Origination Form

Proposed Revisions to a Standard Plans Index

Originator:	Johnson, Victor	Index Number:	695-001
Date:	06/18/2025	Sheet Number(s):	ALL
E-mail:	Victor.Johnson@dot.state.fl.us	Index Title:	Traffic Monitoring Site

Summary of the changes:

All Sheets - Renumbered.

Sheet 1: Updated TABLE OF CONTENTS; Changed titles on Sheets 14-16; Added New Sheet 17.

Sheet 5: Added "and start wire twist at the beginning of the home run slot." to Note 2; Added "Install a home run slot with a minimum width of 5/8"."

Sheet 8: Added "and start wire twist at the beginning of the home run slot." to Note 2; Added "Install a home run slot with a minimum width of 5/8"."

Sheet 11: Added "1.5 meter" to the Strain Gauge or Quartz Axle Sensor callout; Changed interior Sensor and Loop Leads dimension to 1-6".

Sheet 14: Changed the Loop dimension to 15.7"; Changed Lane Width to 6'-0" Max.; Separated the Loops and added dimension in the DUAL LOOP ASSEMBLY; Added TABLE-1; Changed title to "Regular Side Path Configurations".

Sheet 15: Changed the Loop dimension to 15.7"; Changed Lane Width to 6'-1" to 11-8"; Separated the Loops and added dimension in the DUAL LOOP ASSEMBLY; Updated TABLE-1 and renamed TABLE-2; Updated the Inductive Loop callout to reference Table-2; Changed title to "Medium Shared Use Path Configurations".

Sheet 16: Changed the Loop dimension to 15.7"; Changed Lane Width to 11-9" to 15'-0"; Separated the Loops and added dimension in the DUAL LOOP ASSEMBLY; Updated TABLE-1 and renamed TABLE-3; Updated the Inductive Loop callout to reference Table-3; Deleted gap between Inductive Loops and Deleted "See TABLE-1 on Sheet 15" reference; Updated See Changed title to "Medium Shared Use Path Configurations".

Sheet 17: New Sheet - Extra Large Shared Use Path Configurations.

Sheet 17: New Sheet 18 - Added IR Lens and Dimension to the ELEVATION view.

Sheet 18: New Sheet 19- Added "Concrete" to the Foundation callout in DETAIL 'D'.

Sheet 19: New Sheet 20.

Sheet 20: New Sheet 21 - Updated NOTES - Pulled Note 6 out as its own note; Changed the Varies (See Note 6) callout in the SOLAR POWER POLE WITH POLE MOUNTE CABINET to "See CONCRETE BASE DIMENSIONS".

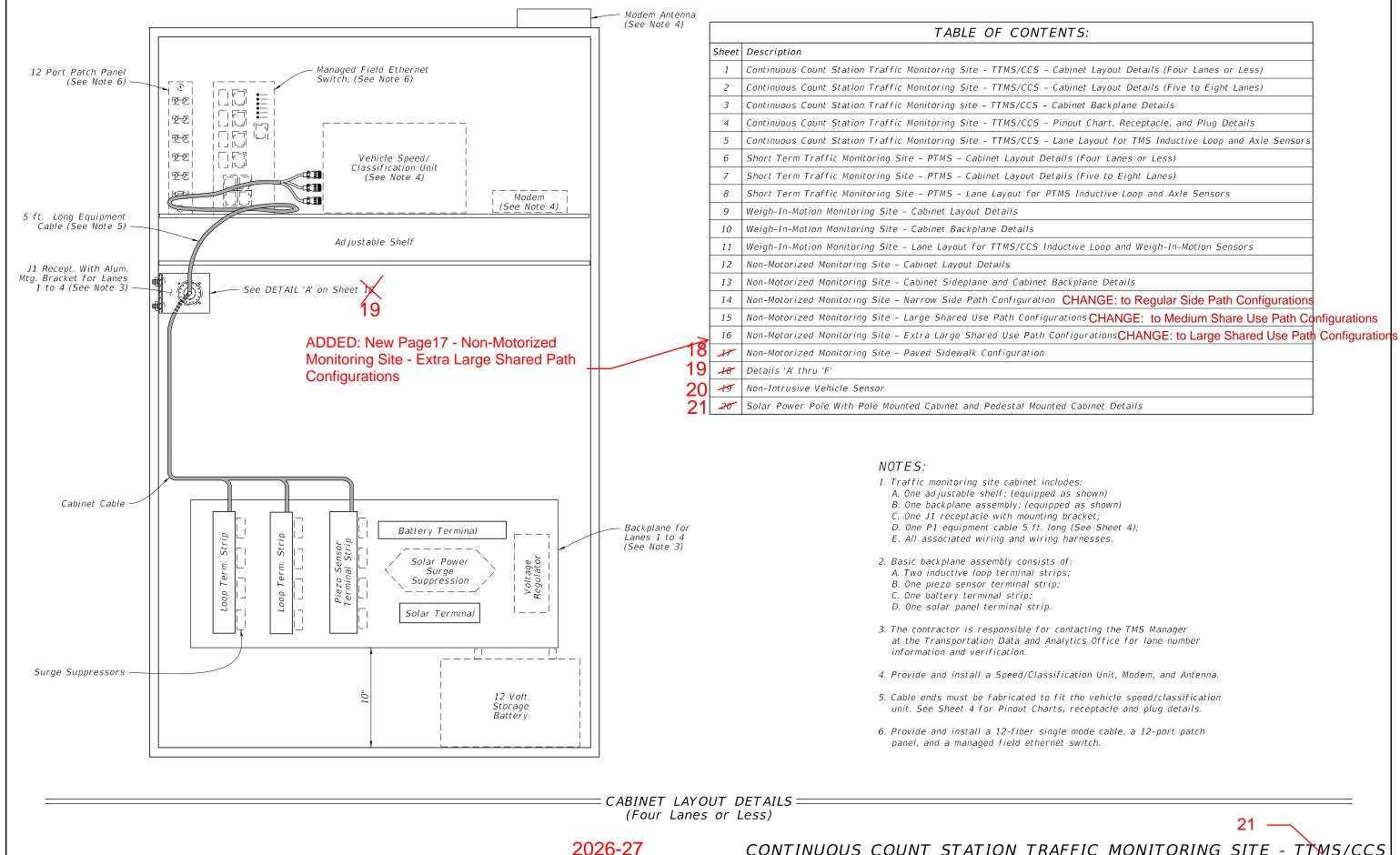
Commentary/Background:

FDOT Transportation Data and Analytics office is updating the pages of the 2026-2027 Standard Plan Index 695-001 to assist with issues that are being experienced in the field during construction. The updated document is bringing in a new page of non-motorized layout to be cohesive with changes in the manufacture's device and updated criteria. It is also meant to detail the processes and equipment to be used in the installation of sensors, both the general instruction for count sites, WIM, and non-motorized.

Other Affected Documents/Offices	Person Contacted	Affected (Yes/No)
Other Standard Plans		
FDOT Design Manual		
Standard Specifications		

Basis of Estimates Manual	
Approved Product List	
Construction Office	
Maintenance Office	

Implementation	



REVISION

11/01/23

DESCRIPTION:

· 11/01/25

FDOT

FY 2025-26

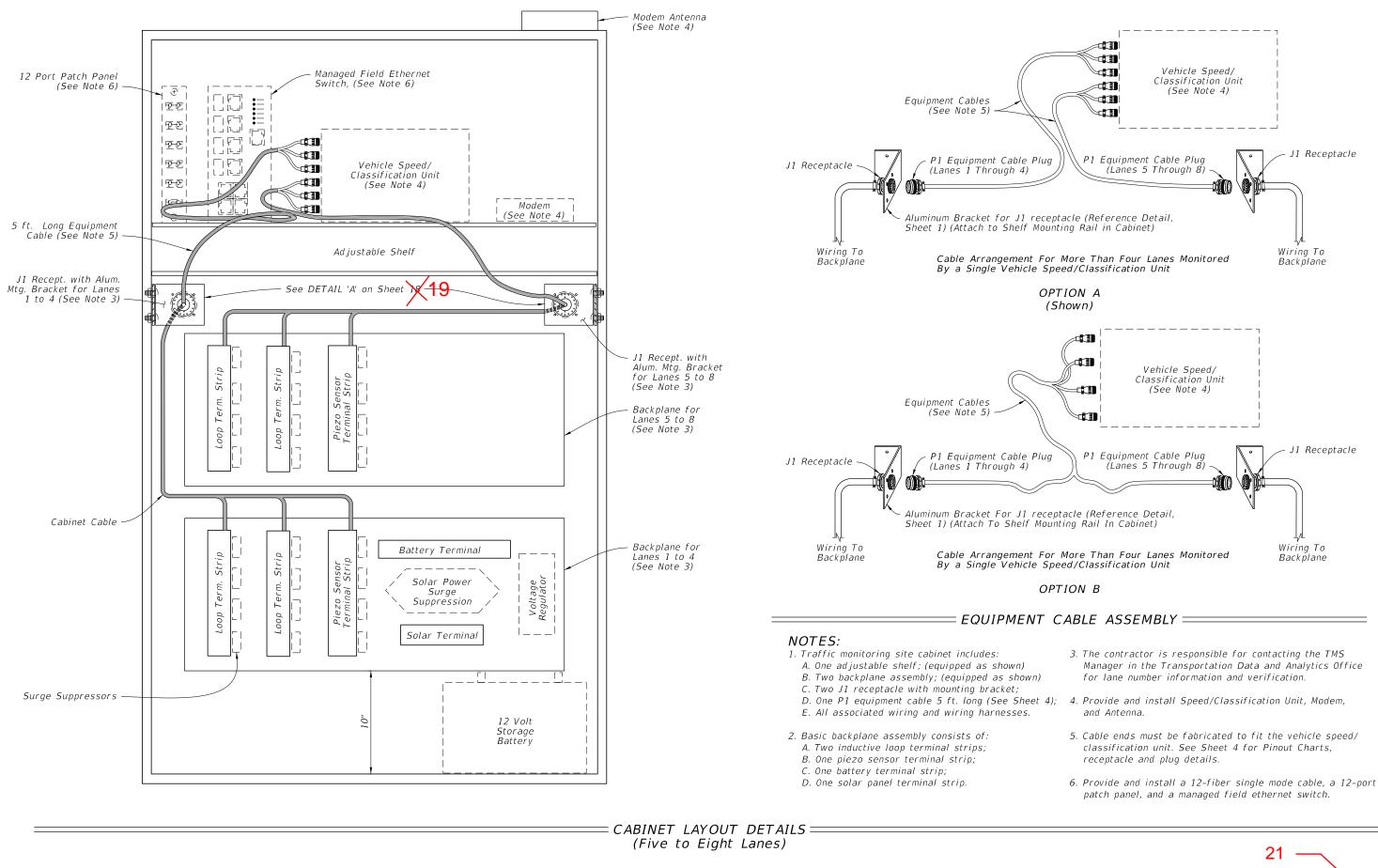
STANDARD PLANS

CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TIMS/CCS

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2026-27

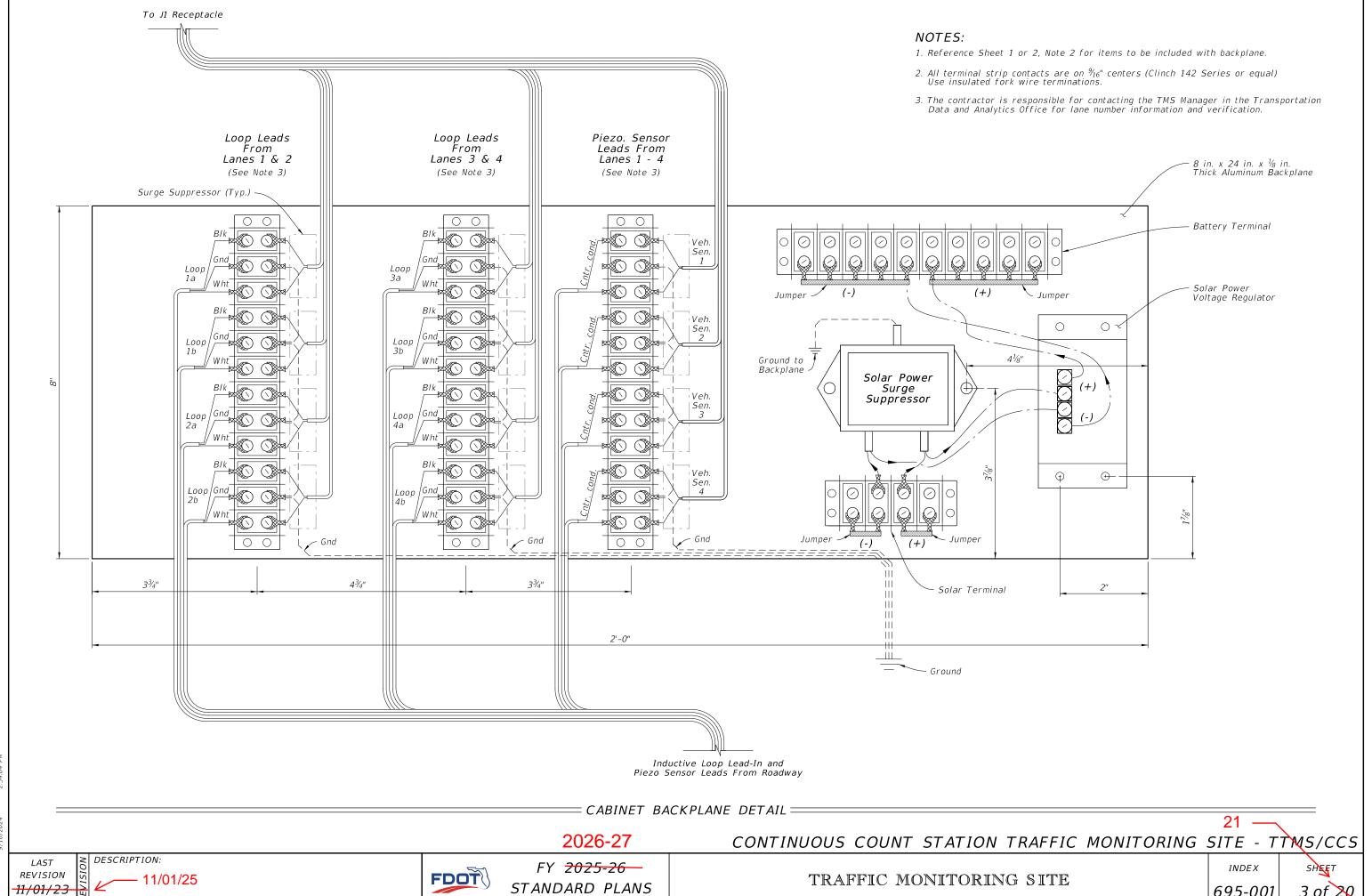
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CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TIMS/CCS

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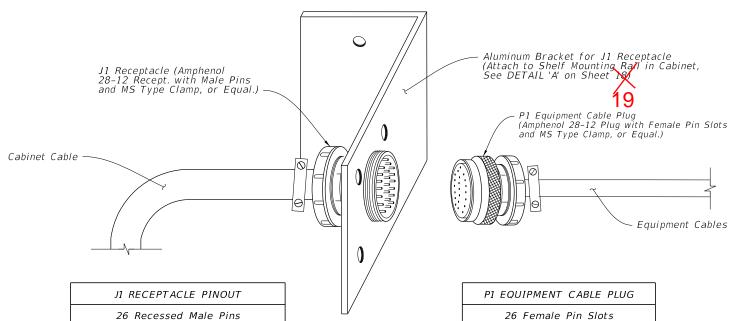
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STANDARD PLANS

TRAFFIC MONITORING SITE

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Loop 1a (5a) white

Loop 1a (5a) black

Loop 1b (5b) red

Loop 1b (5b) black

Loop 2a (6a) green

Loop 2a (6a) blue

Loop 2b (6b) tan

Loop 3a (7a) white

Loop 3a (7a) green

Loop 3b (7b) red

Loop 3b (7b) black

Loop 4a (8a) w/white

Loop 4a (8a) w/black

Loop 4b (8b) w/red

Loop 4b (8b) w/green

Piezo 1 (5) (+) w/blue

Piezo 1 (5) sh w/orange

Piezo 2 (6) (+) w/green

Piezo 3 (7) (+) w/black

Piezo 3 (7) sh w/red/blk

Piezo 4 (8) (+) red/ green

Piezo 4 (8) sh red/white

Gnd green

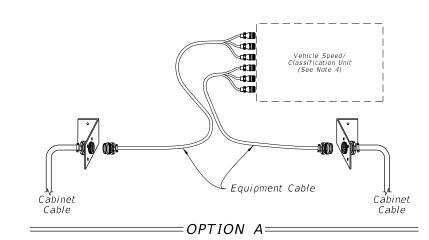
Piezo 2 (6) sh w/red

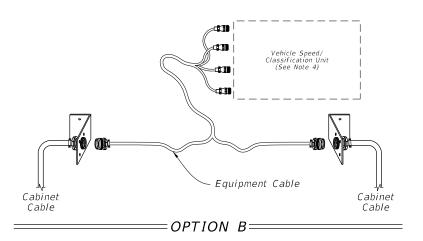
Loop 2b (6b) orange

D

P1 EQUIPMENT CABLE PLUG 26 Female Pin Slots Loop 1a (5a) Loop 1a (5a) Loop 1b (5b) D Loop 1b (5b) Loop 2a (6a) Loop 2a (6a) Loop 2b (6b) Loop 2b (6b) Loop 3a (7a) Loop 3b (7b) Loop 3b (7b) Loop 3b (7b) Loop 4a (8a) Loop 4a (8a) Loop 4b (8b) Loop 4b (8b) Piezo 1 (5) (+) Piezo 1 sh Piezo 2 (6) (+) Piezo 2 sh Piezo 3 (7) (+) Piezo 3 sh Piezo 4 (8) (+) Piezo 4 sh

Equipment Cables





NOTES:

- 1. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.
- 2. The equipment cable can accommodate up to four lanes of inductive loop and piezo sensor inputs. (See Sheet 1 for cabinet layout)
- 3. For more than four lanes and up to eight lanes of inputs, the following options are available:
- A. Second Vehicle Speed/Classification Unit and separate equipment cable connecting to a second J1 receptacle; or
- B. Single Vehicle Speed/Classification Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (See Sheet 2 detail)
- 4. Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.
- 5. Cable Ends must be fabricated to fit the vehicle Speed/Classification Unit.

PINOUT, RECEPTACLE, AND PLUG DETAILS = 2026-27

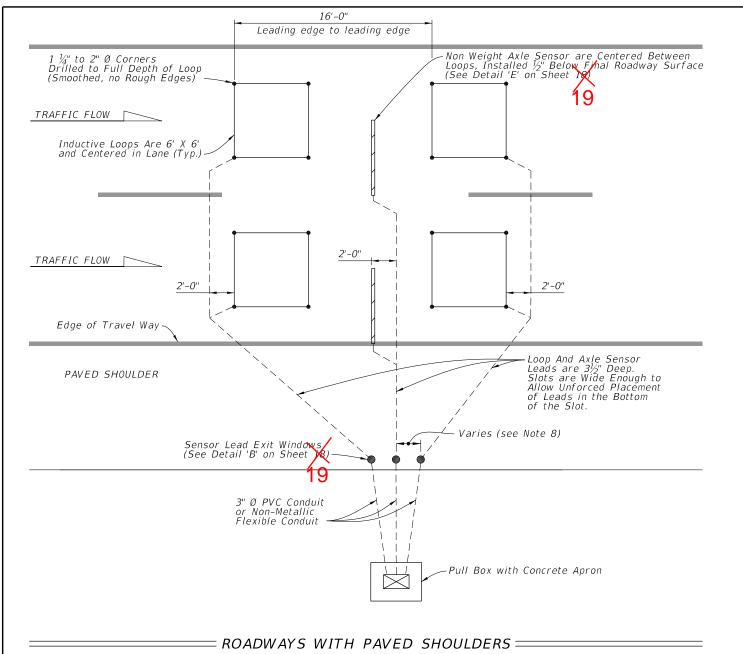
CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TIMS/CCS

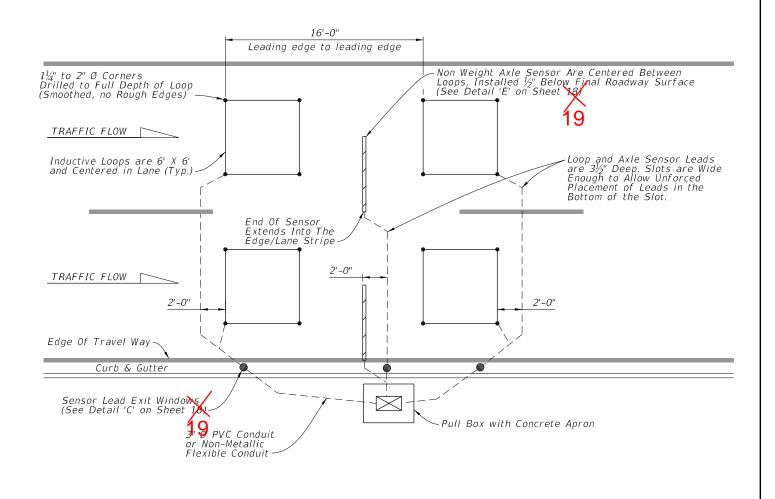
REVISION 11/01/23

DESCRIPTION: - 11/01/25



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1. Install axle sensors and loops associated with axle sensors after placement of the friction course.

