



## STAFF REPORT

DATE: November 5, 2019

**TO:** City Council

**FROM:** Lake Elmo Fire Department Truck Committee

**AGENDA ITEM:** Approve purchase of Tender and Equipment

**REVIEWED BY:** Greg Malmquist, Fire Chief

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### **BACKGROUND:**

January 15, 2019, the City Council approved the “Approval of the Preparation of Plans and Specifications for the Purchase/Replacement of Tender 1 as Identified in the 2019 CIP, Project F-004”.

The Fire Department Truck Committee began its work and held its first meeting to plan the Tender on March 12, 2019. Since that time, with multiple meetings, the committee refined the specifications. Throughout the process, the committee's goals were to design a truck that was ergonomic and safe, efficient, improve our water hauling capabilities and be a regional asset. The specifications were then given to two vendors, Rosenbauer MN, (who has built most of our trucks, including the Rescue/Engine we just took delivery of) and Custom Fire, (located in Osceola Wisc. and has recently built tenders for several departments in our area). We had follow up meetings with both vendors to “fine tune” the specifications. Following these meetings, both vendors provided drawings, specifications and approximate cost estimates. At this point there was a significant difference in the cost estimates from the vendors, with both providing HGAC, (Houston-Galveston Area Council) pricing. Due to the significant difference in the cost estimates, it was mutually decided that Custom Fire would pull from the process.

Final drawings, specifications, cost estimates and copies of contracts were presented to the Public Safety Committee at its October 22, 2019 meeting. The committee reviewed the process and all documents and recommended to Council with a 4-0 vote to move forward with the purchase of the Tender as presented from Rosenbauer MN, (with a desire to reduce the build time of 395 days if possible), along with the associated equipment and allowance for equipment mounting.

### **ISSUE BEFORE COUNCIL:**

Whether or not to approve purchase of Tender, associated equipment and additional allowance as presented.

### **PROPOSAL DETAILS/ANALYSIS:**

Based on the recommendations of both, the Truck Committee and Public Safety Committee, the proposal is to move forward with the 2019 CIP Project F-004, for the purchase of the replacement Tender, associated equipment and allowance for equipment mounting as proposed. Chief Malmquist was able to get the scheduled delivery time of 395 days reduced to 365 days at the request of the Public Safety Committee.

### **FISCAL IMPACT:**

CIP - \$425,000.00

**COSTS:**

- Truck - \$369,772.00 (Chassis - \$108,012.00 and Body/Pump- \$261,760.00)
- Associated Equipment - \$8,429.14
- Equipment mounting and misc. - \$1,000.00

TOTAL COST - \$379,201.14

**OPTIONS:**

- 1) Move forward with purchase of Tender, associated equipment and equipment mounting.
- 2) Deny purchase.

**RECOMMENDATION:**

**Motion: “To approve purchase of 2019 CIP Project, F-004, Tender from Rosenbauer MN, as well as the associated equipment and equipment mounting/miscellaneous at a cost of \$379, 201.14”.**

**ATTACHMENTS:**

1. Truck Committee Tender Specifications
2. Truck Drawing from Rosenbauer
3. Truck Drawing from Custom Fire
4. Purchase contract with HGAC pricing from Rosenbauer MN
5. Purchase Order with HGAC pricing from Rosenbauer MN
6. Truck body specifications from Rosenbauer MN
7. Truck chassis specifications from Rosenbauer MN
8. Tender cost breakdown and comparison

# 2019 LAKE ELMO TENDER SPECIFICATIONS

## **Cab/Chassis**

- Conventional Cab, 2 – air ride seats
- Freightliner
- Engine, Detroit 13 L., 450 hp.
- Transmission, Allison automatic 4000EVS, with PTO
- Spring suspension
- Turning Radius?
- Single Axle
- Axle Locker
- Aluminum Wheels
- Front chrome bumper
- Power windows
- Power, heated mirrors
- Air horns
- 2 – Air Ride Seats
- Air ride cab
- On board air compressor, connected to shore power, to maintain brake pressure and used to “blow out” hose reel. (Can one do both?) with battery conditioner and Auto-Eject
- Center console with 2 cup holders, pocket with space for 3 ring binder.
  - Customer supplied radio to be mounted on console
  - Electronic siren to be mounted.
  - 2 – flashlights mounted
  - 2 – Portable radios mounted
- Federal Q Siren controlled by horn button in steering wheel
- Air Horn controlled by ceiling mounted tether. Accessible by driver and officer
- Lighted grab handles

## **Pump - Enclosed**

- 500 gpm, PTO, Pump and Roll
- 1 – 2 ½” Discharge
- 1 – 2 ½” Intake on Passenger Side, enclosed
- 1 – Hose Reel, located Cabinet or Front Bumper?

## **Chassis**

- 3 – 10” Dump Chutes with protective covers, Electric controls for each, located both in cab and on rear related to location of dump chute.
- Rear view cameras on rear and possibly sides
- 2 – Drop tanks, Fol-Da-Tank 2000 gallon Type 1 Single Lane Tanks, one mounted each side in electric/hydraulic drop down rack with controls at rear.
- Shore power connection to run on board compressor, maintain batteries and charge 2 - flashlights and 2 - portable radios.
- Full height Cabinets located each side in front of wheel wheels, half height located each side behind rear tires, with rollup doors and LED interior lights.
  - Storage for the following:
    - Set of collapsible traffic cones
    - Hydrant bag
    - 2 – 50’ rolls of 2 ½” hose
    - 2 – 50’ rolls of 1 ¾” hose

- 1 – 30' roll of 4" Storz
- 2 – SCBA packs
- 2 – Sets of turnout gear
- Floor Dri?
- Water tank to be maximum size, based on what chassis will handle.
- J style direct to tank fill tube, 4" Storz to be located passenger side, in right front cabinet.
- Wheel well storage compartments
  - Drivers side to be wheel chocks and?
  - Passenger side to be SCBA bottles
- Fire Extinguisher location?

**Lighting**, All lighting to be LED

- Scene lights,
  - 2 each side, (drivers, passenger and rear) – Angle down, LED, located high to maximize coverage
  - 1- Forward facing brow light to be located center above cab.
- Rear Directional Arrow? Options? Mounting location? Covered?
- Emergency
  - Roto Ray
  - Lightbar to be determined, Low Profile?
  - Side lighting, Cab, front and towards rear. High, low, high. Red/White driver's side and Blue/Red passenger side.
  - Top rear corners of body, red driver's side and blue passenger side.
- Interior cabinet lighting to be Strip lighting, 2 per cabinet, each side of door.

2 – 6" Lightweight 10' or 12' Hard Suction, each with Jet Siphon Strainer. To be located in rear accessed storage, either in the tank or passenger side above cabinets. Storage area to be enclosed and built to handle hose with strainer attached.

Same paint scheme and color match as previous Lake Elmo Trucks

Same Graphics as previous Lake Elmo Trucks

Chevrons on rear of truck, Fluorescent Green/Red

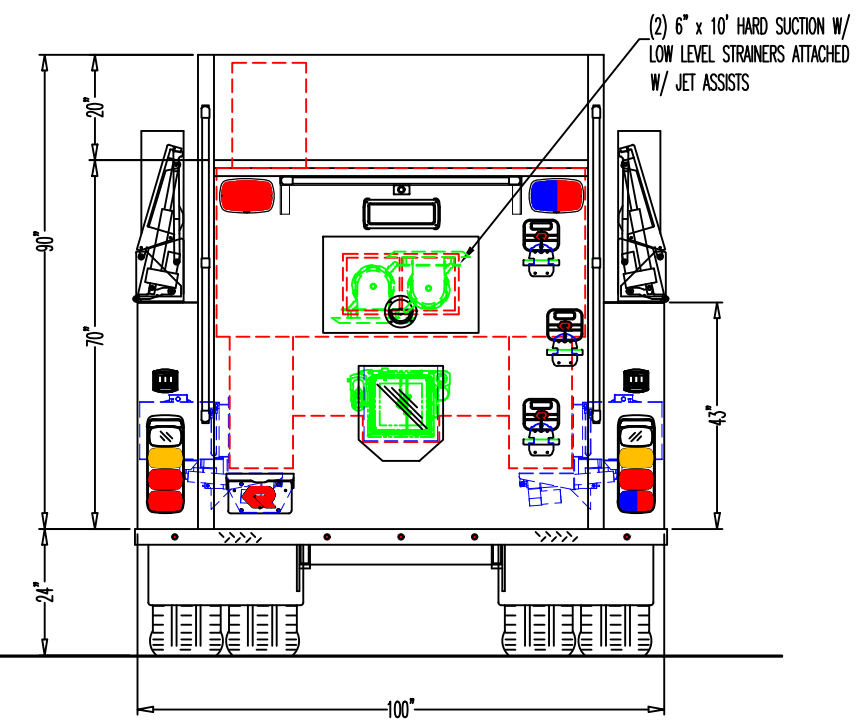
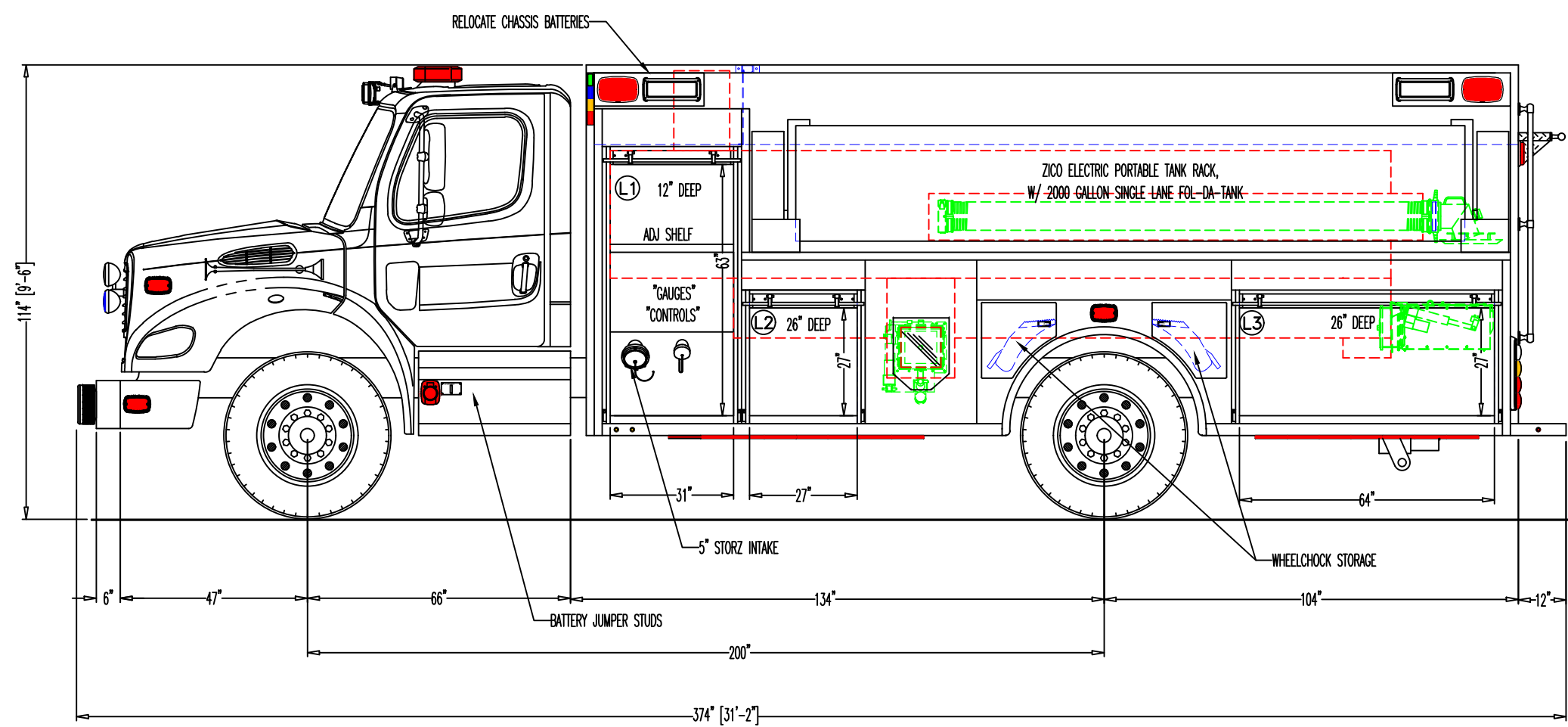
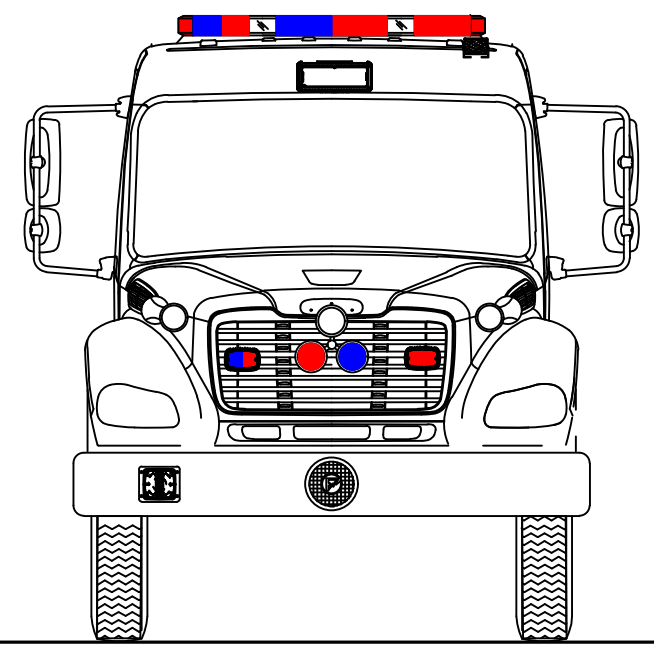
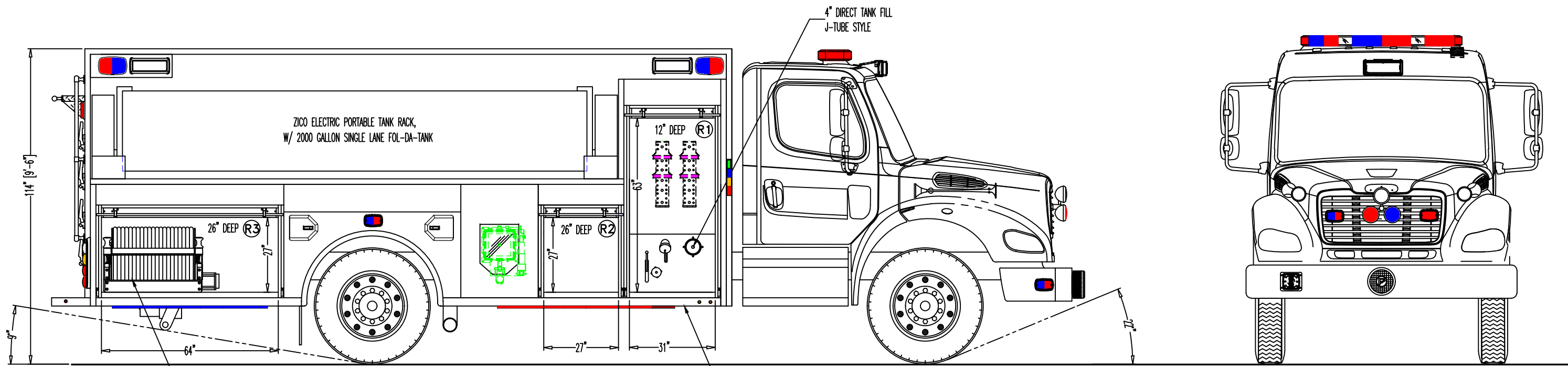
Federal Q Siren, recessed in front bumper.

