BRAUN NORTHWEST, INC.

DETAILED SPECIFICATIONS

FOR

CORONA POLICE DEPARTMENT

EQUIPMENT VEHICLE

CORONA, CALIFORNIA

1 CHASSIS

1.01X OEM CHASSIS

- 2023 Ford F-600 **XL**, Regular Cab, 4 x 2, meeting all the specifications of Section 1.01
  - Ambulance Prep. Package with EPA Special Emergency Vehicle Emissions (47L)
  - 3 year/36,000 mile ″Bumper to Bumper″ warranty
  - 5 year/100,000 mile Powertrain warranty
  - Dual Rear Wheels
  - Provided by Braun Northwest

1.01.01 SPECIFIC RATINGS

- Drive – 4 x 2
- G.V.W.R. – 22,000 lb
- Front Axle – 7,500 lb
- Rear Axle – 15,500 lb
- Wheelbase – 205″
- Cab to Axle – 120″
- Front Spring Capacity – 7,500 lb
- Rear Spring Capacity – 15,500 lb
- Rear Differential – 4.88 ratio, limited slip wide track rear axle

1.01.02 POWER TRAIN

- Engine
  - 6.7L Power Stroke V8 turbo diesel B20
  - Diesel Emission Fluid (DEF) system with operator-commanded regeneration
  - External oil cooler
  - Factory diesel package
  - Heavy duty dry type air cleaner with flow restriction indicator
  - Exhaust brake
- Engine Cooling System
  - Heavy duty, closed-air, free-liquid state type
  - Coolant recovery system
  - 50/50 solution Permanent type antifreeze to –40 degrees F
- Transmission
  - TorqShift 10-speed automatic transmission with selectable drive modes
  - Tow/Haul Mode
  - External oil cooler in chassis grille area

- Exhaust System
  - System complies with Federal Motor Carrier Safety Regulations, Part 393.83
  - Suspended using three hangers, excluding manifold attachment
  - Discharge at right rear side of module
  - Tailpipe shall not terminate within twelve inches of the vertical axis of the fuel tank filler opening.

1.01.03 STEERING

- Power-assisted
- Tilt steering wheel

1.01.04 SHOCK ABSORBERS/STABILIZER BARS

- Heavy-duty shock absorbers front and rear
- OEM front and rear stabilizer bars

1.01.05X BRAKES

- Four wheel power front and rear disc with ABS
- Front 15.39″ diameter; Rear 15.75″ diameter
- Trailer Brake Controller **(52B)**
- Pre-collision Assist with automatic emergency braking **(94P)**

1.01.06X TIRES AND WHEELS

- Seven OEM LT 245/70R-19.5G all-purpose steel belted radials
- Seven OEM 19.5″ steel wheels
- Spare tire and wheel shipped loose
- OEM jack and tire changing tools **(61J)**

1.01.07 ELECTRICAL

- Alternators – OEM Dual rated at 397 Amps total
- Batteries – OEM Dual 750 CCA each
- Stationary Elevated Idle Control

1.01.08 INSTRUMENT PANEL AND CONTROLS

- Gauges
  - Speedometer
  - Tachometer
  - Coolant Temperature
  - Transmission Fluid Temperature
  - Turbocharger Boost
  - Fuel Level
  - Indicator lights
  - Odometer/Trip Odometer
- Cruise Control, with steering mounted controls
- Audio – OEM AM/FM/MP3 stereo
- SYNC - Voice-Activated communications and entertainment system with AppLink and instrument panel compass display
- 2.3″ LCD Productivity Screen in IP Cluster with Compass Display
- USB Port
- Ford Pass® Connect 4G Wi-Fi Modem

1.01.09X CAB EXTERIOR

- Trim Level – **XL**
- Bumper – **Black**
- Grille – **Black**
- Tow eyes –Two Front
- Mud Flaps – Two Front
- Horn – OEM dual electric
- Windows – Tinted safety glass
- Windshield wipers – Two-speed electric, washer and intermittent speed control
- Mirrors
  - Two black, below eye level, manually telescoping trailer tow
- Lights
  - Headlamps – Auto High-Beam, Quad-beam halogen
  - Roof clearance light
  - Under hood service light **(63A)**
- Fuel – OEM 40 gallon tank

1.01.10X CAB INTERIOR

- Trim Level – **XL**
- Seats – OEM
  - **Cloth** 40/20/40 **(1S)**
  - Combination lap and shoulder harness
  - Side door armrest
- Flooring – Black Vinyl
- Climate Control – OEM
  - Heavy duty, fresh air, high capacity heater/defroster
  - Dehumidifying air conditioning system
- Airbags
  - Driver and right-front passenger front
  - Front-Seat side
  - Safety Canopy System with roll-fold side curtain airbags
- Other
  - Dome light, with dual map lights
  - Auxiliary Power Point
  - Interior hood release
  - Power Equipment Group **(90L)**
  - Power door lock & windows
  - Remote keyless entry
  - SecuriLock Passive anti-theft

1.01.11 COLORS

- Exterior – Black Agate (UM)
- Interior – Medium Earth Gray

1.02 CHASSIS MODIFICATIONS

The following modifications will be made to the chassis by Braun Northwest.

1.02.09 MUD FLAPS

Black mud flaps shall be installed behind each rear wheel.

1.02.21 AWNING EXTENDED WARNING LIGHT

A 3″ Red Lens Red LED flashing light shall be installed in the headliner to warn driver when awning is extended (Section 6.12 related). The light shall flash when the emergency brake is released and the awning is deployed.

A placard with white text on red background shall be installed near the flasher, stating:

″AWNING EXTENDED
Don't move vehicle
if light is on.″

1.02.33 TRAILER HITCH/PLUG

A Class V, 2.5″ receiver trailer hitch with 20,000-lb total rating and 2,700-lb tongue weight capacity shall be mounted below the rear bumper with 5/8″ grade 8 bolts. A 2.5″-to-2″ adapter sleeve and 5/8″ hitch pin shall be provided to allow use of either 2″ or 2.5″ accessories. The trailer plug electrical connection shall be a single receptacle that accommodates two standard trailer plugs: One 5 pin flat plug and one RV-style round, seven-pin connection consisting of six flat contacts around one central round pin.

1.02.43 CHASSIS MODIFICATIONS

The driver's and passenger's windows shall have 5% VLT tint added (Section 3.04.02 related).

1.02.60 CAB CONDUIT

A 5.5″ cab conduit shall be installed between the cab and module located behind the driver’s seat. The driver’s console harness shall be routed through the conduit.

1.03 MODULE-TO-CHASSIS MOUNTING SYSTEM

1.03.01 MODULE MOUNTING SYSTEM

The module shall be bolted to the chassis frame in no fewer than twelve locations. Each mounting location shall include a hard rubber isolation pad between the chassis frame and the module lateral. The rearmost lateral(s) shall be connected to the frame extensions with 5/8″ grade 8 bolts. All remaining laterals shall be connected with vertical 3/4″ grade B7 eye bolts fastened to the frame rails with horizontal 3/4″ grade 8 hex bolts. All bolts shall be secured with locking nuts.

Modules 176″L or longer shall have soft rubber washers added above the forward and rear laterals to accommodate chassis frame torsion.

2 MODULAR CONSTRUCTION

All material utilized shall be of the correct type, alloy, and thickness to withstand the intended usage and provide protection against cracking, corrosion, or metal fatigue. All materials utilized shall be of open stock origin, commonly available through local sources, for rapid and economical repair or modification of the body. Any use of proprietary parts or materials in the construction of the body is unacceptable, due to potential delays or difficulties in future repairs or service. NO EXCEPTIONS TO BE TAKEN IN THIS AREA. This specification has been designed and written to fill specific needs of this agency. Where brand name, make, or model of equipment has been specified, no exceptions shall be allowed. Where compartment and cabinet sizes have been specified, bidder must bid substantially (plus or minus 1″) the size specified.
The module shall have a transferable lifetime structural warranty.

2.01 MATERIAL

EXTRUSIONS	SIZE	ALLOY
Structural Tubing	1″ x 2″ x 0.125″ sq	6063-T52
Structural Tubing	2″ x 2″ x 0.125″ sq	6063-T52
Cross Members	3″ x 3″ x 0.375″	6061-T6
Cross Members	1.5″ x 3″ x 0.25″	6061-T6

FORMED SHEETING	SIZE	ALLOY
Skin/Roof/Compartments/Subfloors/Doors	0.125″	5052-H32
Interior Cabinets	0.090″	5052-H32
Diamond Plate	0.125″/0.08″	3003-H22
Stainless Steel	16 ga., 20 ga	304 # 4B

2.02 MODULE DIMENSIONS

Overall Vehicle Dimensions (Specifications are listed as minimums.)

Length	27 ′	4 ″	328.00 ″
Width (excluding mirrors)	8 ′	0 ″	96.00 ″
Height (Approximate)	10 ′	10.63 ″	130.63 ″

Exterior Module Dimensions (Specifications are listed as minimums.)

