



Ludlum Model  
4525-5000  
4525-7500  
4525-10000  
4525-12500  
4525-15000

**Generation 4 Installation Manual**

July 2025

## Statement of Warranty

Ludlum Measurements, Inc. warrants the portal monitor covered in this manual to be free of defects due to workmanship, material, and design for a period of 24 months from the date of delivery. The calibration of a product is warranted to be within its specified accuracy limits at the time of shipment. **Accessories such as computers, Universal Power Supplies (UPSs), cameras, network equipment, etc., are warranted by the individual manufacturer, and are not covered by Ludlum Measurements.**

This warranty excludes the replacement of instruments, detectors, or parts that are broken due to excessive physical abuse, acts of nature such as lightning, or used for purposes other than intended. Warranty claims requiring an onsite technician will cover labor and parts only. All related travel expenses such as airline fees, meals and incidentals, and lodging are to be paid for by the customer and are not covered by the warranty.

There are no warranties, express or implied, including without limitation any warranty of merchantability or fitness, which extend beyond the description of the face thereof. If the product does not perform as warranted herein, the purchaser's sole remedy shall be repair, recalibration, or replacement, at the discretion of Ludlum Measurements. In no event will Ludlum Measurements be liable for damages, lost revenue, lost wages, or any other incidental or consequential damages, arising from the purchase, use, or inability to use product.

## Return of Good to Manufacturer

If equipment needs to be returned to Ludlum Measurements, Inc. for repair or calibration, please send to the address below. All shipments should include documentation containing return shipping address, customer name, telephone number, description of service requested, and all other necessary information. Your cooperation will expedite the return of your equipment.

Ludlum Measurements, INC.  
ATTN: Radiation Security Division  
404 W. 4th St.  
Sweetwater, TX 79556

## Contact Information

Phone: 1-800-622-0828 (US, CA)  
Fax: 325-235-4672

## Free Portal Monitor Support

Monday – Friday 8:00 AM – 5:00 PM CT  
1-800-622-0828 (US, CA)  
After Hours Mailbox  
1-800-717-9506

# Table of Contents

<b>Section 1 - Packaging</b>	<b>4</b>
4525-5000	5
4525-7500	5
4525-10000	6
4525-12500	6
4525-15000	7
<b>Section 2 - Installation</b>	<b>8</b>
System Buffer Zone	9
Stand Orientation	10
Anchoring the Stands	11
Anchor Bolts and Pattern	11
Leveling the Stands	11
Lifting the Stands	12
Lifting the Detectors	13
Torque Specs	13
Squaring the Stands	14
Mounting the Remote	15
Mounting the Wall-Mounted Computer Kit	15
Wiring and Conduit	15
AC Power Requirements	15
Over Pull for Termination	15
Rain Shields	15
Conduit Requirements	16
Cable Block Diagrams	16
<b>Section 3 - Checklist and Photos for Technician</b>	<b>17</b>
Installation Checklist	17
Photo Requirements	18
<b>Section 4 - Drawings &amp; Diagrams</b>	<b>19</b>

## Section 1 - Packaging

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Remove the cardboard and shrink wrap from the pallet (if used), and safely lift each item onto the pallet. Items on the pallet may be secured using metal or plastic strapping. Use caution, as the strapping may be under tension and can cause injury when cut.

If packed in a crate, remove lid and at least one long side and one short side. Remove all small items and store in a safe dry place. Safely lift each item one at a time from the crate.

If the items received are not installed right away, ensure that the pallets or crates are stored in a dry space as they may contain sensitive electronics that are susceptible to damage until properly installed.

An envelope containing important information such as calibration certificates, packing slips, pre-shipment checklist, etc., will be located either in, or attached to the surface of, the shipment. Remove the envelope and store in a safe place.

Using the provided pre-shipment checklist, ensure all marked items are accounted for. In the event of a missing item, contact your sales representative immediately to report it and remediate the issues.

## **4525-5000**

### **Without Stands**

The system is shipped in one wooden crate with two detector assemblies and all the accessories, hardware, and options.

The total shipping weight is approximately 681 kg (1500 lb).

### **With Stands**

The system is shipped on two wooden pallets. Each pallet will contain one stand and one detector assembly. Other accessories, hardware, and options may also be secured to the pallets. At times, a separate smaller crate will be used to ship the accessories, hardware, and options.

The total shipping weight is approximately 1362 kg (3000 lb) (including stand).

## **4525-7500**

### **Without Stands**

The system is shipped in two wooden crates with two detector assemblies and all the accessories, hardware, and options in one crate and one detector assembly and rain shield in other crate.

The total shipping weight is approximately 1135 kg (2502 lb).

### **With Stands**

The system is shipped on four wooden pallets. Two pallets will contain one stand and one detector assembly, another pallet will contain one overhead frame and one detector assembly, and the fourth pallet will contain four stand extensions. Other accessories, hardware, and options may also be secured to the pallets. At times, a separate smaller crate will be used to ship the accessories, hardware, and options.

The total shipping weight is approximately 2043 kg (4500 lb) (including stand).

## **4525-10000**

### **Without Stands**

The system is shipped in two wooden crates with two detector assemblies in each and all the accessories, hardware, and options in one of the two crates.

The total shipping weight is approximately 681 kg (1500 lb).

### **With Stands**

The system is shipped on two wooden pallets. Each pallet will contain one stand and two detector assemblies. Other accessories, hardware, and options may also be secured to the pallets. At times, a separate smaller crate will be used to ship the accessories, hardware, and options.

The total shipping weight is approximately 1362 kg (3000 lb) (including stand).

## **4525-12500**

### **Without Stands**

The system is shipped in three wooden crates with two detector assemblies and all the accessories, hardware, and options in one crate, two detector assemblies in another, and one detector assembly and rain shield in the third crate.

The total shipping weight is approximately 1588 kg (3500 lb).

### **With Stands**

The system is shipped on four wooden pallets. Two pallets will contain one stand and two detector assemblies, another pallet will contain one overhead frame and one detector assembly, and the fourth pallet will contain four stand extensions. Other accessories, hardware, and options may also be secured to the pallets. At times, a separate smaller crate will be used to ship the accessories, hardware, and options.

The total shipping weight is approximately 3405 kg (7500 lb) (including stand).

## **4525-15000**

### **Without Stands**

The system is shipped in four wooden crates with two detector assemblies and all the accessories, hardware, and options in one crate, two detector assemblies in another, and one detector assembly and rain shield in the third and fourth crate.

The total shipping weight is approximately 1588 kg (3500 lb).

### **With Stands**

The system is shipped on four wooden pallets. Two pallets will contain one stand and two detector assemblies, another pallet will contain one overhead frame and two detector assembly, and the fourth pallet will contain the four stand extensions. Other accessories, hardware, and options may also be secured to the pallets. At times, a separate smaller crate will be used to ship the accessories, hardware, and options.

The total shipping weight is approximately 4086 kg (9000 lb) (including stand).

## Section 2 – Installation

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This section is intended to outline the standard installation of a system and does not cover actual termination of cables, which is normally performed by Ludlum Measurements, Inc. (LMI) field service technicians.

The following drawings are provided to facilitate the process in preparing your site for installation.

### Block Diagrams

[517 x 682](#), [517 x 682A](#)

### Model 4525-5000

[511 x 928](#), [511 x 928A](#), [511 x 928B](#), [511 x 928C](#), [511 x 928D](#)

### Model 4525-7500

[511 x 987](#), [511 x 987A](#), [511 x 987B](#), [511 x 987C](#)

### Model 4525-10000

[511 x 989](#), [511 x 989A](#), [511 x 989B](#), [511 x 989C](#)

### Model 4525-12500

[511 x 993](#), [511 x 993A](#), [511 x 993B](#), [511 x 993C](#)

### Model 4525-15000

[511 x 994](#), [511 x 994A](#), [511 x 994B](#), [511 x 994C](#)

### Stands

[517 x 729](#), [517 x 729A](#), [517 x 729B](#), [517 x 729C](#), [517 x 729D](#)

## System Buffer Zone

For best operation, locate the stands in an area where a 3 m (10 ft) buffer zone can be maintained around the detectors. Typically, the stands are mounted about 3 m (10 ft) before the weigh scale and never between the start and end of the scale. It is important that vehicles stay out of this buffer zone except when they are moving slowly between the detectors. Placing a stop sign at the entrance to this buffer zone is highly recommended. See Drawings listed below for an aerial view showing the buffer zone.

Model 4525-5000: [Drawing 511 x 928C](#)

Model 4525-7500: [Drawing 511 x 987C](#)

Model 4525-10000: [Drawing 511 x 989C](#)

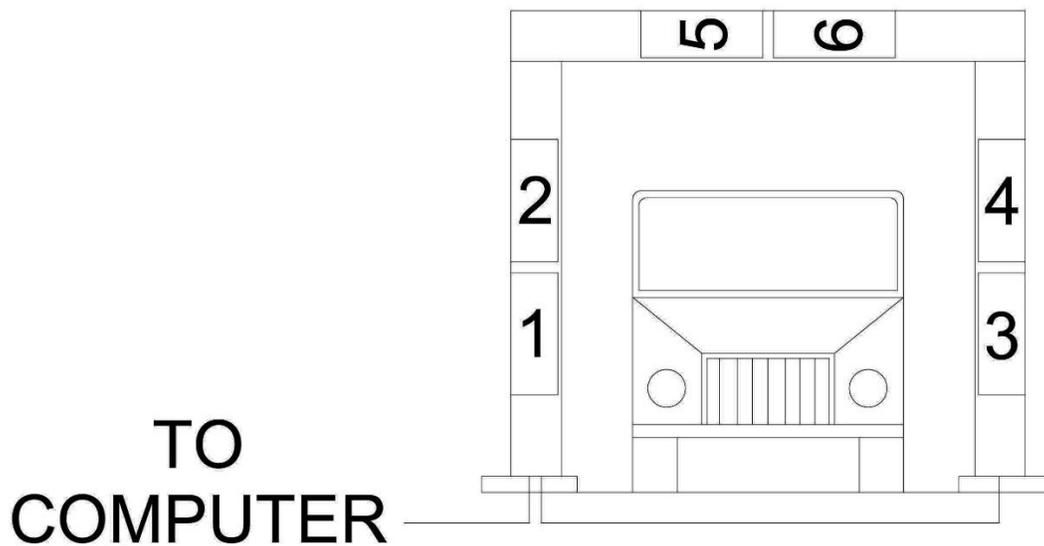
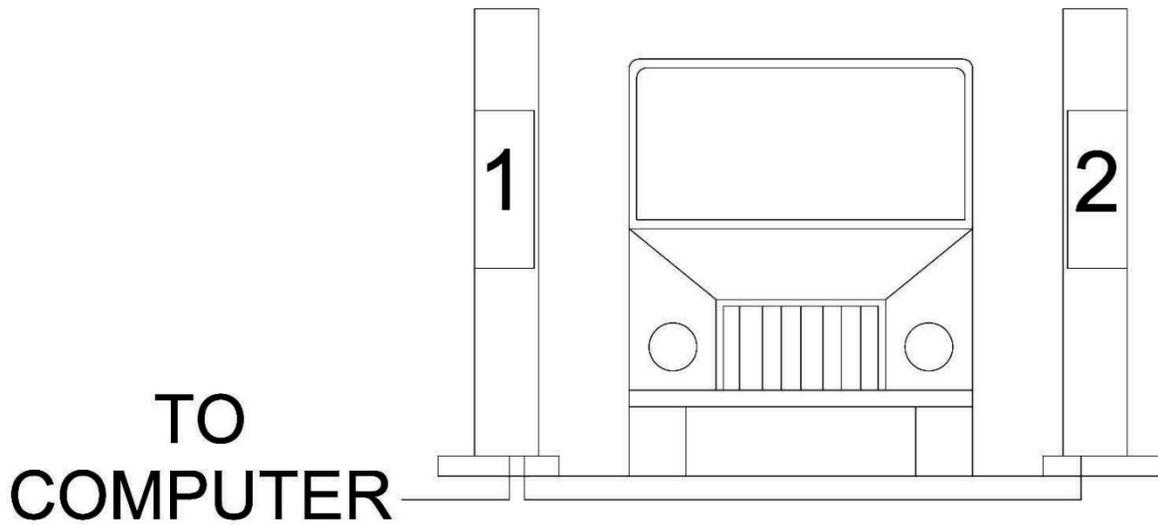
Model 4525-12500: [Drawing 511 x 993C](#)

Model 4525-15000: [Drawing 511 x 994C](#)

Failure to correctly locate the system or failure to enforce the buffer zone may result in more frequent false alarms. These false alarms are caused by the system having an incorrect measurement of the true background radiation level before the system is triggered into check mode.

## Stand Orientation

Detector 1 should go on the side with the four conduits coming out of the pad. See figures below for layout examples. Systems with three or more detectors will follow the same rule. To facilitate ease of installation, it is recommended that detector 1 be on the side nearest to the location of the monitoring office.



## Anchoring the Stands

### Anchor Bolts and Pattern

Due to the close tolerances of the anchor bolt holes, the anchor bolts must be placed according to the dimensions specified on the Anchor Bolt Template drawings.

[Drawing 517 x 729](#)

[Drawing 511 x 997](#)

[Drawing 511 x 836](#)

The anchor bolts should protrude from the concrete from 10 to 12.7 cm (4 to 5 in.).

#### **Note:**

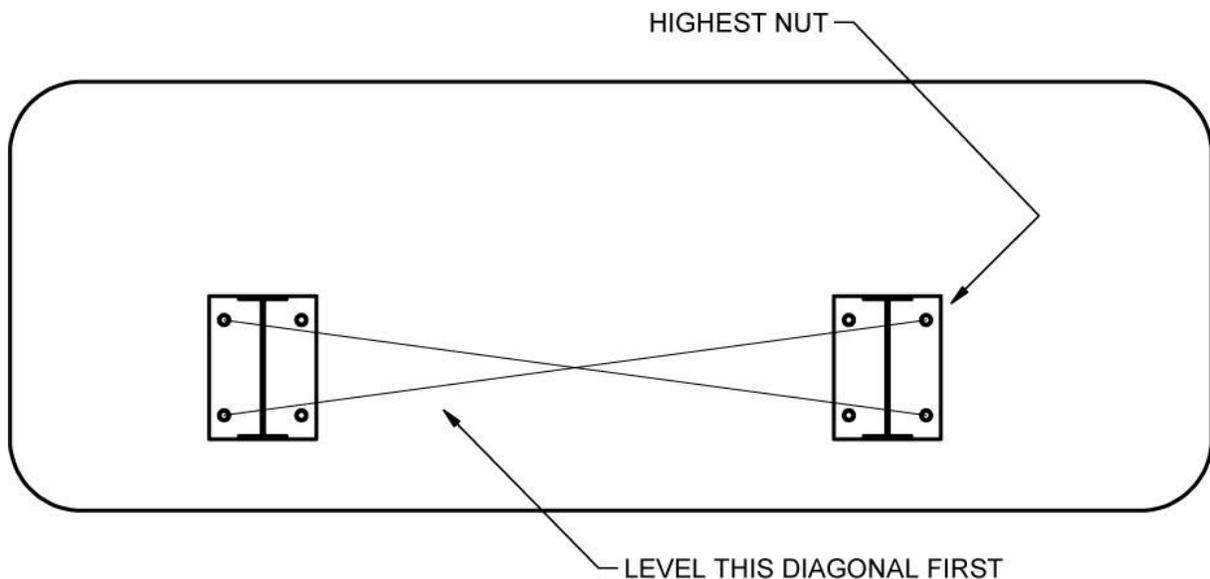
LMI recommends the use of an anchor bolt template to ensure the anchor bolts are placed in the exact locations for your system. These are available to purchase, including anchor bolt hardware kits, to facilitate installation.

If a template is used, the notch on the template should be placed toward the center of the lane. The anchor bolt holes are a tight tolerance fit for the  $\frac{3}{4}$ -inch anchor bolt; therefore, care must be taken when the anchor bolts are placed in the concrete. Double-nut the anchor bolt to the template before the concrete cures to ensure proper anchor-bolt alignment.

## Leveling the Stands

Once the concrete has cured and all the bolts are straight, the mounting points will need to be leveled. Shims may be used, but the proper method of using leveling nuts is highly recommended as described below.

Run a set of leveling nuts on the bolts as low as allowable (one nut per bolt). If the templates were purchased, place the flat template through the bolts onto the leveling nuts. Start leveling from the highest nut, using a 0.61 m (2 ft) (or larger) level in the pattern as demonstrated in the below figures. The stands should be level and plumb within 0.17 cm (1/16 of an inch) over a 0.61 m (2 ft) distance.



## Lifting the Stands

### **Note:**

LMI recommends the detector assemblies be placed and secured into the stands prior to lifting the stand into place. This can be done by placing the stand on ground level and using lifting straps to lower the detector assembly into the stand and secure using the provided hardware. If stands were purchased with your system, the detector assemblies will come pre-assembled with the stands.

All stands purchased with your system should include removable lifting eyebolts and hardware.

Use a lifting harness rated for at least 2268 kg (5000 lb).

During lifting, the unit may lean towards one side. This will allow you to engage two bolts first, and then the rest will align as the stand is lowered.

Before removing the lift harness, ensure the stands are securely fastened to prevent injury or damage.

Before removing the lift harness (and lifting lugs) the four stand mounting nuts will need to be in place.

For systems with overhead detectors, ensure the lower stand is securely fastened before placing the overhead extensions and stand assembly.

## Lifting the Detectors

Systems purchased without stands should follow the recommendations below for lifting and installing the detector assemblies.

Use a lifting harness rated for at least 2268 kg (5000 lb).

For side detectors, position lifting straps around and under the detector and carefully raise them into position. Use straps that will not scratch or otherwise damage the detectors when being lifted into position. As an alternate method, the detector can be mounted to a back plate, and then the detector and back plate can be lifted together and set into place with a crane or other suitable device.

For overhead detectors, the detector can be carefully positioned on its door, and then carefully lifted into place with a forklift or other lifting device. As an alternative method, the detector can be mounted to a back plate, and then the detector and back plate can be lifted together and set into place with a crane or other suitable device. DO NOT lift the detector on its door when installed on a back plate.

The weight of one detector and back plate is approximately 680 kg (1500 lb).

## Torque Specs

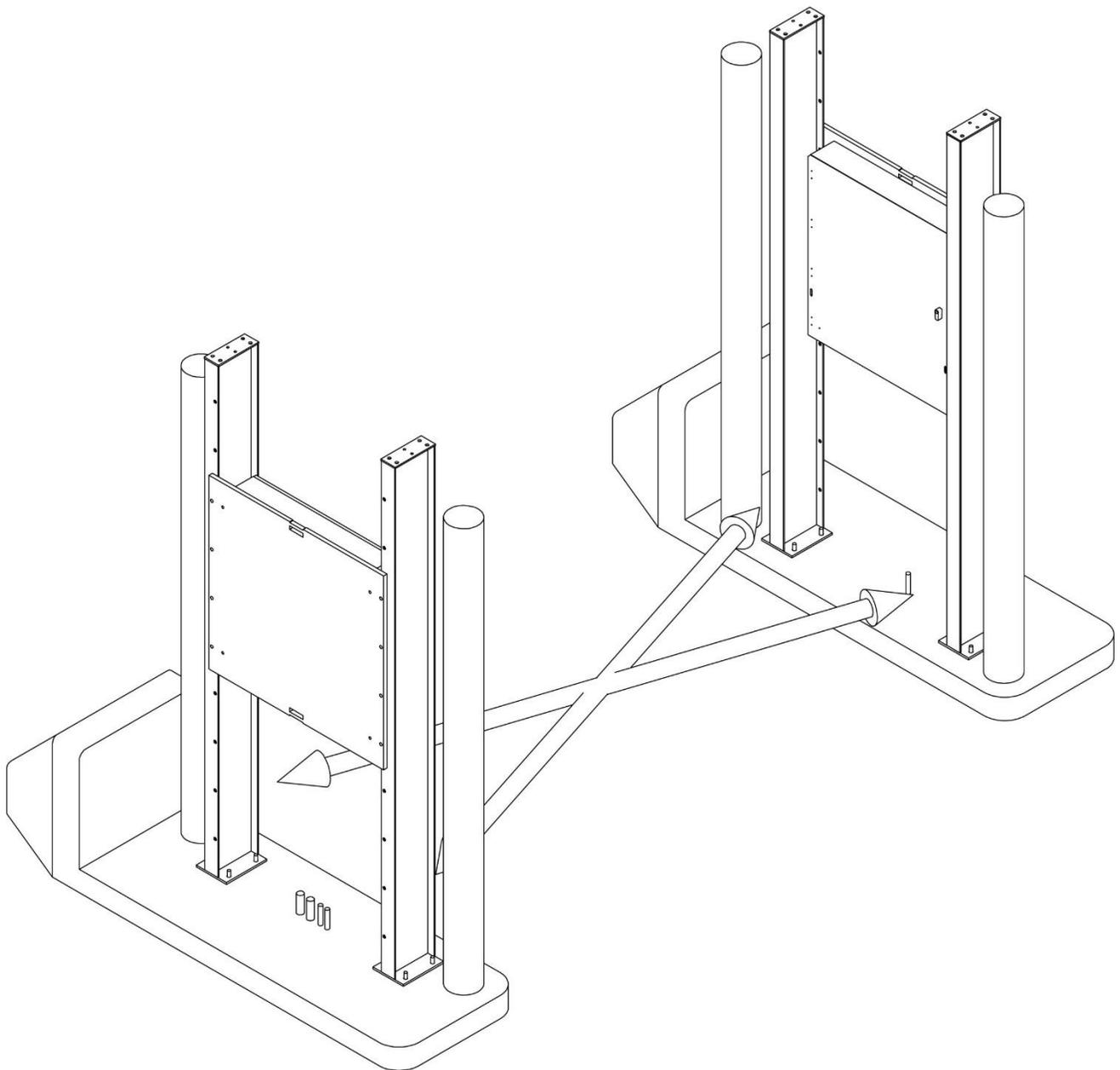
The estimated torque specifications below are offered as the suggested maximum torque values for threaded products and are only a guide.

- The recommended bolts for attaching the stands to the concrete are  $\frac{3}{4}$  inch Grade 3 steel anchor bolts or better. Typical tightening torque is 234 ft-lb.
- The recommended bolts for attaching the stands together and mounting the back plates to the stand are  $\frac{5}{8}$  inch, either Grade 3 zinc-plated steel or stainless steel or better. Typical tightening torque is 96 ft-lb.
- The recommended bolts for mounting the detectors to the stands are  $\frac{1}{2}$  inch, either Grade 3 zinc-plated steel or stainless steel or better. Typical tightening torque is 69 ft-lb.

## Squaring the Stands

After the lower stands have been lifted and secured into place, it is crucial that they are square with each other. Failure to do so will result in sensor alignment issues that cannot be resolved with the included sensor mounting brackets.

The opposing front outside corners of the stands should be within 1.27 cm (1/2 of an inch) of each other on the diagonal reading. Be sure to take the readings at the base of each set of stands. See the figure below for an example.



## Mounting the Remote

The remote box must be securely attached to the wall using four screws through the mounting holes on the remote. Refer to [Drawing 517 x 608](#).

## Mounting the Wall-Mounted Computer Kit

The wall-mounted computer kit must be securely mounted using 10 screws through the mounting holes on the main bracket. Refer to [Drawing 396 x 850](#).

## Wiring and Conduit

### AC Power Requirements

AC power from the breaker box to detector 1 must be a minimum #14-gauge wire for the “hot” and neutral connections, and a #14-gauge wire for the ground connection.

Each system requires a 2-amp power source of 120–240 Vac. LMI recommends a dedicated and clearly labeled 10-20-amp breaker for each system. AC power should be delivered to detector 1 and other system accessories in accordance with local code requirements, which supersede these instructions. Such requirements, for example, may require a disconnect device in clear sight of the hard-wired system.

### Over Pull for Termination

All cables must be pulled, leaving a 0.61 m (24 in.) tail past the end of the conduit or cord grip. Labeling must be used on both ends of the cable to clearly identify each cable. This can be done using any method, such as color coding, letters, numbers, etc.

## Rain Shields

Each detector should be installed with a rain shield. See drawings below.

[Drawing 517 x 730](#)

[Drawing 517 x 730A](#)

[Drawing 517 x 730B](#)

[Drawing 517 x 730C](#)

## Conduit Requirements

The bottom of each detector enclosure and the control box is pre-drilled for conduit connections required for a standard installation.

Refer to the following drawings for conduit requirements at the concrete pad.

[Drawing 517 x 729](#)

[Drawing 511 x 997A](#)

### **Note:**

All conduit coming out of the concrete up to the enclosures must be flexible Liquid-Tight Metallic.

## Cable Block Diagrams

To facilitate installation, the following drawings are provided to illustrate the required cables and their routing. These drawings also show conduit and cable requirements for other standard options available.

1 to 3 Detector Systems: [Drawing 517 x 682](#)

4 to 6 Detector Systems: [Drawing 517 x 682A](#)

### **Caution!**

Caution must be used when closing the enclosures. Excessive force could damage the electronic components.

## Section 3 – Checklist and Photos for Technician

The following checklist and photo requirements will be required to be submitted prior to having a field service technician scheduled for the on-site commissioning of the system.

### Installation Checklist

Yes, No, N/A	Requirement Details
	Foundation for detectors is placed where the detectors have a 3 m (10 ft) “buffer zone” in all directions.
	Detectors are installed in approved stands, anchored in concrete, and placed in their proper configuration.
	Stands are diagonally square with one another within 13 mm (0.5 in.).
	Detector 1 is mounted in a way to leaving adequate space for technicians to perform work safely.
	AC power is terminated at the AC power filter terminals. A clearly marked breaker is accessible in case the AC power must be disconnected.
	Detector cables are pulled as shown on the wiring block diagrams provided in this manual with 61 cm (24 in.) of over-pull on each end.
	2IR sensors are securely mounted using the hardware provided to the stands, at the proper height and on the correct detector. Receivers will be wired and connected to detector 1, whereas the transmitters will be wired to detector 2 or 3, depending on the configuration purchased. See installation drawings for height requirements.
	Cat 5e ethernet cable provided is in conduit and pulled from detector 1 to computer location in office area with 61 cm (24 in.) over-pull on each end.
	The computer and printer (if used) are in an easily accessible location with proper power and an uninterrupted power supply installed. If the wall computer kit was purchased, ensure it has been securely mounted in its desired location to the wall.
	The remote annunciator, if purchased, is mounted on the wall in its desired location. The provided remote cable with 61 cm (24 in.) of over-pull on each end must be pulled from the control box to the remote.
	Any additional accessories such as a camera, strobe/horn, traffic light, P2P wireless kit, etc., must be installed according to the recommended specifications.
	For all systems with overhead detectors, or detectors that may not be reached with a 1.8 m (6 ft) scissor ladder, a man lift, and certified operator will be required on site. For all other systems, a ladder up to 1.8 m (6 ft) will be required for technician’s use to properly inspect and commission the systems.

