

**FOUR RIVERS SANITATION AUTHORITY
ADDENDUM NO. 1
ITB #23-210
ONE (1) COMPLETE MANHOLE LINING APPLICATION SYSTEM**

May 30, 2023

AD1-1 Notice

This Addendum No. 1, dated May 30, 2023, to the Invitation to Bid, **One (1) Complete Manhole Lining Application System**, supersedes all contrary and conflicting information in the above-mentioned instructions, specifications, and contract documents which are hereby supplemented or revised in certain particulars as follows:

AD1-2 General Information

The Authority submits Addendum No. 1 to answer a question and to provide Attachments A & B missing from the bid doc.

AD1-3 Question & Answer

Question 1: Are there any maps?

Answer 1: No maps are provided as this is an invitation to bid for equipment.

Bidder shall initial this Addendum No. 1 and include it with their bid.

_____ Bidder's Initials

Attachment A
Warren Environmental 301-14 data sheet



301-14

Solvent-free, high build epoxy series capable of increasing your asset's service life in highly corrosive environments.

PRODUCT DESCRIPTION



100% solids, high-build protective epoxy coating designed to protect substrates from corrosive environments in wastewater and industrial service.

FEATURE	BENEFIT
APPLY IN 100% HUMIDITY AND ON A DAMP CONCRETE	Reduced labor cost - eliminates dehumidification expenses and puts the asset back in service faster
SINGLE COAT UP TO 500 MILS	Eliminates the risk of coating interface delamination, reduces the cost of resurfacing the substrate, eliminates the need for underlayment, and underlayment waiting period
100% SOLIDS	Non-explosive, non-flammable, more reliable cure, higher quality and performance
ZERO VOC	Safe for workers, the community, and the environment
STRUCTURAL RESTORATION AND ENHANCEMENT	Capable of strengthening assets to an improved or like new condition
AQUATIC SAFE	Independently tested per EPA 2007.0 to ensure no adverse impacts on aquatic life
CORROSION RESISTANT	Stands up to harsh chemical exposures and highly corrosive environments
RESISTANT TO GROUNDWATER PRESSURE	Prevents infiltration - reducing the costly treatment of rain and groundwater
HIGHLY ADHESIVE	Intimately bonds to host structure to prevent damage to substrate
MULTIPLE VISCOSITIES	Viscosity based on desired dry film thickness (DFT) to achieve one coat high build without sagging

APPLICATION SYSTEM



Warren epoxy products are applied by an approved heated meter/mix plural-component spray, trowel, brush, pour and squeegee. Warren Environmental products are applied by trained/approved applicators.

SPECIAL SAFETY AND HANDLING



Components are hazardous materials before being mixed. Consult the corresponding Safety Data Sheets before using.

CERTIFICATIONS



Safe for aquatic life per EPA 2007.0



STORAGE AND USE



Shelf life is one year from date of shipment. Materials are to be kept dry, protected from weather, stored under cover, and stored between 33°F and 120°F. Do not store near flame or heat.

SURFACE PREPARATION GUIDELINES



Concrete: SSPC-SP 13/NACE No. 6 with a clean substrate profile of CSP 4-6 per ICRI No. 310.2R-2013

Steel: SSPC-SP 10/NACE No. 2 Near White Blast Cleaning. A minimum angular profile of 3-5 mils.

Ductile or Cast-Iron: NAPF 500-03, Solvent, Hand Tool, Power Tool, and or Abrasive Blast to remove all oil, grease, asphalt, cement or other loosely adherent deleterious contaminants and achieve a minimum angular surface profile of 3-5 mils. Tightly adherent annealing oxide can remain.

Contact Warren for other substrates.

CURE TIMES

SURFACE TEMPERATURE	DRY TO HANDLE
50°F (10°C)	8 HOURS
70°F (21°C)	2 HOURS
90°F (32°C)	1.5 HOURS



301-14

TYPICAL PROPERTIES BASED ON #3 VISCOSITY

LIQUID PROPERTIES

Viscosity	90,000-120,000cps
Thixotropic Index	5.0 - 6.0
Specific Gravity	B:1.19 A:1.14 A/B:1.173
Flash Point (Closed cup)	>235°F
Color	Varies
Geltime (200g@ 77°F)	27 minutes
Thin Film Set (@ 77°F)	2 hours
Thin Film Set (@ 40°F)	8 hours

PHYSICAL PROPERTIES

Color	Off white
Tensile Strength (ASTM D638)	7,500 psi
Flexural Strength (ASTM D790)	11,000 psi
Flexural Modulus (ASTM D790)	425,000 psi
Compressive Strength (ASTM D695)	10,500 psi
Glass Transition Temperature (ASTM D3418)	151°F
Tensile Elongation @ Break	7%
Shore D Hardness	87
VOC	0 g/L (EPA Method 24)

WARRANTY

Warren typically offers a one year warranty. Additional information will be provided upon request.

DISCLAIMERS

Always read associated Safety Data Sheets (SDS) before working with any product. SDS can be requested by calling our office at **508.947.8539** or emailing us at info@warrenenviro.com. All values reported within this document are typical values and are reported as a means of reference. Individual testing should be done to determine actual results, tested in specific conditions. If you witness unethical or incorrect practices related to the use or application of any Warren Environmental product, please contact us immediately **508.947.8539**.

ISO 9001

Warren Environmental is a ISO 9001:2015 certified company.



VISCOSITIES

DFT (mils)

301-14-0 = Primer (P)	10 - 20
301-14-1 = Top Coat (T)	20 - 50
301-14-2 = Number 2 (#2)	50 - 175
301-14-3 = Extra Thick (XT)	175 - 300
301-14-4 = Full Slug (FS)	300 - 500
301-14-5 = Mastic (M)	125 - >1,000

