VIRGINIA BEACH DEPARTMENT OF EMS

TECHNICAL ASSET SYSTEM INTEGRATION REQUIREMENTS

(TASIR)

Table of Contents

1 Introduction

In so far as each of the Department's volunteer rescue squads desires to operate its own technical assets (ambulances, duty radios, etc) in the Virginia Beach EMS system, there exists a need to integrate those assets with municipal and regional infrastructure and processes. This document, along with any documents it references, specifies requirements for such integration.

1.1 Desired state

This document is written with the following high-level goals in mind:

- System integration concerns are defined before a procurement begins and are raised at initiation of the procurement process.
- Such definitions are composed of:
    - Written words
    - Charts
    - Drawings
    - Pictures
- Compliance with these requirements is verified prior to an asset being ordered.

1.2 Guiding principles

Squads are strongly encouraged to make data-driven procurement decisions, organized according to a well-developed value system. For instance, the following strategy is particularly appropriate for ambulance procurement projects:

Priority	Value statement	Tactic	…to the extent supported by…	←MAKE DATA-DRIVEN DECISIONS→
1	We value meeting all legal requirements.	Spend budgeted money on meeting legal requirements…	**authoritative documentation**	
2	We value keeping everyone safe, including crew members, patients, and others.	Spend remaining budget on keeping everyone safe…	**risk data**	
3	We value optimizing patient care and operations.	Spend remaining budget on optimizing patient care & operations…	**performance data**	
4	We value uniquely identifying ourselves and our units to incident commanders and to the public.	Spend remaining budget on unit markings, agency identification, logos, and other graphics…	**best practice and survey data**	
5	We value signaling our traffic intentions to other drivers.	Spend remaining budget on signaling…	**demonstrable and scientific data**	
6	We value fiscal responsibility.	**Save** remaining budget for other aspects of mission or for next ambulance…	**action plans**	

1.3 Continuous process

This document is a work product intended to serve as the "hub" of a dynamic "hub-and-spoke" process driven by progress. The "spokes" of the process include:

1.3.1 Identification of control points in the procurement process

Control points are opportunities to assess compliance with requirements and to address any discrepancies. Currently-identified control points include when:

- A squad becomes interested in procuring a technical asset
- A squad submits a Memorandum Of Understanding for DEMS approval
- A squad submits a grant application for DEMS or state approval
- A squad submits a loan application for DEMS or city approval
- A squad finishes a purchase or build order, and is ready to sign a contract
- A squad performs an end-of-assembly inspection, or takes delivery of a technical asset
- A squad submits an asset for integration into the Virginia Beach EMS system
- An asset gets refurbished, rechassied, recapitalized, etc
- The city budget planning process begins

The Department and the squad should review this document together at each control point to assess ongoing compliance with requirements.

1.3.2 Identification of Subject Matter Experts (SMEs)

This document is only as legitimate as the endorsements it receives from the appropriate authoritative personnel. As personnel move in, out, and across the workforce and the market, it is important that the Department review this document to assure that its references to, and endorsements from, SMEs are current, correct, and complete.

1.3.3 Interviews with SMEs

The Department should conduct periodic interviews with identified SMEs to review the contents of this document, and to gather:

- New, changed, or obsolete requirements
- Supporting artifacts to include explicitly or by reference

1.3.4 Endorsements from SMEs

The Department should make sure that it gets an explicit endorsement from the appropriate SME for every set of integration requirements for a given system or subsystem. Such endorsements should be in writing and should be attached or otherwise made available with this document.

1.3.5 Advocacy for SMEs at appropriate control points

The Department should take at least each control point as an opportunity to raise stakeholder awareness of SME concerns. The Department acknowledges that the SMEs are not responsible for directly communicating new, changed, or obsoleted requirements directly to the squads, nor are the squads responsible for making direct inquiries to the SMEs. Rather, the SMEs are responsible for communicating changes to the Department, and the Department is responsible for communicating that information to the squads via this document (see 1.1↑).

2 Business cycles and processes

2.1 Squad procurement cycle

Squad coordinators who are responsible for technical asset procurement should perform most or all of the following "cradle to grave" tasks:

- Recognize the need to procure an asset.
- Ensure adequate squad funds are budgeted (also see section 2.2↓).
- Develop full specifications using this document as a guide.
- Solicit quotes, bids, or proposals.
- Make sure any required Memorandum Of Understanding(s) with partner organizations are finalized.
- Issue a purchase order or sign a contract according to squad business rules.
- Make sure payments are processed in a timely manner.
- Ensure contract performance (inspect asset thoroughly using specifications and build order as guides).
- For ops assets, turn asset over to ops staff for full commissioning.
- Determine well ahead of time when an asset will no longer be of use or value.
- For ops assets, receive decommissioned asset from ops staff.
- Remove and reallocate useful sub-components (ie, EMS gear, radios, computers, dashcams, power load systems, etc, for a vehicle).
- Remove highly conspicuous squad markings as necessary.
- Initiate final sale or disposal process.

2.2 City budget process

This document is primarily intended to define requirements for integrating squad-owned technical assets into city infrastructure, but in some cases a squad must consider city budgetary issues. For example, in the traditional arrangement for adding an ambulance to the VB EMS fleet, the EMS Department must seek and receive approval to pay for additional fuel, maintenance, city-supplied medical gear, etc. The timeline for this process is enforced by the

Budget & Management Services Department, the City Manager, and City Council – not by the EMS Department.