ADDED TO NOTE 2: and start wire twist at the beginning of the home run slot.

Install a home run slot with a minimum width of 5/8".

CURB & GUTTER ROADWAYS

- 2. Cut a $3\frac{1}{2}$ " deep slot for the Inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Four turns of #14 AWG, place the IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot.
- ADDED TO NOTE 3: 3. Twist loop leads at the rate of 8 to 16 twist per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted.
- 4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
- 5. See Index 635-001 for pull box and concrete apron details.
- 6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than 1/2" from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor slot at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.
- 7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
- 8. Install Exit Windows at least 2' apart.

LANE LAYOUT FOR TTMS/CCS INDUCTIVE LOOP AND AXLE SENSORS: (Typical for up to 4 Lanes of Sensor Leads Pulled to one Side of the Roadway)

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CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TIMS/CCS

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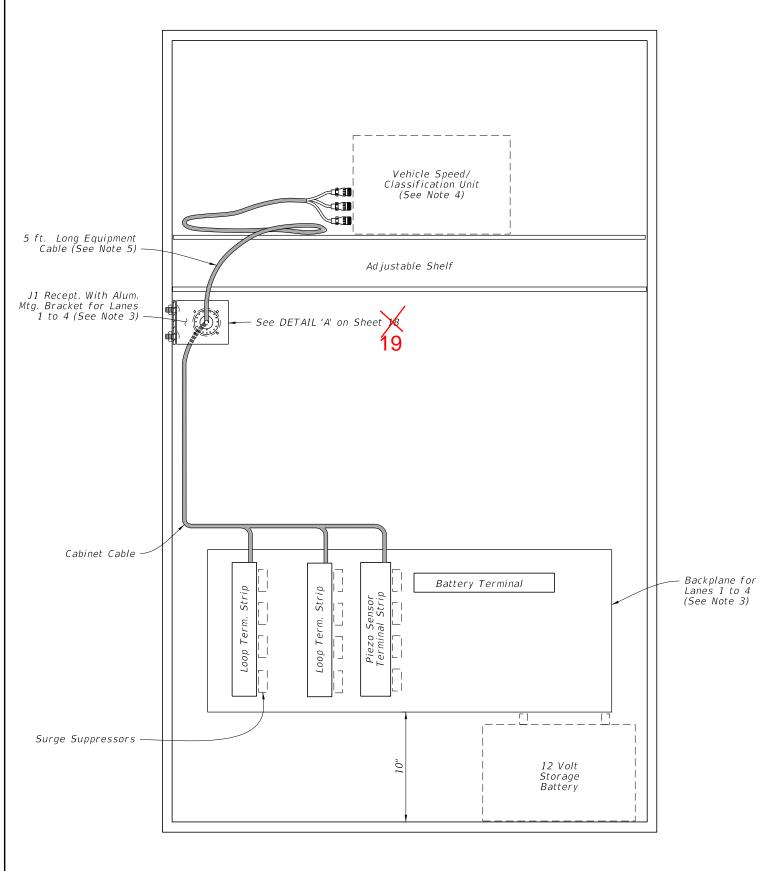
FY 2025-26 STANDARD PLANS

TRAFFIC MONITORING SITE

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- 1. Traffic monitoring site cabinet includes:
- A. One adjustable shelf; (equipped as shown)
- B. One backplane assembly; (equipped as shown)
- C. One J1 receptacle with mounting bracket;
- D. One P1 equipment cable 5 ft. long (See Sheet 4);
- E. All associated wiring and wiring harnesses.
- 2. Basic backplane assembly consists of:
 - A. Two inductive loop terminal strips;
- B. One piezo sensor terminal strip;
- C. One battery terminal strip.
- 3. The contractor is responsible for contacting the District Data Collection Coordinator for lane numbering.
- 4. Proved and install a Speed/Classification Unit.
- 5. Cable ends must be fabricated to fit the vehicle speed/ classification unit. See Sheet 4 for Pinout Charts, receptacle and plug details.

CABINET LAYOUT DETAILS = (Four Lanes or Less)

2026-27

SHORT TERM TRAFFIC MONITORING SITE - PTMS

REVISION 11/01/23

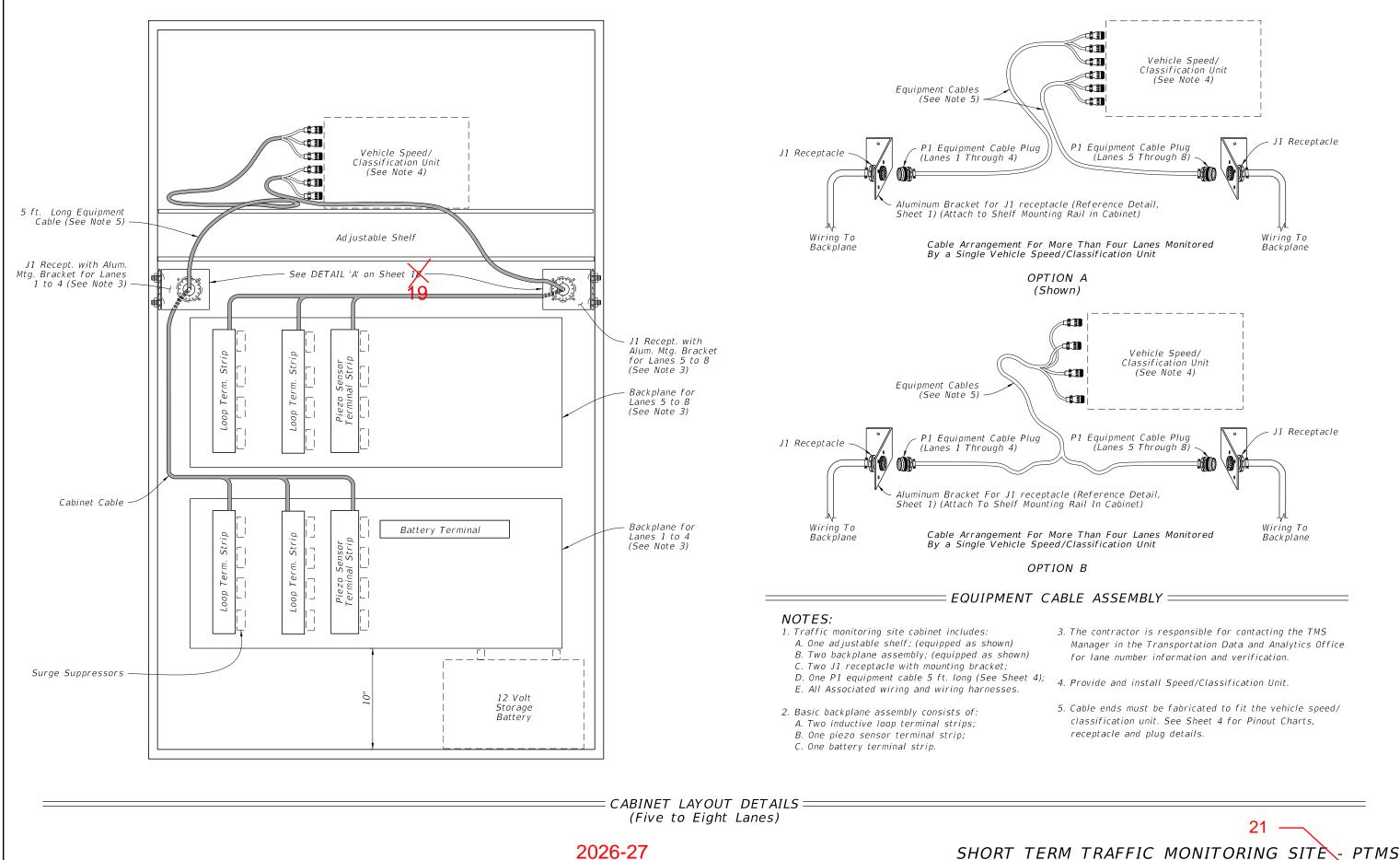
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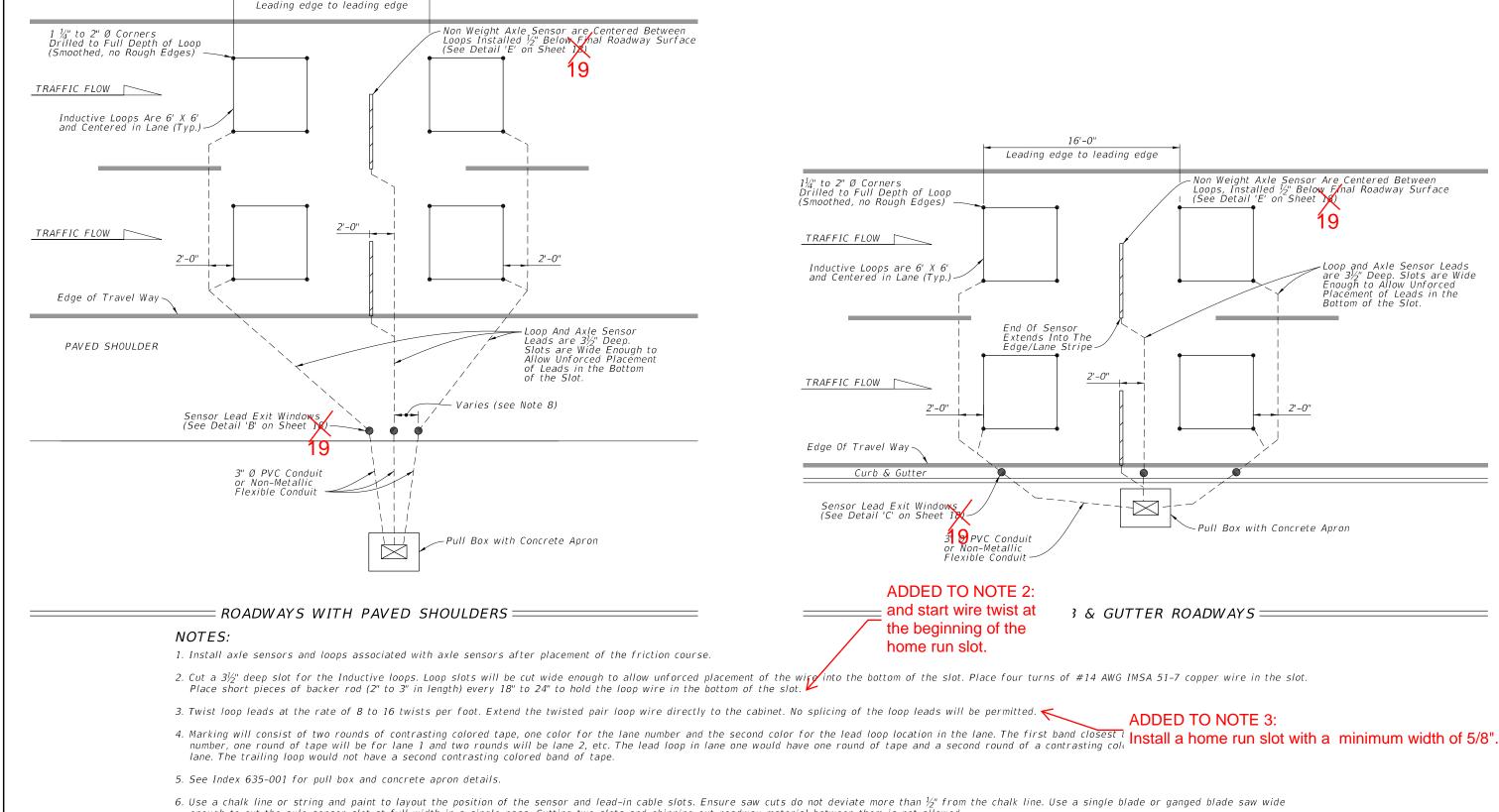
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11/01/23

DESCRIPTION:

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enough to cut the axle sensor slot at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.

7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.

8. Install Exit Windows at least 2' apart.

16'-0"

= LANE LAYOUT FOR PTMS INDUCTIVE LOOP AND AXLE SENSORS = (Typical for up to 4 Lanes of Sensor Leads Pulled to one Side of the Roadway)

SHORT TERM TRAFFIC MONITORING SITE

PTMS

SHEET

REVISION 11/01/23

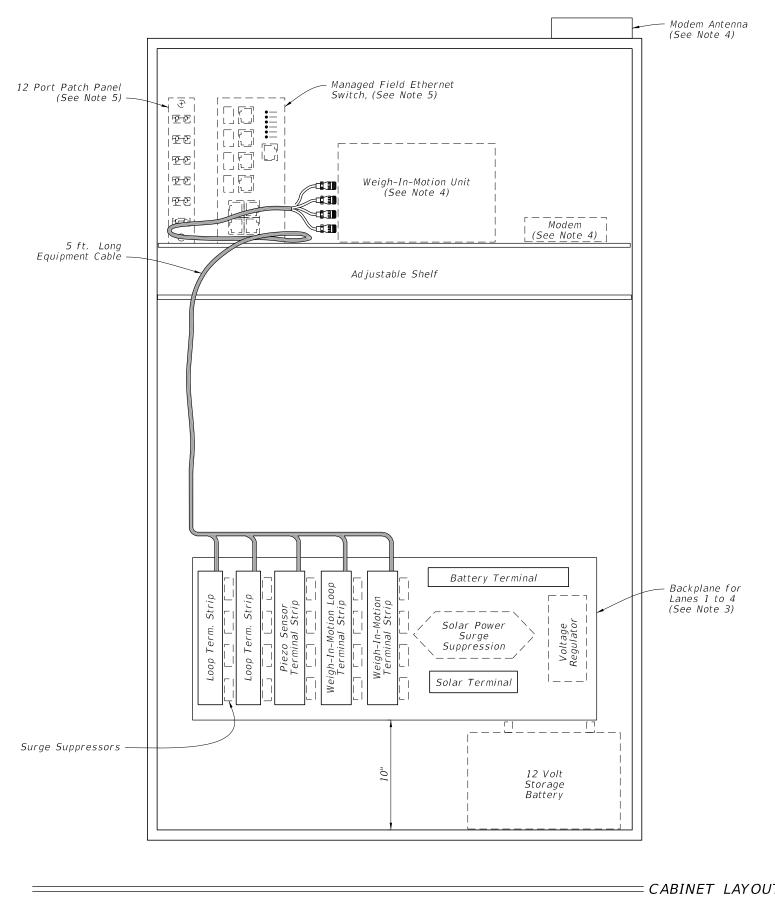
DESCRIPTION: - 11/01/25

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Weigh-In-Motion Unit (See Note 4) Equipment Cables Wiring to Backplane ≠ ⇒ Wiring to Backplane

= EQUIPMENT CABLE ASSEMBLY ===

NOTES:

- 1. Traffic monitoring site cabinet includes:
 - A. One adjustable shelf; (equipped as shown)
 - B. One backplane assembly; (equipped as shown)
 - C. All associated wiring and wiring harnesses.
- 2. Basic backplane assembly consists of:
- A. Two inductive loop terminal strips;
- B. One piezo sensor terminal strip; C. Two weigh-in-motion terminal strips;
- D. One battery terminal strip;
- E. One solar panel terminal strip.
- 3. The contractor is responsible for contacting the TMS Manager at the Transportation Data and Analytics Office for lane number information and verification.
- 4. Provide and install a Weigh-In-Motion Unit, Modem, and Antenna.
- 5. Provide and install a 12-fiber single mode cable, a 12-port patch panel, and a managed field ethernet switch.

