Request for Board of Commissioners' Action

From: Keith Walker **Date:** 6-13-2017

Subject: Tanker for Cecil

Tanker Quote 186,000

will be built to blue prints attached

please feel free to make copies for each Commissioner. Need to also discuss the Grant option that has been found in reference to the tanker

Motion made by _____

Second made by _____

Any discussion: _____

_____

Votes_____ yes _____ no Motion carried/ failed

Osco Tank & Truck Sales, Inc.
1604 12th Avenue
Orion, IL 61273

DOMINATOR SERIES

"Don't just fight the fire, DOMINATE it!"

3000 GALLON POLY ELLIPTICAL TANKER WITH POLY BODY SPECIFICATIONS

INDEX TO SPECIFICATIONS:

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Section 9:	Emergency Lighting & Siren Equipment
Section 10:	Chassis
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Section 12:	Warranties

Initial Here: ____

Osco Tank & Truck Sales, Inc.
1604 12th Avenue
Orion, IL 61273

SPECIFICATION

Section 1: Poly Tank

1.0 Tank
The 3000 gallon tank will be elliptical in design and constructed of Polyprene. Polyprene is a specially formulated high strength copolymer material. It is corrosion and impact resistant, as well as lightweight in design. The water tank will be integral with the body for maximum utilization of space and lowest center of gravity. The top of the tank will feature removable lifting points.

The Tank Shall Carry a Lifetime Warranty from the Manufacturer

1.1 Baffles
The tank portion of the body will be provided with at least one (1) full-length swash partition (baffle) and a sufficient number of width-wise baffles so that the maximum dimension of any spaces in the tank, either transverse or longitudinal, will not exceed 46", and not less than 23". Baffles will have openings at both the top and bottom to permit movement of air and water between spaces to allow maximum flow requirements. Baffles will form an integral part of the tank, and design will be to provide and maintain safe road stability regardless of water level.

1.2 Overflow Vent
Tank will have 6" minimum overflow and air vent designed to prevent damage to the tank under high flow conditions and enclosed in front tank filler. Tank filler to extend upward to top of the tank and will include a water deflection device to contain and minimize water surge. Overflow is to be designed and located to prevent water loss on fast stops or starts, and is also to be located so as not to affect traction on the rear tires per NFPA.

1.3 Body Sub-frame
The body and tank will be mounted to a metal sub-frame constructed from 3" channel to support the tank and pump. The sub frame will be Hot Dip Galvanized. The unit will be bolted to the chassis with 4 point spring loaded mounting hardware. The tank portion of the body will be mounted approximately 3" from the frame rails through a sub frame. The body sub frame will be bolted to the chassis frame. There will be ¼" hard rubber pads between the apparatus and the metal sub-frame to act as a buffer.

1.4 Ladder

An aluminum ladder will be installed to access the top fill opening. The ladder will be constructed of 1" aluminum tubing on the sides and the ladder rungs will be 1" knurled tubing for positive traction. The ladder will be located on the rear street side of the tank.

1.5 Sump
There will be one sump in the bottom front right side corner of the tank. The sump will be fitted with a 3" opening and pipe plug and will be used in combination as a tank drain and tank clean-out. The opening will be fitted with an anti-swirl plate.

Section 2: Tank Plumbing, Openings, & Valves

2.0 Tank to Pump
One sump will be located in the bottom front left side corner of tank. The sump will be fitted with a 3" opening and used for the pump supply line. The pump to tank line will be constructed of PVC and a rubber connection flange to allow for tank movement.

2.1 Direct Fill
One 5" direct fill will be located on the rear curb side of the tank and gated with a 5" Bray butterfly valve. The valve will be stainless steel with a quarter turn swing out handle. Valve will be fitted with a 5" Storz fitting end, Storz cap and chain.

2.2 Direct Fill
One 3" direct fill will be located on the rear street side of the tank and gated with a 3" Bray butterfly valve. The valve will behave a stainless steel interior with a quarter turn handle. Valve will be fitted with a 2-1/2" NST female swivel fitting end, NST cap and chain.