Each budget cycle begins more than nine months before the budget becomes effective and generally proceeds as follows:

September	EMS chief officers solicit input from staff on budget needs.
October	Management Services provides the Department with "target" budget figure based on projected revenues, known obligations and other factors as determined by city leaders.
November	Department prepares a two-level request: One that does not exceed the "target" amount, and one that identifies other needs that would exceed the "target".
December	Department submits its two-level request to Management Services.
January	Department negotiates its request with City Manager and his deputies.
February	Management Services reconciles outstanding issues with the Department.
March	Department presents its request to City Council.
April	EMS Chief negotiates its request with City Council and public hearings are held.
May	City Council finalizes the budget for the coming fiscal year.
July	Department begins spending from approved budget.

2.3 City loans

As a courtesy, City Council has traditionally honored well-prepared formal requests from its volunteer rescue squads for no-interest loans. Such loans have been provided to support capital asset and real estate purchases.

City loans for vehicle purchases shall be subject to maximum amounts that are indexed to the state RSAF grant limits in effect at the time of purchase, and to the vehicle's compliance with all relevant requirements.

3 SPECIFICATIONS

3.1 Mobile ComIT gear

To integrate into the VB EMS system, a vehicle may require a complex set of mobile communications and information technology (ComIT) gear as described in the following sections.

3.1.1 Gamber Johnson mounting system

To integrate into the VB EMS system, a vehicle with a Mobile Data Computer (MDC) must have a Gamber Johnson mounting system for the MDC. Because these mounting systems are vehicle-dependent, the volunteer rescue squad is responsible for all Gamber Johnson pieces below the level of the MDC cradle and/or docking station. The MDC-dependent cradle and/or docking station is supplied by the City. For instance, the squad is responsible for any or all of the following pieces:

- Pedestal kit
- Mounting base
- Lower tube
- Upper pole
- Complete pole
- Locking slide arm
- Motion attachment

Not all mounting systems require all of the pieces in the above list.

The use of Gamber Johnson *Dash Mounts* is not authorized.

For new builds, these pieces should be installed by the upfitter to avoid costly retrofit work. Some upfitters will refuse to install these items if the items are used.

Gamber Johnson vehicle mounts can be selected from the following web page:

https://www.gamberjohnson.com/products#vehicle-mounts

3.1.2 Public safety radio system

3.1.2.1 Embedded pieces

The pieces listed in the table on the following page must be installed in an ambulance to enable the approved public safety radio system. For new builds, these pieces should be installed by the upfitter to avoid costly retrofit work or weather intrusion.

PUBLIC SAFETY RADIO SYSTEM – EMBEDDED PIECES

"Embedded PSR Kit" packaging checklist

W:\Departmental\000-CMMI-SVC-PROCESS-AREA\SUPPLIER-AGREEMENT-MANAGEMENT\mobile-i-t-bundle\ambulance\embedded-pieces.xlsx

√	Qty	Make	Part Number	Description	Install at	Run from <-> to
[ ]	1	MOTOROLA	HLN7002A	MID-POWER TRUNNION KIT	IT cabinet for transceiver brain box	
[ ]	1	MOTOROLA	HLN6911K	REMOTE CONTROL HEAD	Cab console	
[ ]	1	MOTOROLA	HSN4040A	3.2 OHM EXTERNAL SPEAKER ASSEMBLY	Near/between cab headrests	this speaker <-> cab console remote control head
[ ]	1	MOTOROLA	HLN6911K	REMOTE CONTROL HEAD	Action area	
[ ]	1	MOTOROLA	HSN4040A	3.2 OHM EXTERNAL SPEAKER ASSEMBLY	Action area	this speaker <-> action area remote control head
[ ]	1	MOTOROLA	HKN6169B	CABLE, REMOTE MOUNT, 5M		IT cabinet transceiver trunnion <-> cab console remote control head
[ ]	1	MOTOROLA	HKN6188B	Control Head Power Cable		IT cabinet transceiver trunnion <-> nearest 12V IGN source
[ ]	1	MOTOROLA	HKN6169B	CABLE, REMOTE MOUNT, 5M		IT cabinet transceiver trunnion <-> action area remote control head
[ ]	1	MOTOROLA	HKN6188B	Control Head Power Cable		IT cabinet transceiver trunnion <-> nearest 12V IGN source
[ ]	1	MOTOROLA	HKN4192B	20 ft 12V DC Power Cable		IT cabinet transceiver trunnion <-> nearest 12V IGN source
[ ]	1	LARSEN	NMOKHFUDSMAI	NMO HF MOUNT, 17' RG58/U DUAL-SHIELD SMA INSTALLED		IT cabinet transceiver trunnion <-> roof

Packed by:_____ for Squad name:_____ Order #_____

3.1.2.2 Accessible pieces

3.1.2.2.1 Mobile (vehicle-mounted) radios

To integrate into the VB EMS system, a mobile radio must have the following attributes:

APC	Model	Description
656	M30TSS9PW1N	APX7500 DIGITAL Dual Band Mobile RADIO
656	GA00244	Primary Band 7/800
656	GA00308	Secondary Band VHF
656	GA00579	Enable Dual Band Operation
656	G806	Astro Digital Operation IMBE
656	G51	ENH: SOFTWARE SMARTZONE SYSTEM
656	G361	P25 operation
656	QA01749	ADD: ADVANCED SYSTEM KEY - SOFTWARE KEY
656	G442	Control Head
656	G444	Control Head Software
656	G67	Remote Mount
656	G174	3db gain low profile 762-870MHz HAF4013
656	G792	136-174 Wideband HAD4021
656	W22	Palm Mic
656	G831	15 Watt Speaker
656	W947	Packet Data Interface-included
656	G996	POP25
656	GA00229	Enable Basic GPS
656	QA03399	Enhanced Data for GPS
656	GA00268	RFID Label
656	GA00580	TDMA
185	GA00318	4 year SFS-RSA- One year Std warranty plus 4-total 5 years
207	DS450022	Ant, GPS 5V, Black
207	DS487760	/4" mnt 0-6 GHz SMA In
430	T7914UA00049AA	Radio Mangement License