1,000 mils = 1 inch

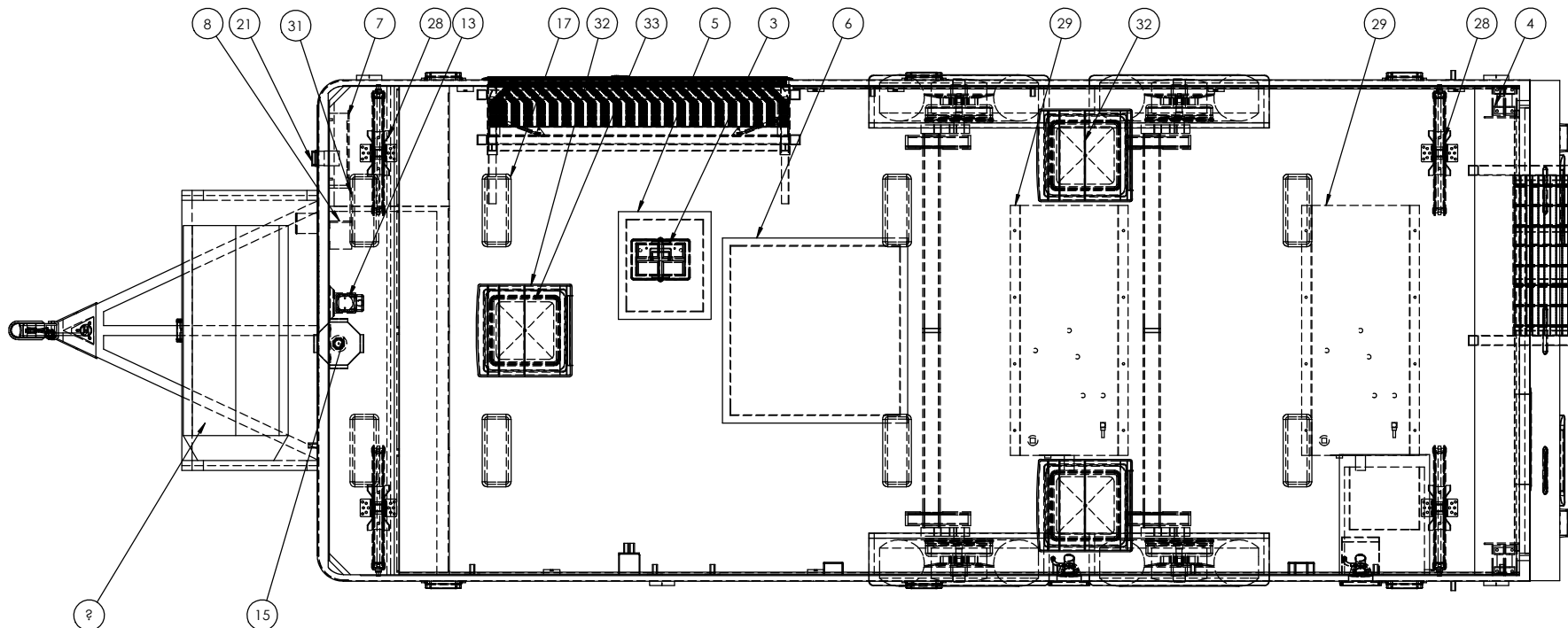
*Not all viscosities are certified for potable water.

Attachment B

**COMPLETE EQUIPMENT & PARTS LIST of an
FRSA-APPROVED LINING SYSTEM**

DESCRIPTION	SKU	QTY INSTALLED	EXTRA INCLUDED
Central New Hampshire 2021 ATC Model (T107 Bumper Pull)			
XP 50C Pump Assembly			
Graco XP 50C Pump	MZ1032	1	
1/4" Air Regulator 2.50 PSI 80 SCFM Corp	26-1125	1	
Xtreme Lowers			
Xtreme 90 Repair Kit	25D255		1
Xtreme 180 Repair Kit	25D259		1
Xtreme Tool / Wrench	15T258		1
Restrictor Tool / Wrench	126786		1
Mix Manifold			
Mix Manifold	262807	1	
Mix Manifold Repair Kit	258992		1
Mix Manifold Ratio Check Kit	24F375		1
Static Mixer	7700370	1	
FlexPlus Spray Gun			
Flexplus Airless Spray Gun w/Rac & 631 Tip	246468		1
Repair Kit Silver Gun Plus	20-1930		2
Rac5 7/8" - 22mm Handtite Guard	243161		2
Rac5 Switchtip Reversible Tip	286535		6
1/4" x 6' 5000 PSI Blue (Whip Line)	PA14B-6FBE		1
3/8" x 50' 5800 PSI Blue	PA26-50FM		1
1/4"M x 3/8"FS Connector (used to connect hoses)	1404-04-06		1
5:1 Monark Pump			
Monark 5:1 Pump - Long	218956	1	
5:1 Monark Pump Rebuild Kit - Long	208520		1
3/8" IN/OUT 1/4" Port Regulator	REG0375	1	
0-100 PSI 2" Gauge 1/4" NPT	PA204L-100	1	
5:1 Monark Pump - Stubby (Base Tank)			
Monark 5:1 Pump - Base Tank	224343	2	
5:1 Monark Pump Rebuild Kit - Base Tank	224401		1
3/8" IN/OUT 1/4" Port Regulator	REG0375	2	
0-100 PSI 2" Gauge 1/4" NPT	PA204L-100	2	
1:1 Fast Flo Pump			
1:1 Fast Flow Feeder Pump	226941	2	
Fast Flo Intake (Flapper) Valve	217102		2
1:1 Fast-Flo Rebuild Kit (Polyethylene)	20-1470		2
VISCON HP Fluid Heater			
VISCON Heater	245869	1	
Bracket for Heater	192585	1	
Acetone Flush Kit			
45:1 Merkur Flush Pump Kit, Machine Mount	262393	1	
45:1 Flush Pump Repair Kit 50CC	24A252		1
45:1 Checkball 25CC	24A261		1
Merkur ES Grout Pump			
3000 PSI Pneumatic Airless Pump w/1/4" x 25' Airless Gun (PX2450FBE)	Merker ES Grout		1
Grout Pump 1/4" x 50' 3600 PSI Airless Hose w/Gauge (installed on Pump)	246386	1	
1/4" x 50' 3600psi FBE	PX2450FBE		1
30:1 Grout Pump Rebuild Kit	24H006		1
30:1 Grout Pump Manifold Strainer (long)	167024		1
Elcometer 266 Holiday Detector			
Elcometer 266 Holiday Detector	D266-4		1
Elcometer 266 Handle, 0.1-30kV	T26620033-3		1
R/A 9.8" Brush Probe Assembly	T99920022-1		1

