

ADVANCED CONTAINMENT SYSTEMS, INC

JOB 1614

HOUSTON POLICE DEPARTMENT SWAT TEAM

34' X 8'- 6" COMMAND CENTER TRAILER/TRUCK BODY

BUILD SPEC ISSUE#2

(First Issue After Pre-Construction Meeting)

1.0 GENERAL:

- 1.1 The Mobile Swat Team Trailer will be 34' long, 8'-6" wide, and 11'-3" overall height .
- 1.2 The trailer will be a self-contained unit capable of all necessary response/ command center operations without the support of any other attachment or towing vehicle. This trailer is to be compatible with other HPD towing vehicles, so that any trailer can be towed with any HPD truck.
- 1.3 Trailer is equipped with an onboard diesel powered electrical generating system and a shore power system to permit operation from either on board or shore power supply.
- 1.4 Trailer fifth wheel height and kingpin setting shall be compatible for trailer to be pulled with a Ford F750 crew cab single drive axle truck-tractor equipped with air & electric brakes, and a full size fifth-wheel and proper electrical connections. This towing vehicle's trailer towing electrical functions to be the same as the other HPD vehicles so that any truck can tow any other HPD trailer. Tractor to be 4-door cab.
 - 1.4.1 The trailer shall be equipped with an air conditioning and heating system, 120/240 – volt electrical circuit.
 - 1.4.2 The wall or partition between every room shall be insulated, and acoustically treated.
 - 1.4.3 Trailer is equipped with one (1) entry / exit door, one (1) roll-up rear door, and one (1) interior sliding door.
 - 1.4.4 The trailer, when in static position, shall be supported by the front landing gear, and two (2) rear stabilizer jacks.
 - 1.4.5 The floor construction in the Swat trailer is to be designed and constructed to accommodate personnel, and related equipment.

1.4.6 The Mobile Swat Team Trailer will be 34' long, 8'-6" wide app. ,11'-3" high. The trailer will be divided into three (3) sections.

4' – 2" long generator / storage area

16' – 2" long (approx) Command Area, Expanding Wall Area, with toilet and galley incorporated.

13'-8" long (approx) Storage Area.

2.0 TRAILER DIMENSIONS:

2.1	Width of body:	8' – 6"
2.2	Length of body hull	34' – 0"
2.3	Overall height	11' – 3" (MAXIMUM –DO NOT EXCEED)
2.4	Generator Room	4' - 2" x 8'-6"
2.5	Overall length	35' – 6"
2.6	Front to Drop:	9' – 4"
2.7	Fifth Wheel Height:	48½" (loaded)
2.8	Kingpin Setting:	16" Setback
2.9	Finished Ceiling Height	7' – 10" (94")

3.0 TRAILER CHASSIS:

- 3.1 Main beams – 12W22 wide flange beam
- 3.2 Gooseneck section constructed of 8W15 wide flange beam.
- 3.3 Crossmembers – 6” x 8.2# structural steel channel
- 3.4 Floor joists – 4” x 2” x 14 ga. steel tubing 16” o.c.
- 3.5 Side rails 4.5” X 3” 12 ga. galvanized steel angle, Deck crossmembers in the 5th wheel section – 4”-5.4# channel
- 3.6 Three (3) 7,000# capacity high speed axles with single wheels, slipper springs (4000# cap) suspension, electric brakes, and 16” hubs on both axles.
- 3.7 Tires – Seven (7) ST235-85R-16 ‘G’ range mounted on 16” silver mod steel wheels (includes spare tire & wheel).
- 3.8 Landing gear to be 50,000 # capacity, two speed, drop leg type, located at the drop of the chassis, with hand crank handle located on the driver’s side of the trailer.
- 3.9 Stabilizer Jacks- two (2) 7000# capacity each, mounted in rear bumper, located diagonally at each rear corner.
 - 3.9.1 Jacks to be swivel type.
 - 3.9.2 Bubble levels (4) mounted at each corner of trailer.
- 3.10 Bumper /platform constructed of 4” – 5.4# structural channel, extending 18” behind the rear of the body and full width of the body shall be installed to provide rear end protection to external equipment, and shall serve as a step to access the storage area.
- 3.11 King pin – SAE 2” king pin located 16” from front of trailer. King pin is fitted into a 3/8” thick steel fifth wheel plate extending back 45” from front of trailer to provide a pivot plate of sufficient size to insure full surface contact of the fifth wheel. King pin box section constructed of 8 W 15 wide flange beams.
- 3.12 Rear steps-heavy duty fabricated 12ga steel, fold down type—2 step. Step assembly is attached to rear bumper and flips up for transport. Steps provide access to rear door, and are 42” wide.
 - 3.12.1 All step surfaces coated with non slip safety grip paint.
 - 3.12.2 A fabricated custom built fold-out aluminum hand rail assembly with three- point attachment is installed at rear door. Rail folds across the door for transporting.
- 3.13 Floor of gooseneck, fifth-wheel section of trailer to be 10ga steel attached to 4” structural channel crossmembers by welding.

- 3.14 Side door steps – heavy duty fabricated 12ga steel – telescopic, 3-step. Step assembly slides transversally across body. Slide tubes attached to trailer understructure. Step surfaces coated with non-slip safety grit. Retainer bar to hold steps in both transport and service positions. Steps to be 9” deep x 42” wide.
 - 3.14.1 All step surfaces coated with non-slip safety grip covering.
 - 3.14.2 A fabricated custom built fold-out aluminum hand rail assembly with three-point attachment is installed at entry/exit door. Rail folds alongside the trailer body for transporting.
- 3.15 A 7 pin ATA electrical connector is to be installed at the front of the trailer. Only those electrical functions required for the operation of this trailer are functional in this connector. Other pins shall be left blank.
- 3.16 A 7 pole flat (Bargman) electrical connector will also be installed at the front of the trailer. This connector will supply power from the towing vehicle for the warning lights, back-up alarm, door ajar (upper & lower) functions, pneumatic mast elevated indicator, and electric brake control.

4.0 BODY STRUCTURE:

- 4.1 Floor system designed to eliminate wheel boxes
- 4.2 All steel frame construction
- 4.3 Galvanized steel tubing wall studs, 2 x 2 x 16 ga. (16” o.c.)
- 4.4 Galvanized steel tubing roof rafters, 2 x 2 x 16 ga. (16” o.c.)
- 4.5 Tongue and groove 3/4” CDX plywood flooring
- 4.6 Sprayed on rubber floor coating coved 1-1/2” up the walls to provide a non-slip, very durable, seamless, chemical resistant, waterproof floor. Gray Color
- 4.7 Exterior siding – aluminum, .090 Mill finish, (to be custom painted).
 - 4.7.1 Aluminum sheets to be 48” wide.
 - 4.7.2 Attached to studs with VHB double-sided tape.
- 4.8 Seamless Fiberglass Reinforced Plastic (FRP) .060” thick, laminated to 3/8” plywood on interior walls with corner joints vinyl trimmed and sealed with a high quality silicone sealant to provide a waterproof, air tight interior.

- 4.9 Roof, .040 thick seamless aluminum roof fastened to the perimeter, aluminum top rail. 12 gauge galvanized steel underlayment.
 - 4.9.1 All fasteners are located outside the trailer body walls.
- 4.10 Heavy duty extruded aluminum top rail installed around perimeter of roof.
- 4.11 R11 rigid foam insulation installed in all walls, floor and ceiling.
- 4.12 Belly pan, 20 ga galvanized steel covering bottom side of trailer.
- 4.13 One (1) heavy-duty aluminum framed entry / exit door (36" wide x 78" high) will be installed on the curbside of the trailer.
 - 4.13.1 Door will have fabricated galvanized steel panel inner cores, aluminum exterior skins, FRP interior skins, continuous hinges, full perimeter neoprene bulb seal and stainless steel door handle with dead bolt, keyed alike with interior thumb latches.
 - 4.13.2 Hydraulic hold open door closer to restrain door and to close automatically
 - 4.13.3 Custom built low profile aluminum drip rail installed over door.
 - 4.13.4 Interior of door at lower area to fitted with an aluminum kick plate.
- 4.14 Compartment above the fifth wheel shall have two (2) heavy duty, aluminum framed doors (36" wide x 52" high) with fabricated galvanized steel panel inner cores, aluminum exterior skins, galvanized interior skins, continuous hinges, full perimeter neoprene bulb seal. Interior of doors are lined with 18ga galvanized steel.
 - 4.14.1 Walls in the fifth wheel section/generator/storage area to be lined with 20 ga galvanized steel laid over 3/8" plywood that is attached to the wall studs
 - 4.14.2 Aluminum louver vents shall be installed in street side and curb side doors to aid in air circulation of generator
 - 4.14.2 A double sound attenuation wall is installed between the generator compartment and the command area.
 - 4.14.4 Aluminum louvers to be of proper size to provide adequate ventilation to the generator. Both doors are fitted with stainless steel paddle handle slam latches keyed alike. Latches to be 2-point slam action with handles located at a height for easy access while standing on ground.
 - 4.14.5 Spring loaded door holders retain these vertical doors in their open position.
 - 4.14.6 Two (2) lights, 12V DC , ceiling mounted, are installed in the generator compartment.