Length	16 ′	5 ″	197.00 ″
Width	8 ′	0 ″	96.00 ″
Height	7 ′	10.375 ″	94.38 ″

Note: Overall dimensions approximate, do not reflect F-600 chassis.

Interior Dimensions of Rear Work Area (Specifications are listed as minimums.)

Length	Forward Wall to Rear Wall	42.50 ″
Width	Left Wall to Right Wall	91.00 ″
Height	Floor to Ceiling	78.00 ″

2.03 STRUCTURAL FRAMING

Side wall and rear wall construction shall consist of 2″ x 2″ x 0.125″ aluminum square tubing extensions welded together with a maximum of 14″ centers. 1″ x 2″ x 0.125″ aluminum tubing may be utilized in addition to 2″ x 2″ tubing to accommodate custom compartment sizes. The bottom of the wall structure shall be sealed with a welded 2″ x 2″ tube, a 2″ x 2″ angle, or a 0.125″ plate depending upon location. The wall structure shall be capped with a 2″ x 4″ x 0.125″ header upon which a 2″ x 2″ x 0.125″ roof structure is welded. This process provides a unitized roll cage structure for greater occupant safety. The front wall structure shall be constructed of formed aluminum channels to allow ample space for wiring raceways, heater hoses, and A/C hoses.

2.04 FOUNDATION SYSTEM

The foundation system shall consist of a 0.125″ aluminum sheet subfloor with foundation members securely welded under the subfloor. Transverse members (laterals) shall consist of 3″ x 3″ x 0.375″ structural angles. 0.25″ x 1.5″ aluminum stringers shall span longitudinally between the laterals.

2.05 MODULE SEAMS

All body and compartment seams at or below floor level shall be full-seam-welded. The entire perimeter of the subfloor shall be completely sealed with a caulking material, creating a watertight seam.

2.06 EXTERIOR SKIN

A Norton NORBOND closed-cell, polyurethane foam tape with high-performance acrylic adhesive shall be utilized full length on all front and rear wall and roof frame members. A polyurethane adhesive sealant shall be applied to the edges of framing members that are bonded with NORBOND tape. An advanced two-part methacrylate structural adhesive shall be used to bond all side wall tubes to the exterior skin and door frames.

The module shall be constructed utilizing full-size sheet construction to minimize body seams. There shall be no corner or mid-body seams.

2.07 MODULE ROOF

In order to improve module strength and minimize exposed seams, the roof shall be seamed transversely, shall have a 1.5″ radius along the edges, and shall be welded to 2″ x 4″ wall header tubes 4.75″ below the roof line. The roof shall be supported by positive contact between sidewall framing and roof framing. All seams on the roof surface shall be continuously welded and body-worked on the outside. In order to avoid the possibility of paint and/or weld cracking, no extrusions shall be used in the exterior construction of the roof or corners of the module.

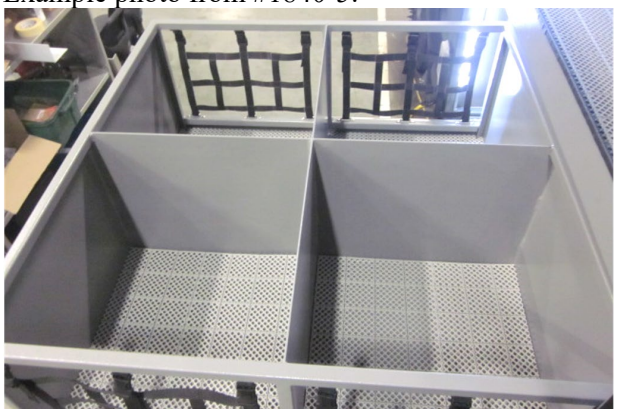
Two contoured, 3/8″ aluminum plates, painted to match the module, shall be welded to the roof structure and project through the center of the roof to serve as anchorage for personal fall arrest equipment. Each anchorage is designed and rated for a single person only.

2.08 MODULE EXTERIOR COMPARTMENTS

All compartments shall be constructed from formed 0.125″ aluminum, securely welded to the subfloor and structural framing. A baffled drain hole shall be provided in all exterior compartment bottoms that extend below the floor line. All exterior adjustable shelves shall be mounted on heavy-duty aluminum track, which is securely welded to compartment interiors. Each shelf shall support at least 300 lb of equipment.

COMPARTMENT #1
Interior Dimensions – 46″W x 56.5″H (different than shown in drawings) x 45″D
Doorway Dimensions – 46″W x 52.5″H (different than shown in drawings)
Location – Streetside, upper front
Shelving – One **reinforced** adjustable shelf with 2″ wiring hole in the back left corner, one 43.75″W vertically-adjustable roll out tray with two L-shaped brackets; one fixed roll out tray with dividers and 42″ 300 lb 100% extension slides (locking slide on right)
Door(s) – ROM roll-up door painted black to match module (Section 3.04)
Light(s) – Two LED strip lights (Section 6.26 related)
Additional Instructions –

1. Two 120VAC GFCI duplex receptacles shall be mounted on the forward wall of the compartment above the roll-out tray (Section 6.21 related).
2. A vent with MERV 8 polyester filter media and punched stainless steel plate shall be installed on the forward wall. A vent with punched stainless steel plate shall be installed on the aft upper wall, between this compartment and Compartment #3.
3. The upper roll out/tip down tray shall be constructed with 4.5″ flanges, and be mounted on 250 lb SlideMaster #SMT-Tip Down slides. The tray shall be vertically adjustable. Gray Matéflex shall be installed on the tray floor.
4. An 80 amp battery charger shall be bolted to the upper forward wall of the compartment (Section 6.23 related, not shown in drawings).
5. The lower roll out tray shall be constructed with full height cross-hatch painted aluminum dividers, separating the tray into four equal gear storage sections. Each section shall have three solid sides and a 1″ webbed net. The webbed nets shall be installed with quick release buckles at the top to allow the net to drop out of the way during use. Gray Matéflex shall be installed on the tray floor.
   Example photo from #1840-5:



COMPARTMENT #2
Interior Dimensions – 86″W x 17.625″H x 20″D
Doorway Dimensions – 86″W x 17.625″H
Location – Streetside, front lower
Shelving – One **reinforced** 81.75″W fixed roll out tray with 4.5″ flanges
Door(s) – Single, bottom-hinged with two 1.5″ diameter rubber bumpers and a **black** Eberhard E-Grabber latch (different than shown in drawings, Section 2.09.03 related).
Light(s) – One horizontal LED strip light (Section 6.26 related)
Additional Instructions –

1. A vent with MERV 8 polyester filter media and punched stainless steel plate shall be installed on the forward wall.
2. A fixed roll out tray with 18″ 300 lb slides shall be installed near the floor of the compartment. The right slide shall be of the locking type to hold the tray open/closed.
3. Two coated black polyurea aluminum grip strut, manual pull-out steps with Slidemaster #SM2-LP 70% extension 300 lb slides shall be installed under the module frame.
4. A 120VAC GFCI duplex receptacle and awning control panel with adjacent remote shall be installed on the forward wall, upper (Sections 6.21 and 4.20 related).

COMPARTMENT #3
Interior Dimensions – 47″W x 56.5″H x 45″D
Doorway Dimensions – 47″W x 52.5″H
Location – Streetside, middle
Shelving – One 44.75″W adjustable roll out tray with two L-shaped brackets; one fixed roll out tray with dividers and 42″ 300 lb 100% extension slides (locking slide on right), one **reinforced** adjustable shelf
Door(s) – ROM roll-up door painted black to match module (Section 3.04)
Light(s) – Two LED strip lights (Section 6.26 related)
Additional Instructions –

1. Two vents with punched stainless steel plates shall be installed, one each on the forward and aft upper walls, between this compartment and Compartments #1 and 3.
2. The upper roll out/tip down tray shall be constructed with 4.5″ flanges, and be mounted on 250 lb SlideMaster #SMT-Tip Down slides. The right slide shall be of the locking type to hold the tray open/closed. The tray shall be vertically adjustable. Gray Matéflex shall be installed on the tray floor.
3. The lower roll out tray shall be constructed with full height cross-hatch painted aluminum dividers, separating the tray into four equal gear storage sections. Each section shall have three solid sides and a 1″ webbed net. The webbed nets shall be installed with quick release buckles at the top to allow the net to drop out of the way during use. Gray Matéflex shall be installed on the tray floor.
4. A 120VAC GFCI duplex receptacle shall be installed on the forward wall, upper (Section 6.21 related).