## Photo Requirements

No. of Photos	Requirement Details
4 each	System in relation to the scale for perspective and to ensure the 3 m (10 ft) buffer zone is adequate and enforced.
2 each	Face of each detector, with door closed, showing the placement of all infrared sensors. This will be detector 1 and detector 2 or 3, depending on your configuration.
1 each	Face of each detector, with doors opened, showing detector cables pulled through conduits and 61 cm (24 in.) over-pull.
1-6 each	Interior of the detector 1 showing the AC power lines terminated, detector cables, remote cable, and the Cat-5e network cable with 61 cm (24 in.) over-pull.
2-4 each	Optional strobe and horn, camera, wireless P2P kit, and mounted with conduit(s) and entering the control box.
2-4 each	Location of the computer that will be used for the supervisor software. If using the wall-mounted computer kit purchased with your system, show kit mounted securely on the wall with ample room for technician to terminate the connection.
1-2 each	The remote annunciator (if purchased) mounted in its desired location and the remote cable with 61 cm (24 in.) of over-pull past the entrance of the box.
Any	Photos of any additional equipment or peripherals installed and expected to be used in conjunction with the control box's hardware or software of the system (gate arms, traffic lights, etc.).
Any	Show anything else that may be of help for the technician to provide an efficient commissioning and start-up service, such as barriers, obstacles, or rapid elevation changes near or around the system, etc.

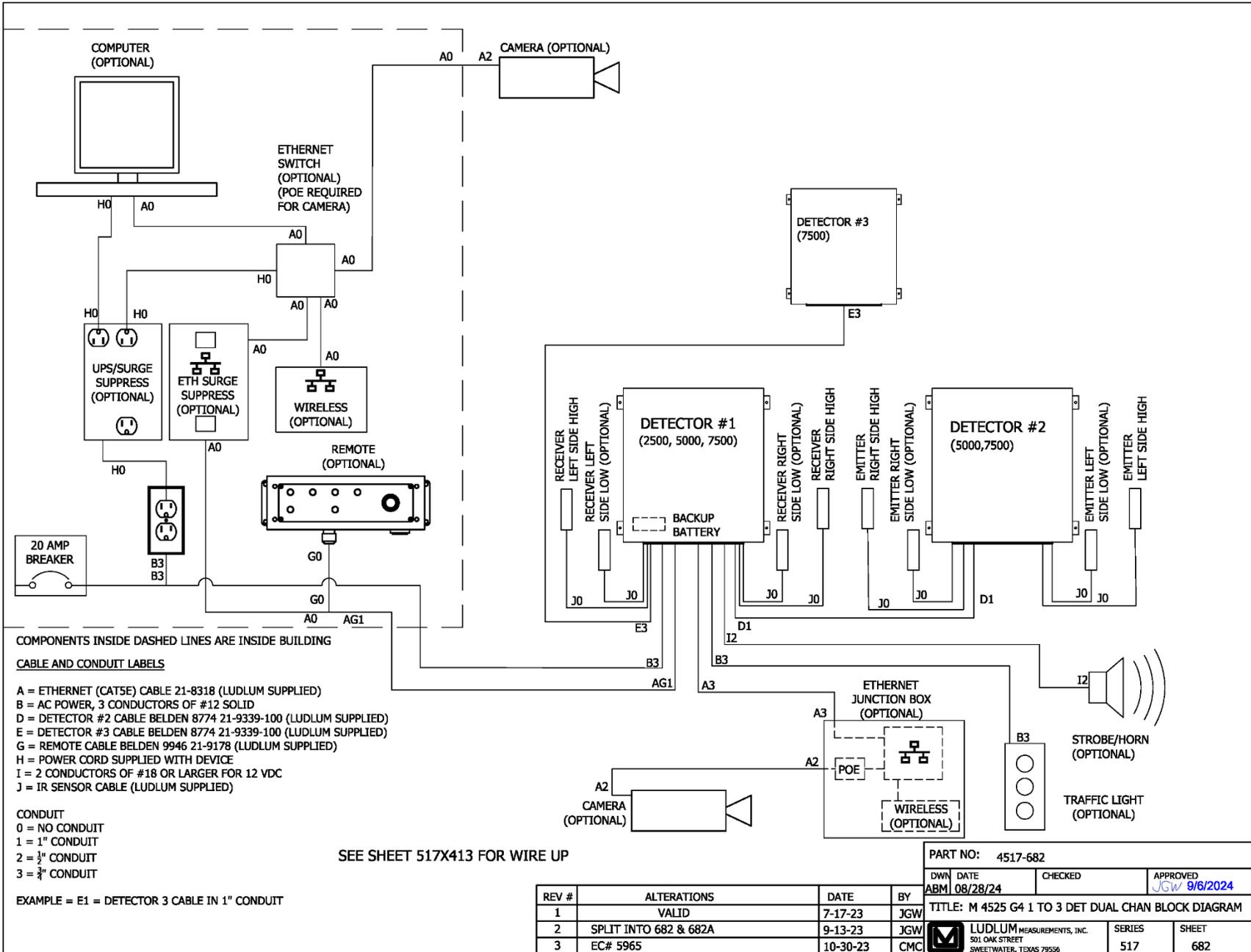
Submit via email to [rsdtech@ludlums.com](mailto:rsdtech@ludlums.com). Files must be compressed into a single zip file totaling less than 20 MB. If file cannot be sent, upload pictures to [Picture Upload Link](#) and email us a copy of the two lists.

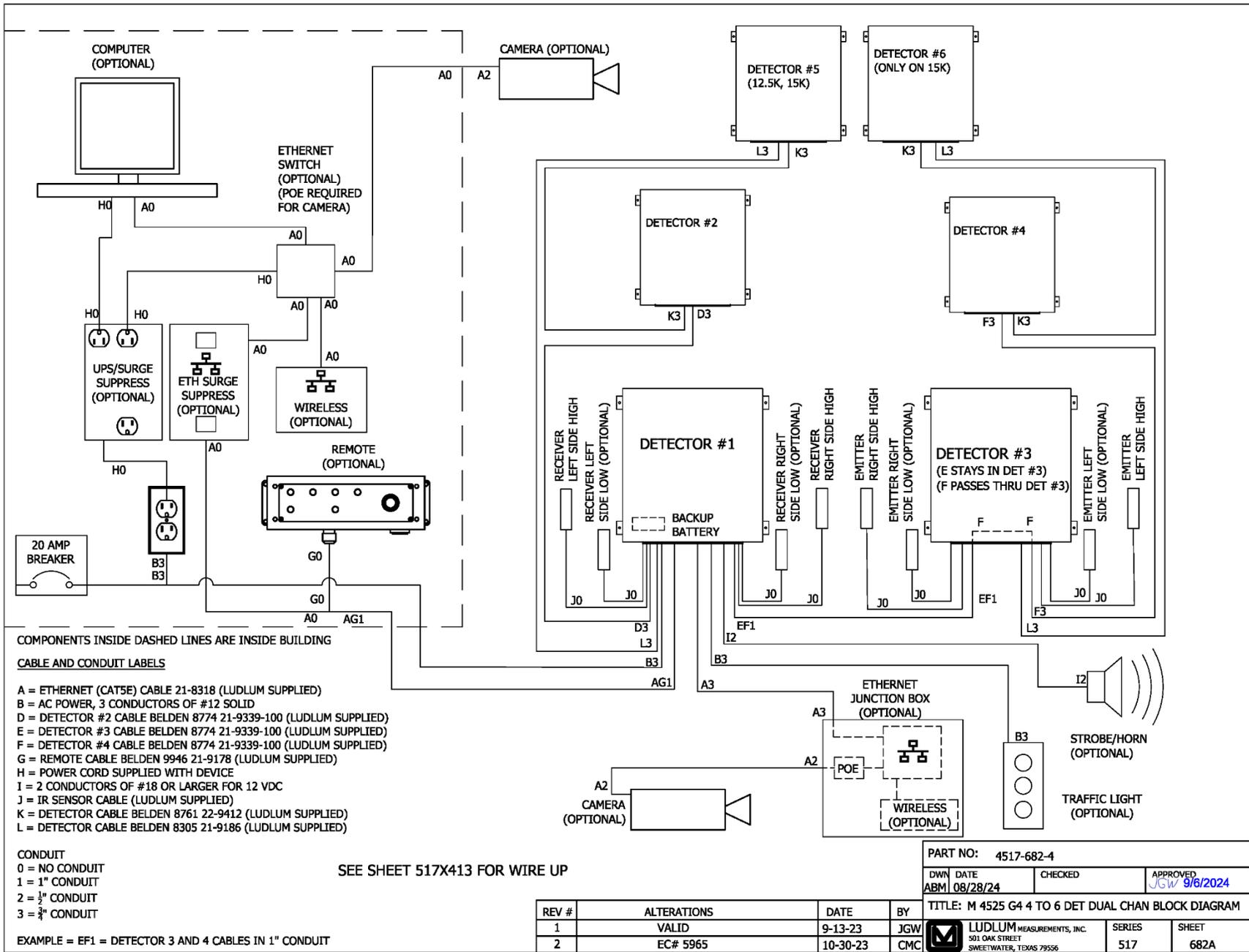
**Please note that delays due to poor validation of these requirements may incur additional charges at the time of service.** For questions, comments, or concerns, send us an email or give us a call.

## Section 4 - Drawings & Diagrams

Drawing Title	Drawing Number
Model 4525 G4 1 to 3 Det Dual Channel Block Diagram	<a href="#">517 x 682</a>
Model 4525 G4 4 to 6 Det Dual Channel Block Diagram	<a href="#">517 x 682A</a>
Model 4525 1 Det Dual Channel Wire Diagram	<a href="#">517 x 722I</a>
Model 4525 2 Det Dual Channel Wire Diagram	<a href="#">517 x 722J</a>
Model 4525 3 Det Dual Channel Wire Diagram	<a href="#">517 x 722K</a>
Model 4525 4 Det Dual Channel Wire Diagram	<a href="#">517 x 722L</a>
Model 4525 5 Det Dual Channel Wire Diagram	<a href="#">517 x 722M</a>
Model 4525 6 Det Dual Channel Wire Diagram	<a href="#">517 x 722N</a>
Model 4525 Remote and Strobe Wire Diagram	<a href="#">517 x 722O</a>
Model 4525-5000 G4 ISO View	<a href="#">511 x 928</a>
Model 4525-5000 G4 Detector Elevation	<a href="#">511 x 928A</a>
Model 4525-5000 G4 Sensitive Area	<a href="#">511 x 928B</a>
Model 4525-5000 G4 Aerial View	<a href="#">511 x 928C</a>
Model 4525-5000 G4 IR Sensor Locations	<a href="#">511 x 928D</a>
Model 4525-7500 G4 ISO View	<a href="#">511 x 987</a>
Model 4525-7500 G4 Detector Elevation	<a href="#">511 x 987A</a>
Model 4525-7500 G4 Sensitive Area	<a href="#">511 x 987B</a>
Model 4525-7500 G4 Aerial View	<a href="#">511 x 987C</a>
Model 4525-10000 G4 ISO View	<a href="#">511 x 989</a>
Model 4525-10000 G4 Detector Elevation	<a href="#">511 x 989A</a>
Model 4525-10000 G4 Sensitive Area	<a href="#">511 x 989B</a>
Model 4525-10000 G4 Aerial View	<a href="#">511 x 989C</a>
Model 4525-12500 G4 ISO View	<a href="#">511 x 993</a>
Model 4525-12500 G4 Detector Elevation	<a href="#">511 x 993A</a>
Model 4525-12500 G4 Sensitive Area	<a href="#">511 x 993B</a>
Model 4525-12500 G4 Aerial View	<a href="#">511 x 993C</a>
Model 4525-15000 G4 ISO View	<a href="#">511 x 994</a>
Model 4525-15000 G4 Detector Elevation	<a href="#">511 x 994A</a>
Model 4525-15000 G4 Sensitive Area	<a href="#">511 x 994B</a>
Model 4525-15000 G4 Aerial View	<a href="#">511 x 994C</a>
Model 4525 G4 Family Concrete Plan	<a href="#">517 x 729</a>
Model 4525 G4 Family Stand Leg	<a href="#">517 x 729A</a>
Model 4525 G4 Family Stand Extension	<a href="#">517 x 729B</a>
Model 4525 G4 Family Stand Back Plate	<a href="#">517 x 729C</a>

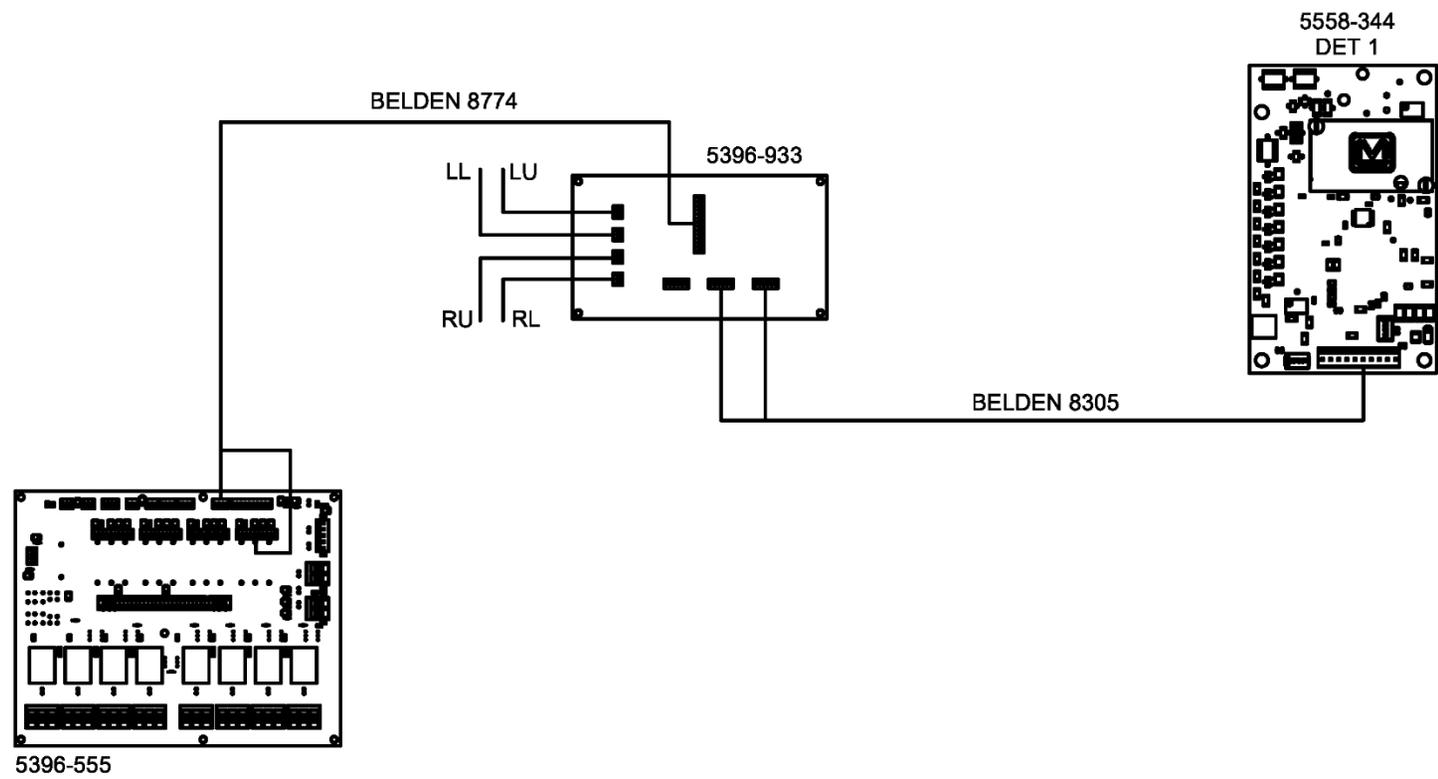
Model 4525 G4 Family Stand Overhead Beam	<a href="#">517 x 729D</a>
Model 4525 Anchor Bolt and Concrete Plans	<a href="#">511 x 836</a>
Model 4525 G4 Anchor Bolt Template	<a href="#">511 x 997</a>
Model 4525 G4 Conduit Template Guide	<a href="#">511 x 997A</a>
Model 4525 Remote	<a href="#">517 x 608</a>
Model 4525 Computer Assembly	<a href="#">396 x 850</a>
Model 4525 G4 Family Rain Shield Install	<a href="#">517 x 730</a>
Model 4525 G4 Family Overhead Rain Shield Install	<a href="#">517 x 730A</a>
Model 4525 G4 Family 2 Det Rain Shield Install	<a href="#">517 x 730B</a>
Model 4525 G4 Family Overhead 2 Det Rain Shield Install	<a href="#">517 x 730C</a>





LL IS (LOWER LEFT REFLECTIVE SENSOR)  
 LU IS (UPPER LEFT REFLECTIVE SENSOR)  
 RL IS (LOWER RIGHT REFLECTIVE SENSOR)  
 RU IS (UPPER RIGHT REFLECTIVE SENSOR)  
 LOWER SENSORS ARE OPTIONAL

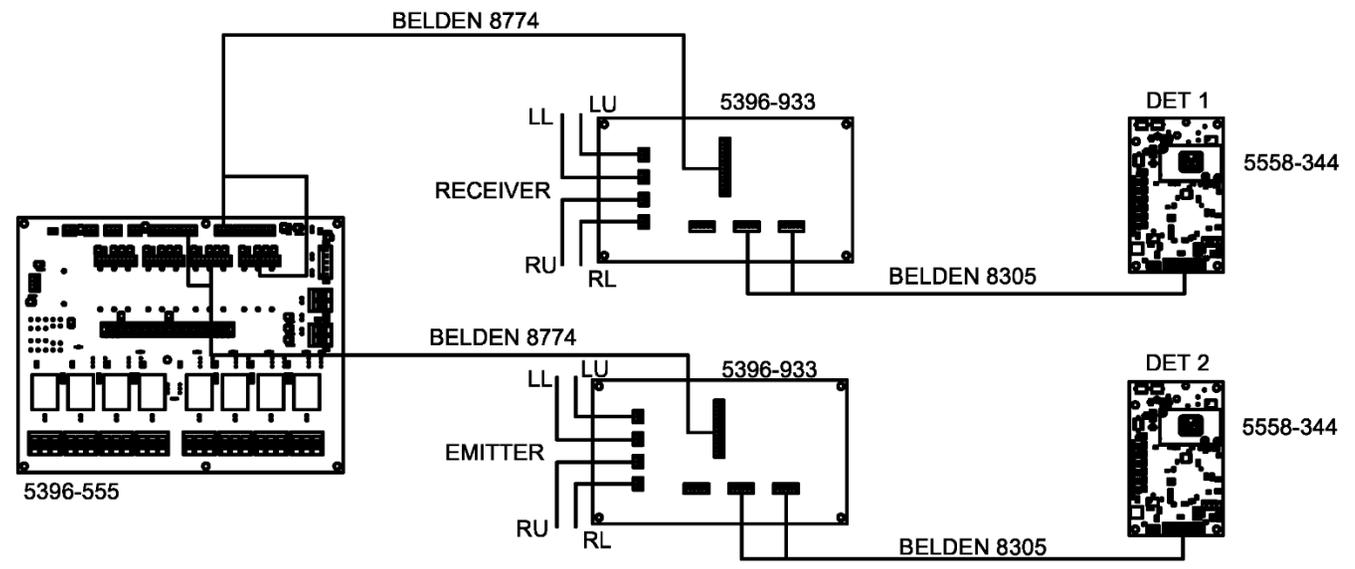
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
<b>DWG NUM: 4517-722</b>			<b>SCALE: -</b>	
<b>TITLE: M 4525 1 DET DUAL CHANNEL</b>				
<b>LUDLUM MEASUREMENTS, INC.</b> <small>501 OAK STREET        SWEETWATER, TEXAS 79588        CAGE CODE: 238109</small>		<b>SERIES</b> 517	<b>SHEET</b> 7221	

LL IS (LOWER LEFT SENSOR)  
 LU IS (UPPER LEFT SENSOR)  
 RL IS (LOWER RIGHT SENSOR)  
 RU IS (UPPER RIGHT SENSOR)  
 LOWER SENSORS ARE OPTIONAL

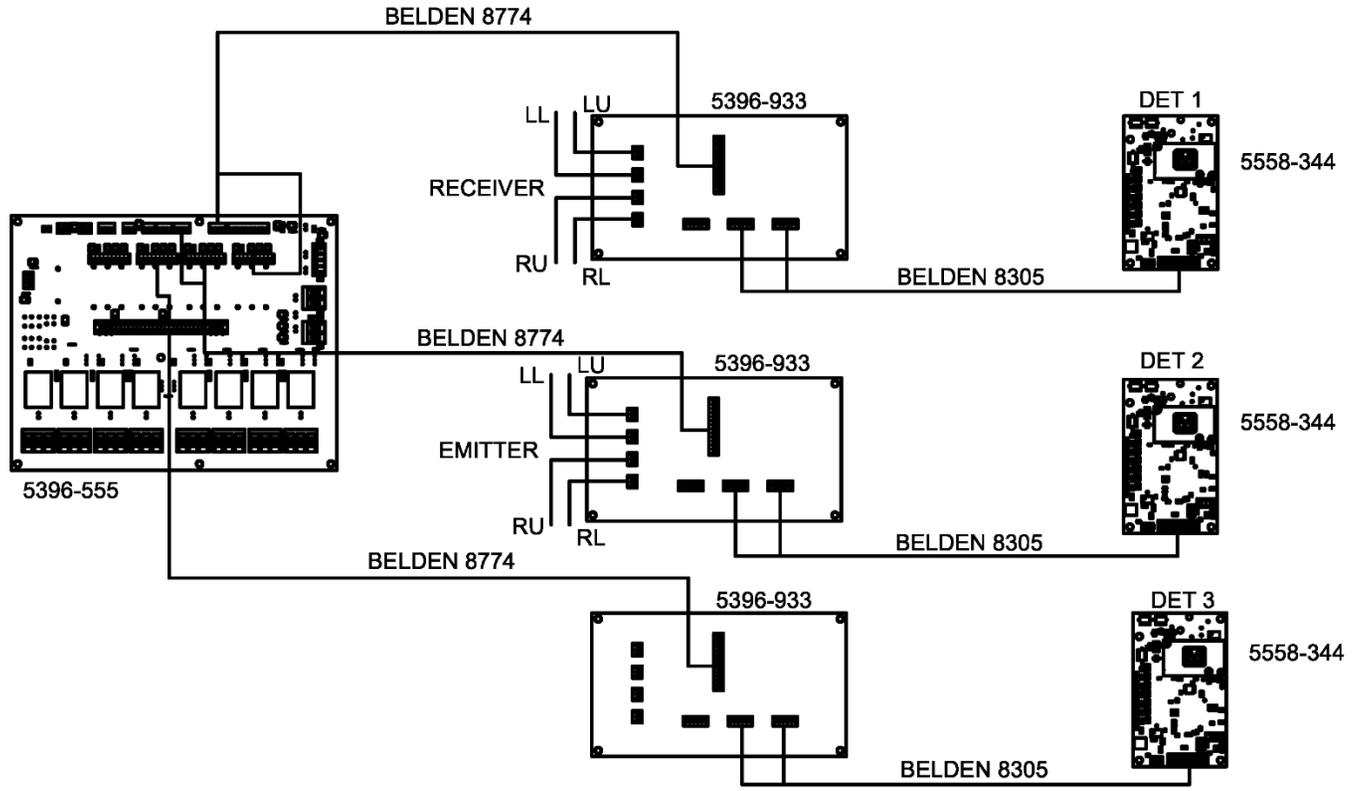
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 2 DET DUAL CHANNEL				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79588 CAGE CODE: 23809		SERIES 517	SHEET 722J	

LL IS (LOWER LEFT SENSOR)  
 LU IS (UPPER LEFT SENSOR)  
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 RU IS (UPPER RIGHT SENSOR)  
 LOWER SENSORS ARE OPTIONAL

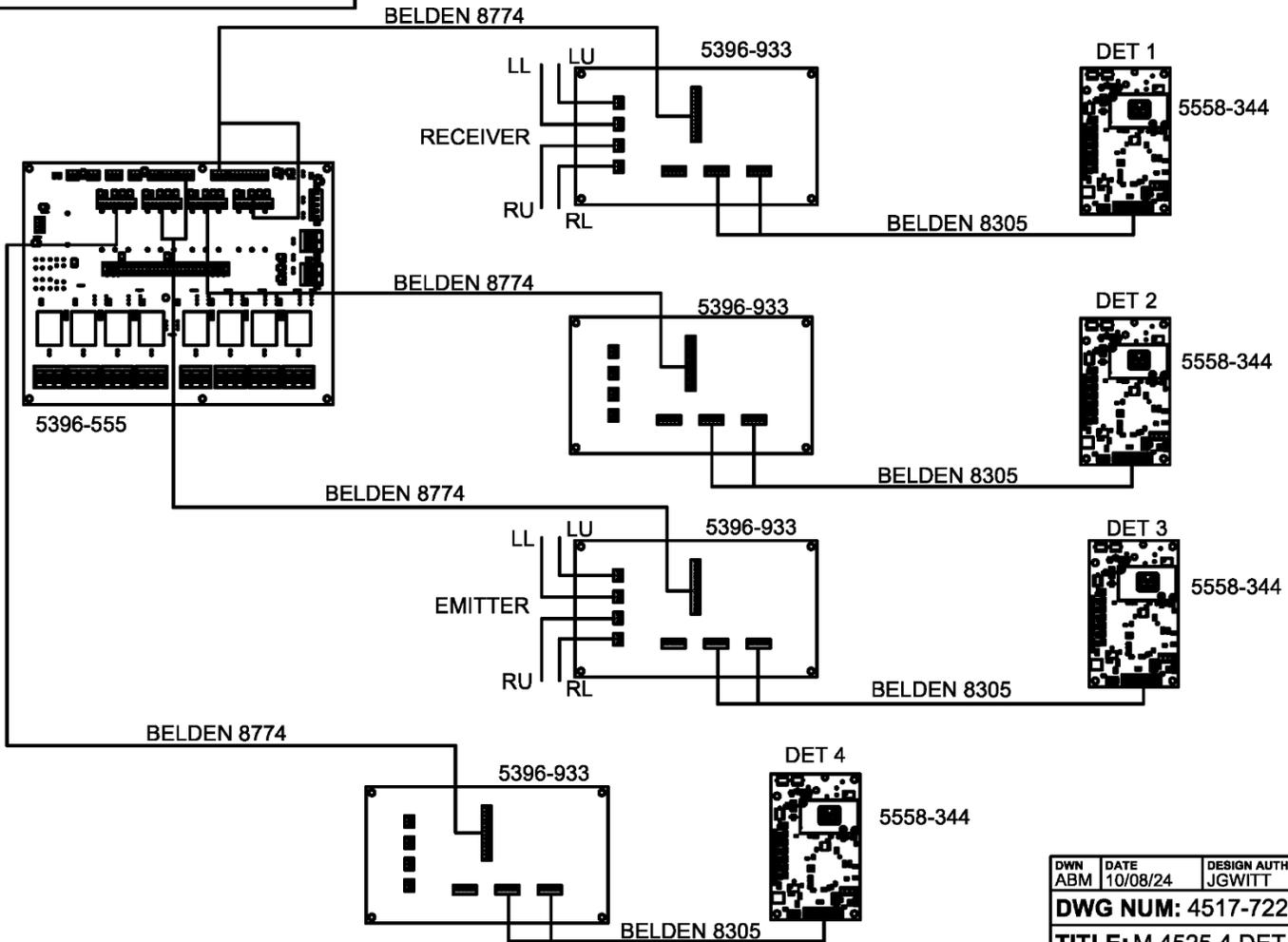
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 3 DET DUAL CHANNEL				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23659		SERIES 517	SHEET 722K	