DESCRIPTION	SKU	QTY INSTALLED	EXTRA INCLUDED
Defelsko PosiTest AT-A			
Defelsko PosiTest AT-A Automatic	210761		1
Honda Pressure Washer 5000 PSI			
5000 PSI & 5.0 GPM 24 HP Honda GX690 Twin Comet Pump	PE-5024HWEBCOM		1
3/8" x 50' 6000 PSI Pressure Washer Hose	6963		1
TurboLaser Rotating Nozzle			
Giant 22060A-12.0 Turbo Laser Rotating Nozzle #12 8gpm	PU22060-120		1
Inline High Pressure Filter - SS Nozzle, 1/4" Male GPP100560	GPP100560		1
Deltech HTDN 125 AirDryer			
Deltech Air Dryer	HTDN125	1	
VanAir VIPER D80 (Compressor)			
VanAir Diesel Air Compressor 80 CFM@100 PSI 25 HP Kubota (Includes 120V Block Heater and Remote Control Panel)	090058-OP	1	
VanAir Compressor Maintenance Kit (Not Included)	41JG91 / KIT1111		
SouthEastern Power 4-17.5KW + Kubota Diesel V2003			
SouthEastern Power 4-17.5KW Diesel Generator	KBESEP-17.5I	1	
BlueOx SwayPro Weight Distribution Hitch (Bumper Pull Trailer Only)			
BlueOx SwayPro Weight Distribution Hitch	BXW2003	1	
2-5/16" Hitch Ball	C40085	1	
MISCELLANEOUS			
1/4"F x 1/4"F Elbow	5504-04-04	1	1
3/4" Ball Valve	BF092-Q	6	2
3/4" Camlock Cap	DC075-SS	2	1
3/4" Camlock Plug	DP075-SS	2	1
3/4" Conduit Elbow	58133901	3	1
3/4" Conduit Coupling	58133701	9	1
3/4" Tee	5605-12-12-12	5	1
3/4" Y Strainers	102636	4	2
3/4"F x 3/8" FS Elbow	1405-06-06	2	1
3/4"M x 3/4"F Camlock	B075-SS	2	1
3/4"M x 3/4"M Connector	5404-12-12	14	2
3/8"M x 3/8"M Connector	5404-06-06	1	1
120 Gallon Base Tank #0071	TANK #?	1	
EXPO Engineered 437 Watt/120V Low Range Drum Heater - Special 77925	AGM-55		4
Tank Heater 220V	2-RS-4-220-31C-LT-Y	2	
Activator Drum	DRUM	1	
Pusher Pump Holster (attached to wall)	PPH-001	2	
Flush Tank (attached to wall)	FLUSH TANK	1	
Bench Grinder (attached to cabinet)	B07FP5WKK7	1	
Bench Vise (attached to cabinet)	B009TOCZEC	1	
Fire Extinguisher w/Heavy Duty Bracket (installed on hook)	B456	1	
Heavy Duty Bracket (for Fire Extinguisher) (Installed)	5HB	1	
Station Wall Eyewash 32oz Double (installed)	HON32-000462-0000	1	
MILTON 2760-50D Steel Dual Arm Auto Retractable Air Hose Reel (3/8"x50' Hose)	B01M5GW1OV	1	
Fuse Kit	X002H4CHE5		1
E-Track 2" x 15' Ratchet Straps	B07KBF21Y1		6
E-Track Large 7" J Hook Tie Down - 2PK	B077ZBRXTZ		2
I acknowledge receipt of and take responsibility for the above list.			
Signed _____		Date: _____	



ATTENTION:
ATC IS NOT RESPONSIBLE FOR CLEARANCE OF VEHICLE
UNTIL CUSTOMER/DEALER COMPLETES VEHICLE CLEARANCE
FORM AND IS VERIFIED BY ATC ENGINEERING DEPARTMENT.

**AIRLINE OUTLETS SHOWN FOR LOCATION REFERENCES ONLY.
ALL LINES TERMINE IN THREADED FEMALE FITTINGS.
CUSTOMER INSTALLING OWN AIRLINE QUICK CONNECTS.**

**DIMENSIONS ARE NOMINAL. STRUCTURAL MEMBERS OFTEN DICTATE
WHERE INTERIOR FEATURES CAN BE PLACED. CONSEQUENTLY, SOME
DIMENSIONED ITEMS RETAIN A +/- 2" TOLERANCE. CRITICAL (BUBBLED)
DIMENSIONS WILL RETAIN A TOLERANCE OF +/- 1/4".**

BOM				
ITEM NO	PART NO	FILE NAME	DESCRIPTION	QTY
1		AIRLINE BUILDOUT220744		1
2		AXLE - TORSION-SIMPLIFIED	7000#, HF-93 OB-78, 22.5° Up	2
3		BATTERY	AGM, 775 CCA	1
4		BOGEY WHEEL		2
5		BOX, IN FLOOR	1 Battery	1
6		BOX, IN FLOOR	Spare Tire	1
7		BREAKER BOX	50 AMP SERVICE (100 AMP BOX)	1
8		CONVERTER, 12VDC	55 AMP	1
9	65528	COUPLER - A-FRAME	ADJ HGT - 20K - 2 5/16" BALL	1
10		E-TRACK, HORIZONTAL		1

BOM				
ITEM NO	PART NO	FILE NAME	DESCRIPTION	QTY
11		FUEL FILL		1
12		FUEL FILL		1
13		HYDRAULIC POWER UNIT - 12V - SINGLE POST JACK		1
14		JACK - TONGUE	5K - TOP WIND	1
15		JACK, HYDRAULIC - SINGLE POST		1
16		LIGHT - ANGLED LOADING		2
17		LIGHT, CEILING - SURFACE MOUNT		8
18		LIGHT, JACK		1
19	99896	LIGHT, LED SCENE	12V-24V - 45dgr ANGLE	6
20		LIGHT, STROBE-220742	500 SERIES AMBER	8
21		MOTORBASE	50 AMP	1
22		OUTLET, ELECTRICAL	120V 15A EXTERIOR	4
23	11978	OUTLET, ELECTRICAL	120V 15A INTERIOR	4
24		OUTLET, ELECTRICAL	120V 20A INT-DEDICATED	4
25		OUTLET, ELECTRICAL	240V 30A	4
26		OUTLET, ELECTRICAL	JUNCTION BOX - 4 x 4 x 4	1
27		PLATFORM220744		1
28		SCISSOR JACK	24" - 5000#	4
29		TANK, FUEL	28 GAL END FILL(ST24-1)D	2
30		TIRES	235/85/16	4
31		TRANSFER SWITCH	50 AMP	1
32		VENT, ROOF COVER	MAXX AIR	3
33		VENT, ROOF	VENT - ROOF - 12V FANTASTIC FAN	3
34		Viper Diesel Portable Air Compressor-220744		1
35		WHEEL WELL - AL	8.5 x 12.0 x 80.0	2

