



VENTURA COUNTY FIRE DEPARTMENT

VENTURA COUNTY FIRE PROTECTION DISTRICT

SPECIFICATION # 2015-5

2015 FORD EXPEDITION COMMAND PACKAGE

These specifications are not meant to limit the vendor. They are to be guidelines to minimum qualifications. Bids on equipment differing in minor detail from these specifications will be considered. Differences or alterations shall be correctly stated and described in detail by the bidder.

Any brand name listed in the specification is for bidding purposes only. Bidders may propose brand name **or equal but must provide "or equal" brand name, product literature and/or specifications for each item that is not the brand name listed. Refer to Section 1.3, Substitutions, in the Bid.**

Bidders shall answer under the column marked "Answer Yes or Give Alternate." Alternates to the following specifications must be explained in detail. Alternates may be detailed on a separate page and referenced to the appropriate section number. Failure to furnish this information may be cause for rejection of bid.

**Answer Yes
Or
Give Alternate**

1. GENERAL DESCRIPTION

1.1. It is the intent of these specifications to cover the furnishings and delivery including installation of three (3) command boxes, three (3) center consoles, and three (3) overhead consoles as hereinafter specified, while obtaining the best results. These specifications will describe the minimum requirements for the proposed command boxes.

1.2. The vehicles that shall be utilized for the installation of the following command boxes shall be three (3) 2015 Ford Expedition SSV 4WDs.

1.3. The vehicles will be provided upon request and picked up by the vendor.

1.4. Bidder shall provide conceptual drawings with quote. (See attached drawings for reference.)

1.5. All measurements in specification are for designing purposes only. Exact configuration shall be determined at a pre-construction meeting.

1.6. The manufacturer of this command unit shall have at least two (2) years' experience building command modules and shall supply a list of 3 customer references

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<p>2. TIME ALLOWANCE / PENALTIES</p>	
<p>2.1. Delivery time shall be based on what is quoted by the manufacturer at the time of bid. The actual time shall be in calendar days based on the calculated time from the date of the purchase order for the award of the contract to the date that final acceptance is made by the Ventura County Fire Department, Fleet Manager. That would be when everything has been completed in the spec and delivered, with no additional repairs needed</p> <p><u>Number of days required by Manufacturer:</u> _____</p>	
<p>2.2. It is the understanding of both parties that time is of the essence to this agreement. It is additionally understood that if the units under this bid are not provided by the bidder within the agreed time frame, then economic damages may occur. This will commence on the start of the purchase order and end when each unit is completed and accepted free of defects.</p>	
<p>2.3. It is further understood and agreed that the agreed amount of fifty dollars (\$50.00) per calendar day, per unit will be assessed as reasonable liquidated damages for each and every calendar day whereby the bidder fails to complete delivery as specified herein.</p>	
<p>2.4. It is the additional understanding of the parties that if the successful bidder is delayed in completing the units and delivery because of any changes in the contract requested by VCFD, or by any default, act or omission of the VCFD, or fires, strikes, or acts of God, the inability to obtain materials, equipment, or labor for the manufacture of the units due to Federal Government restrictions arising out of the national defense; then such time of completion shall be extended for such period as may be agreed upon in writing by the VCFD and the successful bidder.</p>	
<p>2.5. In the event that a delay occurs in delivery because of the foregoing conditions, and upon request by the successful bidder even after the initial completion date has arrived, the VCFD may waive any and all liquidated damages which have accrued to date and enter into a written agreement with the successful bidder for a reasonable extension of time for delivery.</p>	

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<p>2.6. Pre-Conference (Pre-Con): Vendor shall contact VCFD with proposed dates as soon as possible for a pre-con to determine placement of many components</p>	
<p>3. GENERAL FINISH</p>	
<p>3.1. System shall be put together with a severe duty cycle in mind with durability, accessibility and ease of maintenance as a priority.</p>	
<p>3.2. When drilling holes, installers will be careful not to contact other components or wiring.</p>	
<p>3.3. Cuts will be straight, neat and the smallest size necessary for installation of parts. All burrs will be trimmed and sanded.</p>	
<p>3.4. All penetrations into the command box interior will require a grommet to prevent chafe.</p>	
<p>3.5. Installation of all components will be made in accordance with the manufacturer's instructions and according to industry standards, i.e. SAE.</p>	
<p>3.6. All drill shavings will need to be removed prior to reinstallation on any interior components. All surfaces will need to be covered during installation as to insure no damage from hot shavings or scratches from tools, wire or other metal objects.</p>	
<p>3.7. All trim or panels in undamaged condition will be reinstalled utilizing the original fasteners. No lumps, bends, stress marks, cracks or misalignment of interior panels both visible and nonvisible will be accepted. All trim that is damaged shall be replaced at the bidder's expense. Any trim that is damaged prior to vendor pick up shall be noted with pictures in writing to VCFD for evaluation immediately upon discovery.</p>	
<p>3.8. All communications cut outs must be made before the final finish coats are sprayed or applied. Scratches, dents or chips will not be accepted.</p>	
<p>3.9. Excessive rattling of side outs will not be acceptable.</p>	
<p>3.10. Any part of the command box that is damaged by vendor installation shall be fixed properly and VCFD advised of repair.</p>	