COMPARTMENT #4
Interior Dimensions – 34.5″W x 56.5″H x 45″D
Doorway Dimensions – 34.5″W x 52.5″H
Location – Streetside, aft
Shelving – Four **reinforced** adjustable shelves (different than shown in drawings), two roll-out trays with L-shaped brackets.
Door(s) – Two side-hinged doors with a **black** Eberhard E-Grabber latches (different than shown in drawings, Section 2.09.03 related).
Light(s) – One LED strip light (Section 6.26 related)
Additional Instructions –

1. A vent with punched stainless steel plate shall be installed on the forward wall, between this compartment and Compartment #3.
2. The upper roll out tray shall be constructed with 4.5″ flanges, and be mounted on 300 lb 42″ slides. The right slide shall be of the locking type. The tray shall be vertically adjustable. Gray Matéflex shall be installed on the tray floor. Tray shall be installed near floor level (different than shown in drawings).
3. The lower roll out tray shall be constructed with 4.5″ flanges, and be mounted on 300 lb 42″ slides. The right slide shall be of the locking type to hold the tray open/closed. Gray Matéflex shall be installed on the tray floor.
4. A 120VAC GFCI duplex receptacle shall be installed on the forward wall, upper (Section 6.21 related).

COMPARTMENT #5
Interior Dimensions – 34.5″W x 36″H x 45″D
Doorway Dimensions – 34.5″W x 36″H
Location – Streetside, aft
Shelving – Four **reinforced** adjustable shelves (different than shown in drawings), two roll-out trays.
Door(s) – Double doors, side-hinged with **black** Eberhard E-Grabber latches (different than shown in drawings, Section 2.09.03 related).
Light(s) – One LED strip light (Section 6.26 related)
Additional Instructions –

1. A vent with punched stainless steel plate shall be installed on the aft wall.
2. The upper roll out tray shall be constructed with 4.5″ flanges, and be mounted on 300 lb 42″ slides. The right slide shall be of the locking type. The tray shall be vertically adjustable. Gray Matéflex shall be installed on the tray floor. Tray shall be installed near floor level (different than shown in drawings).
3. The lower roll out tray shall be constructed with 4.5″ flanges, and be mounted on 300 lb 42″ slides. The right slide shall be of the locking type to hold the tray open/closed. Gray Matéflex shall be installed on the tray floor.
4. A 120VAC GFCI duplex receptacle shall be installed on the aft wall, upper (Section 6.21 related).

COMPARTMENT #6 – DRAWER
Dimensions – 41″W x 9.625″H x 20″D
Location – Streetside, lower rear
Light(s) – One horizontal LED strip light (Section 6.26 related).
Additional Instructions –

1. **Reinforced** drawer shall operate on two sets of 18″ 300 lb detent slides (two on each side). Gray Matéflex shall be installed on the drawer floor.
2. Compartment shall be ventilated.
3. Drawer shall have a **black** Eberhard E-Grabber latch (different than shown in drawings, Section 2.09.03 related).
4. A coated black polyurea aluminum grip strut, full-width manual pull-out step with SlideMaster #SM2-LP 70% extension 300 lb slides be installed under the module frame, from the wheel well to extend under this compartment (not shown in drawings).

COMPARTMENT #7 – DRAWER
Dimensions – 41″W x 9.625″H x 20″D
Location – Curbside, lower rear
Light(s) – One horizontal LED strip light (Section 6.26 related).
Additional Instructions –

1. **Reinforced** drawer shall operate on two sets of 18″ 300 lb detent slides (two on each side)**.**
2. Gray Matéflex shall be installed on the drawer floor.
3. Compartment shall be ventilated.
4. Drawer shall have a **black** Eberhard E-Grabber latch (different than shown in drawings, Section 2.09.03 related).
5. A firearms loading/unloading port with **wrinkle-black-powder-coated** aluminum door shall be recessed into the module, forward of this compartment (Sections 3.04 and 4.59 related).
6. A coated black polyurea aluminum grip strut, manual pull-out step with Slidemaster #SM2-LP 70% extension 300 lb slides be installed under the module frame, as far forward as possible (different than shown in drawings).

COMPARTMENT #8
Interior Dimensions – 46.75″W x 61.25″H x 45″D
Doorway Dimensions – 46.75″W x 61.25″H
Location – Curbside, middle, above wheel well
Shelving – Four painted aluminum roll out trays, one **reinforced** adjustable shelf
Door(s) – Double, with two **black** Eberhard E-Grabber latches (different than shown in drawings) and a **black** keyed deadbolt lock installed on the forward door (Section 2.09.03).
Light(s) – Two LED strip lights (Section 6.26 related)
Additional Instructions –

1. A 120VAC GFCI duplex receptacle shall be installed on the forward upper wall, above the shelf (Section 6.21 related).
2. A vent with punched stainless steel plate shall be installed on the forward wall, between this compartment and Compartment #9.
3. An exterior two-piece **wrinkle-black powder coated** mounting bracket shall be installed aft of this compartment, for a removable white marker board (Section 4.56 related).
4. This compartment shall be for storage of ***customer-supplied-and-installed*** long guns. There shall be a full height divider with a custom full depth roll-out tray on the left for storage of ***customer-supplied-and-installed*** sniper cases. Tray shall be installed on 44″D 300 lb slides, with a locking slide on the right to hold open/closed. A quick-release strap with two footman loops shall be installed at delivery to hold the cases securely in place.
5. On the right side of the fixed divider there shall be two custom full-depth roll-out trays facing each other, with gun racks for storing long guns in an upright position. Each tray shall be installed on 44″D 300 lb slides, with a locking slide on the right of each tray to hold open/closed. Each tray shall have eight Quick Fist Original clamps installed four each on two painted aluminum c-channels bolted to aluminum tracks, to secure weapons barrels, with eight Santa Cruz Santa Cruz #SC-1900 adjustable butt stock brackets installed on slots below in the tray floors at delivery. Exact dimensions of weapons to be discussed at the preconstruction meeting.
   Example photo of Santa Cruz #SC-1900 adjustable stock bracket:

COMPARTMENT #9
Interior Dimensions – 46.75″W x 61.25″H x 45″D
Doorway Dimensions – 46.75″W x 57.25″H
Location – Curbside, upper middle
Shelving – One fixed roll out tray with dividers, one **reinforced** adjustable shelf with 2″D wire access plug in the aft rear corner, and one fixed shelf
Door(s) – ROM roll-up door painted black to match module (Section 3.04, different than shown in drawings)
Light(s) – Two LED strip lights (Section 6.26 related)
Additional Instructions –

1. This compartment shall be divided into upper and lower sections by the fixed shelf. The area above the fixed shelf shall have two adjustable dividers for storage of ***customer-supplied-and-installed*** shields, with an adjustable shelf installed above the shield storage. The fixed shelf shall have a 1″ lip and a utility strap to hold shields in place during transport.
2. Four 120VAC GFCI duplex receptacles shall be mounted, two on the forward wall, one in the upper portion, one in the lower portion, and two on the aft wall in the upper portion (Section 6.21 related).
3. The area below the fixed shelf shall be divided into a left and right section.
4. The lower section of the compartment shall have a fixed full-width painted aluminum roll-out tray on 44″D 300 lb slides, with the right slide to be the locking type to hold the tray open/closed (different than shown in drawings). Pistol storage drawer shown in drawings shall not be installed.
5. The curbside awning control panel shall be installed on the forward wall, above the roll-out tray (Section 4.20 related).
6. Two vents with punched stainless steel plates shall be installed, one each on the forward and aft upper walls, between this compartment and Compartments #8 and 11.

COMPARTMENT #10 – DAY BOX ON TRAY
Dimensions – 41″W x 17.625″H x 20″D
Location – Curbside, lower forward of wheel well
Door(s) – Bottom-hinged painted aluminum with **black** keyed deadbolt lock and two 1.5″ diameter rubber bumpers (different than shown in drawings).
Light(s) – One horizontal LED strip light (Section 6.26 related).
Additional Instructions –

1. A removable explosives day box shall be stored on a slide-out tray (different than shown in drawings, Section 5.63 related). Tray shall have four 18″ detent slides (two on each side) fixed to the floor of the compartment. Box shall be constructed of 12 ga. steel, be split in two by a fixed vertical divider, be lined with ½″ plywood, and have a hinged lid which overlaps the sides by at least 1″, with two clasps for ***customer-supplied-and-installed*** padlocks. The box shall be coated with textured gray polyurea thermoplastic elastomer (Section 3.04 related). Box shall be secured to the tray with one two-point manual adjustable seatbelt-type strap.
2. Compartment shall be ventilated.
3. A coated black polyurea aluminum grip strut, manual pull-out step with Slidemaster #SM2-LP 70% extension 300 lb slide shall be installed under the module frame.