- 4.15 Roof structure “stair stepped” down at front portion to allow air conditioners to be installed on top of roof, but not exceed the maximum overall height of 11’-3”.
- 4.16 One (1) individually operated slide-out wall section installed on street side in forward portion of command area. Expandable section shall be able to support 2000 lbs. Without any form of injury or stress on the trailer or the slide out itself.
 - 4.16.1 Two (2) workstations will be located in the slide out.
 - 4.16.2 The deploy and retract operations will not be affected by weather conditions.
 - 4.16.3 All sliding/rolling mechanical interface will be self lubricating and sealed as much as possible. All fittings requiring manual lubrication must be easily accessible.
 - 4.16.4 Expandable section must travel in and out smoothly, so that no binding or pinching during expansion or retraction occurs.
 - 4.16.5 Expandable section shall stop automatically at “full in” and “full out” positions.
 - 4.16.6 At “full out” position, there will be a hinged watershed located above the wall section, but traveling with the wall to shed the water from the roof of the section.
 - 4.16.7 All floor segments shall be vertically and horizontally flush after expansion and set-up. No gaps, step-ups, or trip hazards shall be present.
 - 4.16.8 All exposed seals are to be air and moisture tight.
 - 4.16.9 The slide out section shall be of strength so that additional support systems are not required to keep the expanded section from sagging.
 - 4.16.10 A warning bell will be installed to sound when the slide out is being operated.
 - 4.16.11 Section shall be a nominal 7’ high and shall extend 36” from the normal fixed side of the trailer.
 - 4.16.12 Expandable side shall consist of front, rear and side walls, floor, floor sub frame supports, and roof—all integrated with the slide mechanism to form a rigid, 5-sided, self-supporting box structure.
 - 4.16.13 The side section shall be rigidly constructed into a single assembly with appurtenances for expanding the entire section at one time.
 - 4.16.14 The sides, ends, and roof of the expandable section will be insulated to the same thickness as the non-expandable portions of the trailer. The steel structural sub-frame shall provide an insulation cavity of 2”, immediately below the plywood. This cavity to be filled fully with the same insulation as the side walls and protected by a floor pan.

- 4.16.15 A folding floor will be incorporated into the expandable wall design. The bi-folding floor sections are attached to the fixed section of the main floor and to the 1st section of the folded floor. Each folding section is hinged with a heavy duty stainless steel continuous hinge. The sections are manually folded up and lowered using a mechanical lever attached to the folding sections at the rear end of the expanding section. Lever assembly to be easily operable from inside the command area.
- 4.16.16 The expansion and retraction of the expandable side will be activated by an electrically powered rack and gear slide-out system designed to handle the expandable section and the live loads imposed during normal operation. Slide-out system to be a “low pro” design to accept the flush floor system of this unit. The electric motor and controller is 12VDC powered. The controller switch panel is located near one end of the expandable side. The entire expansion / retraction of the expandable side is capable of being performed by one person.
- 4.16.17 A safety system of electrical control interlocks prevents operation of the expandable wall electrical system while any of the folding floor sections are in the down position.
- 4.16.18 An electric override with a manual crank is included to expand or retract the wall system in the event of a power failure, or an electric motor malfunction.
- 4.16.19 Steel framing is installed around the perimeter of the open section of the trailer’s side that accepts the expandable section. The horizontal and vertical framing and the envelopes of the body side panels will be sealed during installation. Corners to be mitered and joints are to be tangent and sealed. The vertical and horizontal framing will have sufficient cross section development to compress against the gaskets and seals when the expandable side section is retracted and expanded. The edges of the metal in contact with the gaskets and seals are to be free of all sharp edges, burrs, and to be blended to prevent the metal framing from deforming or cutting into the gaskets and seals.
- 4.16.20 The seals shall prevent the entrance of water and dust into the trailer when in the travel mode with the side section retracted, and when in the extended mode with the side section expanded.. The seals shall be accurately fitted, have flexural and compressibility characteristics, and shall not absorb moisture. Do not paint the seals.
- 4.17 One (1) heavy-duty aluminum framed entry / exit door (36” wide x 78” high) will be installed at the rear of the trailer.
- 4.17.1 Door will have fabricated galvanized steel panel inner cores, aluminum exterior skins, FRP interior skin, continuous hinges, full perimeter neoprene bulb seal and stainless steel door handle with dead bolt, keyed alike with interior thumb latches.
- 4.17.2 Hydraulic hold open door closer to restrain door and to close automatically.
- 4.17.3 Custom built low profile aluminum drip rail installed over door.
- 4.17.4 Interior of door at lower area to be fitted with an aluminum kick plate.

- 4.18 Install one (1) row of folding steps on the street side rear exterior to access the roof of the unit. Use Eberhard 606009 steps with built-in handhold. Steps are located between the pneumatic tower and the entry/exit door. Heavy duty backing material is installed inside the wall to accept the attachment of the steps. Steps are spaced at a distance for convenient climbing.

5.0 BODY INTERIOR:

5.1 Command Area:

- 5.1.1 Four (4) workstations will be installed in the command area.
- 5.1.2 Wall hung overhead laminated cabinets with adjustable shelves will be installed above all workstations. All cabinets to be glued and screwed.
- 5.1.2.1 12V DC lights (Taylorbrite #14 single linear) will be installed under the wall hung cabinets at each of the work stations.
- 5.1.3 Each workstation will have a 5-roller desk chair that swivels and tilts and will be secured in place for transport, using bungee cords..
- 5.1.4 Each workstation will be 24” deep and the overhead cabinets will be 12” deep.
- 5.1.4.1 All workstation countertops to be covered with laminate (color Dove Gray); all exposed edges are to be 3/4” x 1-1/2” with beveled top edge to prevent chipping. A rubber black T-molding bull nose will be constructed on the exposed sides of the countertops for durability and protection.
- 5.1.5 Two (2) workstations will be located in the fifth wheel section, and two (2) will be located in the slide out section.
- 5.1.5.1 Two steps will separate the lower trailer area from the two (2) workstations in the fifth wheel area. Steps are approximately 7” to 7-1/2” high each step, but are designed to create 3 equal levels of step. The step up area will be located on the forward curbside at the trailer floor drop.
- 5.1.5.2 The elevated workstations will also be protected by a steel tubing guardrail that extends across the remaining width of the trailer. Tubing to be at the extreme back edge of the trailer floor drop. A 4” toe board is installed at the floor line to protect chairs.
- 5.1.5.3 Three (3) white dry erase boards will be fabricated to fit the total width of the guardrail. All boards to be of the same size. Each board to include an aluminum fabricated hanger to fit over the top tubing of the guardrail. These erase boards will interchange with other boards used in other HPD vehicles; and, must be easy to hang and remove.
- 5.1.6 Each workstation will have connectivity ports for a network and phone.

