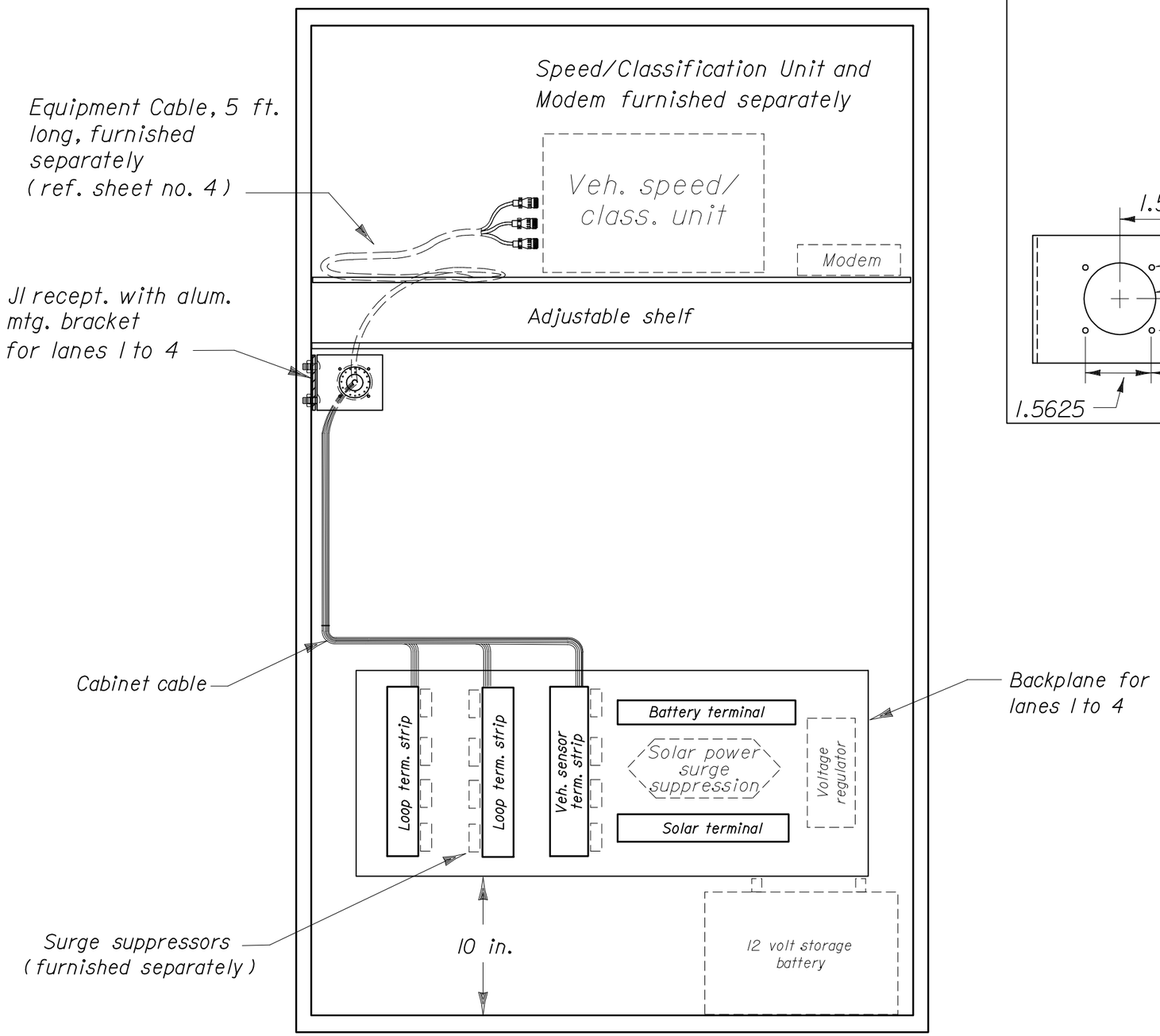


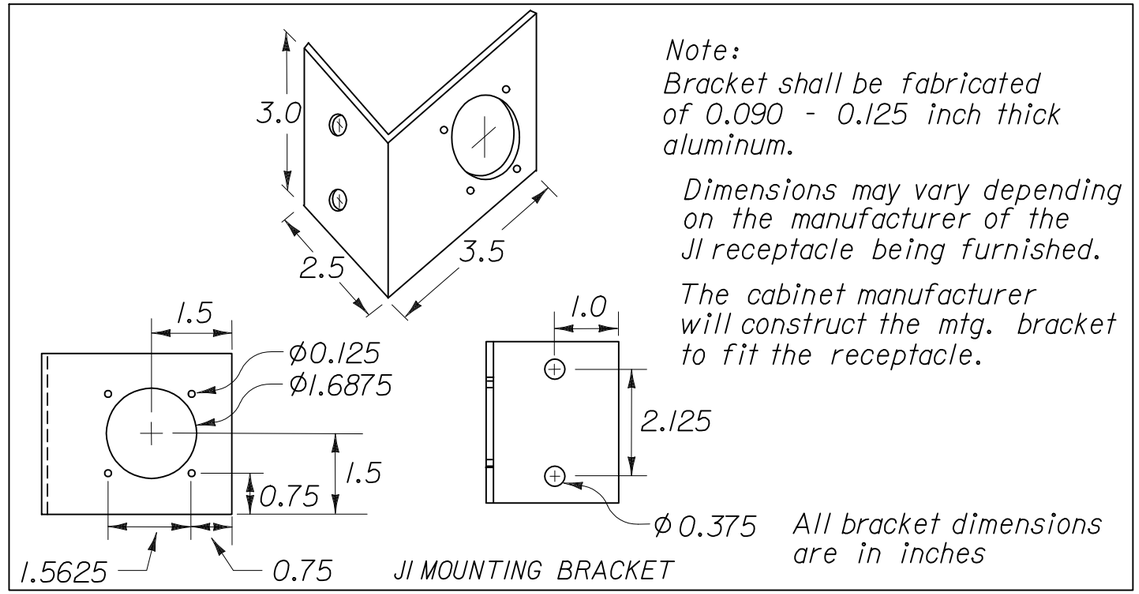


JI MOUNTING BRACKET

Note:
Bracket shall be fabricated of 0.090 - 0.125 inch thick aluminum.

Dimensions may vary depending on the manufacturer of the Jl receptacle being furnished.

The cabinet manufacturer will construct the mtg. bracket to fit the receptacle.

All bracket dimensions are in inches

1. Traffic monitoring site cabinet includes:
   - A. One adjustable shelf;
   - B. One backplane ass'y;
   - C. One Jl receptacle with mounting bracket;
   - D. All associated wiring and wiring harnesses.

2. Basic backplane assembly consists of:
   - A. Two inductive loop terminal strips;
   - B. One vehicle sensor terminal strip;
   - C. One battery terminal strip;
   - D. One solar panel terminal strip.