REVISION TABLE

REV.	DESCRIPTION	DATE	DONE BY
A	VARIOUS CHANGES	4/17/2020	SHB
B	MOVED COMPRESSOR, CHANGED CABINETS, MOUNT OUTLET, MOVED AIRLINE OUTLETS, ADDED DIMS & NOTES	4/8/2020	SHB
C	DELETED 2 ROOF VENTS, ADDED MISSING TRANSFER SWITCH, ADDED BALLOONS	4/13/2020	SHB
D	QC CORRECTIONS	4/22/2020	SHB
E	ADDED MISSING NOTES	4/27/2020	SHB
F	QC CORRECTIONS V2	4/30/2020	SHB
G	ADDED WEIGHT DIST NOTES	5/8/2020	SHB
H	CORRECTED STROBE LIGHTS	5/12/2020	SHB
I	MOVED REAR STROBE LIGHTS	6/5/2020	SHB
K	MOVED ALL OUTLETS, ADDED STEP, ADDED TOP UP TO CABINET, ADDED C-TOP	7/1/2020	SHB

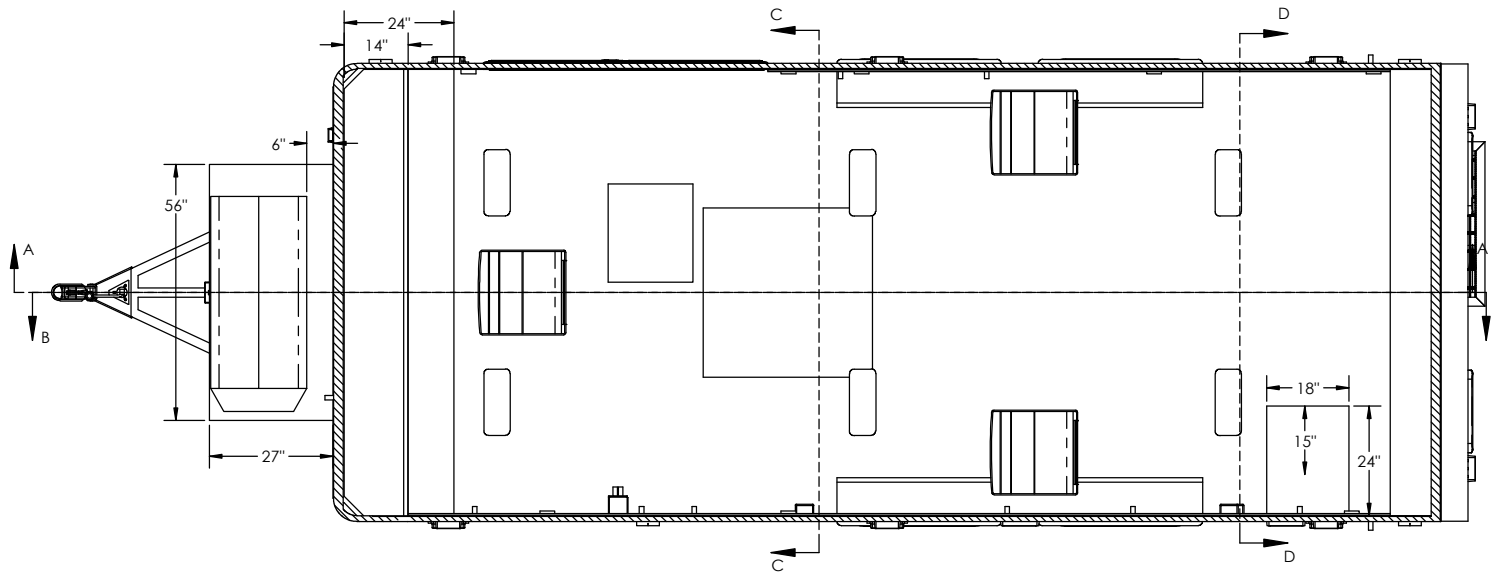
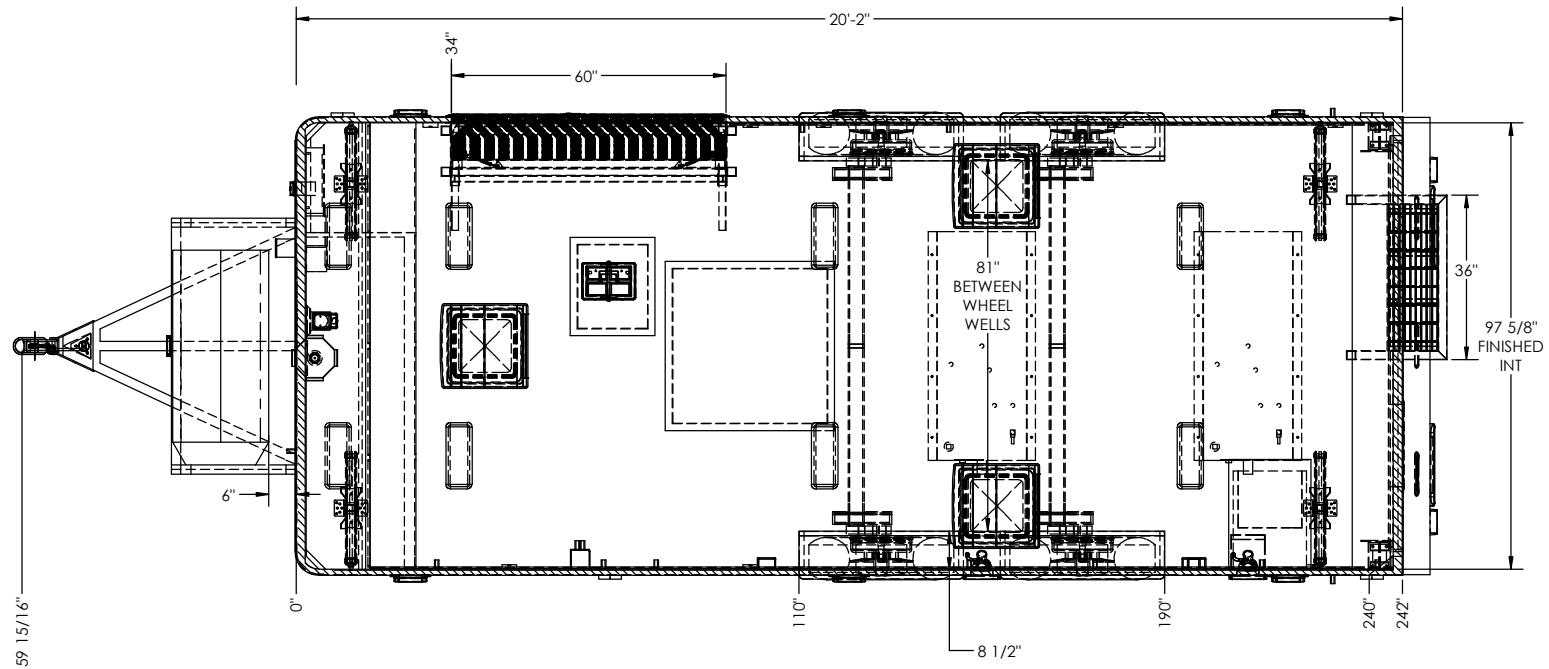
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DIMENSIONS ARE SPECIFICALLY NOTED**

