



City of Bonner Springs

KANSAS

Monday, July 24, 2023

200 East Third Street, Bonner Springs, KS 66012
Bonner Springs City Hall
Council Chambers

NO WORKSHOP MEETING
REGULAR CITY COUNCIL MEETING - 7:30 p.m.

The meeting is open to the public.

CITY COUNCIL MEETING - 7:30 P.M.

1. Community For All Ages - Silver Level Recognition

Action Presentation of Silver level award for the Community For All Ages program to the City of Bonner Springs, KS.

Recommendation

Documents:

CITIZEN CONCERNS ABOUT ITEMS NOT ON TODAY'S AGENDA. (COPIES OF MATERIAL PRESENTED TO THE CITY COUNCIL MUST ALSO BE PROVIDED TO THE CITY CLERK.)

This item is for comments and questions from the audience about items that are not included on today's agenda.

CONSENT AGENDA

1. Minutes of the July 10, 2023 City Council Meeting

Action Make a motion to approve the minutes as presented.

Recommendation Staff recommends approval.

Documents:

1. 07102023 CCM Minutes

2. Claims for City Operation

Action Make a motion to approve the claims for City operations as presented.

Recommendation Staff recommends approval.

Documents:

1. Check Register
2. Expense Approval Report

3. Public Use Request - Fitness Court at Center Park Ribbon Cutting

Action Make a motion to approve the public use request for the fitness court ribbon cutting.

Recommendation Staff recommends approval

Documents:

1. Public Use Request - Fitness Court at Center Park Ribbon Cutting

4. Voting Delegates for the Annual League of Kansas Municipalities Business Meeting

Action Make a motion to approve the voting delegates for the annual League of Kansas Municipalities Conference business meeting.

Recommendation The Mayor recommends approval.

Documents:

OLD BUSINESS

NEW BUSINESS

1. Aerial Fire Truck Purchase

Action Make a motion to authorize the purchase of an aerial fire truck from Pierce Manufacturing in an amount not-to-exceed \$2.1 million and authorize the Assistant City Manager to enter into a lease-purchase agreement with either PNC Equipment Finance or Union Bank and Trust, whichever staff determines to be the best financial advantage for the City.

Recommendation The Fire Chief, Finance Director, and City Manager recommended approval.

Documents:

1. Stock AAt 41043
2. Enforcer 100' Tower Quint w T3 41043

2. Atmos Franchise Agreement Notification of Renegotiation

Action Make a motion to authorize staff to provide written notification to Atmos of the City's intent to renegotiate the franchise agreement.

Recommendation Staff recommends approval.

Documents:

3. Ordinance to Adopt the Standard Traffic Ordinance 50th Edition

Action Make a motion to adopt an ordinance to adopt the Standard Traffic Ordinance 50th Edition.

Recommendation The City Attorney and City Clerk recommend approval.

Documents:

1. Ordinance Adopting 2023 STO

4. Ordinance to Adopt the Uniform Public Offense Code 39th Edition

Action Make a motion to adopt an ordinance to adopt the Uniform Public Offense Code 39th edition

Recommendation The City Attorney and City Clerk recommend approval.

Documents:

1. Ordinance Adopting 2023 UPOC

REPORTS

1. City Manager's Report

Action

Recommendation

Documents:

1. City Managers Update 7-21-23
2. End of Summer Reading 7_29
3. 7.17.23 Completed Planning Projects
4. 7.17.23 Pending Planning Projects
5. InCode Building Permit Report
6. InCode Code Enforcement Report

2. City Council Items

3. Mayor's Report

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From:

Subject: Minutes of the July 10, 2023 City Council Meeting

Recommendation: Staff recommends approval.

Action: Make a motion to approve the minutes as presented.

Background:

Discussion:

Financial Impact:

City Council Minutes – Regular Meeting – July 10, 2023

The Bonner Springs City Council met in Workshop session at 7:00 p.m.

Present: Mayor Harrington; Councilmembers Shannon, Long, McMahan, Wood, Gurley, Kipp, Stephens and Reeves.

City staff present: Amber Vogan, Assistant City Manager; Chris Brake, City Clerk; Tim Richards. Fire Chief; Billy Naff, Police Chief; Tillie LaPlante, Finance Director; Frank Abart, Public Works Director and Justine Spease, Recreation Manager

1. Public Works Organizational Restructuring – The Public Works Director reviewed proposed organization changes necessary when the new water treatment plant becomes operational.

The Workshop session adjourned at 7:25 p.m.

The Bonner Springs City Council met in regular session at 7:30 p.m.

Present: Mayor Harrington; Councilmembers Shannon, Long, McMahan, Wood, Gurley, Kipp, Stephens and Reeves.

City staff present: Amber Vogan, Assistant City Manager; Chris Brake, City Clerk; Tim Richards. Fire Chief; Billy Naff, Police Chief; Tillie LaPlante, Finance Director; Frank Abart, Public Works Director and Justine Spease, Recreation Manager

The Mayor led the Pledge of Allegiance to the Flag of the United States of America, and Reverend Flournoy led the invocation.

Citizen Concerns about Items Not on Today's Agenda – Jordan Michael Tiner Mackey, 120 Emerson Ave., thought he was on the agenda tonight. Stated the sound is difficult to hear even through the microphones when the meeting is viewed online.

CONSENT AGENDA – The Mayor read the Consent Agenda items and asked the staff, audience or City Council if they wished to remove an item for separate consideration. No items were removed.

1. Minutes of June 26, 2023 City Council Meeting
2. Claims for City Operations
3. Public Use Request – Bubble Run 5K and Foam Glow 5K

Reeves moved and Shannon seconded to approve the consent agenda as presented. Unanimous approval.