Delivery deadline, with penalty for exceeding

EAM to be an authorized warranty/service representative.

Dash Camera, (added 5-2-19 by Officers)

All control switches (dump chutes and tank racks) mounted on rear of chassis will be inside a weather tight compartment with push button release latch.



- NOTES:
1. OVERALL HEIGHT IS IN LOADED CONDITION. UNLOADED HEIGHTS MAY BE 4" ABOVE HEIGHTS SHOWN.
  2. DO NOT SCALE DRAWING.
  3. ALL DIMENSIONS ARE APPROXIMATE AND SUBJECT TO ENGINEERING CHANGES.
  4. DRAWING MAY OR MAY NOT SHOW ALL ITEMS AS DESCRIBED IN THE WRITTEN DETAIL SPECIFICATIONS.
  5. INCLUSION OF AN ITEM ON THE DRAWING DOES NOT CONSTITUTE INCLUSION OF THAT ITEM WITH THE FINAL DELIVERED UNIT.

REVISED: CRL DATE: 10-11-2019 (R-06)  
 REVISED: CRL DATE: 08-12-2019 (R-04)  
 REVISED: TAA DATE: 07-29-2019 (R-03)  
 DRAWN: TAA DATE: 06-13-2019 (P6972-01)

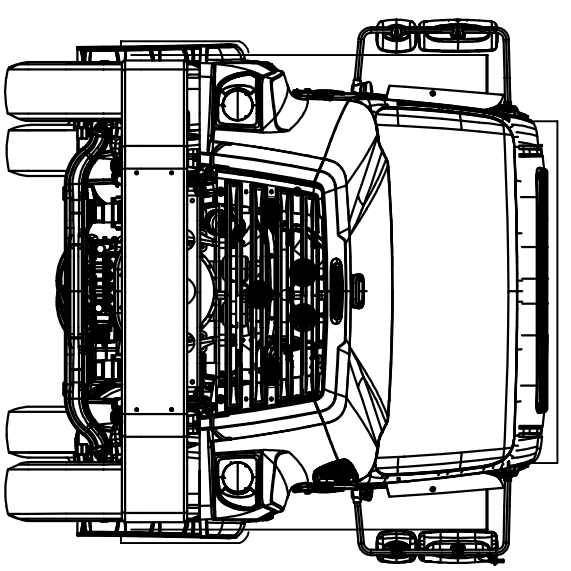
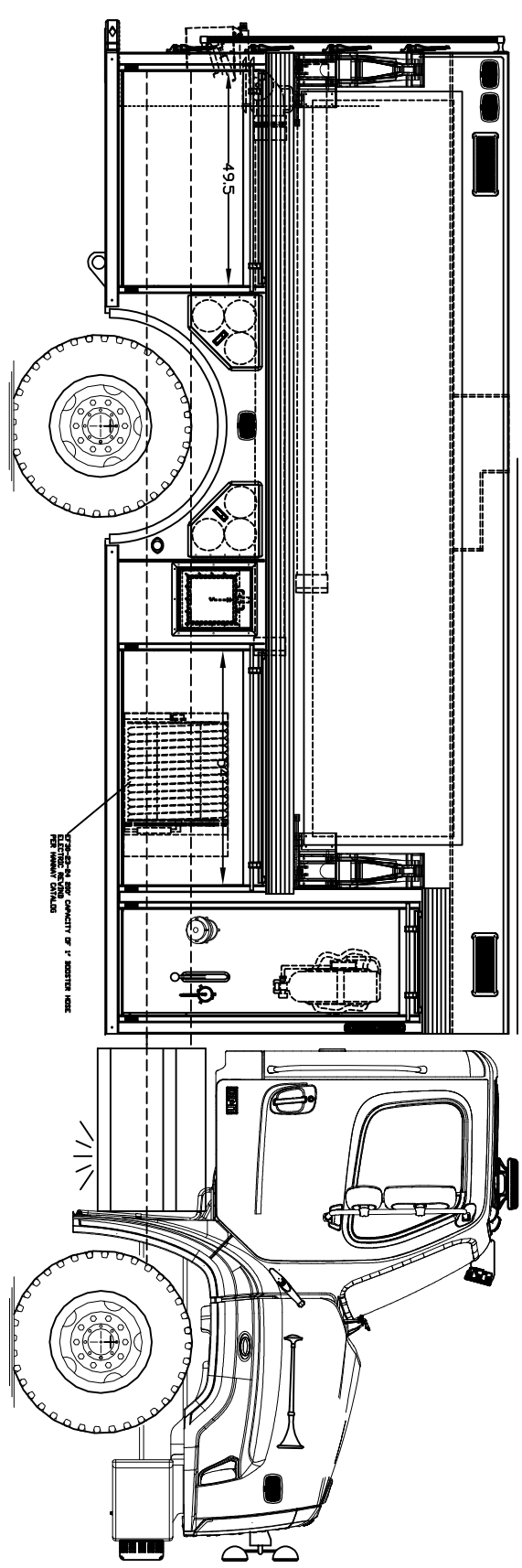
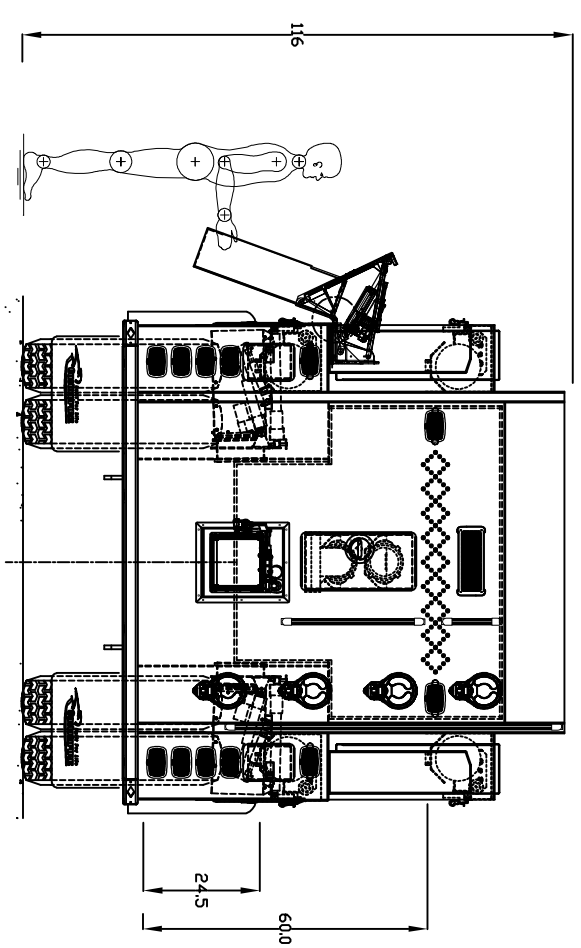
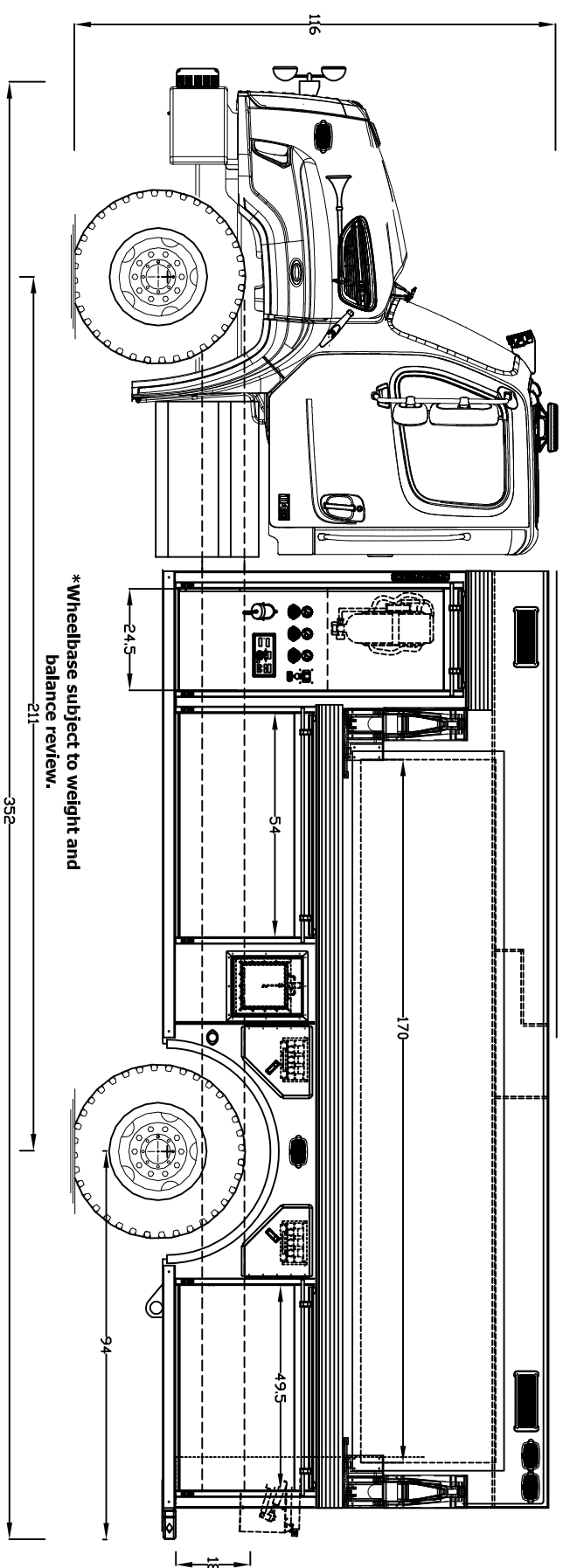
PROPRIETARY AND CONFIDENTIAL  
 THE INFORMATION CONTAINED IN THIS DRAWING IS  
 THE SOLE PROPERTY OF ROSENBAUER. ANY  
 REPRODUCTION IN PART OR AS A WHOLE WITHOUT  
 THE WRITTEN PERMISSION OF ROSENBAUER IS  
 PROHIBITED.