LL IS (LOWER LEFT SENSOR)  
 LU IS (UPPER LEFT SENSOR)  
 RL IS (LOWER RIGHT SENSOR)  
 RU IS (UPPER RIGHT SENSOR)  
 LOWER SENSORS ARE OPTIONAL

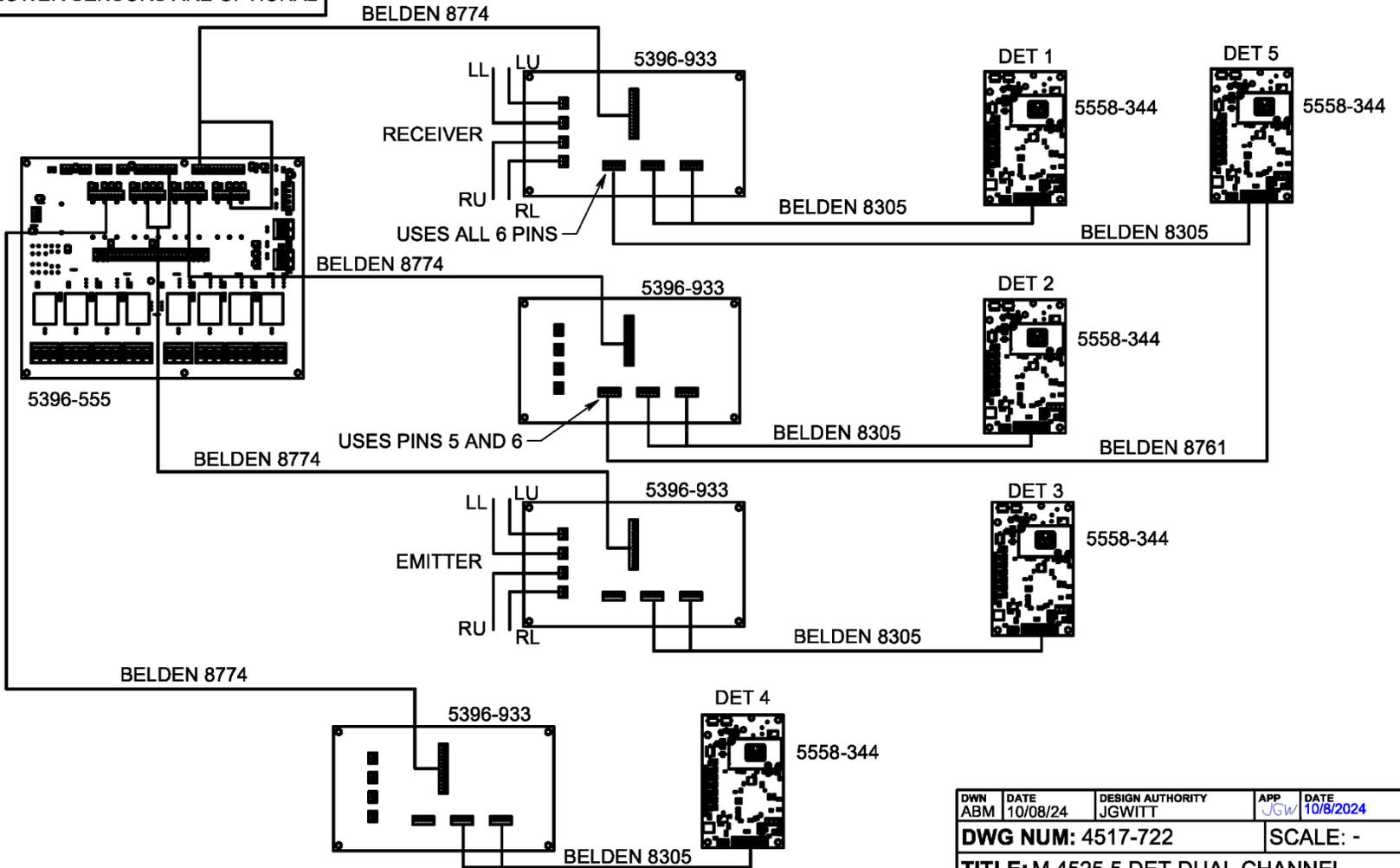
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 4 DET DUAL CHANNEL				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22619		SERIES 517	SHEET 722L	

LL IS (LOWER LEFT SENSOR)  
 LU IS (UPPER LEFT SENSOR)  
 RL IS (LOWER RIGHT SENSOR)  
 RU IS (UPPER RIGHT SENSOR)  
 LOWER SENSORS ARE OPTIONAL

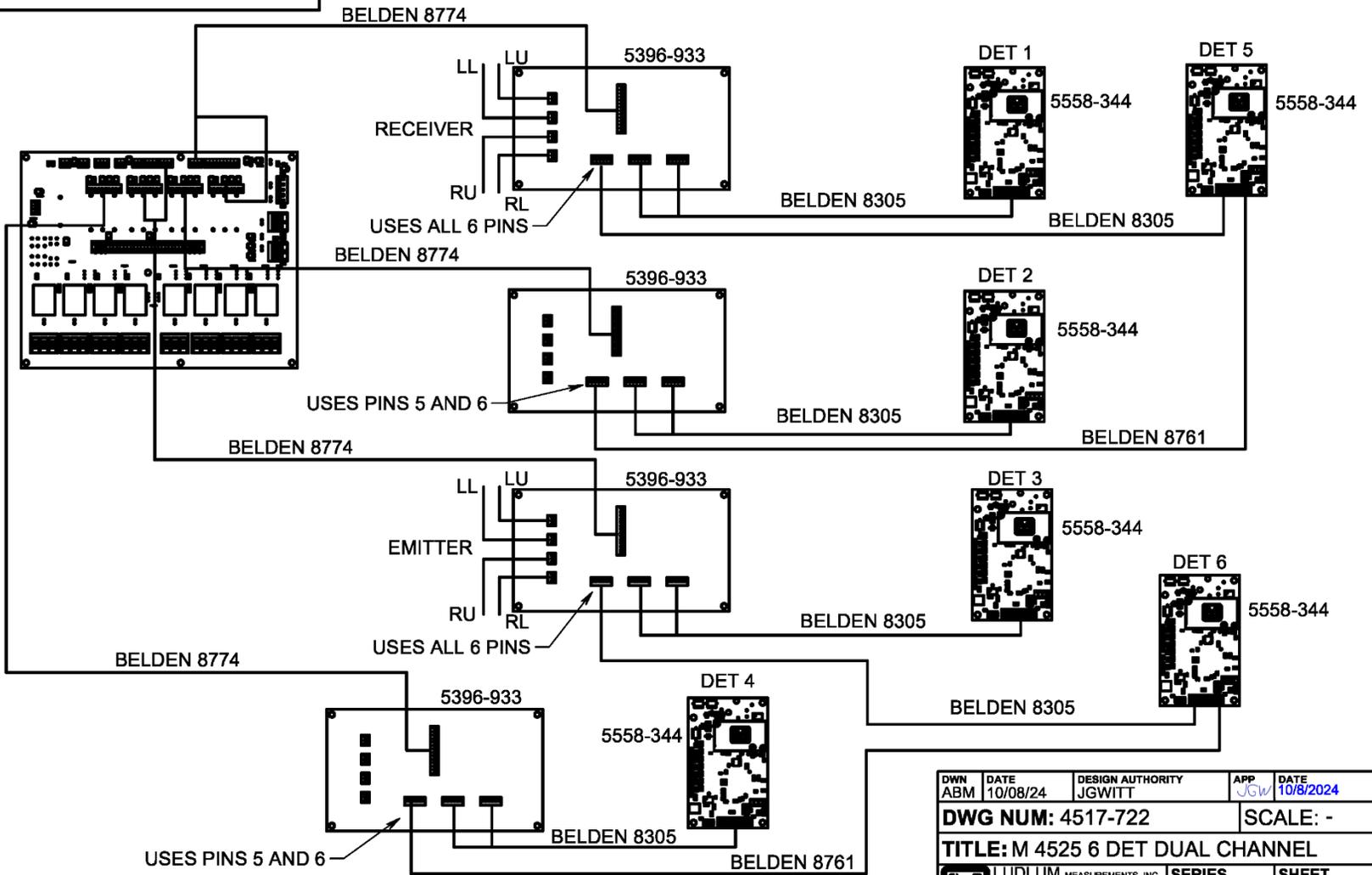
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 5 DET DUAL CHANNEL				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22619		SERIES 517	SHEET 722M	

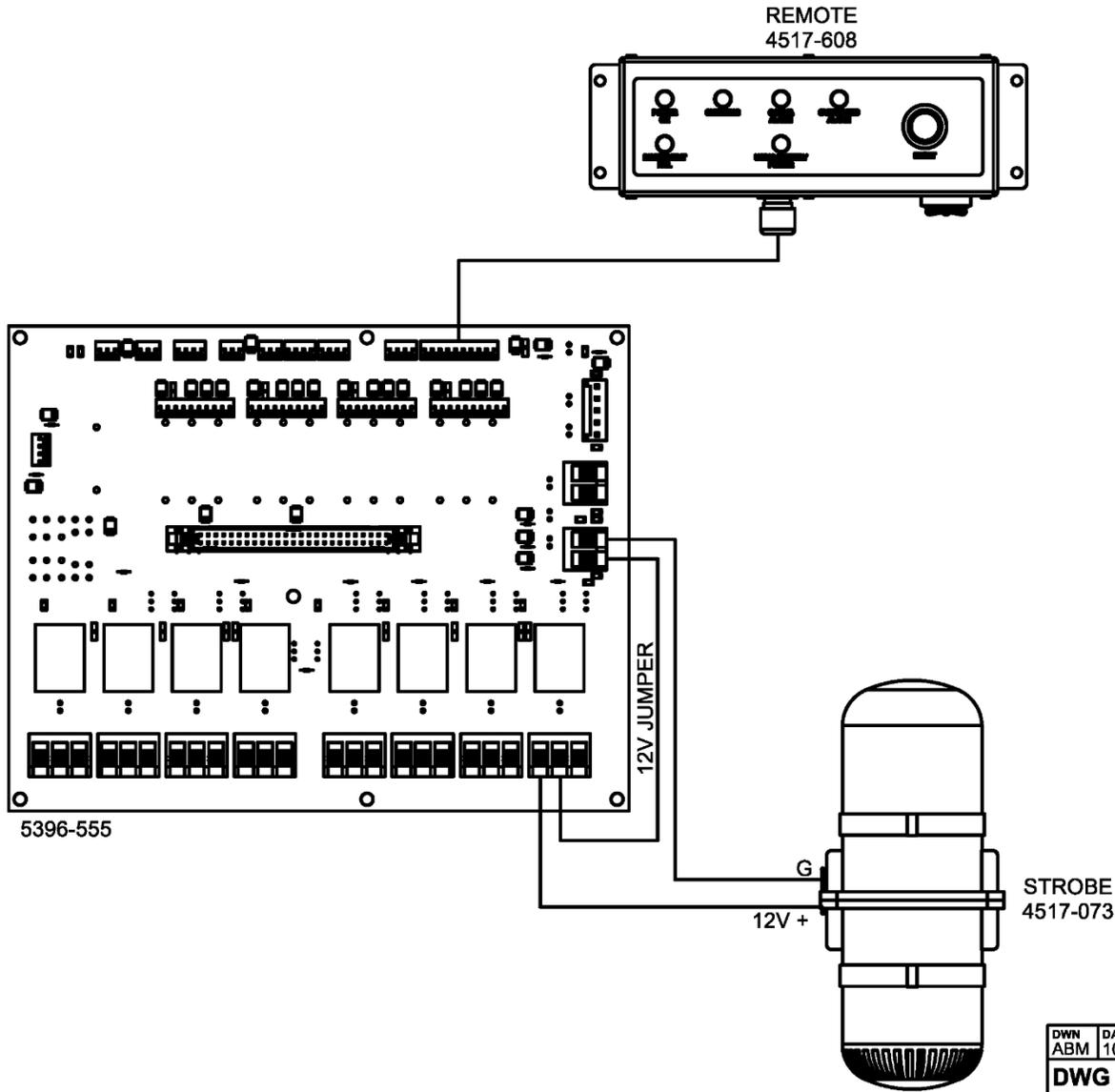
LL IS (LOWER LEFT SENSOR)  
 LU IS (UPPER LEFT SENSOR)  
 RL IS (LOWER RIGHT SENSOR)  
 RU IS (UPPER RIGHT SENSOR)  
 LOWER SENSORS ARE OPTIONAL

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



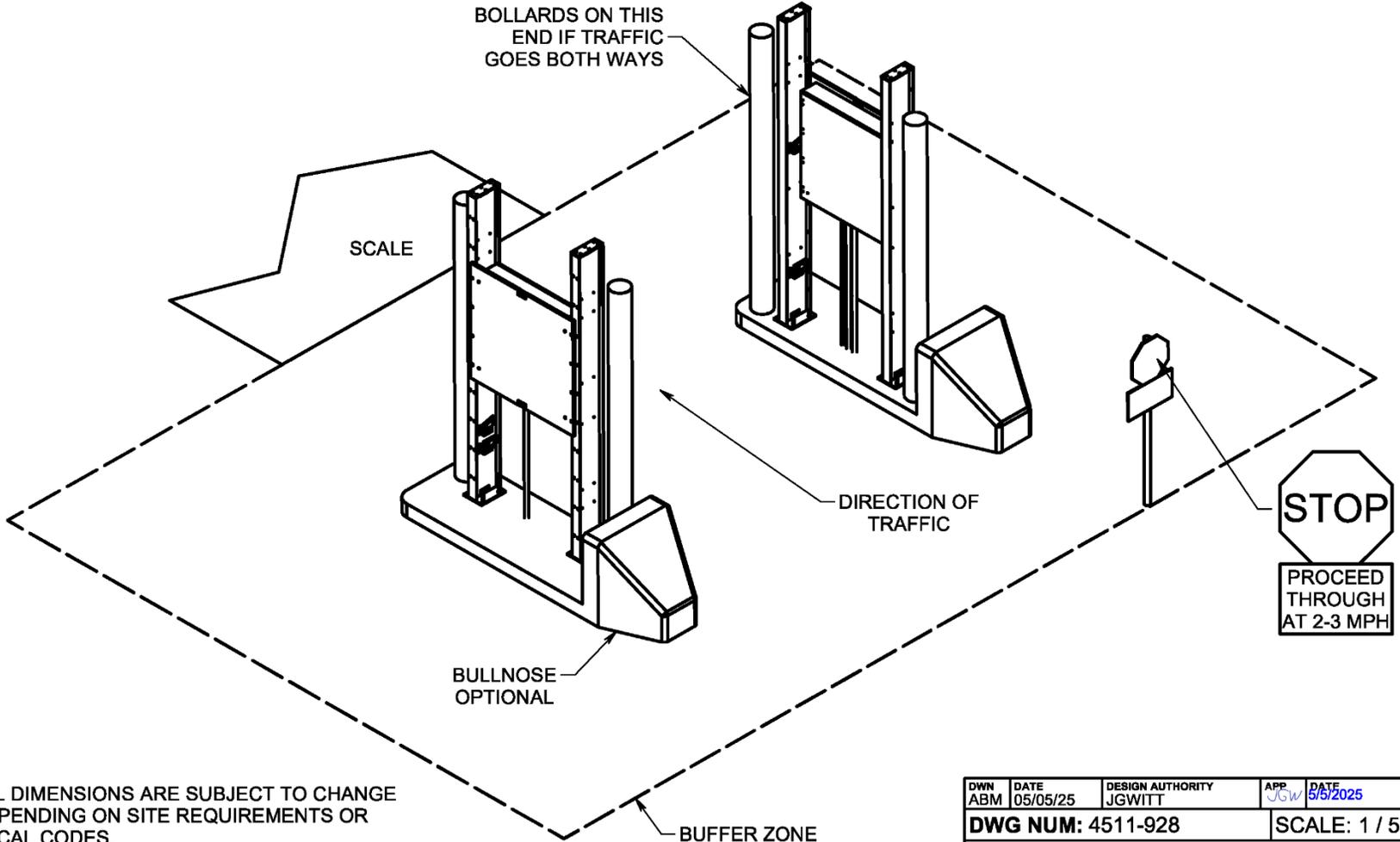
DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 6 DET DUAL CHANNEL				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22609		SERIES 517	SHEET 722N	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	10/08/24	ABM



DWN ABM	DATE 10/08/24	DESIGN AUTHORITY JGWITT	APP JGW	DATE 10/8/2024
DWG NUM: 4517-722			SCALE: -	
TITLE: M 4525 REMOTE AND STROBE				
 LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22859		SERIES 517	SHEET 7220	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM



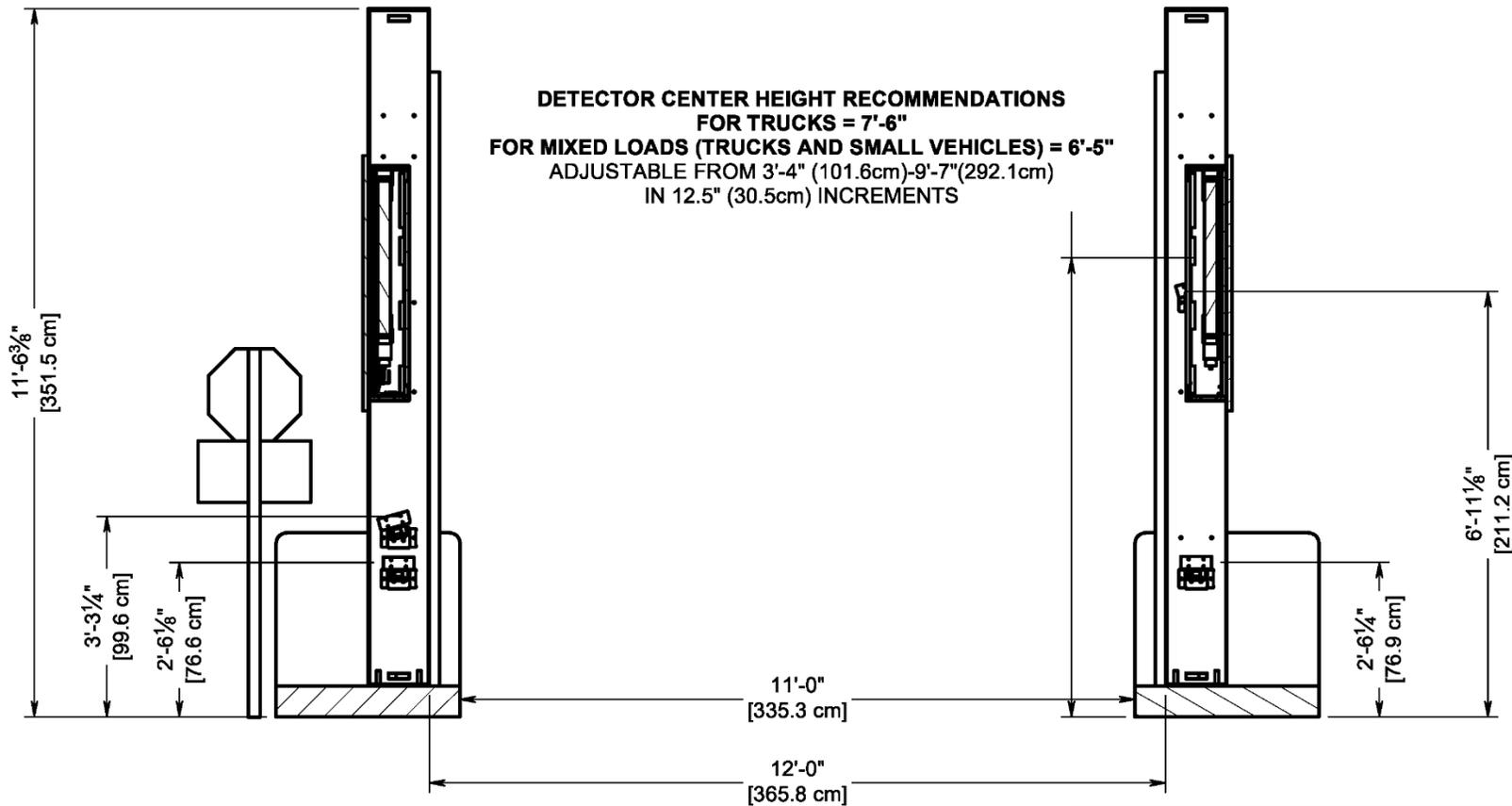
ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

SEE SHEET 511X928F FOR CONCRETE DETAILS AND 511X928G-511X928H FOR STAND DETAILS.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-928			SCALE: 1 / 50	
TITLE: M 4525-5000 G4 ISO VIEW				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22819		SERIES 511	SHEET 928	

SEE DRAWING 511X928D TO SEE THE SENSOR LOCATION.  
WHEN LOOKING AT THE DETECTORS.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM

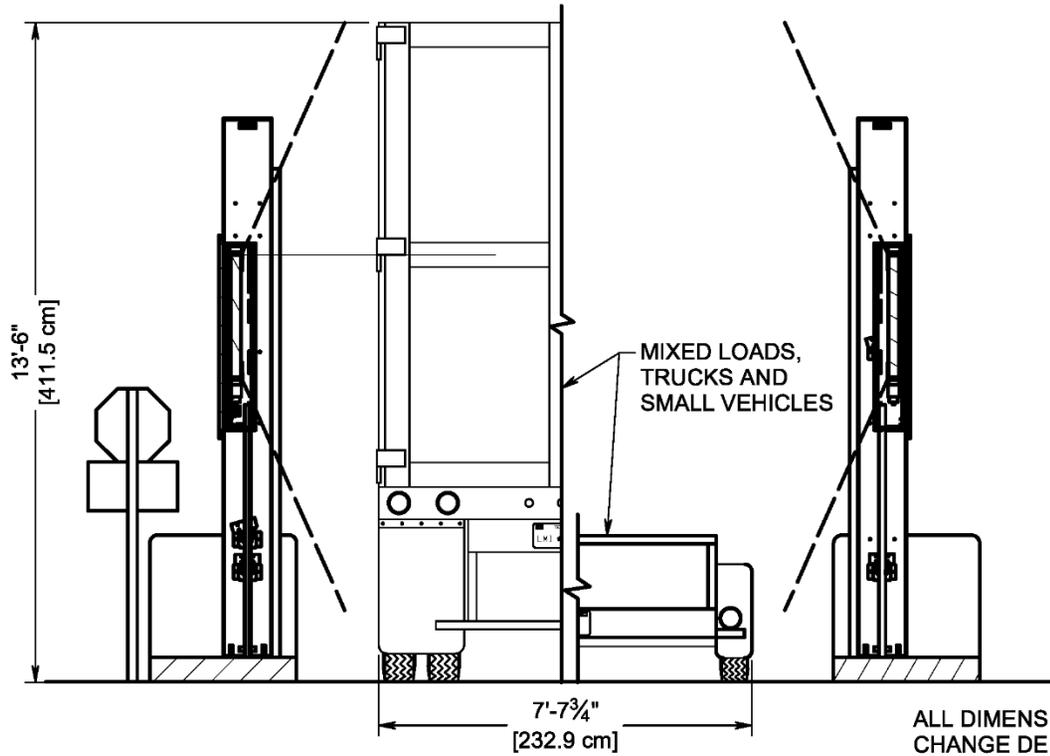


ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

NOTE: 12' DETECTOR SPACING  
FOR MAXIMUM SENSITIVITY.  
SPACING SHOULD NOT EXCEED 14'.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-928</b>			<b>SCALE: 1 / 30</b>	
<b>TITLE: M 4525-5000 G4 DETECTOR ELEVATION</b>				
 <b>LUDLUM MEASUREMENTS, INC.</b> 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23659			<b>SERIES</b> 511	<b>SHEET</b> 928A

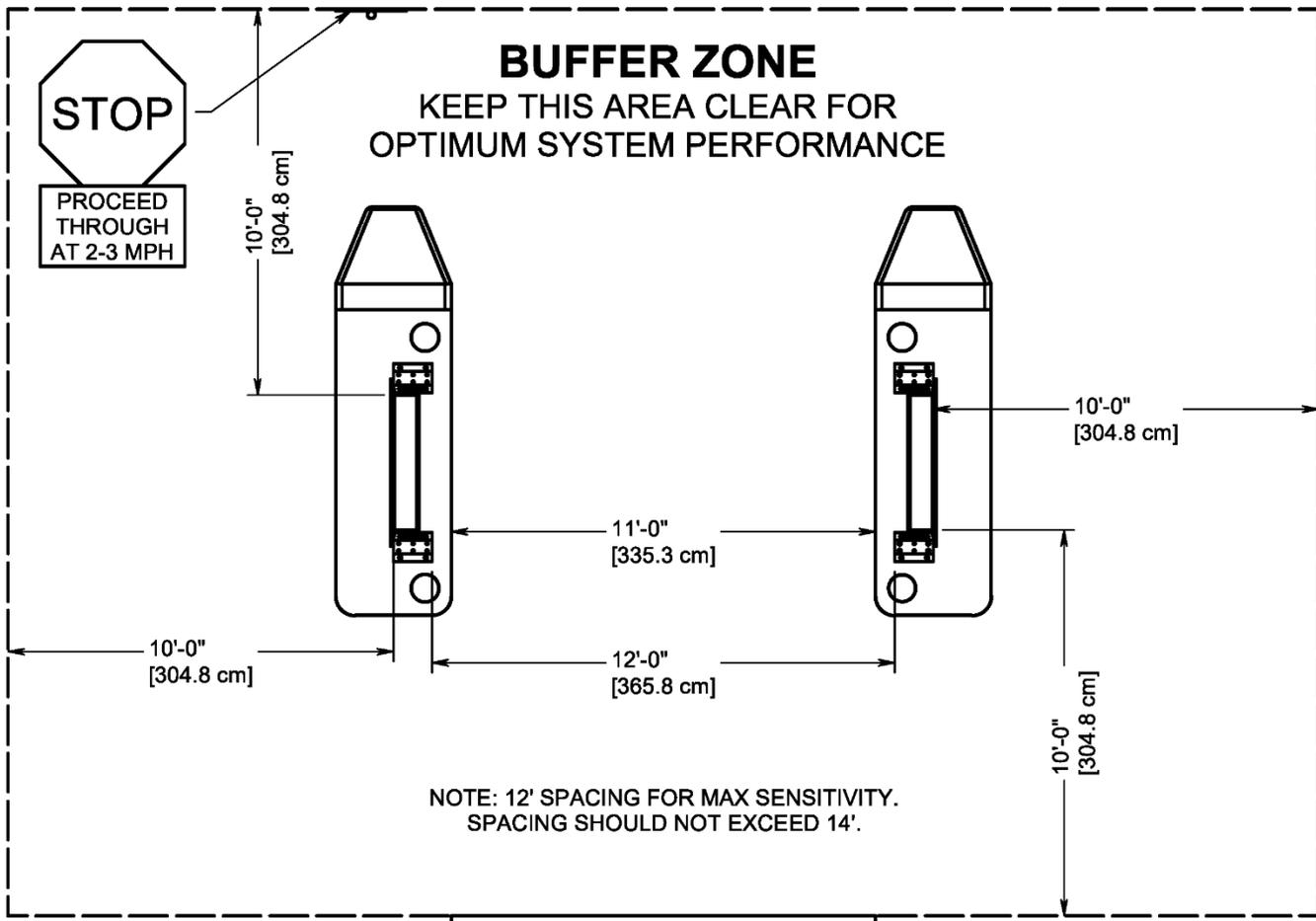
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM



ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS.