Mobile radios in ambulances (or other vehicles with a secondary communications area) must also have the following attributes:

APC	Model	Description
656	GA00092	Dual Control Head
656	G628	17' Control Head Cable
656	W22	Palm Mic

3.1.2.2.2 Portable (handheld) radios

To integrate into the VB EMS system, a portable radio must be a **Motorola APX Series P25 700/800 MHz band** model with the following attributes:

APC	Model	Description
481	Q806	ASTRO digital operation IMBE
481	H38	Smartzone Software
481	Q361	P25 operation
481	G996	POP25-Programming over P25
481	QA00580	TDMA
481	QA03399	Enhanced data for GPS
655	QA04526	RFID Knob
655	QA9008	Group Services- Broadcast Firmware update, Alias update, Location on PTT
655	QA09906	Adaptive Noise Suppression 3 Watt Audio
785	NNTN8860	Single Unit Charger

A portable radio may include the following attributes:

APC	Model	Description
562	QA00574	Secondary Band VHF
562	QA00579	Enable Dual Band Operation
562	QA00577	Front Display Full Keypad
562	QA01427	impact green
785	WPLN7080	Single Unit Charger
372	NNTN8203	XE RSM Green
453	NNTN8029	Spare Battery- LION2300MAH impress FM
481	H499	Delta T submersibility
372	PMMN4069A	RSM 3.5mm Audio Jack
785	NNTN7624B	APX Portable Vehicle Charger

Other options may be allowable upon approval of the SME for VB EMS-related radio and mobile data terminal purchase specifications.

3.1.3 Internet-of-Things (IOT) system

Ambulances now being integrated into the VB EMS system must have a TCP/IP-based IOT system.

3.1.3.1 Embedded pieces

The pieces listed in the table on the following page must be installed in an ambulance to enable the approved IOT system. For new builds, these pieces should be installed by the ambulance upfitter to avoid costly retrofit work or weather intrusion.

INTERNET-OF-THINGS SYSTEM – EMBEDDED PIECES

"Embedded IOT Kit" packaging checklist

W:\Departmental\000-CMMI-SVC-PROCESS-AREA\SUPPLIER-AGREEMENT-MANAGEMENT\mobile-i-t-bundle\ambulance\embedded-pieces.xlsx

√	Qty	Make	Part Number	Description	Install at	Run from <-> to
[ ]	1	CISCO	ANT-5-4G2WL2G1-O	5 in 1 outdoor antenna- 4G/LTE-2, WLAN-2, GPS-1	Roof	
[ ]	1	ACDC Industries	MZL-180	Voltage-sensing delay timer power point	IT cabinet	
[ ]	1	COMPX	ES-PRKP-CAB	Series 300 eLock *VB-CONFIGURED FOR NETWORK CONNECTIVITY*	IV/drug box compartment door	
[ ]	2	Tripp-lite	N206-BC01-IND	RJ45 Bulkhead Coupler, Cat6, Female-to-Female, w/Dust Cap, IP68 rated	Action area	
[ ]	1	CISCO	4G-CAB-ULL-20=	20-ft (6M) Ultra Low Loss LMR 400 Cable with TNC Connector		5-in-1 antenna <-> IT cabinet
[ ]	1	CISCO	4G-CAB-ULL-20=	20-ft (6M) Ultra Low Loss LMR 400 Cable with TNC Connector		5-in-1 antenna <-> IT cabinet
[ ]	1	CISCO	AIR-CAB020LL-R	20 ft LOW LOSS CABLE ASSEMBLY W/RP-TNC CONNECTORS		5-in-1 antenna <-> IT cabinet
[ ]	1	CISCO	AIR-CAB020LL-R	20 ft LOW LOSS CABLE ASSEMBLY W/RP-TNC CONNECTORS		5-in-1 antenna <-> IT cabinet
[ ]	1	CISCO	IR829-DC-PWRCORD	DC Power Cord for IR829		IT cabinet <-> MZL-180-controlled power point
[ ]	1	COMPX	300-DC12V	12V to 9V converter		12V END: MZL-180-controlled power point <-> 9V END: CompX power cable
[ ]	1	COMPX	MA3234200000J	Assembly wire harness interconnect 16"		12V-to-9V converter <-> CompX eLock battery box
[ ]	1	(any)	(any)	CAT 6 Ethernet cable, 25 ft		IT cabinet <-> top of Gamber Johnson pole in cab
[ ]	1	(any)	(any)	CAT 6 Ethernet cable, 25 ft		IT cabinet <-> CompX eLock
[ ]	1	(any)	(any)	CAT 6 Ethernet cable, 25 ft		IT cabinet <-> RJ45 coupler on action area panel
[ ]	1	(any)	(any)	CAT 6 Ethernet cable, 25 ft		IT cabinet <-> RJ45 coupler on action area panel

Packed by:_____ for Squad name:_____ Order #_____

3.1.3.2 Accessible pieces

The following devices must be installed and connected to an ambulance's IOT system:

- Mobile Data Computer, located at cab console
- CompX eLock 300 Series smartlock, located on door of IV/drug box compartment

3.1.4 Motorola Workstation (MW) system

3.1.4.1 Embedded pieces

The pieces listed in the table on the following page must be installed in any vehicle in which there will be a Motorola Workstation system. For new builds, these pieces should be installed by the vehicle upfitter to avoid costly retrofit work or weather intrusion.