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<p>4. FASTENERS, BRACKETS AND SLIDES</p>	
<p>4.1. All screws, nuts, bolts, slides, rivets and washers that are used for the command box assembly shall be stainless steel. Sheet metal screws or self-tapping screws will not be accepted.</p>	
<p>4.2. All fabricated brackets shall support the weight of mounted equipment without flexing or vibration. Brackets shall have a powder coated finish to match the vehicle interior and shall be securely mounted. All brackets shall hold components securely in the vehicle interior even in the event of a rollover. All brackets and fasteners shall meet SAE, DOT and NFPA compliance (10G force).</p>	
<p>4.3. All drawers/slides shall be on roller bearing guides at 100% extension and shall be equipped with heavy duty, marine quality, chrome latches.</p>	
<p>4.4. All slides shall be rated at a minimum of 200 lbs.</p>	
<p>4.5. Items added to the overhead must be secure and supported by the vehicle and not the headliner.</p>	
<p>4.6. All fasteners must be mounted in a way as to not hamper the normal operation of the air bag restraint systems.</p>	
<p>5. ELECTRICAL</p>	
<p>5.1. GENERAL CONSTRUCTION</p>	
<p>5.1.1. The electrical system will be designed to meet SAE Standard J 595, J-845, J-1128 and J1292 (Automobile, Truck, Truck-Tractor, Trailer, and Motor Coach Wiring) as a minimum.</p>	
<p>5.1.2. All circuits and components will be permanently labeled, color- coded and protected with fuses, except where noted in spec.</p>	
<p>5.1.3. All in-line fuse holders will be permanently marked with the circuit they protect, and will be installed in accessible locations.</p>	

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5.1.4. All electrical components, circuits and wiring, will be rated at 125% of the maximum intended load.	
5.1.5. All wiring will run in enclosed looms or conduit. Wiring will be color-coded / heat labeled with circuit designation every three (3) inches.	
5.1.6. All crimp connectors will be of the heavy-duty, nylon variety. Standard duty vinyl connectors are not acceptable. "Scotchlok" connectors are not acceptable for any connections	
5.1.7. Open, "crimp" type connectors are not acceptable for exterior connections and electrical tape is not acceptable for any connection. Crimp connectors shall not be used as a "bus" or wire distribution point. A terminal strip shall be used for such distribution.	
5.1.8. Wiring protection will be provided (via heat resistant 300 degree loom) on all engine compartment wiring and exterior chassis runs.	
5.1.9. Provide and install grommets wherever wiring passes through walls or partitions. Drip loops shall be provided on all walls and partitions.	
5.1.10. Wiring looms will be tied together and clamped to bulkheads to insure maximum security, vibration resistance and to protect against accidental contact with other components. Stick-on wire tie bases are not acceptable.	
5.1.11. All continuous runs of wiring will be supported at intervals of 12" (inches) or less.	
5.1.12. No wiring will be exposed or visible in any area of the interior.	
5.1.13. All exposed wire and cable in other areas of the vehicle shall be protected from damage or accidental contact. No wiring shall run under the carpeting in the driver or passenger foot well.	

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<p>5.1.14. All prefabricated harnesses shall be coiled in a "figure 8" configuration to avoid induction. All other cables will not have coiled wire at its termination.</p>	
<p>5.1.15. All wire ties will be trimmed flush to eliminate sharp edges.</p>	
<p>5.1.16. All soldering will be of high quality. Solder "blobs" and cold solder joints are not acceptable.</p>	
<p>5.1.17. All main power and battery cable connections shall be crimped with approved battery crimpers, soldered, and shall have color-coded silicone heat shrink tubing on each end (red for + and black for -). All crimps shall be tightly crimped and then soldered in place.</p>	
<p>5.1.18. All wiring connections exposed to moisture will utilize glue style heat shrink connectors and or glue style heat shrink tubing.</p>	
<p>5.2. BATTERIES AND CHARGING SYSTEM</p>	
<p>5.2.1. <u>Batteries</u></p>	
<p>5.2.1.1. <u>Batteries and charging systems</u> will be expected to perform under all conditions and temperatures. This system will need to be rated at 125% of load demands. All terminations must be protected and coated with dielectric grease. NO EXCEPTIONS</p>	
<p>5.2.1.2. <u>Engine Battery:</u> Provide and install an <u>OEM replacement battery</u>, Odyssey PC1500 glass mat deep cycle battery. It will function as the main chassis electrical. Provide a rubber mat under the battery. This battery shall be charged through the alternator and shall be completely isolated from the command battery bank through the auto charge relay.</p>	

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<p>5.2.1.3. Aux. Batteries: Provide and install two (2) additional Odyssey PC 1500, glass mat command batteries and mount in an enclosed compartment in the command box. Provide Dri-Deck material under batteries. The batteries shall be fully accessible and have a battery cable service loop. This area shall be sealed and vented to the exterior of the body. Final determination to be made at pre-construction meeting.</p>	
<p>5.2.1.3.1. The PC 1500 command batteries shall be completely isolated from the chassis battery and shall only be connected through the automatic charge relay. They shall function as a power source for command electrical, auxiliary lighting and radio equipment. This system will be designed with the highest possible current flow.</p>	
<p>5.2.1.3.2. The auxiliary batteries will be installed using approved brackets and will be NFPA 10 G compliant.</p>	
<p>5.2.1.3.3. Auxiliary batteries will have adequate spacing for cooling during charging according to the battery manufacturer recommendations.</p>	
<p>5.2.1.3.4. Provide two (2) 100 CFM cooling fans for PC 1500 batteries. The fan shall operate anytime the rear command bank is being charged by the alternator or auxiliary shore charger. One (1) fan shall blow into the battery compartment and one (1) fan shall blow out to atmosphere via a duct to the exterior of the vehicle. The duct shall be located as high as possible in the right rear fender well and designed so as not to allow water or dirt intrusion under normal circumstances.</p>	
<p>5.2.2. <u>Charging System</u></p>	