- 5.1.7 One (1) 30" Flat Panel LCD TV will be installed at each workstation. Total of four (4). These are detailed in the SWATEEP package.
- 5.1.8 Radio configuration to be determined by Houston Police Department
- 5.1.9 Four (4) phones (model TBD), one located at each workstation. Four (4) phone jacks, one located at each workstation, is installed. Phones supplied by ACSI.
- 5.1.10 Each workstation to have a white dry erase board, as large as possible, installed on the walls above the desktops.
- 5.1.11 A white dry erase board will also be installed against the staircase at the entry into the forward workstations
- 5.1.12 One (1) electronic 19" (full size) rack will be installed on the curb side of the trailer between the entry/exit door and the restroom.. All of the communications hardware will be installed in that area. Rack to be open for ventilation. Align the front of the rack with the outer wall of the restroom. The space between the backside of the rack and the wall will be used for routing the communication lines into a communication connector box located below the floor and aligned with the rack.
- 5.1.13 Acoustical wall (sound deadening) material will be installed on the walls and ceiling in the command area of the workstations to provide a "soundsoak" environment within the rooms. Material is to be a sound attenuating carpet material of a color & design that complements the interior of the unit.
- 5.1.14 Workstation #1, (located streetside in the fifth wheel section) for the on scene commander, will have a visual monitoring system, and an intercom linked to the storage area. There will be a monitor linked to a camera located inside the storage area and a light that will be activated when the back door is open. A door ajar switch separate from the switch indicating an open door to the towing vehicle will be used for this application. This switch is to be mounted on the rear entry/exit door. System to be 12 VDC operational.
- 5.1.15 The camera will be mounted above the pocket door for viewing toward the rear of the unit. The monitor screen (10" max) will be mounted under the cabinets and aligned with the #1 Workstation seat. The camera is to be switch activated and this switch is to be located at the monitor. A flashing red light activated by the door switch will be located at the monitor screen. The intercom is to be a 2-way manual push/talk; listen type. Locate one (1) of the units inside the trailer at the back door; door handle side. Locate the other one (1) in a convenient location on the street side interior wall at the #1 workstation.

- 5.1.16 A galley area will separate the command area and the storage area. Located on the street side, a microwave/sink area will be provided. This area will have one (1)- 110VAC type microwave mounted above the sink with an additional storage cabinet below.
- 5.1.22.1 One (1) coffee maker will be installed in this area.
 - 5.1.22.2 One combo 110V-AC/12V-DC under counter type refrigerator (Norcold DE490) will be installed on the curb side in the fifth wheel section below the workstation countertop.
 - 5.1.22.3 One (1) fresh water tank, 40 gallon capacity, is installed below the floor between the chassis frame rails.
 - 5.1.22.4 Fresh water tank is to be equipped with a garden hose inlet fill connection. Connection is located on the exterior curb side of the trailer.
 - 5.1.22.5 City water inlet is located on curb side near the fresh water tank fill. Inlet to be garden hose type connection. This connection is to be used when trailer is to be located for periods of time in location where city water is available. A back flow preventor is installed in the supply line to prevent water back flow into the on board pump system.
 - 5.1.22.6 A fresh water tank overflow and low point drain are located on the curb side near the fill connections.
 - 5.1.22.7 All plumbing supply lines are high density, cross linked, polyethylene tubing with brass swaged lock fittings. All drain lines are Sch 40 PVC pipe.
 - 5.1.22.8 Galley sink is connected to the 40 gallon black water tank.
 - 5.1.22.9 An on-board water pressure system complete with accumulator (bladder) tank and pressure switch is connected to the fresh water tank. Pump is electrically powered by 115 V AC current and has a flow rate of 10 gpm. A pressure demand switch controls the line pressure. Pump is on at 20 psi and off at 40 psi. Pump is self priming and capable of lifting water sufficient to provide necessary discharge. Pump and accumulator are to be constructed from FDA grade materials which are approved for drinking water.
 - 5.1.22.10 Install power receptacles in the front wall below the workstation countertop in order to connect the combo AC/DC under counter type refrigerator. Both 120 VAC and 12 V DC circuits are to be installed. Both circuits are to be dedicated for the refrigerator's use only.
 - 5.1.22.11 One (1) 20 amp 120 V AC GFCI duplex receptacle is to be installed in the wall above the back splash on the sink counter top. Receptacle is to be used for microwave, coffee maker, etc. this receptacle is dedicated.

- 5.1.22.12 One (1) single bowl stainless steel sink and fixtures is to be installed in the base cabinet counter top on the street side of the trailer.
- 5.1.22.13 One (1) water filter, 10 micron, located in sink cabinet, installed in cold water line before sink.
- 5.1.22.14 Fresh water supply for galley sink and toilet is supplied by the on board fresh water system located in the generator/storage area.
- 5.1.22.15 One (1) paper towel holder is to be installed in the galley area.
- 5.1.22.15 One (1) dispenser is to be mounted on the wall in the galley area for hand soap.
- 5.1.23 A restroom is located on the curb side.
- 5.1.24 Walls of restroom are to be finished in the same FRP material as the interior trailer walls.
- 5.1.25 One (1) privacy door, constructed in the same manner as the entry/exit door is to enclose the restroom. Door is to be fitted with a lever type privacy latch.
- 5.1.26 One (1) low water use foot flush toilet is installed and connected to a 40 gallon black water tank, located between frame rails under the trailer. Toilet floor is raised in order for black water plumbing to cross above chassis rail and connect into the black water tank.
- 5.1.27 Black water drain system is a 3" RV style slide gate discharge valve. Tank must have high point vent routed to atmosphere to assist in the filling and emptying of the tank. Valve is located on curb side of trailer.
- 5.1.28 A light, exhaust fan, and tissue dispenser is included in the restroom.
- 5.1.29 One (1) custom table , round type, as large as practical, is to be installed in the command area. Table to be lightweight solid surface material, and removable from the floor when not being used. Table is to be one (1) pedestal design with quick release quarter turn type fastener to lock table pedestal into recessed floor mounted receptacle. Color of table top is to be (Dove Gray). Table is to be free standing design. Table will be used only when the slide out is deployed.
- 5.1.29 Table is to be constructed so that it can be disassembled to store in a storage well located between the rails of the gooseneck section. A possum belly storage compartment is designed for only the storage of the table. A drop down door accessed from the interior of the trailer conceals the table when stored.

5.2 Storage Area:

- 5.2.1 The storage area is located in the rear portion of the trailer, and separated from the command area with a pocket door.
- 5.2.2 This storage area is accessed from the rear exterior of the trailer via a 36" wide x 78" high aluminum framed entry/exit door.
- 5.2.3 An aluminum ramp, 36" x 8', is included, and is to be used to facilitate ramp entry at rear storage door. Ramp is stored in the possum belly of the trailer.
- 5.2.4 Possum belly to be of sufficient size to accept the ramp and a customer supplied ladder. One section of possum belly is designed to fit the 36" wide x 8' long ramp; while the other section is approx 13' long, and of proper width to accept an extension ladder.
- 5.2.5 Three (3) storage compartments, accessible from the exterior are located on the curb side of the trailer in the storage area. Combined length of these storage compartments is to be the same length as the interior storage area.
 - 5.2.5.1 These compartments will be 27" clear inside depth. Two (2) of these compartments to be approx 40" wide. The width of the third compartment to be the remainder of the storage area length. Each compartment is separated by full height vertical partitions.
 - 5.2.5.2 Height of compartments is approximately 42" high. The top of the compartments are approx 76" from the ground.
 - 5.2.5.3 Access is through four (4) extruded aluminum roll-up doors. Each door opening to be as wide and as tall as possible; but, all four doors to be the same size. The long compartment is accessible via two (2) doors. All doors have individual key locks for security. An aluminum drip rail is installed full length above the doors to drain water from the side wall.
 - 5.2.5.4 Each compartment is equipped with one (1) adjustable shelf to provide storage of items. Shelves are aluminum construction and have a 3" lip on the front side.
 - 5.2.5.5 Shelf adjustment/retention is achieved through full height channels (embedded in to partitions) and specialized spring loaded nuts sliding in the channels. System allows the shelves to be adjusted full height of the compartment; or, easily removed from the compartment.
 - 5.2.5.6 Interior of storage compartments are finished with .060" FRP. Corner joints are vinyl trimmed and sealed with silicone sealant to provide a finished interior.
 - 5.2.5.7 Floor of compartments to be steel construction with a rubber floor coating sprayed onto the steel and coved 2" up the walls for water proofing.
 - 5.2.5.8 Each compartment will have one (1) 120 VAC GFCI duplex receptacle.