APPROVED BY:		CHASSIS: FREIGHTLINER M2 112 2DR 4X2
		PUMP: WATEROUS CLVK 500 GPM
MAXIMUM HEIGHT	11'4"	TANK: POLY 2000
MAXIMUM LENGTH	N/A	TYPE: TANKER
BODY WIDTH	100"	AERIAL: N/A

**-PROPOSED-  
LAKE ELMO**

ROSENBAUER EXT

JOB NUMBER	DRAWING NUMBER	REV
-	P7357	06



FREIGHTLINER SD14 711" WB, 352" OAL, 116" CAH ALUMINUM DRY SIDE TENDER BODY 500GPM WATEROUS PTO 2200* TANK Generator: N/A		LAKE ELMO FIRE DEPT. WNK Delivery:	DATE: 9-20-19
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NOTE: Detailed specifications for this apparatus supersede the presentation drawings. Items shown are not included in the specifications. The drawing is proprietary and confidential.



To: City of Lake Elmo  
3800 Laverne Avenue North  
Lake Elmo, MN 55042

Date: 10-30-19

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the City of Lake Elmo, MN, hereinafter called the BUYER and an officer of Rosenbauer Minnesota LLC, Wyoming, MN a division subsidiary of Rosenbauer America, hereinafter called the COMPANY, the following apparatus and equipment:

Rosenbauer Heavy Duty EXT 2000 Gallon EXT Body With Pump \$261,760.00  
Freightliner M2-112 Chassis \$108,012.00  
**HGAC TOTAL ... \$369,772.00\*\***

**Three Hundred Sixty Nine Thousand Seven Hundred Seventy Two Dollars and 00/100.**

All of which are to be built in accordance with the specifications, and drawing attached which are made a part of this agreement and contract. Total contract price includes required HGAC interlocal agreement fee and also apparatus familiarization class. **NO ADDITIONAL TAXES OR FEES APPLY**

**\*\*CHASSIS IS TO BE PROGRESS PAID FOR IN THE AMOUNT SHOWN ABOVE UPONS ITS COMPLETION AND ARRIVAL AT THE APPARATUS MANUFACTURERS FACILITY OR ADDITIONAL INTEREST CHARGES MAY APPLY.**

**Delivery:** The delivery time for the completed apparatus, is to be made 365 calendar days after receipt of and approval of this contract duly executed **or City Purchase order with matching payment and delivery terms.** (Chassis must arrive within 210 days or delivery may be delayed) subject to all causes beyond the Company's control. **Quoted 365 calendar day delivery time is subject to a \$100.00 per day penalty clause for each day beyond the 365 calendar days.** The quoted delivery time is based upon our receipt of the specified materials required to produce the apparatus in a timely manner. The Company can not be held responsible for delays due to Acts of God, Labor Strikes, or Changes in Governmental Regulations that result in delayed delivery to our manufacturing facilities of these specified materials. This delivery estimate is based on the Company receiving complete and accurate paperwork from the Buyer and that no major changes take place during pre-construction, mid point inspections or final inspections. Changes required or requested by the Buyer during the construction process may be cause for an increase in the number of days required to build said apparatus.

**Payment Terms:** Final payment for the apparatus shall be made at time of final inspection and pick up / delivery of the completed vehicle. It is the responsibility of the Buyer to have full payment ready when the apparatus is complete and ready to pick up. If payment is delayed or delivery is delayed pending payment, a daily finance and storage fee may apply. Upon pick up of the apparatus by the Buyer, Buyer agrees to provide all liability and physical damage insurance. It is further agreed that if on delivery and test, any defects should develop, the Company shall be given reasonable time to correct same.

The amount in this proposal shall remain firm for a period of **30 days** from the date of same.

Respectfully submitted,

**BUYER**

**BIDDER** GENERAL SAFETY FIRE APPARATUS INC.

We accept the above Proposal and enter into contract with signature below.

Dealer \_\_\_\_\_  
Dealership Principal

\_\_\_\_\_ Title \_\_\_\_\_  
\_\_\_\_\_ Title \_\_\_\_\_  
\_\_\_\_\_ Date

After company receipt of this document signed by the Buyer, the document will be reviewed and upon approval, countersigned by the Company putting the document in force.

**ROSENBAUER MINNESOTA LLC.**

\_\_\_\_\_ Title \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

# PURCHASE ORDER

BUYER:  
CITY OF LAKE ELMO  
3800 LAVERNE AVE. NORTH  
LAKE ELMO, MN 55042

VENDOR:  
ROSENBAUER MINNESOTA LLC  
P.O. BOX 549  
WYOMING, MN 55092

DATE: AUGUST 12, 2019	PAYMENT TERMS: AS PER CONTRACT
DELIVERY: AS PER CONTRACT	

ONE (1) ROSENBAUER HEAVY DUTY EXT TANKER BODY	\$ 261,760.00
ONE (1) FREIGHTLINER M2 CAB AND CHASSIS	\$ <u>108,012.00</u>
TOTAL COST OF APPARATUS	\$ 369,772.00

PURCHASING THROUGH THE HOUSTON-GALVESTON AREA COUNCIL COOPERATIVE PURCHASING AGREEMENT, CONTRACT FS12-17 FOR YEARS 2017 - 2019.

PRODUCT CODE: VE01

NOTE: VEHICLE PRICE ALREADY INCLUDES HGAC ADMINISTRATION FEE

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CITY OF LAKE ELMO, MN



QUOTATION

General Safety Fire Apparatus

LAKE ELMO 2019 TANKER BODY

Exp. Date: 09/30/2019  
 Quote No: 10013-0030  
 Job/Order No: Proj6388  
 08/12/2019

PART NO	S	QTY	DESCRIPTION
		1	== EXT Pmpr/Tnkr Bid Prep Forms - 22.019 02/18/19 ==
00-00-1300		1	Fire Department Name
00-00-1500	< >	1	MAXIMUM OVERALL HEIGHT Max overall height 9' 8"
00-00-1509		1	Overall Length Restriction, NONE
00-00-1519		1	Overall Width Restriction, NONE
00-00-1529		1	Wheelbase Restriction, NONE
00-00-1539		1	Angle of Approach, NFPA Minimum, 8 Degrees
00-00-1549		1	Angle of Departure, NFPA Minimum, 8 Degrees
		1	<b>NFPA Equipment Allowances</b>
00-12-1100		1	Financial Stability Response
01-06-0560	< >	1	Electronic Stability Control --Supplied with the chassis.
02-13-7300	S <	1	EAM Local Sales and Service Vehicle Support --Per the RMN Service Department the Customer request to have EAM be an authorized service center for this vehicle has been approved. --During the warranty period Lake Elmo will be able to use EAM for on site service if RMN isn't able to provide the service. --Lake Elmo will be expected to contact the RMN Service Department prior to work being done to verify that RMN can't perform the on-site service in a timely manner. If that's the case, EAM will be authorized to perform necessary service on the apparatus.
02-13-7400		1	Toll Free Service Number
		1	== EXT Pmpr/Tnkr Warranties-BR - 22.019 02/18/19 ==
01-16-0150	>	1	-- Warranty, Apparatus, Body Warranty, 1 Year
01-19-0460		1	-- Warranty, Bdy, Alum, Life-Time, Transferable
01-19-2450		1	-- Warranty, Subframe, Lifetime Alum, Transferable
01-20-0360		1	-- Warranty, Paint, PPG, 10 Years, EXT
01-21-0150		1	-- Warranty, Lettering and Striping, 1 Year
01-17-0750		1	-- Pump Warranty, Waterous, 5 Years
02-14-6250		1	Plmbg Warranty, Stnls Stl, 10 Years
01-33-3300		1	-- Mnl, Bdy Complete, CD Compact Disc Version
01-33-5400		1	-- Mnl, Elec, As Built Bdy, CD Compact Disc Version
02-90-1100	>	1	Chassis, Freightliner M2, 2-Dr
		1	== EXT Pmpr/Tnkr - DC Elec System - Commercial - 22.019 02/18/19 ==
50-07-1000	>	1	Elecal, Base, Standard, W/O Load Mgmt
50-10-2000		1	-- High Idle System
55-11-1301	>	1	-- Dr Open/Hazard Wrn Lt, Flashing LED, Red, Clear Lens, Whelen TIR3
50-12-2310	S < >	1	Swch Console, Btwn Front Seats, Cmmrcl, EXT, Freightliner >>Center console to be provided with a pocket for a 3 ring binder as specified below

PART NO	S	QTY	DESCRIPTION
			and also have space on it in addition to the switches for the specified siren, customer supplied radio, two body builder supplied flashlights and two customer supplied portable radio chargers.
50-15-1100		1	Batteries, With Supl'd Chs
50-15-3100		1	Battery Swtch, Mstr Disconnect , Chs Sppld
50-15-7800		1	Battery Chrgr/Comp, KUSS, Pump Plus 1200 52-05-1100
50-16-1100	<	1	-- Display, Bar Graph, Sngl Battery Bank 091-199-001 --Adjacent to the shore power inlet.
50-20-1500	< >	1	Shore Power Inlet, KUSS Super Auto-Eject 20A >>Cover color to be red
50-20-1120		1	-- Shore Power Inlet, Left Front Cab Dr
50-41-6120	>	1	Air Horns (2) 21" Round Grover Stutter Tone
50-41-8180		1	Air Horn Location Hood Mounted, 1 Ea Side
50-43-1000		1	Air Horn Cntrls
50-43-2500		1	-- Air Horn Cntrl, Dual Lanyard Pull Cord
51-00-1700	<	1	-- 12V Power/Ground, 30A, Radio Lctn >>Under center console for customer supplied radio
51-00-4000		1	-- Switched Power, Thru Master
51-05-6200		1	Lt, Engine Cmpt, 12 Volt LED, w/Swtch
51-05-9000		1	-- Switch on Light Head
51-05-6400		1	Lt, Pump Cmpt, 12 Volt LED With Swtch
51-05-9000		1	-- Switch on Light Head
51-20-3100	>	1	-- Fldlt, Mntg Lctn, Front Edge Of Cab Roof
51-15-4186	<	1	-- Fldlt, Fire Research, Spectra SPA800-Q28, 28,000 Lmns, Contour Brow Mnt --Black mount and housing.
54-15-6002		1	-- Scene Lt Swtch , Front Scene Lts, Cab Switch Panel
52-01-1210	>	1	Back Up Alarm, EXT
52-02-1170	<	1	Back-Up, Left, & Right 3-Camera System, ASA, Color >>Prefer chrome cameras if possible
52-08-1300	>	2	-- HandLt, Survivor LED, Orange, w/ 12V Chrgr (#90509)
52-08-2300	< >	1	-- HandLt Install Lctn, Cab, Define >>Located on the in-cab console
52-15-1200	>	1	Radio Antenna Base, Supply and Install, Ea
52-15-1300	<	2	Radio Chrgr, Install Cstmer Supl'd, 12V, Ea >>Mount and wire two (2) customer supplied portable radio chargers on the in cab console. Exact location to be determined.
52-15-1610	>	1	Radio Spkr, Fire, Motorola, Supply/Install, Ea
52-15-1700	< >	1	Radio, Fire, Install Cstmer Supl'd >>Install customer supplied radio in center console. Power and ground provided under console as specified earlier herein.
51-00-1700		1	-- 12V Power/Ground, 30A, Radio Lctn
51-00-4000		1	-- Switched Power, Thru Master
53-01-1200		1	Marker Lts, LED, DOT Requirements
53-02-1250	<	1	License Plate Brkt, Cast Prdts, LP0005-1-C w/ LED Lt --The light will function as the tailboard light on the driver side as well.
53-03-0065		1	Whelen Rr DOT LED Ltng Pkg M6
53-03-2750		1	-- Tail/Brake Lts, Whelen, LED, M6 (Pair)

