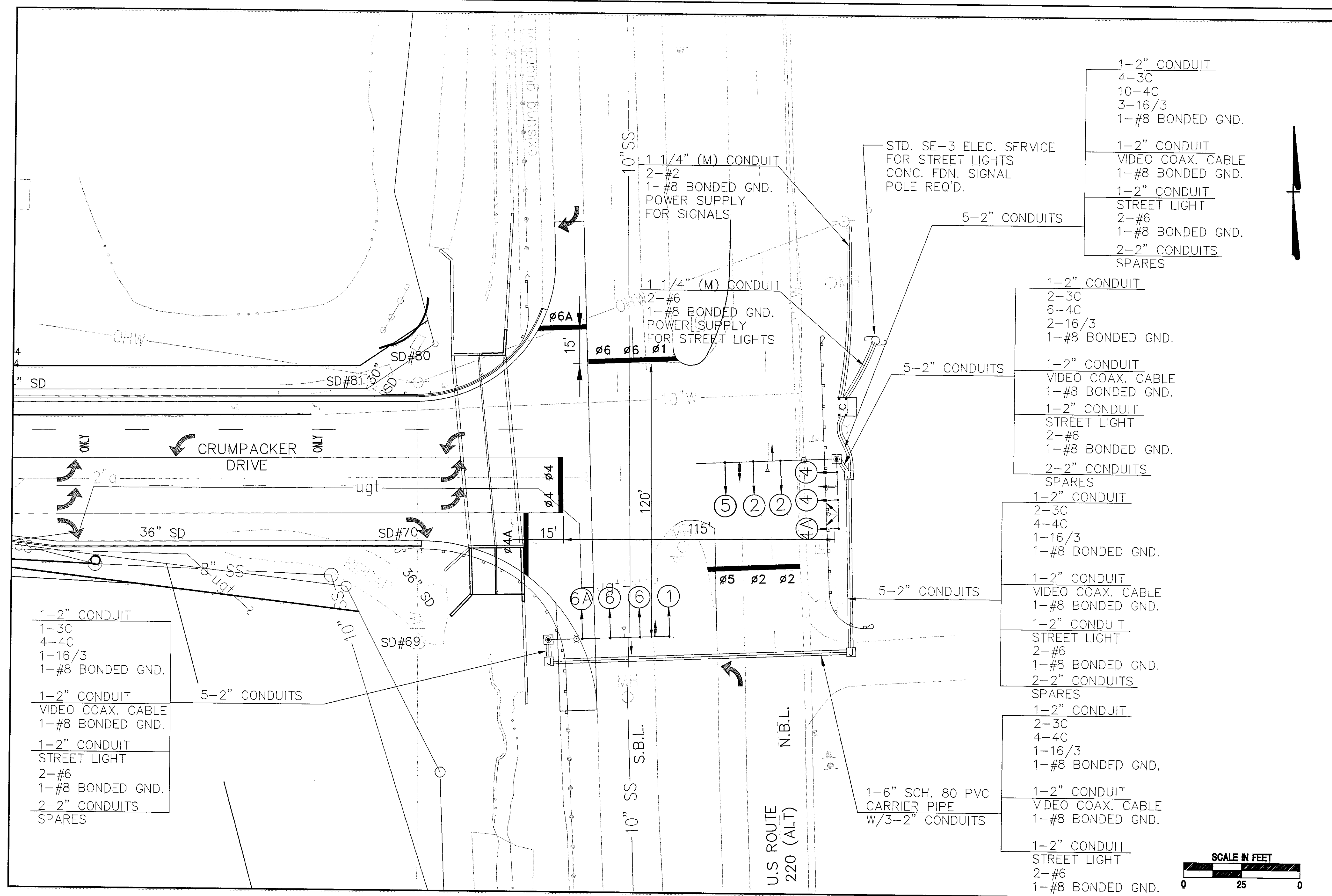