- 5.2.5.9 The space from the top of these compartments to the ceiling is four (4) compartments of equal size, accessible from the interior of the body. Combined length of these compartments is to be the same length as the interior storage area. Compartment depth to align with the inside lower compartments. Each compartment to have a 3" lip at the bottom, and two (2) adjustable shelves with 3" lip to provide storage of items. Shelf adjustment/retention is achieved through full height channels and specializes spring loaded nuts sliding in channels. Compartments are open type with a cargo net over each to retain material in place.
- 5.2.6 Four (4) storage compartments, accessible from the interior of the body are located on the street side of the body. Combined length of these storage compartments to be the same length as the interior storage area minus the weapons locker width.
 - 5.2.6.1 These compartments will be 24" inside depth. The width of all four of these compartments to be of equal size. Compartments are constructed of aluminum, and each compartment is an individual free standing compartment.
 - 5.2.6.2 The height of these compartments will be approx 94" tall. The vertical openings will be approx 88" tall.
 - 5.2.6.3 Compartments are open to inside of trailer. Each compartment to have a cargo net to secure the material during transit.
 - 5.2.6.4 Each compartment is equipped with four (4) adjustable shelves to provide storage of items. Shelves are aluminum construction and have a 3" lip on the front side.
 - 5.2.6.5 Shelf adjustment/retention is achieved through full height channels with specialized spring loaded nuts sliding in the channels. System allows the shelves to be adjusted full height of the compartment; or, easily removed from the compartment.
 - 5.2.6.6 Each compartment will have one (1) 120 VAC GFCI duplex receptacle.
- 5.2.7 A weapons locker will be installed at the forward street side wall of the storage area.
 - 5.2.7.1 The locker will be accessed through a lockable aluminum roll up door. Door to be 36" wide x 84" tall.
 - 5.2.7.2 The interior width of this compartment is to be 39". Compartment to be full height of the trailer's interior Weapon racks to install inside compartment TBD.
- 5.2.8 Room will be accessible via the pocket door or the entry/exit door installed at the rear.
- 5.2.9 This area is separated from the command area by a solid partition wall. Finish on both sides of this wall system is the same construction as the interior of the side walls.

- 5.2.10 A double sliding pocket door system is installed in this wall, so that when closed, it provides complete privacy between the storage area and the command area. Each door retracts into one section of the partition wall. When doors are open and retracted into the walls a clear opening of 36" wide x 78" tall allows full access to both areas. Doors shall be double panel construction with a solid foam core. The door material to be .125" aluminum sheet construction on the storage area side and FRP faced on the command area side. Doors are to be installed on a top mounted ball bearing roller track system with a UHMW guide system fitted into cavities of the partition wall. A quarter turn latch system with recessed handles secures the doors in the closed position, and allows access for opening them from either side. Doors shall be securely sealed on all four sides when closed, to help insulate each room from noise and heat generated from the adjacent room.
- 5.2.11 Two (2) 3' long fold-up aluminum benches are installed on the inside curb side wall.
- 5.2.12 One (1) communication connector box is installed below the floor on the curb side of the trailer. Box to be 36" wide x 12" deep x 20" high; and to have a horizontally hinged swing down door. Door is constructed same as entry/exit doors and equipped with a rubber seal and paddle handle. An aluminum drip shield is installed above the door. Door to "free swing" toward ground and not interfere with inside hinged panel. A horizontally hinged drop down aluminum connector panel (approx 26" x 13") and located 6" inboard of the box serves as the connector bulkhead for the connection of all internal communication lines to the external services. Panel is constructed of .188" aluminum material. Panel is retained to an aluminum open frame by ¼ turn fasteners. A weatherproof metal boot extending from the interior of the trailer floor, behind the 19" rack, into the box; serves as the passage for all required cabling. Install one (1) 120VAC GFCI receptacle inside the box for electrical hook-up from the outside. Install a 4" PVC threaded pipe passage port through the exterior door. Install a PVC screw in plug into the port. A hooded raise up weather shield is attached to the exterior of the main door to protect the box when cables are passed through the port. A ¼ turn latch holds the hood tight against the exterior door.

6.0 GENERATOR ROOM:

- 6.1 Located at front of trailer above the king pin / fifth wheel section.
- 6.2 Overall dimensions approximately 4' – 2" long x 76" inside height x 102" wide
- 6.3 Floor of this room to be 10 ga smooth steel plate.
- 6.4 Room serves as a storage area, encloses the diesel generator, 12 V DC \ battery system, and the fresh water pump system.
- 6.5 A spare tire and wheel is stored on the back wall of this compartment.
- 6.6 Access to this compartment is through vertical doors located on each side of the trailer.
- 6.7 Both compartment doors are louvered to allow generator to obtain fresh air.

6.8 Entire interior of this compartment is lined with 3/8"plywood and covered with 20 ga galvanized steel for fire protection.

7.0. 120 / 240 AC ELECTRICAL SYSTEM:

- 7.1 System is powered by 20KW diesel generator or by shore power line. All wiring and electrical to be installed per National Electric Codes (NEC). All circuit wiring to be number coded, stranded copper THHN, rather than solid and shall be placed in liquid tight protective conduit.
- 7.2 All AC current electrical functions are controlled by one (1) 125 amp load center with main circuit breaker and spaces for up to 36 single pole full size circuit breakers, each of which is properly sized to meet the specific needs for its intended application. The load center is located on the curb side forward wall of the command area. The face of the circuit breaker panel is flush with the wall. All breakers are to be permanently labeled with the circuit name or function of each individual breaker.
- 7.3 One (1) 125 amp @ 240V automatic transfer switch, to transfer power from the generator or shore line power to AC load center.
- 7.4 One (1) shore line power cord of proper size to accept the electrical load of the system is connected to the ATS. Shore line cord must be 50-ft. long. Cord is stored in a horizontal compartment located between the main rails of the trailer at the gooseneck junction. A horizontal door encloses the compartment but must not interfere with the diesel fuel tank filler. The unattached end of the power cord is to be left blank so that customer can equip the cord with an electrical connector to match their supply equipment.
- 7.5 Five (5) wet location type, 2 bulb, 4', 40 watt fluorescent light fixtures are included for the interior. One (1), 2 bulb, 2', 40 watt fluorescent light fixture is installed in the galley area. A 12" dia. circline fluorescent light fixture is installed in the restroom.
- 7.6 Twenty-two (22) GFI protected grounded surge suppression duplex type wall receptacles installed as follows: 14 interior: (2) at each workstation; (4) in the storage area; (1) by the sink; (1) in the restroom; (7) in the storage compartments [1 each compartment]; (1) in the communication connector box; and 4 exterior (1 each corner).
- 7.7 All wiring to be installed in strict accordance with NEC.
- 7.8 Incandescent weatherproof porch lights will be installed on the exterior of the trailer adjacent to the side and rear entry/exit doors.
- 7.9 The neutral line must be grounded to prevent a "floating" neutral condition during operation of equipment.
- 7.10 All equipment racks and cabinets shall be grounded when installed. Minimum size grounding conductor shall be #6 stranded conductor and shall be connected from the rack on the cabinet to the ground buss.
- 7.11 A ground buss must be installed in a central location so that all equipment grounds can be connected to the buss.