OLD BUSINESS – None

NEW BUSINESS –

1. **Notice of Intent to Exceed the Revenue Neutral Rate** – Stephens moved and Shannon seconded to authorize City staff to notify the County Clerk of the City's intent to exceed the Revenue Neutral Rate, maintaining the current mill levy rate of 41.875887 and set a Public Hearing for August 28, 2023 to hear comments on exceeding the Revenue Neutral Rate.
2. **Stormwater Master Plan Update** – Long moved and Shannon seconded to approve the Stormwater Master Plan update. Unanimous approval.
3. **138th Street Project - Atmos Agreement for Gas Line Relocation** - Shannon moved and Gurley seconded to authorize the City Manager to execute an agreement with Atmos for gas line relocation on 138th Street, in the amount of \$495,387.74. Unanimous approval.
4. **Resolution Authorizing an Automatic Aid Agreement between the City of Bonner Springs Fire Department and the Fairmount Township Fire Department** – Reeves moved and Shannon seconded to adopt a resolution authorizing an automatic aid agreement between the City of Bonner Springs Fire

Department and the Fairmount Township Fire Department. Unanimous approval. Assigned Resolution No. 2023-13.

5. **Fire-Rescue Extrication Toolset Purchase** – Gurley moved and Wood seconded to approve the purchase of an extrication tool set from Conrad Fire Equipment in the amount not to exceed \$45,000. Unanimous approval.
6. **Fitness Court Installation Contractor Selection** – Shannon moved and Long seconded to authorize the Assistant City Manager to accept the quote from Engineered Installation Solutions (EIS) for the installation of the fitness court equipment in the amount of \$25,000. Unanimous approval.
7. **Ordinance to Amend the City's Pay Plan** – Gurley moved and Wood seconded to adopt an ordinance to amend the City's pay plan. Unanimous approval. Assigned Ordinance No. 2550

REPORTS

Item No. 1: City Manager's Report – The Assistant City Manager reported the City received a Kansas Arts Industry Commission grant in the amount of \$9,500. It will be used for two murals downtown.

Item No. 2: City Council Items

- Reeves thanked City staff for their work along Spring Creek.
- Reeves asked if there are any plans for improvements toward a green area on Oak Street where the old building was demolished.
- Stephens stated the councilmembers are difficult to hear on the videos and asked staff to investigate options.
- McMahan asked if the City could get a new speaker at the aquatic center.
- Long invited everyone to attend the second Evenings on Oak event on Thursday. Last month 700 -800 people attended.
- Shannon suggested longer microphones.
- Stephens announced Popsicles with Police event will also be taking place Thursday.

Item No. 3: Mayor's Report

- Asked Councilmembers to identify themselves before speaking for clarity for those watching online.
- Evenings on Oak is this Thursday with vendors and food trucks, with the City Band concert immediately following at 8:30 p.m. There are three more City Band Concerts this season.
- Farmers Market continues on Saturdays through mid-October.
- Asked staff to research the range allowed for franchise fees. The current franchise fee is 5%.

The meeting adjourned at 8:31 p.m.

Christina Brake, City Clerk

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Sarah Frehe

Subject: Claims for City Operation

Recommendation: Staff recommends approval.

Action: Make a motion to approve the claims for City operations as presented.

Background: Staff enclosed the regular claims for City operations in the amount of \$1,694,707.22.

Discussion:

Financial Impact:



Bonner Springs, KS

Check Report

By Check Number

Date Range: 07/12/2023 - 07/21/2023

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: AP BANK-AP BANK						
12304	JOHN F. EICKHOFF AND MICHELLE EICKHOFF	07/12/2023	Manual	0.00	13,750.00	151588
10078	AMAZON CAPITAL SERVICES INC	07/21/2023	Regular	0.00	942.98	151589
11959	AMERICAN DIGITAL SECURITY, LLC	07/21/2023	Regular	0.00	465.00	151590
7449	APEX ENVIROTECH, INC.	07/21/2023	Regular	0.00	2,760.00	151591
4525	ASFP	07/21/2023	Regular	0.00	185.00	151592
3303	ASPHALT SALES CO INC	07/21/2023	Regular	0.00	364.80	151593
2470	ATMOS ENERGY	07/21/2023	Regular	0.00	591.41	151594
10140	BEVERLY S MILLS	07/21/2023	Regular	0.00	25.00	151595
7416	BG CONSULTANTS, INC	07/21/2023	Regular	0.00	30,838.25	151596
0117	BOARD OF PUBLIC UTILITIES	07/21/2023	Regular	0.00	47,305.06	151597
2798	BONNER SPRINGS AUTO REPAIR LLC	07/21/2023	Regular	0.00	57.14	151598
6869	BONNER SPRNGS PARTNERS II, LLC	07/21/2023	Regular	0.00	24,772.80	151599
4172	BOUND TREE MEDICAL LLC	07/21/2023	Regular	0.00	5,169.63	151600
11759	BURNS & MCDONNELL CAS CONSTRUCTUORS B	07/21/2023	Regular	0.00	1,443,897.30	151601
0192	C&B EQUIPMENT MIDWEST INC	07/21/2023	Regular	0.00	3,666.25	151602
11793	CHARTER COMMUNICATIONS HOLDING LLC	07/21/2023	Regular	0.00	244.72	151603
10027	CINTAS	07/21/2023	Regular	0.00	469.41	151604
11655	CINTAS FIRE 636525	07/21/2023	Regular	0.00	185.00	151605
7888	COGENT, INC	07/21/2023	Regular	0.00	2,907.50	151606
10136	COMPLIANCEONE	07/21/2023	Regular	0.00	1,026.70	151607
0716	CORE & MAIN LP	07/21/2023	Regular	0.00	58.98	151608
2290	CRAFCO INC	07/21/2023	Regular	0.00	123.58	151609
6509	CS CAREY INC	07/21/2023	Regular	0.00	120.00	151610
0014	DEFFENBAUGH INDUSTRIES INC	07/21/2023	Regular	0.00	3,687.18	151611
11899	EASY ICE, LLC	07/21/2023	Regular	0.00	140.00	151612
7142	EDWARDS CHEMICALS INC	07/21/2023	Regular	0.00	1,107.00	151613
8207	ENSZ & JESTER, PC	07/21/2023	Regular	0.00	195.00	151614
12035	ESCOBAR TREE AND LAWN SERVICES LLC	07/21/2023	Regular	0.00	3,500.00	151615
10964	EVERGY FKA KCP&L	07/21/2023	Regular	0.00	480.94	151616
10942	EVERGY KANSAS CENTRAL INC FKA WESTAR ENI	07/21/2023	Regular	0.00	30,520.29	151617
4342	FELDMANS	07/21/2023	Regular	0.00	422.93	151618
11686	FIRE RECOVERY EMS LLC	07/21/2023	Regular	0.00	2,366.01	151619
11792	FREESE AND NICHOLS, INC	07/21/2023	Regular	0.00	6,494.76	151620
12335	GINNY HEIM	07/21/2023	Regular	0.00	26.00	151621
7383	GREAT PLAINS SOCIETY FOR PREVENTION CRUE	07/21/2023	Regular	0.00	485.00	151622
1532	GT DISTRIBUTORS	07/21/2023	Regular	0.00	162.00	151623
12160	GUARDIAN SECURITY SYSTEMS INC	07/21/2023	Regular	0.00	151.94	151624
7242	HELGET GAS PRODUCTS INC	07/21/2023	Regular	0.00	110.42	151625
12336	HOWARD RUSSO	07/21/2023	Regular	0.00	1,000.00	151626
7720	IBEC, LLC	07/21/2023	Regular	0.00	60.00	151627
12175	JACKIE COLLINS	07/21/2023	Regular	0.00	91.00	151628
12294	JEFFREY CORDILL	07/21/2023	Regular	0.00	1,542.37	151629
5345	JOHNSON COUNTY WASTEWATER	07/21/2023	Regular	0.00	755.96	151630
12334	JUAN VELA	07/21/2023	Regular	0.00	150.00	151631
7899	JUSTINE SPEASE	07/21/2023	Regular	0.00	46.37	151632
12116	KANSAS ASSOCIATION OF FLOODPLAIN MANAG	07/21/2023	Regular	0.00	200.00	151633
10049	KANSAS HEALTH & ENVIRONMENTAL LABORAT	07/21/2023	Regular	0.00	1,504.00	151634
5308	KANSAS ONE-CALL SYSTEM, INC	07/21/2023	Regular	0.00	224.40	151635
11752	KANSAS UNIVERSITY PHYSICIANS, INC	07/21/2023	Regular	0.00	2,462.52	151636
10114	LEATHAM FAMILY, LLC	07/21/2023	Regular	0.00	372.50	151637
9879	MAINSTREET CREDIT UNION	07/21/2023	Regular	0.00	845.00	151638
11776	MATTHEW BOWLIN	07/21/2023	Regular	0.00	441.00	151639
7587	MCANANY OIL CO., INC.	07/21/2023	Regular	0.00	4,890.43	151640
6849	MJV-A LLC	07/21/2023	Regular	0.00	216.79	151641

Check Report

Date Range: 07/12/2023 - 07/21/2023

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
12337	NANCY WATSON	07/21/2023	Regular	0.00	91.00	151642
12338	NATHAN BRUNGARDT	07/21/2023	Regular	0.00	64.77	151643
12333	OPTUM BANK	07/21/2023	Regular	0.00	7,713.32	151644
0947	O'REILLY AUTO STORES INC	07/21/2023	Regular	0.00	72.59	151645
11769	OTTAWA BUS SERVICE, INC.	07/21/2023	Regular	0.00	11,031.00	151646
10020	PDC DIESEL AND AUTO LLC	07/21/2023	Regular	0.00	2,713.01	151647
12339	PEARL LEAL	07/21/2023	Regular	0.00	180.00	151648
11541	PEREGRINE CORPORATION	07/21/2023	Regular	0.00	944.45	151649
11867	PI MANAGED SERVICES LLC	07/21/2023	Regular	0.00	156.25	151650
0646	PUSHWATER ENTERPRISES INC	07/21/2023	Regular	0.00	44.00	151651
10030	QUALITY SPEAKS LLC	07/21/2023	Regular	0.00	166.50	151652
10641	REDISHRED KANSAS INC	07/21/2023	Regular	0.00	56.68	151653
11773	RONALD TILDEN	07/21/2023	Regular	0.00	259.90	151654
8441	SHAWNEE COPY CENTER	07/21/2023	Regular	0.00	98.00	151655
0930	STANLEY R MCAFEE	07/21/2023	Regular	0.00	1,080.00	151656
12314	TATUM BARTELS	07/21/2023	Regular	0.00	66.16	151657
11906	TENNANT SALES & SERVICE COMPANY	07/21/2023	Regular	0.00	452.77	151658
12340	TFORCE FREIGHT INC	07/21/2023	Regular	0.00	57.50	151659
10854	THE JATH GROUP INC	07/21/2023	Regular	0.00	125.00	151660
12341	THE REINHALT - THOMAS CORPORATION	07/21/2023	Regular	0.00	1,245.60	151661
6802	TOTAL ELECTRIC CONTRACTORS INC	07/21/2023	Regular	0.00	1,237.40	151662
12342	TRUDY PETERSON	07/21/2023	Regular	0.00	450.00	151663
11556	U.S. BANK EQUIPMENT FINANCE	07/21/2023	Regular	0.00	666.63	151664
11386	UNIFIED GOVERNMENT TREASURER	07/21/2023	Regular	0.00	2,058.00	151665
6819	UNIFIRST CORPORATION	07/21/2023	Regular	0.00	356.85	151666
4137	UNIVERSITY OF KS HOSPITAL AUTH	07/21/2023	Regular	0.00	61.00	151667
10838	URBAN CORRIDOR COORDINATED TRANSIT CO	07/21/2023	Regular	0.00	50.00	151668
0712	W W GRAINGER	07/21/2023	Regular	0.00	44.64	151669
2043	WEIS FIRE & SAFETY EQUIPMENT	07/21/2023	Regular	0.00	1,440.00	151670
1321	WESTLAKE HARDWARE	07/21/2023	Regular	0.00	1,071.08	151671
	Void	07/21/2023	Regular	0.00	0.00	151672
	Void	07/21/2023	Regular	0.00	0.00	151673
10810	WILLIAM F TUCKER	07/21/2023	Regular	0.00	8,946.00	151674
8411	WILSON & COMPANY ENGINEERS	07/21/2023	Regular	0.00	7,008.80	151675
12343	WRAP FACTORY KC LLC	07/21/2023	Regular	0.00	120.00	151676