CABINET LAYOUT DETAILS =

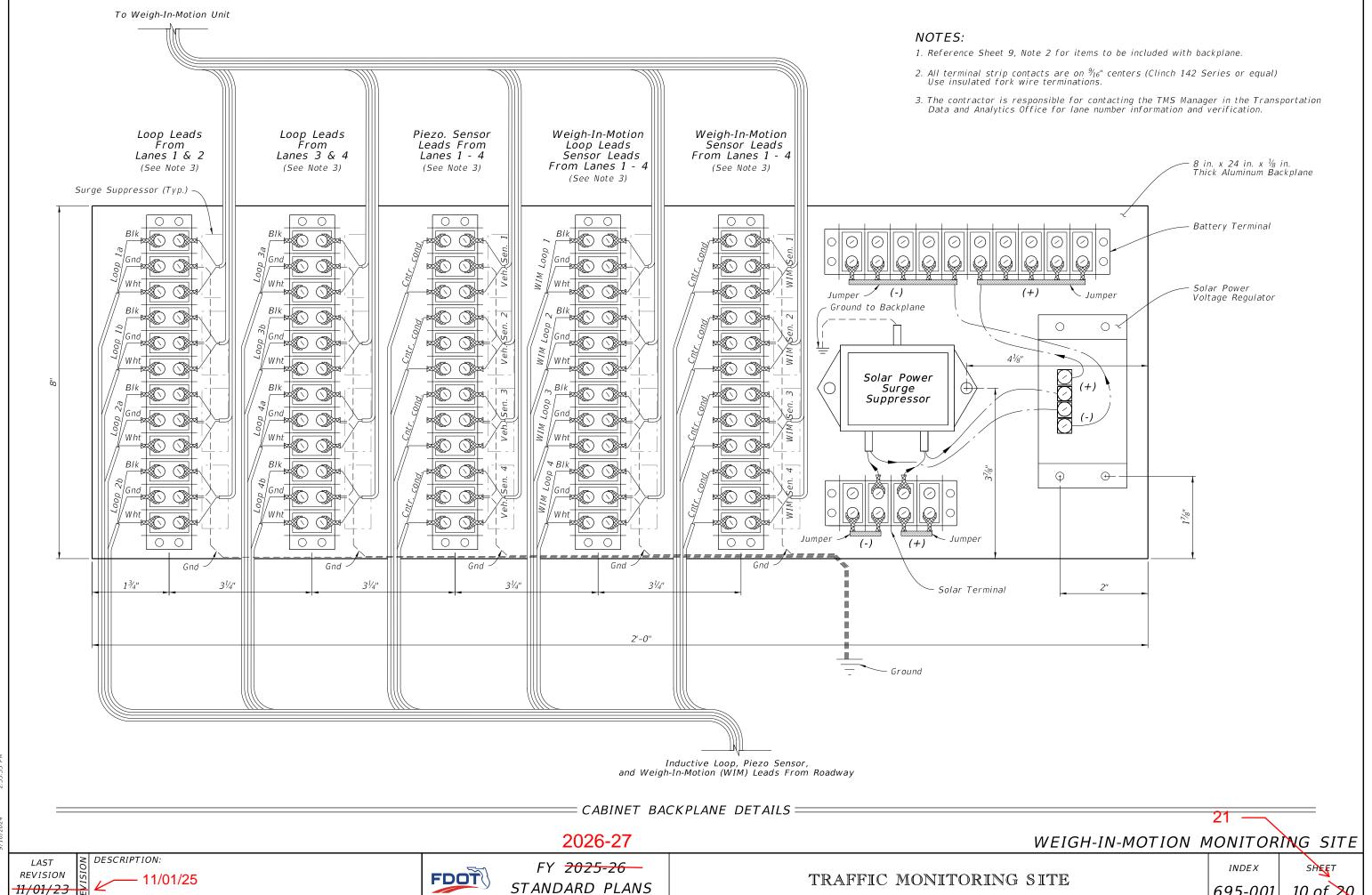
WEIGH-IN-MOTION MONITORING SITE

DESCRIPTION: REVISION - 11/01/25 11/01/23

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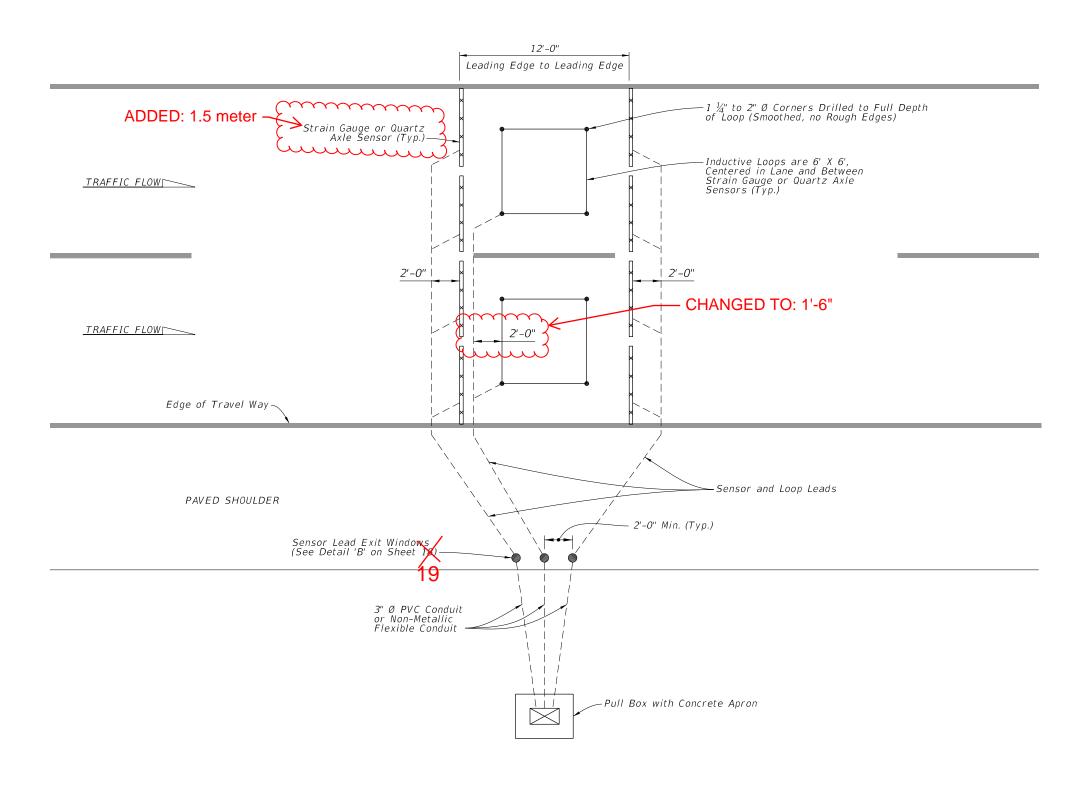


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- 1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
- 2. Cut a $3\frac{1}{2}$ " deep slot for the Inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot.
- 3. Twist loop leads at the rate of 8 to 16 twists per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted.
- 4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
- 5. See Index 635-001 for pull box and concrete apron details.
- 6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than $\frac{1}{2}$ " from the chalk line. Install the sensor according to manufacturer's recommendations.
- 7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
- 8. Install Exit Windows at least 2' apart.



= LANE LAYOUT FOR TTMS/CCS INDUCTIVE LOOP AND WEIGH-IN-MOTION SENSORS :

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WEIGH-IN-MOTION MONITORING SITE

REVISION 11/01/24

DESCRIPTION: - 11/01/25



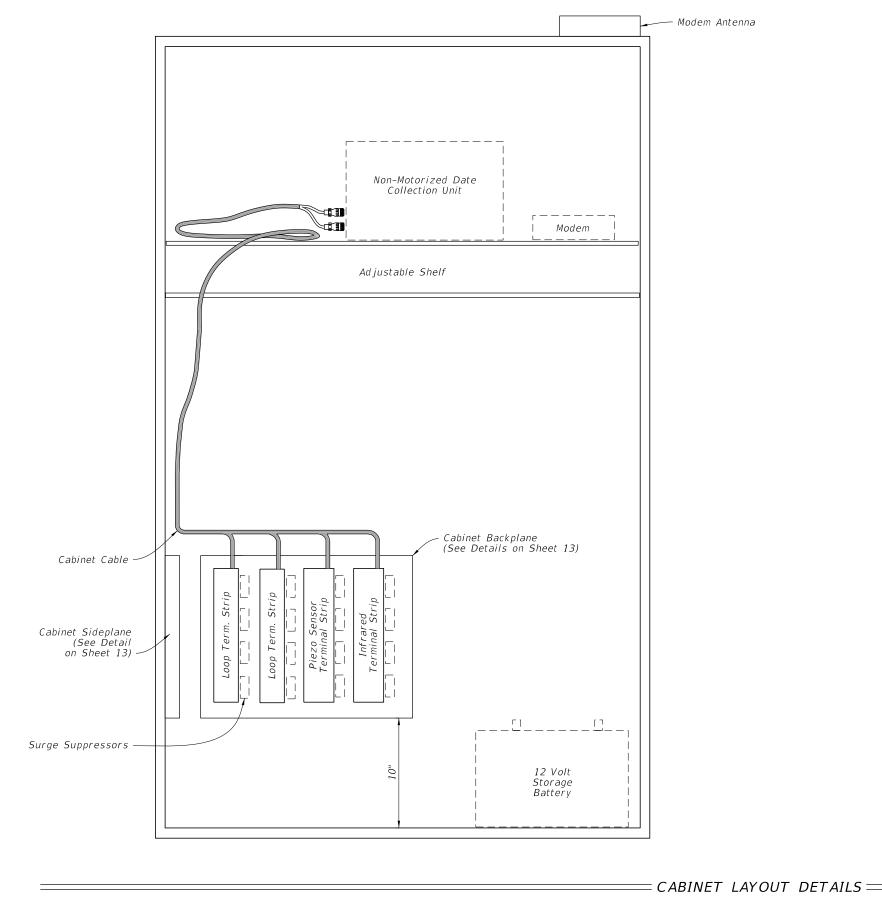
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- 1. Traffic monitoring site cabinet includes:
- A. One adjustable shelf; (equipped as shown)
- B. One backplane assembly; (equipped as shown)
- C. One sideplane assembly; (equipped as shown);
- D. Infrared sensor and piezo sensor cables.
- 2. Basic backplane assembly consists of:
- A. Two inductive loop terminal strips; B. One piezo sensor terminal strip:
- C. One infrared sensor terminal strip;.
- 3. Basic sideplane assembly consists of:
- A. One battery terminal strip;

B. One solar panel terminal strip.

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NON-MOTORIZED MONITORING SITE

DESCRIPTION: REVISION - 11/01/25 11/01/23

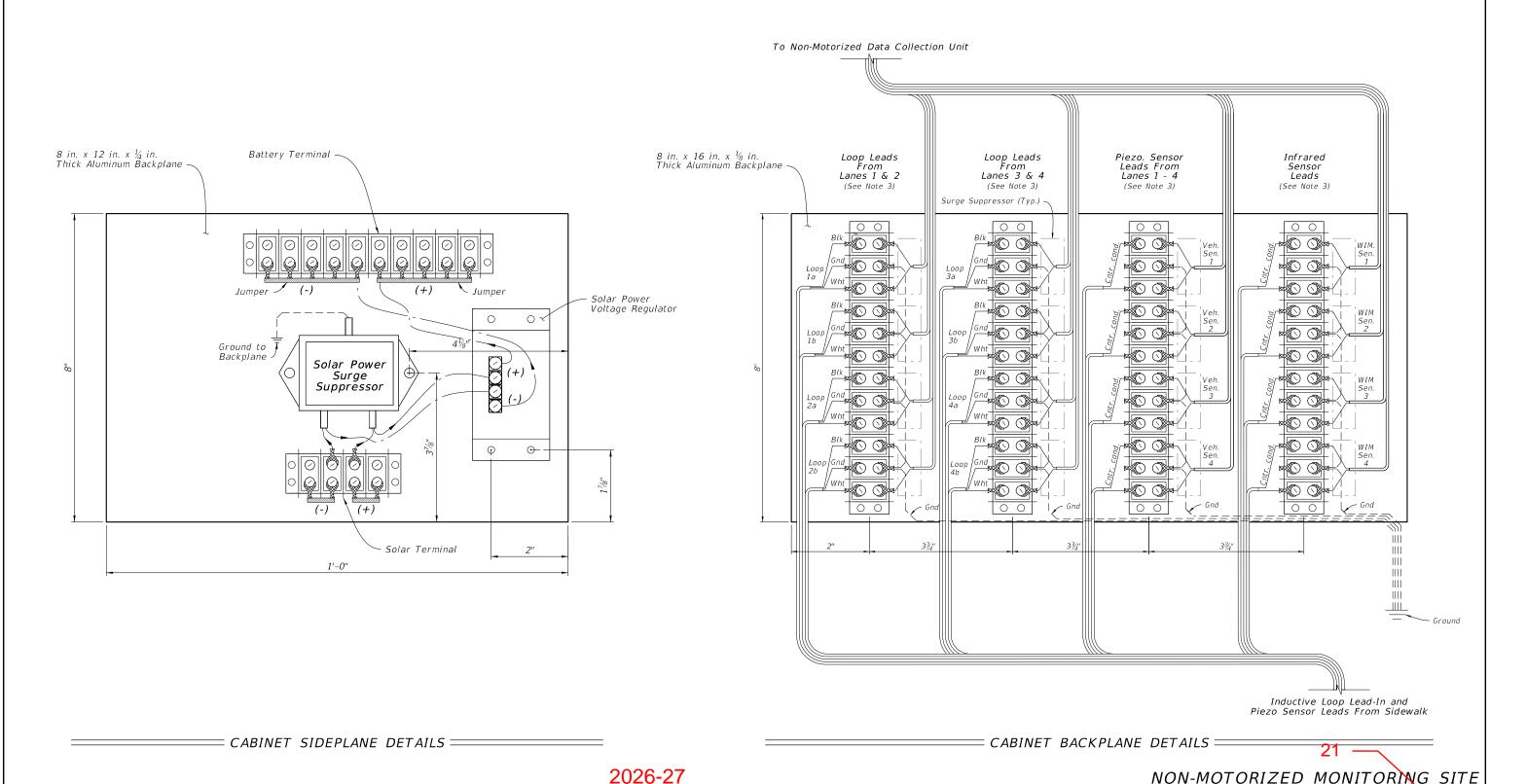
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- 1. Reference Sheet 12, Note 2 for items to be included with backplane.
- 2. All terminal strip contacts are on $\frac{9}{16}$ " centers (Clinch 142 Series or equal) Use insulated fork wire terminations.
- 3. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.



DESCRIPTION: REVISION - 11/01/25 11/01/23

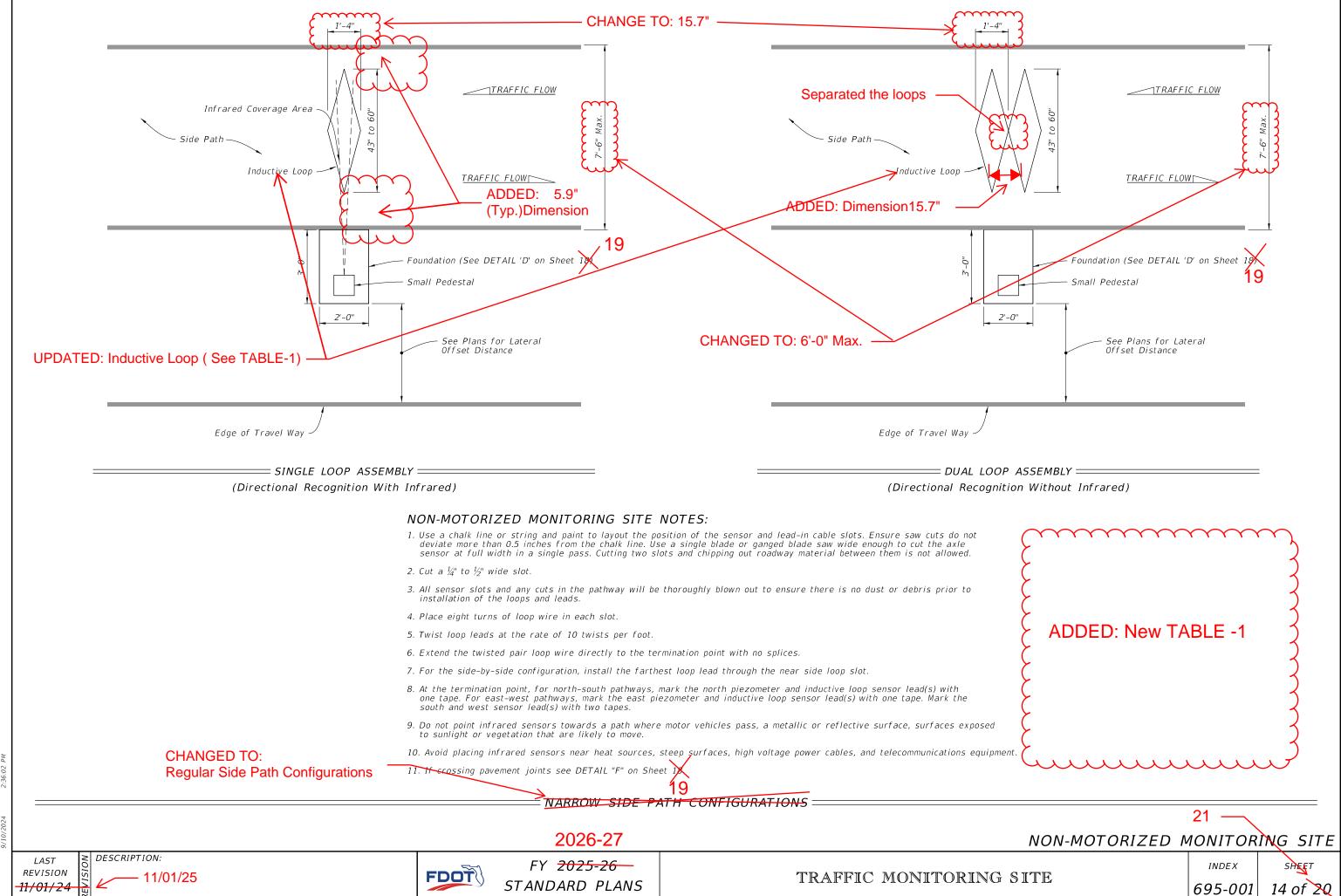
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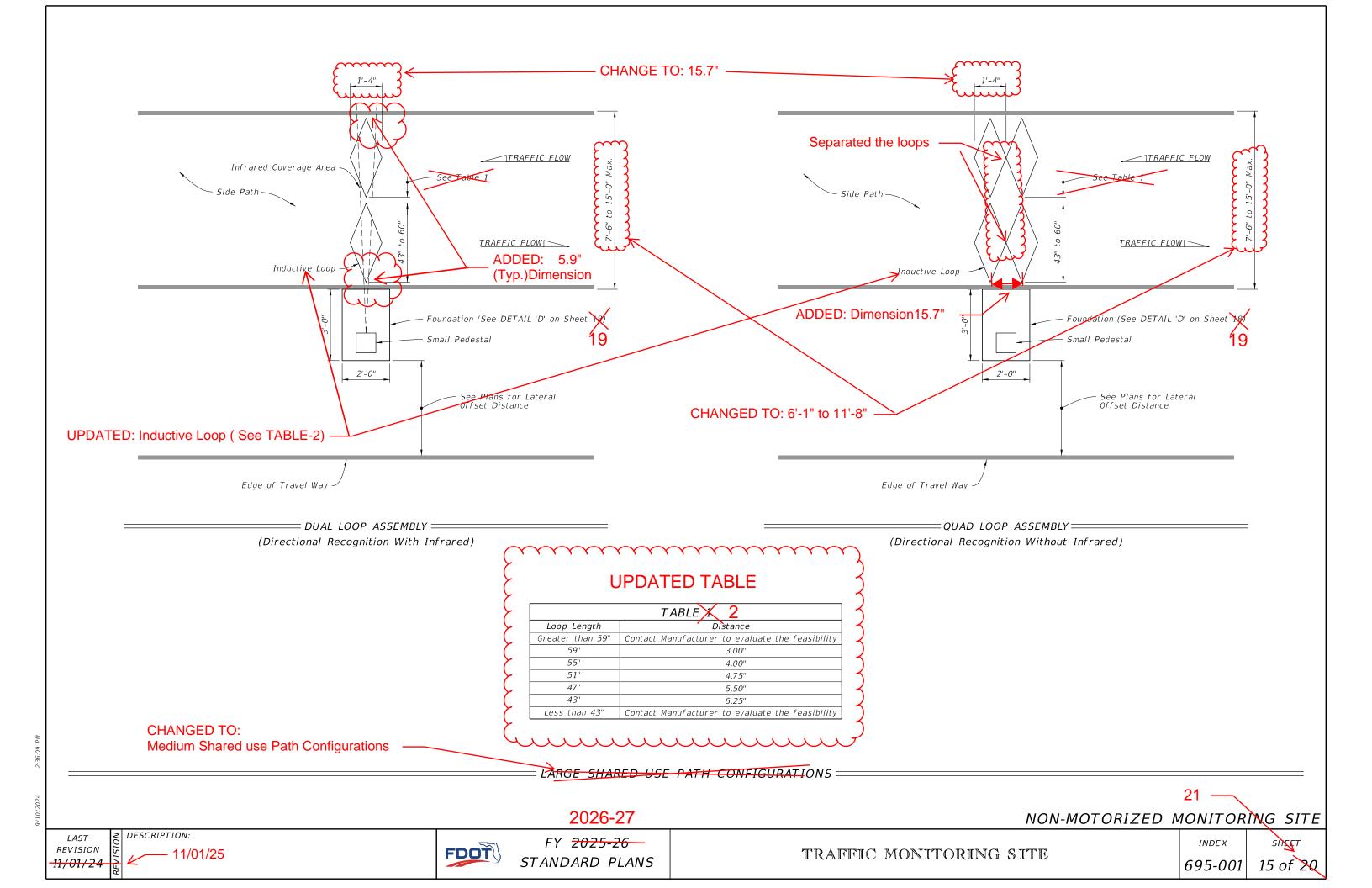
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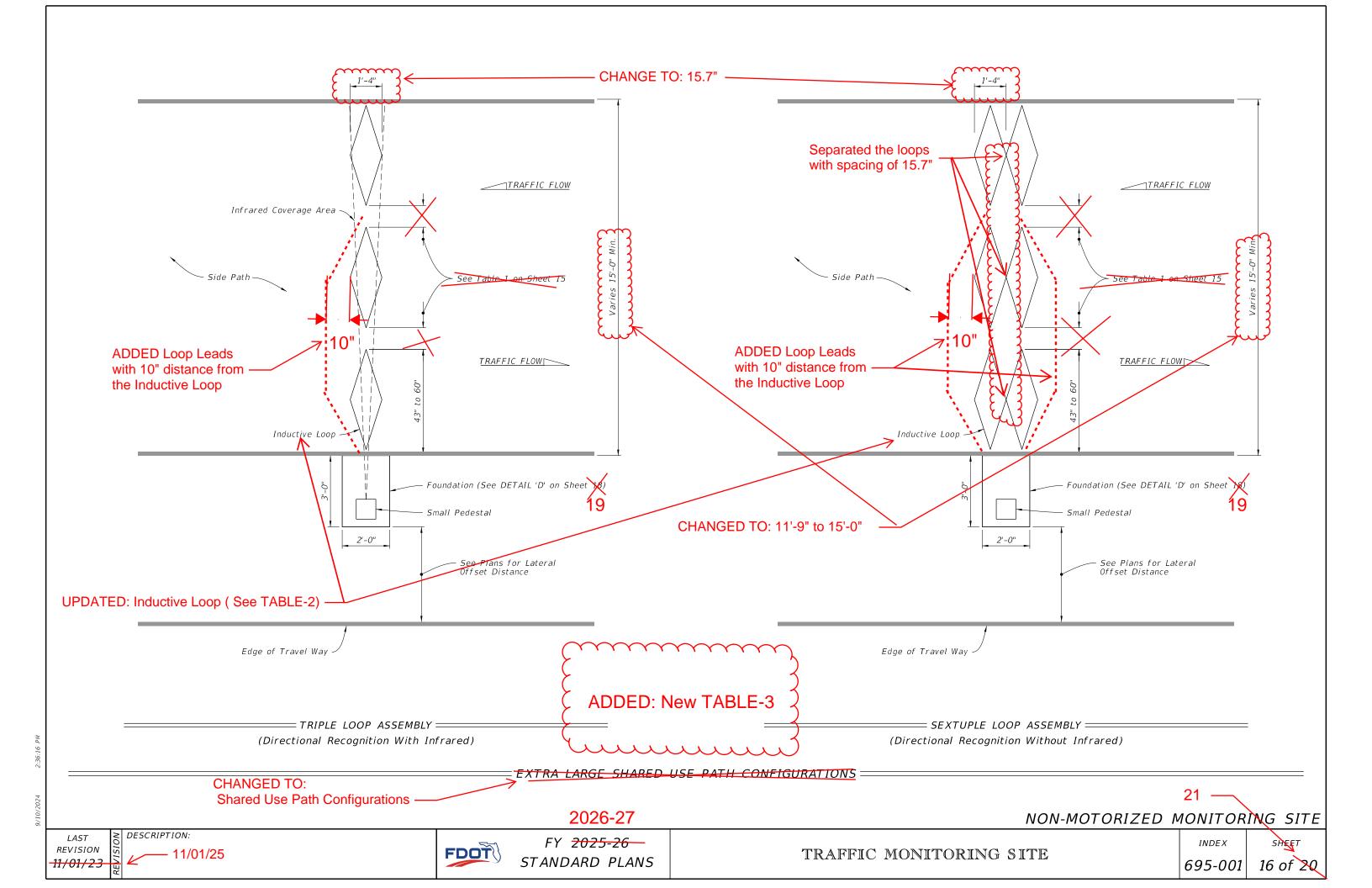
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NON-MOTORIZED MONITORING SITE