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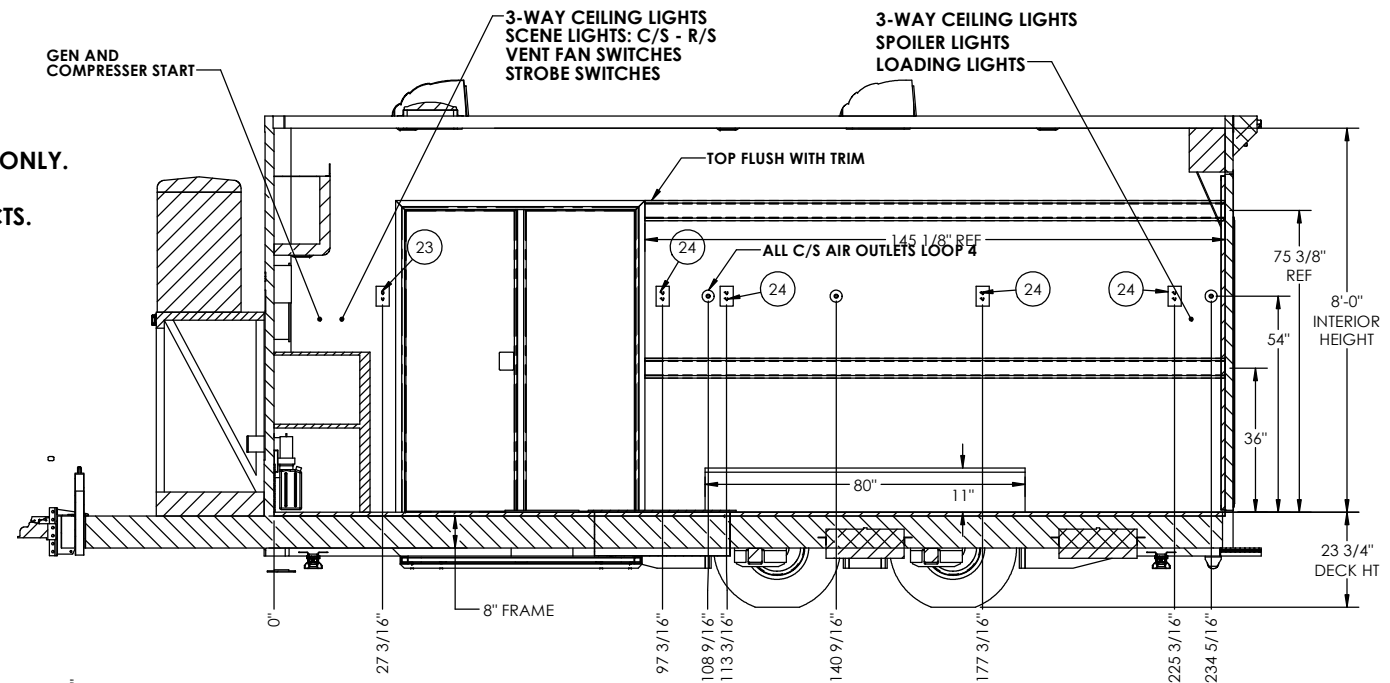
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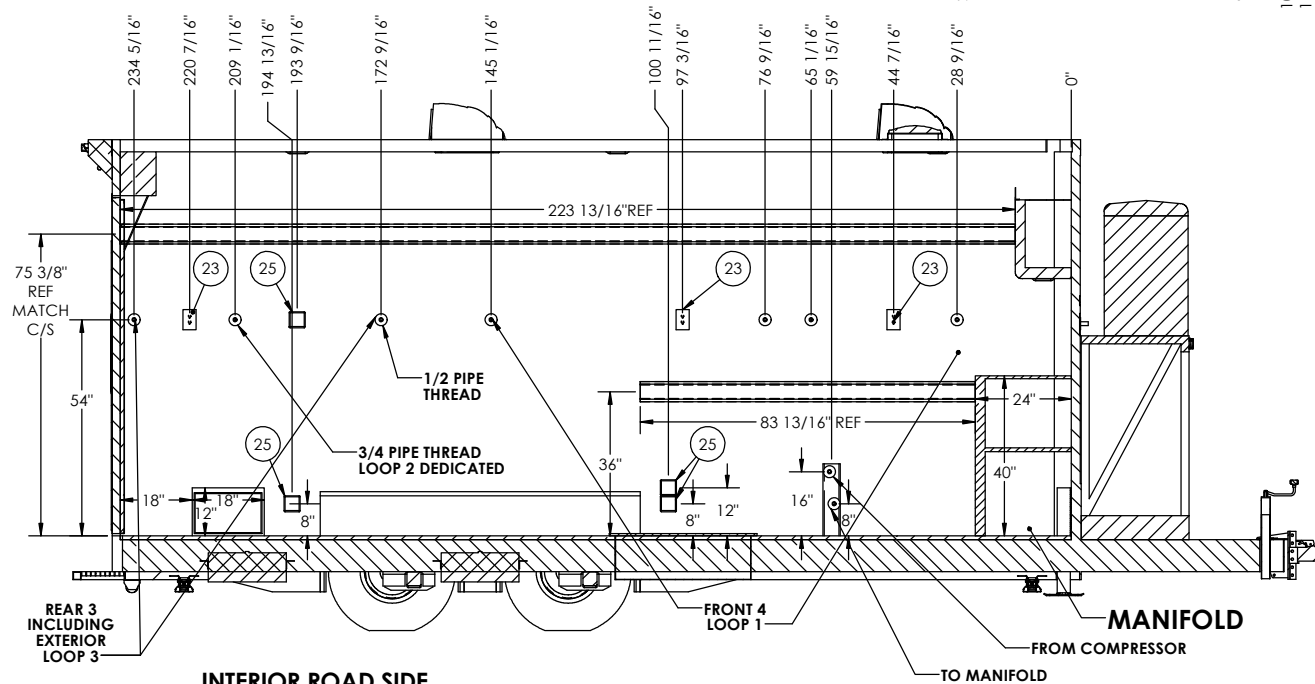


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AIRLINE OUTLETS SHOWN FOR LOCATION REFERENCES ONLY.
ALL LINES TERMINE IN THREADED FEMALE FITTINGS.
CUSTOMER INSTALLING OWN AIRLINE QUICK CONNECTS.