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<p>5.2.2.1. Provide and install one (1) Blue Sea ML series 300 amp automatic charge relay with manual override and designed to be utilized when each battery is connected, charged, isolated or used for jumpstart. This unit will be mounted in a serviceable location with protection from the elements. It will have an ignition switch control wire that is live through the start position.</p>	
<p>5.2.2.1.1. The vehicle shall be equipped with an emergency jump start feature capable of starting the engine with the isolated through the ACR (Automatic Charge Relay) switch to the auxiliary batteries in the event of a chassis battery failure. The three position momentary switch shall be on the dash and be clearly identified. The switch shall be capable of activation when the engine is turned off.</p>	
<p>5.2.2.2. The OEM alternator shall be replaced with a vendor provided Quality Power 200 amp alternator. Alternator shall be designed to use existing belts and mounts. (If the OEM alternator is not used as a core, it shall be returned to VCFD).</p>	
<p>5.2.2.2.1. The OEM alternator main charge circuit shall be upgraded so that the aftermarket alternator current can be fully optimized.</p>	
<p>5.2.2.2.2. The aftermarket alternator shall be fully functional with the OEM ECM.</p>	
<p>5.2.3. Provide and install a new Vanner fast idle actuator (or equal) that shall be installed in accordance with manufacturer's instructions. It will be mounted in the engine compartment. It shall have the best location for safe activation, protection from extreme heat and provide ease of serviceability. The system shall safely integrate with all OEM systems. Component shall be covered by a lifetime warranty.</p> <p>Provide manufacturer: _____</p>	

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<p>5.2.3.1.1. The fast idle system shall automatically detect low battery voltage and engage to raise rpm to maximize alternator output. Maximum fast idle shall not exceed 1100 RPM.</p>	
<p>5.2.3.1.2. The fast idle will disengage whenever the brake pedal is applied or when the transmission is moved from "park".</p>	
<p>5.2.4. Provide and install a key ignition control system. This system is a solid-state device which plugs into the OEM EBCC. This system shall be completely isolated from the chassis electrical. All components shall be covered by vendor warranty.</p> <p>Provide Manufacturer: _____</p>	
<p>5.3. SHORE POWER SYSTEM AND CHARGER</p>	
<p>5.3.1. Shore power shall be through a vendor provided 15 amp Kussmaul, Auto Eject with interrupt circuit with a yellow cover. The Auto-Eject mechanism shall be mounted in the rear left fender at the door. The shore power input from the Kussmaul Auto-Eject shall route to the Pro Mariner charger. NO EXCEPTIONS.</p>	
<p>5.3.2. Provide and install a Kussmaul, P/N 091-76-12 dual bar graph battery level indicator. Indicator shall be connected to each battery bank and shall be mounted in the general location as the Auto Eject. Bar graph shall be visible from the outside of the vehicle. Exact mounting location to be determined at pre-construction meeting.</p>	
<p>5.3.3. Provide and install a Promariner Pronautic 1260 60 amp battery charger. The charger shall be hooked up to the 15 amp Kussmaul auto eject and be wired to the rear command batteries. It shall utilize a temperature sensor connected to the rear command battery bank.</p>	
<p>5.3.3.1. The battery charge settings shall be according to Odyssey battery specifications. Vendor shall provide settings with documentation.</p>	

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<p>5.3.3.2. The 120 volt input side of this unit shall be wired in accordance with SAE and UL codes. All wiring will be: P-136-49-MSHA 12 AWG, 3/C SJOOW 300V cable.</p>	
<p>5.4. ELECTRICAL BUSS SYSTEM</p>	
<p>5.4.1. Provide and install a DC <u>positive main electrical power buss</u> and distribution system. The system will have one main trunk line (minimum 1-gauge cable, 1670 strands) with size and type marked every foot, (heat applied) from the engine mounted electrical buss. It shall have a 200 amp load protection per line, with manual reset and service override feature. The trunk line will provide service from the ACR (Automatic Charge Relay) in the engine compartment to the rear command battery bank. The panel shall be capable of providing isolated and protected circuits for 125% of all components at their locations. Both components shall be completely removable for servicing and/or replacement.</p>	
<p>5.4.2. Provide and install a DC <u>negative main electrical ground buss</u> system. The system shall be of the same size, capacity and design as the DC positive system. This system is completely isolated from the chassis electrical. All grounds shall originate at the factory ground stud on the right front side of the engine. This eliminates the possibility of noise and ground loops, which could damage the communications equipment. Both components shall be completely removable for servicing and/or replacement.</p>	
<p>5.4.3. All <u>Relays</u> shall be in the open position with the vehicle ignition in the off position.</p>	
<p>5.5. COMMAND CENTER POWER ACTIVATION SYSTEM</p>	
<p>5.5.1. Provide and install a <u>rear command center power activation</u> system. This system provides control of all rear command communications when activated. A water resistant pin switch shall be activated by opening the rear lift gate. It shall turn on all communications to the rear, interior lighting, lift gate warning lights, and mute the car stereo speakers. When the lift gate is closed, all power to interior rear lighting and to the remote radio heads shall be turned off and the rear communications speakers shall be muted.</p>	