3. When piezoelectric axle sensors are used, the shields must be connected to earth ground.

CABINET LAYOUT DETAIL
( For Up To Four Lanes )

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

# TRAFFIC MONITORING SITE

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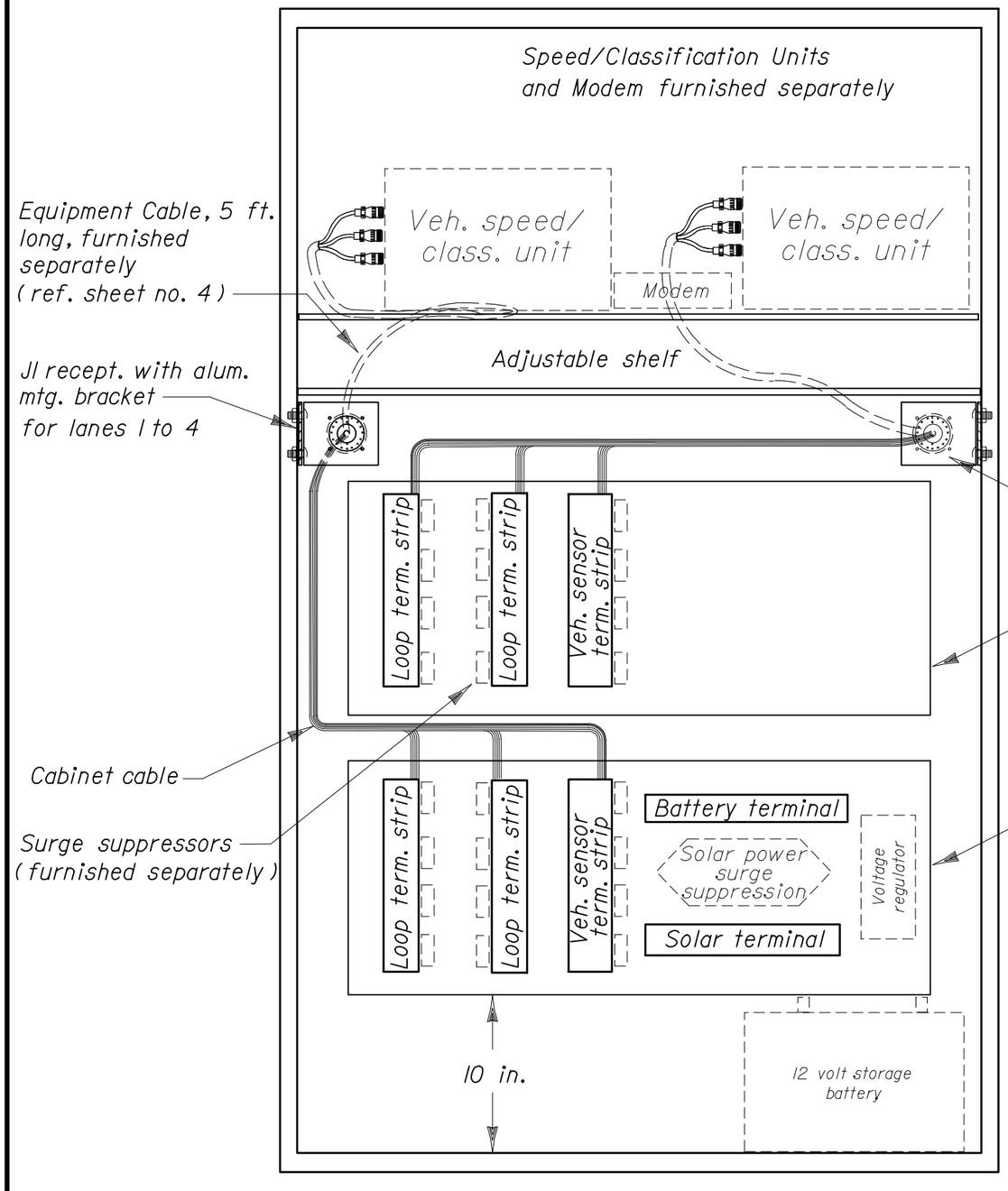


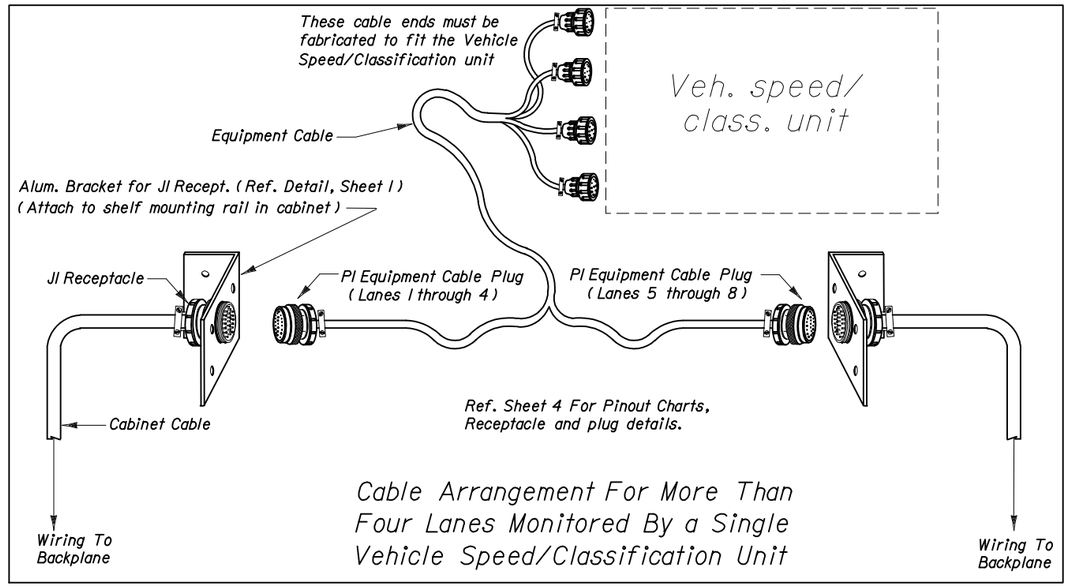


Cable Arrangement For More Than
Four Lanes Monitored By a Single
Vehicle Speed/Classification Unit

1. Traffic monitoring site cabinet includes:
   - A. One adjustable shelf;
   - B. Two backplane assemblies ( equipped as shown );
   - C. Two Jl receptacles with mtg. brackets;
   - D. All associated wiring and wiring harnesses.

2. Basic backplane assembly consists of:
   - A. Two inductive loop terminal strips;
   - B. One vehicle sensor terminal strip;
   - C. One battery terminal strip;
   - D. One solar panel terminal strip.