Bank Code AP BANK Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	171	86	0.00	1,680,957.22
Manual Checks	1	1	0.00	13,750.00
Voided Checks	0	2	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	172	89	0.00	1,694,707.22



Bonner Springs, KS

Expense Approval Report

By Vendor Name

Payment Dates 7/12/2023 - 7/21/2023

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 10078 - AMAZON CAPITAL SERVICES INC					
AMAZON CAPITAL SERVICES I...	14CL-L3K3-JRTF	07/18/2023	BROOMS/DUSTPAN FOR COMMUNITY CENTER	300-175-000-703041	47.38
AMAZON CAPITAL SERVICES I...	19JT-44NH-NMNY	07/18/2023	MISC OFFICE SUPPLIES	300-175-000-703020	81.77
AMAZON CAPITAL SERVICES I...	19JT-44NH-NMNY	07/18/2023	HUBCAP FOR IMPALA	300-175-000-703999	39.05
AMAZON CAPITAL SERVICES I...	19JT-44NH-NMNY	07/18/2023	CHRISTMAS IN JULY SUPPLIES	565-000-000-402421	43.97
AMAZON CAPITAL SERVICES I...	1CX1-3FY9-C1XX	07/18/2023	WRISTBANDS/STORAGE CONTAINERS FOR CAMP	565-000-000-703650	92.95
AMAZON CAPITAL SERVICES I...	1GJF-R67N-QWHM	07/18/2023	POPCORN FOR CAMP	565-000-000-703650	49.95
AMAZON CAPITAL SERVICES I...	1H4X-1VHQ-6YYY	07/18/2023	EVIDENCE SUPPLIES	300-185-000-703999	299.70
AMAZON CAPITAL SERVICES I...	1K19-HKLM-WPD9	07/18/2023	MILWAUKEE POWER TOOL BATTERIES	430-000-000-703193	135.48
AMAZON CAPITAL SERVICES I...	1LX7-36TR-QDCM	07/18/2023	EVIDENCE SUPPLIES	300-185-000-703999	132.78
AMAZON CAPITAL SERVICES I...	1NVM-JVDH-K4XF	07/18/2023	TRASH CANS FOR OFFICE	300-185-000-703041	19.95
Vendor 10078 - AMAZON CAPITAL SERVICES INC Total:					942.98
Vendor: 11959 - AMERICAN DIGITAL SECURITY, LLC					
AMERICAN DIGITAL SECURITY,...	INV0015702	07/18/2023	FIX SECURITY CAMERA	300-185-000-702746	465.00
Vendor 11959 - AMERICAN DIGITAL SECURITY, LLC Total:					465.00
Vendor: 7449 - APEX ENVIROTECH, INC.					
APEX ENVIROTECH, INC.	CSM03.001 MAY 2023	07/18/2023	CSM SAMPLING - MAY 2023	420-000-000-702037	2,760.00
Vendor 7449 - APEX ENVIROTECH, INC. Total:					2,760.00
Vendor: 4525 - ASFPM					
ASFPM	0002985	07/18/2023	ASFPM CERT FLOODPLAIN MGR TEST APPLICATION FEE	300-157-000-702270	185.00
Vendor 4525 - ASFPM Total:					185.00
Vendor: 3303 - ASPHALT SALES CO INC					
ASPHALT SALES CO INC	152896	07/18/2023	ASPHALT FOR POTHOLE PATCHING	300-190-000-703081	182.40
ASPHALT SALES CO INC	152958	07/18/2023	ASPHALT FOR POTHOLE PATCHING	300-190-000-703081	58.71
ASPHALT SALES CO INC	152979	07/18/2023	ASPHALT FOR POTHOLE PATCHING	300-190-000-703081	60.99
ASPHALT SALES CO INC	152999	07/18/2023	ASPHALT FOR POTHOLE PATCHING	300-190-000-703081	62.70
Vendor 3303 - ASPHALT SALES CO INC Total:					364.80
Vendor: 2470 - ATMOS ENERGY					
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	300-165-000-702925	191.77
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	300-175-000-702925	172.72
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	300-190-000-702925	30.86
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	420-000-000-702925	159.22
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	430-000-000-702925	30.86
ATMOS ENERGY	0002986	07/18/2023	GAS SERVICE	540-000-000-702925	5.98
Vendor 2470 - ATMOS ENERGY Total:					591.41
Vendor: 10140 - BEVERLY S MILLS					
BEVERLY S MILLS	23-222	07/18/2023	GREEN TREE ID PLAQUE FOR ARBOR DAY TREE 2023	300-175-000-703763	9.00
BEVERLY S MILLS	23-224	07/18/2023	REPLACEMENT PLAQUE FOR ARCHIE SANDERS BENCH	078-000-000-703800	16.00
Vendor 10140 - BEVERLY S MILLS Total:					25.00
Vendor: 7416 - BG CONSULTANTS, INC					
BG CONSULTANTS, INC	20-1413L(33)	07/18/2023	Owners Representative Services - Water Plant Proj	029-000-000-702250	30,583.25