COMPARTMENT #11
Interior Dimensions – 40″W x approx. 50″H (different than shown in drawings) x 45″D
Doorway Dimensions – 40″W x approx. 46″H (different than shown in drawings)
Location – Curbside, forward upper
Shelving – One fixed roll out tray with dividers and 42″ 300 lb 100% extension slides (locking slide on right), one **reinforced** adjustable shelf
Door(s) – ROM roll-up door painted black to match module
Light(s) – Two LED strip lights (Section 6.26 related)
Additional Instructions –

1. A vent with MERV 8 polyester filter media and punched stainless steel plate shall be installed on the forward wall. A vent with punched stainless steel plate shall be installed on the aft upper wall, between this compartment and Compartment #9.
2. The fixed roll out tray shall be located on the bottom of the compartment with 44″ 300 lb slides, with the right slide of each tray to be the locking type to hold the tray open/closed.
3. The roll out tray shall be constructed with full height front and back and dividers dividing the tray into two equal gear storage sections. Each section shall have three solid sides and a cargo net installed on the outer edge for easy separate access to all four storage sections. The cargo nets shall be installed with quick release buckles at the top to allow the net to drop out of the way during use.
4. A 120VAC GFCI duplex receptacle shall be installed on the forward upper wall, above the shelf (Section 6.21 related).

COMPARTMENT #12
Interior Dimensions – 43″W x 28″H x 24″D
Doorway Dimensions – 43″W x 28″H
Location – Curbside, lower front
Shelving – None
Door(s) – Single, louvered, top hinged, with two gas shocks and a **black** Eberhard E-Grabber latch (different than shown in drawings, Section 2.09.03 related).
Light(s) – None
Additional Instructions –

1. An Onan 6 kW diesel generator shall be installed (Section 6.44 related). Generator shall be installed so as to be adequately serviceable and shall be fueled from vehicle fuel tank. Generator shall be vented by cut outs in the compartment floor as specified by the generator manual, along with louvers in the door for additional ventilation. Generator exhaust shall be routed out below the forward corner of the module.
2. A coated black polyurea aluminum grip strut, manual pull-out step with Slidemaster #SM2-LP 70% extension 300 lb slide shall be installed under the module frame.

ROOF TOP COMPARTMENTS

Dimensions (Note: Dimensions measured from the perspective of facing each compartment, separately)

Streetside – 120″W x 15.375″H x 18″D

Front – 86″W x 15.375″H x 18″D

Curbside: 120″W x 15.375″H x 18″D

Location – Module roof

Shelving – None

Door(s) – Gasketed, hinged-up black polyurea-coated aluminum diamond plate lid with insulated box pan stiffener, two gas shock hold opens, and **black** Eberhard E-Grabber latches (different than shown in drawings, Section 2.09.03 related): two interconnected latches per streetside and curbside compartments, and one latch for the forward compartment (Sections 2.09.03 and 3.04 related).

Light(s) – Three full-width horizontal LED strip lights (one per box) (Section 6.26 related), along the upper latch edge of each box.

Additional Instructions –

1. There shall be three weatherproof rooftop 0.125″ aluminum storage boxes fabricated from aluminum welded to the module roof in an inverted U-shaped layout, and painted to match the module.
2. Four drain holes shall be provided in each compartment, one each in the forward and rear outboard corners.
3. The streetside and curbside rooftop compartments shall be reinforced, and two 14′ awnings shall be installed, one on the outer side of each compartment (Section 4.20 related).

2.09 MODULE DOORS

Compartment #2, 5, 6, 7, 8, 10, and 12 doors and passage door shall be box-pan-formed with a total thickness of 2″.

Compartment #1, 3, 4, 9 and 11 doors shall be ROM locking roll-up doors, painted to match the module (Section 3.04 related).

2.09.01 DOOR FRAME AND SEAL

Each hinged door frame shall have a flange for the installation of an air cell hollow core 360-degree compression door seal. This seal creates watertight, dust-free compartment integrity. Door seal shall be knock-on type. Door frames shall be bonded to the adjacent tubes such that no exterior flange is required.

ROM door frames shall have integrated seals.

2.09.02 DOOR HINGES

Compartment #2, 6, 7, 8, 9, 10, and 12 doors and passage door shall have full-length, piano-type, 2.5″W stainless steel hinges, positioned with 0.25″ rivets at each end. The hinges shall be attached with #12 x 0.75″ stainless steel truss head screws spaced 4″ apart, sealed with Sikaflex.

2.09.03X DOOR LATCHES

Compartments #2, 4, 5, 6, 7, 8, 10, 12, rooftop compartment door handles, and rear entrance door handle shall be **black** Eberhard E-Grabber latches (different than shown in drawings). Passage doors shall have release handles on the inside of each door. All exterior doors shall have rotary latches and striker posts that meet FMVSS 206 requirements. Striker posts shall be adjustable and be secured with a nut from behind the door frame. The striker washer shall not be removed. Doors greater than 45″ tall shall have double rotary latches activated by stainless steel rods. Once final adjustments have been made, threads shall have Loctite or equivalent applied. All double-door compartments shall have rotary latches on each door. Doors shall latch to doorframe-mounted striker posts only and not to one another. All locks shall be keyed J236.

Each ROM roll-up door shall have an aluminum spring loaded lift bar and a keyed #J236 lock.

2.09.04X COMPARTMENT DOOR CONTROL

Compartment #2 shall have two 1.5″ rubber bumpers installed (not shown in drawings).
Compartment #10 shall have a two 1.5″ rubber bumpers (different than shown in drawings).
Compartment #12 shall have two gas shocks.
ROM roll-up compartment doors shall include a spring counterbalance feature.

2.09.06 REAR DOOR CONTROL

Rear door control shall be one heavy-duty, double spring door check capable of holding the door open at approximately a 90-degree angle on any road surface.

2.09.07 COMPARTMENT DOOR SKINS

Each hinged compartment door shall have a door skin made of flat, brushed finish 0.090″ aluminum plate and be removable, and have a latch service opening with a 2.25″ x 4.5″ black rubber plug for lubrication and service. Red/white 1.5″ conspicuity tape shall be installed on the outboard vertical edge of each door, excluding ROM roll-up doors.

2.09.08 ENTRANCE DOOR SKIN

Entrance doorskin shall be made of 0.080″ bright aluminum diamond plate and be removable to service door hardware. A removable stainless-steel bezel shall be installed at mid-height on the door skin to provide access to the latch hardware (not shown in drawings).

2.09.09 ENTRANCE DOORWAYS

One 36″W x 71″H rear module entrance door shall be provided.

2.09.10X THRESHOLDS

Compartments #2, 4, 5, 8, 10 and 12 and module access door frames shall have full-width-formed stainless- steel threshold plates to protect the lower edge of frame.
Compartments #1, 3, and 9 shall have integrated thresholds with the ROM roll-up doors.

2.10 MODULE INTERIOR CABINETS

Shall be formed of 0.090″ aluminum and shall be securely welded or mounted to the structural framing. All interior adjustable shelves shall be mounted on 1″ wide aluminum track.

CABINET #1 – Electrical Cabinet
Dimensions – 25″W x 27.75″H x 8″D
Location – Streetside wall of rear work area, upper
Shelving – None
Door(s) – Painted aluminum, side hinged, door with a hold-open device, two quarter turn slotted latches, and an automatic compartment light. Door shall be have upper/lower punched ventilation sections (different than shown in drawings).
Additional Instructions –

1. This cabinet shall house the electrical component module and load center (Section 6.01 related).
2. The streetside interior wall shall be finished with GB-33631 white paint with an additional clear coat to be used as a dry erase surface (Sections 3.07 and 5.23 related, different than shown in drawings).

CABINET #2
Dimensions – 37.5″W x 22″H x 12″D
Location – Forward wall of rear work area, upper curbside
Shelving – Three adjustable
Door(s) – 1″ webbed net with four quick release buckles on the lower cabinet doorframes
Lighting – A Code 3 CW0400 Series #CW0411-WR 11.8″L red/white LED work light with touch switching shall be installed below this cabinet (Section 6.14 related).
Additional Instructions –

1. Cargo net shall have hook-and-loop straps installed at the top to hold the net up during use.

CABINET #3
Dimensions – 37.5″W x 22″H x 12″D
Location – Forward wall of rear work area, upper streetside
Shelving – Three adjustable
Door(s) – 1″ webbed net with four quick release buckles on the lower cabinet doorframes
Lighting – A Code 3 CW0400 Series #CW0411-WR 11.8″L red/white LED work light with touch switching shall be installed below this cabinet (Section 6.14 related).
Additional Instructions –

1. Cargo net shall have hook-and-loop straps installed at the top to hold the net up during use.

#4 – Work Station
Dimensions – 81.875″W x 24″H x 20″D
Location – Forward wall of rear work area
Shelving – None
Door(s) – None
Additional Instructions –

1. A full depth one-piece 16 gauge, 304 stainless steel countertop with a rolled down edge, and aluminum cove trim along the wall shall be installed.
2. Five 120VAC GFCI duplex receptacles shall be installed in a raceway on the back wall (Section 6.21 related, not shown in drawings).
3. A 12VDC receptacle and dual USB port with round cover shall be installed in the raceway (Section 6.25 related, not shown in drawings).
4. The forward wall between the counter and upper cabinets shall be finished with GB-33631 white paint with an additional clear coat to be used as a dry erase surface (Sections 3.07 and 5.23 related, different than shown in drawings).
5. A digital thermostat and generator remote panel shall be installed on the back wall, lower center (Sections 5.17 and 6.44 related, not shown in drawings).
6. There shall be 64.25″W x 28.5″H x 20″D open storage located below the work area.
7. Two rolling mesh fabric task chairs shall be provided for work station seating. A 1″ strap with footman loops and a quick-release buckle shall be installed to hold both chairs in place during transit (Section 5.33 related).
8. A ***customer-supplied*** all-in-one radio transceiver with auxiliary speaker shall be centered above the countertop (Sections 6.18 and 8.02 related.)