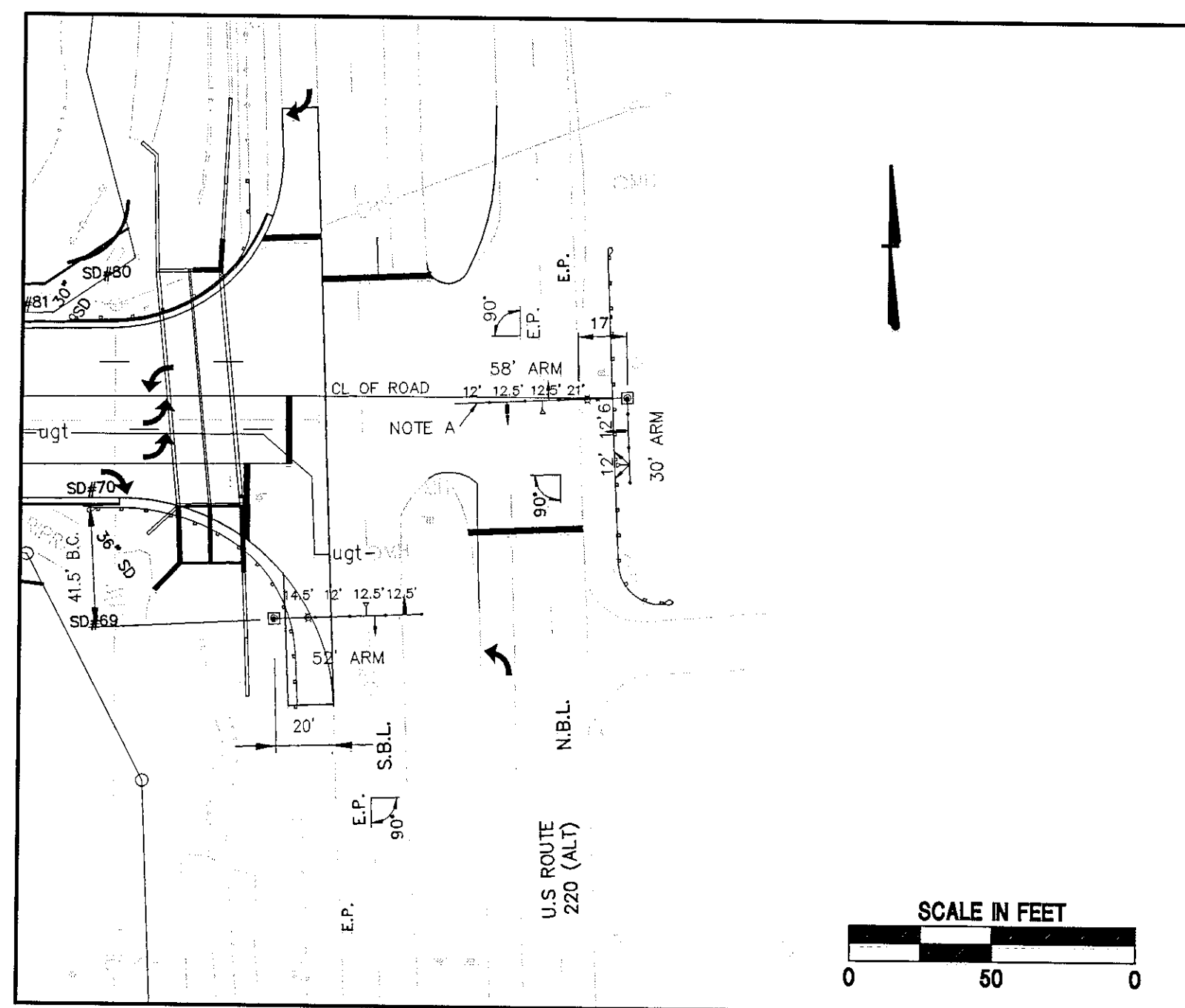