PART NO	S	QTY	DESCRIPTION
53-04-2750		1	-- Turn Signals, Whelen, LED w/ Arrow, M6 (Pair)
53-06-3550		1	-- Backup Lts, Whelen, LED, M6 (Pair)
53-07-1210		1	-- Tail Lt Bezel, 4 Lts, Whln M6 (Pair), ABS Chrome
53-05-1800		1	Turn Signals, Mid Bdy, LED Marker Lt (Pair)
54-02-1420		1	-- Ground Lts, Cab, 2-Dr, LED, Whelen 3SC0CDCR Pair
54-03-1220		1	-- Ground Lts, Pump Panel, LED, Pr Whelen 3SC0CDCR
54-03-1420		1	-- Ground Lts, Mid Body, LED, Whelen 3SC0CDCR, Pair
54-03-1620		1	-- Ground Lts, Rr Step, LED, Whelen 3SC0CDCR, Pair
54-03-1820		1	-- Ground Lts, Bhnd Rr Wheels, LED, Whelen 3SC0CDCR, Pair
54-04-1999		1	-- Lt Swtch , Ground Lts w/ Park Brake
54-11-2100		1	Lt Swtch , Step/Wlkwy Lts Wired Park Brake Swtch
54-15-4610	S < >	5	Scene Lt, Fire Research, Spectra MAX, LED SPA260-Q20, Blk, Surface Mount >>(4) Black bezels for the upper side scene lights and (1) chrome bezel for the rear scene light
54-15-5500		2	-- Scene Lt Lctn, Left Side Of Bdy
54-15-1470	<	2	-- Scene\Warn Lt, Mntg Plate, Painted >>Job color black
54-15-5600		2	-- Scene Lt Lctn, Right Side Of Bdy
54-15-1470	<	2	-- Scene\Warn Lt, Mntg Plate, Painted >>Job color black
54-15-5700		1	-- Scene Lt Lctn, Rr Of Bdy
54-15-6400		1	-- Scene Lt Swtch , Left Scene Lts, Cab Switch Panel
54-15-6500		1	-- Scene Lt Swtch , Right Scene Lts, Cab Switch Panel
54-15-6600		1	-- Scene Lt Swtch , Rr Scene Lts, Cab Switch Panel
54-15-6700		1	-- Scene Lt Swtch , Rr Scene Lts, Auto w/ Reverse
56-01-1700	>	1	Siren, Elect, Whelen 295HFS2
56-02-1600		1	-- Spkr, F-S Dynamax, ES100C 100 Watt
56-02-1650		1	-- Spkr Grille, Stnls Stl, "R"
56-03-1200		1	-- Spkr Lctn, Bumper, Rcsd, Left Side
56-06-0400	>	1	Siren, F-S, Q2B, Mech, Bumper, Partially Rcsd, Center
56-07-1600		1	-- Siren Cntrl, F-S, Q2B, Driver's Horn Ring
56-07-1500		1	-- Siren Cntrl, F-S, Q2B, Dash Button, Officer's Side
56-07-1200		1	-- Siren Brake, F-S, Q2B, Officer's Side
57-02-1210	S < >	1	-- Lt Bar, Whelen, Ultra Freedom IV, #F4N0VLED, LED, 60" --The lightbar is to be fully populated as follows, with all clear lens:  From Driver side to Passenger side respectively:  Driver side ends are both red followed by red, red, white, red, center to be red then blue, followed by blue, white, red, blue then red on the forward facing end and blue on the rearward facing end. PDF embedded in this QW#  --Driver side to be red lights and one (1) white light. --Officer side to be blue lights and one clear on the passenger side.  --Note: All specified side, front and rear warning lights are to flash in a fast random pattern
57-08-1210	< >	1	-- Trffc Emtr, GTT Opticom, Roof Mntd, 492H High-Priority, Wired to Park Brake >>One (1) 3M Opticom 492H infrared strobe traffic emitter (to be the same as Lake Elmo #73913) is to be supplied and installed on the cab roof >>Wired to activate with the e-master warning, off when the park brake is set.

PART NO	S	QTY	DESCRIPTION
57-10-0600		1	-- Lightbar Cntrl, with Master Warning Switch
58-71-1770		1	-- Wrn Lts, Whelen, Upper Rr (2) M9 LED
57-20-1418	S <	1	-- Wrn Lt, Drvr, Whelen, M9, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1427		1	-- Wrn Lt, Offcr, Whelen, M9, Split Red/Blue LED, Clear Lens, Ea
58-01-2180		2	-- Flange, Chrome, Wrn Lt, Whln, M9 Ea
58-46-2100		1	-- Wrn Lts, Whelen, Upper Side Front (2) M9 LED
57-20-1418	S <	1	-- Wrn Lt, Drvr, Whelen, M9, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1427		1	-- Wrn Lt, Offcr, Whelen, M9, Split Red/Blue LED, Clear Lens, Ea
58-01-2181		2	-- Flange, Black, Wrn Lt, Whln, M9, Ea
58-61-2100		1	-- Wrn Lts, Whelen, Upper Side Rr (2) M9 LED
57-20-1418	S <	1	-- Wrn Lt, Drvr, Whelen, M9, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1427		1	-- Wrn Lt, Offcr, Whelen, M9, Split Red/Blue LED, Clear Lens, Ea
58-01-2181		2	-- Flange, Black, Wrn Lt, Whln, M9, Ea
		1	<b>CAB WARNING LTS</b>
58-03-2000		1	-- Wrn Lts, Whelen, Low Frnt, (2) M6 LED
57-20-1218	S <	1	-- Wrn Lt, Drvr, Whelen, M6, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1227		1	-- Wrn Lt, Offcr, Whelen, M6, Split Red/Blue LED, Clear Lens, Ea
58-01-2140		2	-- Flange, Chrome, Wrn Lt, Whln, M6, Ea
58-09-2000		1	-- Wrn Lts, Whelen, Intrsct (2) M6 LED
57-20-1218	S <	1	-- Wrn Lt, Drvr, Whelen, M6, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1227		1	-- Wrn Lt, Offcr, Whelen, M6, Split Red/Blue LED, Clear Lens, Ea
58-01-2140		2	-- Flange, Chrome, Wrn Lt, Whln, M6, Ea
58-26-0100	S <	1	-- Sound Off nLineTracers Below Rub Rail --SoundOff nLine tracer style running lights shall be installed below the rub rails of the apparatus as follows:  --Two (2) ENL172R 72" Red LED nLine lights mounted one (1) each side below L1/L2 and R1/R2.  --One (1) ENL160R 60" Red LED nLine light mounted below the L4. --One (1) ENL160B 60" Blue LED nLine light mounted below R4.
58-36-2000		1	-- Wrn Lts, Whelen, Low Rr Side (2) M6 LED
57-20-1218	S <	1	-- Wrn Lt, Drvr, Whelen, M6, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1227		1	-- Wrn Lt, Offcr, Whelen, M6, Split Red/Blue LED, Clear Lens, Ea
58-01-2140		2	-- Flange, Chrome, Wrn Lt, Whln, M6, Ea
58-81-2000		1	-- Wrn Lts, Whelen, Low Rr (2) M6 LED
57-20-1218	S <	1	-- Wrn Lt, Drvr, Whelen, M6, Split Red/Red LED, Clear Lens, Ea >>Split red/red
57-20-1227		1	-- Wrn Lt, Offcr, Whelen, M6, Split Red/Blue LED, Clear Lens, Ea
59-01-0000		1	Miscellaneous Wrn Lts
59-02-1110	< >	1	-- Roto Ray Lt, Red-Clear-Blue, LED -The Roto-Ray will activate with the e-Master and shut off when the park brake is set.
		1	<b>== EXT SA Pmpr/Tnkr Chassis Modifctns - 22.019 02/18/19 ==</b>

PART NO	S	QTY	DESCRIPTION
10-01-1100	>	1	Vehicle Dimensions, Sngl Axle
10-02-1100		1	Label, Data, Fluid Levels
10-02-1200		1	Label, Data, Height x Length, Weight
10-02-1300		1	Label, Data, "No Ride" Rr Step
10-02-1400		1	Label, Data, Tire Pressure
10-02-2100		1	Label, Indicating Number of Seats
10-02-2500		1	Label, "Caution: Do Not Wear Helmet While Seated"
10-03-6020	>	1	Tow Plates (2), Rr Frame Rail, Under Step, 3/4"x3"ID
80-43-2400		1	-- Painting, Tow Plates, Blk
10-04-2128		1	-- Bumper Ext, 6", By Bdy Bldr
10-04-2318		1	-- Bumper Gravelshield, 6", By Bdy Bldr
10-06-1110		1	Whl Trim, S/S Hub/Lug Cvr, Front/Rr, Sngl Axle
10-06-1600		1	Tire Pressure Indicator, Sngl Axle, Commercial, p/n RWTG1235
10-07-0100		1	-- Exhaust Supplied With Chassis
10-07-1500		1	-- Exhaust Heat Shield, Under Bdy Compts
10-08-1300		1	Mud Flaps, Front Whls, Blk, w/ Bdy
10-08-2100		1	Mud Flaps, Rr Whls, Blk, w/ Bdy
10-10-0400	>	1	Cab Step Overlay, 2 Dr LH Side
10-10-0500	>	1	Cab Step Overlay, 2 Dr RH Side
10-13-4150	S <	1	-- Binder Storage Module, Cab, Commercial Chassis, Rear of Console, Sngl 3" >>Binder slot for a 3" 3-ring binder built into the rear of the console.
10-13-3520		1	-- Exterior Finish, Cabinet, DA Sanded
10-13-3550		1	-- Interior Finish, Cabinet, Natural
10-18-4050	S < >	1	-- Batteries, Relocate Chassis Supplied, Top of Body >>Relocate the chassis batteries top front of body
10-18-1100		1	-- Battery Jump Start Plugs, Quick Disconnects, Near Drivers Door
		1	<b>== EXT PTO Pmprr/Tnkr Pump&amp;Plumbing - 22.019 02/18/19 ==</b>
		1	<b>PTO PUMPS</b>
20-25-1200		1	-- Pump, Waterous, CLVK, PTO, 1 Stage
20-25-1100	>	1	-- Pump Flow Rtnng, Waterous, CLVK, 500 GPM
22-03-1400		1	-- Intk, Ungated, 4-1/2", LH Side
22-40-5700		1	-- Adptr, LW Alum, 4-1/2"F x 5" Storz
22-41-7200		1	-- Cap, 5" Storz, LW Alum, Lckng, w/Chain or Cable
20-26-2200		1	-- Pump Seal, Mech, Waterous
20-26-2400	>	1	-- Pump Impeller, Waterous, Flame Plated Hubs
20-26-2600		1	-- Pump Anode, Waterous, Removable
20-26-3400	>	1	-- Pump Shift, Waterous, PTO, Pump and Roll
27-03-1700	>	1	-- Gauge, Dschg, 2-1/2" 400#, In Cab, Pump and Roll
20-26-4400		1	-- Pump Primer, Waterous, VPO, Oil Less, Elec, Push Button
27-10-3400	>	1	-- Pressure Gvrnr, FRC, In-Cntrl, w/Bdy, TGA300
		1	<b>STAINLESS STEEL PUMP PLUMBING *</b>
21-00-2000		1	-- Screens/Anodes, Pump
21-00-3200		1	-- Piping, Stnls Stl - Up to 1000 GPM
21-01-0200	>	1	-- Pump Drain, Master, Manifold, Push Pull Type
21-01-5500		1	-- Intk Manifold, Stnls Stl
21-01-6500		1	-- Dschg Manifold, Stnls Stl
21-01-7300		1	-- Painting, Pump & Piping, Unpainted
21-01-8100		1	-- Threads, National Hose (NST)
22-51-5110	>	1	-- Tank-To-Pump, Water Tank, 3" Vlv/4" Piping, PTO/Crossmnt