- 7.12 One (1) grounding rod, 3/8" long, with 30 ft. of heavy duty braided copper ground wire is required to insure that the grounding rod can reach "mother earth" when the trailer is at a site. This grounding wire must be fastened to the ground connection of the load center, the trailer chassis, the ground buss, and the ground terminal on the generator chassis. Grounding rod is to be mounted in a tube and stored in the shore line cord storage compartment. A "J" hook must be installed in the compartment to hold the grounding cable in a neat coil. A plate warning that the vehicle must be grounded when used shall be mounted near the load center in the command/conference room.
- 7.13 All wiring is to be installed in liquid tight flexible conduit and shall be concealed, but easily accessible for repairs. All conduit shall be secured and fastened at appropriate points to prevent sagging and must be fastened at all points of bending. Conduit must be protected against chafing and damage. All lighting, wiring, switches, and receptacles shall be securely installed, straight and true, and free of loose or faulty connections. Wall outlets and other receptacles shall be conveniently located and installed uniformly. All electrical equipment and fixtures shall be mounted securely and properly positioned to prevent damage during transit.
- 7.14 Two (2) emergency exit lights, with 12 volt back up battery, to be installed above each entry/exit location.
- 7.15 Install (1) 120 VAC external power connection dedicated for a Kussmaul battery charger, to allow charger to be connected to electrical power when the trailer is not connected to either shore power, or when the generator is not operating. Power connection is to be located externally on the front of the trailer. Furnish a Kussmaul #5278C, 120V 15 amp male power inlet receptacle installed in a #091-3 RD Red weather proof cover. Current limiting relays are to be installed to prevent back-flow of current from the inlet receptacle to any other electrical connections in the system. Additionally, connect interior lights to this circuit. An identification plate located adjacent to this receptacle is required to identify the appliances connected.
- 7.16 Install one (1) 120 VAC external power connection dedicated to the AC outlet for the refrigerator. This system when connected to an extension cord provides electrical power to these circuits when the trailer is not connected to shore power or when the generator is not operating. Power connection is to be located externally on the front of the trailer adjacent to the other external power connection. This power connection is accomplished by using a Kussmaul #5278C, 120 V, 15 amp male power inlet receptacle installed in a #091-3 WH White weather proof cover. A current limiting device utilizing relays is to be installed to prevent back flow of current from inlet receptacle to any other electrical connections. An identification plate located adjacent to this receptacle is required to identify the circuits connected.
- 7.17 Install one (1) porch light on the exterior of the trailer adjacent to each entry/exit door. Lights are to be incandescent bulb type.
- 7.18 Two (2) 500 watt, 120 volt, extend-a-pole telescoping halogen lights are included with mounting brackets. One (1) installed on each rear corner of the trailer. Lights to be operated from the ground and to be controlled on separate switches located in the control panel.

8.0. ELECTRICAL – 12 V DC:

- 8.1 All exterior trailer lighting to meet or exceed Federal Motor Vehicle Standards FMVSS 108. All taillights and markers shall be LED type.
- 8.2 All wiring shall be stranded copper. All wiring exposed to possible physical damage shall be protected by use of heavy duty thermoplastic loom. All looms passing through any flanges or flat surfaces must be properly grommeted. Loom must be held in place with coated steel fasteners.
- 8.3 Rear directional lighting shall consist of two (2) lights each side, [split system for stop, tail, and rear directional lights] (ATA type), mounted on the rear wall of the trailer at a height to provide the best visibility for an approaching vehicle; but must be within the height guidelines of FMVSS-108. Lights to be Truck-Lite LED #60 series, grommet mount with stainless steel grommet covers. Lights are to be mounted in an aluminum housing to eliminate recessing into the trailer wall.
- 8.4 Clearance, marker, and ID lights are to be installed in the recessed cavity of the roof rail. Five (5) red lights shall be installed across the rear. Five (5) yellow lights are to be installed across the front. Two (2) red lights, one each side at the rear. Two (2) yellow lights, one(1) each side at the front. Two (2) yellow lights, one each side at the mid-point. All lights to be Truck-Lite LED #35 series, or equal.
- 8.5 Clearance and marker lights are to be installed on the sides of the trailer at the lower rub rail area. Two (2) red lights, one each side at the rear. Two (2) yellow lights, one on each side at the front. Two (2) yellow wide turn indicator lights, one on each side located at the mid point, and connected to the directional and the marker light circuits. All lights to be Truck-Lite LED# 21 series, or equal.
- 8.6 Reflectors to be Class A, Reflex type, and are installed on the rear and the sides of the trailer to meet FMVSS 108 regulations.
- 8.7 A license plate light and bracket is to be installed on the left side rear of the trailer. Light to be Truck-Lite LED # 15 series, or equal.
- 8.8 All trailer lighting branch wires to terminate in a Truck-Lite #50 series junction box with a terminal plate. Box to be located in an easily accessible location underside at the rear of the trailer.
- 8.9 The trailer shall be equipped with a 12- volt, 7-contact round pin style receptacle. The receptacle shall be installed at the front of the trailer, easily accessible, but protected from damage. The receptacle shall have a spring- loaded cover assembly. The 7-contact socket shall be wired in accordance with SAE J 560 to supply 12 – volts directly to the trailer from a vehicle wired for turn signals independent of the stop light.
- 8.10 A 7-conductor, ATA approved, electrical cable shall be connected from the front receptacle to the #50 terminal block at the rear of the trailer. This cable serves as the main electrical cable for the wiring circuit. All conductors must be of the proper size to accept the electrical loads of the circuits. Cable is to be securely fastened to the main chassis rail by rubber coated brackets.
- 8.11 All wiring connections at the lights are to have a minimum of 6” free wire to facilitate ease of repair/replacement of lights.

- 8.12 Two (2) 12 volt DC deep cycle batteries (Trojan SCS 225: 225 minutes @ 25amps per battery) is installed in the generator/storage compartment. Batteries are to supply DC power for the exterior scene lights, interior 12 VDC fluorescent lights, DC refrigerator, and other 12VDC lighting requirements.
- 8.12.1 Batteries are to be retained in a stainless steel pan with a leak proof lip to retain liquid in the event of a battery leak.
- 8.13 Install one (1) Kussmaul Auto Charge 4000 ,12 VDC, 40amp output, battery charger in an area near the deep cycle batteries. A bar graph charging indicator to be installed in the control panel. The battery charger is to be connected to the 120 V AC electrical system to supply charging current to the batteries when the generator is operating or the shore power is connected.
- 8.14 One (1) Taylorbrite #I4 single linear CCF light 12 VDC is to be installed above the control panel at front wall of command area. Switch is to be located near the front entry/exit door.
- 8.15 Two (2) 12 VDC service lights, ceiling mounted, are to be installed in the generator/storage area. Switch is to be located at curb side door to this compartment.
- 8.16 Two (2) emergency exit lights, with 12 volt back up battery, to be installed above each entry/exit door.
- 8.17 All switches and outlets shall be labeled “12-volt.”
- 8.18 All 12-volt wiring shall be color coded and numbered.
- 8.19 Provide two (2) 12 VDC cigar lighter type receptacles on the front wall of the command area above the counter top. These receptacles are to be used for chargers/adapters utilizing lighter type plugs.
- 8.20 Whelen Scene Light Package consisting of seven (7) #810CAOZR clear lens 8-32 degree halogen scene lights, surface mounted three (3) on each side of trailer and one (1) mounted in rear of trailer. Two (2) of the side lights, on the curb side, are located under the rear awning; and one (1) light is mounted at the same height as far forward as possible on the trailer. The center light on the street side is centered between the front and rear light. Lights are powered by deep cycle batteries and controlled by three (3) switches in the control panel located near load center.
- 8.21 All scene light switches to be rocker type. All other low voltage switches located within interior of trailer to also be rocker type.
- 8.22 Emergency lighting package consisting of:
- 8.22.1 Two (2) Whelen #90R00FR 900 Series RED LED flashing lights surface mounted ,and two (2) Whelen #90B00FR 900 Series BLUE LED flashing lights surface mounted.
- 8.22.1.1 One (1) each – high each side, as close to front and rear as possible — alternate flashing pattern.
- 8.22.1.2 The warning lights shall be mounted in a 9EFLANGE housings.
- 8.23 Emergency Warning Light Package—also includes:
- 8.23.1 Two (2) Whelen #60B00FR Blue LED flasher light surface mounted
- 8.23.1.1 One (1) curb side, rear high as close to the outside as possible
- 8.23.1.2 One (1) street side, rear low as close to the outside as possible.