PLAN  
SCALE: 1"=25'

# LEGEND

- JUNCTION BOX
- OPTICOM DETECTOR (3M DETECTOR CABLE)
- 75 WATT INDICATOR FLOOD LIGHT 3C IMSA #14
- VIDEO DETECTOR
- LUMINAIRE



MAST ARM AND POLE PLACEMENT DETAILS  
SCALE: 1"=50'

NOTE A: POLE FOUNDATION DESIGN AND MAST ARM LENGTH SHALL INCLUDE PROVISIONS FOR FUTURE 3 HEAD SIGNAL.

1-2" CONDUIT  
4-3C  
10-4C  
3-16/3  
1-#8 BONDED GND.  
1-2" CONDUIT  
VIDEO COAX. CABLE  
1-#8 BONDED GND.  
1-2" CONDUIT  
STREET LIGHT  
2-#6  
1-#8 BONDED GND.  
2-2" CONDUITS  
SPARES

1-2" CONDUIT  
2-3C  
6-4C  
2-16/3  
1-#8 BONDED GND.

1-2" CONDUIT  
VIDEO COAX. CABLE  
1-#8 BONDED GND.  
1-2" CONDUIT  
STREET LIGHT  
2-#6  
1-#8 BONDED GND.  
2-2" CONDUITS  
SPARES

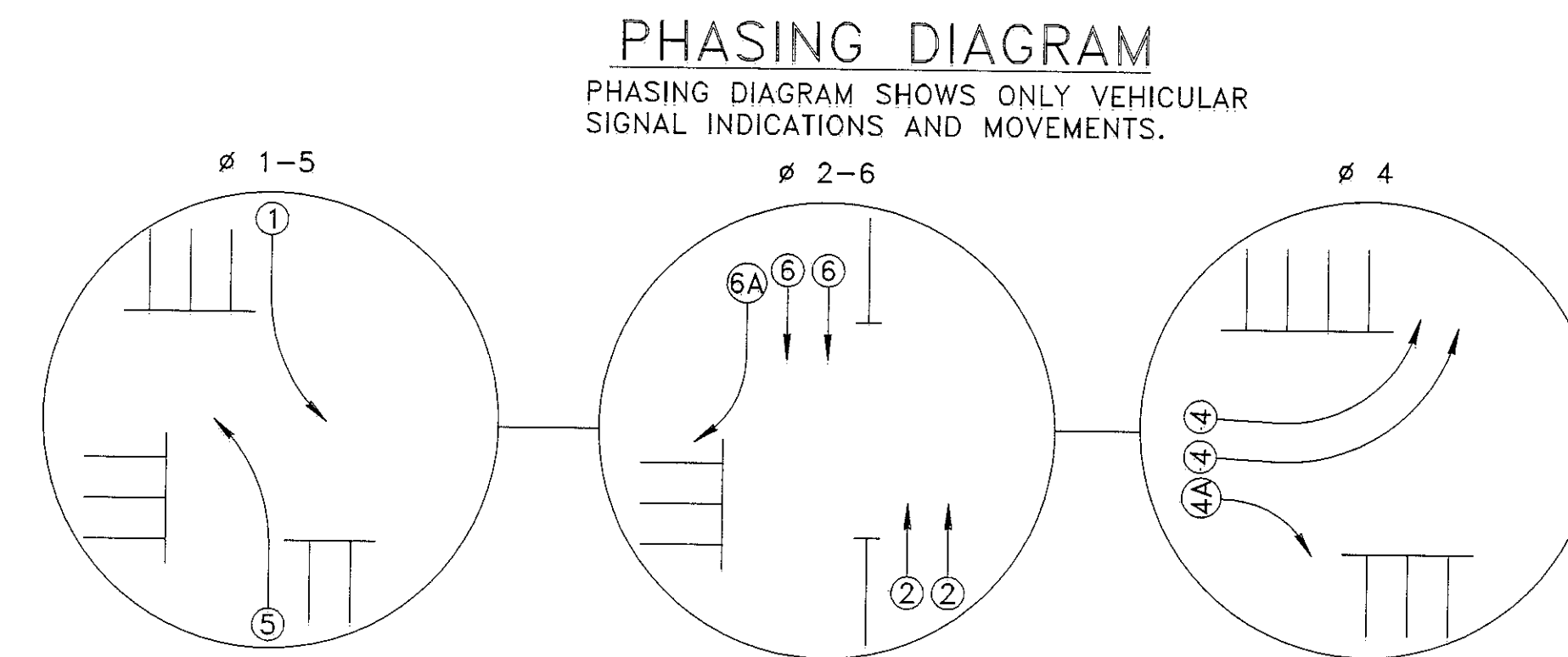
1-2" CONDUIT  
2-3C  
4-4C  
1-16/3  
1-#8 BONDED GND.

1-2" CONDUIT  
VIDEO COAX. CABLE  
1-#8 BONDED GND.  
1-2" CONDUIT  
STREET LIGHT  
2-#6  
1-#8 BONDED GND.  
2-2" CONDUITS  
SPARES

1-2" CONDUIT  
2-3C  
4-4C  
1-16/3  
1-#8 BONDED GND.

1-2" CONDUIT  
VIDEO COAX. CABLE  
1-#8 BONDED GND.  
1-2" CONDUIT  
STREET LIGHT  
2-#6  
1-#8 BONDED GND.