PART NO	S	QTY	DESCRIPTION
22-50-0100		1	-- Single Tank to Pump Control - Pump Operator's Panel
24-62-2310	>	1	-- Vlv Mfgr, ELK,(3"), Manual, Std Pull Control
22-55-5040		1	-- Intk Vlv Cntrl, Pull Rod, 1/4 Turn Lckg, ELK - IC
23-02-1400		1	-- Tank Fill/Cooling Line, Water Tank, 2-1/2"
24-62-1250		1	-- Vlv Mfgr, AKR, 8000, (2-1/2")
22-55-4012		1	-- Intk Vlv Cntrl, Pull Rod, 1/4 Turn, AKR - IC
20-30-3200		1	-- Pump Instln, Midship PTO, By Bdy Bldr
20-31-1000		1	Fire Pump Testing - Pumpers/Tankers
20-31-1400		1	-- Pump Test, Factory Test Only
20-31-3200		1	Dump-Relief Vlv, Suction Side, ELK #40, NST
20-31-4110		1	Pump Cooler, Bypass-To-Tank, 3/8", IC Mini-Twist Handle
20-31-5110		1	Heat Exchanger, Engine, Hook-Up Only, IC Mini-Twist Handle
22-12-3100		1	-- Intk, Aux, Gtd, 2-1/2", NST, Right Side
21-01-2502		1	-- Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn - Spec Only
22-41-1100		1	-- Plug, 2-1/2", Chrome Rocker Lug, w/Chain
24-62-2250		1	-- Vlv Mfgr, ELK (2-1/2"), Manual, Swing Type, Adjacent Control
22-55-5020		1	-- Intk Vlv Cntrl, ELK, Mnl Swing Type-Adjacent
		<b>1</b>	<b>DISCHARGES</b>
23-09-4100		1	-- Dschg, 2-1/2", Left Side, Pump Panel, NST
21-01-2502		1	-- Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn - Spec Only
24-02-1200		1	-- Elbow, 2-1/2"F x 2-1/2" NST M, Chrome
24-03-1400		1	-- Cap, 2-1/2", NST Chrome, Rocker Lug, w/Chain
24-61-2250		1	-- Vlv Mfgr, ELK, (2-1/2"), Manual
24-54-0030	>	1	-- Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, ELK - IC
27-02-1500	>	1	-- Gauge, Dschg, IC, 2-1/2" 400#, WF
23-10-4100		1	-- Dschg, 2-1/2", Right Side, Pump Panel, NST
21-01-2502		1	-- Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn - Spec Only
24-02-1200		1	-- Elbow, 2-1/2"F x 2-1/2" NST M, Chrome
24-03-1400		1	-- Cap, 2-1/2", NST Chrome, Rocker Lug, w/Chain
24-61-2250		1	-- Vlv Mfgr, ELK, (2-1/2"), Manual
24-54-0030	>	1	-- Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, ELK - IC
27-02-1500	>	1	-- Gauge, Dschg, IC, 2-1/2" 400#, WF
24-30-3600		1	-- Hose Reel, HAN, RH Side Cmpt, Elec, Stl Pntd
24-31-2100		1	-- Hose Reel, Rwnd Cntrl, Weatherproof Push Button
24-32-1200		1	-- Dschg, Hose Reel, 1"
21-01-2500		1	-- Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn
24-32-1700		1	-- Dschg, Hose Reel, Plmbd to Normal Pressure
24-61-2100		1	-- Vlv Mfgr, ELK, (1")
24-54-0030	>	1	-- Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, ELK - IC
27-02-1500	>	1	-- Gauge, Dschg, IC, 2-1/2" 400#, WF
24-33-1800		1	-- Hose, Water, 800#, 1-in x 200-ft, Two (2) 100-ft Lengths
24-33-4100		1	-- Nzl, ELK, SM-3FG, 1"
24-33-8000		1	-- Nzl, Mtg, Hose Reel
24-33-9600	>	1	-- Roller, Hose Reel, Captive, Four Sided
27-37-3150	>	1	-- Air Blow Out, Hose Reel, Chassis Air, Mnl 1/4 Turn Vlv
80-43-1600		1	-- Painting, Hose Reel, Silver Grey
		<b>1</b>	<b>== EXT Pmpr/Tnkr-Side Mount Pump Cmpt - 22.019 02/18/19 ==</b>
26-02-4100	>	1	Pump Enc, Side Mt, Front Cmpt Tanker Style
26-31-1110		1	Gauge Panel, Upper LH, S/S, EXT
26-35-3210		1	Pump Panel, Stnls Stl, LH/RH, SM, EXT

PART NO	S	QTY	DESCRIPTION
26-35-1100		1	-- Pump Panel, Bltd, LH
26-35-1150		1	-- Pump Panel, Recessed, Lower, LH, EXT
26-35-1200		1	-- Pump Panel, Bltd, RH
26-50-1200		1	Heater, Pump Enc, 30,000BTU, w/Swtch on Pmp Oprtr's Pnl
26-50-3200		1	Heat Pan, Pump Enc, Midship, Slide Out Panel, Alum
26-55-1100		1	Labels, Test Data and Safety Placards
26-55-2410		1	Labels, IC Color Coded, EXT
26-56-2110		1	Pump Engage Lt (1), Grn Lt Pump Panel, Actuated w/Pmp Engmnt
27-01-1500	>	1	-- Mstr Gauges, IC, 4" PSI, Pr
27-01-4100	>	1	Gauge, Test Taps
27-35-1100		1	Water Tank Gauge, FRC, TankVision Pro 300, Pump Panel WLA300-A00
27-35-1200	S <	1	-- Water Tank Gauge, FRC, TankVision Pro 300, Remote Display By Direct Fill >>Installed on the right side pump panel adjacent to the direct tank fill
27-35-6100		1	-- Water Tank Gauge, Whelen PS TANK2 LED, Level Lts, Pair, FRC
		1	<b>== EXT LL / LR SA Pmpr/Tnkr - 22.019 02/18/19 ==</b>
25-28-1440		1	Water Tank, 2000 Gal, Pmpr/Tnkr , Poly, T-Tank
25-42-1100	>	1	-- Water Tank, Base Specs, Poly
25-42-1200		1	-- Water Tank, Manufacturer, UPF, Poly
25-44-1720		1	-- Water Tank, Fill Tower, 12" x 12", EXT
25-50-1400		1	-- Water Tank Clean-out & Plug, 3"
25-50-2300	S < >	1	-- J" Tube Style Direct Tank Fill, 4" Storz with Cap and Chain J tube style tank fill from right side pump panel to up, over and down into top of water tank. Maximum size piping as allowed by tank mfg. with 4" Storz fitting and cap.
25-62-0500		1	-- Rr - Square Quick Dumps, EXT
25-62-1350	<	1	-- Quick Dump, Rr 10", Intrnl Mt, Bhnd Panel, EXT >>Install top hinged door over opening that opens when chute is telescoped. This will be covered with Chevron as specified later herein
25-61-1080		1	-- Quick Dump, 10", Stnls Stl, LH Elec Actuator, EXT
25-61-2450	S <	1	-- Control, Quick Dump, LH Side, 10", Dual Elec, In-Cab&Rr >>Rear dump controls to be in the cab and also on each side at rear of truck. The controls for the dump valves and fold down drop tank carriers on each side at rear of truck will be housed in weatherproof enclosures with pleasing appearance.
25-61-3250		1	-- Quick Dump Chute, 10" Stnls Stl, Elec Extend/Retract
25-62-5100		1	-- Quick Dump Chute, 10" Rr, Sngl Elec Open/Close
25-64-0500		1	-- Left Side - Square Quick Dumps, EXT
25-64-1350	>	1	-- Quick Dump, LH Side, 10", Intrnl Mnt Bhd Dr, Ahd Rr Whls
25-64-2400		1	-- Quick Dump, LH Side, 10", Dual Elec Opn/Cls Cntrls (1 cab / 1 rear body)
25-64-2600		1	-- Quick Dump, LH Side, 10", Stnls Stl
25-64-3250		1	-- Quick Dump Chute, LH Side, 10" SS Elec Extnd/Rtrct
25-64-4100		1	-- Quick Dump Chute, 10" LH Side, Sngl Elec Opn/Cls Cntrl
25-66-0500		1	-- Right Side - Square Quick Dumps, EXT
25-66-1350	>	1	-- Quick Dump, RH Side, 10", Intrnl Mnt Bhd Dr, Ahd Rr Whls
25-66-2400		1	-- Quick Dump, RH Side, 10", Dual Elec Opn/Cls Cntrls (1 cab / 1 rear body)
25-66-2600		1	-- Quick Dump, RH Side, Stnls Stl
25-66-3250		1	-- Quick Dump Chute, RH Side, 10" SS Elec Extnd/Rtrct
25-66-4100		1	-- Quick Dump Chute, 10" RH Side, Sngl Elec Opn/Cls Cntrls
29-00-2400	< >	1	Hosebed, Pmpr, <168" L, HD, 71" Wide - EXT Truck will not be carrying any hose on top of truck, only a possible folding signboard at rear.
29-10-1050		1	Hosebed, Grating, Extrd Alum, <168" Long - EXT

PART NO	S	QTY	DESCRIPTION
29-10-5020		1	Hosebed Storage Cpcty, EXT
29-20-2000	S < >	1	NO Hosebed Cover Req'd >>No hosebed cover required for this truck as hose will not be carried in hosebed. Only a possible folding sign board mounted in at rear of truck.
29-20-5600	S	1	-- Hosebed Cover Vinyl Color, DELETED
30-00-0299		1	Raw Material Surcharge - Single Axle
30-01-2000		1	Bdy Const - Rosenbauer EXT - SA Pmpr/Tnkr
30-01-2250		1	-- Electrolysis Corrosion Cntrl
30-01-3210		1	-- Side Body Height, EXT-SA Pmpr/Tnkr, 85"
30-02-1920		1	-- Side Body Header, Alum, Pntd, Sngl Axle, EXT
44-05-1200		1	-- Whl Well Panel, Alum, Pntd, Sngl Axle
44-06-4320		1	-- Fenderette, Polished Stainless Steel, EXT
30-10-1500		1	-- Sub-Frame, EXT, SA Pmpr/Tnkr
31-01-5010	S <	1	100" OAW, 26" Lwr Dpth Both Sides, LL/LR >>Front compartment ahead of wheels each side will be a standard 63" high full height compartment.
31-01-5330	>	1	Pntd Roll Up Drs, Outside Cmpt, LL/LR, 168" Bdy
30-02-1600		1	-- Drs, Roll-Up, Outside Cmpt, Specs, EXT
30-02-1260	>	2	-- Dr Strap, EZ-Pull Down, Ea
30-02-1697	>	4	-- Finish, Roll-up Drs, Paintd, Specs, EXT
31-01-5300		1	-- Bdy, Rosenbauer EXT, Pmpr/Tnkr , 168"
32-05-4043	S <	1	-- Cmpt Height, High Left, Low Side, RU Drs --L1 compartment will be a standard 63" high full height. --L2 compartment will be 27" low height.
32-05-6222	S <	1	-- L1 - Ahd Rr Whls-62" Low Compt-Pntd Roll Up Outside Compt --L1 compartment, 62" wide
44-40-1020		2	-- Vents, Compts, Louvers (Ea)
45-02-4100		1	-- Shelf, Adjust, Alum 3/16", EXT
45-30-1125		1	-- Turtle Tile, Shelves/Trays, 1/4 Depth, (each)
45-30-1800		1	-- Turtle Tile, Floor, Cmpt, Ahd Rr Whls (1/4 depth)
55-01-3390		1	-- Cmpt Lt, Wall, OSS Access, 54" LED Tube Lt, (2) Ea Cmpt
55-06-1400		1	-- Cmpt Lt, Dr Swtch, Magnetic, Ea
32-05-8022	S <	1	-- L2 - Bhd Rr Whls-64" Low Compt-Pntd Roll Up Outside Compt --L2 compartment, 64" wide
44-40-1020		2	-- Vents, Compts, Louvers (Ea)
45-30-2000		1	-- Turtle Tile, Floor, Cmpt, Bhd Rr Whls (1/4 depth)
55-01-3360		1	-- Cmpt Lt, Wall, OSS Access, 18" LED Tube Lt, (2) Ea Cmpt
55-06-1400		1	-- Cmpt Lt, Dr Swtch, Magnetic, Ea
32-06-4043	S <	1	-- Cmpt Height, High Right, Low Side, RU Drs --R1 compartment will be a standard 63" high full height. --R2 compartment will be 27" low height.
32-06-6222	S <	1	-- R1 - Ahd Rr Whls-62" Low Compt-Pntd Roll Up Outside Compt --R1 compartment, 62" wide.
44-40-1020		2	-- Vents, Compts, Louvers (Ea)
45-02-4100		1	-- Shelf, Adjust, Alum 3/16", EXT
45-30-1125		1	-- Turtle Tile, Shelves/Trays, 1/4 Depth, (each)
55-01-3390		1	-- Cmpt Lt, Wall, OSS Access, 54" LED Tube Lt, (2) Ea Cmpt
55-06-1400		1	-- Cmpt Lt, Dr Swtch, Magnetic, Ea
32-06-8022	S <	1	-- R2 - Bhd Rr Whls-64" Low Compt-Pntd Roll Up Outside Compt --R2 compartment, 64" wide.