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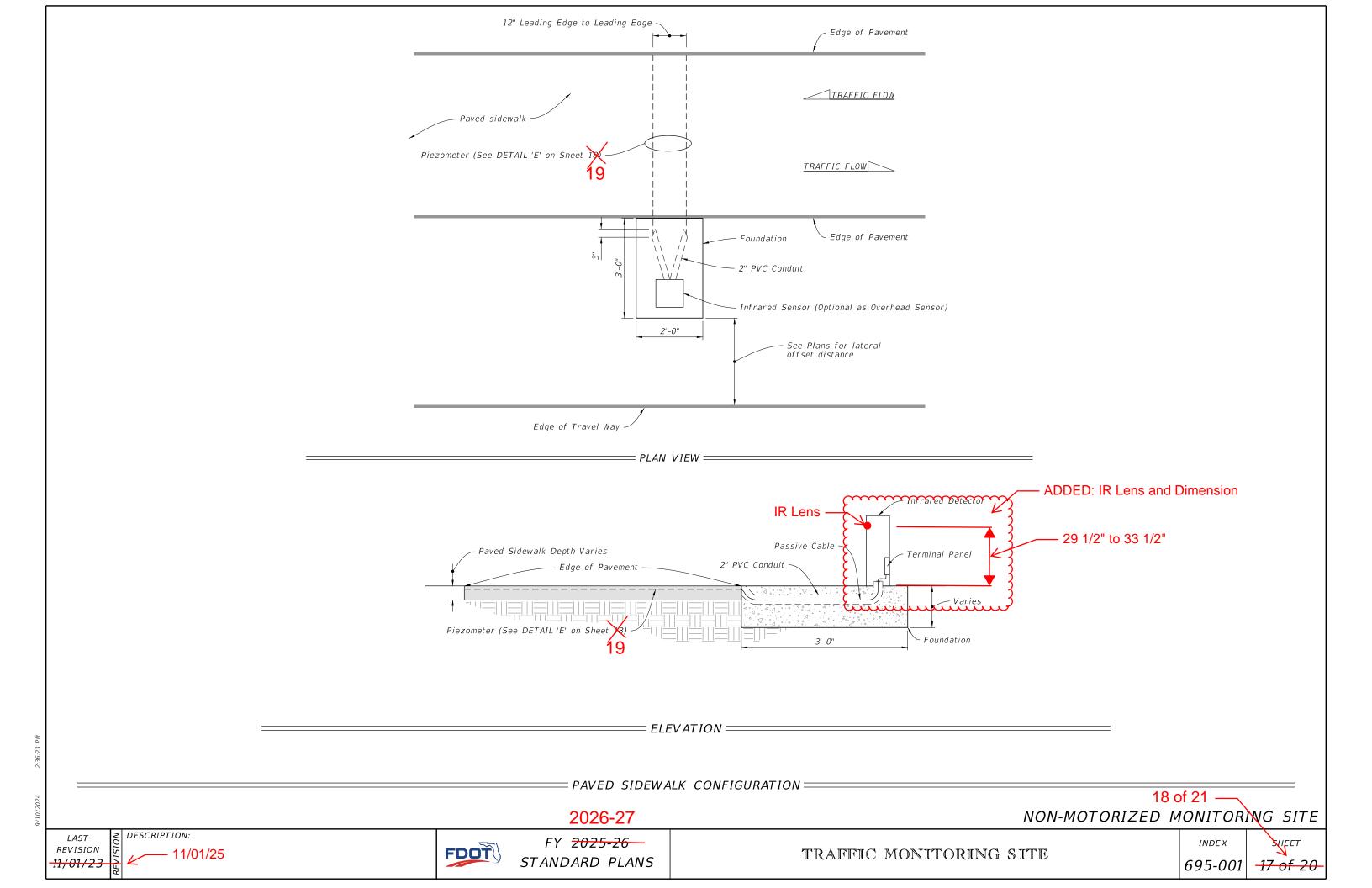


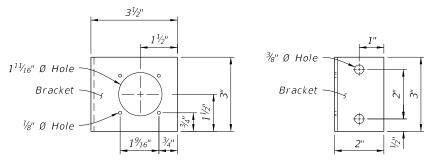


ADDED: New page 17



Extra Large Shared Use Path Configurations four loop & quadruple assemblies





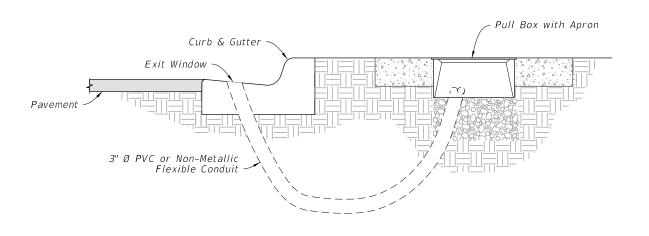
SIDE VIEW ISOMETRIC VIEW

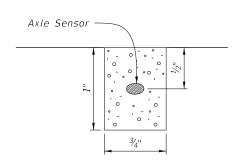
FRONT VIEW

Fabricate bracket out of $\frac{3}{32}$ " - $\frac{1}{8}$ " inch thick aluminum. Dimensions may vary depending on the manufacturer of the J1 receptacle being furnished. The cabinet manufacturer will construct the mounting bracket to fit the receptacle.

J1 MOUNTING BRACKET

= DETAIL 'A" =





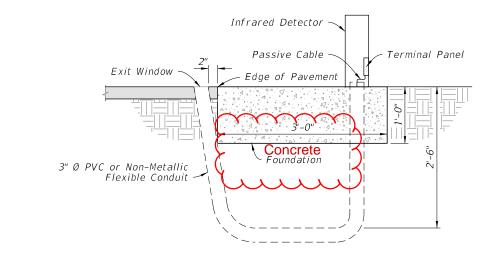
DETAIL 'C'=

END VIEW (Axle Sensor Slot)

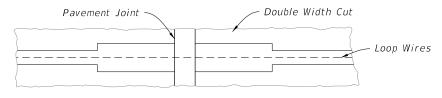
= DETAIL 'E' =

Pull Box with Apron Exit Window Paved Shoulder 3" Ø PVC or Non-Metallic Flexible Conduit

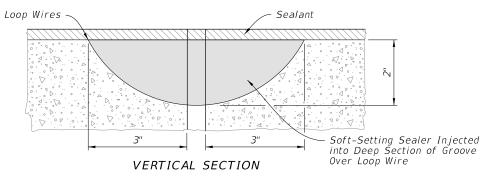
DETAIL 'B'



=DETAIL 'D'=



PLAN VIEW



= DETAIL 'F'

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DETAILS 'A' THRU 'F'

DESCRIPTION: LAST REVISION 11/01/25 11/01/23

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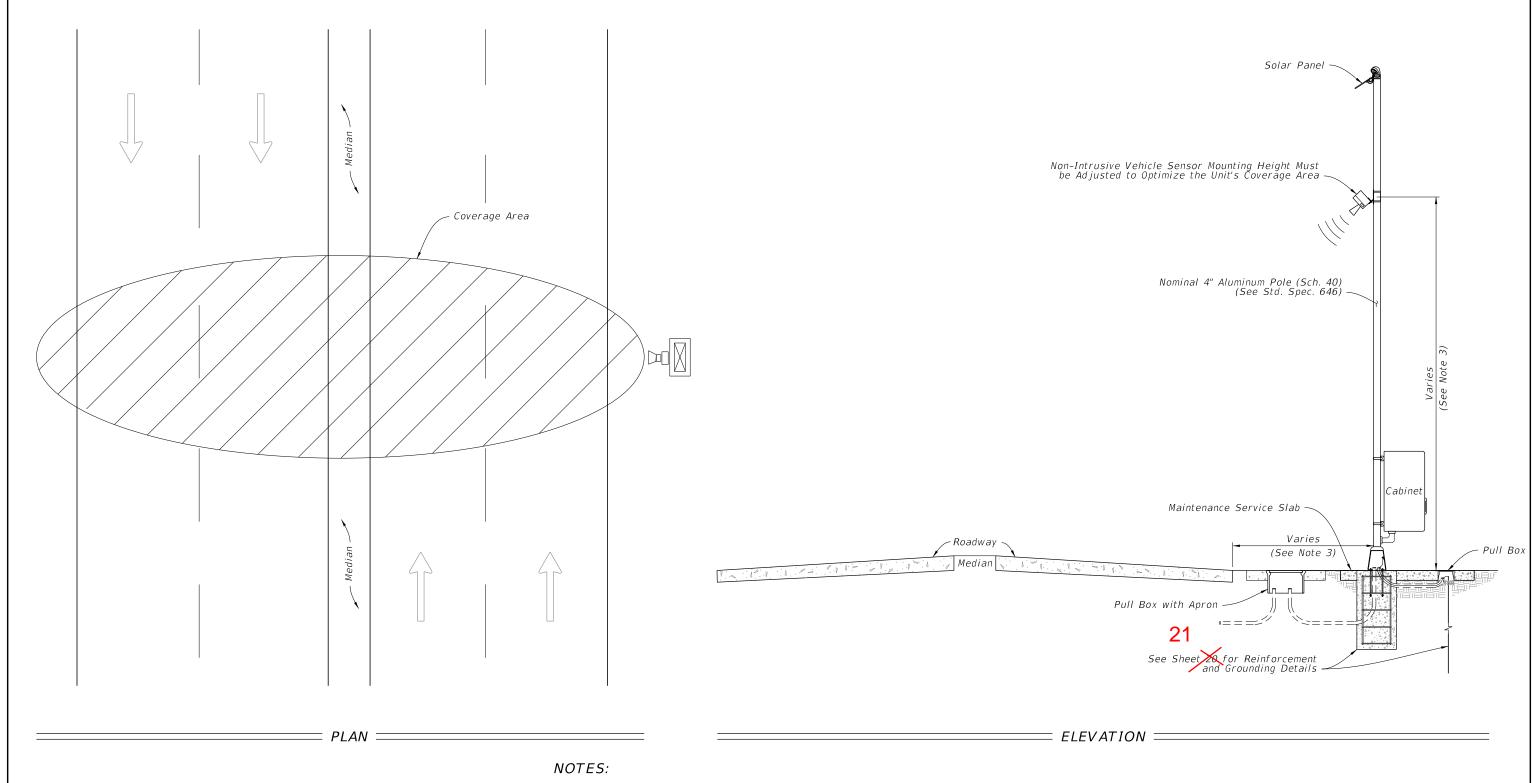
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- 1. The unit must be capable of detecting up to eight lanes of traffic (in either or both directions) when mounted perpendicular to the roadway.
- 2. Coverage area of the unit is affected by the roadway geometry: distance from the travel lanes, median type and width, barrier walls, etc.
- 3. Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis, in accordance with the manufacturer's recommended guidelines. Offset of pole must be greater than or equal to minimum clear zone requirements.
- 4. Cabinet, ground rod pull box, and maintenance service slab installed per Index 676-010, except cabinet center will be 4 feet above grade.

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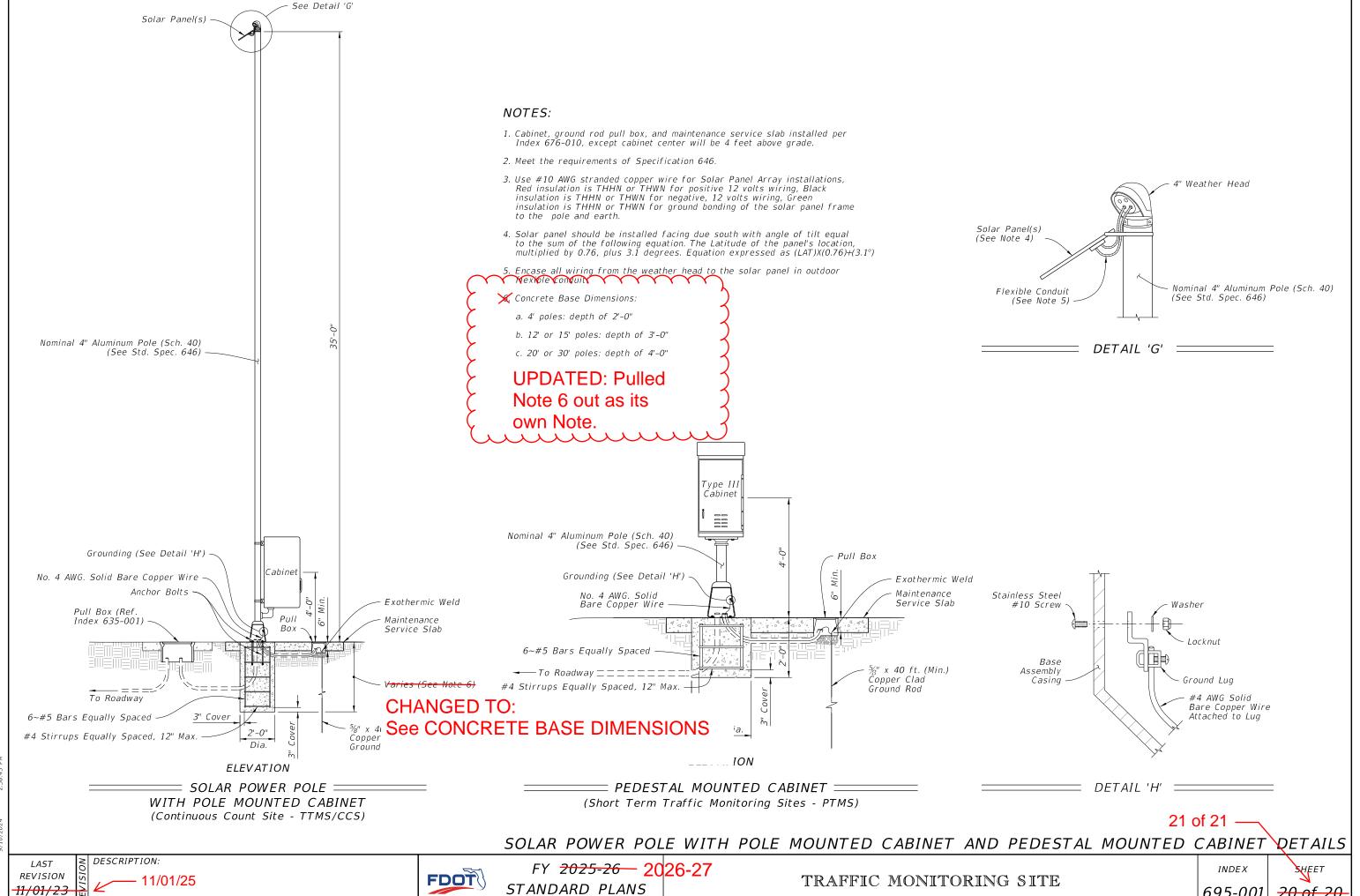
NON-INTRUSIVE VEHICLE SENSOR

DESCRIPTION: REVISION - 11/01/25 11/01/23

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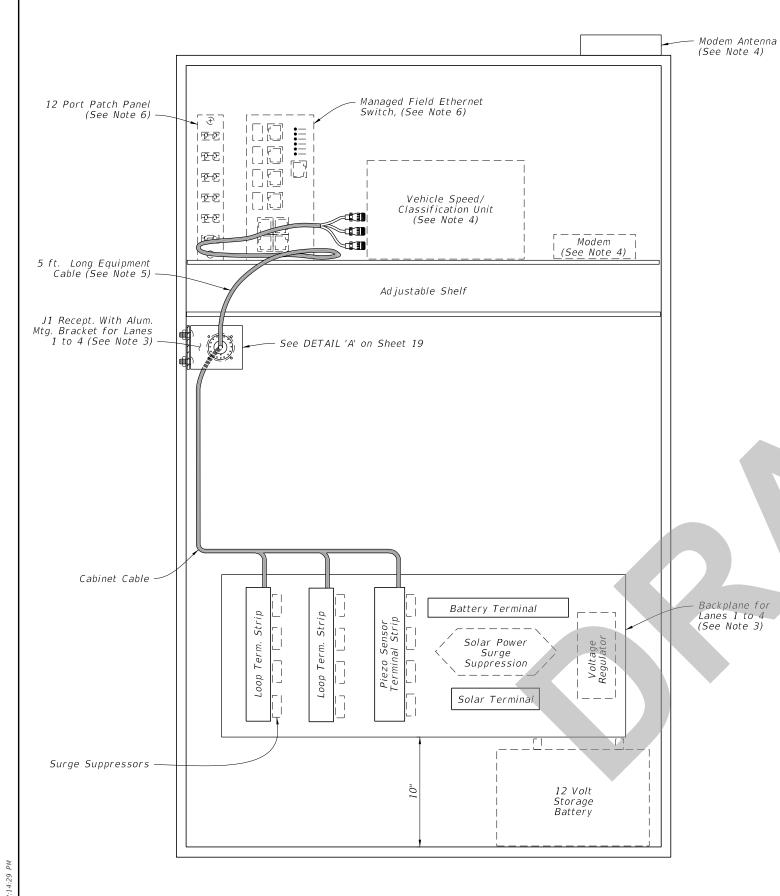