SCALE IN FEET  
0 25 0



## PHASING DIAGRAM

PHASING DIAGRAM SHOWS ONLY VEHICULAR SIGNAL INDICATIONS AND MOVEMENTS.

## COLOR SEQUENCE CHART

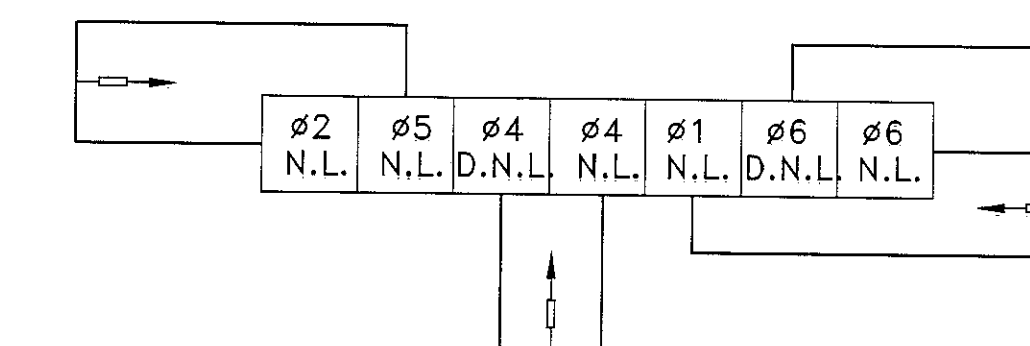
| SIGNAL | R/W | ø1-5          |             |               |             | ø2-6          |             |               |             | ø4            |             |               |             | FLASH |
|--------|-----|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|-------|
|        |     | CLEAR TO ø2-6 | CLEAR TO ø4 | CLEAR TO ø1-5 | CLEAR TO ø4 | CLEAR TO ø1-5 | CLEAR TO ø4 | CLEAR TO ø1-5 | CLEAR TO ø4 | CLEAR TO ø1-5 | CLEAR TO ø4 | CLEAR TO ø1-5 | CLEAR TO ø4 |       |
| 1      | R   | A             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R     |
| 2      | R   | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | A     |
| 4      | R   | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R     |
| 4A     | R   | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R     |
| 5      | R   | A             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R     |
| 6      | R   | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | A     |
| 6A     | R   | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R             | R           | R     |

NOTES:  
1. CONTROLLER TO REST ø2-6 GREEN  
2. CONTROLLER TO START/RESTART ø2-6 GREEN

## CONTROLLER TIMING CHART

| PHASE | MIN GREEN | PASSAGE TIME | MAX GREEN I | MAX GREEN II | AMBER CLEAR | ALL RED CLEAR |
|-------|-----------|--------------|-------------|--------------|-------------|---------------|
| 1-5   | 10        | 3.5          | 25          | 25           | 3.0         | 1.0           |
| 2-6   | 15        | 3.5          | 60          | 60           | 3.0         | 1.0           |
| 4     | 15        | 3.5          | 40          | 40           | 3.0         | 1.0           |

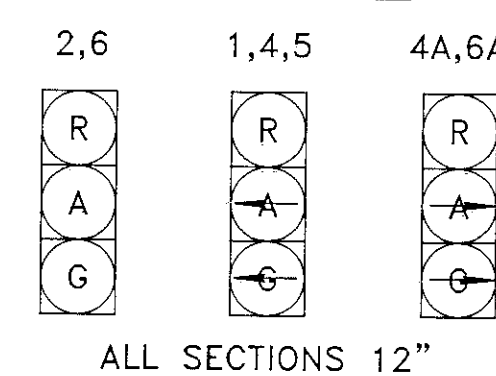
## DETECTOR SYSTEM CHART



N.L. DENOTES NON LOCK PRESENCE  
D.N.L. DENOTES NON LOCK DELAYED PRESENCE 10 SECONDS

EMERGENCY PREEMPTION 3 WAY  
N.B. CALLS ø2 & ø5  
S.B. CALLS ø1 & ø6  
CRUMPACKER DRIVE CALLS ø4

## SIGNALS



NOTE:  
RED BALL & GREEN BALL ONLY  
SHALL BE LIGHT EMITTING DIODE (LED)  
TRAFFIC SIGNAL DISPLAY.