INTERIOR CURB SIDE



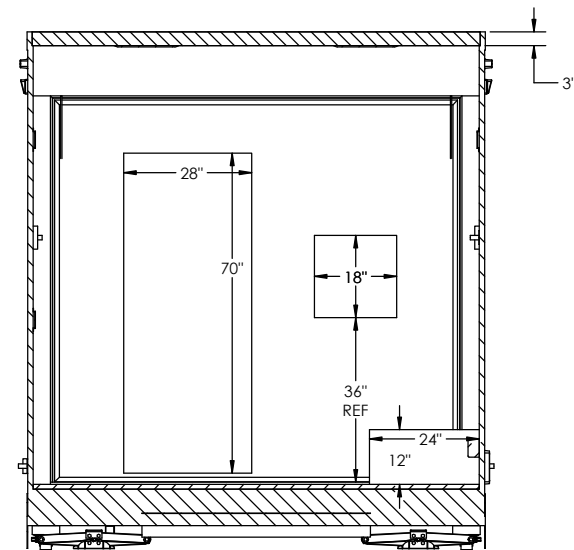
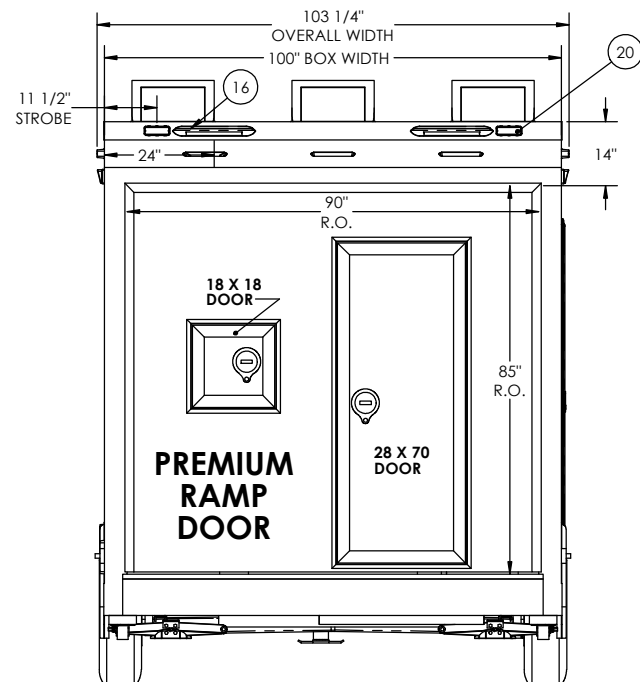
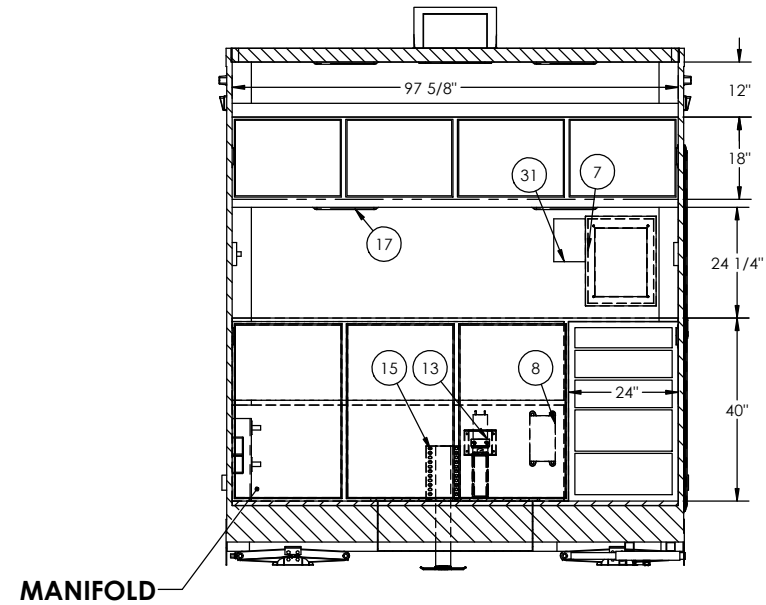
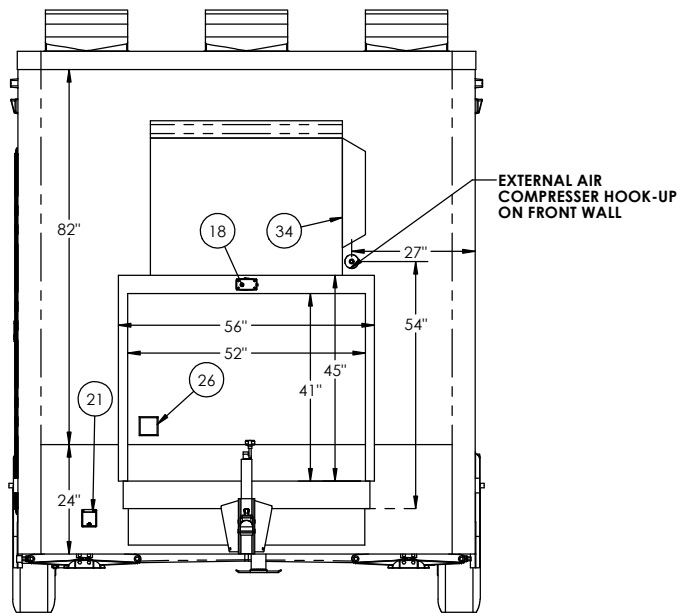
INTERIOR ROAD SIDE