PART NO	S	QTY	DESCRIPTION
44-40-1020		2	-- Vents, Cmpts, Louvers (Ea)
45-30-2000		1	-- Turtle Tile, Floor, Cmpt, Bhnd Rr Whls (1/4 depth)
55-01-3360		1	-- Cmpt Lt, Wall, OSS Access, 18" LED Tube Lt, (2) Ea Cmpt
55-06-1400		1	-- Cmpt Lt, Dr Swtch, Magnetic, Ea
33-60-2100	>	1	Rr Bdy, Flat Back, EXT
32-08-5600		1	-- No Rr Cmpt
		<b>1</b>	<b>COMPARTMENT STORAGE PROVISIONS</b>
33-61-1320		1	-- Rr Step, EXT Bdy, Bolt-On, 12"
44-11-5150		1	Whl Well Cmpt, Ahd of Whls Left Side, EXT
44-10-7010	>	1	-- Whl Well Cmpt, Whl Chock, Pntd Dr
44-11-5350		1	Whl Well Cmpt, Bhnd Whls Left Side, EXT
44-10-7010	>	1	-- Whl Well Cmpt, Whl Chock, Pntd Dr
44-11-5550		1	Whl Well Cmpt, Ahd of Whls Right Side, EXT
44-10-1600	S < >	1	-- Whl Well Cmpt, Sngl SCBA, Poly Tube, Pntd S/S Dr, (Fire Shopp) --Painted Fire Shopp door.
44-10-6000		1	-- Whl Well Cmpt, SCBA Cmpt Straps
44-11-5750		1	Whl Well Cmpt, Bhnd Whls Right Side, EXT
44-10-1600	S < >	1	-- Whl Well Cmpt, Sngl SCBA, Poly Tube, Pntd S/S Dr, (Fire Shopp) --Painted Fire Shopp door.
44-10-6000		1	-- Whl Well Cmpt, SCBA Cmpt Straps
90-25-7620	S <	1	Suction Hose Cmpt, Rr Center Thru Tank, EXT >>Rear suction hose storage will accommodate the hose with two (2) specified hard suctions hoses each with pre-connected low level strainers with jet assist siphons on them.
90-25-9100		1	Suction Hose Provd'd By, Bdy Bldr, MN
90-25-3120	>	2	-- Suction Hose, Flex, Kochek PVC, 6"x10'-MN
90-25-6100		2	-- Suction Hose Cplgs, Alum, LH FM x RLM
90-30-3800	<	2	Fldg Tank Mtg, Zico 12V Elec/Hyd, Left Side, PTS-HA --One (1) driver side and one (1) officer side. --To accommodate the specified 2,100 gallon Fol-Da-Tank brand Type 1 single lane tanks.
90-30-3992	<	1	-- Fldg Tank Cover, Zico, Painted --One (1) driver side and one (1) officer side.
90-30-5100		1	Fldg Tank Provd'd By, Bdy Bldr
90-30-1300	S < >	2	-- Fldg Water Tank, 2100 Gal, Alum Frame, 22 Oz Vinyl Single Lane Type 1 --Two (2) Fol-Da-Tank brand "Single Lane" Type 1 aluminum frame 2,100 gallon folding tanks are to be supplied, mounted one (1) each side of the apparatus body.
		<b>1</b>	<b>== EXT Pmpr/Tnkr Common Body Parts - 22.019 02/18/19 ==</b>
44-01-1400		1	-- Bdy Trim, Frnt Bdy, Ht of Side Cmpts, Alum T/P
44-01-4020		1	-- Bdy Trim, Rr Bdy, Smooth Alum for Chevron Stripe, EXT
33-62-4260		1	-- Steps, Fldg, Rear, Right Hand (4), Integral LED Lts
33-62-5300		1	-- Step, Bltd, Treadplate, Rr Intermediate, 48"
33-70-1401		1	-- Handrail, Alum, Lighted, White LED, Rr Step, Vert, 60", Pair
33-70-2101		1	-- Handrail, Alum, Lighted, White LED, Below Hosebed, Horz, 48"
44-02-1120		1	-- Rub Rails, Lwr Bdy, EXT, Extrd Alum

PART NO	S	QTY	DESCRIPTION
60-25-9610	< >	1	Shore Power Strip, 120V, 15 Amp, 4-Plug Strip Rcptcl >>Installed rear of inside cab center console.
		1	<b>== EXT Pmpr/Tnkr - Equipment Systems - 22.019 02/18/19 ==</b>
		1	<b>== EXT SA Pmpr/Tnkr - Pnt/Ltr/Str - 22.019 02/18/19 ==</b>
80-20-5200	S <	1	Bdy Paint, Pmpr/Tnkr, Two-Tone, EXT >>Paint sides of upper body black from top down to ABOVE the top of front compartment headers and below scene lights and upper side warning lights and straight back above folding tank carriers.
80-32-1250		1	Compt Finish, DA Sanded, Up to 8 Cmpts, EXT
80-40-1250		1	Whl Finish, By Chassis Manufacturer
80-42-1600		1	Bdy Paint, Touch Up, 2 oz. Bttl, Two Color
80-50-1700	S <	1	Graphics Allowance \$4,000 To Match Existing LEFD Apparatus --Graphics package to be finalized.
80-70-1300	S <	1	Stripe, Reflective, Part of Graphics Allowance --Graphics package to be finalized.
80-72-1110	<	1	Stripe, Refl, 3M Diamond Grde, Chevron Pattern Entire Rr, EXT >>Make sure to also cover rear suction hose storage door and dump valve door
80-72-1799		1	=== NO Rr Roll-Up Door Chevron Striping - Pick to Select ===
80-79-1000		1	NFPA Standing / Walking Surfaces Yellow Safety Tape (NFPA 15.7.1.6)
		1	<b>== EXT Pmpr/Tnkr - Loose Equipment - 22.019 02/18/19 ==</b>
90-01-5900	S <	1	Whl Chocks Pair Zico #SAC-44 Fldg NO Mounts --Stored in the driver side rear wheel well panel compartments.
90-21-1200	< >	2	SCBA Mntg Brkt, Zico, 45 Minute, Non Riding >>Non riding spring clip style mounted in R1 as per drawing
90-26-2900	<	2	Suction Strainer, Kocheck Low Level, 6", Kocheck #LL60 --Two (2) strainers with Jet-Siphons are to be supplied, pre-connected to the two (2) hard suction hoses.

**Prepared for:**  
 Steve Harris  
 Rosenbauer Minnesota LLC  
 5181 260th Street  
 Wyoming, MN 55092  
 Phone: 651-462-1000

**Prepared by:**  
 Carolyn Lebeau  
 ISTATE TRUCK CENTER  
 2901 WEST 60TH STREET N.  
 SIOUX FALLS, SD 57107  
 Phone: 605-336-2995

## S P E C I F I C A T I O N   P R O P O S A L

Description	Weight Front	Weight Rear
<b>Price Level</b>		
M2 PRL-18M (EFF:04/17/18)		
<b>Data Version</b>		
SPECPRO21 DATA RELEASE VER 011		
<b>Vehicle Configuration</b>		
M2 112 CONVENTIONAL CHASSIS	8,244	6,026
2020 MODEL YEAR SPECIFIED		
SET BACK AXLE - TRUCK		
STRAIGHT TRUCK PROVISION		
LH PRIMARY STEERING LOCATION		
<b>General Service</b>		
TRUCK CONFIGURATION		
DOMICILED, USA 50 STATES (INCLUDING CALIFORNIA AND CARB OPT-IN STATES)		
FIRE SERVICE		
EMERGENCY VEHICLES BUSINESS SEGMENT		
LIQUID BULK COMMODITY		
TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS		
MAXIMUM 8% EXPECTED GRADE		
SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE		
FREIGHTLINER LEVEL II WARRANTY		
EXPECTED FRONT AXLE(S) LOAD : 16000.0 lbs		
EXPECTED REAR DRIVE AXLE(S) LOAD : 31000.0 lbs		
EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 47000.0 lbs		
<b>Truck Service</b>		



**Prepared for:**  
 Steve Harris  
 Rosenbauer Minnesota LLC  
 5181 260th Street  
 Wyoming, MN 55092  
 Phone: 651-462-1000

**Prepared by:**  
 Carolyn Lebeau  
 ISTATE TRUCK CENTER  
 2901 WEST 60TH STREET N.  
 SIOUX FALLS, SD 57107  
 Phone: 605-336-2995

Description	Weight Front	Weight Rear
FIRE TANK/PUMPER - MAIN DRIVELINE DRIVEN SPLIT-SHAFT PTO/PUMP  ROSENBAUER  EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME "XX" INCHES : 32.0 in		
<b>Engine</b>		
DETROIT DD13 12.8L 450 HP @ 1625 RPM, 1900 GOV RPM, 1650 LB/FT @ 975 RPM		
<b>Electronic Parameters</b>		
68 MPH ROAD SPEED LIMIT CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT PTO MODE ENGINE RPM LIMIT - 1100 RPM PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED PTO RPM WITH CRUISE SET SWITCH - 700 RPM PTO RPM WITH CRUISE RESUME SWITCH - 800 RPM PTO MODE CANCEL VEHICLE SPEED - 5 MPH PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND FUEL DOSING OF AFTERTREATMENT ENABLED IN PTO MODE-CLEANS HYDROCARBONS AT HIGH TEMPERATURES ONLY ONE REMOTE PTO SPEED PTO SPEED 1 SETTING - 700 RPM PTO MINIMUM RPM - 700		
<b>Engine Equipment</b>		
2016-2019 ONBOARD DIAGNOSTICS/2010 EPA/CARB/FINAL GHG17 CONFIGURATION 2008 CARB EMISSION CERTIFICATION - EXEMPTED VEHICLE; NO CLEAN IDLE LABEL REQUIRED STANDARD OIL PAN ENGINE MOUNTED OIL CHECK AND FILL ONE PIECE VALVE COVER SIDE OF HOOD AIR INTAKE WITH NFPA COMPLIANT EMBER SCREEN AND FIRE RETARDANT DONALDSON AIR CLEANER DR 12V 275 AMP 40-SI BRUSHLESS PAD ALTERNATOR WITH REMOTE BATTERY VOLTAGE SENSE	10	