3. When piezoelectric axle sensors are used, the shields must be connected to earth ground.

CABINET LAYOUT DETAIL

( For More Than Four Lanes
And Up to Eight Lanes )

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

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To JI receptacle

Ref. sheet no. 1 or 2, note 2
for items to be included with backplane

Surge suppressor

Loop leads from lanes 1 & 2

Loop leads from lanes 3 & 4

Piezo. sensor leads from lanes 1 - 4

8 in. x 24 in. x 0.125 in. thick aluminum backplane

Power output

Solar power voltage reg.

Loop 1a — Blk, Gnd, Wht

Loop 1b — Blk, Gnd, Wht

Loop 2a — Blk, Gnd, Wht

Loop 2b — Blk, Gnd, Wht

Loop 3a — Blk, Gnd, Wht

Loop 3b — Blk, Gnd, Wht

Loop 4a — Blk, Gnd, Wht

Loop 4b — Blk, Gnd, Wht

Cntr. cond.

Cntr. cond.

Cntr. cond.

Cntr. cond.

Veh. sensor 1

Veh. sensor 2

Veh. sensor 3

Veh. sensor 4

Gnd

Gnd

Gnd

(−)

(+)

Jumpers

Solar power surge suppressor

(+)

(−)

$4\frac{1}{8}$″

$3\frac{7}{8}$″

$1\frac{7}{8}$″

8″

$3\frac{3}{4}$″

$4\frac{3}{4}$″

$3\frac{3}{4}$″

2″

24″

Red (+)

Solar power input

Blk (−)

Earth ground

Inductive loop lead-in and vehicle sensor leads from roadway

All terminal strip contacts are on $\frac{9}{16}$ inch centers ( Cinch 142 Series or equal )
Use insulated fork wire terminations

CABINET BACKPLANE DETAIL

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

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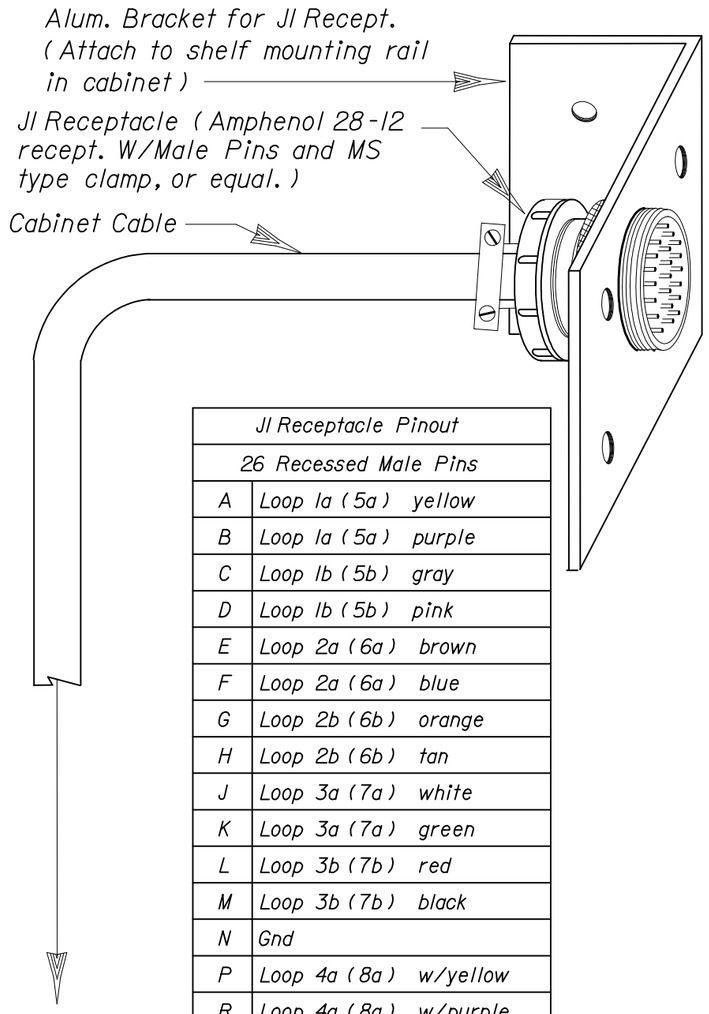
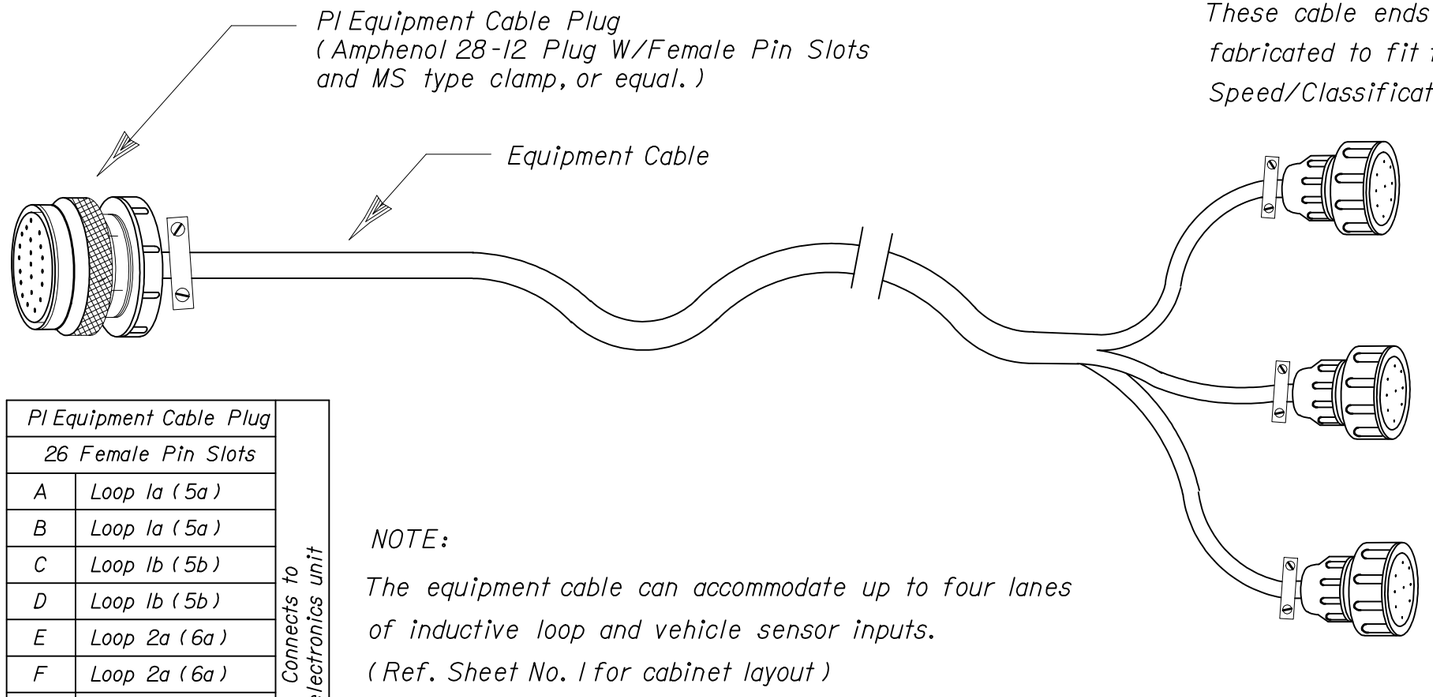