2.3 Fill Tower
One tank fill tower will be located on the top of the tank centered in between the front and the rear. The opening will be a 23" x 23" opening with a flip up lid. The fill tower will be constructed of Polypropylene high strength copolymer material and the lid will be hinged on the front so that it opens up and to the front.

Section 3: Dump Valve

3.1 Newton Swivel Dump
There shall be one painted mild steel Newton Model 1070-44-13 dump valve with a 6012SW swivel dump and 4036-8x12-34 slide out extension. The dump valve shall be located on the rear of the tank. The valve

shall be manually actuated and be able to turn to the left or right and extend beyond the edge of the tank.

Section 4: Apparatus Body & Accessories

4.1 Apparatus Body
The entire tanker body will be constructed of 5052 aluminum material. The body will be supported underneath by a primed and painted steel sub-frame which will be fastened to the truck frame. The body will be prepared for painting by applying an adhesion promoting primer and then a final coat of single stage paint. The body will be painted a single solid Red.

4.2 Fender Wells
The tank fender wells will be fitted with a aluminum liner. They will be form fitted and welded into the underside of the body.

4.3 Fenderettes
There will be polished stainless steel fenderettes installed on the wheel wells to prevent road splash onto the body and to give the body a very attractive appearance. The fenderettes will extend approximately 1.5" beyond the body and will be fastened with stainless steel bolts from the inside so that no fasteners will be visible from the exterior.

4.4 Rub Rail
The lower edge of the aluminum body will have a polished aluminum rub rail fastened to it to avoid any unintentional scraps and give the body a more appealing look.

4.5 Tow Hooks
The rear of the body will have two tow hooks located above the rear step and will be fastened directly to the frame of the truck.

Section 5: Apparatus Body Rear Step, Catwalks & Hose Trays

5.0 Rear Step
There will be a rear step installed on the rear of the unit constructed of pre-formed aluminum deck plate with perforations for added traction when stepping onto it. It will be 18" deep x 98" wide to match the apparatus body. Where the rear step meets up to the apparatus body, we will install a 4" kick plate built of polished aluminum. The rear step will also feature a storage tray and fasteners to store the Newton elbow and extension.

5.1 Catwalks
One each side of the tank, there will be a catwalk that runs the length of the tank and is located on top of the apparatus body directly above the front left and right storage compartments. The catwalks will be constructed of ¾" thick Polyprene copolymer material and covered with an aluminum diamond-tread plate with a bent 30 degree lip on the outside edge to act as a drip edge. These catwalks will be used to mount the hose trays and portable tank racks.

5.2 Hose Tray
An aluminum hose storage tray shall be constructed on the driver side catwalk. The storage compartment shall be built of aluminum diamond tread and have a 5" tall side.

Section 6: Body compartments & Portable Tank Rack

6.0 Driver Side Compartment - L1
A "sweep out style" compartment will be located on the driver side forward of the rear tandem axles. The dimensions of this compartment will be 62" wide x 30" tall x 27" deep. The compartment will have ROM Roll-up doors. The compartment shall be equipped with door activated LED compartment lights, stainless steel vent grill, floor drains, and black Turtle Tile plastic floor decking. The interior compartment finish will be sprayed with grey Speedliner and splatter painted with the same color as the exterior of the body. There will be a "Door Open" indicator light in the dash of the truck cab.

6.1 Passenger Side Compartment - R1
A "sweep out style" compartment will be located on the driver side forward of the rear tandem axles. The dimensions of this compartment will be 62" wide x 30" tall x 27" deep. The compartment will have ROM Roll-up doors. The compartment shall be equipped with door activated LED compartment lights, stainless steel vent grill, floor drains, and black Turtle Tile plastic floor decking. The interior compartment finish will be sprayed with grey Speedliner and splatter painted with the same color as the exterior of the body. There will be a "Door Open" indicator light in the dash of the truck cab. The compartment will have a one (1) aluminum tray supported on each side with uni-strut rails.