**Prepared for:**  
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 Rosenbauer Minnesota LLC  
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 Wyoming, MN 55092  
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 2901 WEST 60TH STREET N.  
 SIOUX FALLS, SD 57107  
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Description	Weight Front	Weight Rear
(3) DTNA GENUINE, FLOODED STARTING, MIN 3000CCA, 555RC, THREADED STUD BATTERIES BATTERY BOX FRAME MOUNTED STANDARD BATTERY JUMPERS SINGLE BATTERY BOX FRAME MOUNTED LH SIDE BACK OF CAB WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN NON-POLISHED BATTERY BOX COVER NO CAB AUXILIARY POWER WIRING POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED OUTBOARD DRIVER SEAT	8	
BW MODEL BA-921 19.0 CFM SINGLE CYLINDER AIR COMPRESSOR WITH SAFETY VALVE STANDARD MECHANICAL AIR COMPRESSOR GOVERNOR AIR COMPRESSOR DISCHARGE LINE GVG, FIRE AND EMERGENCY SERVICE VEHICLES ENGINE WARNING JACOBS COMPRESSION BRAKE		
RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE EXITING FORWARD OF REAR TIRES	10	5
ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD ACTIVE REGENERATION AND DASH MOUNTED SINGLE REGENERATION REQUEST/INHIBIT SWITCH STANDARD EXHAUST SYSTEM LENGTH		
RH HORIZONTAL TAILPIPE, EXIT FORWARD OF REAR TIRES AT 90 DEGREES	20	20
6 GALLON DIESEL EXHAUST FLUID TANK 100 PERCENT DIESEL EXHAUST FLUID FILL LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING STANDARD DIESEL EXHAUST FLUID TANK CAP BORG WARNER (KYSOR) REAR AIR ON/OFF ENGINE FAN CLUTCH AUTOMATIC FAN CONTROL WITH DASH SWITCH AND INDICATOR LIGHT, NON ENGINE MOUNTED		



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 2901 WEST 60TH STREET N.  
 SIOUX FALLS, SD 57107  
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Description	Weight Front	Weight Rear
DDC SUPPLIED ENGINE MOUNTED FUEL FILTER/FUEL WATER SEPARATOR WITH WATER-IN-FUEL INDICATOR		
FULL FLOW OIL FILTER		
1400 SQUARE INCH RADIATOR		
ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT		
GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT		
CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES		
HDEP FIXED RATIO COOLANT PUMP AND RADIATOR DRAIN VALVE WITH FIRE PUMP AUXILIARY ENGINE COOLING	10	
ALUMINUM FLYWHEEL HOUSING		
DELCO 12V MOD 3.175-39MT+ OCP STARTER WITH THERMAL PROTECTION AND INTEGRATED MAGNETIC SWITCH	-35	

### Transmission

ALLISON 4000 EVS AUTOMATIC TRANSMISSION WITH PTO PROVISION	210	60
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### Transmission Equipment

ALLISON VOCATIONAL PACKAGE 198 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODEL EVS  
 ALLISON VOCATIONAL RATING FOR FIRE TRUCK/EMERGENCY VEHICLE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES  
 PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY  
 SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY  
 PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE  
 SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE  
 PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE  
 SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE



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 Rosenbauer Minnesota LLC  
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 2901 WEST 60TH STREET N.  
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Description	Weight Front	Weight Rear
ENGINE BRAKE RANGE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		
FUEL SENSE 2.0 DISABLED - PERFORMANCE - TABLE BASED		
DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES		
VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT END OF FRAME		
ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED		
(2) CUSTOMER INSTALLED MUNCIE CS10 SERIES PTO'S		
PTO MOUNTING, LH SIDE AND TOP RH SIDE OF MAIN TRANSMISSION		
MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN		
PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED		
TRANSMISSION PROGNOSTICS - ENABLED 2013		
WATER TO OIL TRANSMISSION COOLER, FRAME MOUNTED	30	
TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK		
SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)		

### Front Axle and Equipment

DETROIT DA-F-16.0-5 16,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE	190	
MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES	10	
FIRE AND EMERGENCY SEVERE SERVICE, NON-ASBESTOS FRONT LINING		
CAST IRON OUTBOARD FRONT BRAKE DRUMS		
FRONT OIL SEALS		
VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL		
STANDARD SPINDLE NUTS FOR ALL AXLES		
MERITOR AUTOMATIC FRONT SLACK ADJUSTERS		



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Description	Weight Front	Weight Rear
TRW TAS-85 POWER STEERING	40	
POWER STEERING PUMP		
2 QUART SEE THROUGH POWER STEERING RESERVOIR		
ORGANIC SAE 80/90 FRONT AXLE LUBE		
<b>Front Suspension</b>		
16,000# TAPERLEAF FRONT SUSPENSION	200	
MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION		
FRONT SHOCK ABSORBERS		
<b>Rear Axle and Equipment</b>		
RS-30-185 31,000# U-SERIES FIRE/EMERGENCY SERVICE SINGLE REAR AXLE		-2,030
3.58 REAR AXLE RATIO		
IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING		
MXL 18T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	40	40
DRIVER CONTROLLED TRACTION DIFFERENTIAL - SINGLE REAR AXLE		
(1) DRIVER CONTROLLED DIFFERENTIAL LOCK REAR VALVE FOR SINGLE DRIVE AXLE		
BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH		
MERITOR 16.5X7 P CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, CAST SHOES		30
FIRE AND EMERGENCY SEVERE SERVICE NON-ASBESTOS REAR BRAKE LINING		
BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S)		
WEBB CAST IRON REAR BRAKE DRUMS		50
REAR OIL SEALS		
HALDEX GOLDSEAL LONGSTROKE 1-DRIVE AXLES SPRING PARKING CHAMBERS		
HALDEX AUTOMATIC REAR SLACK ADJUSTERS		
ORGANIC SAE 80/90 REAR AXLE LUBE		
<b>Rear Suspension</b>		
31,000# FLAT LEAF SPRING REAR SUSPENSION WITH HELPER AND RADIUS ROD FOR FIRE/EMERGENCY SERVICE		140
SPRING SUSPENSION - NO AXLE SPACERS		





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 Rosenbauer Minnesota LLC  
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 2901 WEST 60TH STREET N.  
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Description	Weight Front	Weight Rear
STANDARD AXLE SEATS IN AXLE CLAMP GROUP		
FORE/AFT CONTROL RODS		
<b>Brake System</b>		
AIR BRAKE PACKAGE		
WABCO 4S/4M ABS WITH TRACTION CONTROL, WITH ATC OFF-ROAD SWITCH		
REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES		
FIBER BRAID PARKING BRAKE HOSE		
STANDARD BRAKE SYSTEM VALVES		
STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM		
STD U.S. FRONT BRAKE VALVE		
RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE		
BW AD-9 BRAKE LINE AIR DRYER WITH HEATER	20	
BENDIX OIL COALESCING FILTER FOR AIR DRYER		
AIR DRYER MOUNTED INBOARD ON LH RAIL		
STEEL AIR TANKS MOUNTED AFT INSIDE AND/OR BELOW FRAME JUST FORWARD OF REAR SUSPENSION, NO TRIPLE OR TORPEDO TANKS		
CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD		
BW DV-2 AUTO DRAIN VALVE WITHOUT HEATER ON ALL TANK(S)		
<b>Trailer Connections</b>		
UPGRADED CHASSIS MULTIPLEXING UNIT		
UPGRADED BULKHEAD MULTIPLEXING UNIT		
<b>Wheelbase &amp; Frame</b>		
5100MM (201 INCH) WHEELBASE		
11/32X3-1/2X10-15/16 INCH STEEL FRAME (8.73MMX277.8MM/0.344X10.94 INCH) 120KSI	110	60
1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT	190	380
2150MM (85 INCH) REAR FRAME OVERHANG		
FRAME OVERHANG RANGE: 81 INCH TO 90 INCH	-40	190
CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 135.25 in		



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 ISTATE TRUCK CENTER  
 2901 WEST 60TH STREET N.  
 SIOUX FALLS, SD 57107  
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Description	Weight Front	Weight Rear
CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 132.25 in		
CALC'D FRAME LENGTH - OVERALL : 315.52		
CALCULATED FRAME SPACE LH SIDE : 82.19 in		
CALCULATED FRAME SPACE RH SIDE : 211.49 in		
CALC'D SPACE AVAILABLE FOR DECKPLATE : 135.45 in		
SQUARE END OF FRAME		
FRONT CLOSING CROSSMEMBER		
STANDARD WEIGHT ENGINE CROSSMEMBER		
STANDARD CROSSMEMBER BACK OF TRANSMISSION		
STANDARD MIDSHIP #1 CROSSMEMBER(S)		
STANDARD REAR MOST CROSSMEMBER		
STANDARD SUSPENSION CROSSMEMBER		

### Chassis Equipment

THREE-PIECE 14 INCH CHROMED STEEL BUMPER WITH COLLAPSIBLE ENDS		
REMOVABLE FRONT TOW HOOKS STORED ON THE CHASSIS FRAME	25	
BUMPER MOUNTING FOR SINGLE LICENSE PLATE		
FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS		
GRADE 8 THREADED HEX HEADED FRAME FASTENERS		
TANK BODY 1501 TO 3000 GALLONS		

### Fuel Tanks

50 GALLON/189 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK - LH	-10	
RECTANGULAR FUEL TANK(S)		
PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS		
FUEL TANK(S) FORWARD		
PLAIN STEP FINISH		
FUEL TANK CAP(S)		
EQUIFLO INBOARD FUEL SYSTEM		
NO NATURAL GAS VEHICLE FUEL TANK VENT LINE/STACK		
HIGH TEMPERATURE REINFORCED NYLON FUEL LINE		

**Prepared for:**  
 Steve Harris  
 Rosenbauer Minnesota LLC  
 5181 260th Street  
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**Prepared by:**  
 Carolyn Lebeau  
 ISTATE TRUCK CENTER  
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 SIOUX FALLS, SD 57107  
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Description	Weight Front	Weight Rear
FUEL COOLER MOUNTED LEFT HAND IN RAIL	10	
<b>Tires</b>		
MICHELIN XDN2 GRIP 315/80R22.5 20 PLY RADIAL REAR TIRES	100	
MICHELIN XDN2 GRIP 315/80R22.5 20 PLY RADIAL REAR TIRES		240
<b>Hubs</b>		
CONMET PRESET PLUS PREMIUM IRON FRONT HUBS		
WEBB IRON REAR HUBS		70
<b>Wheels</b>		
ALCOA ULTRA ONE 89U64X 22.5X9.00 10-HUB PILOT 5.99 INSET ALUMINUM FRONT WHEELS	-28	
ALCOA ULTRA ONE 89U64X 22.5X9.00 10-HUB PILOT 5.99 INSET ALUMINUM REAR WHEELS		-56
POLISHED FRONT WHEELS; OUTSIDE ONLY		
POLISHED REAR WHEELS; OUTSIDE OF OUTER WHEELS ONLY		
FRONT WHEEL MOUNTING NUTS		
REAR WHEEL MOUNTING NUTS		
<b>Cab Exterior</b>		
112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB		
AIR CAB MOUNTING		
BOLT-ON MOLDED FLEXIBLE FENDER EXTENSIONS	10	
LH AND RH EXTERIOR GRAB HANDLES WITH SINGLE RUBBER INSERT		
HOOD MOUNTED CHROMED PLASTIC GRILLE		
CHROME HOOD MOUNTED AIR INTAKE GRILLE		
FIBERGLASS HOOD		
SINGLE ELECTRIC HORN		
ALL UNIT(S) KEYED ALIKE WITH CUSTOMER SPECIFIED KEY NUMBER FT1031		
REAR LICENSE PLATE MOUNT END OF FRAME		
INTEGRAL HEADLIGHT/MARKER ASSEMBLY WITH CHROME BEZEL		
LED AERODYNAMIC MARKER LIGHTS		
DAYTIME RUNNING LIGHTS		
OMIT STOP/TAIL/BACKUP LIGHTS AND PROVIDE WIRING WITH SEPARATE STOP/TURN WIRES TO 4 FEET BEYOND END OF FRAME		-5