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<p>5.5.2. The command center power activation system shall be completely isolated from the chassis electrical. This system shall fully integrate with all, OEM systems.</p>	
<p>5.6. INTERIOR COMMAND LIGHTING</p>	
<p>5.6.1. Power to interior command lighting shall be provided through the Command Center Power Activation System when rear lift gate is opened.</p>	
<p>5.6.2. Provide and install two (2) On Scene Solutions 18" nightsticks PN 70005, or equal, in rear command area securely. Lights shall be mounted above the command box behind the C pillar on the right and left side. Provide additional on/off switch at rear command module. Exact locations to be determined at pre- construction meeting.</p>	
<p>5.6.3. Provide and install one (1) Havis C-Map-T LED 18" flexible map lights, or equal, with rheostat control to the command module top surface. Exact location to be determined at pre-construction meeting.</p>	
<p>5.6.4. Provide and install four (4) AVEO Eye Beam Touch aircraft style LED reading lights. (MFG PN# AVE-EBBB-001)</p>	
<p>5.6.4.1. Two (2) Aveo lights shall be installed in the rear of the overhead console.</p>	
<p>5.6.4.2. Two (2) Aveo lights shall be mounted in the rear tailgate lower corners.</p>	
<p>5.6.4.3. Exact placement of lights shall be discussed at precon.</p>	
<p>5.7. EMERGENCY LIGHTING</p>	
<p>5.7.1. Emergency lighting will utilize a UNITROL TOUCHMASTER UTMD that will be installed by VCFD. Emergency lighting shall be installed programmed and wiring labeled for Position 1, 2, and 3. An 18" labeled service loop shall be provided for each lighting position. Exact operation and function of the Unitrol positions 1, 2 and 3 shall be provided at the pre- construction meeting.</p>	

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<p>5.7.2. Provide and install a Whelen WPKM1 <u>park/neutral control</u> module. This system shall be used to control emergency lighting from response to on scene modes, utilizing the transmission park position. When activated, all wig-wag and white code lights shall be turned off. This system shall be completely isolated from the chassis electrical. Provide labeled connection for siren controller with 18" service loop.</p>	
<p>5.7.3. Install a VCFD provided roof mounted <u>light bar</u>. It shall be a Whelen Legacy GB2DDDD-VCFBC1</p>	
<p>5.7.3.1. Steady front facing steady red shall be located to the left of the center position, and the opposite red on the right shall have a flash pattern.</p>	
<p>5.7.3.2. Vendor will need to provide switching and identification for the wiring provided for the light bar: right / left alley, take downs, on scene, and code 1, 2, and 3. All programming shall be done by the vendor and copy provided to VCFD.</p>	
<p>5.7.3.3. The rear light bar has a traffic advisor feature. The vendor shall hook up and provide permanent labeled switching for this feature. Amber flashing on the light bar; identify all modes: Right, left and hazard flash.</p>	
<p>5.7.3.4. Mount light bar with VCFD provided Whelen MKAJ83 adjustable mounting kit. Light bar shall be mounted in the highest position and level to the ground. The wire harness must enter the roof through a watertight connector grommet. All areas of roof penetration shall be sealed with 100% silicone.</p>	
<p>5.7.3.5. The harness shall travel inside the dual metal headliner and be protected from cuts or shorts everywhere it crosses metal. No lumps in headliner will be accepted.</p>	

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<p>5.7.4. Install two (2) (VCFD provided), grill mounted WHELEN Part # M4D split, series red/white linear super LED lights w/ clear lenses. The emergency white LEDs will be to the center and cut out while in park. They are mounted in the front grill with vendor fabricated stainless steel mounting plates. Grill lights will require a chrome plated flange. VCFD will provide two (2) Whelen Part # M4FC for mounting. Exact location to be determined at pre-construction meeting.</p>	
<p>5.7.4.1. The mounting flanges that are provided by VCFD are standard flanges. The bidder may need another flange or may need to modify this flange to achieve the level center vision of light to oncoming vehicle height and be parallel to the ground. The final product shall be a surface mount and black in appearance.</p>	
<p>5.7.5. Install four (4) (VCFD provided) fender mounted WHELEN Model # M4RC series linear super LED lights, red with clear lens. The front and rear fender mounted lights will require four (4) Whelen Part # M4FC flanges which will be provided by VCFD.</p>	
<p>5.7.5.1. The mounting flanges that are provided by VCFD are standard flanges. The bidder may need another flange or may need to modify this flange to achieve the level center vision of light to oncoming vehicle height and be parallel to the ground. The final product shall be surface mount and black in appearance.</p>	
<p>5.7.6. Install two (2) new (VCFD provided) rear warning lights, Whelen model M4RC series linear super LED lights, red with clear lens. They are to be mounted on the outside of the rear lift gate. The flange shall be a VCFD provided Whelen model M4FC surface mount.</p>	
<p>5.7.7. Install two (2) new (VCFD provided) taillight hide-a-way lights, Whelen model Vertex VTX609R super LED lights, Red with clear lens. They are to be mounted in the taillight bucket next to the reverse lights. Exact location to be determined at pre-construction meeting.</p>	