- 8.23.1.3 The warning lights shall be mounted in a 6EFLANGE housing
- 8.23.2 Two (2) Whelen #60R00FR RED LED flashing light surface mounted.
 - 8.23.2.1 One (1) street side, rear high, as close to the outside as possible.
 - 8.23.2.2 One (1) curb side, rear low as close to the outside as possible.
 - 8.23.2.3 The warning lights shall be mounted in a 6EFLANGE housing.
- 8.23.3 Two (2) Whelen #60R00FR RED LED lights and Two (2) Whelen #60B00FR BLUE LED flashing lights mounted on the sides of the unit in the lower section.
 - 8.23.3.1 One (1) RED light on streetside forward, behind generator comp't door.
 - 8.23.3.2 One (1) BLUE light on streetside rear, bracket mounted below floor line.
 - 8.23.3.3 One (1) BLUE light on curbside forward, behind generator comp't door.
 - 8.23.3.4 One (1) RED light on curbside rear, bracket mounted below floor line.
 - 8.23.3.5 The warning lights shall be mounted in a 6EFLANGE housing.
- 8.23.4 Emergency LED warning lights shall be operated from the tow mover control panel and is transferred to trailer through a 7 pole flat blade trailer receptacle & connecting power cord located at the front of the trailer. The Red and Blue lights are to be installed so that the adjacent light is never the same color.
 - 8.23.4.1 This receptacle/power cord is also utilized to transfer door ajar, back-up alarm, and other functions between the trailer and truck.
- 8.24 Control Panel:
 - 8.24.1 A control panel/enclosure is to be located on the front wall of the command area on the interior front wall, at eye level. Control panel must include the following:
 - 8.24.1.1 The enclosure shall be mounted on the wall at eye level
 - 8.24.1.2 The enclosure shall have a NEMA rating of 3, 3R,4, 4X, 12 & 13.
 - 8.24.1.3 The enclosure is designed to meet the Joint Industrial Council (JIC) standards in the United States.
 - 8.24.1.4 Enclosure is made from corrosion resistant hot compression molded fiberglass reinforced polyester.
 - 8.24.1.5 The enclosure mounting plate shall be non-metallic.

8.24.2 Mounted in the control panel face plate shall be:

8.24.2.1 Generator start/stop control.

8.24.2.2 Generator oil & temperature gauges.

8.24.2.3 Generator hour meter.

8.24.2.4 AC voltage meter

8.24.2.5 Generator fuel gauge

8.24.2.6 Kussmaul battery charging bar graph indicator.

8.24.2.7 120V illuminated round rocker switches for pole lights

8.24.2.8 12 V illuminated round rocker switches for scene lights

8.24.2.9 Liquid level monitor for all on board water tanks (fresh, gray & black).

8.24.2.10 All switches function labeled.

8.25 One (1) Tank Monitoring System installed to monitor water levels in both black water tank and fresh water tank.

8.26 Door ajar indicator system with flashing red indicator light installed in truck cab in clear visibility of driver. One indicator light for exterior compartment doors, upper compartment doors, and entry/exit doors.

8.27 Back-up alarm, electric, 102 dba, will be installed at the rear of the trailer to automatically be activated when the transmission is shifted into reverse. Alarm is powered through the 7 pole flat blade electrical connector.

9.0 GENERATOR:

9.1 One (1) Power Tech Generator, 20KW, 60 HZ, 240-120V equipped with diesel fuel system, remote control (located on front wall of command area, and 10 amp battery charger kit)

9.2 Generator is to be mounted in the front compartment above the king pin/ fifth wheel section. Generator is to be positioned in the compartment to allow easy servicing of all necessary components. Special care must be taken to insure that all maintenance components can be accessed for servicing and/or removal without removing the generator, or putting a service person in harms way.

- 9.3 Generator is to be mounted using sound/vibration attenuation components installed at all mounting points.
- 9.4 Provide an oil drain extension hose with crankcase drain valve to facilitate changing engine oil.
- 9.5 Engine must be equipped with a dry type air cleaner, spin on lube oil filter, and spin on fuel filters.
- 9.6 Engine is to be equipped with a 12 VDC starting motor, 12 VDC battery charging alternator, and 12 VDC electric fuel pump.
- 9.7 Safety shutdowns for high water temperature and low oil pressure must be included.
- 9.8 The engine shall be equipped with a critical exhaust silencer. The exhaust shall be directed away from the ground level surrounding the trailer, and away from the awning areas where people will be assembled.
- 9.9 The generator shall be fueled by a dedicated 60 gallon capacity DOT approved diesel fuel tank. A fuel gauge shall be installed in the tank.
- 9.10 The fuel tank is to be located between the landing gear, protected by the chassis and plumbed to a filler neck accessible between frame the rails in the gooseneck area.
- 9.11 Generator to include oil and temperature gauges, hour meter and remote start installed in the command/conference room.
- 9.12 Wall between generator and command room to have a double panel of mylar faced multi-layer composite sound deadening material to reduce the noise from the generator entering the command area.
- 9.13 All wiring and cable conductors from the generator to the automatic transfer switch (ATS) shall be stranded copper of proper size to handle the load. The conductors shall be protected in a flexible liquid-tight conduit.

10.0 HVAC SYSTEM:

- 10.1 Three (3) roof mounted A/C units with heat strips are included and installed in the “step-down” area of the roof above the generator compartment. A transition duct at the ceiling of generator compartment directs the air from the A/C units into the command area above the front upper cabinets. This duct extends full width across the body. An intersecting longitudinal duct mates with the cross duct and extends along the curb side of the body at the ceiling line. Two (2) of the air conditioner’s discharges are routed into this duct. The third A/C unit (street side) discharges into the command area at the front of the room above the workstations. The longitudinal duct extends down the curb side wall and terminates at wall between the command area and the storage area. This duct will have regulated louvered grilles to cover the discharge openings in the command area, the galley, and the toilet. Scuppers and turning vanes are installed within the duct system to provide proper air distribution. A 110 VAC booster fan is installed within the duct system in order to provide proper air distribution throughout the forward work area of the trailer. This fan is controlled through the thermostat. Duct is covered with FRP to blend into the walls. Each A/C unit produces 13,500 BTUs of cooling and 5,600 BTU’s of heat. Units are controlled by a thermostat located in the command area.

11.0 MISCELLANEOUS:

- 11.1 Labeling: All control switches, faucets, valves, function indicators, etc. to be labeled with engraved vinyl self-adhesive signage. All load center breaker functions to be labeled for easy identification
- 11.2 Bubble levels on all four (4) corners
- 11.3 One (1) Safety Vision #SV-LCD 50-65-620 Rear View Vision Video monitor with #SV-TT1540 Kit as follows:
- 11.3.1 Color monitor
 - 11.3.2 Camera with built in audio microphone.
 - 11.3.3 Cable for the trailer, 65 ft
 - 11.3.4 Cable, 15 ft, with junction connection for monitoring in cab
 - 11.3.5 Jumper cable, 8-1/2 ft, to connect between truck and trailer
 - 11.3.6 Camera mounted on rear of trailer.
 - 11.3.7 Monitor mounted in cab of tractor for easy viewing by operator.

- 11.4 Two (2) white awnings will be located on curbside of the vehicle, one to be deployed over the exterior storage compartments; and the other over the entrance/exit door. Rear awning to be 14' long. Front awning to be 8' long.
- 11.5 A total of ten (10) sets of keys is to be supplied to HPD personnel.

12.0 INTEGRATION PORTION OF UNIT:

12.1 HPDSWATRP Radio Package shall be provided and installed. This Motorola package consists of the following:

12.1.1 The integration portion of the trailer consists of the Motorola radio equipment requested by the customer and installed. [ACSI to purchase the equipment from Motorola and it is to be installed by CWS.]

800 MHZ Consolette (1)

Qty	Part No.	Description
1	L2OURS9PW1 N	XTL 5000 CONSOLETTTE 10-35 WATT, 762-870MHZ
1	G114	ENH: DIGITAL ID DISPLAY
1	G51	ENH: SMARTZONE OPERATION
1	G173	ENH: SMARTZONE OMNILINK
1	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPE
1	G81	ADD: W9 HW SETUP CONSOLETTTE
1	L791	ADD: NO ANTENNA NEEDED
1	TRN7466	MOUNTING BRACKET EIA 19 INCH
1	G24	ADD: TWO YEAR EXPRESS SERVICE
1	RAF4219A B	800MHZ BLACK 806-866 W/CABLE
1	DQADAPTER	MINI-UHF FEMALE TO N-MALE ADAPTER

12.1 HPDSWATRP Radio Package shall be provided and installed: (Continued)

VHF Consolette (1)

Qty	Part No.	Description
1	L20KSS9PW1 N	XTL 5000 VHF MOBILE 10-50 WATT 136-174 MHZ
1	G114	ENH: DIGITAL ID DISPLAY
1	G48	ENH: CONVENTIONAL OPERATION
1	G81	ADD: W9 HW SETUP CONSOLETTTE
1	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPE
1	L791	ADD: AUDIO INTFC BD XTL5000
1	TRN7466	MOUNTING BRACKET EIA 19 INCH
1	G24	ADD: TWO YEAR EXPRESS SERVICE
1	RAD4208A	LOW PROFILE VHF ANTENNA, BLACK, 15
1	QDADAPTER	MINI-UHF FEMALE TO N-MALE ADAPTER