6.2 Swing Down Tank Rack
One (1) Ziamatic electric swing down Portable Tank Rack will be located on the right side of the tank mounted on top of the catwalk. The tank rack(s) will be built to swing down over the body. The tank rack shall be controlled from a switch on the rear corner of the tank

body. The tank rack will be designed to carry a 3000 Gallon "Fol-da-tank" folding water tank.

Section 7: Pump & Plumbing

7.0 Berkeley Pump
The pump will be a Berkeley, Model B2-1/2, Mid-range PTO-driven transfer pump. The pump will have a maximum rated capacity of 550 GPM. Pump features include cast iron casing, bronze impeller and wear rings, mechanical seal, and stainless steel shaft. The pump will be pedestal mounted in between frame rails under the truck and connected to the Power Take-off with a 1410 balanced steel driveshaft.

7.1 Pump Compartment
The apparatus will be equipped with a side control pump compartment to house the water pump plumbing and controls that will be 12" wide. The pump compartment will be constructed of mild steel angle iron with #4 finish stainless steel pump panels and covers. The street and curb side of the pump compartment will be equipped with a 2-1/2" Class 1 water pressure gauge.

7.2 Discharge(s)
There will be a total of two (2) 2-1/2" NST male stainless steel discharges located on the driver side pump panel. The discharges will have a 2-1/2" stainless steel full-flow quarter turn ball valve and fitted with a cap and chain.

7.4 Tank Fill/Pump Recirculation
There will be one 3" valve that will be used for tank refill and pump recirculation. The line will have a 3" air-operated butterfly valve and connected to the tank with a rubber hose. The tank fill valve will be controlled from a switch on the pump panel.

7.5 Relief Valve
There will be one (1) 1.5" automatic pressure relief valve. The valve will be enclosed in the pump panel and will empty straight down to the ground if pressure is bled off. The valve will be brass with NPT threads.

7.6 Tank To Pump Line
There will be a 4" Tank to pump line located underneath from the tank to the pump. The line will have a pneumatically operated 4" Keystone butterfly valve with hose barb end. PVC pipe and EPDM Rubber hose will be used to connect the tank to pump line. The air switch to operate the valve will be located on the pump panel.

Section 8: Electrical Components

8.0 Master Battery Disconnect Switch

One (1) master battery disconnect switch will be located on the driver side floor of the truck cab. When the battery switch is on the "OFF" position, all power to the apparatus will be disconnected. When the battery switch is turned to the "ON" position, all power will be restored and there will be a green "BATTERY ON" indicator light in the dash of the truck.

8.1 Control Console

In the center of the truck cab, a control console will be custom made to fit in between the driver and passenger seat. The control console will have the following control options:

- Tank Water Level Gauge cab display
- Compartment "Door Ajar" light display
- Master light switch to control all emergency lighting
- Rocker switch for each emergency lighting zone
- Rocker switch for each scene light zone

Each display and switch will be clearly labeled and switches will be lighted. The control console will be constructed of mild steel and painted a flat black to reduce daytime glare.

8.2 Chassis and Body Wiring

The chassis and body will be wired as two separate units. All connections will be made in a centrally located junction box. Each individual circuit will be adequately sized for the load it is planned to carry, run in color-coded wire and protected with high temperature convoluted plastic loom. All connections will be made with weatherproof connectors and all harnesses will be fastened securely.

8.3 Compartment "Door Ajar" Warning

There will be a red warning light located in the center control console and labeled properly. The light will illuminate when either compartment door is open.

8.4 LED Stop/Turn/Tail & DOT Lighting

All DOT lighting will be will be LED. On the back of the apparatus two (2) Whelen LED 600 Series quad-cluster lights will be installed. Each Cluster will have a Red LED Brake/Tail light, Amber turn signal arrow light, Clear LED back-up light, and a Red LED emergency flashing light.