### SIGNAL HEAD WIRING

1-4C FOR HEAD 1  
1-4C FOR HEAD 2  
1-4C FOR HEAD 4  
1-4C FOR HEAD 4A  
1-4C FOR HEAD 5  
1-4C FOR HEAD 6  
1-4C FOR HEAD 6A

CONTRACTOR SHALL CONTACT  
MISS UTILITY @ 1-800-552-7001  
FOR LOCATION OF ALL UTILITIES,  
AT LEAST 72 HOURS PRIOR TO  
BEGINNING CONSTRUCTION

- NOTES
- COMBINATION LUMINAIRE MAST ARM POLES SHALL BE STD. MP-1 WITH TERMINAL STRIP. THE NUMBER OF ANCHOR BOLTS SHALL BE AS REQUIRED BY MANUFACTURER.
  - CONTROLLER CABINET FOUNDATION SHALL BE STD. CF-1.
  - SIGNAL HEADS SHALL BE MOUNTED IN ACCORDANCE WITH STD. SM-3.
  - ELECTRICAL SERVICE FOR SIGNALS SEE SUMMARY NOTE 2, SHEET TS-1.
  - ALL JUNCTION BOXES SHALL BE STD. JB-3C UNLESS OTHERWISE NOTED.
  - ALL UNDERGROUND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH STD. ECI-1.
  - ALL CONDUIT ENTERING JUNCTION BOX SHALL NOT EXTEND INTO BOX OVER 2" ±1/2" AND SHALL BE FITTED WITH APPROPRIATE BELL ENDS OR BUSHINGS.
  - ALL SIGNALS SHALL HAVE BLACK BACKPLATES AND TUNNEL VISORS.
  - (M) DENOTES METAL CONDUIT AND (S) DENOTES SHIELDED CABLE.
  - THE SIGN ON THE MAST ARM SHALL BE MOUNTED WITH RIGID MOUNT ASTRO-BRACKETS OR EQUAL.
  - THE CONTRACTOR SHALL FURNISH SIGNAL POLE FOUNDATION DESIGN. SEE SUMMARY NOTE 4, SHT. TS-1
  - ALL CONDUITS UNDER PAVED AREAS SHALL BE BORED.
  - ADD OPTICOM EMERGENCY PREEMPTION TO ALL APPROACHES:

3M OPTICOM DISTRIBUTOR: J. O. HERBERT  
P.O. BOX 2620  
CHESTERFIELD, VIRGINIA 23832  
PHONE: (804) 794-8385

### REQUIRED EQUIPMENT:

- SPECIAL RELAY & TERMINATION PANEL - 10 1/2"W X 10 1/2"H X 5" PROTRUSIVE TO BE LOCATED IN CABINET UPPER LEFT SIDE.
  - 511 DETECTORS MOUNTED ON MAST ARMS TO BE LOCATED AT TIME OF INSTALLATION WITH INPUT FROM VDOT. CALL 387-5449 FOR INSTRUCTIONS. FIELD WIRE TO BE 3 CONDUCTOR 3M MODEL 138.
  - 752 RACK MOUNT PHASE SELECTORS (SHALL BE 3M) WITH NECESSARY MODULES AND HARNESSSES.
  - 75 WATT INDICATOR FLOOD LIGHTS MOUNTED ON MAST ARMS WITH #14-3 CONDUCTOR SIGNAL CABLE TO BE LOCATED AT TIME OF INSTALLATION.
- ABOVE TO BE DESIGNED AND INSTALLED WITH (2) COPIES OF DOCUMENTATION. SUPPLIER TO PROVIDE CERTIFICATION OF PROPER OPERATION.
- STANDARD CARD RACK FOR PLUG IN OPTICOM PHASE SELECTORS, REQUIRED.
  - 16/3 CONDUCTOR IS FOR VIDEO POWER SUPPLY.

Mattem & Craig  
CONSULTING ENGINEERS • SURVEYING  
701 FIRST STREET  
ROANOKE, VA 24060  
(540) 345-3342  
FAX (540) 345-7881

WAL-MART STORE #3243-00  
TRAFFIC SIGNAL PLAN  
CRUMPACKER DRIVE (RTE. 781)  
ROANOKE COUNTY, VIRGINIA

Vertical Scale:  
N/A  
Horizontal Scale:  
AS SHOWN  
Issue Date:  
9/28/01  
Sheet No.:

TS-3