**SENSITIVITY NOTE:**  
 AREA SHOWN IS THE GREATEST SENSITIVITY AREA. THE SYSTEM WILL DETECT RADIATION OUTSIDE OF THAT AREA, BUT WITH REDUCED SENSITIVITY.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-928</b>			<b>SCALE: 1 / 40</b>	
<b>TITLE: M 4525-5000 G4 SENSITIVE AREA</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23809		<b>SERIES</b> 511	<b>SHEET</b> 928B	

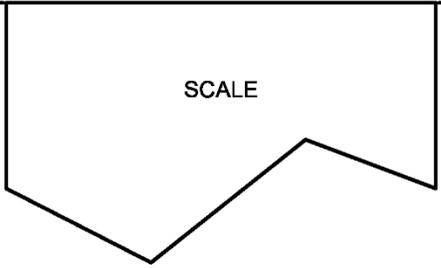


**BUFFER ZONE**  
KEEP THIS AREA CLEAR FOR  
OPTIMUM SYSTEM PERFORMANCE



NOTE: 12' SPACING FOR MAX SENSITIVITY.  
SPACING SHOULD NOT EXCEED 14'.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM

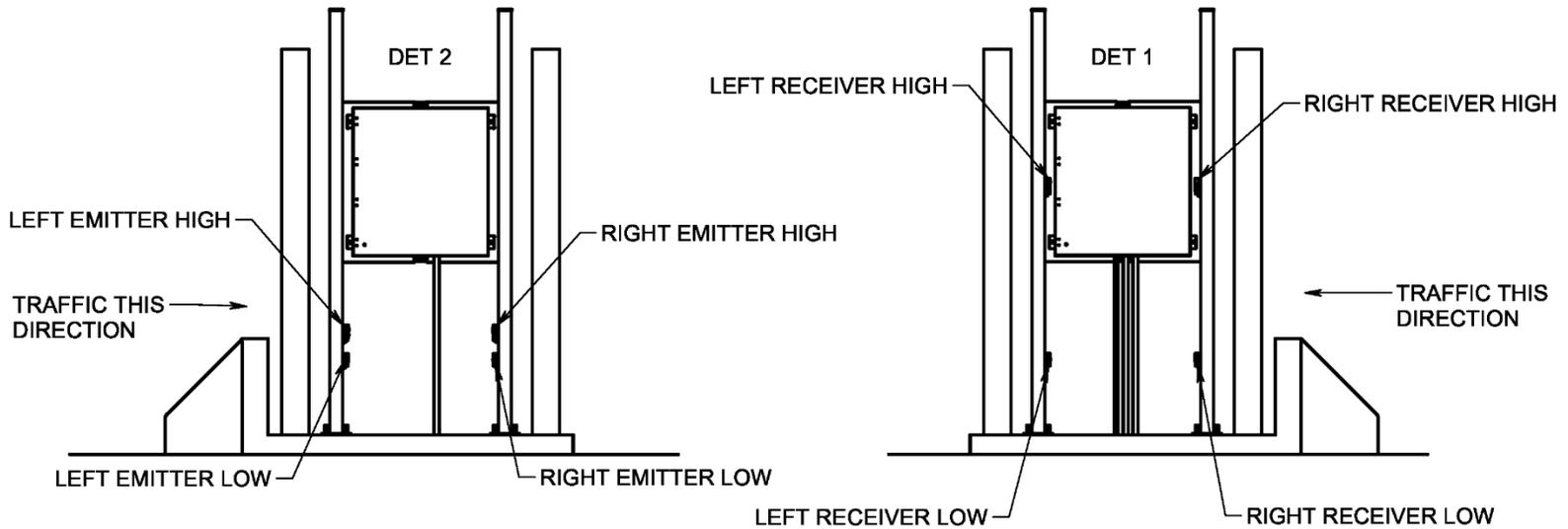


ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-928</b>			<b>SCALE: 1 / 50</b>	
<b>TITLE: M 4525-5000 G4 AERIAL VIEW</b>				
		SERIES 511	SHEET 928C	

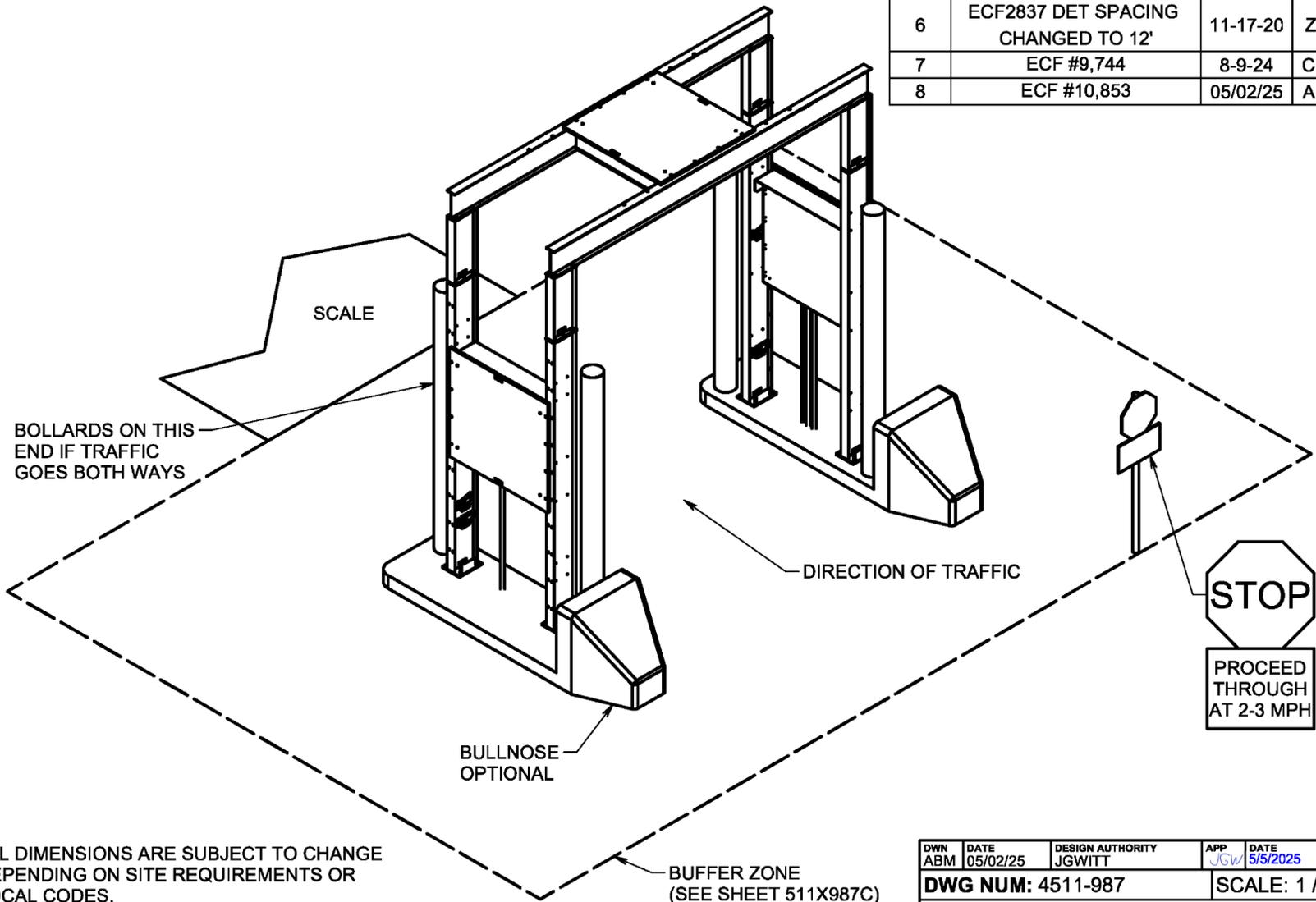
IR SENSOR SET UP FOR 2 SENSORS USE ONLY HIGH.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM



DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-928			SCALE: 1 / 50	
TITLE: M 4525-5000 G4 IR SENSOR LOCATIONS				
 LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23859		SERIES 511	SHEET 928D	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/02/25	ABM

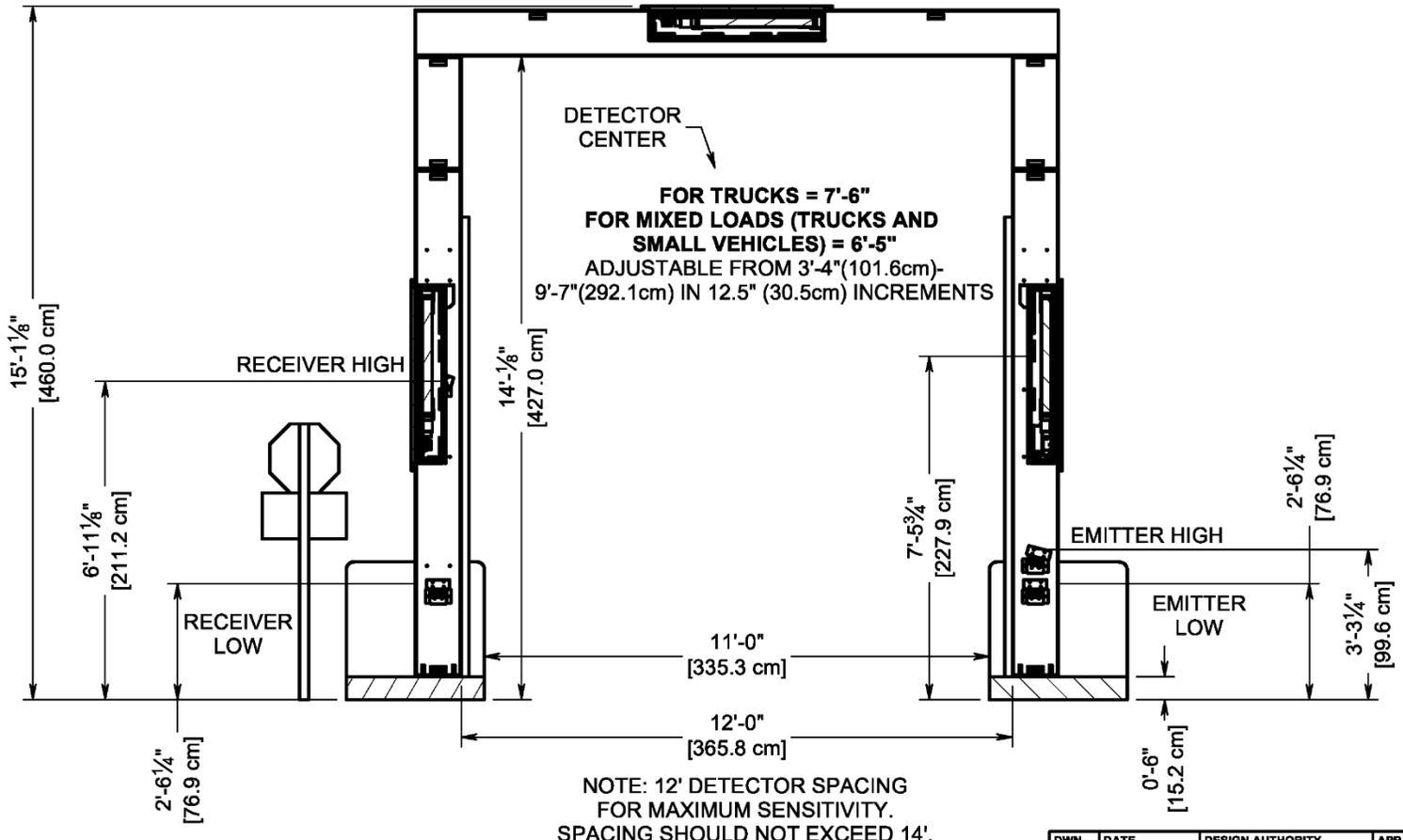


ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

SEE SHEET 511X987G FOR CONCRETE DETAILS AND 511X987H-511X987K FOR STAND DETAILS.

DWN ABM	DATE 05/02/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-987			SCALE: 1 / 50	
TITLE: M 4525-7500 G4 ISO VIEW				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22819		SERIES 511	SHEET 987	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/02/25	ABM



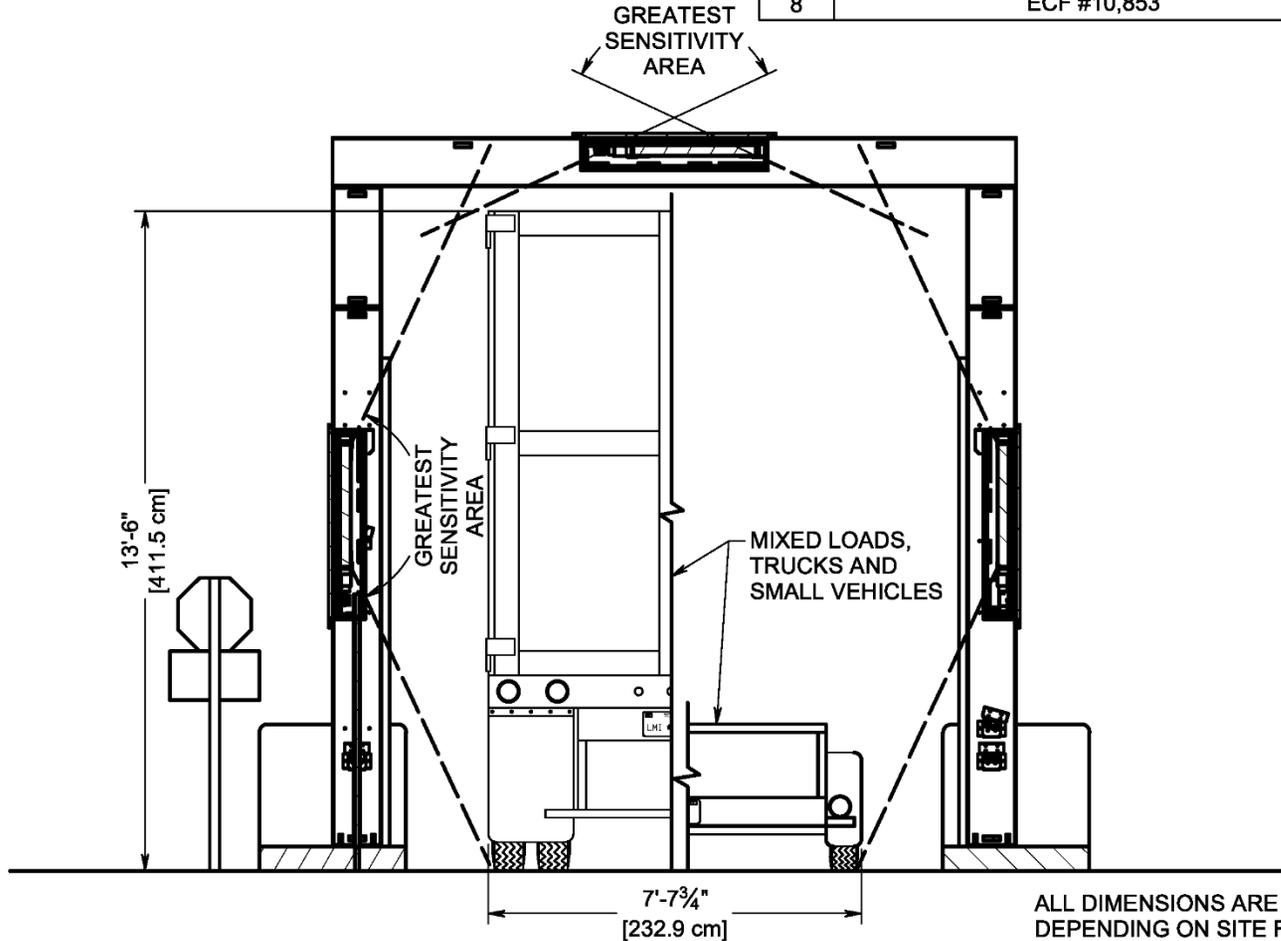
NOTE:  
 IN AREAS THAT ARE SUBJECT TO HEAVY ICE/SNOW BUILDUP, CURB HEIGHT MAY NEED TO BE INCREASED FOR EXTRA CLEARANCE FOR OVERHEAD.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

DWN ABM	DATE 05/02/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-987			SCALE: 1 / 40	
TITLE: M 4525-7500 G4 DETECTOR ELEVATION				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23659		SERIES 511	SHEET 987A	

FOR SENSOR LOCATIONS SEE 511X928D.

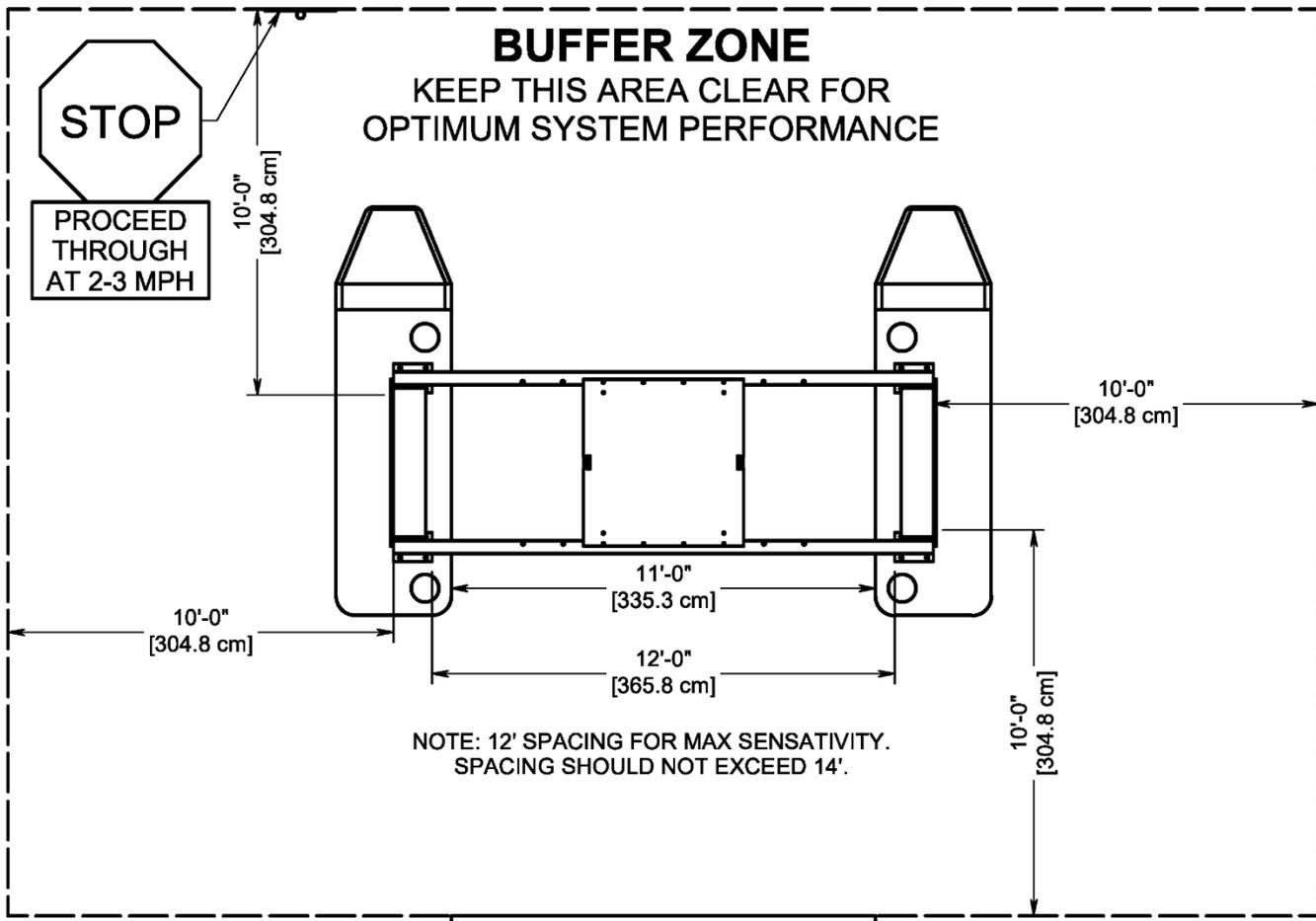
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/02/25	ABM



**SENSITIVITY NOTE:**  
 AREA SHOWN IS THE GREATEST SENSITIVITY AREA. THE SYSTEM WILL DETECT RADIATION OUTSIDE OF THAT AREA, BUT WITH REDUCED SENSITIVITY.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS.

DWN ABM	DATE 05/02/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-987</b>			<b>SCALE: 1 / 40</b>	
<b>TITLE: M 4525-7500 G4 SENSITIVE AREA</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22809		<b>SERIES</b> 511	<b>SHEET</b> 987B	



NOTE: 12' SPACING FOR MAX SENSATIVITY.  
SPACING SHOULD NOT EXCEED 14'.