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Sheet	Description
1	Continuous Count Station Traffic Monitoring Site - TTMS/CCS - Cabinet Layout Details (Four Lanes or Less)
2	Continuous Count Station Traffic Monitoring Site - TTMS/CCS - Cabinet Layout Details (Five to Eight Lanes)
3	Continuous Count Station Traffic Monitoring site - TTMS/CCS - Cabinet Backplane Details
4	Continuous Count Station Traffic Monitoring Site – TTMS/CCS – Pinout Chart, Receptacle, and Plug Details
5	Continuous Count Station Traffic Monitoring Site - TTMS/CCS - Lane Layout for TMS Inductive Loop and Axle Sensors
6	Short Term Traffic Monitoring Site - PTMS - Cabinet Layout Details (Four Lanes or Less)
7	Short Term Traffic Monitoring Site - PTMS - Cabinet Layout Details (Five to Eight Lanes)
8	Short Term Traffic Monitoring Site - PTMS - Lane Layout for PTMS Inductive Loop and Axle Sensors
9	Weigh-In-Motion Monitoring Site - Cabinet Layout Details
10	Weigh-In-Motion Monitoring Site - Cabinet Backplane Details
11	Weigh-In-Motion Monitoring Site - Lane Layout for TTMS/CCS Inductive Loop and Weigh-In-Motion Sensors
12	Non-Motorized Monitoring Site - Cabinet Layout Details
13	Non-Motorized Monitoring Site - Cabinet Sideplane and Cabinet Backplane Details
14	Non-Motorized Monitoring Site - Regular Side Path Configurations
15	Non-Motorized Monitoring Site - Medium Shared Use Path Configurations
16	Non-Motorized Monitoring Site - Large Shared Use Path Configurations
17	Non-Motorized Monitoring Site - Extra Large Shared Use Path Configurations
18	Non-Motorized Monitoring Site - Paved Sidewalk Configuration
19	Details 'A' thru 'F'
20	Non-Intrusive Vehicle Sensor
21	Solar Power Pole With Pole Mounted Cabinet and Pedestal Mounted Cabinet Details

- 1. Traffic monitoring site cabinet includes:
 - A. One adjustable shelf; (equipped as shown)
- B. One backplane assembly; (equipped as shown)
- C. One J1 receptacle with mounting bracket;
- D. One P1 equipment cable 5 ft. long (See Sheet 4);
- E. All associated wiring and wiring harnesses.
- 2. Basic backplane assembly consists of:
- A. Two inductive loop terminal strips; B. One piezo sensor terminal strip;
- C. One battery terminal strip;
- D. One solar panel terminal strip.
- 3. The contractor is responsible for contacting the TMS Manager at the Transportation Data and Analytics Office for lane number information and verification.
- 4. Provide and install a Speed/Classification Unit, Modem, and Antenna.
- 5. Cable ends must be fabricated to fit the vehicle speed/classification unit. See Sheet 4 for Pinout Charts, receptacle and plug details.
- 6. Provide and install a 12-fiber single mode cable, a 12-port patch panel, and a managed field ethernet switch.

CABINET LAYOUT DETAILS = (Four Lanes or Less)

CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TTMS/CCS

REVISION 11/01/25

DESCRIPTION:

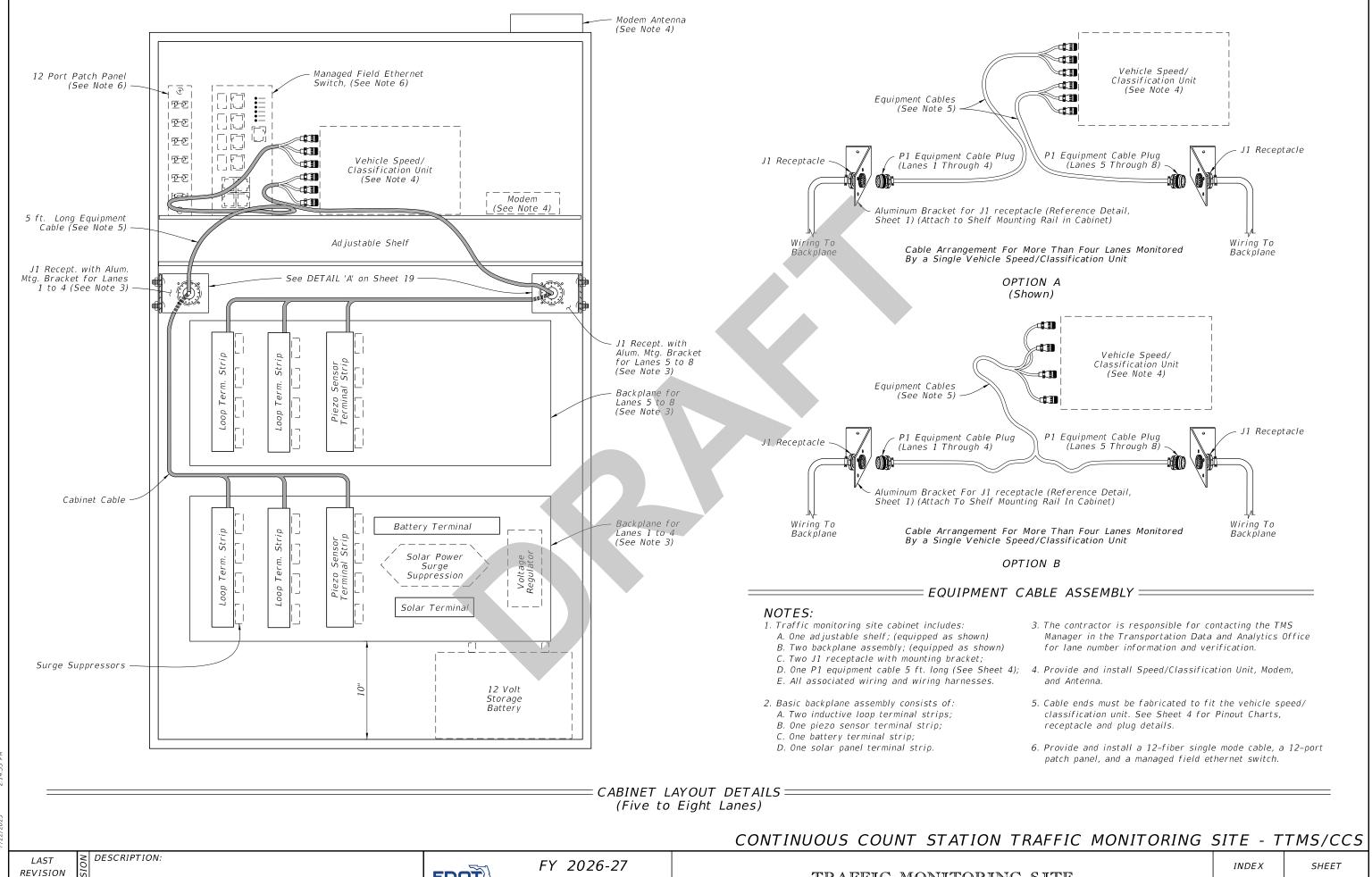
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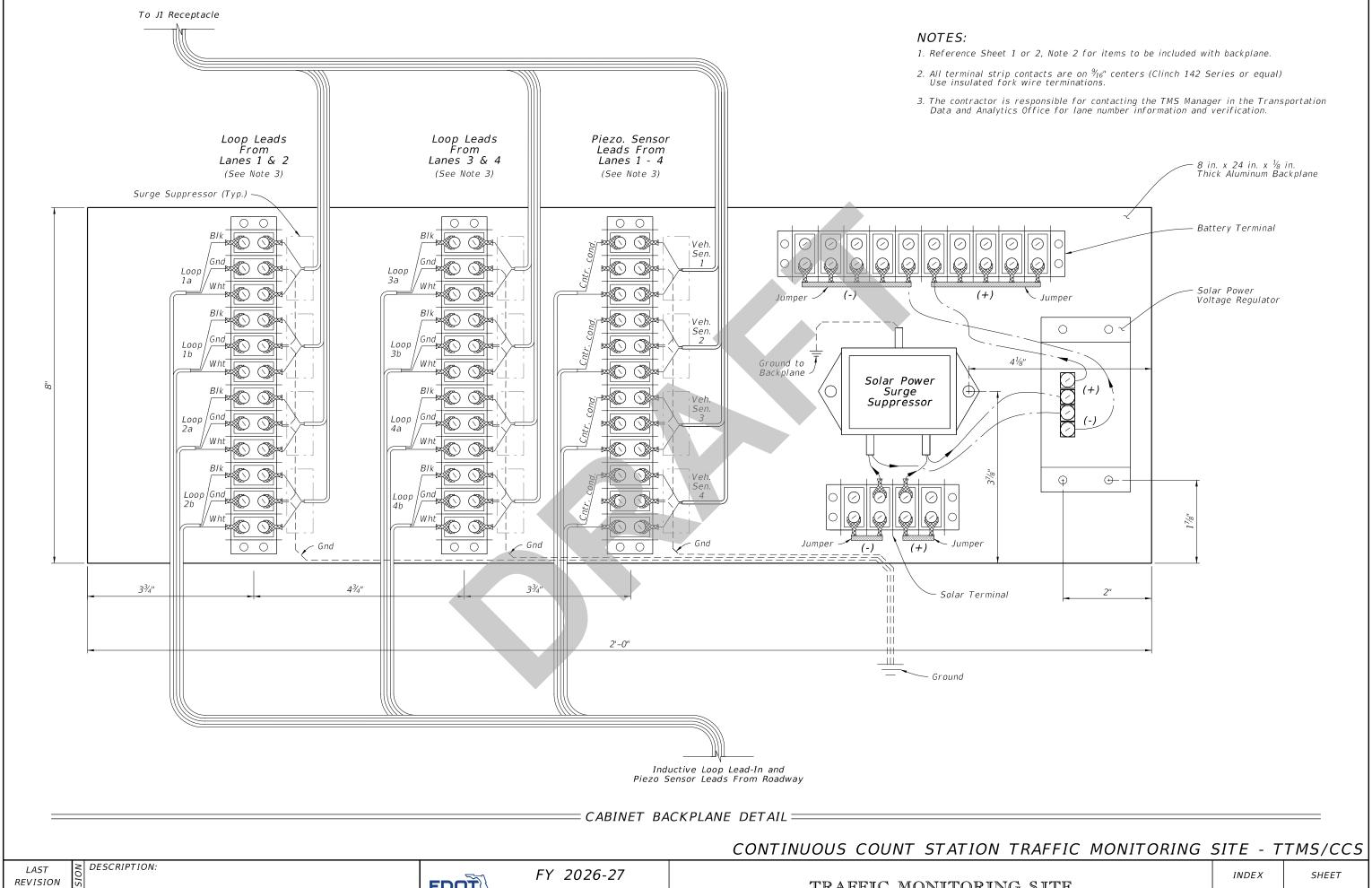
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TRAFFIC MONITORING SITE

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J1 RECEPTACLE PINOUT

26 Recessed Male Pins

Loop 1a (5a) white

Loop 1a (5a) black

Loop 1b (5b) red

Loop 1b (5b) black
Loop 2a (6a) green
Loop 2a (6a) blue
Loop 2b (6b) orange
Loop 2b (6b) tan
Loop 3a (7a) white

Loop 3a (7a) green

Loop 3b (7b) red

Loop 3b (7b) black

Loop 4a (8a) w/white

Loop 4a (8a) w/black

Loop 4b (8b) w/red

Loop 4b (8b) w/green

Piezo 1 (5) (+) w/blue

Piezo 1 (5) sh w/orange

Piezo 2 (6) (+) w/green

Piezo 2 (6) sh w/red

Piezo 3 (7) (+) w/black

Piezo 3 (7) sh w/red/blk

Piezo 4 (8) (+) red/ green

Piezo 4 (8) sh red/white

Gnd green

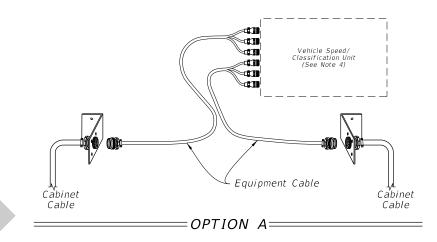
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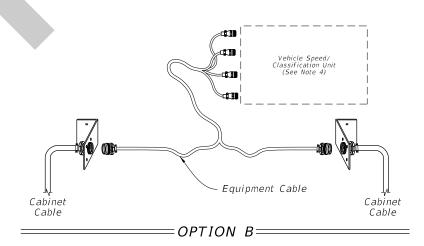
— Aluminum Bracket for J1 Receptacle (Attach to Shelf Mounting Rail in Cabinet, See DETAIL 'A' on Sheet 19)

> P1 Equipment Cable Plug (Amphenol 28-12 Plug with Female Pin Slots and MS Type Clamp, or Equal.)

Equipment Cables

P1 EQUIPMENT CABLE PLUG		
26 Female Pin Slots		
А	Loop 1a (5a)	
В	Loop 1a (5a)	
С	Loop 1b (5b)	
D	Loop 1b (5b)	ro Unit
Ε	Loop 2a (6a)	Connect To ectronics Ur
F	Loop 2a (6a)	Conn
G	Loop 2b (6b)	Ele
Н	Loop 2b (6b)	
Ν	Gnd	
J	Loop 3a (7a)	
К	Loop 3b (7b)	
L	Loop 3b (7b)	
М	Loop 3b (7b)	To
Р	Loop 4a (8a)	onnect T tronics
R	Loop 4a (8a)	Conn
5	Loop 4b (8b)	Εle
T	Loop 4b (8b)	
d	Gnd	
U	Piezo 1 (5) (+)	
V	Piezo 1 sh	
W	Piezo 2 (6) (+)	nit
Χ	Piezo 2 sh	onnect To tronics Un
Υ	Piezo 3 (7) (+)	nnec
Z	Piezo 3 sh	Co E/ect
а	Piezo 4 (8) (+)	





NOTES:

- 1. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.
- 2. The equipment cable can accommodate up to four lanes of inductive loop and piezo sensor inputs. (See Sheet 1 for cabinet layout)
- 3. For more than four lanes and up to eight lanes of inputs, the following options are available:
- A. Second Vehicle Speed/Classification Unit and separate equipment cable connecting to a second J1 receptacle; or
- B. Single Vehicle Speed/Classification Unit capable of up to eight lanes of inputs and a single equipment cable with split ends to fit two J1 receptacles. (See Sheet 2 detail)
- 4. Numbers in parenthesis in the pinout chart identify lane numbers when a second backplane for lanes 5 through 8 is required.
- 5. Cable Ends must be fabricated to fit the vehicle Speed/Classification Unit.

= PINOUT, RECEPTACLE, AND PLUG DETAILS =

CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TTMS/CCS

LAST REVISION 11/01/25

DESCRIPTION:

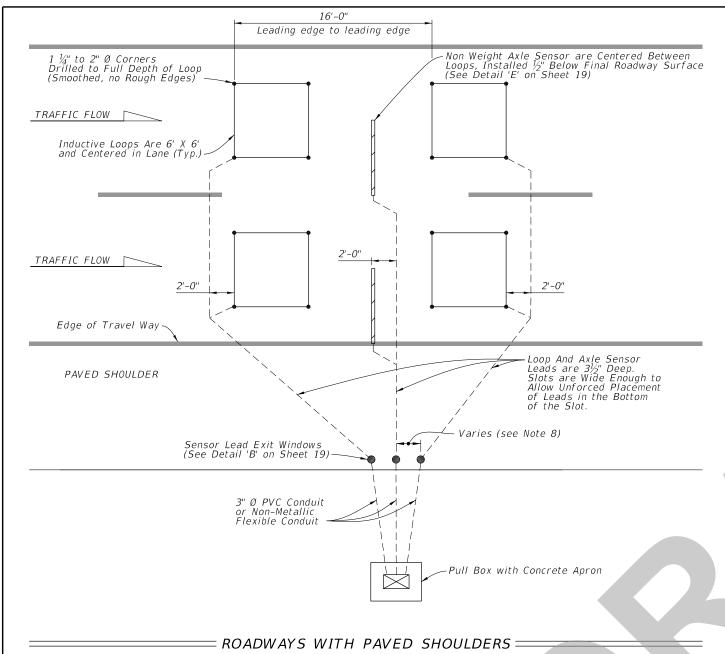
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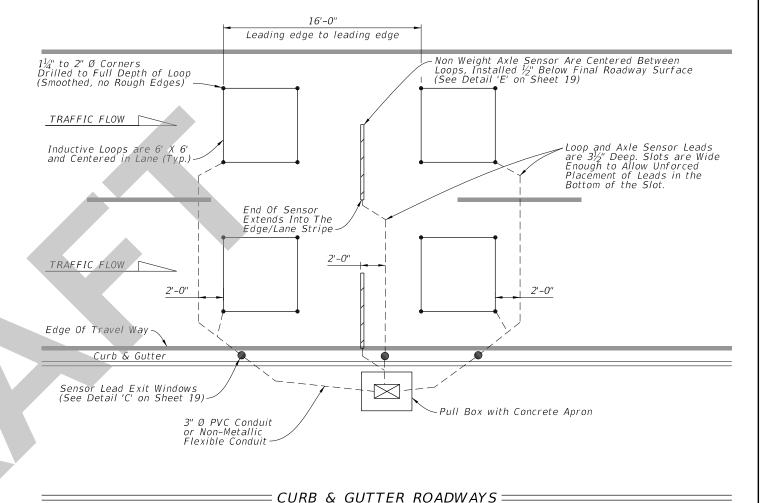


Piezo 4 sh

7/22/2025

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- 1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
- 2. Cut a $3\frac{1}{2}$ " deep slot for the Inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG, place the IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot and start wire twist at the beginning of the home run slot.
- 3. Twist loop leads at the rate of 8 to 16 twist per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted. Install a home run slot with a minimum width of %".
- 4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
- 5. See Index 635-001 for pull box and concrete apron details.
- 6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than ½" from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor slot at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.
- 7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
- 8. Install Exit Windows at least 2' apart.