| J1 Receptacle Pinout | |
|---|---|
| 26 Recessed Male Pins | |
| A | Loop 1a (5a) yellow |
| B | Loop 1a (5a) purple |
| C | Loop 1b (5b) gray |
| D | Loop 1b (5b) pink |
| E | Loop 2a (6a) brown |
| F | Loop 2a (6a) blue |
| G | Loop 2b (6b) orange |
| H | Loop 2b (6b) tan |
| J | Loop 3a (7a) white |
| K | Loop 3a (7a) green |
| L | Loop 3b (7b) red |
| M | Loop 3b (7b) black |
| N | Gnd |
| P | Loop 4a (8a) w/yellow |
| R | Loop 4a (8a) w/purple |
| S | Loop 4b (8b) w/gray |
| T | Loop 4b (8b) w/brown |
| U | Piezo 1(5) (+) w/blue |
| V | Piezo 1(5) sh w/orange |
| W | Piezo 2 (6) (+) w/green |
| X | Piezo 2 (6) sh w/red |
| Y | Piezo 3 (7) (+) w/black |
| Z | Piezo 3 (7) sh w/red/blk |
| a | Piezo 4 (8) (+) red/green |
| b | Piezo 4 (8) sh red/orange |
| d | Gnd red/black |




| P1 Equipment Cable Plug | | |
|---|---|---|
| 26 Female Pin Slots | | |
| A | Loop 1a (5a) | Connects to electronics unit |
| B | Loop 1a (5a) | |
| C | Loop 1b (5b) | |
| D | Loop 1b (5b) | |
| E | Loop 2a (6a) | |
| F | Loop 2a (6a) | |
| G | Loop 2b (6b) | |
| H | Loop 2b (6b) | |
| N | Gnd | |
| J | Loop 3a (7a) | Connects to electronics unit |
| K | Loop 3a (7a) | |
| L | Loop 3b (7b) | |
| M | Loop 3b (7b) | |
| P | Loop 4a (8a) | |
| R | Loop 4a (8a) | |
| S | Loop 4b (8b) | |
| T | Loop 4b (8b) | |
| d | Gnd | |
| U | Piezo 1(5) (+) | Connects to electronics unit |
| V | Piezo 1 sh | |
| W | Piezo 2 (6) (+) | |
| X | Piezo 2 sh | |
| Y | Piezo 3 (7) (+) | |
| Z | Piezo 3 sh | |
| a | Piezo 4 (8) (+) | |
| b | Piezo 4 sh | |

NOTE:

The equipment cable can accommodate up to four lanes of inductive loop and vehicle sensor inputs. (Ref. Sheet No. 1 for cabinet layout)

For more than four lanes and up to eight lanes of inputs, the following options are available:

1. A second Vehicle Speed/Class. Unit and separate equipment cable connecting to a second J1 receptacle; or
2. A single Vehicle Speed/Class. Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (Ref. Sheet 2 detail)

Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.

EQUIPMENT CABLE DETAIL

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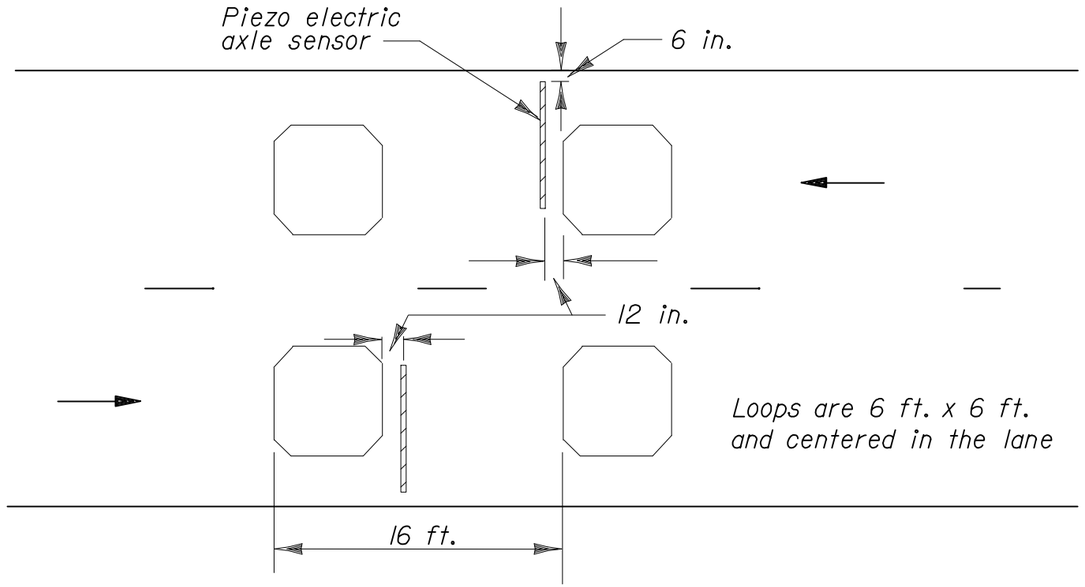
## TRAFFIC MONITORING SITE LOOP ASSEMBLY WITH AXLE SENSOR PLACEMENT DETAIL



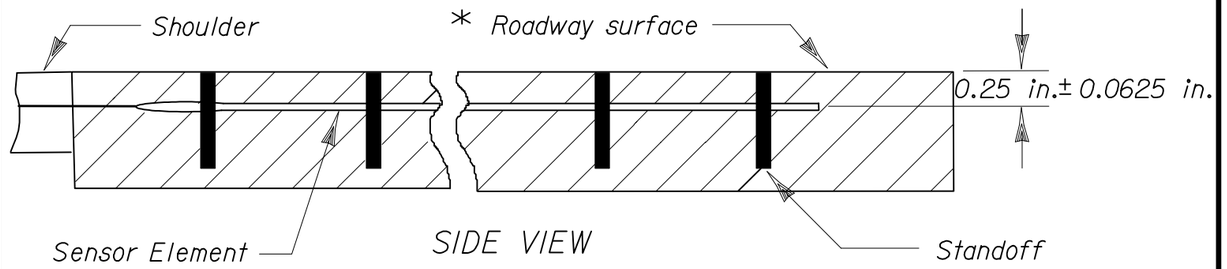

Note:

Loop slots shall be 0.25 inches wide ( approx. ) by 1.5 inches to 2 inches deep. Three turns of #12 AWG, type XHHW stranded copper wire shall be placed in the slot. Backer rod shall be used to hold the loop wire in the bottom of the slot.