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<p>5.7.8. Install two (2) (VCFD provided) lift gate warning lights on the outside of lift gate. They shall be red with a clear lens Whelen TIR 3 mounted into the bottom license plate light cover and shall point down when the lift gate is closed and rearward when open. Lights shall be an alternate flashing pattern and will be activated by rear lift gate command relay. They shall have adequate service loops.</p>	
<p>5.7.9. Vendor to wire factory OEM headlight flasher unit. This device will alternate the hi-beam headlights in code three and will cut off in park. Flasher will also cut off when the headlights are activated in the high beam mode. The main unit will be in a user serviceable location. Switched at controller.</p>	
<p>5.7.10. All emergency lighting shall be programmed to a quad flash pattern. Exact pattern to be determined at pre-construction meeting</p>	
<p>5.7.11. All emergency lighting cables shall be continuously covered in loom and the connectors will be sealed to the loom. All cable shall have adequate service loops. All connectors shall have sealed connectors.</p>	
<p>5.7.12. Provide and install two (2) new rear flood/backup lights. Under the rear bumper. They shall be Whelen ION part # WIONC. The lights should be switched at the rear command console by a three (3) position switch that controls the light mode in reverse, as a scene light and in the off position.</p>	
<p>6. FRONT OVERHEAD CONSOLE</p>	
<p>6.1. Vendor is to provide and install an overhead radio console in the place of the factory installed overhead console area between the two front seat sun visors. This console shall be constructed to be as shallow as possible (measurement from headliner to lowest point on the console) for driver/passenger safety while providing ample room for control heads, cabling and cooling.</p>	
<p>6.2. The console shall be constructed of laser cut aluminum. It shall be powder coated black to match lower console.</p>	

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<p>6.3. The console shall be constructed to incorporate standard sized mounting rails in order to mount radio control heads, speaker and map lights. It shall come with Troy Products face plates installed.</p>	
<p>6.4. This console shall be capable of mounting/containing two (2) Kenwood TK790 remote radio heads, one (1) speaker for the primary radio as well as two (2) Aveo touch beam map lights.</p>	
<p>7. FRONT LOWER CENTER CONSOLE</p>	
<p>7.1. Vendor is to provide and install a Troy Products CC-MC-14 console and vehicle specific mounting base, with faceplates and blanks. (Faceplates shall fit UTMD Siren)</p>	
<p>7.2. Vendor shall provide and install the following Troy Products accessories to be used in conjunction with the CC-MC-14 console:</p> <ul style="list-style-type: none"> • Cup Holders: AC-INTBH • Map Box: AC-BINDERBX • Pad- AC-ARMCOMP 	
<p>8. REAR COMMAND MODULE</p>	
<p>8.1. GENERAL</p>	
<p>8.1.1. Provide and install a rear command module as described below. (Measurements are approximate depending on materials used to make command box).</p>	
<p>8.1.2. The vehicle shall be equipped with a full width, 27" deep 20" high rear command unit 46"X11" X 20" electrical box and 24"X18"X11" computer box. (See attached drawing for concept)</p>	
<p>8.1.3. The exterior and interior of the module shall be made from solid hard woods or aluminum. Other construction material may be accepted, but first must be reviewed and accepted by VCFD.</p>	
<p>8.1.4. The module shall be coated and finished with black Linex or equal material.</p> <p>Provide coating manufacturer: _____.</p>	

SPECIFICATIONS

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<p>8.1.5. The command module shall not exceed 350 lbs. NO EXECPTIONS.</p> <p>Provide recommended construction material: _____</p> <p>Provide finished weight: _____</p>	
<p>8.1.6. Provide and install subflooring to take up space under command module. The forward side of subfloor shall be removable to access wiring.</p>	
<p>8.1.7. Provide and install grommets wherever wiring shall pass through walls or partitions.</p>	
<p>8.1.8. Provide two (2) 12 volt, 10 amp, rubber capped and flush mounted power points and two (2) 3 amp flush mounted USB ports on the upper left corner of command box. Exact location discussed at pre-con.</p>	
<p>8.2. RADIO FACE PLATE MOUNTING</p>	
<p>8.2.1. The rear facing upper section of the command module shall have a fixed location utilizing troy products mounting rails and radio rack space for four (4) radio face plates.</p>	
<p>8.2.2. The radio head mounting locations shall be equally spaced over the slide out command desk.</p>	
<p>8.2.3. Troy products radio face plates and blanks shall be provided for all mounting locations.</p>	
<p>8.3. ELECTRICAL EQUIPMENT BOX</p>	
<p>8.3.1. The electrical equipment box shall be located on the front side floor of the rear command module.</p>	
<p>8.3.2. The box shall be approximately 48" width, 13" high and 22" deep. (Height should correspond to the height of the single rear seat while in storage mode)</p>	