= LANE LAYOUT FOR TTMS/CCS INDUCTIVE LOOP AND AXLE SENSORS = (Typical for up to 4 Lanes of Sensor Leads Pulled to one Side of the Roadway)

CONTINUOUS COUNT STATION TRAFFIC MONITORING SITE - TTMS/CCS

REVISION 11/01/25

DESCRIPTION:

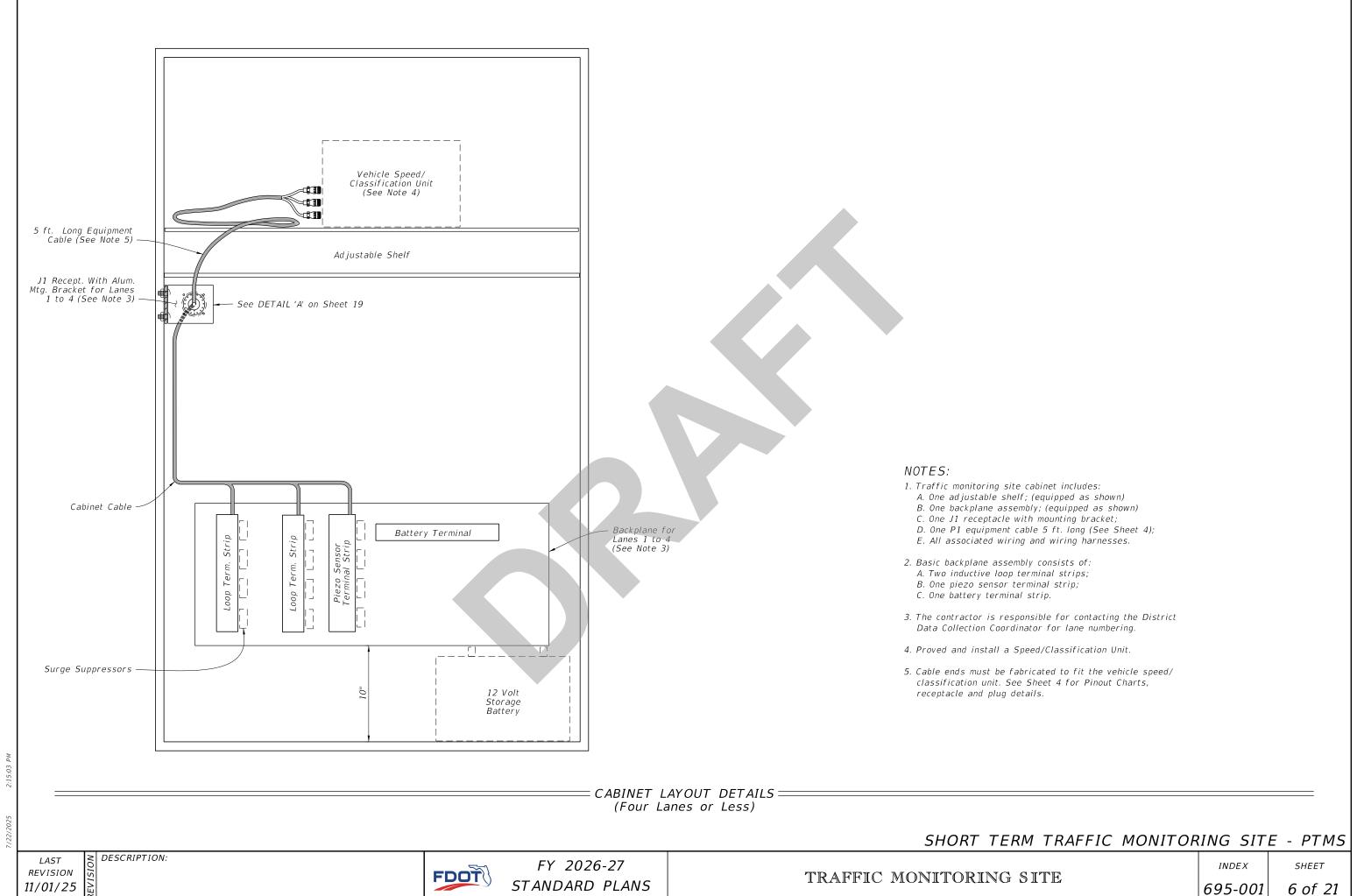
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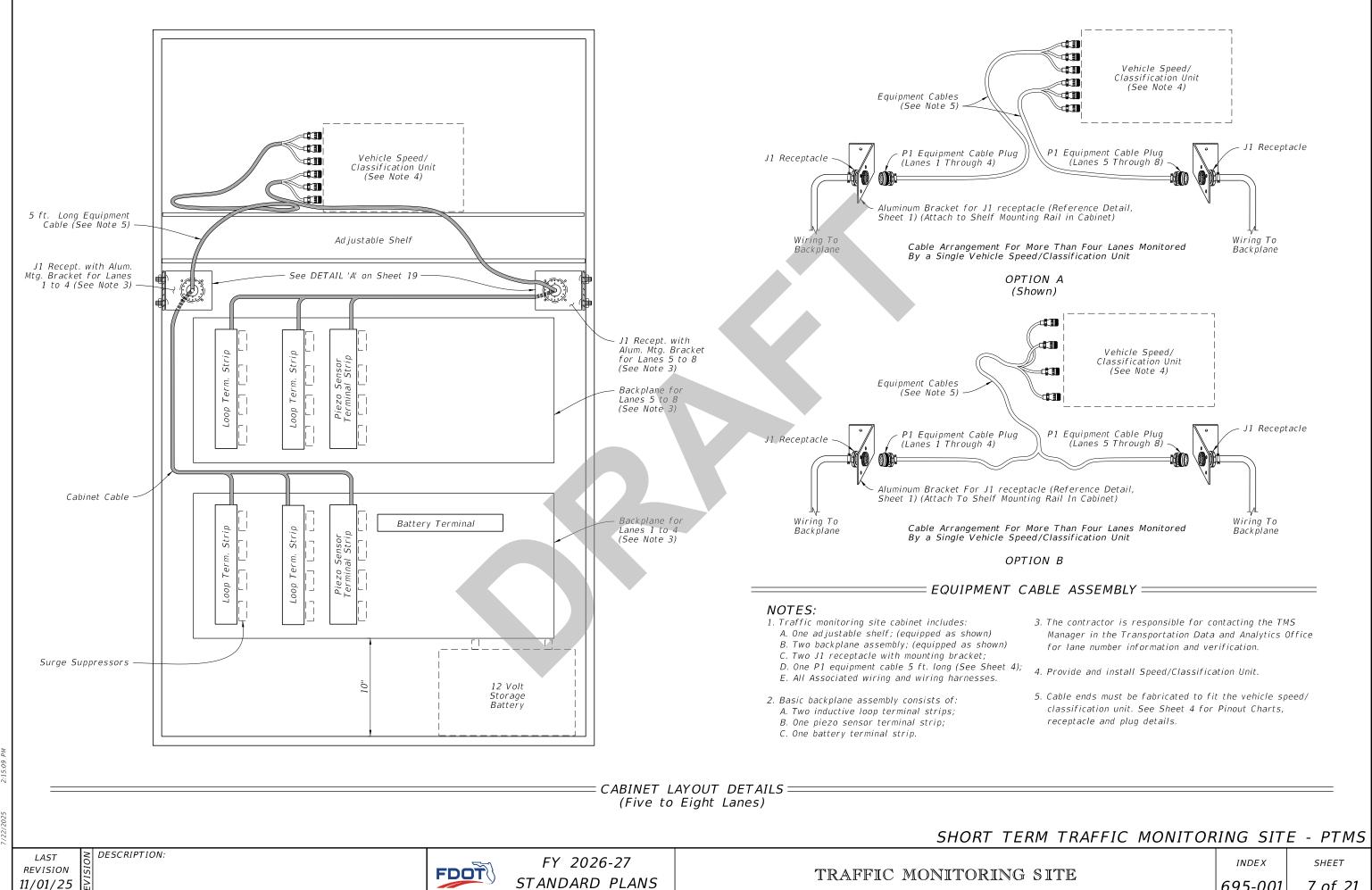
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TRAFFIC MONITORING SITE

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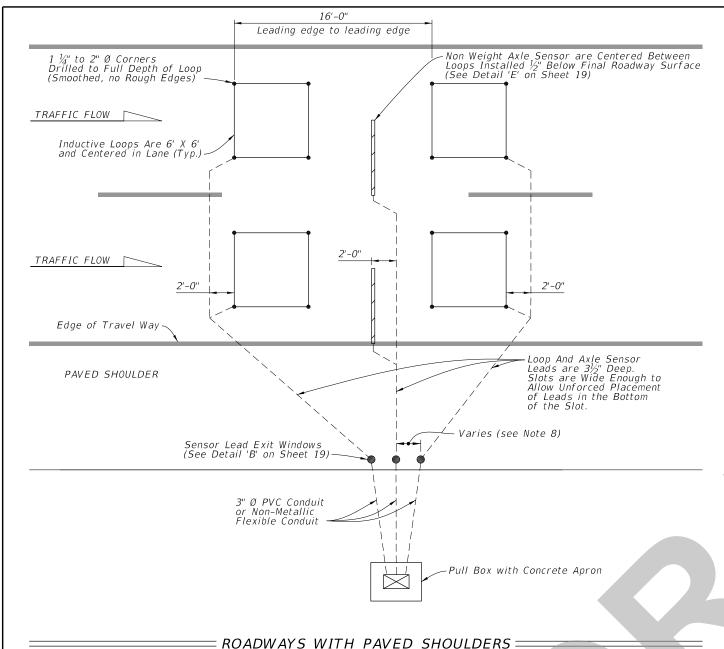
SHEET

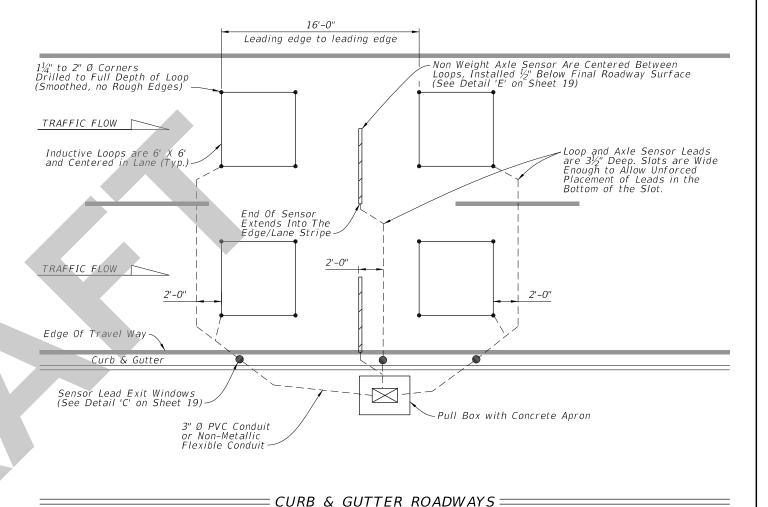




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- 1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
- 2. Cut a $3\frac{1}{2}$ " deep slot for the Inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot and start wire twist at the beginning of the home run slot.
- 3. Twist loop leads at the rate of 8 to 16 twists per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted. Install a home run slot with a minimum width of %".
- 4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
- 5. See Index 635-001 for pull box and concrete apron details.
- 6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than 1/2" from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor slot at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.
- 7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
- 8. Install Exit Windows at least 2' apart.

= LANE LAYOUT FOR PTMS INDUCTIVE LOOP AND AXLE SENSORS = (Typical for up to 4 Lanes of Sensor Leads Pulled to one Side of the Roadway)

SHORT TERM TRAFFIC MONITORING SITE - PTMS

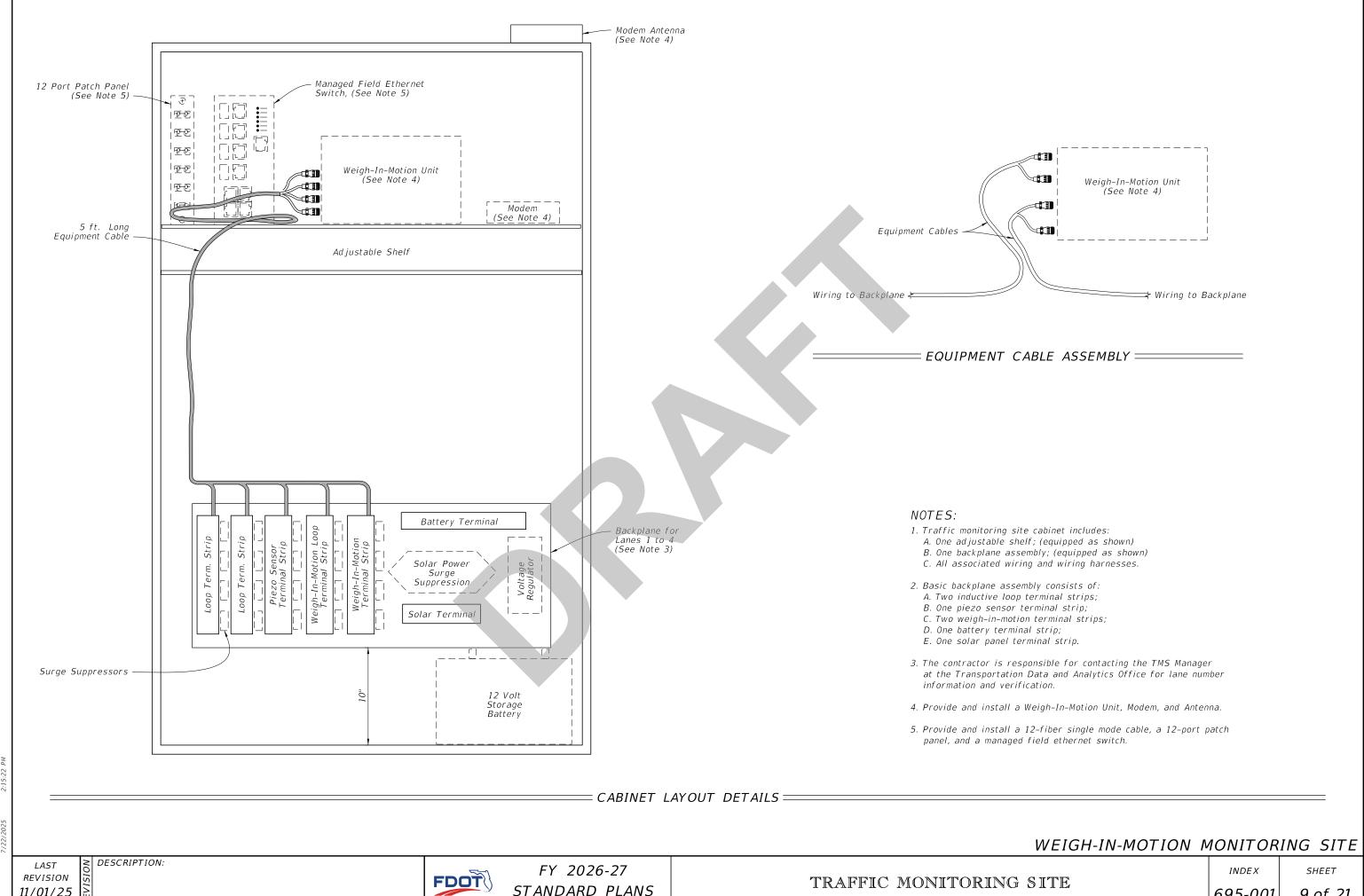
REVISION 11/01/25

DESCRIPTION:

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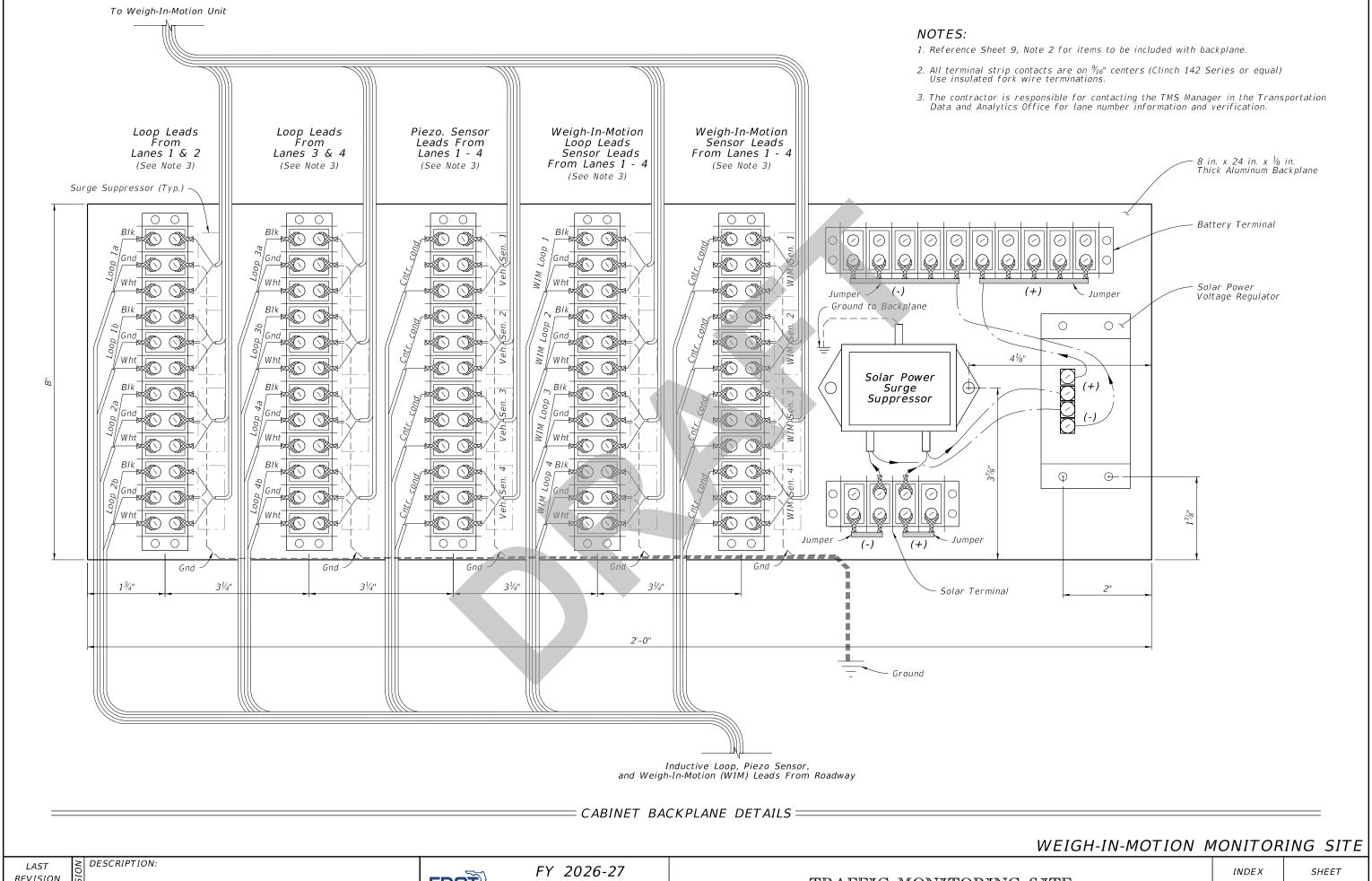
SHEET



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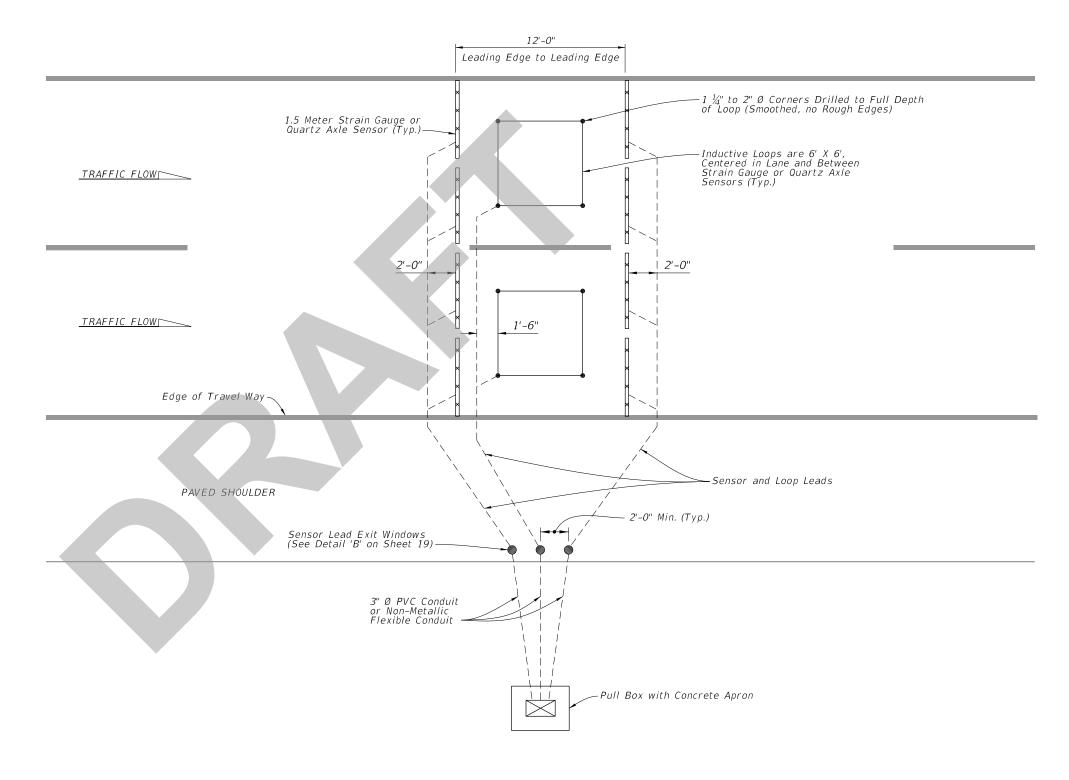


REVISION 11/01/25

FDOT

- 1. Install axle sensors and loops associated with axle sensors after placement of the friction course.
- 2. Cut a $3\frac{1}{2}$ " deep slot for the Inductive loops. Loop slots will be cut wide enough to allow unforced placement of the wire into the bottom of the slot. Place four turns of #14 AWG IMSA 51-7 copper wire in the slot. Place short pieces of backer rod (2" to 3" in length) every 18" to 24" to hold the loop wire in the bottom of the slot.
- 3. Twist loop leads at the rate of 8 to 16 twists per foot. Extend the twisted pair loop wire directly to the cabinet. No splicing of the loop leads will be permitted.
- 4. Marking will consist of two rounds of contrasting colored tape, one color for the lane number and the second color for the lead loop location in the lane. The first band closest to the cabinet will represent the lane number, one round of tape will be for lane 1 and two rounds will be lane 2, etc. The lead loop in lane one would have one round of tape and a second round of a contrasting colored tape for the lead loop in the lane. The trailing loop would not have a second contrasting colored band of tape.
- 5. See Index 635-001 for pull box and concrete apron details.
- 6. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than $\frac{1}{2}$ " from the chalk line. Install the sensor according to manufacturer's recommendations.
- 7. All sensor slots and any cuts in the roadway will be thoroughly blown out to ensure there is no dust or debris prior to installation of sensors or leads.
- 8. Install Exit Windows at least 2' apart.