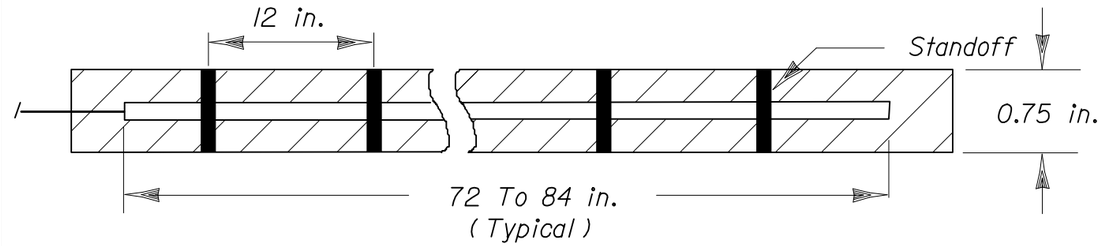
Loop leads shall be twisted at the rate of 10 to 12 twists per foot. The twisted pair shall extend to the pull box with three feet of spare length coiled in the pull box.

All leads ( inductive loop & vehicle sensor ) shall be identified according to the lane numbering convention shown on sheet 8 and 9.

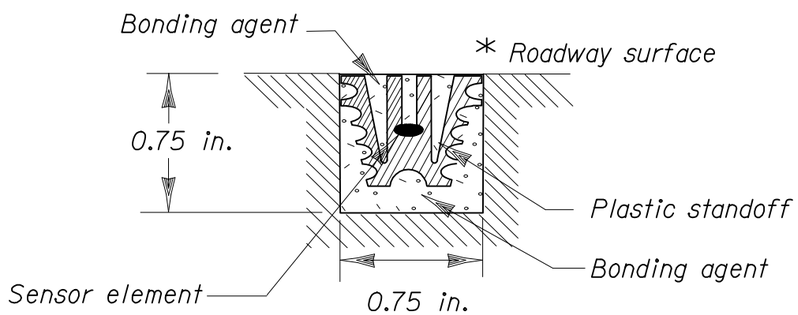
## TYPICAL UNENCAPSULATED CLASS II VEHICLE SENSOR




SIDE VIEW




TOP VIEW




END VIEW

* Some installations may require axle sensors to be placed in the structural course, prior to placement of the friction course.

Note:

These are typical dimensions. actual dimensions, element cross-sections and standoffs may vary depending on manufacturer and model.

LOOP AND PIEZOELECTRIC VEHICLE SENSOR DETAIL

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

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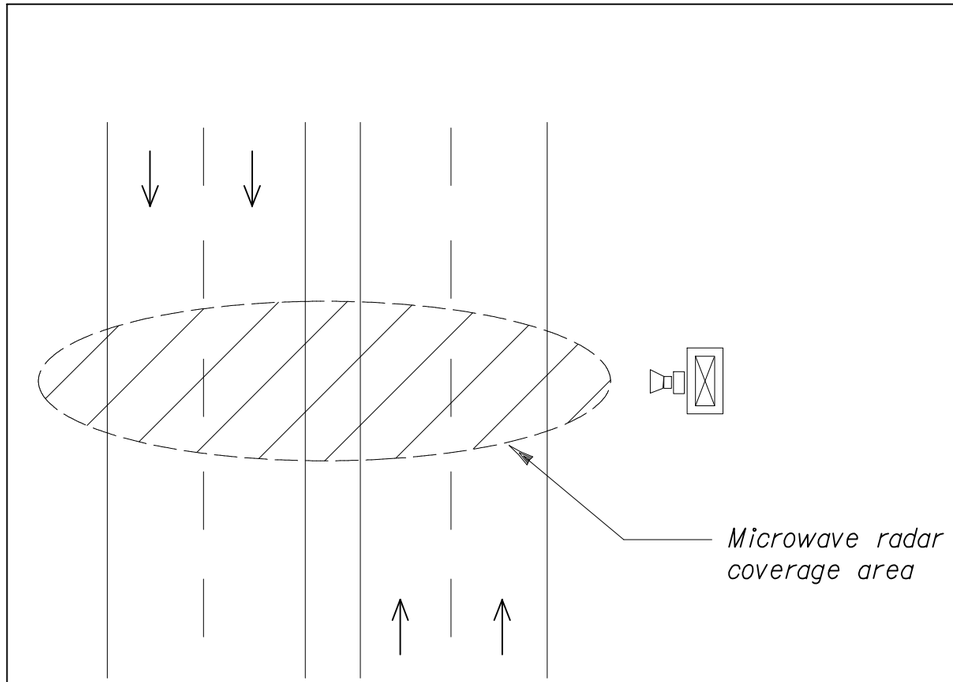
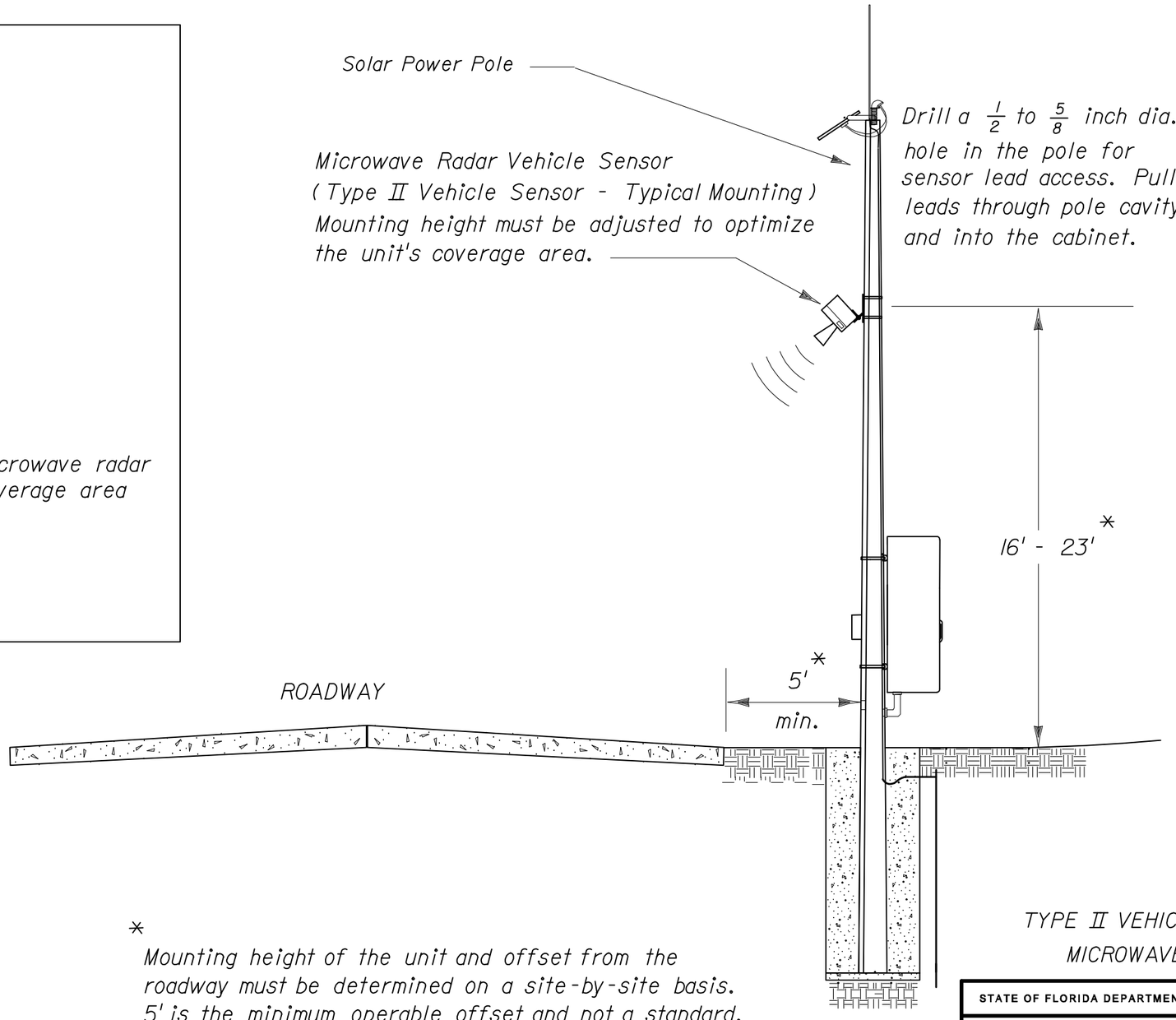