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<p>8.3.3. Access to the equipment side shall be provided from the top side via a 30" tri-fold door. The door shall be pop latched to prevent rattling and have a smooth level surface. Flush mounted stainless hinges shall be full length at the fold points.</p>	
<p>8.3.4. Provide four (4) 3" access holes for wiring installation at front and rear and sides of equipment box. Exact location and pattern discussed at pre-con.</p>	
<p>8.3.5. There shall be a sealed battery storage area incorporated into the left-hand side of the electrical box (See section 8.4 for details).</p>	
<p>8.3.6. There shall be a sealed computer box center forward of the electrical box. (See section 8.5)</p>	
<p>8.4. BATTERY STORAGE COMPARTMENT (Mid left location)</p>	
<p>8.4.1. Provide and install a sealed, pop latched, battery storage area at the right rear lower side of the electrical box. This shall be easily accessible for battery maintenance.</p>	
<p>8.4.2. Battery storage compartment shall be 13" high, 16" wide, and 18" deep.</p>	
<p>8.4.3. Provide mounting for two (2) Odyssey PC 1500 batteries in this compartment.</p>	
<p>8.4.4. Auxiliary batteries shall have adequate spacing for cooling during charging according to the battery manufacturer recommendations.</p>	
<p>8.4.5. Provide two (2), 4", 12 volt 100 CFM cooling fan ports for the battery box.</p>	
<p>8.4.5.1. One (1) intake fan shall be in the forward side of the battery storage compartment.</p>	
<p>8.4.5.2. One (1) exhaust fan shall be connected to the exhaust output duct hose and be located on the rear side of the battery compartment.</p>	

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<p>8.4.5.3. One (1) output duct shall have a 3" duct hose connection capability to blow out bad air via a duct to the exterior of the vehicle.</p>	
<p>8.4.5.4. The fans shall run anytime the batteries are in charge mode. (battery charger or engine alternator)</p>	
<p>8.5. COMPUTER BOX (Front center location)</p>	
<p>8.5.1. The computer box shall be located forward center of the electrical box. The dimensions shall be 13" high, 22" wide, and 29" deep.</p>	
<p>8.5.2. The computer box shall have a screwed sealed lid with tamper proof screws. There shall be a pass-through between the communication box and the electrical equipment box.</p>	
<p>8.5.3. The computer box will and be ventilated with two (2), thermostat controlled, 12-volt brushless fans with 4" ports. Thermostat setting shall be adjustable. The intake shall be in the left forward section of the communication box and the exhaust shall be at the right front lower section of the electrical equipment box. Exact location and setting discussed at pre-con.</p>	
<p>8.5.4. There shall be a 3" of cable routing from the computer box to the front center console.</p>	
<p>8.6. COMMAND DESK</p>	
<p>8.6.1. Command desk shall be located center right.</p>	
<p>8.6.2. The command desk shall have a clear Plexiglas, or equal, writing surface that is wide as possible and automatically lighted at full extension. Lights shall be LED. Lighting shall not interfere with operator. Writing surface shall hold down documents and maps underneath.</p>	
<p>8.6.3. The right front lower section of the slide out shall have a 12" high by 13" wide file drawer divided into three (3) sections. The drawer shall be deep as possible.</p>	

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<p>8.6.3.1. The rear section shall have 12 ¼" wide rails. 6" from the rear for hanging file folders.</p>	
<p>8.6.3.2. The second middle section shall be 8" deep, full height, full width and fully open to the top.</p>	
<p>8.6.3.3. The third (forward) section of the drawer shall have a 5"X12"X6" removable pull out tray that is divided in half for office supplies. This tray shall have a handle for removal so the underlying storage section can be utilized.</p>	
<p>8.6.4. The front left lower section shall have one (1) storage drawer. The drawer shall be 12" high and 13" wide and 21" deep fully open to the top.</p>	
<p>9. ADDITIONAL ACCESSORIES AND COMPONENTS</p>	
<p>9.1. Provide and install four (4) remote, 10 amp, rubber capped and flush mounted power points. Two (2) shall be installed into the front console on the right hand side and two (2) shall be installed on the left top of the command module. Power points to be wired to the command battery bank hot all the time.</p>	
<p>9.2. Provide and install two (2) 3 amp USB charge ports to the left top of the command module.</p>	
<p>9.3. Provide and install remote unlock switch mounted behind the grill. It shall be hidden from view for unlocking the doors. This switch shall be rubber covered and waterproof. System shall integrate with all OEM systems. The vehicle alarm should activate when the remote unlock switch is utilized.</p>	
<p>9.4. Provide and install one (1), vendor provided, STREAMLIGHT SL-20LP Orange Rechargeable flashlight. Exact location to be determined at pre-construction meeting. It shall be wired to the command battery bank.</p>	
<p>9.5. Provide and install one (1), Zico SCBA bracket (part # is KD-ULLH) Bracket will be mounted on the front left hand side of the command box. This bracket and mounting shall comply with NFPA recommendations. Exact placement and location to be determined at pre-construction meeting.</p>	