CABINET #5 - Drawers
Dimensions – 17.625″W x 30″H x 20″D
Location – Curbside, below work station
Additional Instructions –

1. Two 13″W x 5″H x 19″D metal drawers shall be installed above. Each drawer shall operate on slides rated at 300 lb per set and have a gas shock hold open/closed device to ensure drawers do not accidentally open or close during operation of the vehicle. Drawers shall be of formed 0.125″ aluminum construction, painted to match the interior. Each drawer shall have machine-stamped divider supports along the sides with four removable ABS dividers per drawer.
2. One aluminum drawer shall be installed below and be set up for hanging file storage. The drawer shall operate on slides rated at 300 lb per set and have a gas shock hold open/closed device to ensure drawer does not accidentally open or close during operation of the vehicle. Drawer shall be of formed 0.125″ aluminum construction, painted to match the interior.
3. Two sets of manual seatbelt straps (different than shown in drawings) shall be secured to the curbside interior wall of the rear work area, for storage of a ***customer-supplied-and-installed*** portable ladder, details to be determined at the preconstruction meeting (Section 4.14 related).

2.14 WHEEL WELL LINERS

Wheel well liners made of formed aluminum shall be installed in the module wheel well openings.

2.15 ELECTROLYSIS PREVENTION

All external materials and fasteners shall be selected to prevent electrolysis and corrosion due to dissimilar materials and exposure to the elements. The module shall be painted before any exterior items (hinges, latches, door hold opens, etc.) are installed to provide an isolating film between dissimilar materials. Exterior fasteners used for direct connection to painted aluminum surfaces shall be coated with a corrosion inhibitor.

3 COATINGS AND FINISHES

3.01 MODULE FINISH PREPARATION

The module shall be seam sealed and all imperfections on aluminum surfaces of module shall be sanded smooth. The entire exterior shall be mechanically etched and washed with wax-and-grease-remover to ensure proper primer/sealant adhesion.

3.02 MODULE PRIMER

Module shall be sealed with a two-component, low VOC, direct-to-metal epoxy primer/sealant prior to applying the finish coat of acrylic urethane paint.

3.03 PAINT TYPE

Shall be Sherwin Williams acrylic urethane.

3.04X COLOR SCHEME

Base color: To match Agate Black (UM) (GB-100558185 v2)
ROM doors for Compartments #1, 3, 4, and 11 shall be painted to match Agate Black (GB-100558185 v2) **by ROM**, to match the module.
The following items shall be sand blasted and coated with **black textured polyurea:**

- Five pull-out manual steps
- Rock guards
- Rear kick panel
- Rear license plate holder
- Rear bumper
- Three rooftop compartment storage lids

The following items shall be sand-blasted and finished with **wrinkle black powder-coating** (Section 3.04 related):

- Exterior two-piece mounting bracket for removable white marker board
- Firearms loading/unloading port Cast Products door
- Two shoreline stainless steel plates
- Fuel fill
- Fuel splash guard
- Folding steps
- DEF fill attachment

The following items shall be sand-blasted and finished with **gloss black powder-coating** (Section 3.04 related):

- Drip rails

3.04.01 CHASSIS COLOR

Chassis shall be OEM Agate Black (UM) (Section 1.01.11 related).

3.04.02 CHASSIS WINDOWS

The driver's/passenger's window(s) shall have 5% VLT tint added (Section 1.02.43 related).

3.06X COMPARTMENT FINISH

All compartments shall be sanded, etched, washed, primed, coated with textured polyurea thermoplastic elastomer finish and painted light gray (GLV-51748).
All shelves and trays shall be sanded, etched, washed, primed, and painted light gray (GLV-51748).

3.07X INTERIOR CABINETRY FINISH

All interior cabinetry shall be sanded, etched, washed, primed, and painted white (G2-33631 Alt 2). All large wall areas shall have an additional clear coat to be used as a dry erase surface (Section 5.23 related).

All drawers, shelves and trays shall be sanded, etched, washed, primed, and painted white (G2-33631 Alt 2).

3.08 MODULE UPHOLSTERY

Module upholstery material shall be Dove Gray Spradling Perform 60 seamless vinyl.

3.09 MODULE FLOORING MATERIAL

Shall be Genome (#TFM2702) Altro Transflor Meta Slip-Retardant Sheet flooring providing durability, ease of maintenance and stain resistance. It shall contain a high concentration of microscopic aluminum oxide particles and colored quartz crystals suspended throughout the thickness with silicon carbide grains in the entire wear surface for slip-retardant performance. It shall have an overall thickness of 0.11″ nominal. Flooring shall be manufactured for Wear Resistance to meet ASTM C 501, indentation resistance in accordance with ASTM F 1303 and ASTM F 970, Grade 1 standards, shall meet ASTM D 2047 Slip Retardant, ASTM F 970 Static Load, ASTM E648, CMVSS, FMVSS 302, CAN ULC S102.2 Fire Data Tests. (Section 5.04 related)

An insulated floor shall be installed over the 0.125″ aluminum subfloor and shall be comprised of 0.75″ thick polyiso insulation between 0.75″ x 0.75″ x 0.063″ square tubing, covered with a 0.125″ aluminum sheet (Section 2.04 related).

3.10 COMPARTMENT LINING

Compartment floors shall be lined with light gray Matéflex floor tile and all shelves with mat, unless otherwise noted.

3.11 CABINET LINING

Interior cabinet shelves shall be lined with easy sweep mats which are removable for ease of cleaning.

3.12 SURFACES AND FINISHES

All module interior compartment surfaces and finishes shall be impervious to soap, disinfectants, and water, to permit washing and sanitizing.

4 MODULE EXTERIOR

4.01 STEP/BUMPER

The rear bumper shall be a welded construction of 3″ x 3″ x 0.375″ aluminum angle and 1.5″ x 0.25″ flat bar and shall be covered by 0.125″ bright aluminum diamond plate, sand-blasted and **coated in textured black polyurea**. The entire top shall be non-skid Grip Strut and shall provide a 10″ step (Section 3.04 related). Both outermost ends shall be angled to prevent dragging of corners in high angle of departure areas. Diamond plate shall be formed on front and rear edges for channel-type strength. The bumper shall be bolted directly to the chassis frame using high strength Grade 5 bolts. Bumper shall be easily removable and replaceable in case of damage.

4.02X RUB RAILS

Extruded aluminum rub rails of a double channel design shall be installed along the lower streetside and curbside edges of the module. Rub rails shall be 2.5″H x 0.75″W x 0.125″D, with a 0.5″H black conspicuity reflective tape installed in the insert area.
Rub rails shall be coated in textured black polyurea (Section 3.04 related).

4.03 FENDER RINGS

High grade weather-resistant industrial black rubber fender rings with a rounded outer edge shall be installed on the module, following the full contour of the wheel well opening and projecting 2.5″ from the module body.

4.04 DRIP RAIL

Extruded, anodized aluminum drip rails shall be installed the full length of the module front, rear, and sides near the roof. Drip rails shall be installed with bonding tape and mechanical fasteners on each end that shall withstand exposure to the elements. They shall be finished with 45-degree angled ends to avoid hooking materials which brush against the vehicle causing damage.
Drip rails shall be sand-blasted and finished with gloss black powder-coating (Section 3.04 related).

4.05 ROCK GUARDS

Bright aluminum diamond plate rock guards shall cover the front module corners, 24″ up from bottom of module, 2.5″ wrapped around the sides of module, and 15″ across the front of the module.
Rock guards shall be sand-blasted and finished with textured black polyurea thermoplastic elastomer (Section 3.04 related).

4.06 REAR KICK PANEL

An aluminum diamond plate rear kick panel shall extend from the bottom edge of the module up to the bottom of the rear doors, full-width formed and wrapped 2.5″ around the sides of the module.
Rear kick panel shall be sand-blasted and finished with textured black polyurea thermoplastic elastomer (Section 3.04 related).

4.07X FUEL FILL

A polished cast aluminum fill well shall be installed on the streetside of the module and be properly vented (not shown in drawings). Fill and vent hoses shall be installed and protected in accordance with the chassis bodybuilder recommendations.
A fill shall be provided for the DEF tank, between the cab and module, streetside.
Fuel fill and DEF fill attachment plate shall be **wrinkle-black-powder-coated** (Section 3.04 related).

4.08 MODULE WINDOW

The rear passage door window shall be 18.75″ x 18.75″ with fixed glass. It shall have a black anodized aluminum frame, rubber gasket, be dark-tinted and shall be attached with screws for ease of replacement

4.09X FUEL SPLASH GUARD

A stainless steel fuel splash guard shall be installed below the fuel fill (not shown in drawings). Fuel guard shall be **wrinkle-black-powder-coated** (Section 3.04 related).