DESCRIPTION:

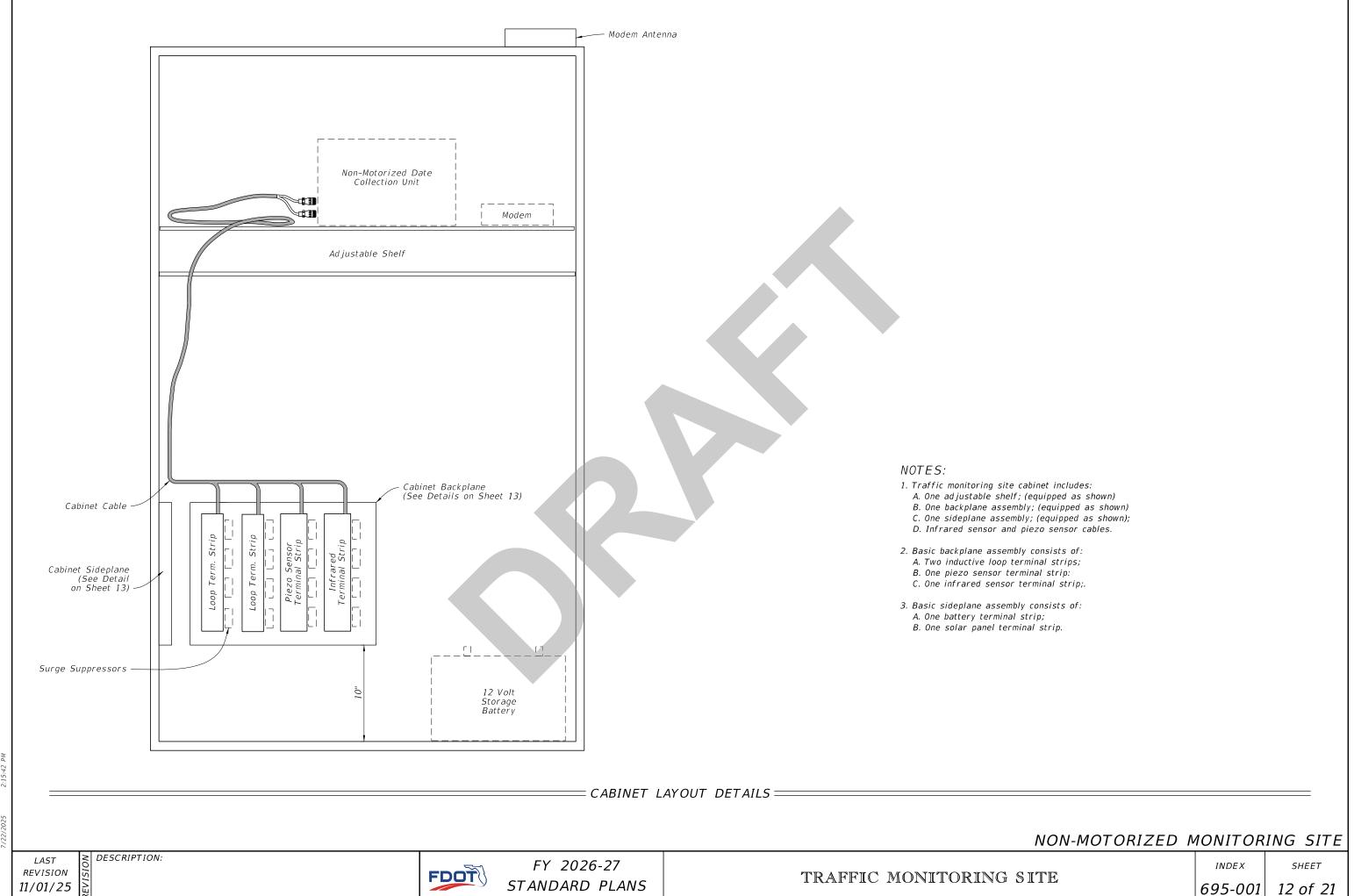


= LANE LAYOUT FOR TTMS/CCS INDUCTIVE LOOP AND WEIGH-IN-MOTION SENSORS =

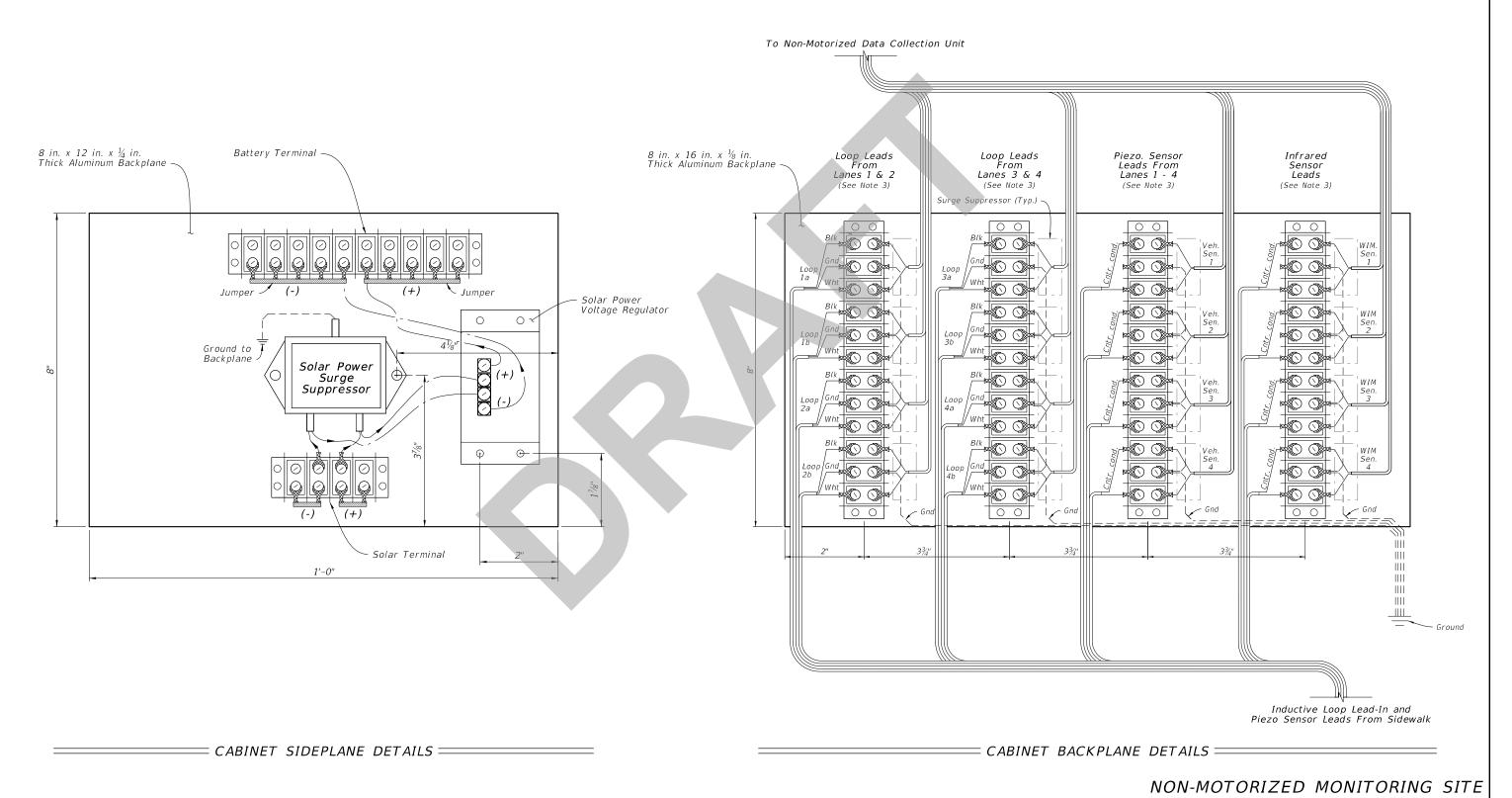
WEIGH-IN-MOTION MONITORING SITE

REVISION 11/01/25

FDOT



- 1. Reference Sheet 12, Note 2 for items to be included with backplane.
- 2. All terminal strip contacts are on $\frac{9}{16}$ " centers (Clinch 142 Series or equal) Use insulated fork wire terminations.
- 3. The contractor is responsible for contacting the TMS Manager in the Transportation Data and Analytics Office for lane number information and verification.



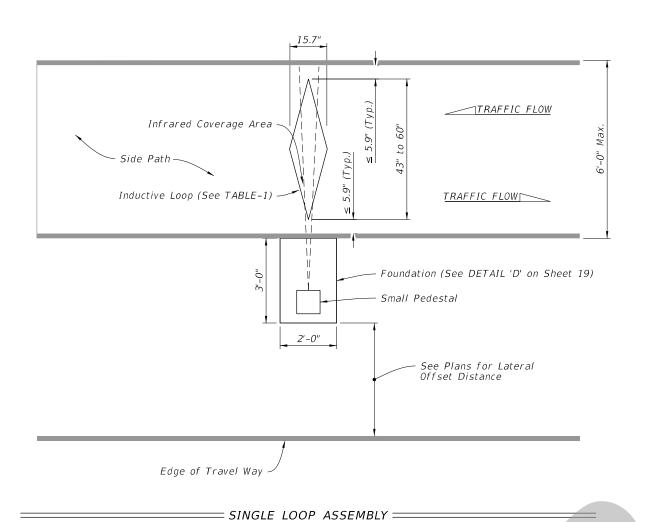
REVISION 11/01/25 DESCRIPTION:

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(Directional Recognition With Infrared)

1. Use a chalk line or string and paint to layout the position of the sensor and lead-in cable slots. Ensure saw cuts do not deviate more than 0.5 inches from the chalk line. Use a single blade or ganged blade saw wide enough to cut the axle sensor at full width in a single pass. Cutting two slots and chipping out roadway material between them is not allowed.

- 2. Cut a $\frac{1}{4}$ " to $\frac{1}{2}$ " wide slot.
- 3. All sensor slots and any cuts in the pathway will be thoroughly blown out to ensure there is no dust or debris prior to installation of the loops and leads.
- 4. Place eight turns of loop wire in each slot.
- 5. Twist loop leads at the rate of 10 twists per foot.
- 6. Extend the twisted pair loop wire directly to the termination point with no splices.
- 7. For the side-by-side configuration, install the farthest loop lead through the near side loop slot.
- 8. At the termination point, for north-south pathways, mark the north piezometer and inductive loop sensor lead(s) with one tape. For east-west pathways, mark the east piezometer and inductive loop sensor lead(s) with one tape. Mark the south and west sensor lead(s) with two tapes.
- 9. Do not point infrared sensors towards a path where motor vehicles pass, a metallic or reflective surface, surfaces exposed to sunlight or vegetation that are likely to move.
- 10. Avoid placing infrared sensors near heat sources, steep surfaces, high voltage power cables, and telecommunications equipment.
- 11. If crossing pavement joints see DETAIL "F" on Sheet 19.

	15.7"	15.7" 15.7"			
			to 60"	TRAFFIC FLOW	6'-0" Max.
Side Path Inductive Loop (See TABLE-1)			43" t	TRAFFIC FLOW	,,0-,9
	3'-0"			dation (See DETAIL 'D' on Sheet 19	9)
	-	2'-0"		— See Plans for Lateral Offset Distance	
Edge of Travel V		OOP ASSEME	RIV —		

(Directional Recognition Without Infrared)

TABLE - 1			
Lane Width	Loop Length		
43.3"	39.4" to 43.3"		
47.2"	43.3" to 47.2"		
51.2"	47.2" to 51.2"		
55.1"	51.2" to 55.1"		
59"	55.1" to 59.1"		
63" to 70.9"	59.1"		
72.8" to 76.8"	Contact Manufacture		

REGULAR SIDE PATH CONFIGURATIONS

NON-MOTORIZED MONITORING SITE

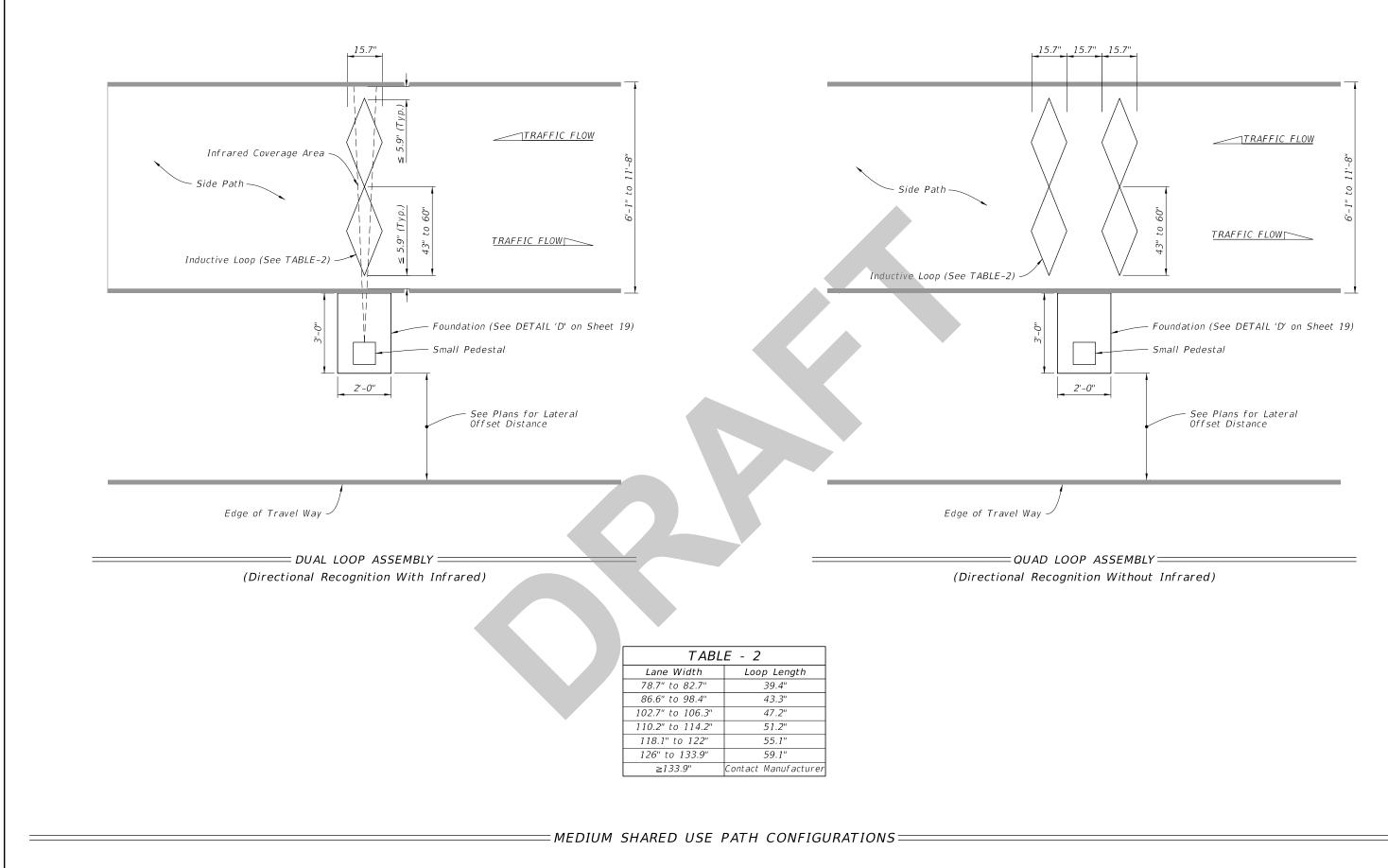
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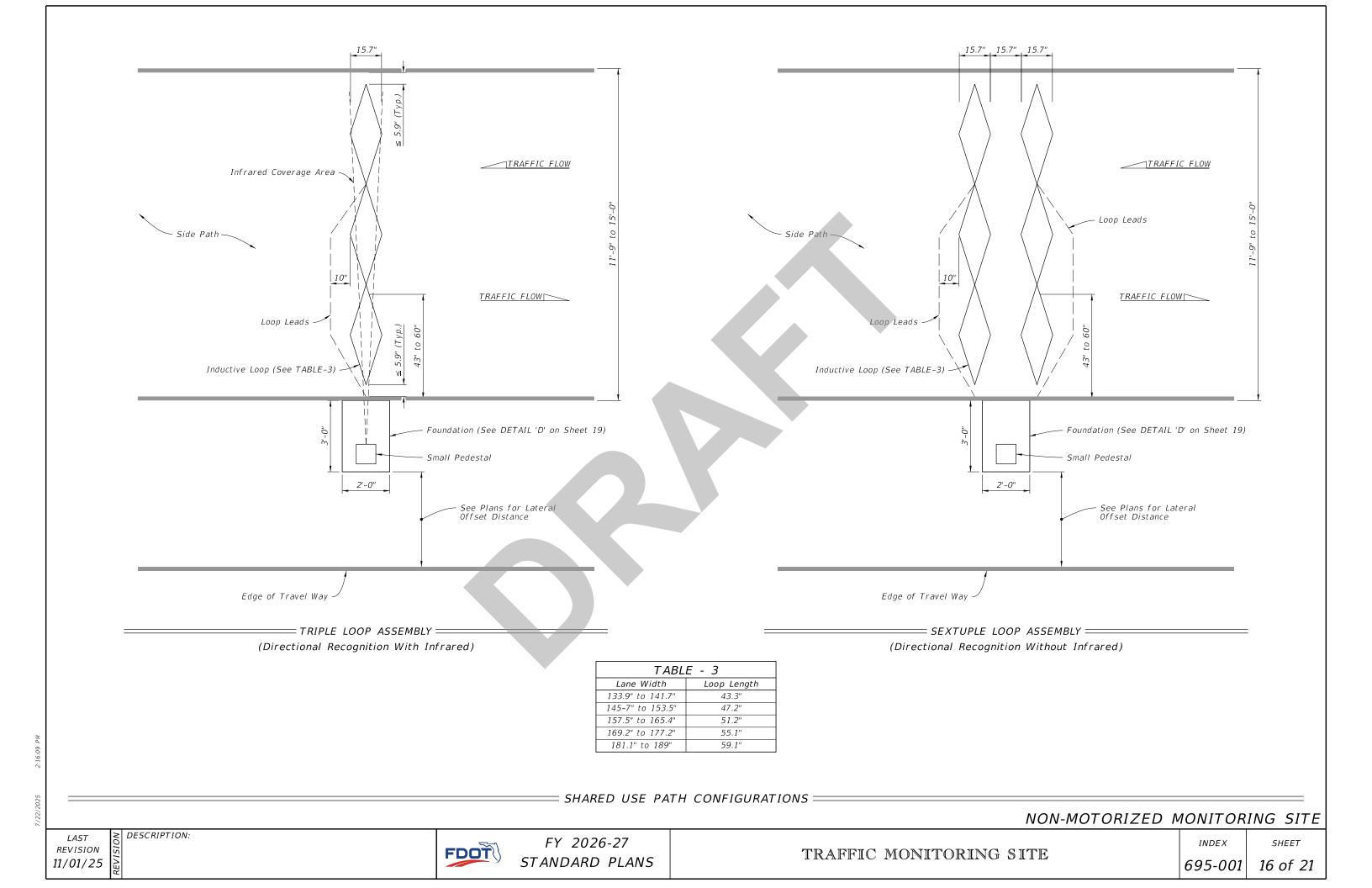