8.5 Kussmaul Auto-Charge Kit

One Kussmaul auto charge pump plus kit will be installed on apparatus. The kit will include a battery charger and conditioner to keep the batteries at full charge. The kit also will include a compact air compressor to keep the air system at full charge. There will also be a power strip inside cab for accessories. The unit will be controlled by an automatic disconnecting "shore line". The unit will "disconnect" when the ignition is turned on.

Section 9: Emergency Lighting and Siren Equipment

9.0 Light bar

The front upper zone warning light package will be a Whelen LED Justice Series. The light bar will be fully NFPA compliant and certified by the lighting manufacturer to meet all the requirements. The light bar will be 54" in length and will feature eight (8) red LED lights, two (2) on each outside corner (<>) and four (4) on the front of the bar. The bar will also contain two (2) clear/white LED lights on the front of the bar. The light bar will be permanent mounted to the cab roof and be switched at the control console in the truck cab.

9.1 Lower Zone - Surface Mount 600 Series Lighting

There shall be seven (7) RED and one (1) BLUE Whelen 600 series Super-LED light heads. Two (2) shall be located in the front grille (1 RED/ 1 BLUE), two (2) located near the front fenders (RED), two (2) located near the rear fenders (RED), and two (2) located in the rear quad-cluster on the lower rear zone (RED). Each light shall be surface mounted and have a chrome bezel.

9.2 Upper Zone - Rear

There shall two (2) Whelen L31F Super-LED light heads located on the top rear corners of the tank. Each light shall contain four (4) Whelen linear LED light heads.

9.3 Siren Amplifier

One Whelen Model 295SLSA1 Electronic Siren Amplifier will be installed in the truck cab in a location that is easily accessible to the driver. The electronic siren is a 100 watt siren with hands free operation, hard wired microphone and 17 scan lock siren tones. The siren functions will be backlit for easy operation during night use.

9.4 Speaker

One Whelen Model SA314A 100 watt speaker will be mounted along the frame behind the front bumper.

9.5 Scene Lights

There will be a total of four (4) scene lights located on the tank. The scene lights will be Whelen 900 Series LED lights. The lights shall be surface mounted with chrome bezels. Two (2) scene lights will be mounted on the top side rear corners of the tank. The remaining two (2) scene lights will be mounted on the rear bulkhead of the tank. The scene lights will be individually switched (Left/Rear/Right) from the control console inside the truck cab. The two (2) light heads on the rear of the tank shall also come on when the truck is shifted into reverse.

9.6 Ground Lights
There will be six (6) Tecniq E-910 sealed beam LED ground lights installed on the truck and apparatus to illuminate the area below the apparatus. Two (2) lights will be located underneath the truck cab step, two (2) will be located underneath the apparatus body storage compartments, and two (2) will be located underneath the rear aluminum step. Each ground light will be automatically on when the truck parking brake is applied.

9.7 Back-up Alarm
One (1) ECCO Model 530 102 decibel back-up alarm shall be installed on the rear truck frame. The back-up alarm shall be automatically activated when the truck is put in the reverse gear.

9.8 Rear Vision Camera
There will be one (1) Roscoe rear view safety camera system installed. The camera will include one (1) wide angle camera and one (1) 7" full color monitor. The cameras will be located on the rear of the apparatus. The monitor will be installed per customer specifications.

Section 10: Chassis

10.0 Kenworth T440
The cab and chassis furnished shall be a 2012 Kenworth T440 setback front axle and tandem rear axle. The truck wheelbase shall be 210". The chassis shall be built to meet or exceed all current NFPA 1901 requirements. **The chassis shall have a maximum vehicle speed of 62 Miles Per Hour.**

10.1 Frame
The frame rails shall be heat treated allow steel. The frame rails shall measure 10-5/8" tall x 3-1/2" deep x 5/16" thick with a 120,000 PSI yield strength. (May be subject to change due to Kenworth engineering requests.)