4.14 LADDER

Two sets of manual seatbelt straps (different than shown in drawings) shall be secured to the curbside interior wall of the rear work area, for storage of a ***customer-supplied-and-installed*** portable ladder, details to be determined at the preconstruction meeting (Section 4.14 related).

4.16 REAR LICENSE PLATE

A recessed license plate holder with dual incandescent lights shall be installed in the rear kick panel, centered below rear doors.
License plate holder shall be sand-blasted and finished with textured black polyurea (Section 3.04 related).

4.20X AWNING

Two 14 ft. wide Girard G-2000 electric awnings, each with a 10 ft. canvas extension shall be installed on the roof of the module, curbside and streetside, bolted to the sides of the rooftop compartments. The awning cases shall be black, and the canvas shall be gray.
The streetside control panel shall be installed in Compartment #2 on the forward wall, upper, with an adjacent handheld wireless remote attached with hook and loop tape.
The curbside control panel shall be installed in Compartment #8 on the forward wall above the roll-out tray, with an adjacent handheld wireless remote attached with hook and loop tape.
Rooftop compartments shall be reinforced for awning installation.
A Whelen #3SR00FRR red LED flashing light shall be installed in the cab headliner (Sections 1.02.21 and 6.12 related). The light shall flash when the emergency brake is released and the awning is deployed.
A placard with white text on red background shall be installed near the flasher, stating:
″AWNING EXTENDED
Don't move vehicle
if light is on.″

4.23 FOLD-DOWN STEPS

Five Cast Products #SP6610-1CH extra grip folding step/handholds shall be mounted on the rear wall, to the right of the entrance doorway of the module, for accessing the rooftop storage. Steps shall be **wrinkle-black-powder-coated** (Section 3.04 related).

4.34 AUTOMOTIVE UNDERCOATING SEAL

The chassis and module underbodies (excluding the area above the fuel tank, driveline, and exhaust lines, per manufacturer's specifications) shall be sprayed with undercoating for reduced corrosion and added sound deadening.

4.56 WHITE MARKER BOARD

An exterior two-piece stainless steel mounting bracket shall be installed above Compartment #7 for a removable white marker board. The white marker board shall be stored in an exterior compartment, exact location to be determined at the preconstruction meeting.

The two-piece mounting bracket shall be coated with **wrinkle-black-powder-coating** (Section 3.04 related).

4.59 FIREARMS LOADING/UNLOADING PORT

A Concept Development Corporation Model #APC-100W wall-mounted loading/unloading port shall be installed just aft of the curbside wheel-well. Loading port shall be covered by a **wrinkle black powder-coated** Cast Products aluminum door (Section 3.04 related).

5 MODULE INTERIOR

All interior hangers, supports, fasteners, latches, and hinges shall be of a near-flush-type design. The work area compartment shall be free of sharp projections. Exposed edges and corners shall be broken with a radius or protected with 1″ high-density foam covered with heavy-duty vinyl color-matched upholstery.

5.01X UPPER WALL COVERING

All interior walls shall be constructed of 0.125″ aluminum which is sanded, etched, washed, primed, and painted white (G2-33631 Alt 2).
The large interior wall areas of the rear work area (e.g. curbside wall, streetside wall, #4 Workstation wall between counter and upper cabinets, and full-height walls adjacent to the rear passage door) shall be painted with GB-33631 white paint with an additional clear coat to be used as a dry erase surface (Sections 3.07 and 5.23 related).

5.02X HEADLINER

The headliner shall be 0.125″ aluminum which is sanded, etched, washed, primed, and painted white (G2-33631 Alt 2).

5.03 HEAD PAD/CUSHION

Head pad located over module access opening shall be 1.5″ foam covered with heavy-duty seamless vinyl upholstery (Section 3.08 related).

5.04 LOWER WALL COVERING

All interior walls shall be constructed of 0.125″ aluminum which is sanded, etched, washed, primed, and painted white (G2-33631 Alt 2).

5.06 ACCESS DOOR GRAB RAIL

The module access door shall have a 1.250″D L-style stainless steel grab handle which may also be used as an entry assist rail.

5.16 INSULATION

The module side, ends, roof, doors, and floor shall be insulated to enhance the interior environment and to restrict heat, cold, and external noise from entering the module. The insulation shall be a non-settling foam plank material of 1.5″, or 0.75″ thickness depending upon location and available space.
Roof, doors, wall, and floor insulation shall be polyisocyanurate.
A 3″ wide, 60-mil, closed cell polyethylene foam tape shall be used as a thermal break on the inside surface of the wall tubes.

5.17D MODULE CLIMATE CONTROL SYSTEM

A 120VAC Coleman Mach 8 Roughneck rooftop 15,000 BTU cooling AC unit (or equal), with heat strip and a black housing shall be installed on the module roof, aft. The unit shall have a fan and controls independent of the cab system, shall run off curbside shoreline and the generator, and shall be plumbed to drain condensation via a flexible hose through the module structure to the ground. A digital thermostat shall be installed on the #4 Workstation wall (not shown in drawings).

5.23X WHITE MARKER BOARD SURFACES

The large interior wall areas of the rear work area (e.g. curbside wall, streetside wall, #4 Workstation wall between counter and upper cabinets, and full-height walls adjacent to the rear passage door) shall be painted with GB-33631 white paint with an additional clear coat to be used as a dry erase surface (Section 3.07 related).

5.33D MODULE INTERIOR SEATING

Two rolling mesh fabric task chairs shall be provided, one per work station seating. A 1″ strap with footman loops and quick-release buckles shall be installed to hold both chairs in place during transit.

5.63 DAY BOX

A removable explosives day box shall be stored on a slide-out tray in Compartment #10 (different than shown in drawings). Tray shall have four 18″ 300 lb detent slides (two on each side) fixed to the floor of the compartment. Box shall be constructed of 12 ga. steel, be split in two by a fixed vertical divider, be lined with ½″ plywood, and have a hinged lid which overlaps the sides by at least 1″, with two clasps for customer-supplied-and-installed padlocks. The box shall be coated with textured gray polyurea thermoplastic elastomer (Section 3.04 related). Box shall be secured to the tray with one two-point manual adjustable seatbelt-type strap.

6 ELECTRICAL

All added body and chassis electrical equipment shall be served by circuits separate and distinct from the vehicle chassis circuits. All vehicle wiring shall be copper and conform to all SAE J1128 requirements. The wiring shall be colored, numbered, or function coded every 3″ for permanent identification and correspond with the vehicle schematics. Solderless, insulated connectors shall be used. Slotted Panduit-style wiring duct shall be used in electrical component module to ensure air circulation throughout power component wiring. The wiring shall be routed in conduit or looms and wiring shall be secured to the underbody or frame with insulated metal cable straps. All power distribution cabling shall be covered with a protective split loom. Where wiring passes over the exhaust, a heat shield shall be installed. The electrical component module shall be equipped with positive locking plugs to provide easy disconnect for remount or repair of body. All wiring devices, switches, outlets, etc., except circuit breakers, shall be rated to carry 125% of the maximum ampere load for which the circuit is protected.
The vehicle electrical system shall be tested and certified to AMD 005 requirements.

6.01 ELECTRICAL LOAD DEVICES

Body electrical wiring shall utilize overload protective devices of the automotive-type circuit breaker. In addition, one single pole, 20-amp circuit breaker shall be provided for future use. The circuit breakers, relays, and other electrical items shall be located in included as part of the enclosed electrical component module located in Cabinet #1.

6.02 VOLTMETER/AMMETER

A single display voltmeter/ammeter shall be installed on the side of the console, driver's side, which simultaneously displays voltage and alternator current when the ignition is on (Section 6.09 related). Display flashes to indicate low voltage.

6.04 IGNITION CONTROL

Chassis electrical circuits shall be controlled by the ignition switch as provided by the OEM chassis manufacturer. The auxiliary chassis-related functions shall be powered by one 100-amp continuous duty solenoid, triggered by the chassis ignition.

6.05 MODULE POWER

Module power shall be controlled by a console-mounted switch labeled ″MODULE DISC.″ which activates one 100-amp continuous duty solenoid located in the power component module (Section 6.09 related).

6.06 WIRING ACCESS

All cabinets and compartments shall have removable panels as needed to access wiring harnesses and hoses.

6.07 BACK-UP ALARM

An SAE J994-compliant self-adjusting back-up alarm shall be installed, with a momentary disable switch labeled ″BACK-UP DISABLE″ in the driver's console (Section 6.09 related). If disabled while in reverse, the back-up alarm shall automatically reset when shifted out of reverse.

6.08 SERVICE LOOP

A 6″ service loop of wire or harness shall be provided at all electrical components, terminals, and connection points.