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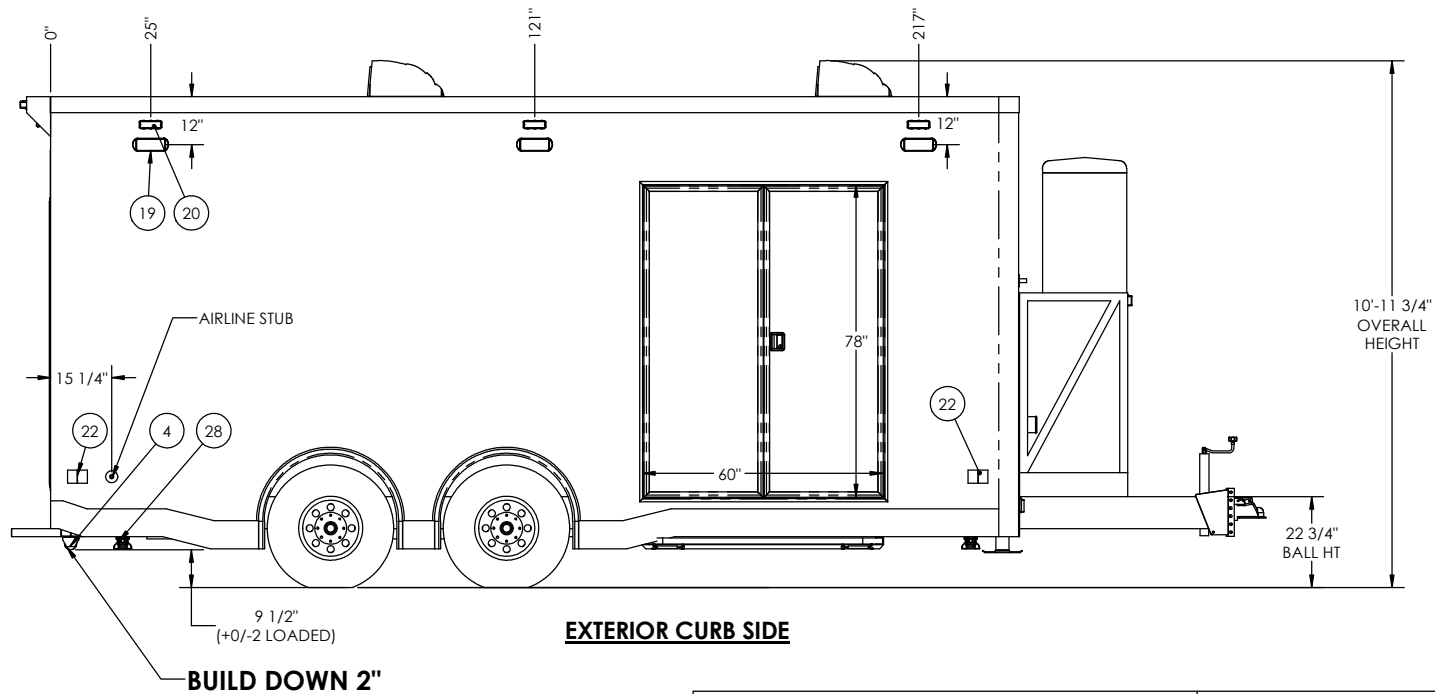
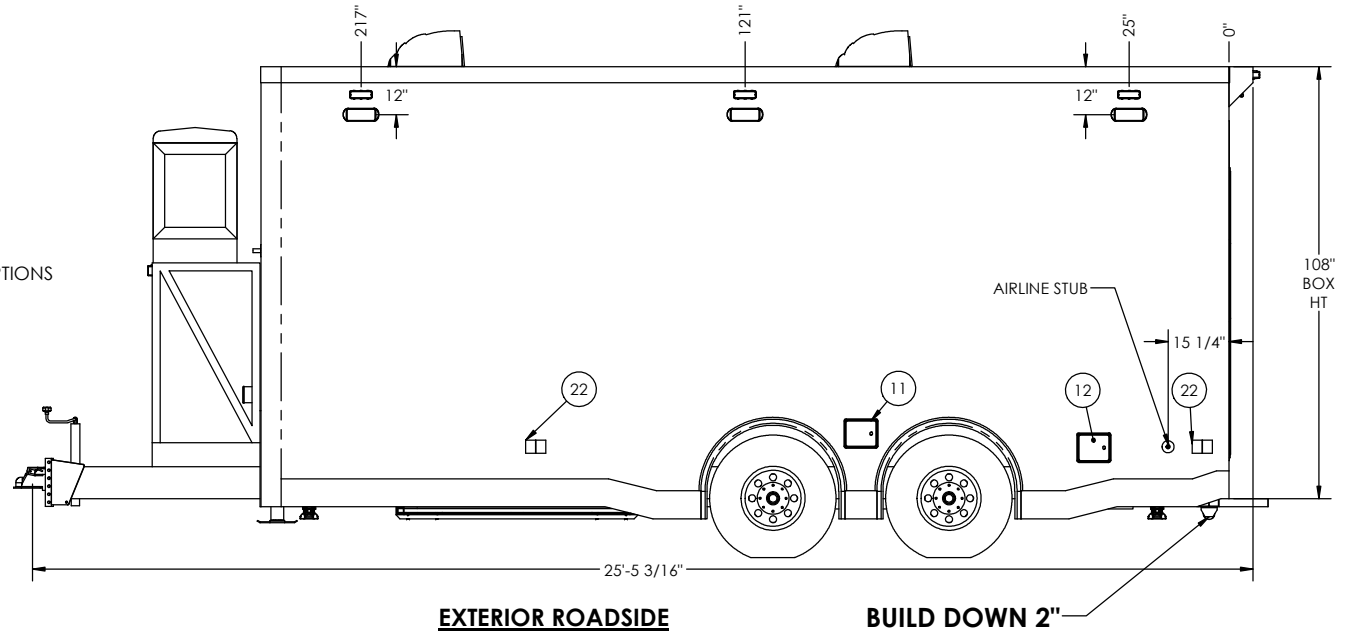
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ATTENTION:
ATC IS NOT RESPONSIBLE FOR
HIGHER THAN DESIRED TONGUE
WEIGHTS OF TRAILERS DUE TO OPTIONS
ON/NEAR TONGUE OF TRAILER