MOTOROLA WORKSTATION SYSTEM – EMBEDDED PIECES

"Embedded MW Kit" packaging checklist

W:\Departmental\000-CMMI-SVC-PROCESS-AREA\SUPPLIER-AGREEMENT-MANAGEMENT\mobile-i-t-bundle\ambulance\embedded-pieces.xlsx

√	Qty	Make	Part Number	Description	Install at	Run from <-> to
[ ]	1	MOTOROLA	FHN7006A	TRUNNION HOUSING ASSEMBLY for CPU MW810	IT cabinet for MW brain box	
[ ]	1	MOTOROLA	FKN0004A	60 Pin 16 ft Display Cable for MW810 R2.0		STRAIGHT END: IT cabinet MW trunnion <-> RIGHT-ANGLE END: top of Gamber Johnson pole in cab
[ ]	1	MOTOROLA	HKN4192B	20 ft 12V DC Power Cable		IT cabinet MW trunnion <-> nearest MZL-180-controlled power point
[ ]	1	MOTOROLA	HKN4192B	20 ft 12V DC Power Cable		Top of Gamber Johnson pole in cab <-> nearest MZL-180-controlled power point

Packed by:_____ for Squad name:_____ Order #_____

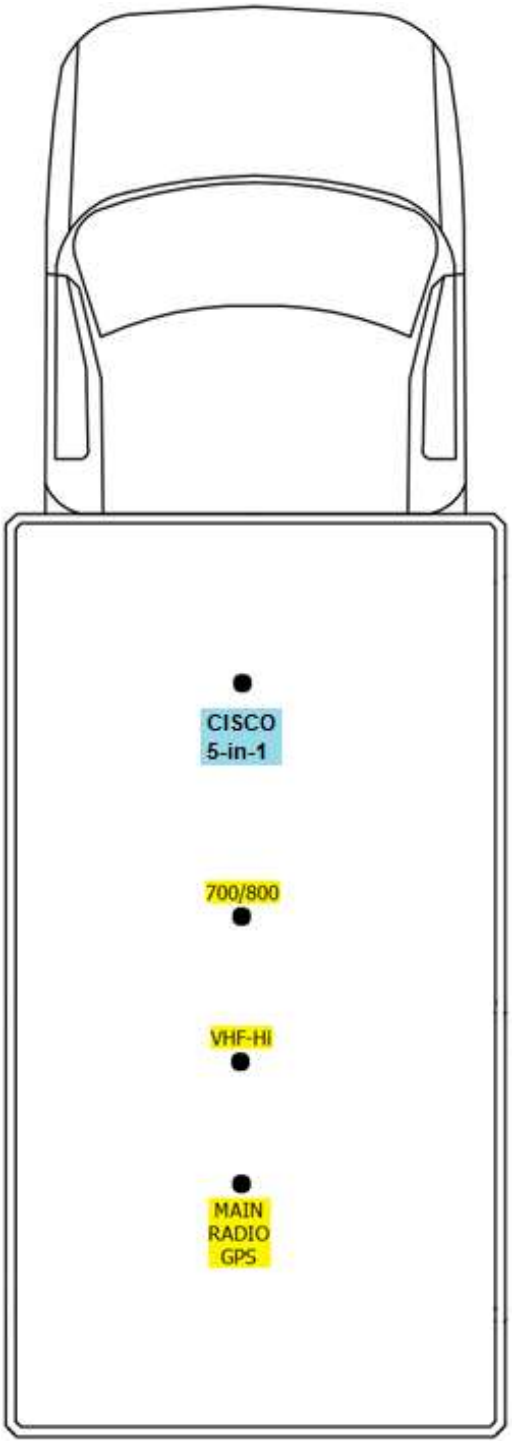
3.1.4.2 Accessible pieces

To integrate into the VB EMS system, a Motorola Workstation (MW) must have the following attributes:

Type	Item	APC	Model	Description
CPU	1	736	F5218	MW810 MOBILE WORKSTATION CPU
CPU	1a	736	VA00796	12.1"XGA 1500NIT DISPLAY,60 PIN,W/B
CPU	1b	736	VA00822	ALT : WIN 7 PRO 32BIT OS ON MSATA
CPU	1c	736	VA00079	ADD:COMM & VIDEO I/O EXPANSION BOAR
CPU	1d	736	VA00738	INTEL I7-3610QE, IVY BRIDGE QUAD CO
CPU	1e	736	VA00751	SOLID STATE DISK,256GB W/IMAGE WIN
CPU	1f	736	VA00763	8GB,DDR3, 1600MHZ DUAL SLOT
CPU	1g	736	VA00799	R2.0 DEAD RECKONING GPS MODULE,NO A
CPU	1h	736	VA00806	WLAN,802.11A/G/N,INTEL6300,3ANT. CO
CPU	1i	736	VA00804	WAN1, SIERRA MC7750, VERIZON,NO ANT
CPU	1j	736	VA00817	WLAN ANT., 3X3 MIMO, 12FT
CPU	1k	736	VA00823	WAN1, TWO ANT. FOR MC7750, MAIN/DIV
CPU	1l	736	VA00471	ADD:SMART CARD READER
CPU	1m	736	VA00017	ADD: BLUETOOTH COMMUNICATION
CPU	1o	736	VA00840	KEYBOARD,US
CPU	1p	185	V699AZ	ENH: 2 YEAR RSA MW810R2.0
AuxCable	2	736	FKN0007	AUX CABLE W/TB, AND 2 EXTENDED CURR
GPSAnt	3	207	DSGPSNMO02	Ant, GPS 5V, Black
GPSMount	4	207	DSNMOKHFUDSMAI	3/4" mnt 0-6 GHz SMA In
Monitor Cable	5	10	FKN0004ASP01	(6 Meter 60/60pin CPU to Display cable for R2.0)
	6	170	DSGJ71100913	MW800/810 CUSTOM CRADLE 'VINNY'
	7	170	DSGJLOWSWIVEL	LOW PROFILE SWIVEL MOTION ATTACHMEN