PLAN VIEW




The unit must be capable of detecting up to eight lanes of traffic ( in either or both directions ) when mounted perpindicular to the roadway.

Coverage area of the unit is affected by the roadway geometry: distance from the travel lanes, median type and width, barrier walls, etc.

* Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis. 5' is the minimum operable offset and not a standard.

TYPE II VEHICLE SENSOR
MICROWAVE RADAR

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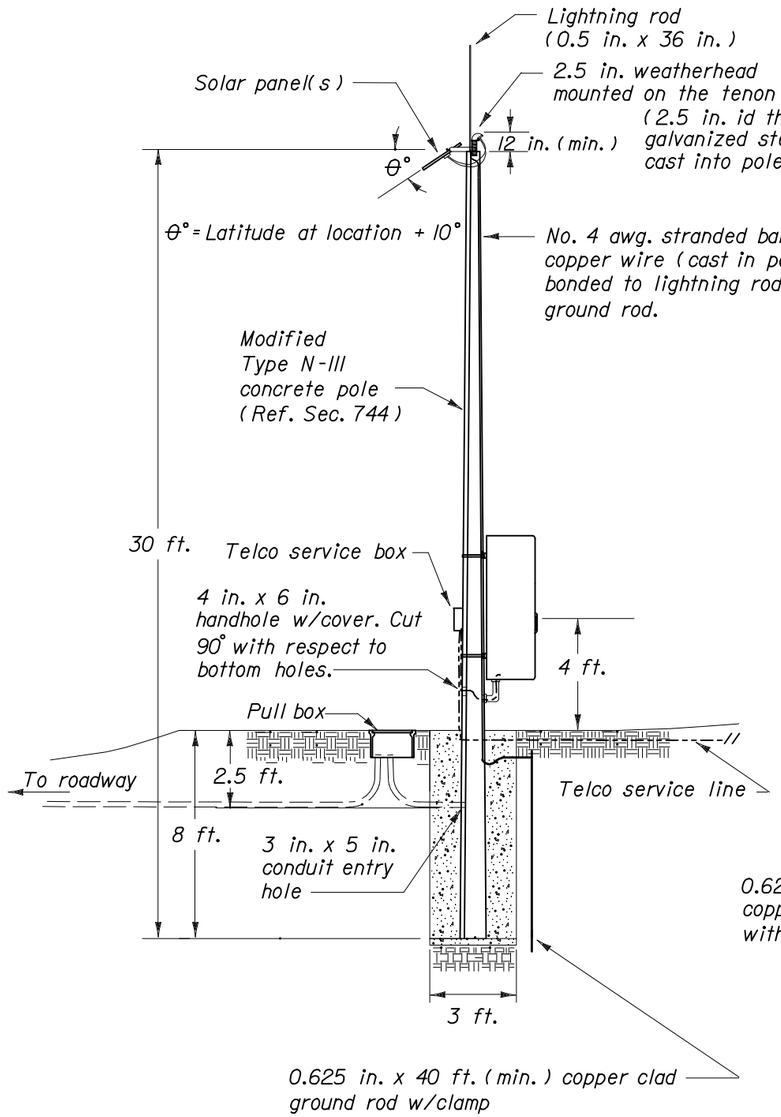
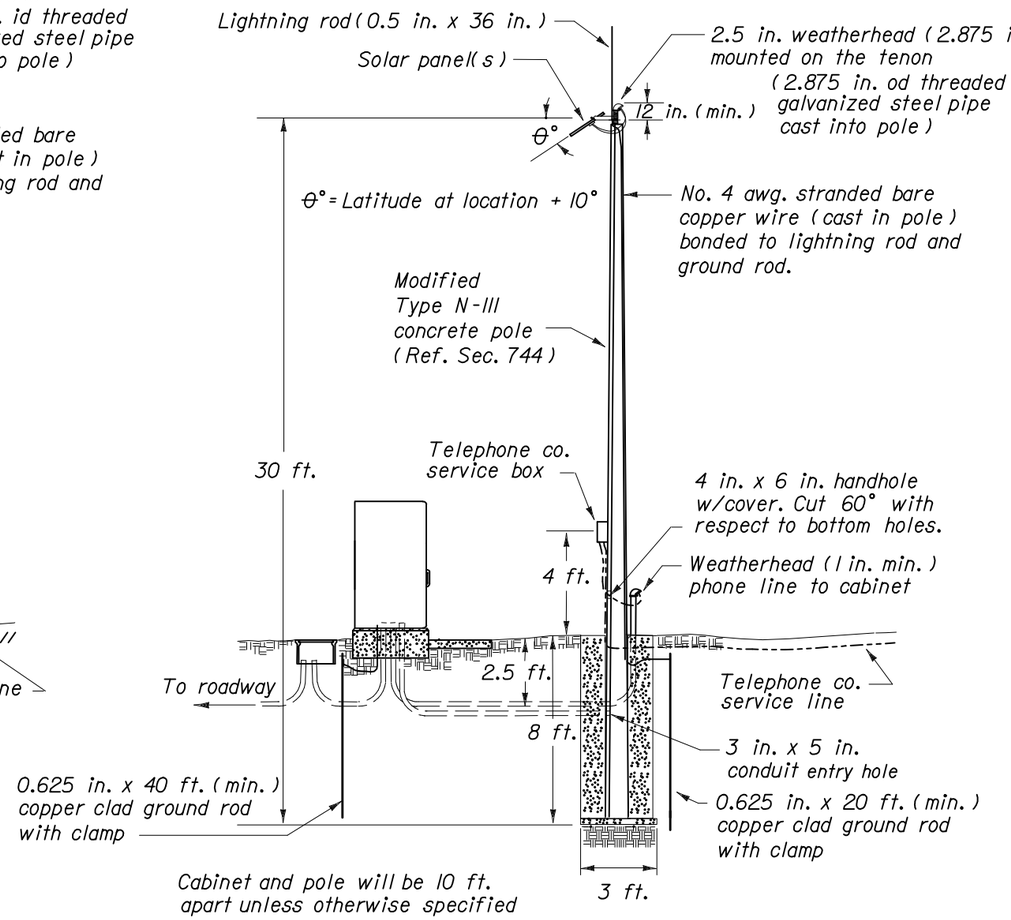
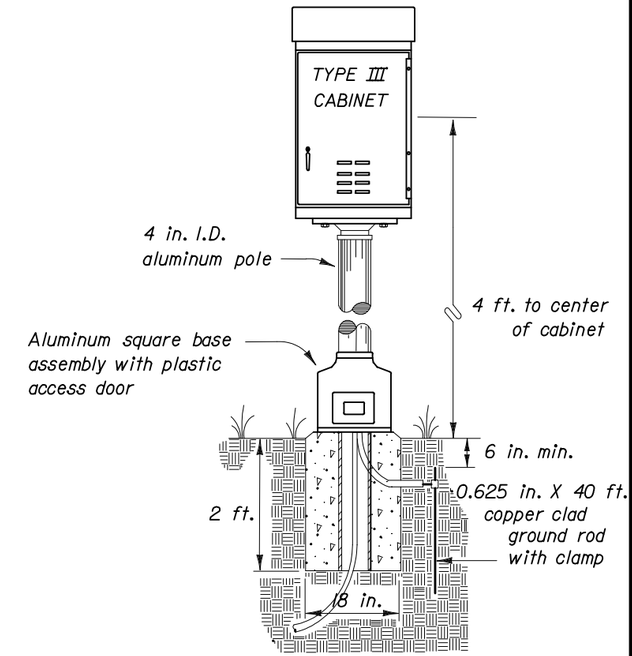