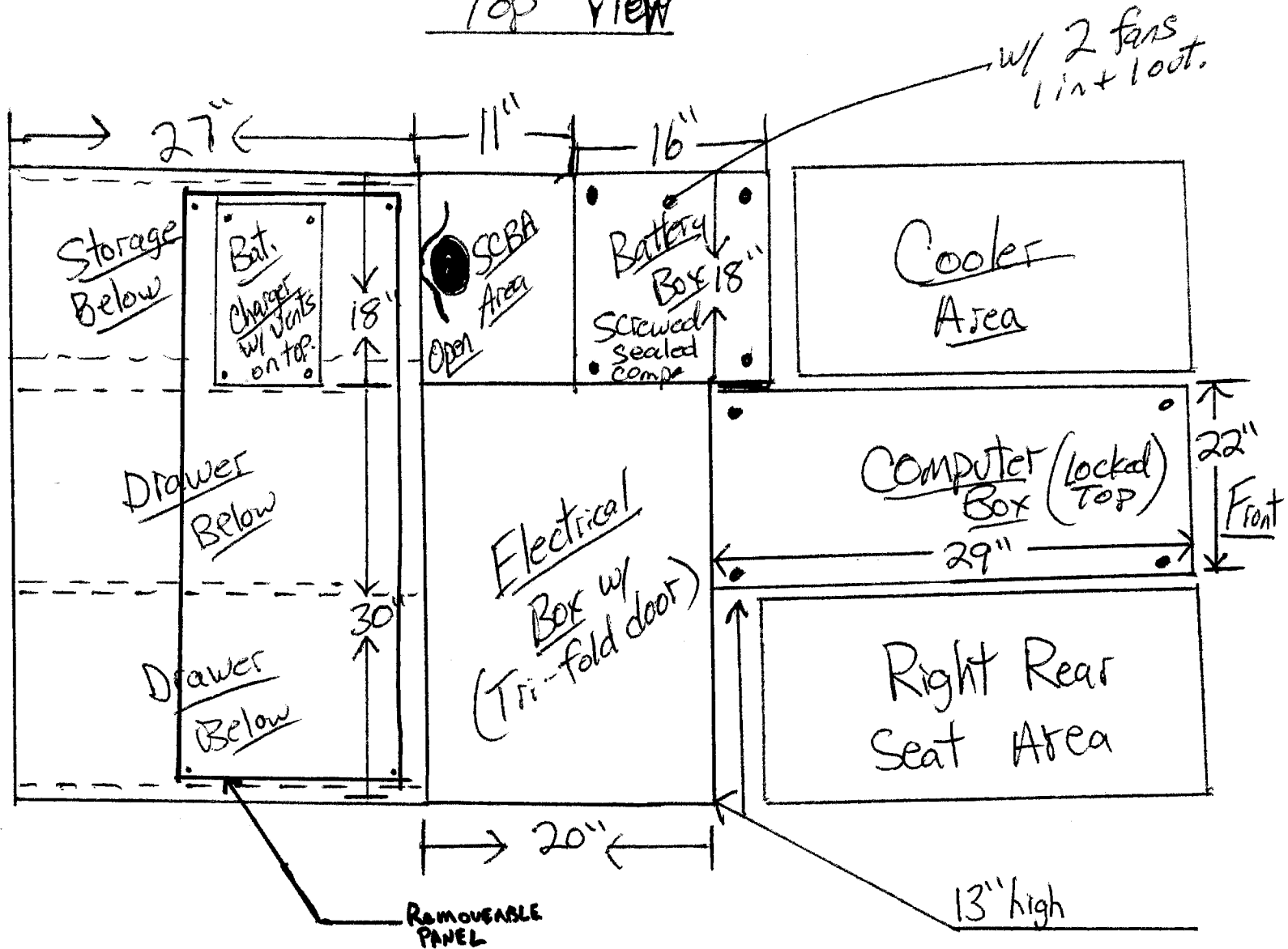
SPECIFICATIONS

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<p>9.6. Provide and install one (1) ANSUL Model # 2A-10-BC fire extinguisher, mounted on the front of the rear command module. Mounting shall conform to NFPA rating. Exact location to be determined at pre-construction meeting.</p>	
<p>10. MANUALS AND DIAGRAMS</p>	
<p>10.1. Vendor shall provide two (2) complete printed sets of service manuals plus two (2) additional operator's manuals per vehicle.</p>	
<p>10.2. The complete set of service manuals shall include an operator's manual, parts manual, maintenance manual, and include warranties.</p>	
<p>10.3. All documentation, printed material, manuals, books, charts, schematics and compact discs shall be exact representations of the specific equipment being delivered. No Exceptions.</p>	
<p>11. WARRANTY</p>	
<p>11.1. The command box shall be fully warranted by the same vendor.</p>	
<p>11.2. Provide a full one year warranty covering all workmanship and materials unless otherwise stated herein. Warranty period shall commence when the vehicle is placed into service by VCFD. Manufacturer to be notified of in service date.</p>	
<p>11.3. All batteries and alternator to have a <u>three-year warranty</u>.</p>	
<p>11.4. The automatic charge relay, fast idle actuator, main buss, key ignition, park/neutral control system, and all equipment cabinets shall all have a <u>ten year warranty</u>.</p>	
<p>11.5. Repairs shall be made in a timely manner within 24 hours after VCFD contacts vendor regarding a warrantable failure. Vendor will provide services to repair the vehicle at the vehicle's location, or if the work is extensive arrangements can be made to have work performed at the vehicle maintenance shop. If no response is made to VCFD within 24 hours, VCFD will send vehicle out to another vendor to have repairs completed. The invoice from these repairs will be forwarded to the awarded bidder for payment, plus any costs incurred by a mechanic or office staff at the department.</p>	