Expense Approval Report

Payment Dates: 7/12/2023 - 7/21/2023

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
BG CONSULTANTS, INC	22-1301L(11)	07/18/2023	Owners Rep services with Lift Station #2 Project	420-000-000-021960	255.00
Vendor 7416 - BG CONSULTANTS, INC Total:					30,838.25
Vendor: 0117 - BOARD OF PUBLIC UTILITIES					
BOARD OF PUBLIC UTILITIES	0002987	07/18/2023	WATER USAGE 6/3/23 - 7/3/23	430-000-000-703225	47,305.06
Vendor 0117 - BOARD OF PUBLIC UTILITIES Total:					47,305.06
Vendor: 2798 - BONNER SPRINGS AUTO REPAIR LLC					
BONNER SPRINGS AUTO REPA...	24327	07/18/2023	OIL/FILTER CHANGE FOR VID #483	300-190-000-702510	57.14
Vendor 2798 - BONNER SPRINGS AUTO REPAIR LLC Total:					57.14
Vendor: 6869 - BONNER SPRNGS PARTNERS II, LLC					
BONNER SPRNGS PARTNERS II,...	2ND QTR 2023	07/18/2023	2ND QTR 2023 CID SALES/USE TAX CONTRIB - FINAL	491-000-000-702386	5,643.29
BONNER SPRNGS PARTNERS II,...	2ND QTR 2023	07/18/2023	2ND QTR 2023 CID SALES/USE TAX COLLECTED - FINAL	492-000-000-702384	19,129.51
Vendor 6869 - BONNER SPRNGS PARTNERS II, LLC Total:					24,772.80
Vendor: 4172 - BOUND TREE MEDICAL LLC					
BOUND TREE MEDICAL LLC	84923733	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	591.20
BOUND TREE MEDICAL LLC	84925136	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	19.00
BOUND TREE MEDICAL LLC	84932949	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	183.15
BOUND TREE MEDICAL LLC	84934421	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	425.40
BOUND TREE MEDICAL LLC	84940605	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	776.95
BOUND TREE MEDICAL LLC	84941937	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	11.85
BOUND TREE MEDICAL LLC	84945516	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	455.15
BOUND TREE MEDICAL LLC	84947091	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	139.95
BOUND TREE MEDICAL LLC	84960609	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	375.08
BOUND TREE MEDICAL LLC	84966010	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	473.95
BOUND TREE MEDICAL LLC	84978182	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	386.33
BOUND TREE MEDICAL LLC	85000660	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	452.24
BOUND TREE MEDICAL LLC	85003984	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	433.57
BOUND TREE MEDICAL LLC	85003985	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	259.64
BOUND TREE MEDICAL LLC	85025807	07/18/2023	MEDICAL SUPPLIES	300-165-000-703250	186.17
Vendor 4172 - BOUND TREE MEDICAL LLC Total:					5,169.63
Vendor: 11759 - BURNS & MCDONNELL CAS CONSTRUCTUORS BONNER SPRINGS JV					
BURNS & MCDONNELL CAS C...	PMT #12	07/18/2023	Phase II Water Treatment Facility Project	029-000-000-702310	1,443,897.30
Vendor 11759 - BURNS & MCDONNELL CAS CONSTRUCTUORS BONNER SPRINGS JV Total:					1,443,897.30
Vendor: 0192 - C&B EQUIPMENT MIDWEST INC					
C&B EQUIPMENT MIDWEST I...	14674-00	07/18/2023	REPAIR PARTS FOR CLARIFIER	420-000-000-703041	3,666.25
Vendor 0192 - C&B EQUIPMENT MIDWEST INC Total:					3,666.25
Vendor: 11793 - CHARTER COMMUNICATIONS HOLDING LLC					
CHARTER COMMUNICATIONS ...	0099865070623	07/18/2023	CITY HALL INTERNET 7/6/23 - 8/5/23	300-130-000-702023	244.72
Vendor 11793 - CHARTER COMMUNICATIONS HOLDING LLC Total:					244.72
Vendor: 11655 - CINTAS FIRE 636525					
CINTAS FIRE 636525	0F58680619	07/18/2023	INSPECT FIRE EXTINGUISHERS AT POOL	570-000-000-702590	185.00
Vendor 11655 - CINTAS FIRE 636525 Total:					185.00
Vendor: 10027 - CINTAS					
CINTAS	4160530335	07/18/2023	JANITORIAL BUILDING SUPPLIES	300-185-000-702746	224.67
CINTAS	4160700966	07/18/2023	CITY HALL JANITORIAL SUPPLIES	300-130-000-703041	244.74
Vendor 10027 - CINTAS Total:					469.41
Vendor: 7888 - COGENT, INC					
COGENT, INC	5567659	07/18/2023	PUMP RENTAL TO DRAIN CLARIFIER AT WWTP	420-000-000-702460	2,907.50
Vendor 7888 - COGENT, INC Total:					2,907.50