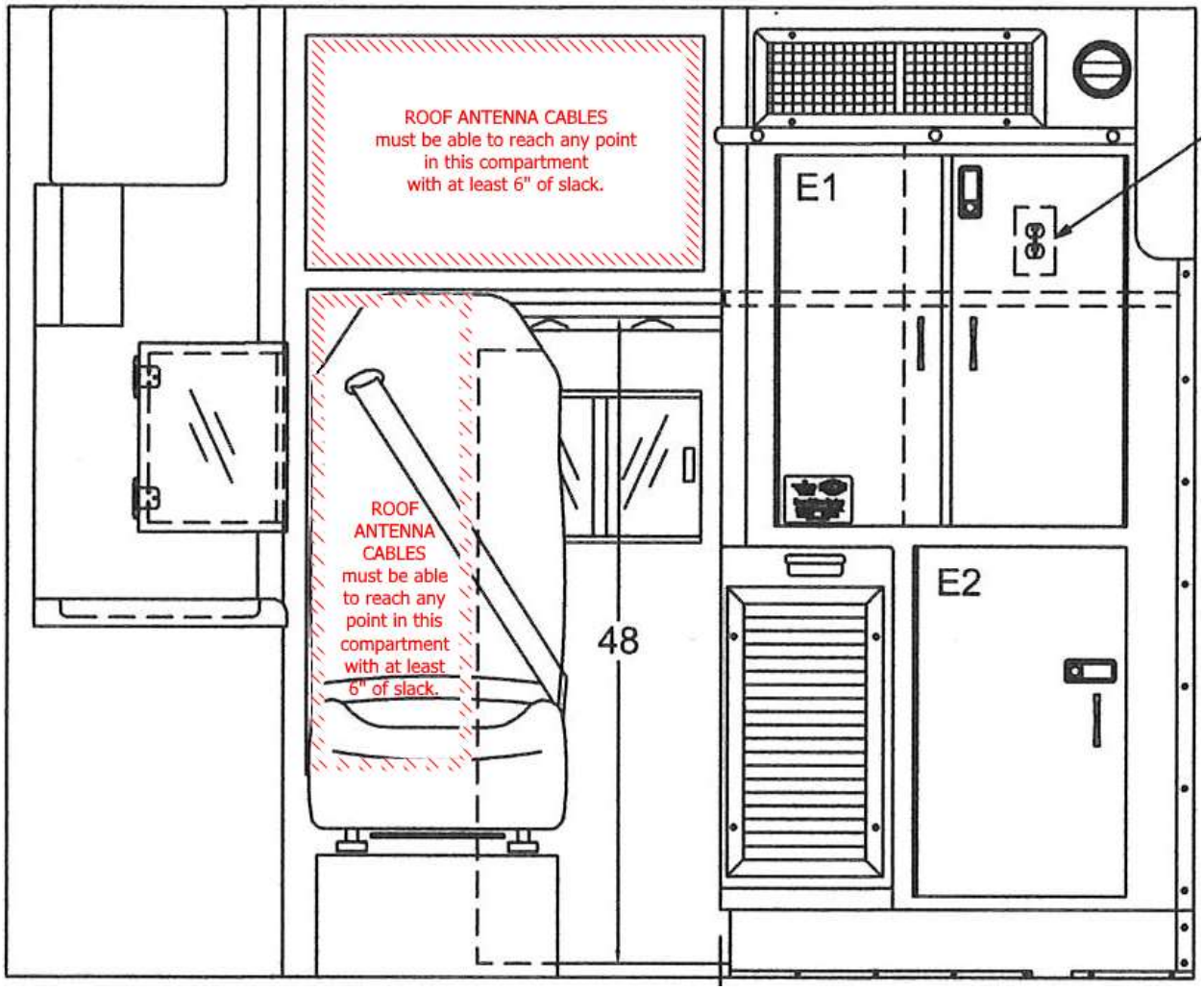
3.1.5 Vehicle antenna placement

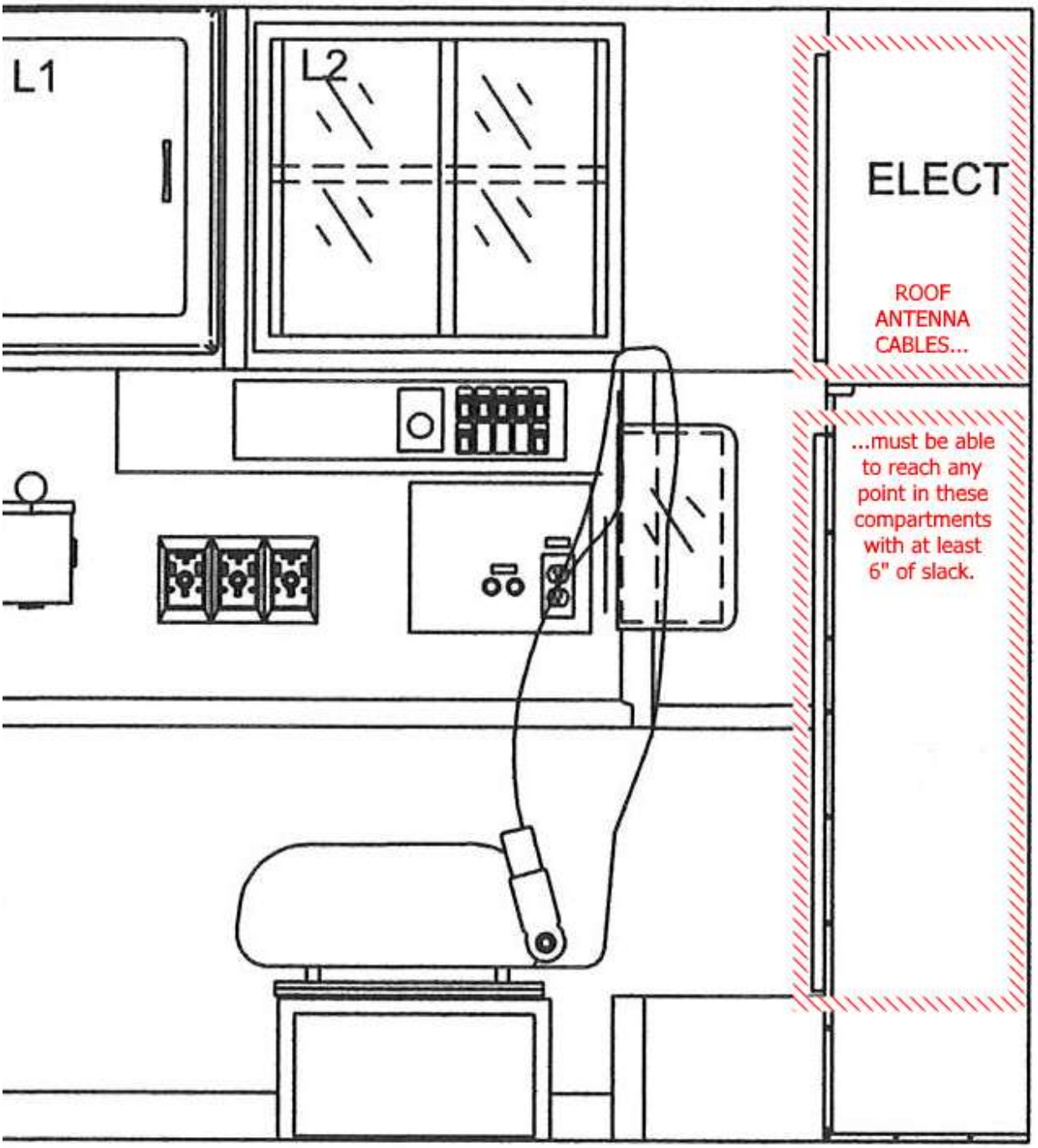
To integrate into the VB EMS system, a vehicle must have antennas mounted according to sound radio engineering principles. For instance, a vehicle equipped with an approved