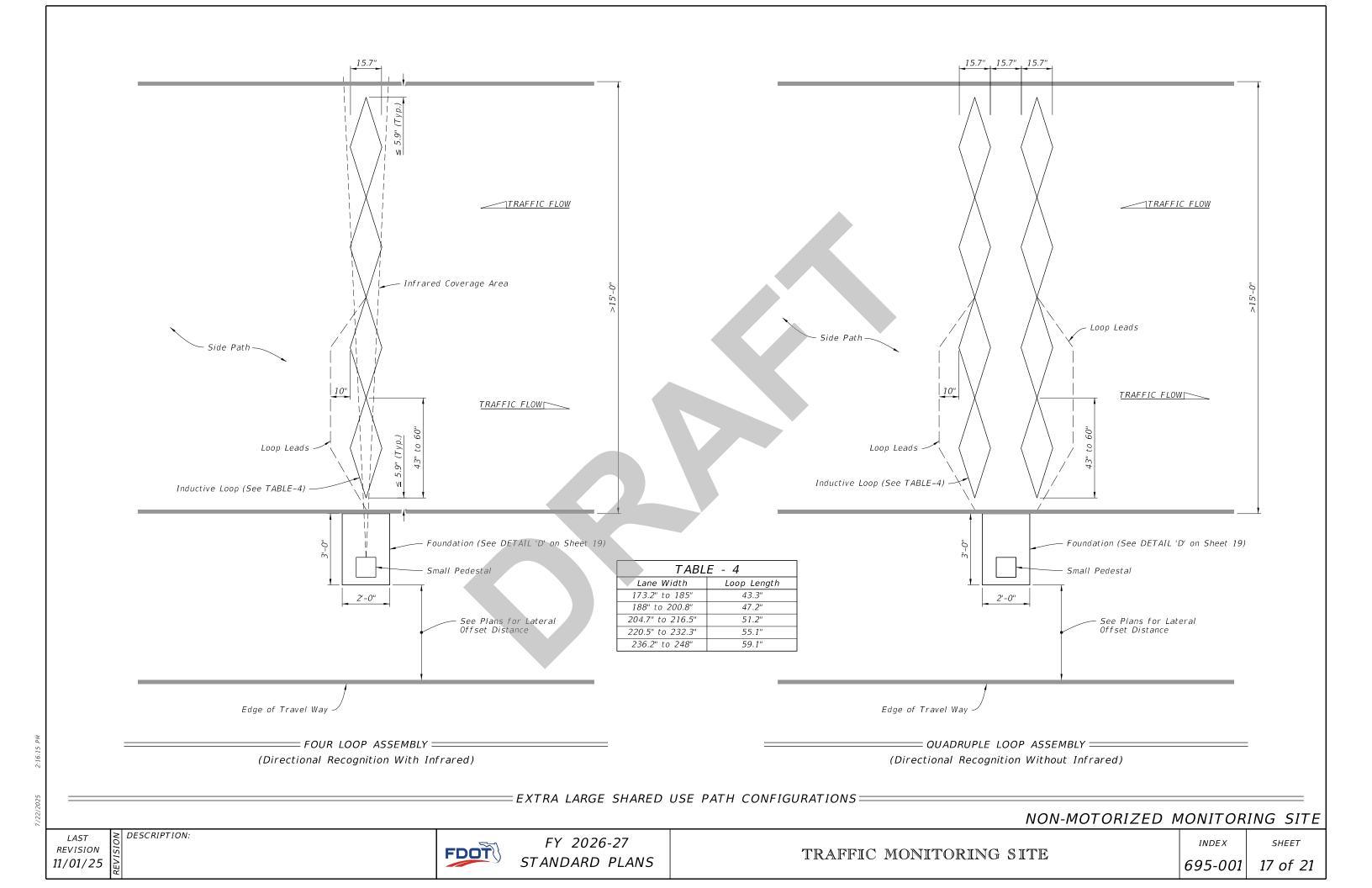
7/22/2025

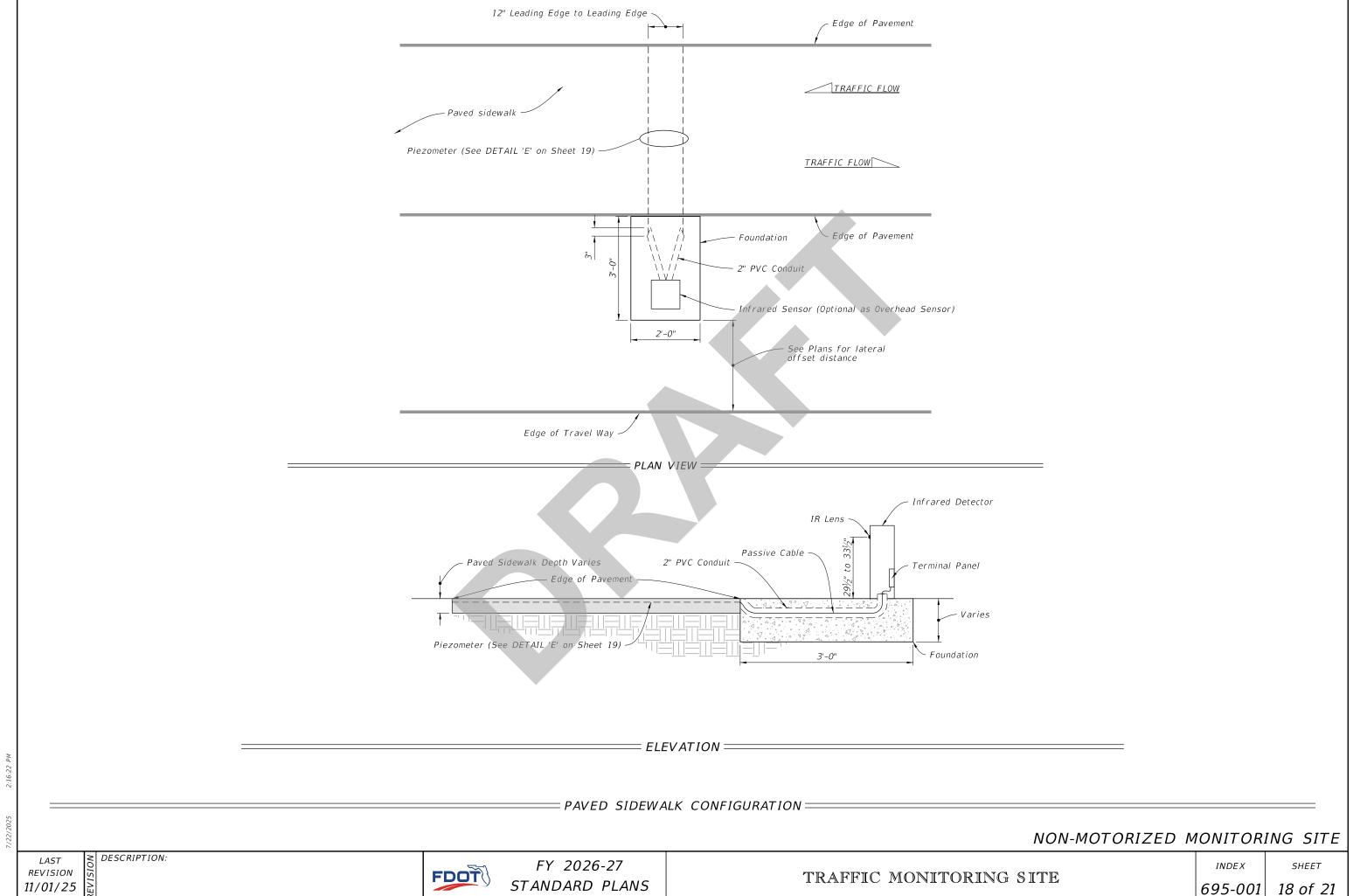
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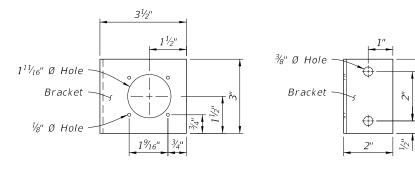
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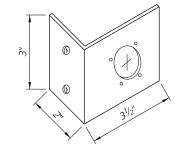
FY 2026-27 STANDARD PLANS NON-MOTORIZED MONITORING SITE

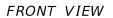












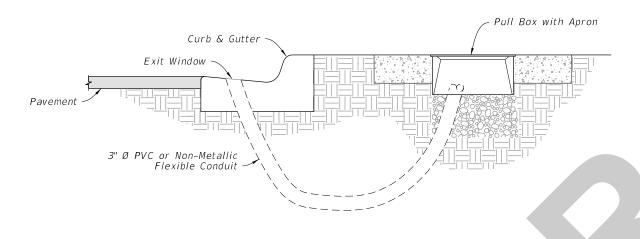
SIDE VIEW

ISOMETRIC VIEW

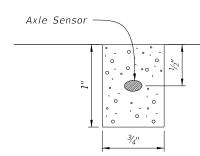
Fabricate bracket out of $\frac{3}{32}$ " - $\frac{1}{6}$ " inch thick aluminum. Dimensions may vary depending on the manufacturer of the J1 receptacle being furnished. The cabinet manufacturer will construct the mounting bracket to fit the receptacle.

J1 MOUNTING BRACKET

= DETAIL 'A" =

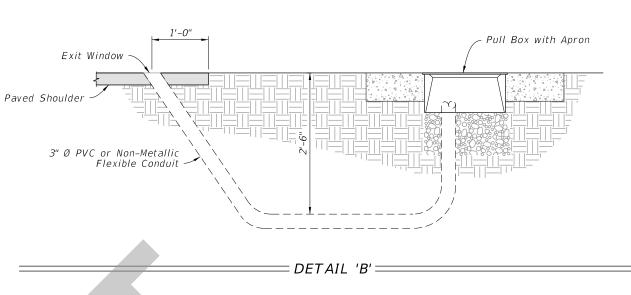


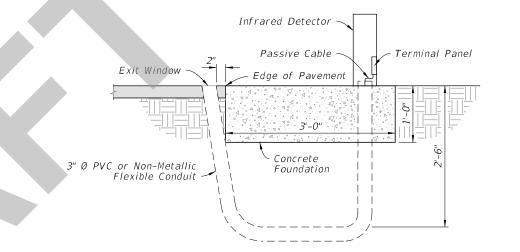
DETAIL 'C'=

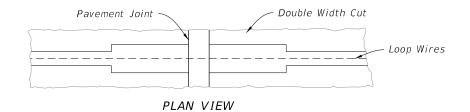


END VIEW (Axle Sensor Slot)

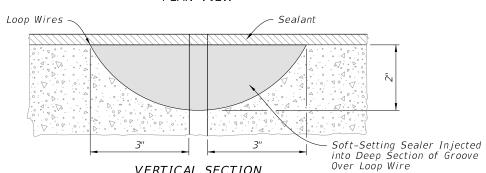
= *DETAIL 'E'* =







=DETAIL 'D'=



= DETAIL 'F'

VERTICAL SECTION

DETAILS 'A' THRU 'F'

REVISION 11/01/25

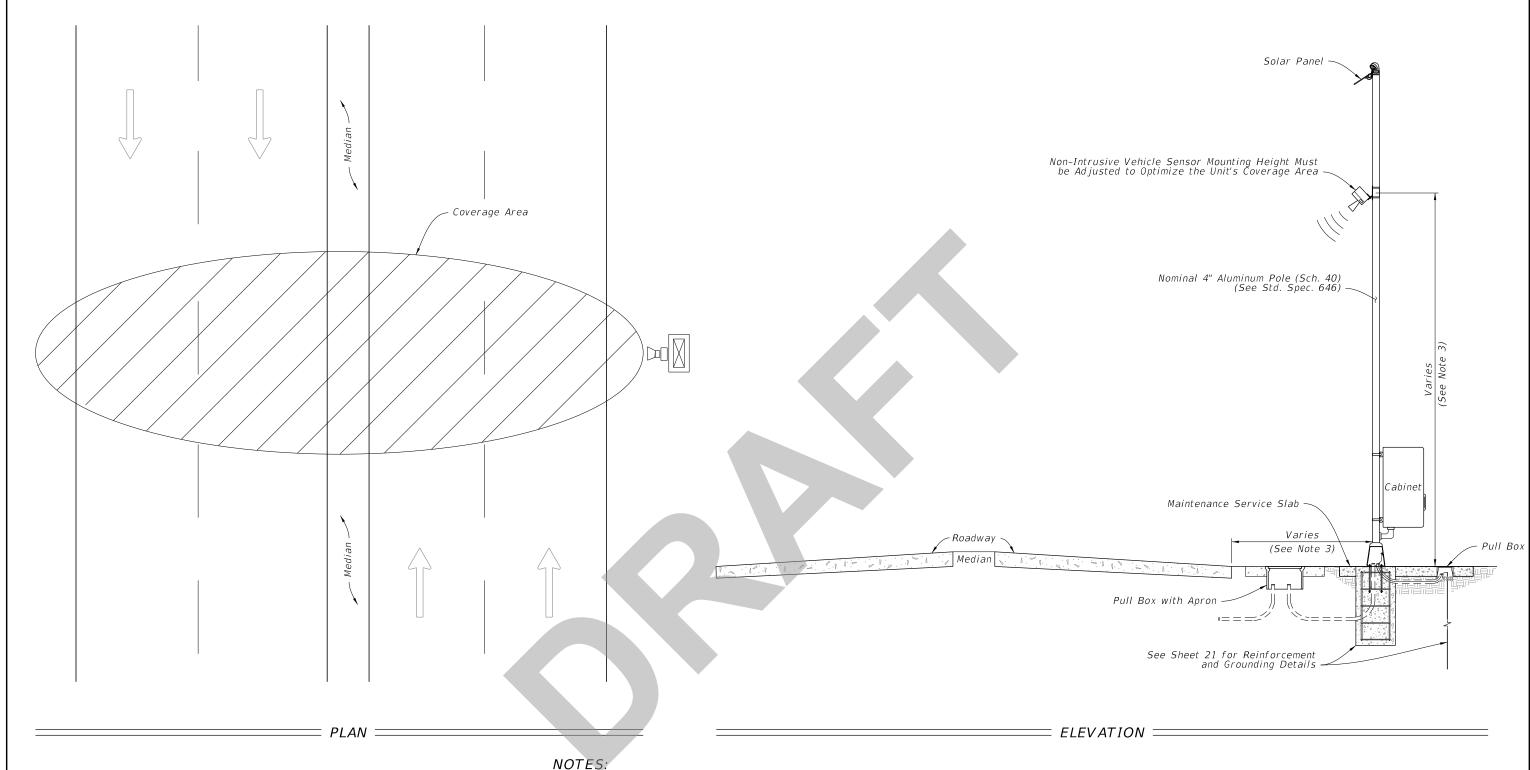
DESCRIPTION:

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- 1. The unit must be capable of detecting up to eight lanes of traffic (in either or both directions) when mounted perpendicular to the roadway.
- 2. Coverage area of the unit is affected by the roadway geometry: distance from the travel lanes, median type and width, barrier walls, etc.
- 3. Mounting height of the unit and offset from the roadway must be determined on a site-by-site basis, in accordance with the manufacturer's recommended guidelines. Offset of pole must be greater than or equal to minimum clear zone requirements.
- 4. Cabinet, ground rod pull box, and maintenance service slab installed per Index 676-010, except cabinet center will be 4 feet above grade.

NON-INTRUSIVE VEHICLE SENSOR

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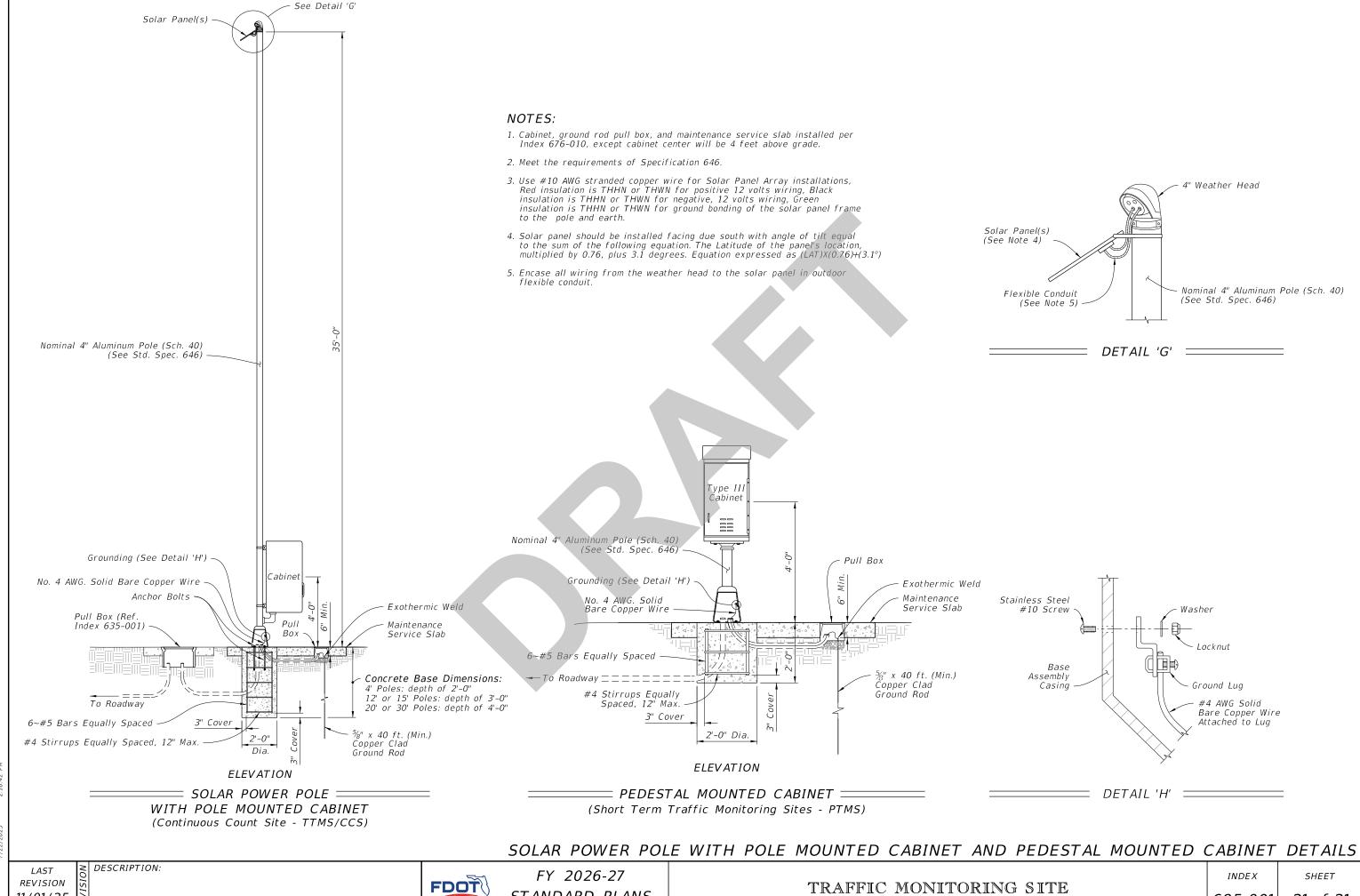
FDOT

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