SOLAR POWER POLE
WITH POLE MTD. CABINET




SOLAR POWER POLE
WITH BASE MTD. CABINET




PEDESTAL MTD. CABINET

SOLAR POWER POLE DETAIL

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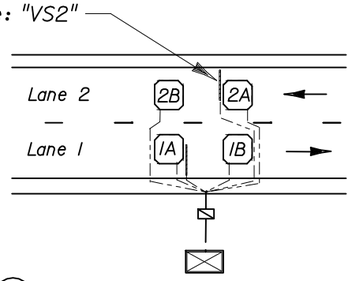
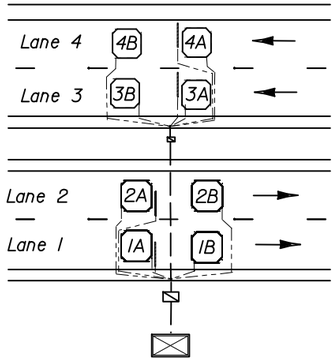
## SINGLE CABINET CONFIGURATION

*Vehicle sensors will be identified by, and leads marked with, the letters "VS" followed with the lane number.*

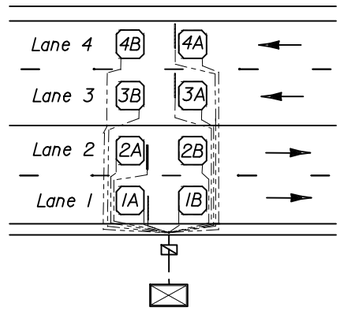
*Example: "VS2"*



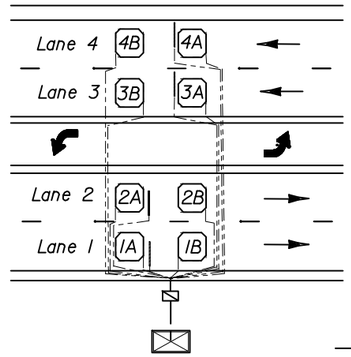

(A) TWO LANE - TWO WAY



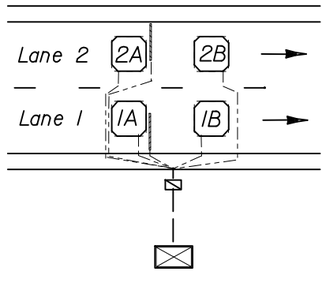

(B) FOUR LANE, DIVIDED - TWO WAY



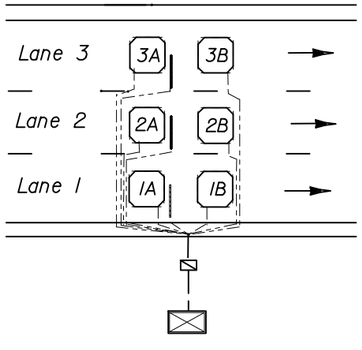

(C) FOUR LANE, UNDIVIDED - TWO WAY



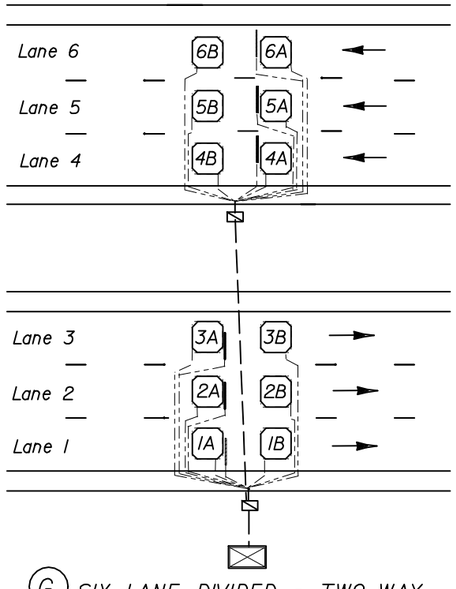

(D) FOUR LANE/CONTINUOUS LEFT TURN LANE



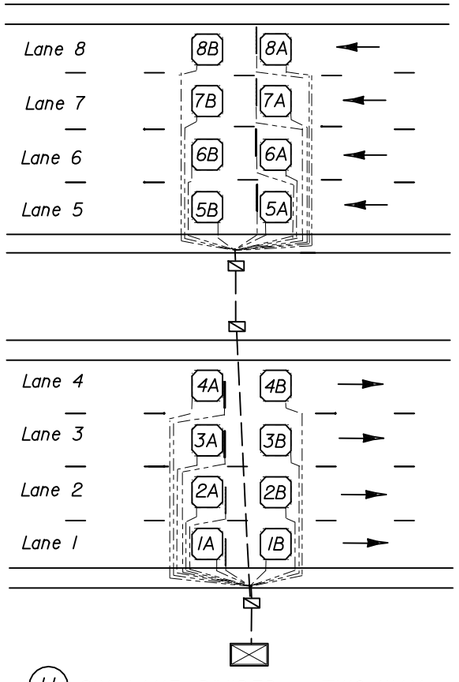

(E) TWO LANE - ONE WAY




(F) THREE LANE - ONE WAY




(G) SIX LANE, DIVIDED - TWO WAY