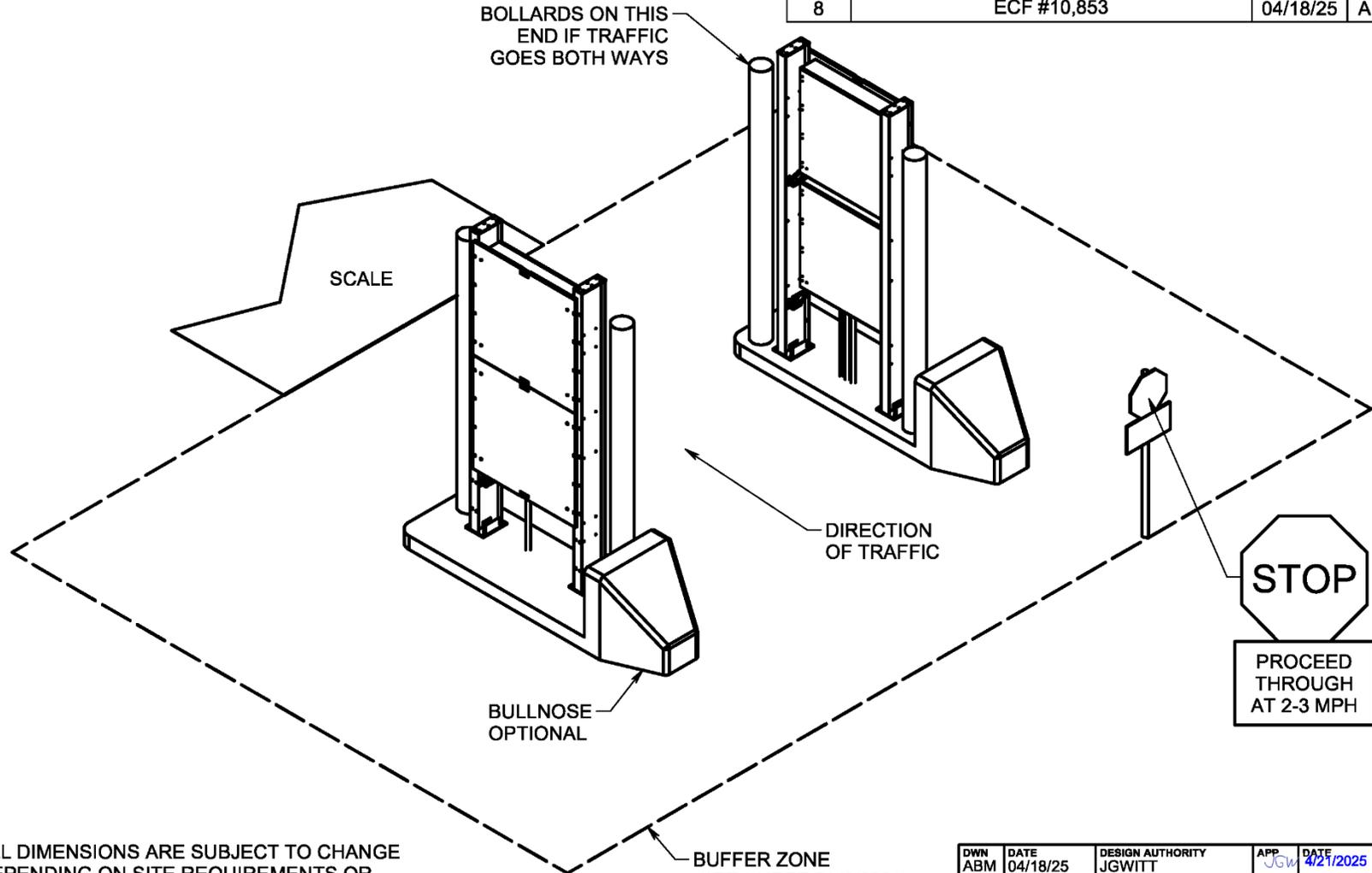
SCALE

ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/02/25	ABM

DWN ABM	DATE 05/02/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-987			SCALE: 1 / 50	
TITLE: M 4525-7500 G4 AERIAL VIEW				
		SERIES 511	SHEET 987C	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM



ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

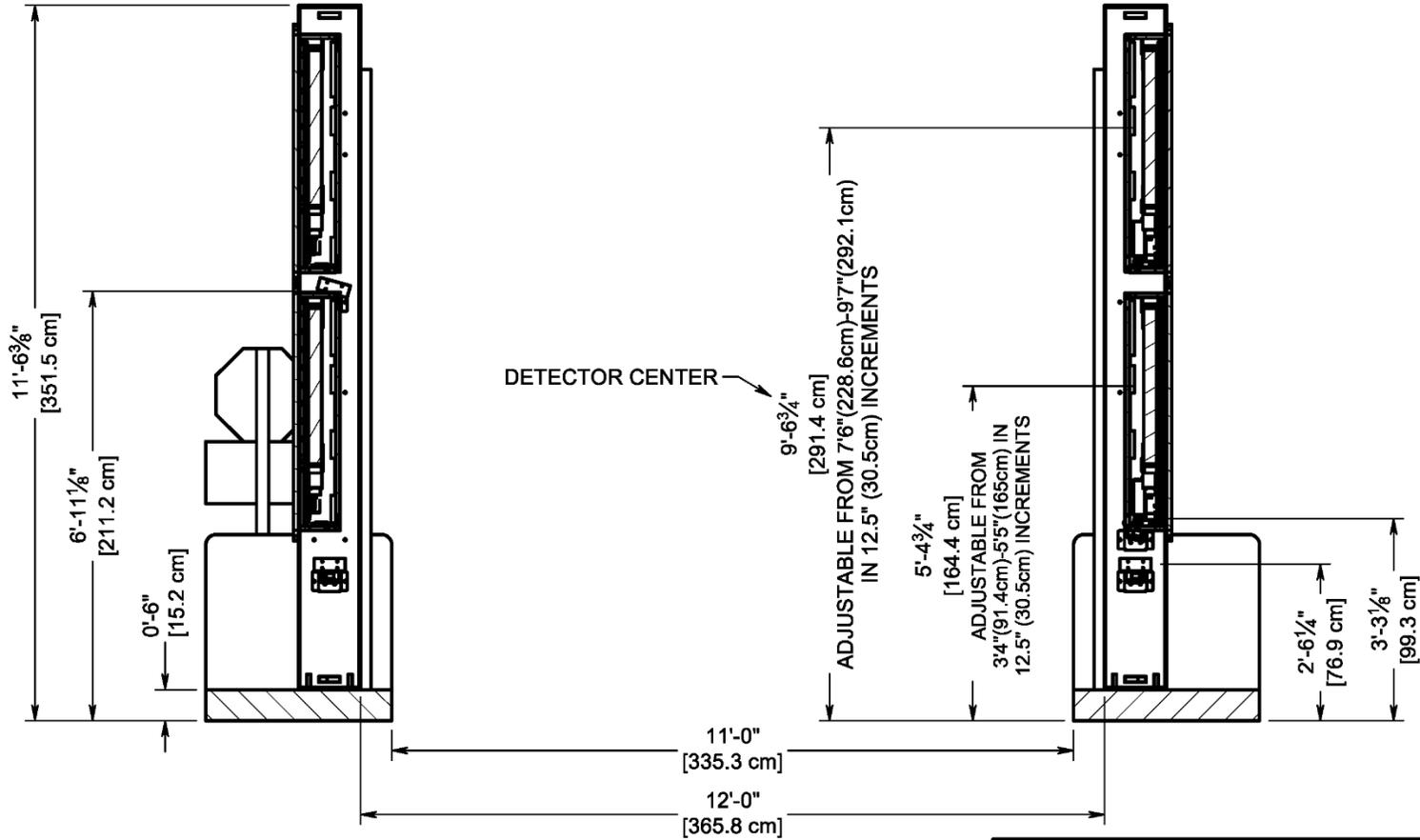
SEE SHEET 511X989F FOR CONCRETE DETAILS AND 511X989G-511X989I FOR STAND DETAILS.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/21/2025
DWG NUM: 4511-989			SCALE: 1 / 50	
TITLE: M 4525-10000 G4 ISO VIEW				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22809		SERIES 511	SHEET 989	

**NOTE:**

IF SYSTEM IS BEING USED EXCLUSIVELY FOR TRAINS OR LARGE TRUCKS, DETECTOR HEIGHT SHOULD BE RAISED SO THAT DETECTORS ARE CENTERED ON THE SIDE OF THE RAIL CAR OR TRUCK BED. IR SENSORS SHOULD BE POSITIONED TO REDUCE FALSE TRIGGERS AS MUCH AS POSSIBLE.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM



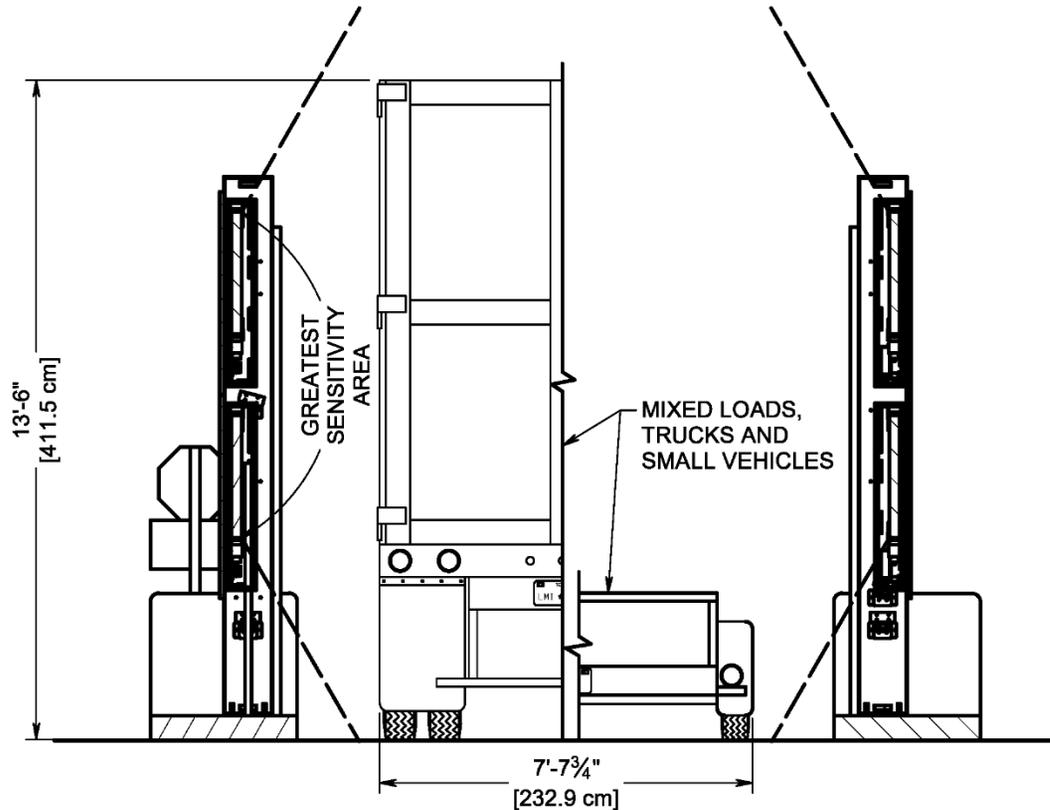
ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

NOTE: 12' DETECTOR SPACING FOR MAXIMUM SENSITIVITY. SPACING SHOULD NOT EXCEED 14'.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/21/2025
DWG NUM: 4511-989			SCALE: 1 / 30	
TITLE: M 4525-10000 G4 DETECTOR ELEVATION				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22659		SERIES 511	SHEET 989A	

FOR SENSOR LOCATIONS SEE 511X928D.

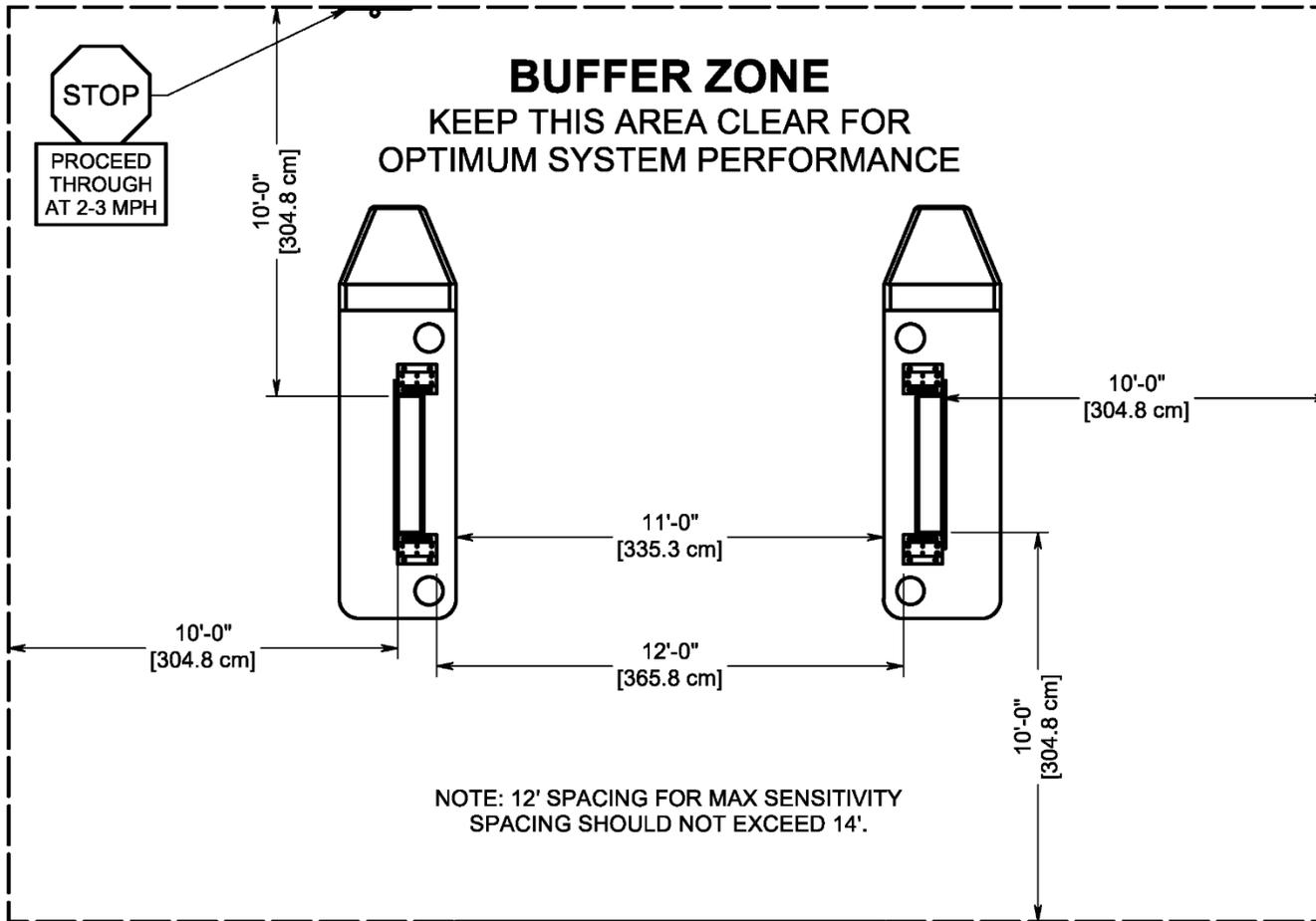
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM



**SENSITIVITY NOTE:**  
 AREA SHOWN IS THE GREATEST SENSITIVITY AREA. THE SYSTEM WILL DETECT RADIATION OUTSIDE OF THAT AREA, BUT WITH REDUCED SENSITIVITY.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/21/2025
DWG NUM: 4511-989			SCALE: 1 / 40	
TITLE: M 4525-10000 G4 SENSITIVE AREA				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79566 CAGE CODE: 23859		SERIES 511	SHEET 989B	



NOTE: 12' SPACING FOR MAX SENSITIVITY  
SPACING SHOULD NOT EXCEED 14'.

REVISION HISTORY

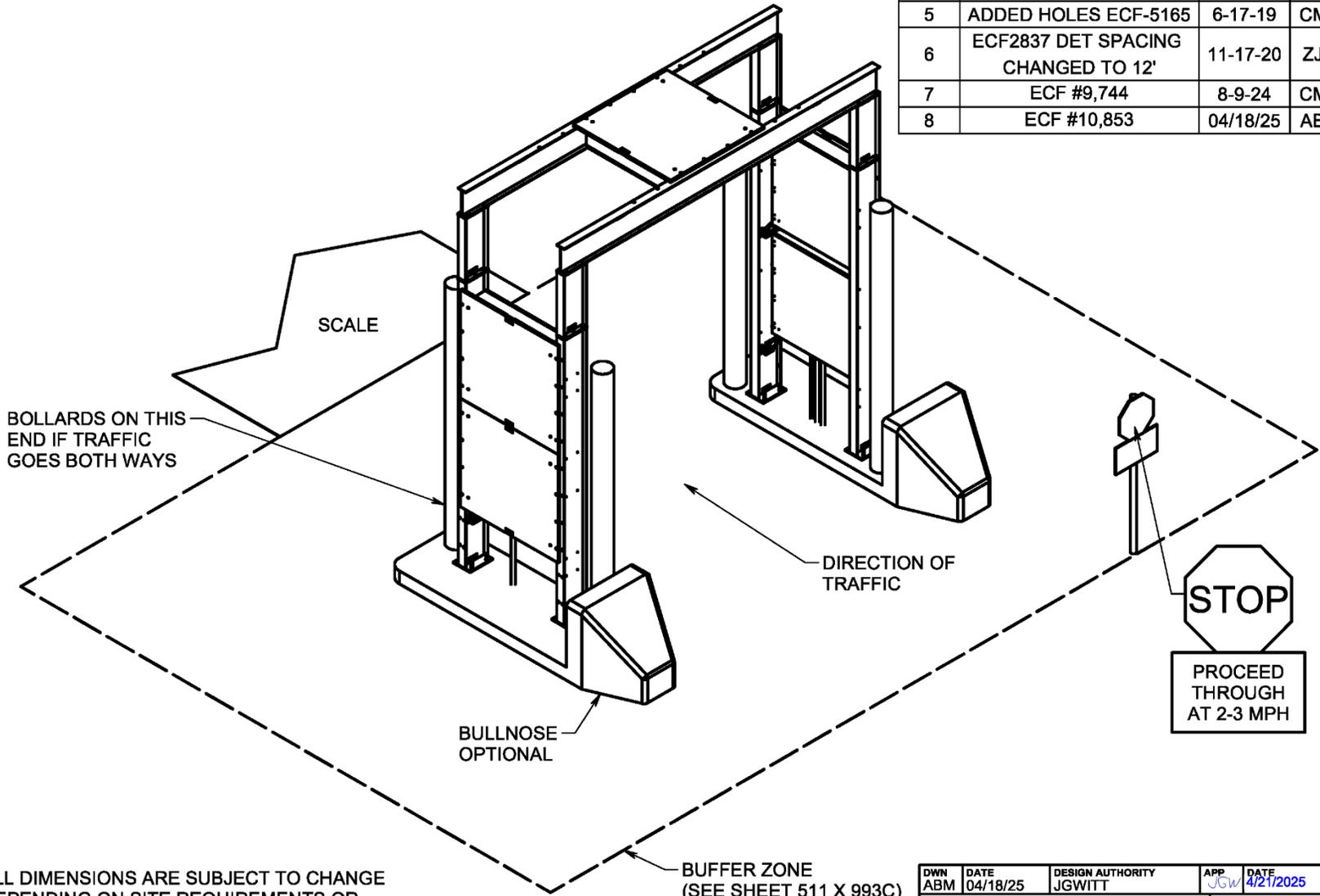
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM

SCALE

ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/21/2025
<b>DWG NUM: 4511-989</b>			<b>SCALE: 1 / 50</b>	
<b>TITLE: M 4525-10000 G4 AERIAL VIEW</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23809		<b>SERIES 511</b>	<b>SHEET 989C</b>	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM

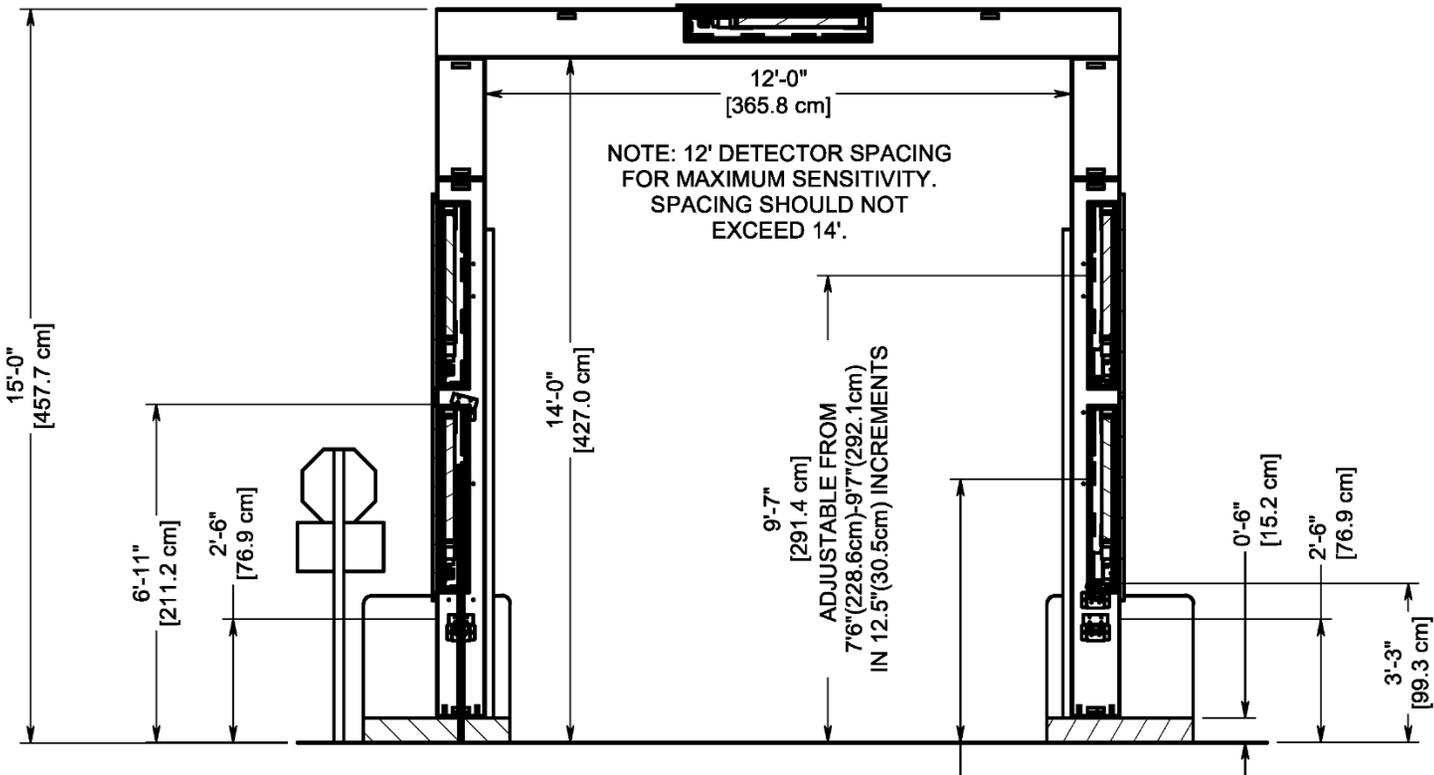


ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

SEE SHEET 511X993G FOR CONCRETE DETAILS AND 511X993H-511X993K FOR STAND DETAILS.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/21/2025
DWG NUM: 4511-993			SCALE: 1 / 50	
TITLE: M 4525-12500 G4 ISO VIEW				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22809		SERIES 511	SHEET 993	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM



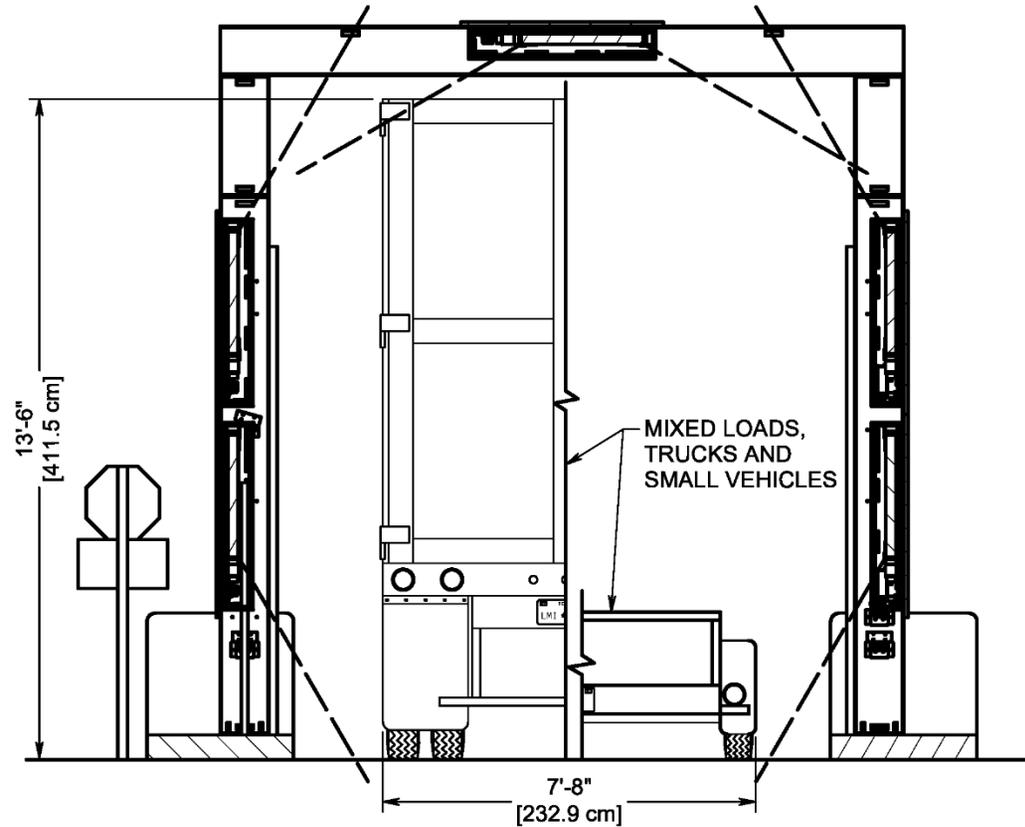
NOTE:  
 IN AREAS THAT ARE SUBJECT TO HEAVY ICE/SNOW BUILDUP. CURB HEIGHT MAY NEED TO BE INCREASED FOR EXTRA CLEARANCE FOR OVERHEAD.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP	DATE
DWG NUM: 4511-993			SCALE: 1 / 40	
TITLE: M 4525-12500 G4 DETECTOR ELEVATION				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22659		SERIES 511	SHEET 993A	

FOR SENSOR LOCATIONS SEE 511X928D.

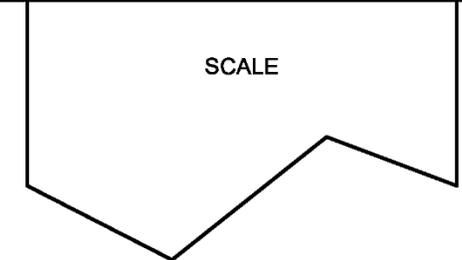
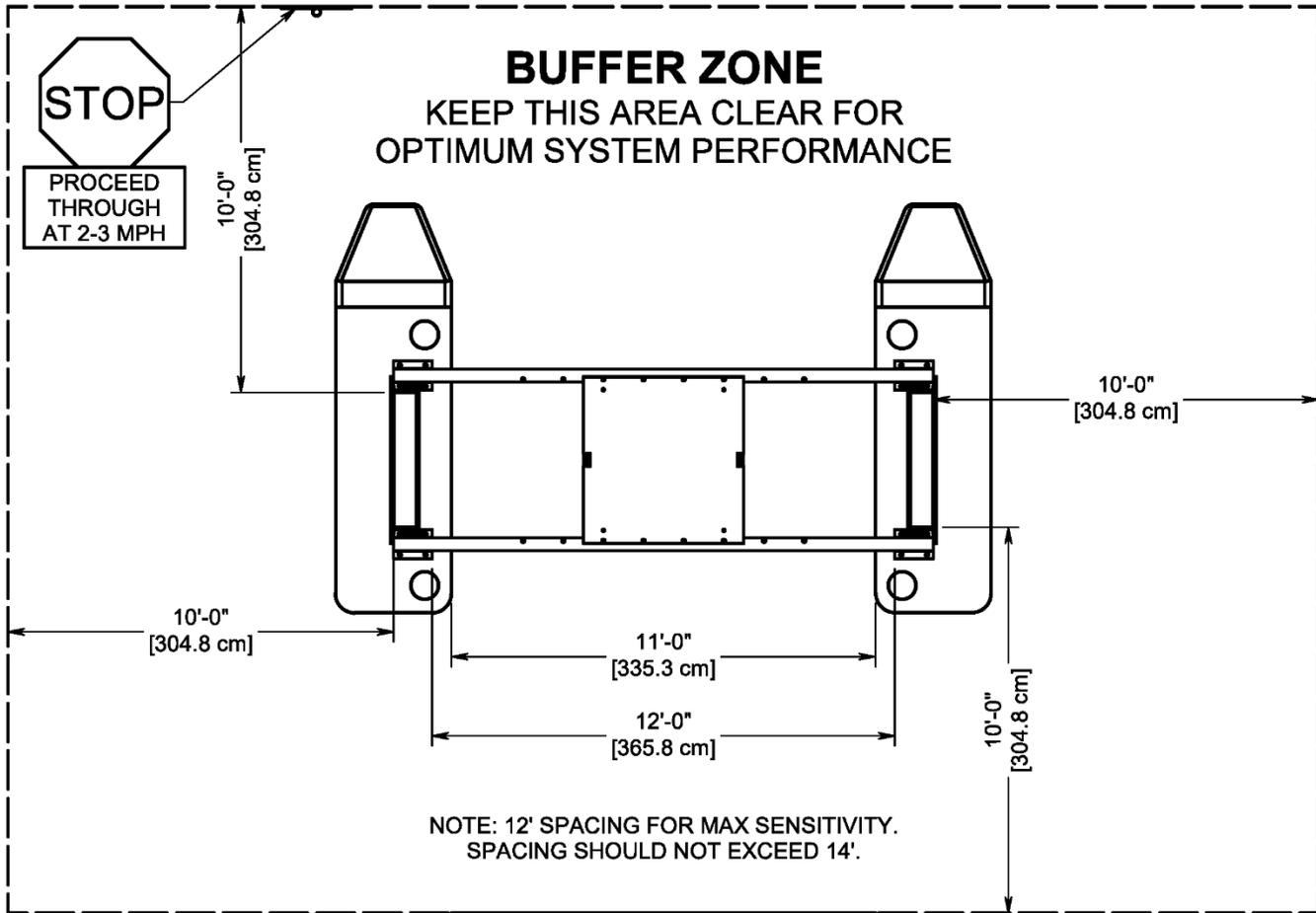
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM



**SENSITIVITY NOTE:**  
 AREA SHOWN IS THE GREATEST SENSITIVITY AREA. THE SYSTEM WILL DETECT RADIATION OUTSIDE OF THAT AREA, BUT WITH REDUCED SENSITIVITY.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS.