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Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 10136 - COMPLIANCEONE					
COMPLIANCEONE	305848	07/18/2023	PRE-EMPLOYMENT SCREENING FOR JOHNSON-HERNANDEZ	300-190-000-702297	89.50
COMPLIANCEONE	305848	07/18/2023	JUNE MONTHLY CHARGES/RANDOM DOT	300-190-000-702297	42.12
COMPLIANCEONE	305848	07/18/2023	JUNE MONTHLY CHARGES/RANDOM DOT	420-000-000-702297	14.04
COMPLIANCEONE	305848	07/18/2023	JUNE MONTHLY CHARGES/RANDOM DOT	430-000-000-702297	18.72
COMPLIANCEONE	305848	07/18/2023	JUNE MONTHLY CHARGES/RANDOM DOT	497-000-000-702297	4.68
COMPLIANCEONE	305849	07/18/2023	JUNE MONTHLY CHARGES/RANDOM NON DOT	300-165-000-702297	322.92
COMPLIANCEONE	305849	07/18/2023	JUNE MONTHLY CHARGES/RANDOM NON DOT	300-185-000-702297	112.32
COMPLIANCEONE	305849	07/18/2023	PRE-EMPLOYMENT SCREENINGS	300-190-000-702297	105.60
COMPLIANCEONE	305849	07/18/2023	PRE-EMPLOYMENT SCREENINGS	565-000-000-702299	158.40
COMPLIANCEONE	305849	07/18/2023	PRE-EMPLOYMENT SCREENINGS	575-000-000-702297	158.40
Vendor 10136 - COMPLIANCEONE Total:					1,026.70
Vendor: 0716 - CORE & MAIN LP					
CORE & MAIN LP	S801724	07/18/2023	IRON YOKE BARS	430-000-000-703537	58.98
Vendor 0716 - CORE & MAIN LP Total:					58.98
Vendor: 2290 - CRAFTCO INC					
CRAFTCO INC	9402955091	07/18/2023	GUARD RACKS FOR STRIPING MACHINE	300-190-000-703081	123.58
Vendor 2290 - CRAFTCO INC Total:					123.58
Vendor: 6509 - CS CAREY INC					
CS CAREY INC	U-62835	07/18/2023	MULCH	300-190-000-703041	120.00
Vendor 6509 - CS CAREY INC Total:					120.00
Vendor: 0014 - DEFFENBAUGH INDUSTRIES INC					
DEFFENBAUGH INDUSTRIES I...	0019249-4861-3	07/18/2023	SLUDGE HAULING 6/16/23 - 6/30/23	420-000-000-702037	2,479.30
DEFFENBAUGH INDUSTRIES I...	7157259-4858-5	07/18/2023	WWTP DUMPSTER SERVICE 6/15/23	420-000-000-702746	32.40
DEFFENBAUGH INDUSTRIES I...	7157300-4858-7	07/18/2023	AQUATIC PARK DUMPSTER SERVICE 6/1/23 - 6/30/23	570-000-000-702460	590.10
DEFFENBAUGH INDUSTRIES I...	7160956-4858-1	07/18/2023	COMMUNITY CENTER DUMPSTER SERVICE	300-130-000-702746	585.38
Vendor 0014 - DEFFENBAUGH INDUSTRIES INC Total:					3,687.18
Vendor: 11899 - EASY ICE, LLC					
EASY ICE, LLC	00996866	07/18/2023	JULY ICE MACHINE RENTAL	300-190-000-702460	70.00
EASY ICE, LLC	00996866	07/18/2023	JULY ICE MACHINE RENTAL	430-000-000-702460	70.00
Vendor 11899 - EASY ICE, LLC Total:					140.00
Vendor: 7142 - EDWARDS CHEMICALS INC					
EDWARDS CHEMICALS INC	IN119797	07/18/2023	SODIUM HYPOCHLORITE	570-000-000-703283	1,107.00
Vendor 7142 - EDWARDS CHEMICALS INC Total:					1,107.00
Vendor: 8207 - ENSZ & JESTER, PC					
ENSZ & JESTER, PC	0002982	07/18/2023	LEGAL SERVICES FOR OVERTIME PAY	300-155-000-702037	195.00
Vendor 8207 - ENSZ & JESTER, PC Total:					195.00
Vendor: 12035 - ESCOBAR TREE AND LAWN SERVICES LLC					
ESCOBAR TREE AND LAWN SE...	0002990	07/18/2023	REMOVAL OF TREES AT 327 W INSLEY	300-190-000-702746	3,500.00
Vendor 12035 - ESCOBAR TREE AND LAWN SERVICES LLC Total:					3,500.00