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<p>11.6. Payment for warranty repairs performed and materials purchased by VCFD or other vendor repair facility will be due from vendor and payable within 60 days upon receipt of work order and invoices of work performed, at \$105.00 per hour for VCFD or at other vendor repair facilities rate.</p>	
<p>11.7. Transportation and fueling of the vehicle to and from the warranty facility for warranty repairs shall be the responsibility of and at the expense of the successful bidder until vehicle is accepted.</p>	
<p>12. DELIVERY</p>	
<p>12.1. Deliver to:</p> <p align="center"> VENTURA COUNTY FIRE PROTECTION DISTRICT 2451 Latigo Avenue Oxnard, CA 93030 </p> <p>Between 9:00 AM and 12:00 Noon (Due to inspection time necessary)</p> <p align="center"> ATTN: Roger Clow @ (805) 388-4504 Or Office Assistant.- @ 805-388-4508 </p>	

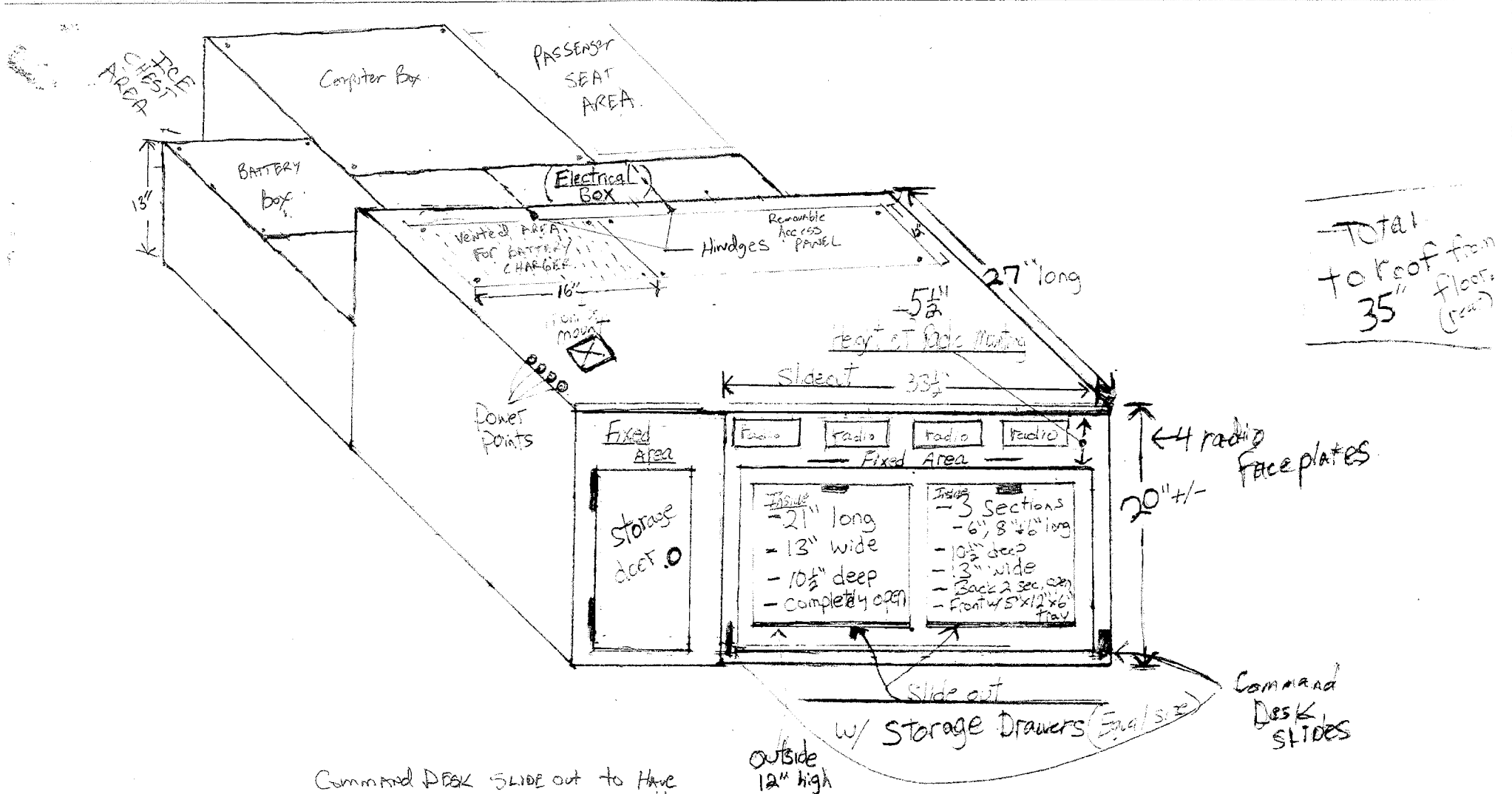
Top View



Rear

New Drawing

3-D View



Total
to roof from
floor
35" (incl.)

Command DESK SLIDE out to Have
Lighted Acrylic Desk Surface. with
corner Notched for EASY Access
to Under lying papers.
THERE SHALL Be SPACE behind
SLIDE out for 3" wire runs.

outside
12" high

Slide out
w/ Storage Drawers (Equal size)

Command
Desk
SLIDES