10.2 Engine
The chassis shall have a Cummins ISL diesel engine rated at 370 Hp. @ 2100 RPM with 1250 lb/ft of torque @ 1400 RPM. The engine shall have a governed speed of 2100 RPM. The engine shall be equipped with an engine exhaust brake which will be activated by a dash mounted switch. The engine will have an aluminum radiator with 1000 square inches of two row louvered fins.

10.3 Transmission
The transmission shall be an Allison Automatic Model 3000RDS. The transmission shall have a close ratio six (6) speed operation. The shift control shall be a push button panel mounted on the truck dash. The transmission shall be equipped with the necessary PTO provisions for pump installation.

10.4 Axles & Suspension
The front axle shall be a 12,000 pound axle with a 12,000 pound taper leaf spring suspension with shock absorbers. The rear axle shall be a Dana Spicer DSP41 40,000 pounds on a Kenworth Airglide 400L suspension with rear shock absorbers. The rear axles shall be spaced apart at 52" and shall have a rear axle gear ratio of 5.57.

10.5 Wheels & Tires
All outside wheels shall be polished aluminum 22.5" 10-stud hub piloted wheels. The rear inner wheels shall be a painted steel 22.5" 10-stud hub piloted wheels. Where the aluminum and steel wheels meet, there shall be a spacer to avoid corrosion. The front tires shall be 12R22.5 steer tread. The rear tires shall be 11R22.5 traction tread.

10.7 Batteries, Alternator & Starter
There shall be two (2) PACCAR GP31 maintenance free 12 Volt 2100 Cold Cranking Amp batteries installed in the passenger side compartment. The batteries shall be maintained by a Bosch 12 Volt 200 Amp alternator.

10.7 Cab Equipment and Accessories
Additional chassis features shall include the following:

- Halogen headlights
- 45-gallon polished aluminum fuel tank
- Painted front bumper, full width
- Polished aluminum grille
- Cab Grab handles, chrome bar with anti-slip rubber inserts
- Power & Heated Mirrors, Rectangular(15" x 7") top, Convex bottom

- Radio, Panasonic AM/FM
- Air Conditioned and Heated

Section 11: Paint, Lettering, Striping, & Signs

11.0 Paint
The apparatus will be painted in a single solid color. The truck will be RED. The apparatus body will be sanded, cleaned, and primed with a self-etching flexible primer. The primer will then be hand sanded and a final coat of paint will be applied.

11.1 Lettering
The truck will be lettered in a gold leaf type vinyl with a black shadow and outline. The truck shall be lettered to department specifications. There will be a $650.00 allowance for lettering.

11.2 Reflective Striping
The apparatus will be striped with a white vinyl reflective striping from the front to the rear of the truck. The stripe will be four inches in width.

11.3 Chevron Striping
Per NFPA 1901 standards, there will be a minimum of 50 percent of the rear of the apparatus covered in a RED & YELLOW chevron reflective vinyl striping. The striping will be in 6" wide stripes. Where the chevron striping will go will be left of top the department.

11.4 Apparatus Labels
There will be a permanent label located in the chassis which will include the following information:

- Quantity and type of fluids used in the apparatus including: engine oil, engine coolant, transmission fluid, drive axle fluid, air conditioning refrigerant, air conditioning lubrication oil, power steering fluid and pump transmission oil.
- Front and rear cold tire pressures
- Number of personnel the vehicle is designed to carry
- Height and length of the vehicle in feet and inches
- Gross Vehicle Weight Rating (GVWR) in pounds