(H) SIX LANE, DIVIDED - TWO WAY

LANE NUMBERING CONVENTION DETAIL

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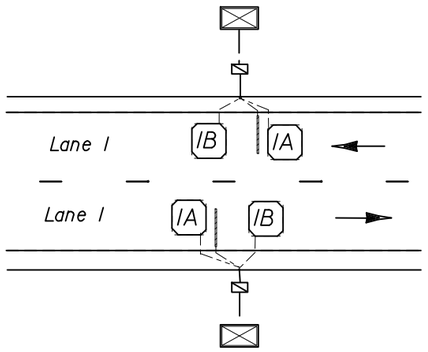
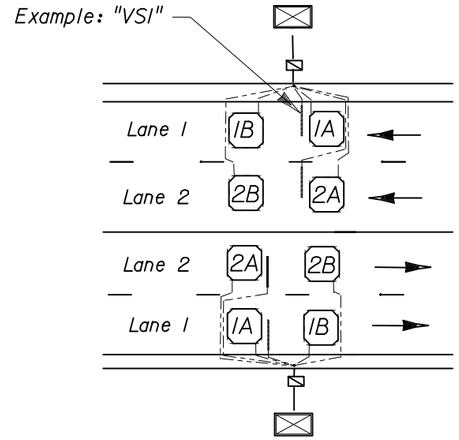
*Vehicle sensors will be identified by, and leads marked with, the letters "VS" followed with the lane number.*

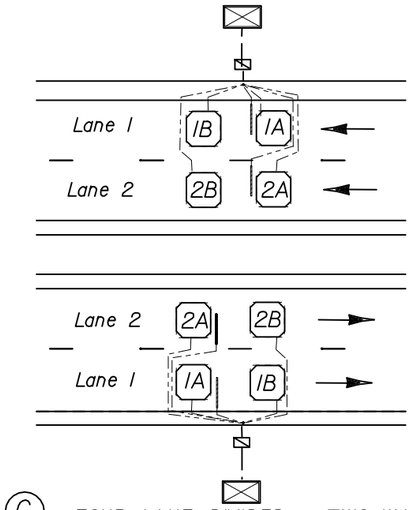
**TWO CABINET CONFIGURATION**



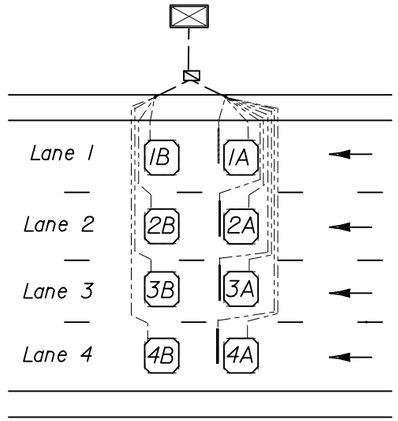

(A) TWO LANE - TWO WAY



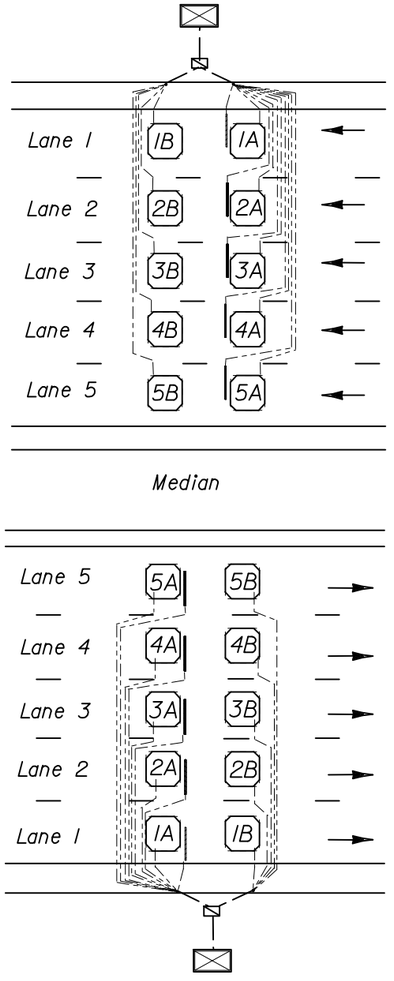

(B) FOUR LANE, UNDIVIDED TWO WAY



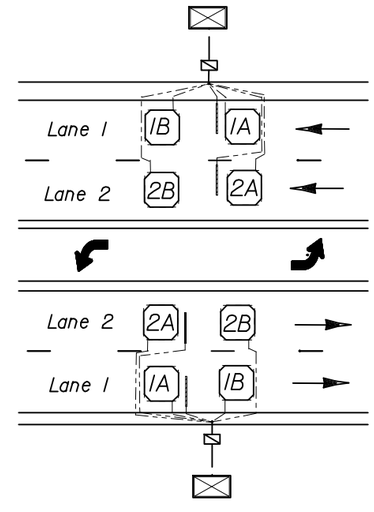

(C) FOUR LANE, DIVIDED - TWO WAY



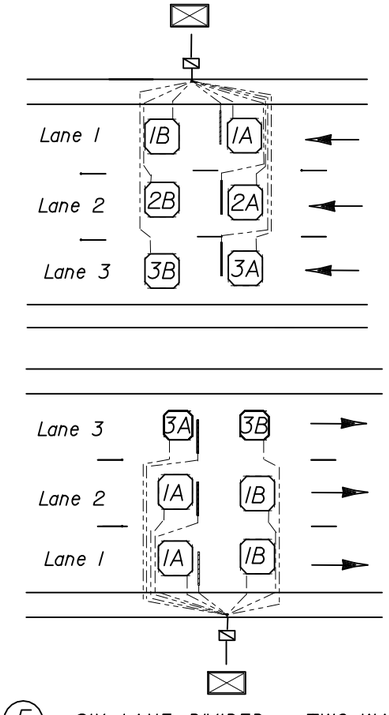

(F) EIGHT LANE, DIVIDED TWO WAY




(G) TEN LANE, DIVIDED TWO WAY




(D) FOUR LANE/CONTINUOUS LEFT TURN LANE




(E) SIX LANE, DIVIDED - TWO WAY

LANE NUMBERING CONVENTION DETAIL

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