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Vendor: 10964 - EVERGY FKA KCP&L					
EVERGY FKA KCP&L	0002991	07/18/2023	MUNICIPAL STREET LIGHT - LED 300-190-000-702925 5/31/23 - 6/30/23		480.94
Vendor 10964 - EVERGY FKA KCP&L Total:					480.94
Vendor: 10942 - EVERGY KANSAS CENTRAL INC FKA WESTAR ENERGY INC					
EVERGY KANSAS CENTRAL INC...	0002992	07/18/2023	ELECTRICAL SERVICE 6/5/23- 7/5/23	300-175-000-702925	85.66
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-130-000-702925	2,436.94
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-145-000-702925	117.92
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-165-000-702925	2,201.15
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-175-000-702925	2,968.17
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-185-000-702396	235.49
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-185-000-702925	2,566.86
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-190-000-702925	333.30
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	300-190-000-702925	1,753.67
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	420-000-000-702925	9,088.12
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	430-000-000-702925	4,808.23
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	497-000-000-702925	246.66
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	540-000-000-702925	231.28
EVERGY KANSAS CENTRAL INC...	0002993	07/18/2023	ELECTRIC SERVICE	570-000-000-702925	3,446.84
Vendor 10942 - EVERGY KANSAS CENTRAL INC FKA WESTAR ENERGY INC Total:					30,520.29
Vendor: 4342 - FELDMANS					
FELDMANS	323210	07/18/2023	FUNNEL FOR WWTP AERATOR	420-000-000-703041	7.99
FELDMANS	323230	07/18/2023	METER FOR FUEL CELL IN VID #593/GAS GANS	430-000-000-703193	360.97
FELDMANS	323288	07/18/2023	ACO SUPPLIES	300-185-000-703022	53.97
Vendor 4342 - FELDMANS Total:					422.93
Vendor: 11686 - FIRE RECOVERY EMS LLC					
FIRE RECOVERY EMS LLC	072023CBKS	07/18/2023	JUNE AMBULANCE BILLING SERVICES	300-165-000-702999	2,366.01
Vendor 11686 - FIRE RECOVERY EMS LLC Total:					2,366.01
Vendor: 11792 - FREESE AND NICHOLS, INC					
FREESE AND NICHOLS, INC	1356437	07/18/2023	Unified Development Ordinance Phases 2 & 3	620-000-000-021960	6,494.76
Vendor 11792 - FREESE AND NICHOLS, INC Total:					6,494.76
Vendor: 12335 - GINNY HEIM					
GINNY HEIM	51385098	07/18/2023	REFUND FOR SAC & FOX CASINO TRIP	540-000-000-402426	26.00
Vendor 12335 - GINNY HEIM Total:					26.00
Vendor: 7383 - GREAT PLAINS SOCIETY FOR PREVENTION CRUELTY TO ANIMALS					
GREAT PLAINS SOCIETY FOR P...	0623BS	07/18/2023	ANIMAL TRANSFER	300-185-000-702396	485.00
Vendor 7383 - GREAT PLAINS SOCIETY FOR PREVENTION CRUELTY TO ANIMALS Total:					485.00
Vendor: 1532 - GT DISTRIBUTORS					
GT DISTRIBUTORS	UNIV0020588	07/18/2023	UNIFORM ITEMS	300-185-000-703015	162.00
Vendor 1532 - GT DISTRIBUTORS Total:					162.00
Vendor: 12160 - GUARDIAN SECURITY SYSTEMS INC					
GUARDIAN SECURITY SYSTEMS..	13541535	07/18/2023	ALARM SYSTEM 7/1/23 - 7/31/23	300-190-000-702746	36.38
GUARDIAN SECURITY SYSTEMS..	13541535	07/18/2023	ALARM SYSTEM 7/1/23 - 7/31/23	420-000-000-702746	79.18
GUARDIAN SECURITY SYSTEMS..	13541535	07/18/2023	ALARM SYSTEM 7/1/23 - 7/31/23	430-000-000-702746	36.38
Vendor 12160 - GUARDIAN SECURITY SYSTEMS INC Total:					151.94
Vendor: 7242 - HELGET GAS PRODUCTS INC					
HELGET GAS PRODUCTS INC	0002043531	07/18/2023	OXYGEN	300-165-000-703250	110.42
Vendor 7242 - HELGET GAS PRODUCTS INC Total:					110.42