Section 12: Warranties

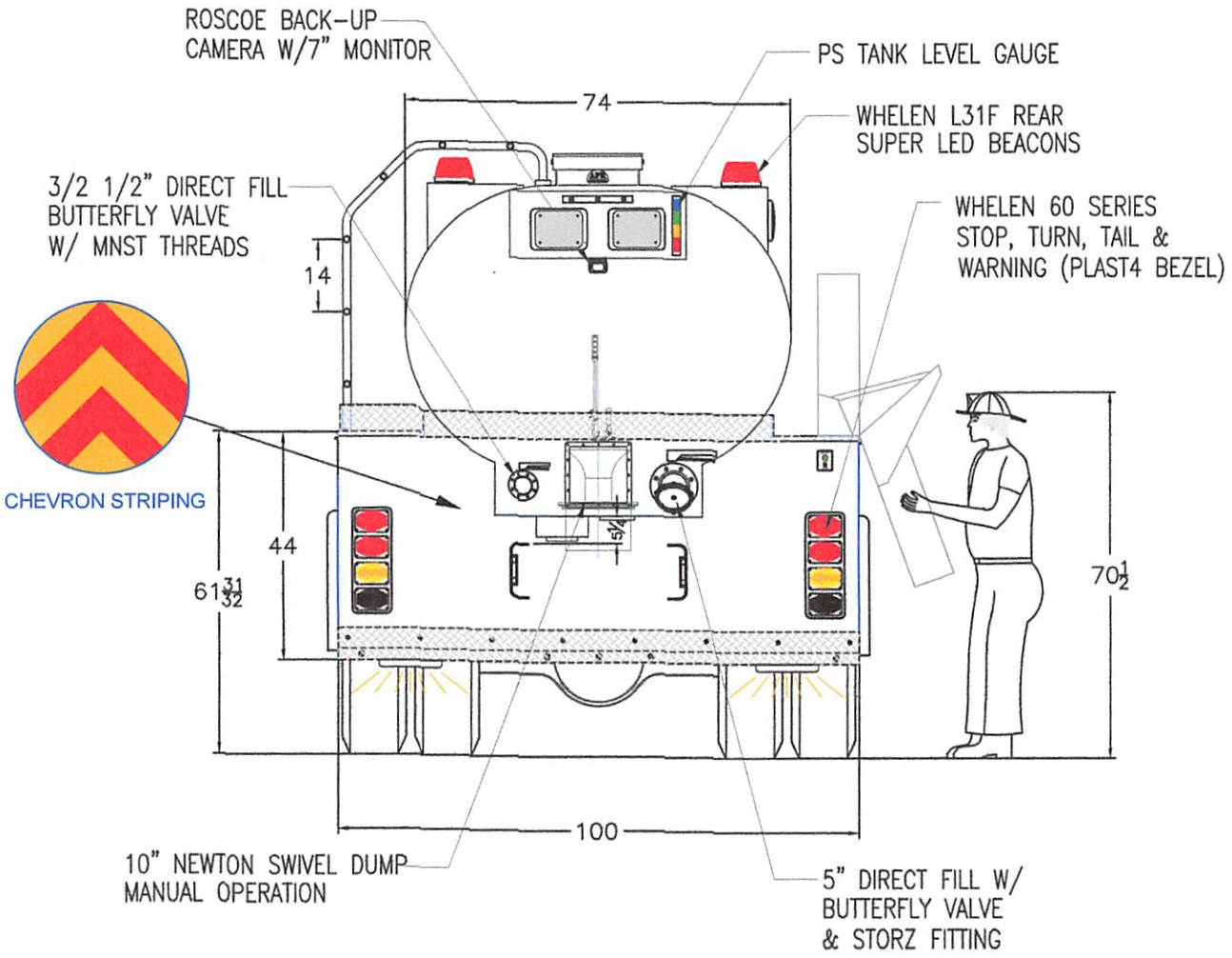
12.0 Tank & Body Warranty

The tank will be covered by a **Limited Lifetime Warranty.** The warranty guarantees the tank to be free from defects in material and workmanship for the normal service life of the unit. The aluminum body shall come with a 10 year warranty guaranteeing the material and workmanship of the body.

12.1 Pump Warranty
The pump warranty is Two **(2) year.** The pump will have a standard two (2) year parts and labor warranty.

12.2 Truck Warranty
The Kenworth chassis shall come with a 90 day warranty. A 1-year powertrain warranty shall be available for an additional $2,850. A 2-year powertrain warranty shall be available for $3,850.