mobile radio and an approved MDT will have exterior antennas mounted something like this:



3.1.6 Antenna cable termination points

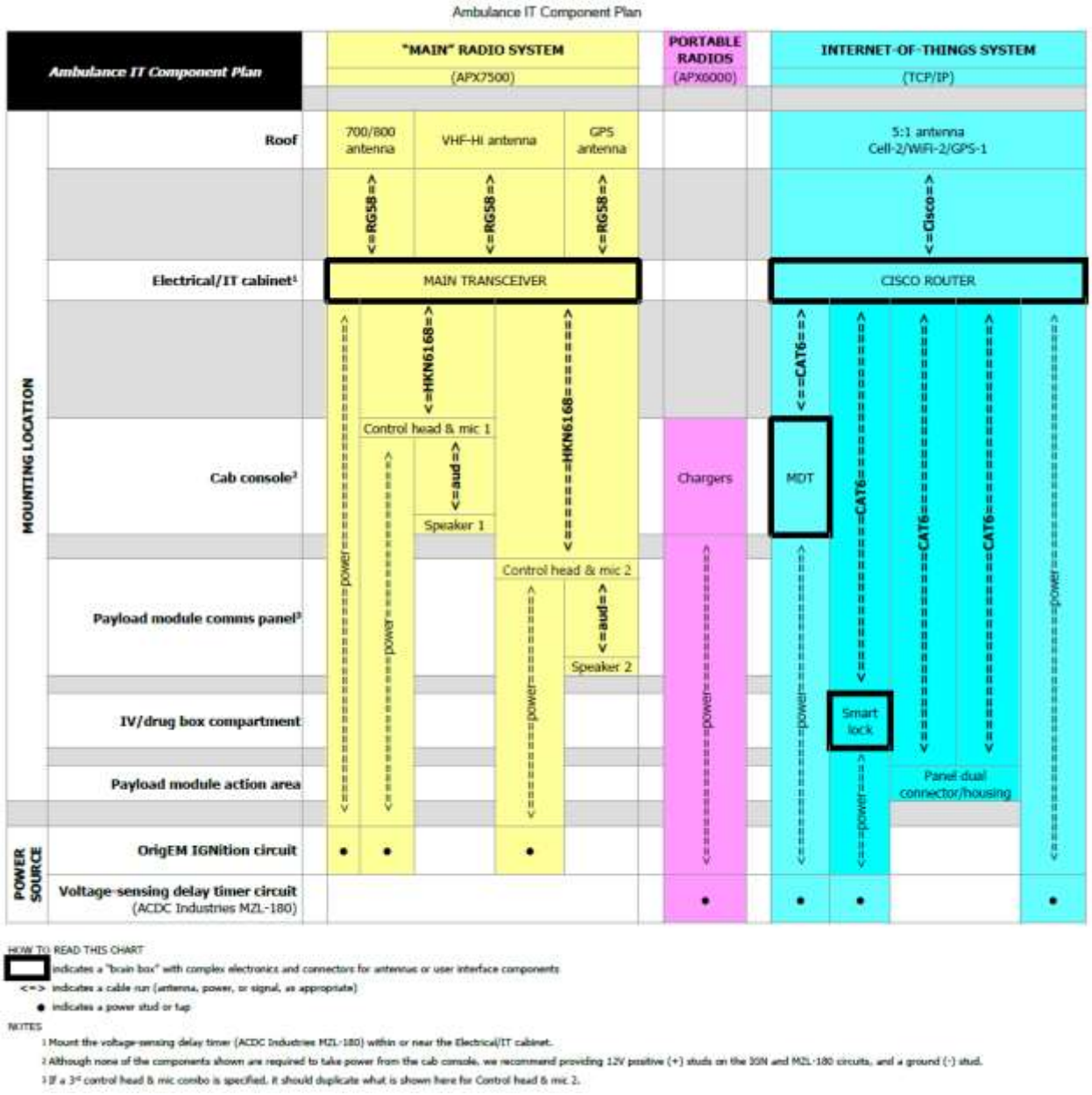
To integrate into the VB EMS system, an ambulance must be equipped with antenna cables that terminate as follows:




L1
L2
ELECT
ROOF
ANTENNA
CABLES...
...must be able
to reach any
point in these
compartments
with at least
6" of slack.

3.1.7 Component mounting and power source chart

To integrate into the VB EMS system, ComIT equipment must be mounted and supplied with power according to the following chart:



HOW TO READ THIS CHART

indicates a "brain box" with complex electronics and connectors for antennas or user interface components

<=> indicates a cable run (antenna, power, or signal, as appropriate)

● indicates a power stud or tap

NOTES

1 Mount the voltage-sensing delay timer (ACDC Industries MZL-180) within or near the Electrical/IT cabinet.

2 Although none of the components shown are required to take power from the cab console, we recommend providing 12V positive (+) studs on the IGN and MZL-180 circuits, and a ground (-) stud.

3 If a 3rd control head & mic combo is specified, it should duplicate what is shown here for Control head & mic 2.

3.2 Chassis, engine, and drivetrain

For safety reasons, wheel lugs and lug nuts may not be concealed by vanity wheel covers.

3.3 Fuel

To qualify for using fuel supplied by the Public Works Department, a vehicle must run on one of the following fuels:

- ULTRA-LOW-SULFUR DIESEL
- REGULAR UNLEADED GASOLINE

3.4 Traffic preemption systems

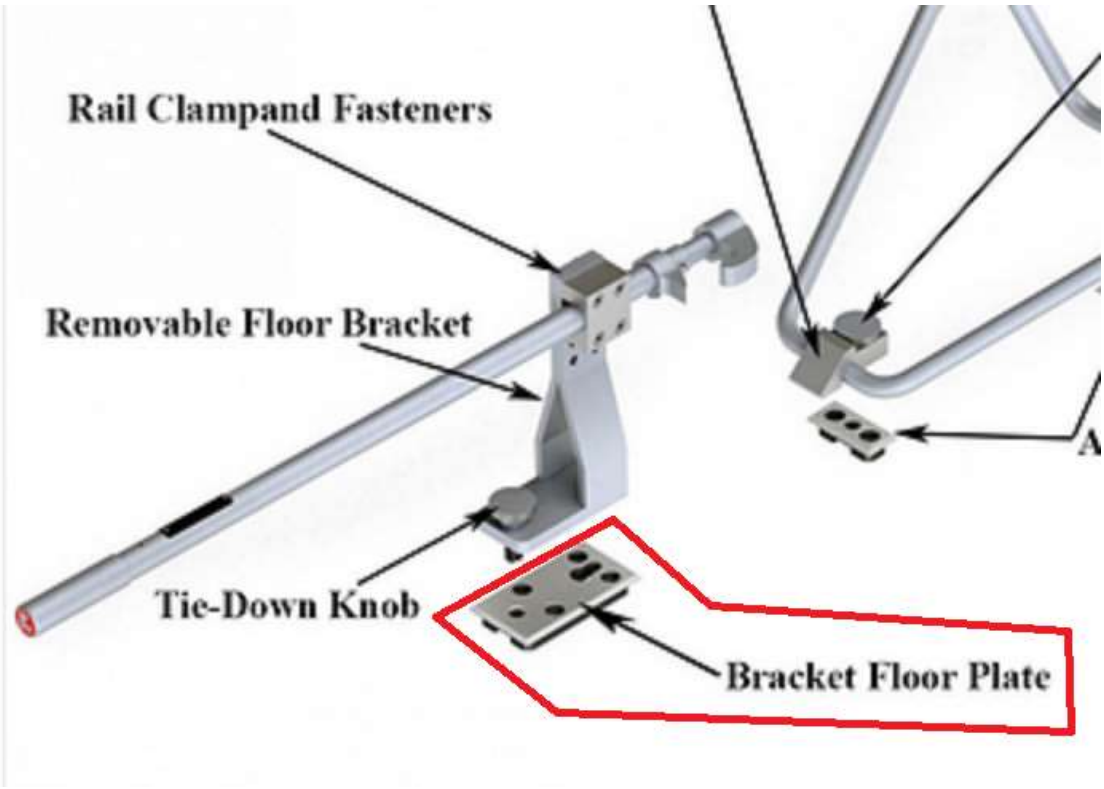
To integrate into the city's traffic preemption system, the following requirements must be met:

- The vehicle must be equipped with an OPTICOM INFRARED emitter. The emitter must only be active when the vehicle's transmission is in DRIVE and the emergency lights are on. For the embedded component, contact the Department Fleet Acquisition Division Chief to have an "Embedded Opticom Kit" shipped to the upfitter at City expense.
- Siren controllers must be configured to prevent siren activation unless at least the vehicle's secondary ("Hazard -- Vehicle Stopped on Right-of-Way" mode) flashing emergency lights are also activated. The intent of this requirement is to prevent the use of the siren when none of the official warning lights are on.
- Foot-actuated air horns (if installed) must be configured to prevent air horn activation unless the transmission is in Drive. This requirement also applies to any foot-actuated loud traffic warning device. The intent of this requirement is to prevent hearing damage caused by accidental activation of loud devices while the transmission is in not in Drive. This requirement does not apply to hand-actuated devices.

3.5 Payload module requirements (ambulances only)

a. The backboard compartment shall be a vertical full-height compartment at the rear corner of the curb side of the ambulance. The door to the compartment shall open to the curb side.

b. A Bracket Floor Plate to receive a legacy cot side bracket assembly must be installed for use with a VB EMS Bariatric Cot Kit:



3.6 Final stage mounted accessory gear

To integrate most efficiently into the Public Works Fleet Management vehicle onboarding process, final stage mounted accessory gear such as the following should be pre-installed by the factory or the dealer. Installation of such gear is not typical tasking for Fleet Management and should only be performed by qualified installation business establishments:

- Radio microphone clips
- Flashlight recharger bases, pre-connected to electrical power
- Fire extinguishers
- Commercial GPS devices (if hard-mounted or hardwired to electrical power)

- Aftermarket backup camera systems (all components)
- Portable suction brackets (if used)
- Monitor/defibrillator brackets or securing plates
- Laptop or tablet brackets or holding systems

3.7 Supply chain optimization conditions

The city can repair or replace the following makes and models of equipment expediently:

- Federal PA 300 siren system
- Whelen 900 or M series lightheads
- Vanner 1050W inverter for ambulances

Alternative equipment is not prohibited but may result in a unit being kept out of service for an extended period of time when problems arise.

3.8 Lifecycle budgetary conditions

To integrate into the city's maintenance and repair funding system, features of complex technical assets that are prone to failure, damage or loss, and that exceed minimum requirements and are considered by the City to be superfluous, vanity, or otherwise unnecessary items, may not be supported. The City may replace such features, once failed, damaged, or lost, with more economical solutions or removed altogether, as appropriate. Unsupported features may include, but are not limited to:

- Chrome fenderettes
- LED light strips

3.9 Garage space, vehicle aprons, structural additions and modifications

1. To fit inside all VB EMS stations, a vehicle (including protruding items such as mirrors and antennas) must be less than:
    - 118", which is 9'10", in HEIGHT (a limitation of the Thalia station)
    - 142", which is 11'10", in WIDTH (a limitation of the Plaza station)
    - 180", which is 15', in LENGTH (an approximate limitation of the Thalia station)

2. The Department may impose weight restrictions on heavy vehicles to avoid damage to station aprons, etc.

3. A squad must receive approval from both the EMS Department and the Public Works Department Buildings Division before making any substantial additions or modifications to city-owned buildings.

4. The sole authorities for negotiating the use of city-owned building space between the EMS and Fire Departments are the EMS Chief and the Fire Chief. Personnel at lower levels of authority are not authorized to alter existing arrangements. Similar rules shall apply if space is shared between EMS and any other city departments.

3.10 Roadway dimensions and load limits

1. The most limiting bridge that a VB EMS unit may reasonably be expected to cross is the North Landing Bridge on Route 165 (North Landing Road) at the Virginia Beach / Chesapeake city line, which has a weight limit of 13 tons, which is 26,000 pounds. Although emergency vehicles may be exempt from weight restrictions according to state law, a squad must receive approval from both the EMS Department and the Public Works Transportation Division before procuring a vehicle that would exceed the weight limit of the North Landing Bridge.

2. Squads procuring heavy or oversize vehicles should be familiar with Part A Section 5 of the Planning Department Permits & Inspections Division Moving and Hauling Manual[1], and the Public Works Department Operations Division's Blanket Permit Requirements Memo[2] and Blanket Permit Hauling Map[3].

3.11 Regional Drug and IV Box System

If a vehicle is, according to the EMS Department, an addition to the fleet (as opposed to a replacement), and it should carry a regional IV box and a regional drug box, the vehicle owner must arrange to buy double the quantity of IV and drug boxes that will be kept on the vehicle. Half of the procured boxes will be kept on the vehicle. The other half will be kept in standby inventory in the hospital pharmacy system.

Regional IV and drug boxes shall be bought through the regional EMS council.

---

[1] https://www.vbgov.com/government/departments/planning/permits-inspections/Documents/form-pdf/MovingandHaulingManual.pdf

[2] http://www.dmv.state.va.us/webdoc/pdf/vbc1.pdf

[3] www.dmv.state.va.us/webdoc/pdf/vbc2.pdf