UHF Control Stations (2)

Qty	Part No.	Description
2	M20SSS9PW1 N	XTL 5000 UHF R2 450-520 MHZ 10-45 WATT
2	G114	ENH: DIGITAL ID DISPLAY
2	G48	ENH: CONVENTIONAL OPERATION
2	G80	ADD: W7 CONTROL HEAD
2	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPE
2	G89	ADD: NO ANTENNA NEEDED
2	G95	ADD: CONTROL HEAD SOFTWARE, W7
2	G91	ADD: CONTROL STATION POWER SUPPLY
2	W665	ADD: CONTROL STATION OPERATION
2	W382	ALT: CONTROL STATION MICROPHONE
2	G66	ADD: DASH MOUNT
2	G142	ADD: NO SPEAKER NEEDED
2	G24	ADD: TWO YEAR EXPRESS SERVICE
2	RAE4168A B	UHF BLACK 450-470MHZ W/CABLE
2	DSMAC5BMU	SPECTRA ADAPTER
2	DS7BMAC5B	HEADSET

12.1 HPDSWATRP Radio Package shall be provided and installed: (Continued)

UHF Consolette (1)

Qty	Part No.	Description
1	L20SSS9PW1 N	XTL 5000C UHF R2 450-520 MHZ 10-40 WATT
1	G114	ENH: DIGITAL ID DISPLAY
1	G48	ENH: CONVENTIONAL OPERATION
1	G81	ADD: W9 SETUP CONSOLETTTE
1	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPE
1	L791	ADD: AUDIO INTFC BD XTL5000
1	TRN7466	MOUNTING BRACKET EIA 19 INCH
1	RDN8943A	CBIS14.62572MOT, RACK GROUND
1	DSRMP620AT	120VAC 20AMP 6 OUTLET NEMA15-20, 20'
2	G24	ADD: TWO YEAR EXPRESS SERVICE
2	RAE4168A B	UHF BLACK 450-470MHZ W/CABLE
1	DQADAPTER	MINI-UHF FEMALE TO N-MALE ADAPTER

Miscellaneous Equipment:

Qty	Part No.	Description
500	CDN6490	3/8" EXTRAFLEX FOAM CABLE
1		MISC CABLES, ADAPTERS, AND BRACKETS

12.1.2 One (1) 19" full size electronic rack is to be installed between the toilet and the front entry/exit door in the command area to house all of the electronic/communication components. Rack is to be open. Front of rack to align with the outside edge of the toilet. Cable passageway is located between rack and wall of trailer.

12.2 SRGSP Surveillance Package shall be provided and installed:

12.2.1 Surveillance PTZ camera to be mounted on the Will-Burt pneumatic mast installed on the rear bumper of the trailer. [Camera system to be purchased from CWS and installed by CWS.]

12.2.2 Surveillance camera shall be controlled from the command area.

12.2.3 A nine channel multiplexer for eight additional camera feeds and a nine channel DVR will be installed.

- 12.2.4 The patch panel is to be equipped with a bnc-to-bnc connector in order to be compatible with the interior connection on the controller.
- 12.2.5 The PTZ camera cable will extend to the top of the mast through the Nycoil spiral conduit.
- 12.2.6 A pass through will be provided into the forward command area to run the appropriate cabling.

12.3 HPDSWATEEP Electronic Equipment Package shall be provided and installed.

Video Components supplied in the EEP are:

- a.) 1-Dell Server
- b.) 1-DVTEL software package
- c.) 1-8 port DVTEL encoder
- d.) 1-8-port encoder power supply
- e.) 1-Pelco PTZ camera
- f.) 1-Pelco PTZ camera power supply
- g.) 1-Pelco PTZ mounting arm
- h.) 1-Pelco PTZ pole mount
- i.) 500' -Belden RG6 coaxial cable
- j.) 1-APC rack mounted LCD monitor, keyboard & mouse

Wired Network Components supplied in the EEP are:

- a.) 12-Belkin RJ45 Keystone jacks
- b.) 1000' - Belkin Shielded CAT5 cable
- c.) 1-Trendware 24 port patch panel
- d.) 1-Belkin 24 pack 7' patch cables
- e.) 1-Cisco 24 port switch

12.3.1 A hinged panel located in the weather-tight connector box on the exterior of the trailer is used for connecting to media systems inside the vehicle to exterior sources. This panel, located at the rack location, will serve as the connection point for bringing voice, video, and data into the vehicle.

12.3.2 Four (4) flat panel monitors—30" will be installed. One (1) at each workstation. Monitors to be set up as follows:

12.3.2.1 All monitors will be controlled from the command area.

12.3.2.2 All monitors will view the onboard PTZ camera feed.

12.3.2.3 DVTEL software package is included and will be installed by CWS.

12.3.3 Notebook computers and a server shall be provided:

12.3.3.1 Specifications to be determined in pre-construction meeting

12.3.3.2 Computer allowance, total of \$10,000.00 maximum is included.
(Includes lap tops and server).

12.3.3.3 Laptops to be specified by HPD under the allotted budget amount and purchased by ACSI. Server is to be furnished and installed by CWS. ACSI will purchase server and software from CWS. CWS is responsible for all hardware and software installation and training.

12.3.4 One (1) Will-Burt model #TMD-7-42 telescoping pneumatic vertical mast, 42' extended height, 7' stowed height, is to be furnished and mounted on the rear of the trailer. A #C-267 pneumatic compressor assembly w/ tank is to be mounted in the generator compartment. A #900484 filter, regulator, lubricator is included and installed in the air line between the compressor and the mast. A #810989 1" ID x 70' Nycoil cable conduit is supplied to house the electrical cabling for the camera / antenna. Mast extension warning light kit is installed and connected through the 7 pole electrical connector to indicate to the driver when the mast is elevated. Mast is to be furnished and installed by ACSI.

12.4 SPP2 Satellite Phone Package [purchased by ACSI and installed by CWS].
Phone package consists of:

12.4.1 Two (2) Globalstar #GSP-1600 hand held phone units

12.4.2 Two (2) Globalstar #GCK-1410 car kits w/o bag

12.4.3 Two (2) Globalstar #GCK-0008 privacy handsets

12.4.4 Installation into communication system.

12.4.5 Activation fee and annual service fee is to be purchased by HPD.

13. PAINT SPECIFICATIONS –TRAILER

13.1 The exterior of the trailer body shall be painted white to match the tractor cab.

13.2 Trailer to be painted Dupont Imron sealed with clear coat.

13.3 Underside of trailer body and trailer chassis to be painted gloss black polyurethane after all components are installed.

13.4 All exposed metal surfaces on the trailer will be thoroughly cleaned and prepared for painting.

13.5 All exposed open joints, interior of boxes, etc. to be caulked with Sika Flex #221 gray automotive sealant.

13.6 The aluminum surfaces will be properly cleaned. All steel surfaces will be treated to remove all dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well.

- 13.7 A self-etching variprime system of 0.5 mil dry film is to be applied to all aluminum components after cleaning and prior to any other coatings being applied.
- 13.8 A minimum of (2) mil dry film of two component urethane primer / surfacer will be applied to the metal surfaces to provide a corrosion protective base coat.
- 13.9 Two (2) coats of automotive grade, two component acrylic urethane paint is applied. The urethane top coat contains a clear coat resin that creates the high gloss and depth of image.

14.0 CTBSWAT PACKAGE, COMMAND TRUCK CAB & CHASSIS, FIFTH WHEEL & ASSOCIATED EQUIPMENT / ACCESSORIES:

- 14.1 One (1) fifth wheel, stationary (Fontaine), left hand (roadside) release. Fifth wheel to be model # SL6A369250E (9-1/4" mounting height—34" frame width).
 - 14.1.1 Mount fifth wheel 6" ahead of rear axle centerline.
 - 14.1.2 Stationary frame mounted fifth wheel is bolted to the truck chassis using Grade 8 bolts.
 - 14.1.3 Fifth wheel is located to provide proper axle weight distribution to the chassis when trailer is connected.
 - 14.1.4 Mounted height of fifth wheel to be approximately 49" above ground – loaded
- 14.2 Cut frame rails at 39" aft axle and taper rear
- 14.3 One (1) cab guard/protection installed behind cab.
 - 14.3.1 Cab guard follows cab contour as it extends upward
 - 14.3.2 Top of cab protection to be 2" above top of truck cab
 - 14.3.3 Frame of protector constructed of 2" x 2" x .125" steel square tubing
 - 14.3.4 A solid 10 gauge bulkhead, full width of the cab guard extends from the bottom, up to the bottom of cab window
 - 14.3.5 Rear cab window is protected by #9 x 1.5" expanded metal guard incorporated into the cab protector.