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP	DATE
<b>DWG NUM: 4511-993</b>			<b>SCALE: 1 / 40</b>	
<b>TITLE: M 4525-12500 G4 SENSITIVE AREA</b>				
 <b>LUDLUM MEASUREMENTS, INC.</b> 501 OAK STREET SWEETWATER, TEXAS 79556 <small>CAGE CODE: 23659</small>		<b>SERIES</b> 511	<b>SHEET</b> 993B	

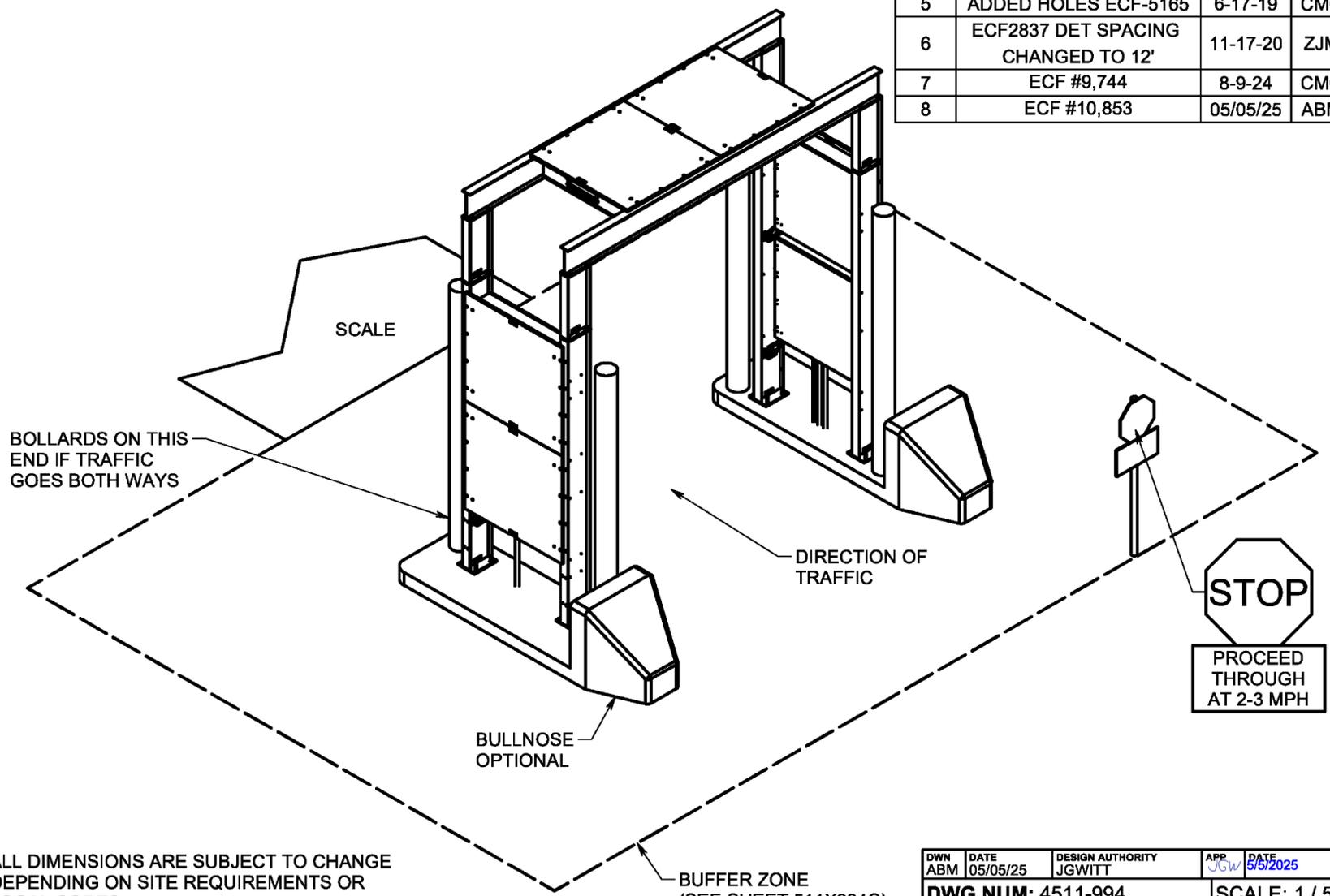


ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	04/18/25	ABM

DWN ABM	DATE 04/18/25	DESIGN AUTHORITY JGWITT	APP	DATE
<b>DWG NUM: 4511-993</b>			<b>SCALE: 1 / 50</b>	
<b>TITLE: M 4525-12500 G4 AERIAL VIEW</b>				
LUDLUM MEASUREMENTS, INC. <small>501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23859</small>		<b>SERIES 511</b>	<b>SHEET 993C</b>	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM

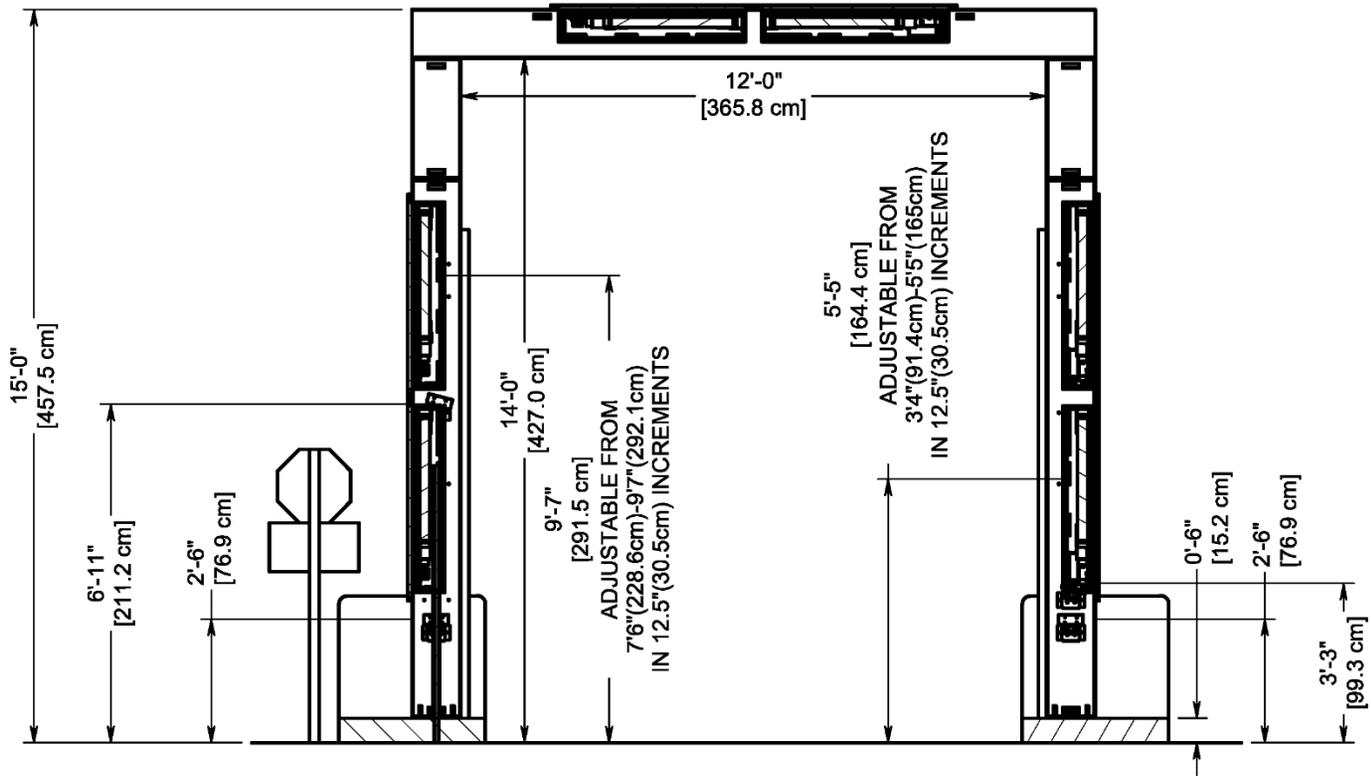


ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

SEE SHEET 511X994G FOR CONCRETE DETAILS AND 511X994H-511X994K FOR STAND DETAILS.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
DWG NUM: 4511-994			SCALE: 1 / 50	
TITLE: M 4525-15000 G4 ISO VIEW				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22819		SERIES 511	SHEET 994	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM



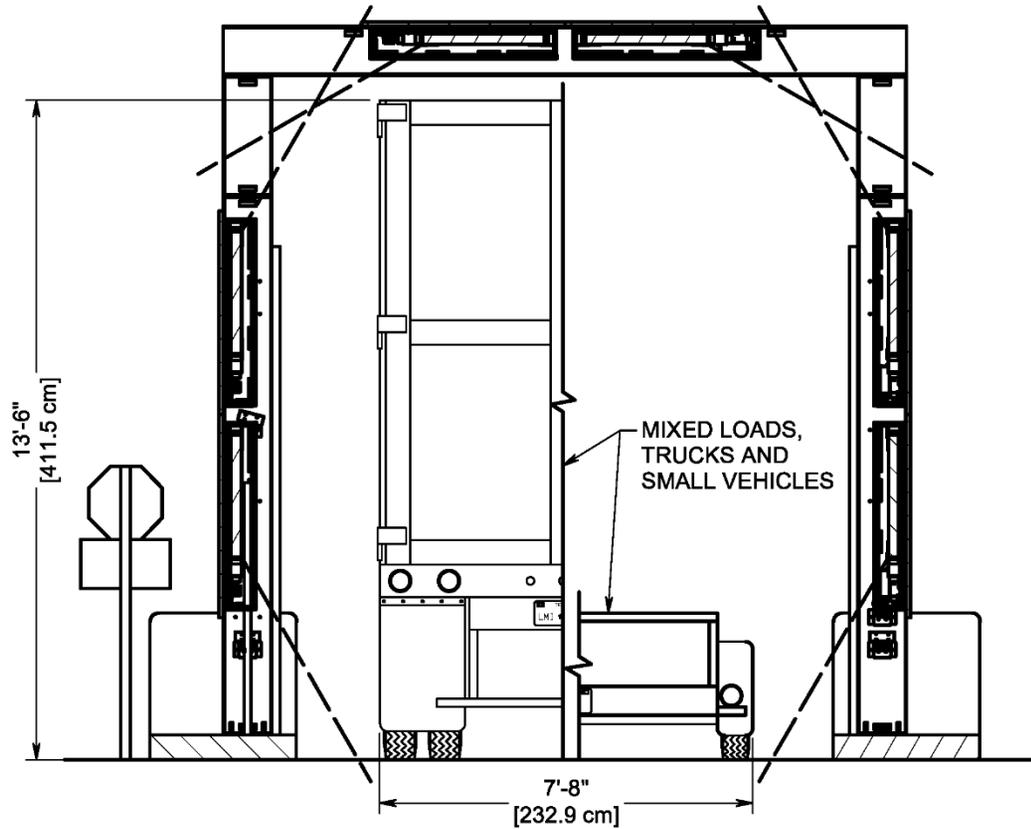
**NOTE:**  
 IN AREAS THAT ARE SUBJECT TO HEAVY ICE/SNOW BUILDUP. CURB HEIGHT MAY NEED TO BE INCREASED FOR EXTRA CLEARANCE FOR OVERHEAD.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-994</b>			<b>SCALE: 1 / 40</b>	
<b>TITLE: M 4525-15000 G4 DETECTOR ELEVATION</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22659		SERIES 511	SHEET 994A	

FOR SENSOR LOCATIONS SEE 511X928D.

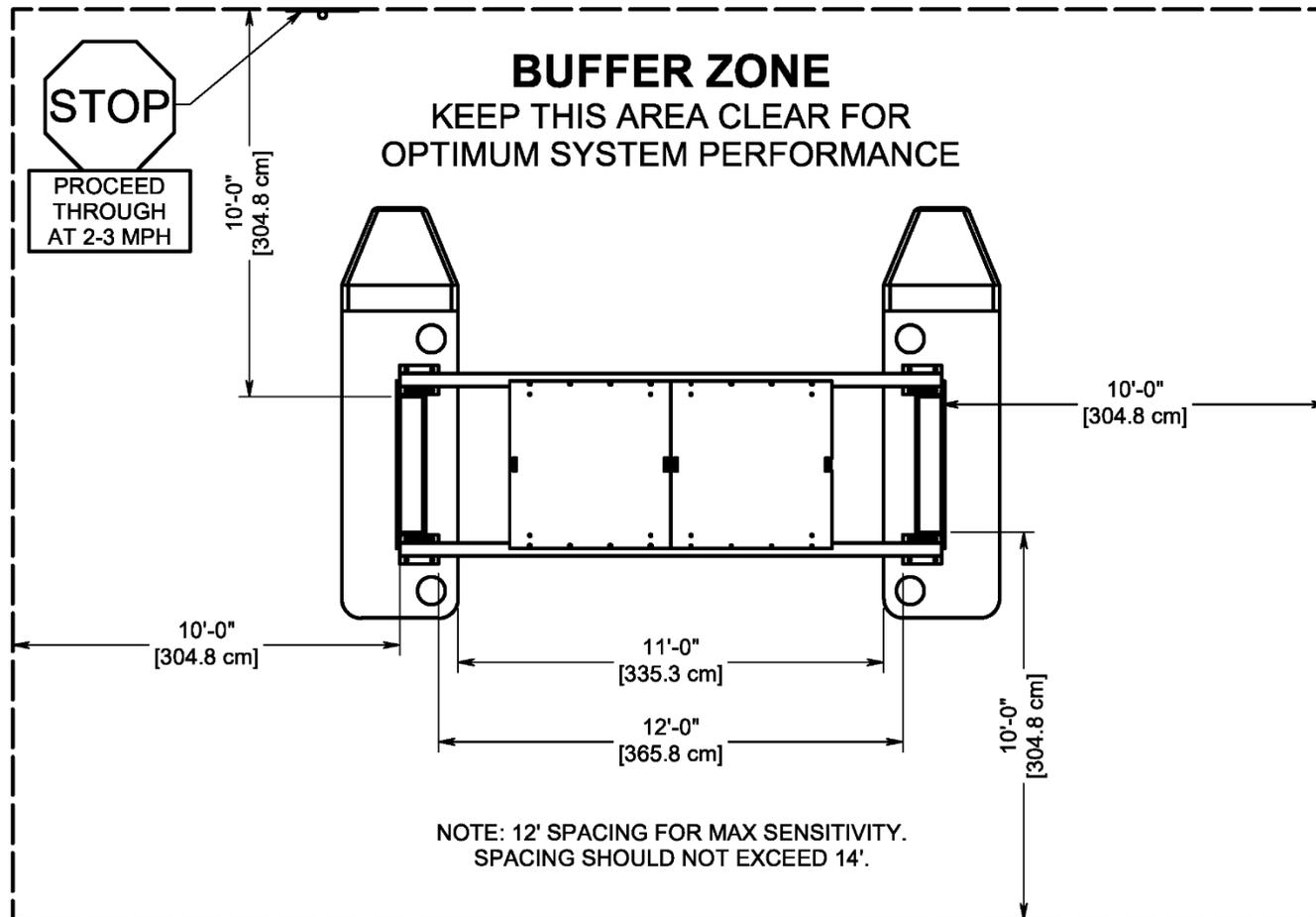
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM



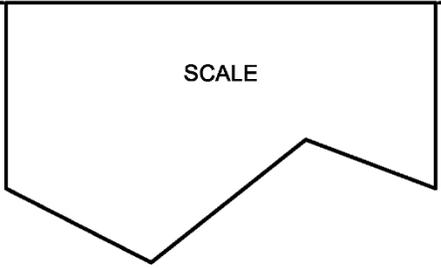
**SENSITIVITY NOTE:**  
 AREA SHOWN IS THE GREATEST SENSITIVITY AREA. THE SYSTEM WILL DETECT RADIATION OUTSIDE OF THAT AREA, BUT WITH REDUCED SENSITIVITY.

ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS.

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-994</b>			<b>SCALE: 1 / 40</b>	
<b>TITLE: M 4525-15000 G4 SENSITIVE AREA</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22809		<b>SERIES</b> 511	<b>SHEET</b> 994B	



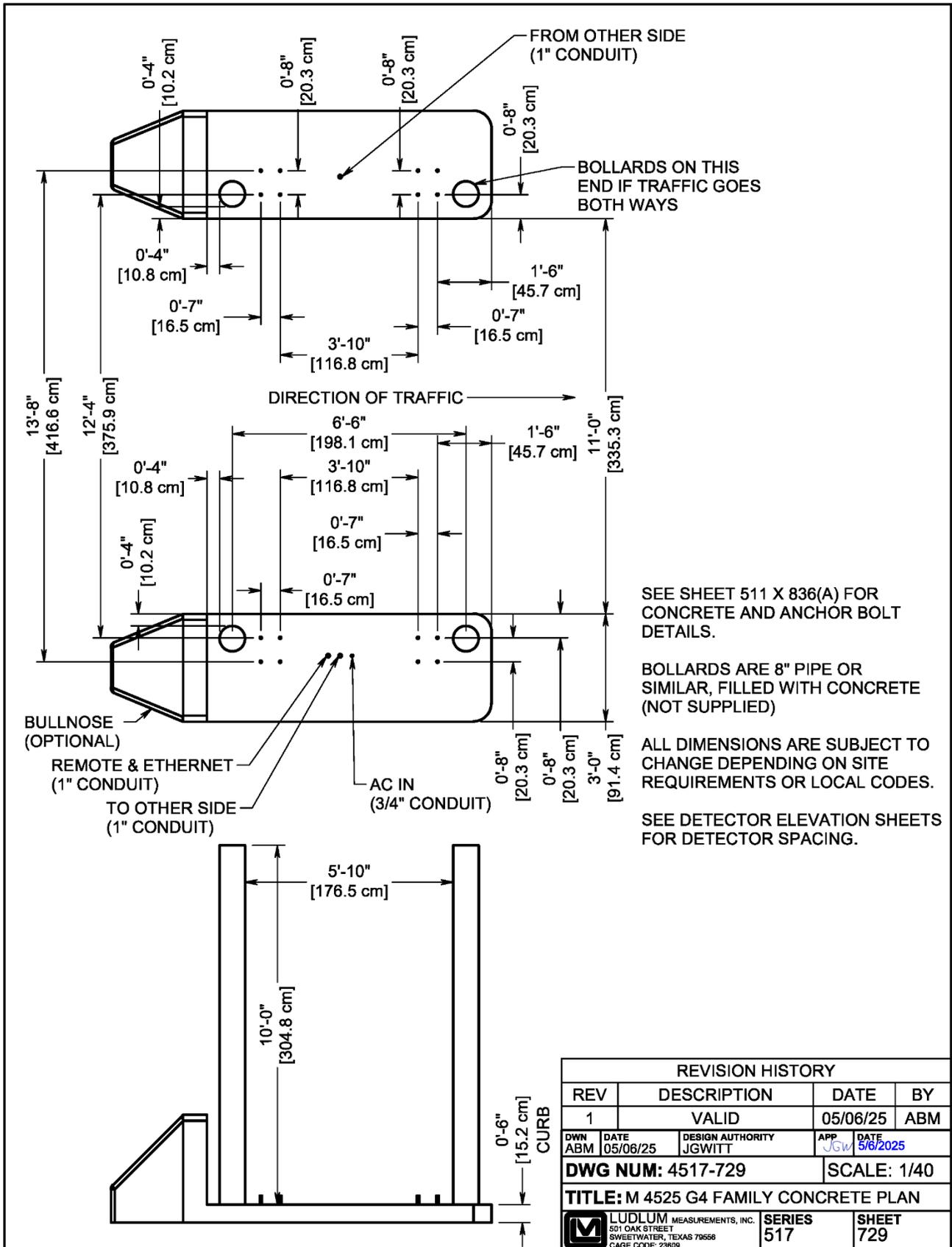
NOTE: 12' SPACING FOR MAX SENSITIVITY.  
SPACING SHOULD NOT EXCEED 14'.

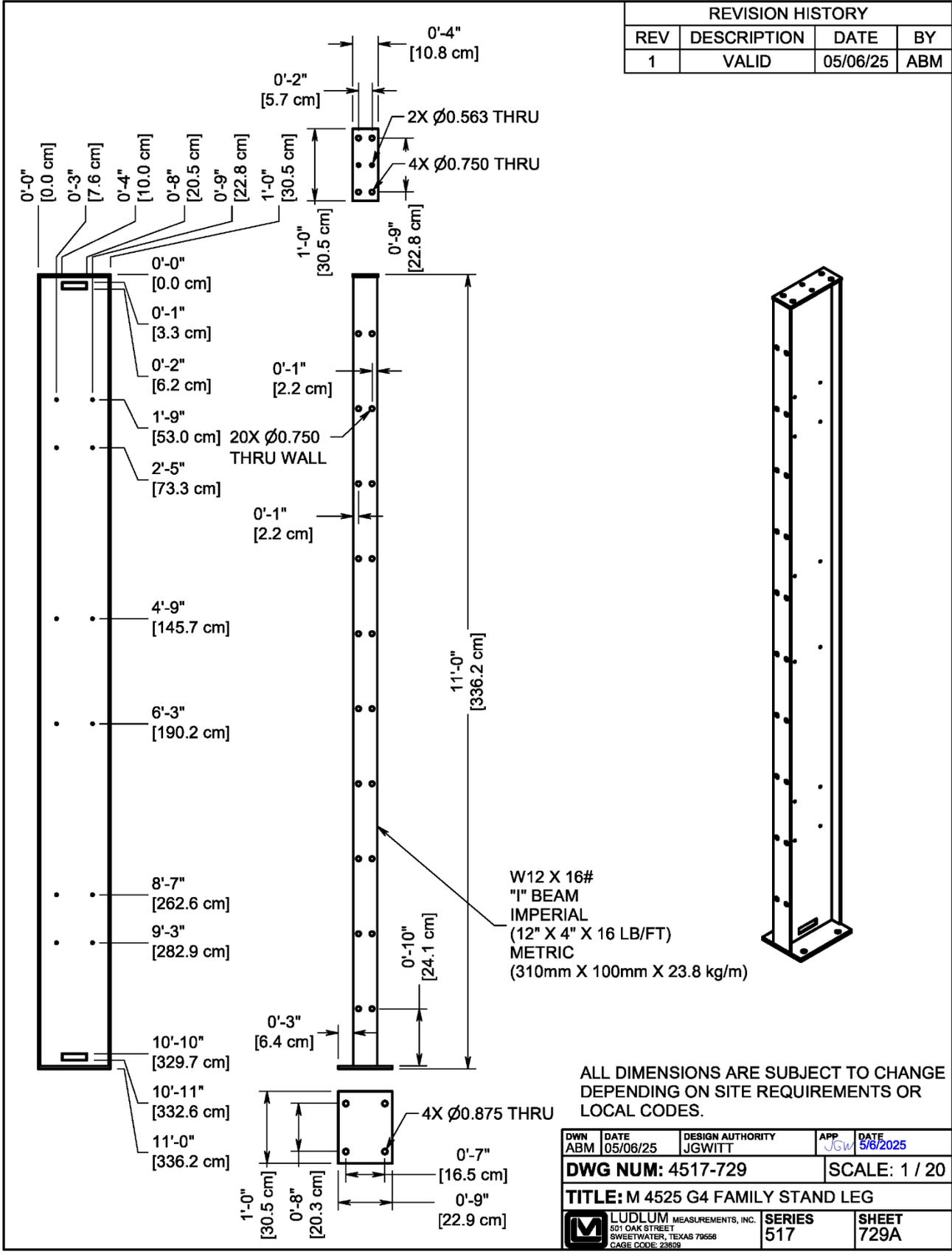


ALL DIMENSIONS ARE SUBJECT TO CHANGE  
DEPENDING ON SITE REQUIREMENTS OR  
LOCAL CODES.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
5	ADDED HOLES ECF-5165	6-17-19	CMC
6	ECF2837 DET SPACING CHANGED TO 12'	11-17-20	ZJM
7	ECF #9,744	8-9-24	CMC
8	ECF #10,853	05/05/25	ABM

DWN ABM	DATE 05/05/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/5/2025
<b>DWG NUM: 4511-994</b>			<b>SCALE: 1 / 50</b>	
<b>TITLE: M 4525-15000 G4 AERIAL VIEW</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23659		<b>SERIES 511</b>	<b>SHEET 994C</b>	



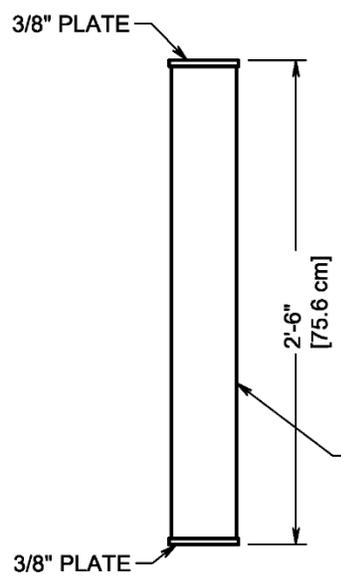
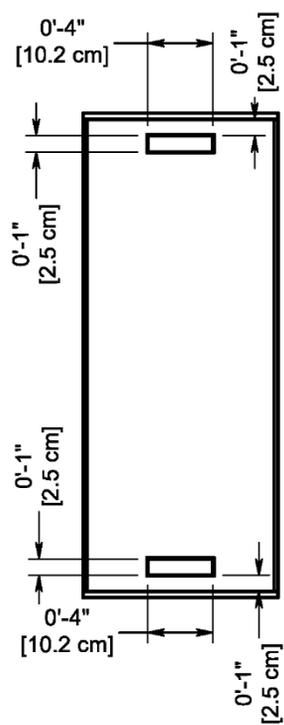
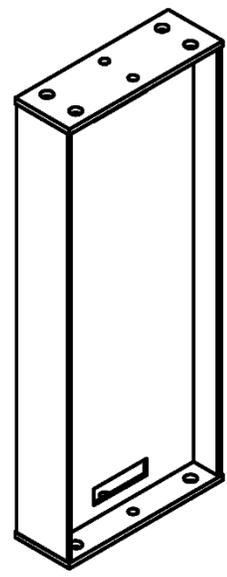
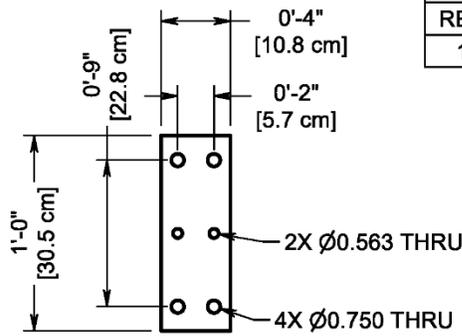


REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	05/06/25	ABM

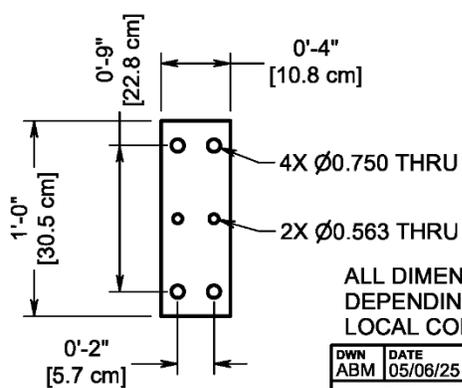
ALL DIMENSIONS ARE SUBJECT TO CHANGE DEPENDING ON SITE REQUIREMENTS OR LOCAL CODES.