12.3 Lighting Warranty
There will be a Five (5) year warranty on all Whelen LED products. The speakers, siren, and power supply will be covered by a minimum Two (2) year warranty.



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SIGNATURE _____

TITLE _____

DATE _____

CUSTOMER	BROOKINGS F.D., SOUTH DAKOTA
SIZE	3000
BODY MATERIAL	.190 THK. SMOOTH ALUMINUM
TANK MATERIAL	(APR) POLYPROPYLENE
PUMP	BERKELEY B2 1/2 , 550 GPM (PTO)
CHASSIS	KENWORTH T440 (2) DOOR

ALL DIMENSIONS ARE GIVEN IN INCHES, UNLESS NOTED OTHERWISE, AND ARE FOR REFERENCE ONLY

OSCO TANK & TRUCK SALES

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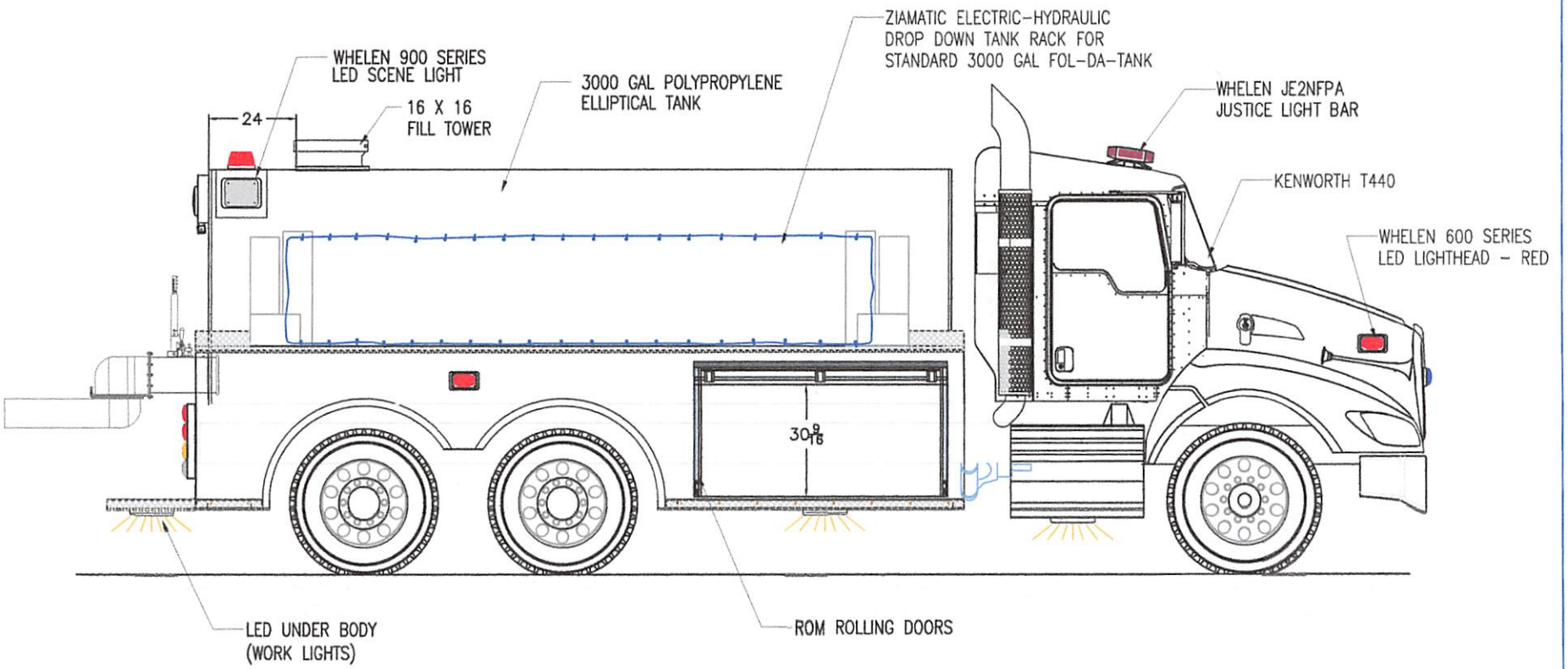
SCALE: NONE	DATE: 06/08/16	SHEET: 1 OF 1