6.09X DRIVER'S CONSOLE/MAP BOX

A custom driver's console made of **wrinkle-black-powder-coated** formed aluminum shall be installed between the seats. It shall have a custom switch panel with the following layout, and a map holder with mill-finished aluminum dividers, with a map light (Section 6.11 related)

Passage Compt. D/O Lights	1.	2.	3.	4.	5.	6.
	Emerg. Master	Module Disc.	Back-up Disable	Compt. Lights	Spare	Spare

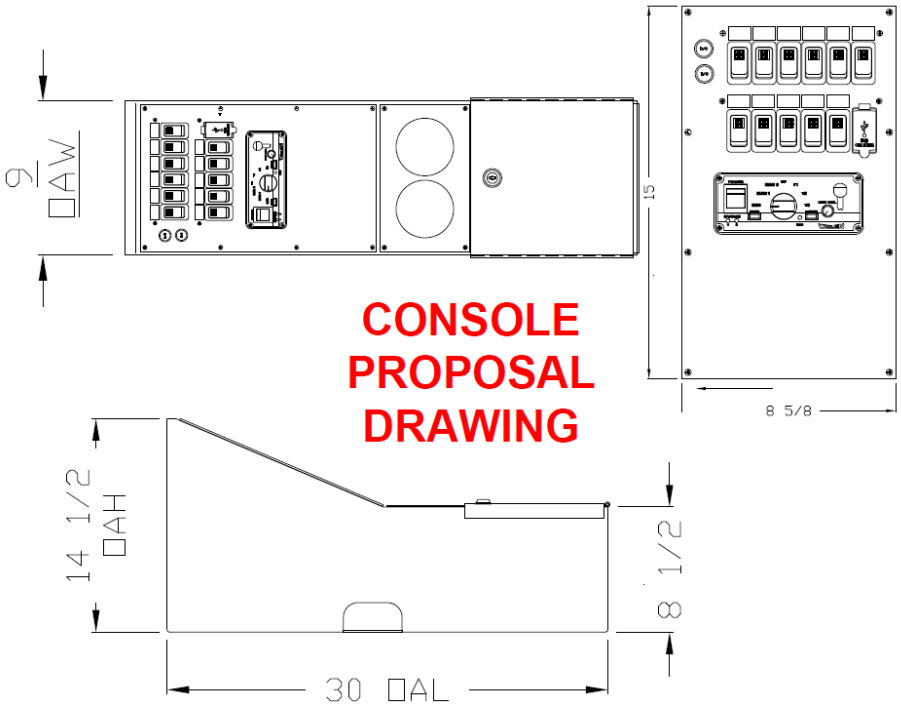
7.	8.	9.	10.	11.	12.
Left Scene	Right Scene	Front Scene	Rear Scene	Spare	Dual USB

Siren (Section 6.30.09)

Customer-supplied all-in-one radio
(Make/model TBD at preconstruction meeting
(Section 6.18 related).

Cup holder	Cup holder

Locking storage



ADDITIONAL ITEMS:
Customer-supplied auxiliary speaker on front of the console (Sections 6.18 and 8.02 related).
A digital voltmeter shall be installed on the driver's side of the console (Section 6.02 related).

6.10 SWITCHES
Switches installed in the driver's console and rear control panel shall be rocker-type and permanently marked by function.

6.11X MAP LIGHT
A map light with a 19″ flexible neck and **red lens** shall be mounted on the right forward corner of the driver's console (Section 6.09 related).

6.12 DOOR AJAR WARNING LIGHT
A flashing LED light with a red lens shall warn the driver of an open module passage door, and a flashing LED light with an amber lens shall warn the driver of an open module compartment door. The lights shall flash and buzzer shall sound only if the vehicle is out of park. The lights shall be installed on the driver's console (Section 6.09 related).
A 3″ Red Lens Red LED flashing light shall be installed in the headliner to warn driver when awning is extended (Section 1.02.21 related). The light shall flash when the emergency brake is released and either awning is deployed.
A placard with white text on red background shall be installed near the flasher, stating:
″AWNING EXTENDED
Don't move vehicle
if light is on.″

6.13X WORKSTATION CONTROL PANEL
A two-switch control panel shall be located on the interior wall, to the curbside of the rear passage door, with the following switch layout (not shown in drawings):

1.	2.
Dome Hi-Off-Lo	Red Dome

A single switch labeled ″REAR SCENE″ shall be installed below the two-switch panel (Section 6.30.04 related).

6.14D CABINET LIGHTING
Two Code 3 CW0400 Series #CW0411-WR 11.8″L red/white LED work lights with touch switching shall be installed, one each below Cabinets #2 and 3.

6.16D MODULE INTERIOR LIGHTING
Shall be designed to keep vehicle height to a minimum without interfering with the structural integrity of the roof. Module interior lighting shall consist of two dual intensity Whelen #80CREHCR red/white LED dome lights. Both lights shall be controlled by a ″DOME HI-OFF-LO″ (white lights) switch and a ″RED DOME″ switch, with both switches in a two-switch panel located just inside the rear passage door, towards the curbside (not shown in drawings).

6.17 BASIC EXTERIOR LIGHTING

Basic lighting shall include headlights, parking lights, directional signal lights, tail and stop lights, license plate light, back-up lights, hazard lights, identification lights, clearance lights, and side marker lights as required by FMVSS 108.

Module identification lights, clearance lights, and side marker lights, unless included on a lightbar, shall be Truck-Lite LED Model 36.

Rear and side reflex reflectors shall be installed in accordance with FMVSS 108 requirements.

Rear stop/tail, turn and back-up lights shall be Truck-Lite Model 45 series LED lights, installed in the rear kick panel, pattern from outboard in: red stop/tail light, amber turn signal, and clear back-up light. The back-up lights shall activate automatically when the vehicle is placed in reverse.

6.18 COMMUNICATIONS EQUIPMENT

The customer shall be responsible for powering up and tuning of any radio equipment.

Item #1

Description: One ***customer-supplied*** all-in-one radio transceiver with mic and auxiliary speaker (Section 8.02 related). Make/model to be determined at the preconstruction meeting.

Location: Driver's console (Section 6.09 related); aux speaker on front of console

Additional Instructions: All connections shall be made, including Antenna, Antenna cable(s), battery power and/or ignition power, and grounds. Prior to powering up of the module, all in-line fuses of radio equipment shall be removed and secured to their fuse holders.

Item #2

Description: One ***customer-supplied*** all-in-one radio transceiver with mic and auxiliary speaker (Section 8.02 related). Make/model to be determined at the preconstruction meeting.

Location: Centered above #4 Workstation

Additional Instructions: All connections shall be made, including Antenna, Antenna cable(s), battery power and/or ignition power, and grounds. Prior to powering up of the module, all in-line fuses of radio equipment shall be removed and secured to their fuse holders.

6.19 ANTENNA MOUNTS AND CABLES

Three NMO universal antenna mounts with KHFUD/RG58UD cables, Larsen HyPermaster universal connectors and mini-UHF adapters shall be installed on the module roof. Antenna base access shall be through the dome light openings, and the cables shall terminate, one in the driver's console, one above #4 Workstation in the rear of the module, and one termination location to be determined at the preconstruction meeting.

6.21A SHORELINES/GENERATOR LOAD CENTER

Utility power shall be furnished with 120VAC shorepower via two 20-amp Kussmaul Super Auto-Eject plugs with black covers and green indicator lights on **wrinkle-black powder-coated** stainless-steel plates (Section 3.04 related), one each located on the streetside and curbside forward corners of the module and distributed through a load center located in Cabinet #1. The streetside shoreline connection shall be labeled ″PRIMARY″ and shall power 120VAC receptacles and the battery charger. The curbside shoreline connection shall be labeled ″SECONDARY″ and shall power the rear rooftop A/C unit. An automatic transfer switch shall be furnished and wired between the generator and streetside shoreline to provide power to selected 120VAC loads from either electrical source. All exposed 120VAC receptacles shall be GFCI protected.

Load Center #1

1.	Rooftop A/C w/heat strip, (20A non-GFCI, Generator and Secondary Shoreline)	2.	80 amp Battery Charger (20A non-GFCI, Primary Shorepower & Generator)
3.	Curbside Awning (15A non-GFCI, Shorepower #1 & Generator)	4.	Streetside Awning (15A non-GFCI, Shorepower #1 & Generator)
5a. 5b.	Receptacles, S/S exterior (15A non-GFCI, Shorepower #1 & Gen) Receptacles, C/S exterior (15A non-GFCI, Shorepower #1 & Generator)	6a. 6b.	Receptacles, #4 Workstation (15A non-GFCI, Shorepower #1 & Generator) Blank (15A non-GFCI, Shorepower #1 & Generator)

Five interior 120VAC GFCI duplex receptacles shall be installed in a raceway in #4 Workstation (not shown in drawings), in the rear of the module.