DWN ABM	DATE 05/06/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/6/2025
DWG NUM: 4517-729			SCALE: 1 / 20	
TITLE: M 4525 G4 FAMILY STAND LEG				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 GAGE CODE: 2309		SERIES 517	SHEET 729A	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	05/06/25	ABM

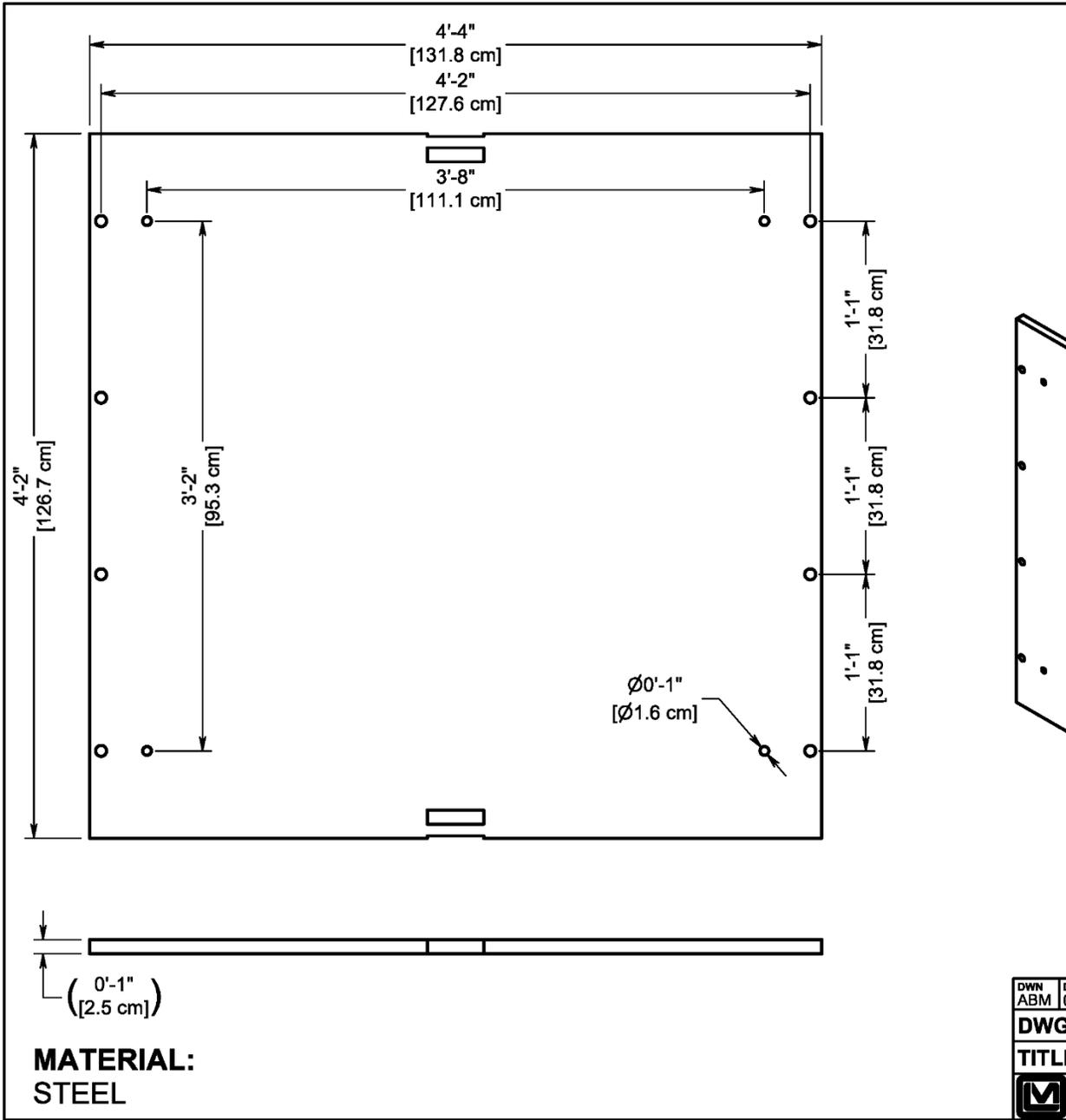


W12 X 16#  
 "I" BEAM  
 IMPERIAL  
 (12" X 4" X 16 LB/FT)  
 METRIC  
 (310mm X 100mm X 23.8 kg/m)

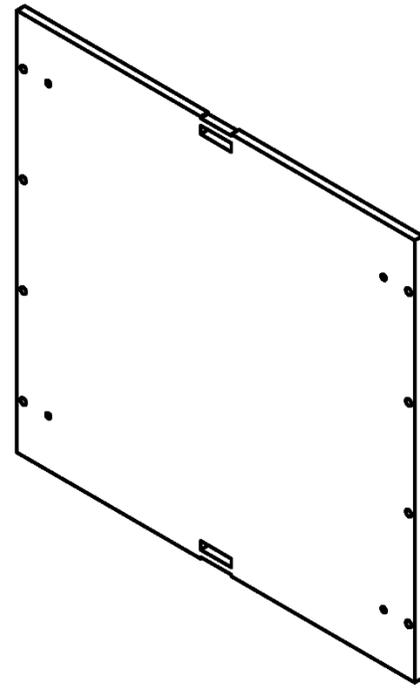


ALL DIMENSIONS ARE SUBJECT TO CHANGE  
 DEPENDING ON SITE REQUIREMENTS OR  
 LOCAL CODES.

DWN ABM	DATE 05/06/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/6/2025
DWG NUM: 4517-729			SCALE: 1 / 10	
TITLE: M 4525 G4 FAMILY STAND EXTENSION				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 GAGE CODE: 23839		SERIES 517	SHEET 729B	



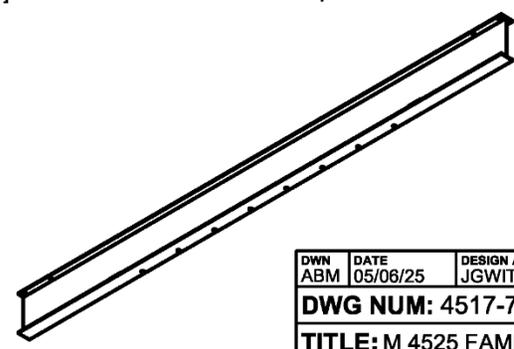
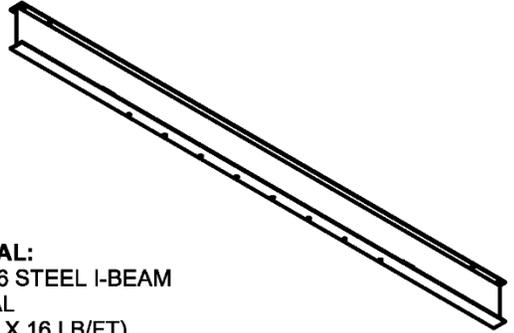
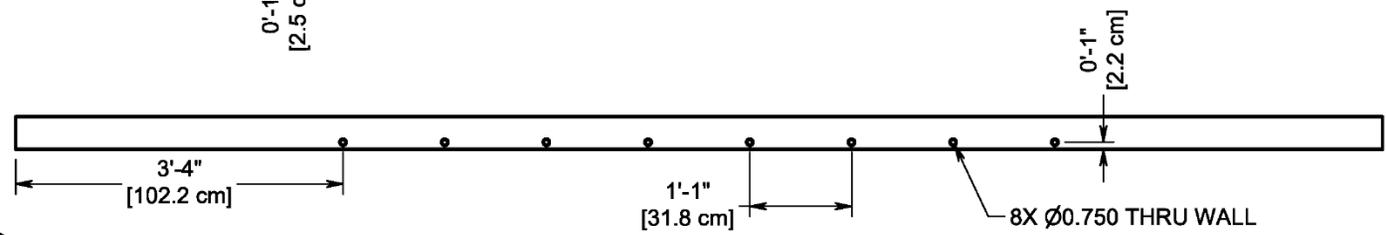
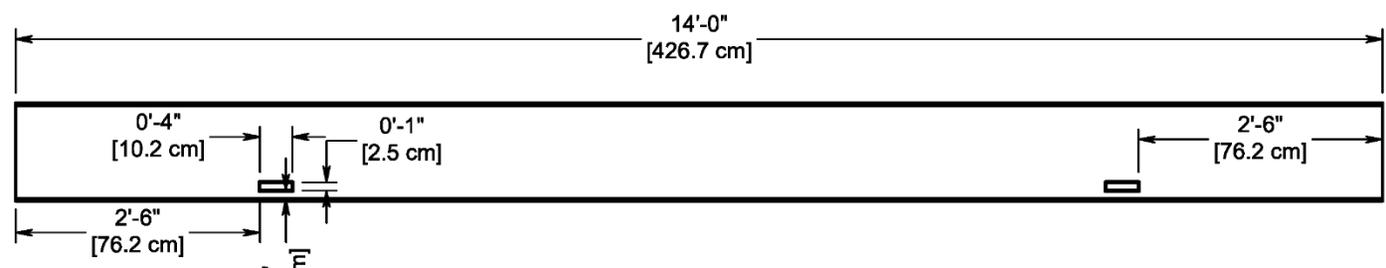
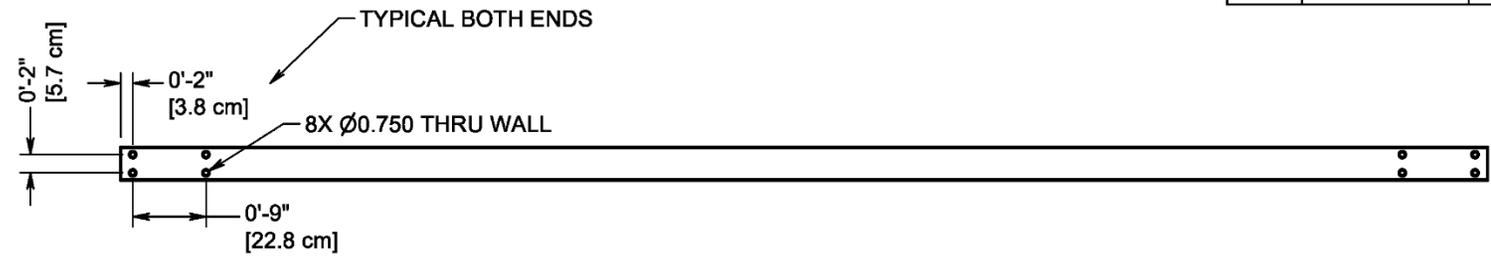
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	05/06/25	ABM



**MATERIAL:**  
STEEL

DWN ABM	DATE 05/06/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/6/2025
<b>DWG NUM: 4517-729</b>			<b>SCALE: 1 / 10</b>	
<b>TITLE: M 4525 G4 FAMILY STAND BACK PLATE</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23859		SERIES 517	SHEET 729C	

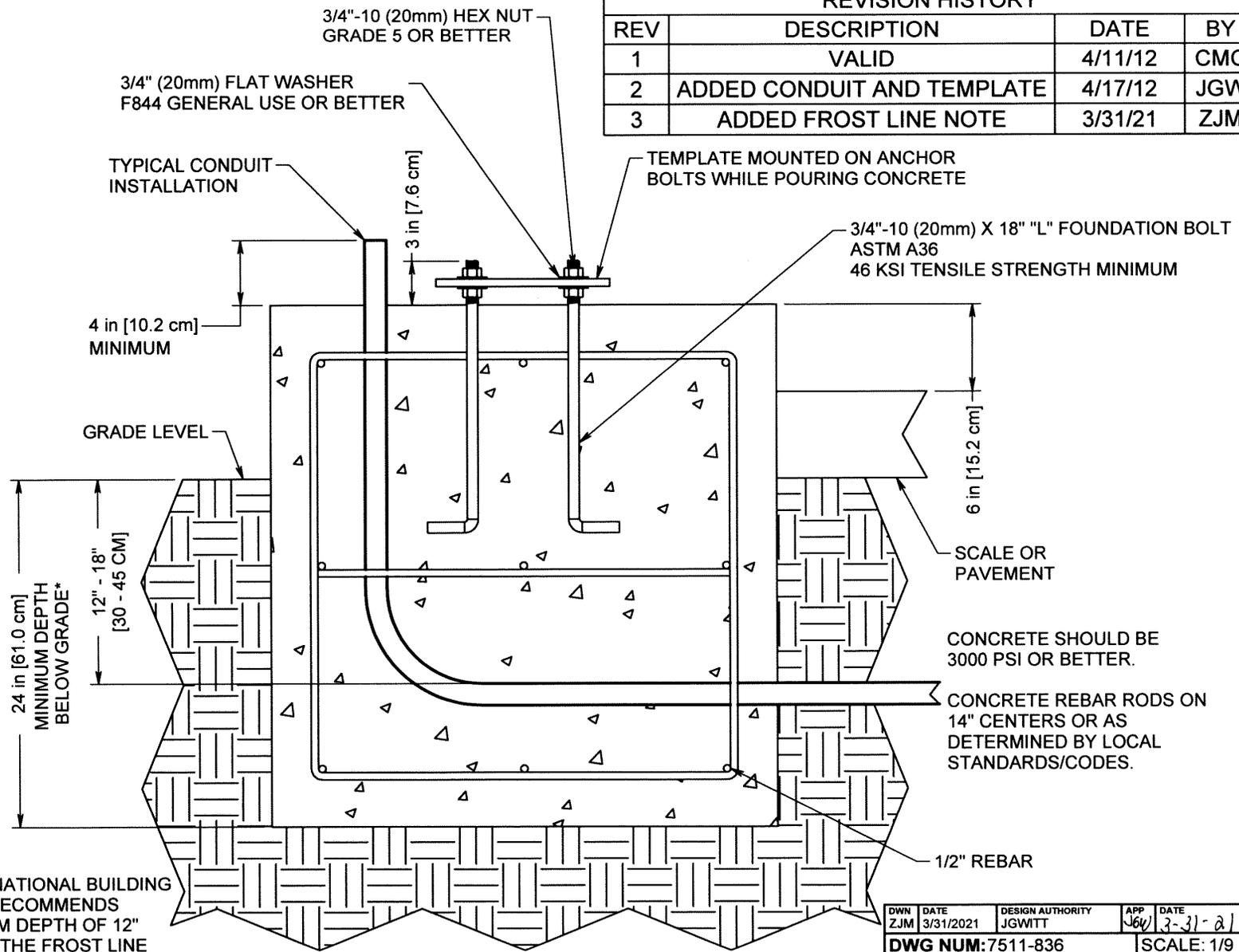
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	05/06/25	ABM



**MATERIAL:**  
W12 X 16 STEEL I-BEAM  
IMPERIAL  
(12" X 4" X 16 LB/FT)  
METRIC  
(310mm X 100mm X 23.8 kg/m)

DWN ABM	DATE 05/06/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 5/6/2025
<b>DWG NUM: 4517-729</b>			<b>SCALE: 1 / 20</b>	
<b>TITLE: M 4525 FAMILY G4 STAND OVERHEAD</b>				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 22609		<b>SERIES</b> 517	<b>SHEET</b> 729D	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	4/11/12	CMC
2	ADDED CONDUIT AND TEMPLATE	4/17/12	JGW
3	ADDED FROST LINE NOTE	3/31/21	ZJM

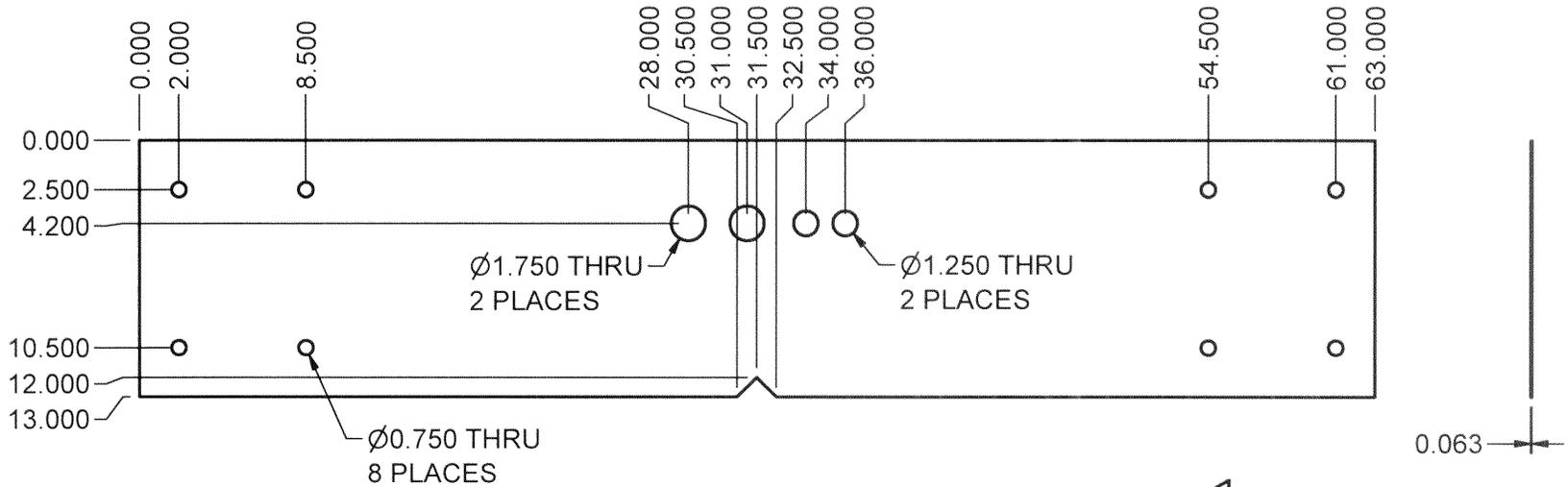


\*INTERNATIONAL BUILDING CODE RECOMMENDS MINIMUM DEPTH OF 12" BELOW THE FROST LINE

CONCRETE SHOULD BE 3000 PSI OR BETTER.  
 CONCRETE REBAR RODS ON 14" CENTERS OR AS DETERMINED BY LOCAL STANDARDS/CODES.

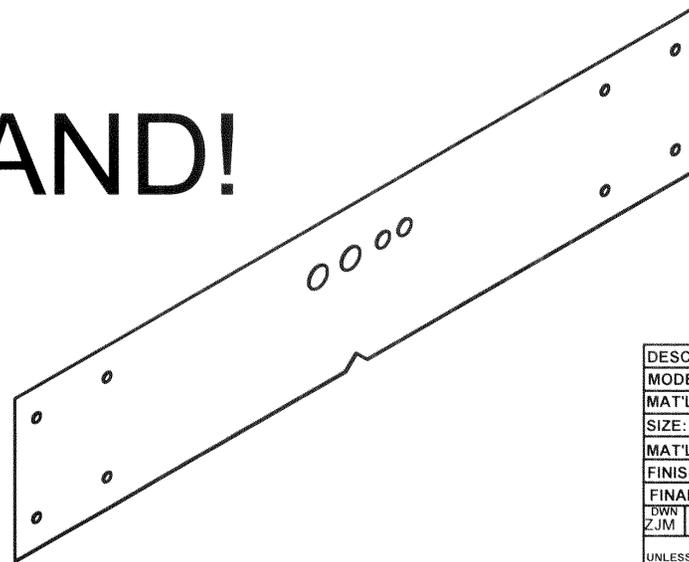
DWN ZJM	DATE 3/31/2021	DESIGN AUTHORITY JGWITT	APP JGW	DATE 3-31-21
DWG NUM: 7511-836			SCALE: 1/9	
TITLE: M 4525 ANCHOR BOLT & CONCRETE				
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556			SERIES 511	SHEET 836

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	3-7-13	RHS
2	ECF 5688 CHANGED PN#	9-21-20	ZJM



**DO NOT SAND!**

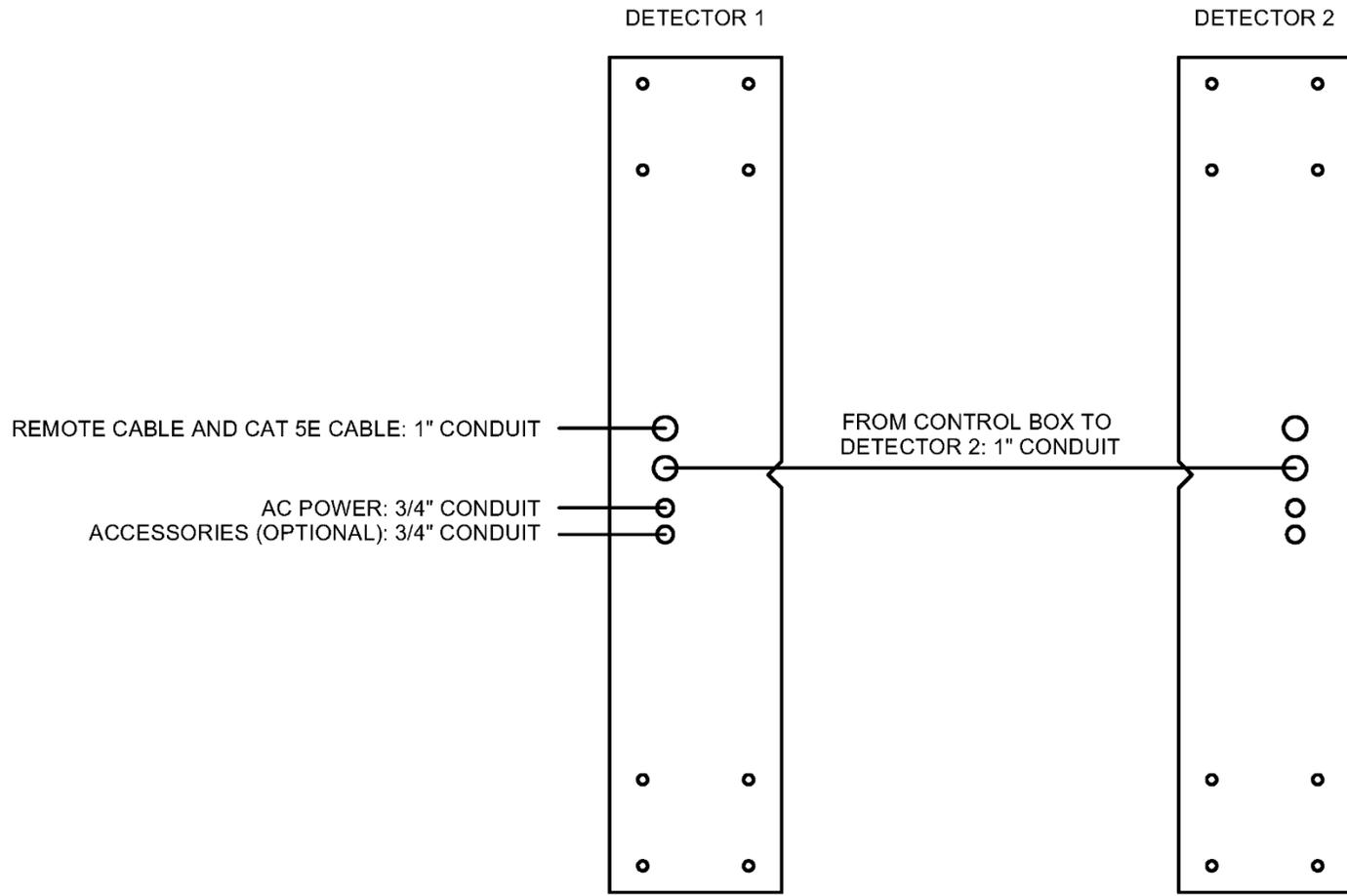
NOTE:  
NOTCH IS FRONT  
OF STAND FACING  
TRAFFIC LANE



DESC: ANCHOR BOLT TEMPLATE			
MODEL NO.: 4525-5000		PART NO.: 7511-997-01	
MAT'L.: 16 GA HOT DIP GALV.			
SIZE: 819 SI.			
MAT'L. NO.: 37-9820			
FINISH: CLEAN, DON'T SAND		NO. REQ'D: 1	
FINAL ASSY NO.: ---			
DWN	DATE	CHK	DATE
ZJM	9/21/2020		
APP	DATE	SILK	SCREEN:
Jew	9-21-20	N	N
TOLERANCES UNLESS NOTED OTHERWISE		SCALE: 1/8	
MILL, LATHE, SHEETMETAL = ± 0.005		ANGLES = ± 0.5°	
BENDS ON SHEETMETAL PARTS = ± 0.010			
ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE			
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556		SERIES 511	SHEET 997