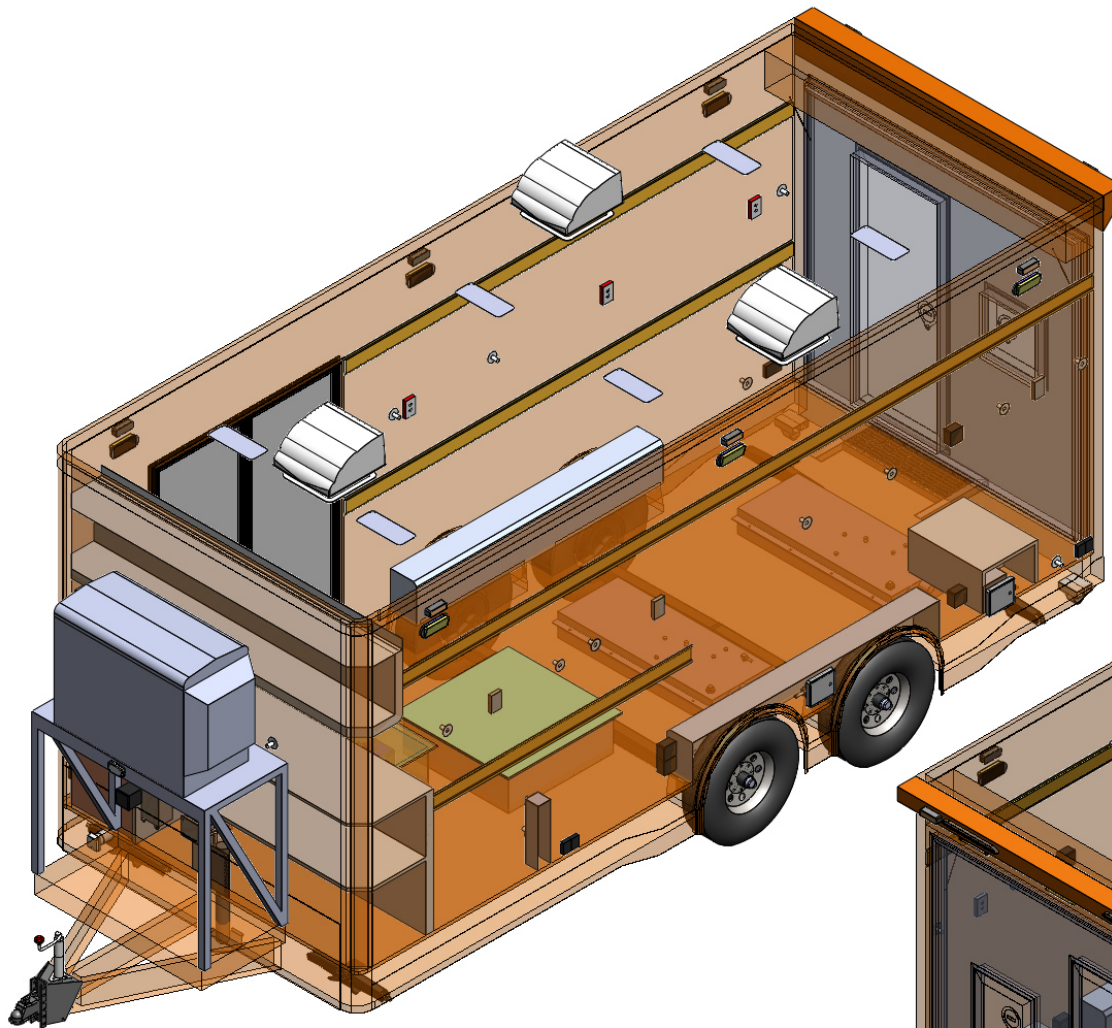


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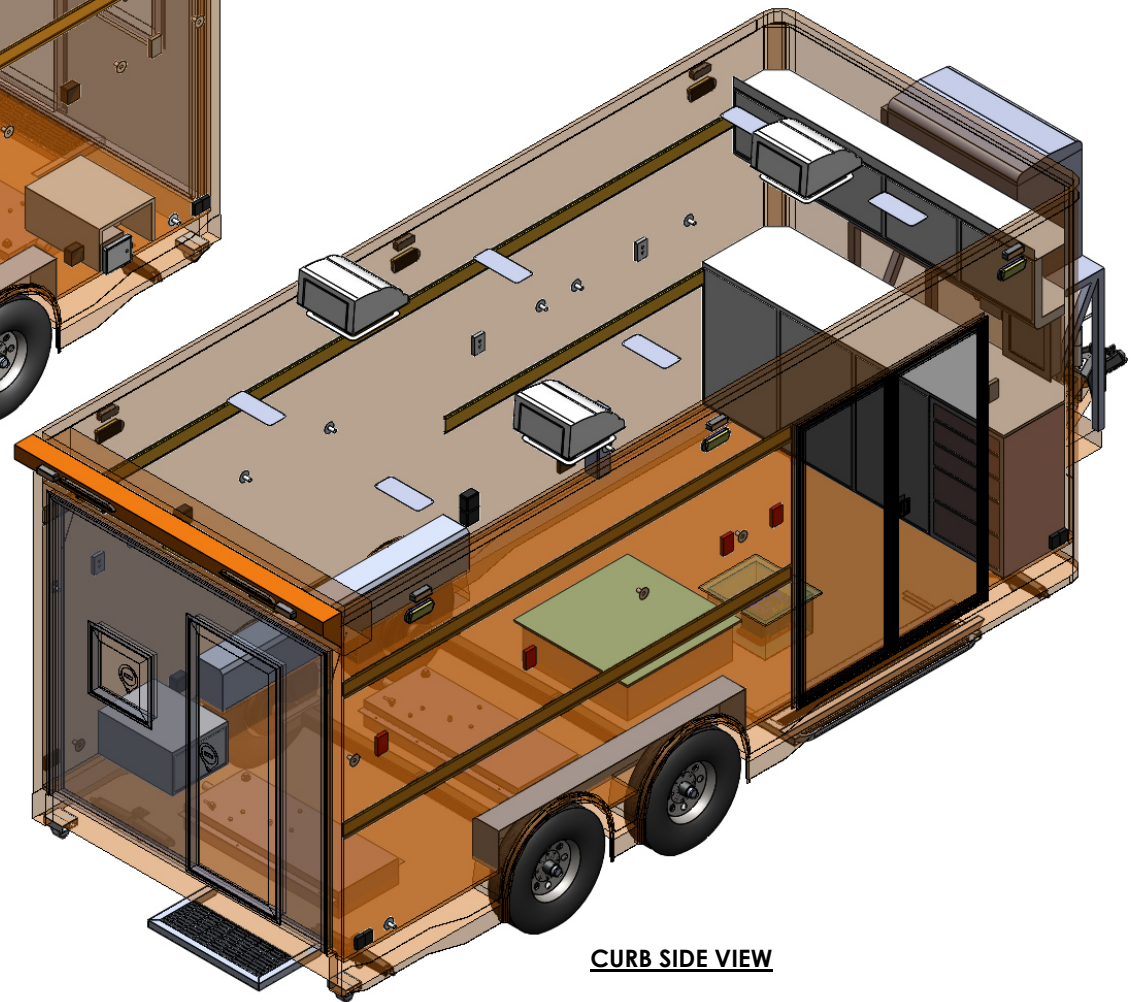
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ROAD SIDE VIEW



CURB SIDE VIEW

ALL LOCATIONS ARE NOMINAL UNLESS CRITICAL DIMENSIONS ARE SPECIFICALLY NOTED

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