Twelve 120VAC GFCI duplex receptacles shall be installed:

- Two in Compartment #1
- One in Compartment #2
- One in Compartment #3
- One in Compartment #4
- One in Compartment #5
- One in Compartment #8
- Four in Compartment #9
- One in Compartment #11

Two exterior 120VAC GFCI duplex receptacles installed with **black** weather proof covers shall be mounted:

- One rear of module, streetside
- One rear of module, curbside

6.22 BATTERY GROUNDS

In addition to OEM chassis grounds, the following ground circuits with soldered ends shall be added to reduce RF interference:

- A minimum 4 ga. ground cable from the power component panel to the chassis frame.
- Two braided ground straps from the module body to the chassis frame.
-

6.23 BATTERY CHARGER

An 80 amp minimum battery charger/conditioner shall be installed in Compartment #1 (not shown in drawings), and wired to primary shoreline. The charger shall have a totally filtered output voltage, locked at a maximum 14 volts. The charger shall be designed for long term charger and converter operation without damage to batteries.

6.25 12VDC POWER SUPPLY

One 12VDC, 15-amp lighter-style power point receptacle shall be installed in the #4 Workstation raceway (not shown in drawings)

Two USB dual charging ports shall be installed:

- One round Blue Sea dual port with cover in the #4 Workstation raceway (not shown in drawings)
- One Blue Sea dual port, switch-insert-style in the driver's console (Section 6.09 related).

All 12VDC power point receptacles, USB charge ports, 12VDC charging circuits, electric air compressors, if present, shall be powered from a 12VDC auxiliary bus. An InPower LVD20-100-SPC540 low voltage disconnect switch shall deliver power to the auxiliary bus only when the supply voltage to the vehicle batteries is at or above 13.0 VDC.

6.26 COMPARTMENT LIGHTING

LED strip lighting shall be installed in each outside compartment, excluding generator Compartment #12, and shall be activated by the respective compartment door switch. Compartments #1, 3, 5, 8, and 9 shall each have two strip lights installed. An override switch labeled ″COMPT. LIGHTS″ shall be installed in the driver’s console (Section 6.09 related).

6.27 EXTERIOR DOOR SWITCHES

Shall be 1/2″ mechanical door switches.

6.30 EMERGENCY WARNING SYSTEMS

6.30.01 FRONT LIGHTBAR

A ***customer-supplied*** Sound Off Signal 54″W nFORCE NXT with flashers and flood lighting shall be centered on the upper front of the module, lighthead configuration to be determined at the preconstruction meeting (different than shown in drawings, Section 8.02 related).

Red/Blue Flasher portion shall be controlled by the ″EMERG. MASTER″ switch on driver's console (Section 6.09 related). White steady portion shall be controlled by ″FRONT SCENE″ switch on the driver's console (Section 6.30.04 related). Details to be determined at the preconstruction meeting.

A ***customer-supplied*** Sound Off Signal mpower 7″ x 3″ combination red/blue flasher/steady white light head with black bezel shall be centered on the upper front of the module (different than shown in drawings, Section 8.02 related).

Red/Blue Flasher portion shall be controlled by the ″EMERG. MASTER″ switch on driver's console (Section 6.09 related). White steady portion shall be controlled by ″FRONT SCENE″ switch on the driver's console (Section 6.30.04 related). Details to be determined at the preconstruction meeting.

Front recessed lightbar shown in drawings shall not be installed.

6.30.03X FLASHERS

Ten ***customer-supplied*** Sound Off Signal mpower 7″ x 3″ combination red/blue flasher/steady white light heads with black bezels shall be shall be installed (different than shown in drawings, Section 8.02 related):

- Eight on the upper sides of the module in the corners, four each on the streetside and curbside
- Two on the rear of the module above the kick panel, one each on the streetside and curbside

Four ***customer-supplied*** Sound Off Signal mpower 4″ x 2″ combination red/blue flasher/steady white light heads with black bezels shall be installed on the module rear, upper (different than shown in drawings, Section 8.02 related):

Red/Blue Flasher portions shall be controlled by the ″EMERG. MASTER″ switch on driver's console (Section 6.09 related). White steady portions shall be controlled by ″FRONT SCENE″ switch on the driver's console (Section 6.30.04 related). Details to be determined at the preconstruction meeting.

6.30.04X SCENELIGHTS

The white portion of all Sound-Off combination flasher/scenelights shall be set to steady, for use as scenelight. Scenelights shall be controlled by the respective switches on the driver's console (Section 6.09 related).

6.30.08 GRILLE LIGHTS

Two ***customer-supplied*** Sound Off Signal mpower 4″ x 2″ combination red/blue flasher/steady white light heads with black bezels shall be installed on the OEM grille (different than shown in drawings).

Red/Blue Flasher portion shall be controlled by the ″EMERG. MASTER″ switch on driver's console (Section 6.09 related). White steady portion shall be controlled by ″FRONT SCENE″ switch on the driver's console (Section 6.30.04 related). Details to be determined at the preconstruction meeting.

6.30.09 SIREN

A Whelen 295SLSA1, 200-watt siren shall be installed in the driver's console (Section 6.09 related). Standard features shall include Radio Rebroadcast, Public Address, Manual, Wail, Yelp, Air horn, and Piercer tones. The siren's hands-free function shall operate through the OEM horn ring circuit when the sirens rotary selector is in the HF position and the Emergency Master switch is on.

6.30.10X SIREN SPEAKERS

Two Federal Signal DynaMax #ES100C speakers with ESFMT-EFB ″Electric F″ (#2856700276A) **black** grilles shall be installed in the OEM bumper.

6.40 ELECTRIC DOOR LOCKS

Electric door locks shall be installed on all compartment and module passage doors. A lock/unlock switch shall be provided in the module on the rear passage door. The door locks for the cab and module shall be interconnected, to allow all doors to be locked/unlocked from either the cab or module.

6.44 GENERATOR

An Onan 6 kW diesel generator shall be installed in Compartment #12 and be wired to all 120VAC loads, with the exception of the block heater if present. Generator shall be installed so as to be adequately serviceable and shall be fueled from vehicle fuel tank. Fuel supply to the generator shall be cut off when the chassis tank to which it is connected falls below 1/4 full. A warning label shall be provided and installed on the cab console stating: ″Generator will turn off when fuel drops to quarter tank″. A remote start panel with an integrated hour meter shall be installed on the forward wall of the rear work area. Generator shall be vented by cut outs in the compartment floor as specified by the generator manual, along with louvers in the door for additional ventilation. The compartment light shall be omitted from the generator compartment (Section 6.26 related). Generator exhaust shall be routed out below the side of the module.

6.46 AUDIO/VIDEO EQUIPMENT/BACK-UP CAMERA

Item #1

Description: A Rostra back-up camera system shall be installed, including a surface-mounted camera and a rear view mirror/monitor with a 4.3″ screen.

Location: Camera on the rear of the module, centered above the rear passage door. Rearview mirror/monitor centered on chassis windshield, upper.

Additional Instructions: Camera shall automatically display on monitor when the vehicle is placed in reverse. The programming remote shall be shipped loose (Section 8.01 related).

7 SUPPORTING DOCUMENTATION

7.01A OWNER'S MANUAL

Shall be provided with the vehicle and shall include the following items:

1. Braun Northwest Contact Information
2. Table of Contents
3. Certifications and Labels
   a. FMVSS Certification Sticker*
   b. Customer Usable Payload Sticker*
   c. Tire and Loading Information Sticker (for under 10k GVWR only)*
   d. Braun Northwest Paint Sticker**
   e. AMD 005 Low Voltage Electrical System Test
4. Braun Northwest Warranties
   f. Lifetime module warranty
   g. Seven-year/75,000-mile limited electrical warranty
   h. Two-year/30,000-mile conversion warranty
   i. Five-year paint warranty
   j. Chemical De-Icer Statement
5. Service and Operations manual
6. Electrical
   a. Wire charts and plug pinouts
   b. Harness layout
   c. Schematics
7. Parts list
8. Paint information
9. Product Brochures and Information
10. Specifications and Drawings
11. Second OEM chassis key

* These stickers are applied adjacent to the chassis OEM stickers, typically on the B pillar.

** This sticker is typically applied to the inside of the electrical cabinet door.

8 MISCELLANEOUS EQUIPMENT

8.01 LOOSE EQUIPMENT

The following equipment shall be shipped loose with the vehicle:

1. Touch-up paint, one bottle each:
   – To match Agate Black (GB-100558185 v2)
   – Light Gray (GLV-51748)
   – White (G2-33631 Alt 2).
2. Two 20 amp cord ends for shorelines
3. One antenna coax end
4. Four compartment keys, J236
5. Rearview mirror remote
6. 10′ HDMI cable
7. Spare tire and wheel

8.02 CUSTOMER-SUPPLIED EQUIPMENT

The customer shall provide the following equipment and have delivered to Braun Northwest within 30 days of the preconstruction meeting:

1. Two all-in-one radios with auxiliary speakers (make/model TBD at preconstruction meeting)
2. Sound Off Signal flasher/scene lighting package, make/model/quantities TBD at the preconstruction meeting)

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