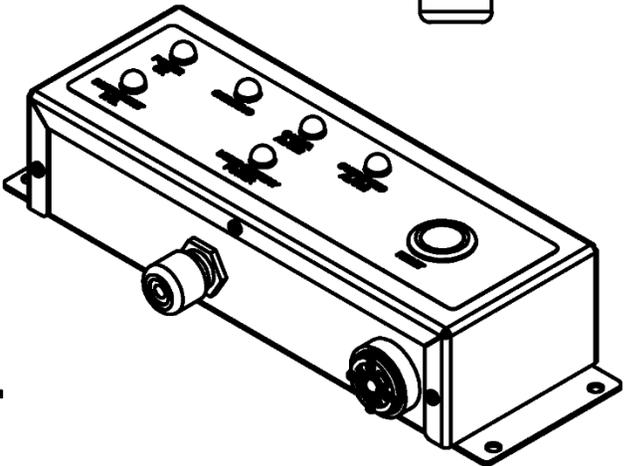
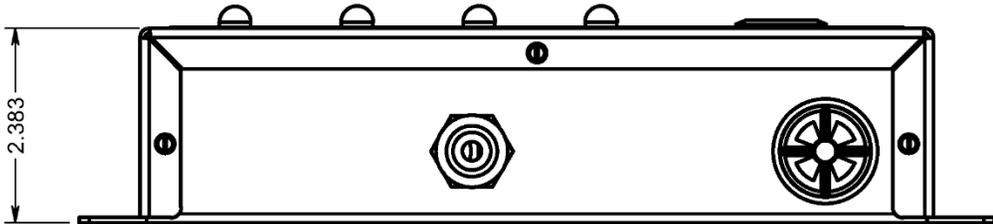
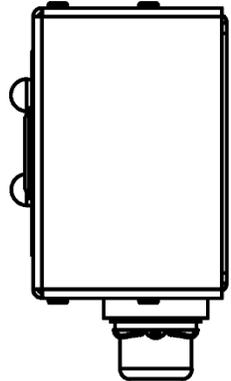
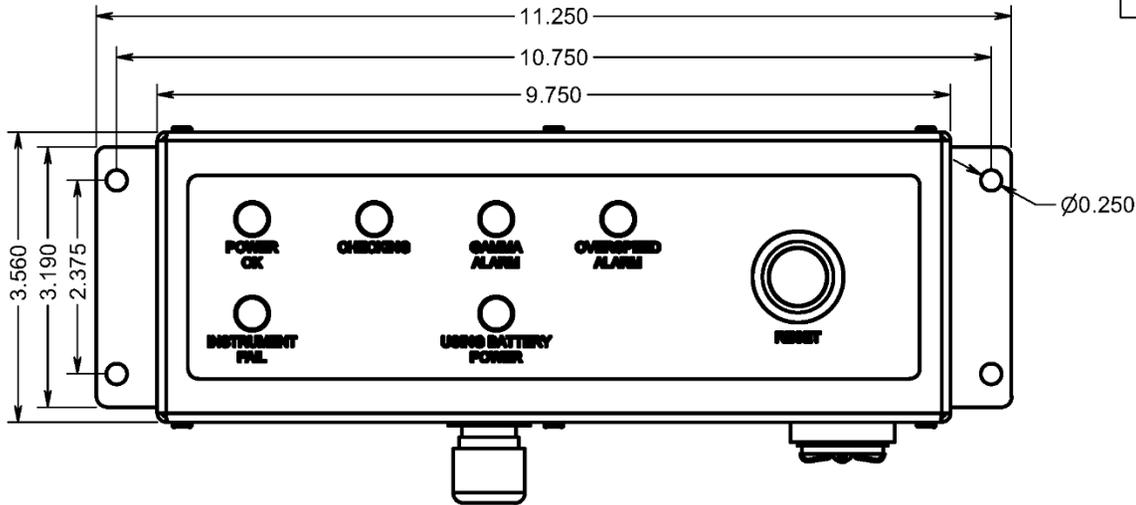
CONDUIT LAYOUT CAN BE SWAPPED  
 PAD WITH THREE CONDUITS GOES TO  
 SCALE HOUSE SIDE (DETECTOR 1).

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	06/30/25	ABM



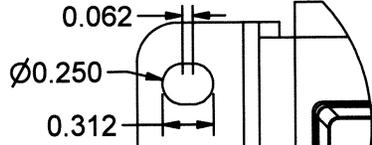
DWN	DATE	DESIGN AUTHORITY	APP	DATE
ABM	06/30/25	JGWITT		
DWG NUM: 7511-997			SCALE: -	
TITLE: M 4525 G4 CONDUIT TEMPLATE GUIDE				
 LUDLUM MEASUREMENTS, INC. 901 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23809		SERIES 511	SHEET 997A	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	03/17/25	ABM



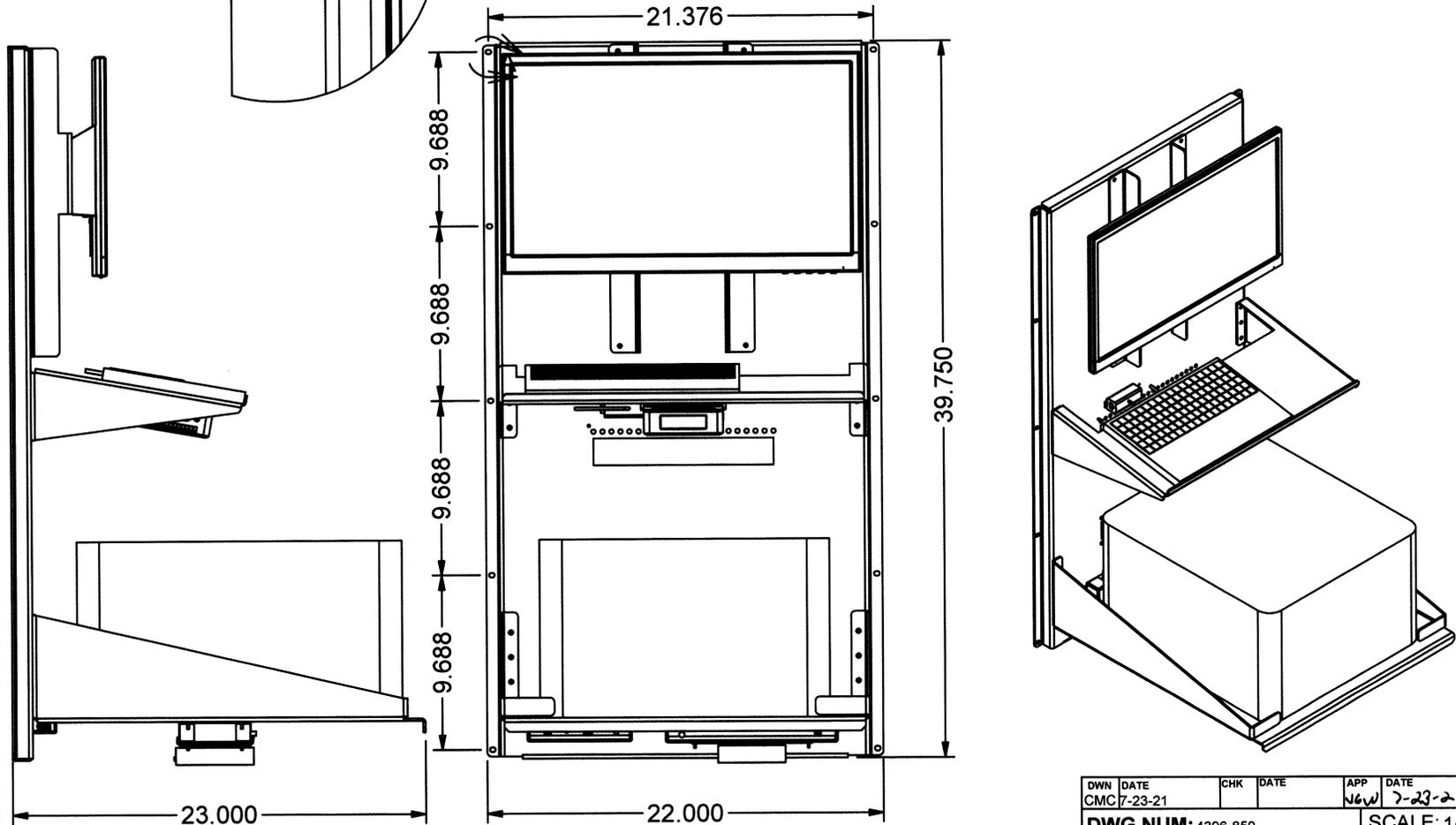
DWN ABM	DATE 03/17/25	DESIGN AUTHORITY JGWITT	APP	DATE
DWG NUM: 4517-608			SCALE: 1 / 2	
TITLE: M 4525 REMOTE DISPLAY W/ RESET (2022)				
 LUDLUM MEASUREMENTS, INC. 901 OAK STREET SWEETWATER, TEXAS 79556 CAGE CODE: 23809		SERIES 517	SHEET 608	

TYPICAL MOUNT  
SLOT (10 PLACES)



DETAIL A  
SCALE 1 : 1

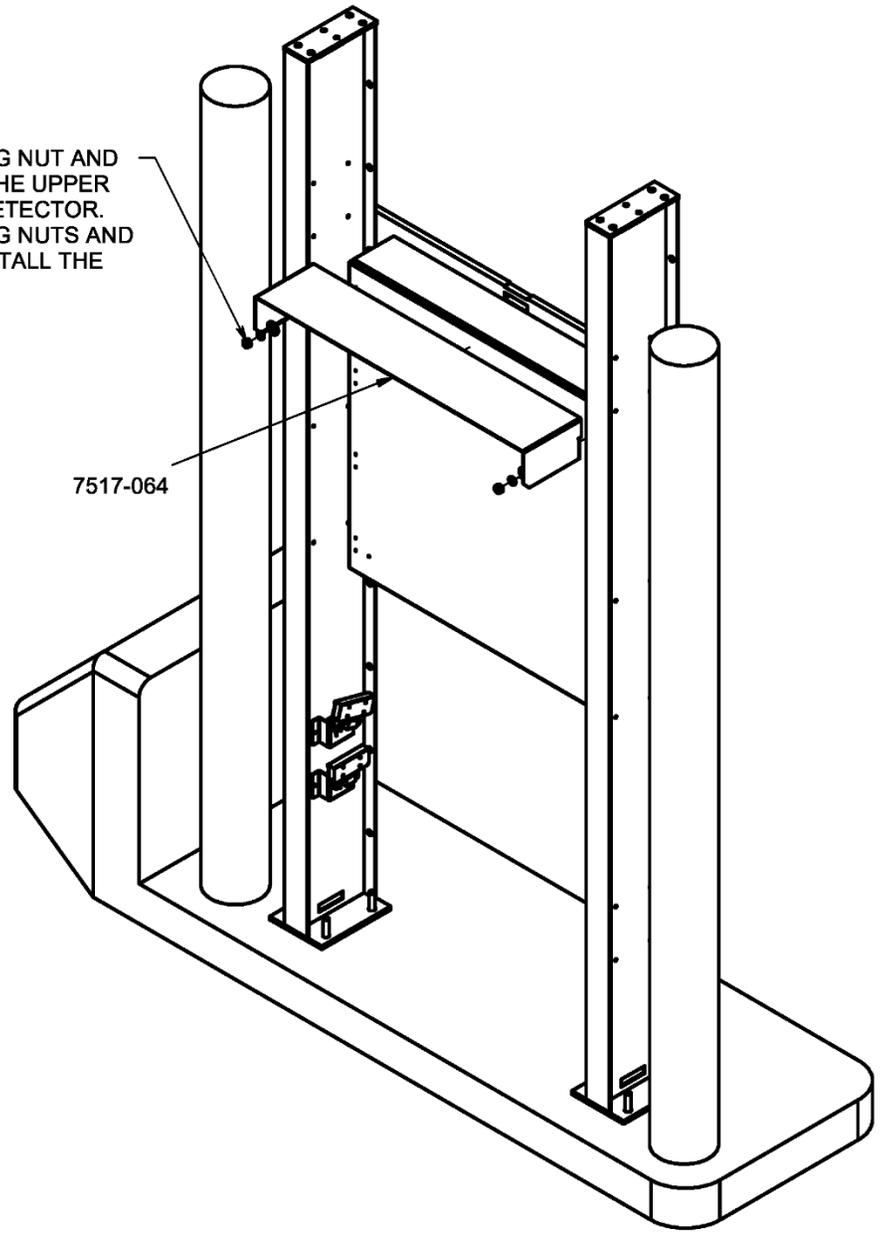
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
7	ECF# 2700	10-25-19	CMC
8	PLANAR MONITOR EC2700	10-30-19	JGW
9	UPDATED COMPUTER PART NUMBER	11-5-19	CMC
10	ECF# 2700	6-29-21	CMC
11	EC# 5970	7-23-21	CMC



DWN	DATE	CHK	DATE	APP	DATE
CMC	7-23-21			JGW	7-23-21
DWG NUM: 4396-850				SCALE: 1/8	
TITLE 4525 COMPUTER ASSEMBLY					
LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79556		SERIES	SHEET		
		396	850		

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	04/25/25	ABM

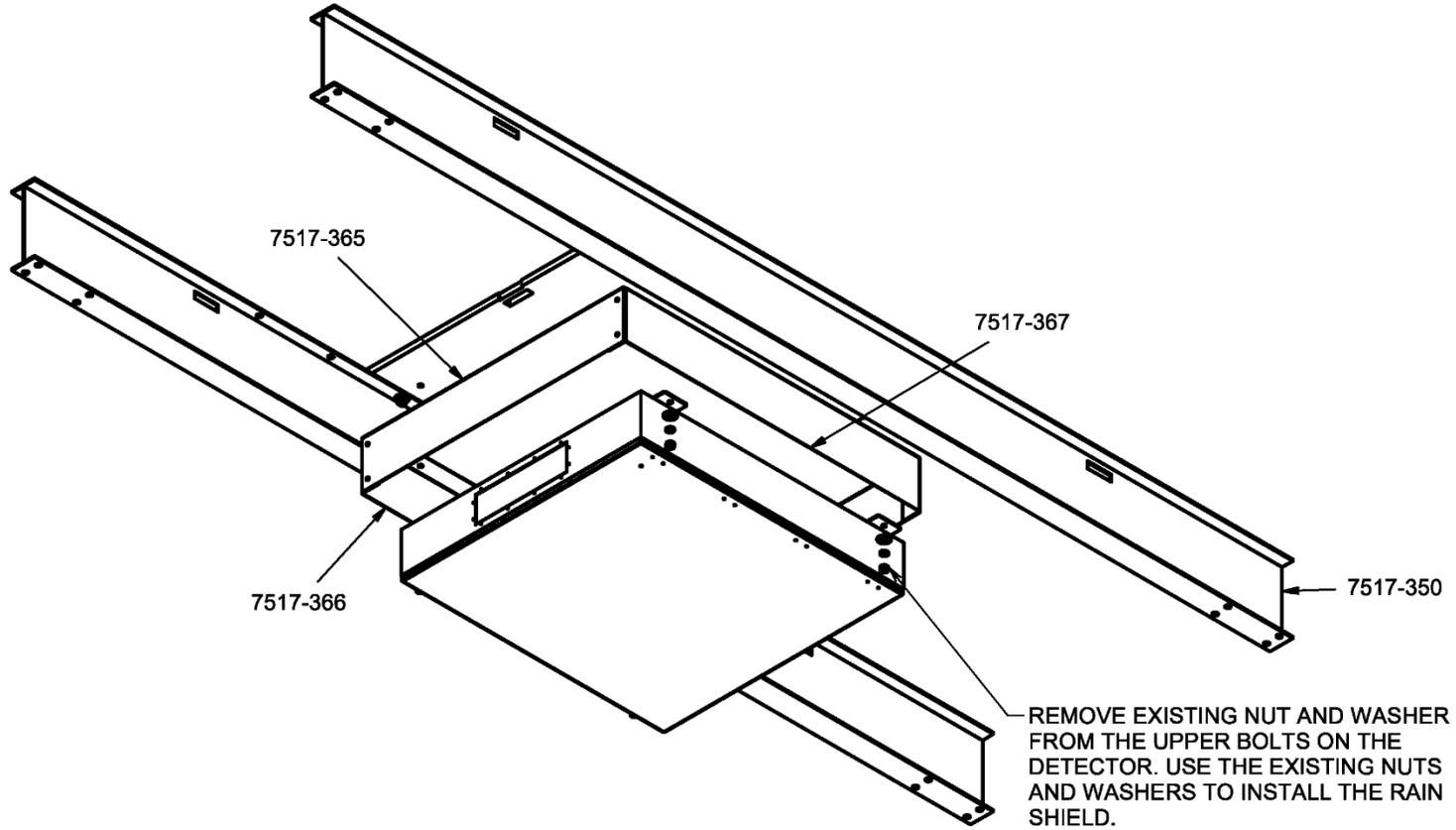
REMOVE EXISTING NUT AND WASHER FROM THE UPPER BOLTS ON THE DETECTOR. USE THE EXISTING NUTS AND WASHERS TO INSTALL THE RAIN SHIELD.



DWN ABM	DATE 04/25/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/28/2025
<b>DWG NUM: 4517-730</b>			<b>SCALE: 1 / 20</b>	
<b>TITLE: M 4525 G4 FAMILY RAIN SHIELD INSTALL</b>				
 <b>LUDLUM MEASUREMENTS, INC.</b> <small>501 OAK STREET SWEETWATER, TEXAS 79666 CAGE CODE: 23809</small>		<b>SERIES</b> 517	<b>SHEET</b> 730	

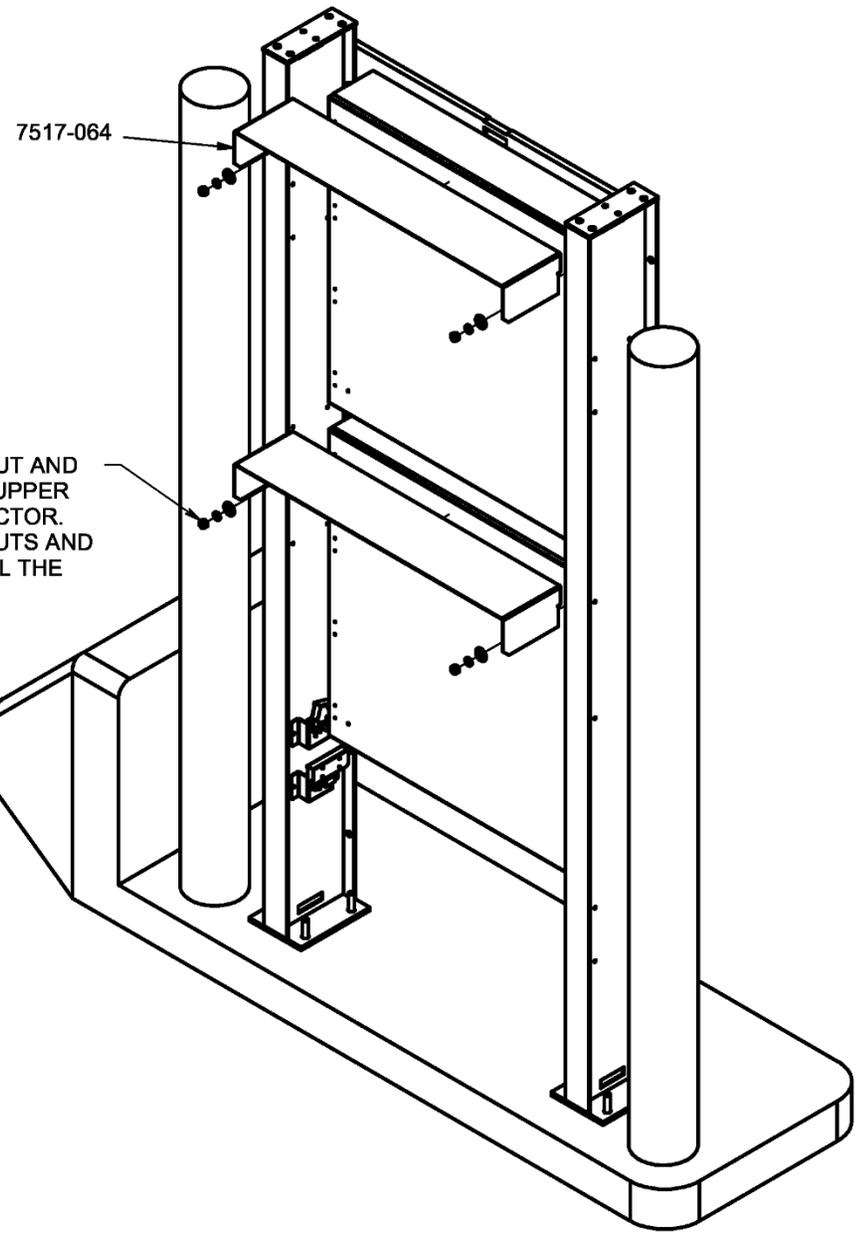
FOR RAIN SHIELD INSTALL SEE 511X987E.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	04/25/25	ABM



DWN ABM	DATE 04/25/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/28/2025
DWG NUM: 4517-730			SCALE: 1 / 40	
TITLE: M 4525 G4 FAMILY OVERHEAD RAIN SHIELD				
 LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79568 CAGE CODE: 23819		SERIES 517	SHEET 730A	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	04/25/25	ABM

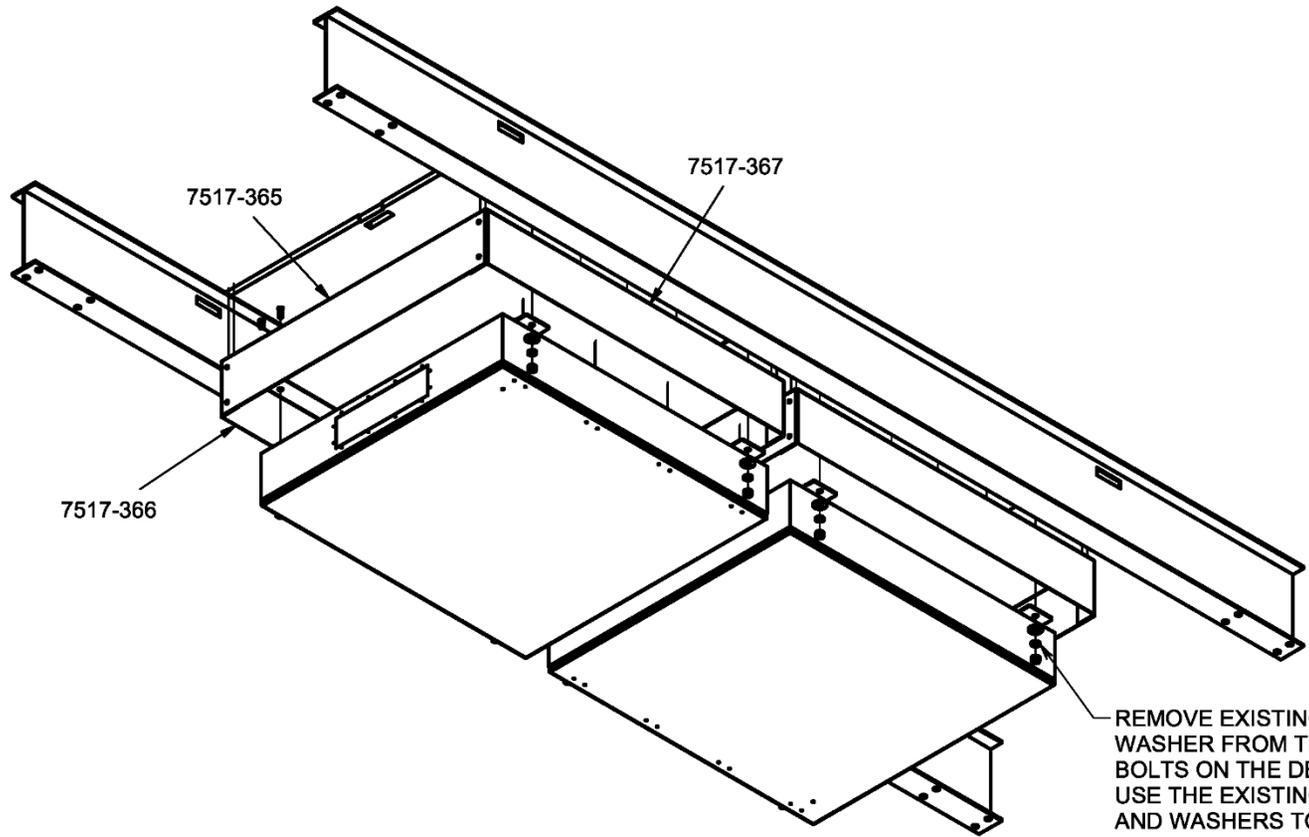


REMOVE EXISTING NUT AND WASHER FROM THE UPPER BOLTS ON THE DETECTOR. USE THE EXISTING NUTS AND WASHERS TO INSTALL THE RAIN SHIELD.

DWN ABM	DATE 04/25/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/28/2025
<b>DWG NUM: 4517-730</b>			<b>SCALE: 1 / 20</b>	
<b>TITLE: M 4525 FAMILY G4 RAIN SHIELD INSTALL</b>				
 <b>LUDLUM MEASUREMENTS, INC.</b> <small>501 OAK STREET SWEETWATER, TEXAS 79666 CAGE CODE: 23809</small>		<b>SERIES</b> 517	<b>SHEET</b> 730B	

FOR RAIN SHIELD INSTALL SEE 511X994E.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	VALID	04/25/25	ABM



REMOVE EXISTING NUT AND WASHER FROM THE UPPER BOLTS ON THE DETECTOR. USE THE EXISTING NUTS AND WASHERS TO INSTALL THE RAIN SHIELD.

DWN ABM	DATE 04/25/25	DESIGN AUTHORITY JGWITT	APP JGW	DATE 4/28/2025
DWG NUM: 4517-730			SCALE: 1 / 40	
TITLE: M 4525 FAMILY G4 RAIN SHIELD INSTALL				
 LUDLUM MEASUREMENTS, INC. 501 OAK STREET SWEETWATER, TEXAS 79668 CAGE CODE: 23819		SERIES 517	SHEET 730C	