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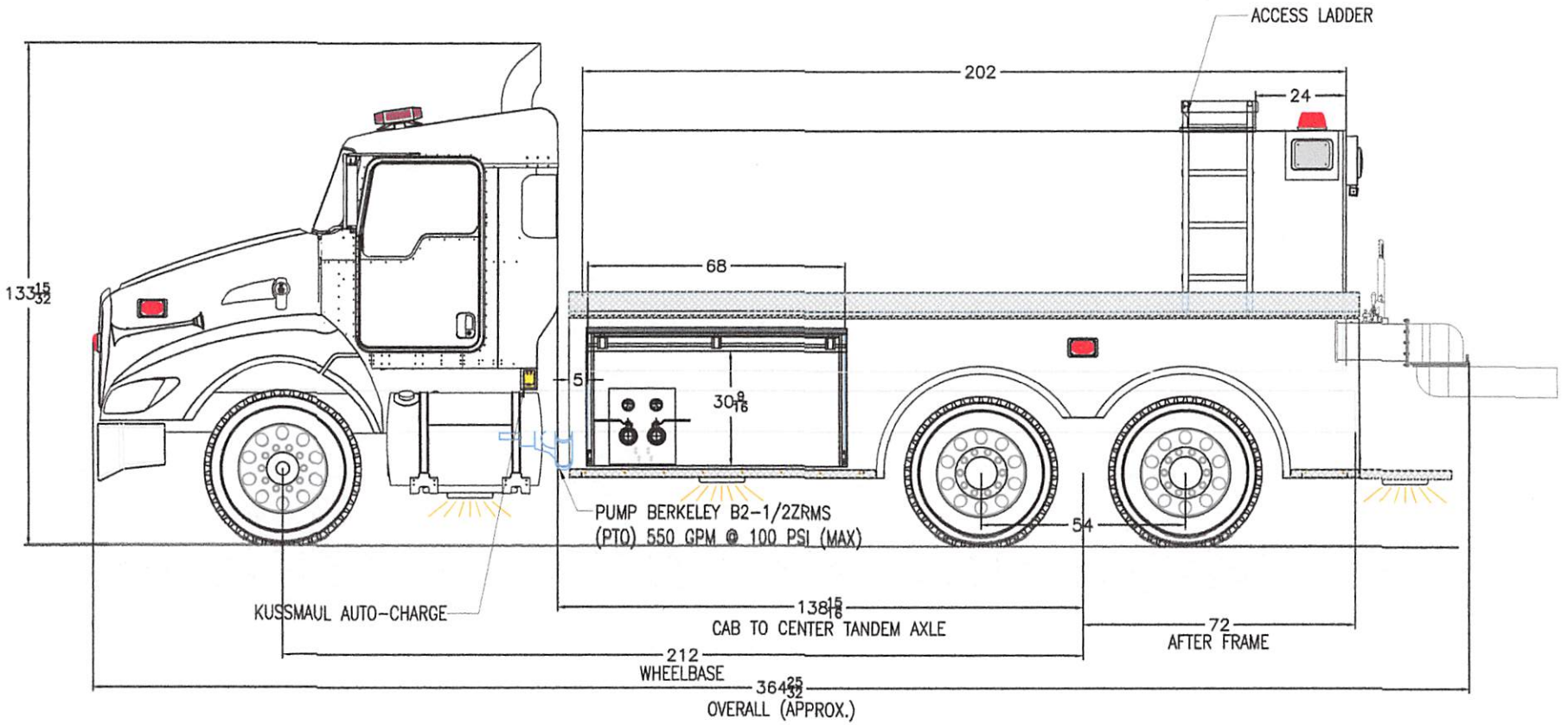

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