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 Rosenbauer Minnesota LLC  
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Description	Weight Front	Weight Rear
STANDARD FRONT TURN SIGNAL LAMPS		
AUTOMATIC ON/OFF, ENGINE COMPARTMENT, HOOD ACTIVATED WORK LIGHT WITH MANUAL OVERRIDE	1	
DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE		
DOOR MOUNTED MIRRORS		
102 INCH EQUIPMENT WIDTH		
LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS		
STANDARD SIDE/REAR REFLECTORS		
NO REAR WINDOW	-20	
TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS		
RH AND LH ELECTRIC POWERED WINDOWS, PASSENGER SWITCHES ON DOOR(S)	4	
TINTED WINDSHIELD		
2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, FRAME MOUNTED		

**Cab Interior**

OPAL GRAY VINYL INTERIOR		
MOLDED PLASTIC DOOR PANEL		
MOLDED PLASTIC DOOR PANEL		
BLACK MATS WITH SINGLE INSULATION		
NO DASH MOUNTED ASH TRAYS AND LIGHTER		
FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING		
IN DASH STORAGE BIN		
(2) CUP HOLDERS LH AND RH DASH		
GRAY/CHARCOAL FLAT DASH		
SMART SWITCH EXPANSION MODULE		
5 LB. FIRE EXTINGUISHER	10	
HEATER, DEFROSTER AND AIR CONDITIONER		
STANDARD HVAC DUCTING		
MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH		
STANDARD HEATER PLUMBING		
VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR		
BINARY CONTROL, R-134A		



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Description	Weight Front	Weight Rear
PREMIUM INSULATION		
SOLID-STATE CIRCUIT PROTECTION AND FUSES		
12V NEGATIVE GROUND ELECTRICAL SYSTEM		
DOMED DOOR ACTIVATED LH AND RH, DUAL READING LIGHTS, FORWARD CAB ROOF		
LH AND RH ELECTRIC DOOR LOCKS		
(1) 12 VOLT POWER SUPPLY IN DASH		
TRIANGULAR REFLECTORS KIT WITHOUT FLARES SHIPPED LOOSE IN CAB	10	
SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION DRIVER SEAT WITH NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR	50	
SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION PASSENGER SEAT WITH NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR	40	15
LH AND RH INTEGRAL DOOR PANEL ARMRESTS		
BLACK CORDURA PLUS CLOTH DRIVER SEAT COVER		
BLACK CORDURA PLUS CLOTH PASSENGER SEAT COVER		
NFPA 1901-2009 HIGH VISIBILITY ORANGE SEAT BELTS		
FIXED STEERING COLUMN		
4-SPOKE 18 INCH (450MM) STEERING WHEEL		
DRIVER AND PASSENGER INTERIOR SUN VISORS		
NO ENTRY/ACCESS/STEP WIRING		

### Instruments & Controls

GRAY DRIVER INSTRUMENT PANEL  
 GRAY CENTER INSTRUMENT PANEL  
 ENGINE REMOTE INTERFACE WITH PARK BRAKE AND NEUTRAL INTERLOCKS  
 BLACK GAUGE BEZELS  
 LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM  
 2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES  
 ENGINE COMPARTMENT MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS, WITH WARNING LIGHT IN DASH  
 ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL



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Description	Weight Front	Weight Rear
KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY		
ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED		
HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH		
2 INCH ELECTRIC FUEL GAUGE		
FUEL FILTER RESTRICTION INDICATOR		
ENGINE REMOTE INTERFACE NOT CONFIGURED		
ENGINE REMOTE INTERFACE CONNECTOR IN ENGINE COMPARTMENT		
ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE		
2 INCH TRANSMISSION OIL TEMPERATURE GAUGE		
ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY		
CUSTOMER FURNISHED AND INSTALLED PTO CONTROLS		
ELECTRONIC STABILITY CONTROL		
ELECTRIC ENGINE OIL PRESSURE GAUGE		
OVERHEAD INSTRUMENT PANEL		
ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER		
STANDARD VEHICLE SPEED SENSOR		
ELECTRONIC 3000 RPM TACHOMETER		
VT-HU CONNECTIVITY PLATFORM HARDWARE		
2 YEARS DETROIT CONNECT BASE PACKAGE (VIRTUAL TECHNICIAN, DETROIT CONNECT PORTAL ACCESS) FOR VT-HU CONNECTIVITY PLATFORM		
IGNITION SWITCH CONTROLLED ENGINE STOP		
DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY		
SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY		
MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH		
ALTERNATING FLASHING HEADLAMP SYSTEM WITH BODY BUILDER CONTROLLED ENGAGEMENT		



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Description	Weight Front	Weight Rear
ONE VALVE PARKING BRAKE SYSTEM WITH DASH VALVE CONTROL AUTONEUTRAL AND WARNING INDICATOR		
SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE		
INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS		

### Design

TWO COLOR CUSTOM PAINT

### Color

CAB COLOR A: L0001EB BLACK ELITE BC  
 CAB COLOR B: L0762EB MED RED ELITE BC  
 BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT  
 STANDARD E COAT/UNDERCOATING

### Certification / Compliance

U.S. FMVSS CERTIFICATION, EXCEPT SALES  
 CABS AND GLIDER KITS

### Secondary Factory Options

DEALER HAS BEEN ADVISED OF AND  
 ACCEPTED RESPONSIBILITY FOR  
 MODIFICATIONS DUE TO POSSIBLE  
 PTO/CHASSIS INTERFERENCE

### Raw Performance Data

CALC'D FRAME LENGTH - OVERALL : 315.52  
 CALCULATED EFFECTIVE BACK OF CAB TO  
 REAR SUSPENSION C/L (CA) : 132.25 in  
 CALC'D SPACE AVAILABLE FOR DECKPLATE :  
 135.45 in

## TOTAL VEHICLE SUMMARY

### Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight <sup>†</sup>	9469 lbs	5235 lbs	14704 lbs
Dealer Installed Options	2 lbs	0 lbs	2 lbs



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 Phone: 605-336-2995

Total Weight <sup>+</sup>	9471 lbs	5235 lbs	14706 lbs
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**Dealer Installed Options**

	<b>Weight Front</b>	<b>Weight Rear</b>
WELDON VDR AND DISPLAY INSTALLED AT ISTATE TRUCK CENTER	2	0
Total Dealer Installed Options	2 lbs	0 lbs

(+) Weights shown are estimates only.  
 If weight is critical, contact Customer Application Engineering.

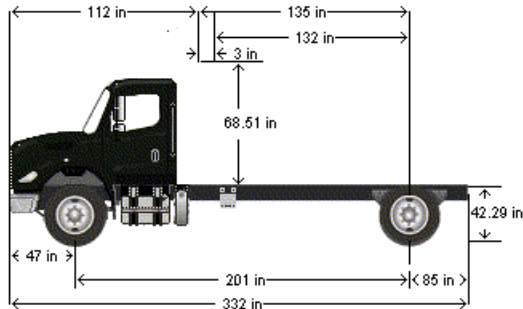




**Prepared for:**  
 Steve Harris  
 Rosenbauer Minnesota LLC  
 5181 260th Street  
 Wyoming, MN 55092  
 Phone: 651-462-1000

**Prepared by:**  
 Carolyn Lebeau  
 ISTATE TRUCK CENTER  
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## D I M E N S I O N S



### VEHICLE SPECIFICATIONS SUMMARY - DIMENSIONS

Model .....	M2112
Wheelbase (545) .....	5100MM (201 INCH) WHEELBASE
Rear Frame Overhang (552) .....	2150MM (85 INCH) REAR FRAME OVERHANG
Fifth Wheel (578) .....	NO FIFTH WHEEL
Mounting Location (577) .....	NO FIFTH WHEEL LOCATION
Maximum Forward Position (in) .....	0
Maximum Rearward Position (in) .....	0
Amount of Slide Travel (in) .....	0
Slide Increment (in) .....	0
Desired Slide Position (in) .....	0.0
Cab Size (829) .....	112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB
Sleeper (682) .....	NO SLEEPER BOX/SLEEPERCAB
Exhaust System (016) .....	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE EXITING FORWARD OF REAR TIRES

### TABLE SUMMARY - DIMENSIONS



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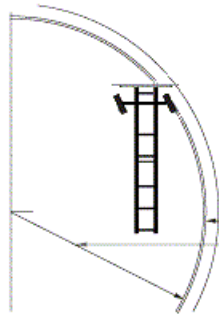
Dimensions	Inches
Bumper to Back of Cab (BBC)	112.4
Bumper to Centerline of Front Axle (BA)	46.9
Min. Cab to Body Clearance (CB)	3.0
Back of Cab to Centerline of Rear Axle(s) (CA)	135.2
Effective Back of Cab to Centerline of Rear Axle(s) (Effective CA)	132.2
Back of Cab Protrusions (Exhaust/Intake) (CP)	3.0
Back of Cab Protrusions (Side Extenders/Trim Tab) (CP)	0.0
Back of Cab Protrusions (CNG Tank)	0.0
Back of Cab Clearance (CL)	3.0
Back of Cab to End of Frame	219.8
Cab Height (CH)	68.5
Wheelbase (WB)	200.8
Frame Overhang (OH)	84.6
Overall Length (OAL)	332.2
Rear Axle Spacing	0.0
Unladen Frame Height at Centerline of Rear Axle	42.3

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

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## TURNING RADIUS



Turning radius graphic and data provided strictly for comparisons between model configurations. Weather, road surfaces, and tire treads affect the results. It is strongly suggested that actual vehicles be measured before constructing any roads/driveways using this information. For specific figures regarding your configuration, please contact your CAE representative.

	Dimensions	Tolerance
Wall to Wall Diameter (ft)	61.5	+/- 3.0
Curb to Curb Diameter (ft)	59.4	+/- 3.0
Turning Radius (ft)	29.2	+/- 1.5

## VEHICLE SPECIFICATIONS SUMMARY - TURNING RADIUS

Model ..... M2112  
 Cab Size (829) ..... 112 INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB  
 Wheelbase (545) ..... 5100MM (201 INCH) WHEELBASE  
 Front Tires (093) ..... MICHELIN X WORKS Z 315/80R22.5 20 PLY RADIAL FRONT TIRES  
   Width (in) ..... 12.5  
 Front Axle (400) ..... DETROIT DA-F-16.0-5 16,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE  
   Kingpin Intersection (in) ..... 71  
 Bumper (556) ..... THREE-PIECE 14 INCH CHROMED STEEL BUMPER WITH COLLAPSIBLE ENDS  
   Width (in) ..... 93.5  
   Bumper Miter to Front Axle (in) ..... 27.56  
 Primary Steering Location (003) ..... LH PRIMARY STEERING LOCATION  
 Steering Gear (536) ..... TRW TAS-85 POWER STEERING  
   Dual Steering Gear ..... NONE  
   Ram ..... NONE  
 Rear Axle (420) ..... RS-30-185 31,000# U-SERIES FIRE/EMERGENCY SERVICE SINGLE REAR AXLE  
 Axle Spacing (624) ..... NO AXLE SPACING

Performance calculations are estimates only. If performance calculations are critical, please contact Customer Application Engineering.

## TENDER COST BREAKDOWN

	ROSENBAUER	CUSTOM FIRE
<b>VEHICLE</b>		
Chassis	\$108,012.00	ESTIMATED
Body/Pump	\$261,760.00	PRICE
TOTAL	<b>\$369,772.00</b>	<b>\$396,000.00</b>
<b>Associated Equipment</b>		
5" Hose	\$5,163.55	\$5,163.55
2 1/2" Hose	\$1,228.24	\$1,228.24
1 3/4" Hose	\$880.00	\$880.00
Nozzles	\$1,157.35	\$1,157.35
TOTAL	<b>\$8,429.14</b>	<b>\$8,429.14</b>
Change orders, equipment mounting, misc.	<b>\$1,000.00</b>	<b>\$1,000.00</b>
TOTAL	<b>\$379,201.14</b>	<b>\$405,429.14</b>
CIP AMOUNT	<b>\$425,000.00</b>	<b>\$425,000.00</b>
DIFFERENCE CIP/ACTUAL	<b>\$45,798.86</b>	<b>\$19,570.86</b>