- 14.4 All trailer electrical and brake control connections to be mounted to the cab guard for easy hook-up to the trailer.
 - 14.4.1 Air brake glad hands will be installed in a glad hand caddy mounted on cab guard.
 - 14.4.2 One (1) Electric Brake Control, installed under dash for easy access by driver to control electric brakes on other trailers is included. Brake control is to be wired through 6 pole connector at cab guard.
 - 14.4.3 One (1) 7 pole round pin (ATA) electrical connector with 12' coiled cord is installed at cab guard.
 - 14.4.4 One (1) 7 pole flat type (Bargman) electrical connector with 12' coiled cord is installed at cab guard. Functions served by this connector are: electric trailer brakes, electric brake breakaway battery charger, warning lights, door ajar, back-up alarm, and pneumatic mast elevated indicator.
- 14.5. One (1) deck cover incorporated into the cab guard extends back 47" behind front of cab guard. Deck cover is 96" wide. Passenger side to have one underbody box, 45" long, 24" deep, 24" high. Underbody box door to be fitted with a stainless steel 2-point dead bolt 'T' locking recessed twist handle. Box to be designed to incorporate sweep-out design at the bottom. Driver side to have one underbody box with a hull 45" long , 24" deep, 24" high. Forward section of box is to have a water cooler rack to accommodate a 5 gal Igloo 451 series industrial cooler. An Igloo #25042 rack is mounted to a frame which allows for easy removal of the cooler and for personnel to access the cooler spigot and cup dispenser the while cooler is in the rack. This section of box is not to have any obstructions which will prevent spilled water from draining. Coat the interior of the cavity with Toff rubberized coating. The rear 24" length of the hull is to be enclosed to form an underbody box with a door and sweep out features same as passenger side. Cooler supplied by HPD.
 - 14.5.1 Deck cover extends as far as possible behind cab guard, yet maintains clearance for the fifth wheel. Curb side of deck to extend to the outside of the underbody box. Underbody box mounts flush with the outside edge of the deck.
 - 14.5.2 Top walk surface of deck to be solid steel floor coated with non-slip safety grip paint.
 - 14.5.3 Mount deck cover/cab guard assembly to chassis using u-bolts.
- 14.6 One grab rail installed on cab protector, driver side, to assist entry to deck cover
 - 14.6.1 Grab rail is constructed of 1.25" diameter extruded aluminum tubing with ribbed rubber inserts that provide a positive grip even when wet
 - 14.6.2 Tubing is mounted into chrome stanchions to provide strength and durability
- 14.7 Two (2) 12VDC halogen sealed beam work lights are mounted each side of cab guard near the top outside corners.
 - 14.7.1 Lights are of rectangular lens design with housing constructed of durable, impact resistant polycarbonate material.

- 14.7.2 Lights are controlled by a separate switch in the truck cab.
- 14.8 One set of aluminum fenders, full radius for single axles trucks will be installed.
 - 14.8.1 Fenders are 24" high x 25" wide x 48" long and are constructed of .090 smooth aluminum with stiffening ribs formed into fender panels
 - 14.8.2 Adjustable fender mounting brackets are used to attach the fenders to the chassis
- 14.9 One pair of plain mud flaps are installed behind fenders and attached to chassis.
- 14.10 Paint finishing:
 - 14.10.1 After all fabrication work has been completed, all body joints will be sanded smooth.
 - 14.10.2 After all sanding, all body metal surfaces will be treated with an iron phosphate spray.
 - 14.10.3 Entire body exterior and interior of underbody compartments to be completely primed with a primer material recommended to be compatible with the finish paint system used.
 - 14.10.4 After priming, all exposed open joints, interior of box, and exterior of the body is to be caulked with Sika Flex #221 GRAY AUTOMOTIVE SEALANT.
 - 14.10.5 The finish paint color and type of paint is to be exactly the same system as the truck cab
 - 14.10.6 Entire underside of body and chassis is to be painted gloss black polyurethane after all components are installed.
- 14.11 One (1) Electric trailer brake control, installed under dash for easy access by driver to control electric brakes on trailer. Brake control wired to 7-pole flat connector at cab guard of body.
- 14.12 One (1) custom center console mounted in cab between the two front seats. Console to be as large as possible and fabricated from 1/8" smooth aluminum. Console finish to be textured power coat paint. Color to be compatible with cab interior. The forward most portion of the console is to be slanted for mounting the siren control head, warning light control panel, and radios; with easy access to both people in the cab seats. The rear portion of console is to be arranged with a portion being an open storage area and part being enclosed with a lift-up hinged cover for storage of notebooks and maps.
- 14.13 One (1) Federal #Q2B 12 Volt motor driven, rotary siren with chrome plated grille and housing recess mounted in the front area of vehicle. Siren shall be properly wired with heavy copper cable for a minimum voltage drop.
- 14.14 One (1) Whelen #295HFSQ1 electronic siren control head is mounted in the center console
- 14.15 Two (2) Whelen #SA314B siren speakers w/cast aluminum trim ring is to be mounted in the front bumper behind the grill.
- 14.16 One (1) Whelen #FL2 Edge series 55" LED Lightbar with, 2-red, 2-blue, and 1-clear light in the center—front & rear ,and 2-cornering lights (red,blue) each side.

- 14.17 Compartment lights, surface mounted flat type to be installed in underbody compartment on body and in front gooseneck compartment on trailer. Lights are controlled by door jamb switches mounted in the corner of the doorframes.
- 14.17.1 Lights in the underbody compartments are connected to truck electrical system.
- 14.17.2 Lights in trailer are connected to the trailer's electrical system. All lights are to be Weldon #2035-7100.
- 14.18 One (1) Federal SW 300 switch control panel having six (6) SPST rocker switches is installed on the forward slant portion of the console. Three (3) switches feature user selected legends that are backlit for night visibility. Switch control- panel controls all 12-volt emergency lighting and warning devices.
- 14.19 One (1) internally lighted rocker switch mounted to the left of the switch control panel switch is Installed to function as and is to be identified as “ MASTER EMERGENCY SWITCH”.
- 14.20 Warning lights (3) shall illuminate automatically to warn driver when any of the following conditions exist:
NOTE: Although some of the functions are not applicable to this trailer; the truck must be equipped the same as the other trucks in order for all trucks to pull all trailers.
a.) comp't/entry-exit doors are ajar
b.) pneumatic mast is elevated
c.) hydraulic leveling jacks are not properly stowed (function not on BOMB trailer)
- 14.21 Relocate the 7-pole round pin electrical connector from the rear of the chassis to the cab guard.
- 14.22 Relocate the trailer air brake junction block from the rear of the chassis to an area on the frame close to the cab guard. Furnish and install coiled air brake hoses and gladhands from the junction block to connect to the trailer.
- 14.23 Furnish and install a gladhand hose caddy for the air hoses and electrical connector. Mount hose caddy to the cab guard.
- 14.24 Install a heavy duty (class 4) receiver hitch at the rear of the chassis. Hitch to be securely braced to truck chassis to tow trailers having a 2” ball coupler. Receiver with a 2” ball is included with the receiver hitch. Mount hitch so that the center of receiver opening is approx 18” – 20” from ground.
- 14.25 Install a 7 pole Bargman flat blade electrical connector at rear of chassis. Connect to chassis lighting functions and electric brake controller.
- 14.26 Furnish a 7 pole flat blade to 4 pole electrical connector adapter for towing trailers without electric brakes.
- 14.27 Install one (1) Truck Lite #40850 lighting power unit module at rear of chassis between frame rails. Module includes S/T/T & BU lamps w/ license plate mounted to power unit.