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Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 12336 - HOWARD RUSSO					
HOWARD RUSSO	100	07/18/2023	YEAR 1 STIPEND FOR PUBLIC ART	505-000-000-702999	1,000.00
Vendor 12336 - HOWARD RUSSO Total:					1,000.00
Vendor: 7720 - IBEC, LLC					
IBEC, LLC	7796620	07/18/2023	SECURITY ALARM MONITORING 7/1/23 - 7/31/23	300-165-000-702925	60.00
Vendor 7720 - IBEC, LLC Total:					60.00
Vendor: 12175 - JACKIE COLLINS					
JACKIE COLLINS	49114052A	07/18/2023	REFUND FOR IOWA TRIP - DOUBLE ROOM TO TRIPLE	540-000-000-402426	91.00
Vendor 12175 - JACKIE COLLINS Total:					91.00
Vendor: 12294 - JEFFREY CORDILL					
JEFFREY CORDILL	0723173	07/18/2023	2510 PUMP SERVICING	300-165-000-702511	1,542.37
Vendor 12294 - JEFFREY CORDILL Total:					1,542.37
Vendor: 12304 - JOHN F. EICKHOFF AND MICHELLE EICKHOFF					
JOHN F. EICKHOFF AND MICH...	0003010	07/12/2023	REISSUE EICKHOFF TCO PAYMENT	045-000-000-702464	13,750.00
Vendor 12304 - JOHN F. EICKHOFF AND MICHELLE EICKHOFF Total:					13,750.00
Vendor: 5345 - JOHNSON COUNTY WASTEWATER					
JOHNSON COUNTY WASTEWA...	0002994	07/18/2023	WW CHARGES 6/1/23 - 6/30/23	420-000-000-702999	755.96
Vendor 5345 - JOHNSON COUNTY WASTEWATER Total:					755.96
Vendor: 12334 - JUAN VELA					
JUAN VELA	50449986	07/18/2023	REFUND DEPOSIT FOR SOUTH PARK 7/1/23	300-000-000-021400	150.00
Vendor 12334 - JUAN VELA Total:					150.00
Vendor: 7899 - JUSTINE SPEASE					
JUSTINE SPEASE	0002983	07/18/2023	JUNE MILEAGE REIMBURSEMENT	300-175-000-703420	46.37
Vendor 7899 - JUSTINE SPEASE Total:					46.37
Vendor: 12116 - KANSAS ASSOCIATION OF FLOODPLAIN MANAGEMENT					
KANSAS ASSOCIATION OF FL...	0002995	07/18/2023	KAFM ANNUAL CONFERENCE	300-157-000-702124	200.00
Vendor 12116 - KANSAS ASSOCIATION OF FLOODPLAIN MANAGEMENT Total:					200.00
Vendor: 10049 - KANSAS HEALTH & ENVIRONMENTAL LABORATORIES					
KANSAS HEALTH & ENVIRON...	62638	07/18/2023	ANALYTICAL SERVICES 4/11/23 - 6/27/23	430-000-000-702037	1,504.00
Vendor 10049 - KANSAS HEALTH & ENVIRONMENTAL LABORATORIES Total:					1,504.00
Vendor: 5308 - KANSAS ONE-CALL SYSTEM, INC					
KANSAS ONE-CALL SYSTEM, I...	3060168	07/18/2023	JUNE LOCATES (187)	430-000-000-702037	224.40
Vendor 5308 - KANSAS ONE-CALL SYSTEM, INC Total:					224.40
Vendor: 11752 - KANSAS UNIVERSITY PHYSICIANS, INC					
KANSAS UNIVERSITY PHYSICI...	CI-1008307	07/18/2023	EMERGENCY MEDICAL DIRECTOR AGREEMENT APRIL - JUNE	300-165-000-702297	2,462.52
Vendor 11752 - KANSAS UNIVERSITY PHYSICIANS, INC Total:					2,462.52
Vendor: 10114 - LEATHAM FAMILY, LLC					
LEATHAM FAMILY, LLC	0466775	07/18/2023	BADGES	300-185-000-703015	372.50
Vendor 10114 - LEATHAM FAMILY, LLC Total:					372.50
Vendor: 9879 - MAINSTREET CREDIT UNION					
MAINSTREET CREDIT UNION	07212023	07/21/2023	PAYROLL FOR 7/21/2023	071-000-000-021380	845.00
Vendor 9879 - MAINSTREET CREDIT UNION Total:					845.00
Vendor: 11776 - MATTHEW BOWLIN					
MATTHEW BOWLIN	2669	07/18/2023	MOVE LIGHTS FROM EXPLORER TO RANGER	300-157-000-702511	441.00
Vendor 11776 - MATTHEW BOWLIN Total:					441.00

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Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 7587 - MCANANY OIL CO., INC.					
MCANANY OIL CO., INC.	11693	07/18/2023	DIESEL FOR FUEL TANKS	072-920-000-703410	4,890.43
Vendor 7587 - MCANANY OIL CO., INC. Total:					4,890.43
Vendor: 6849 - MJV-A LLC					
MJV-A LLC	123400-063023	07/18/2023	UNIFORM CLEANING	300-185-000-702762	216.79
Vendor 6849 - MJV-A LLC Total:					216.79
Vendor: 12337 - NANCY WATSON					
NANCY WATSON	53162269	07/18/2023	REFUND FOR TRIP TO IOWA - SINGLE ROOM TO DOUBLE	540-000-000-402426	91.00
Vendor 12337 - NANCY WATSON Total:					91.00
Vendor: 12338 - NATHAN BRUNGARDT					
NATHAN BRUNGARDT	0002996	07/18/2023	MILEAGE REIMBURSEMENT 6/26/23 - 7/1/23	300-175-000-702124	27.80
NATHAN BRUNGARDT	0002997	07/18/2023	MILEAGE REIMBURSEMENT 7/3/23 - 7/7/2	300-175-000-702124	36.97
Vendor 12338 - NATHAN BRUNGARDT Total:					64.77
Vendor: 12333 - OPTUM BANK					
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	071-000-000-021385	2,650.82
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-125-000-701610	187.50
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-145-000-701610	125.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-155-000-701610	125.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-157-000-701610	250.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-165-000-701610	625.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-170-000-701610	187.50
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-175-000-701610	375.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-185-000-701610	1,625.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	300-190-000-701610	625.00
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	420-000-000-701610	343.75
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	430-000-000-701610	343.75
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	497-000-000-701610	62.50
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	505-000-000-701610	62.50
OPTUM BANK	07212023	07/21/2023	HEALTH SAVINGS ACCOUNT FOR 7/21/2023	525-000-000-701610	125.00
Vendor 12333 - OPTUM BANK Total:					7,713.32
Vendor: 0947 - O'REILLY AUTO STORES INC					
O'REILLY AUTO STORES INC	0264-230550	07/18/2023	FEELER GAUGE FOR WWTP BIO-SOLIDS BUILDING	420-000-000-703193	12.99
O'REILLY AUTO STORES INC	0264-232266	07/18/2023	ANTIFREEZE FOR 2502	300-165-000-702511	11.99
O'REILLY AUTO STORES INC	0264-234196	07/18/2023	MOTOR OIL	300-165-000-702511	23.99
O'REILLY AUTO STORES INC	0264-237492	07/18/2023	VEHICLE SUPPLIES	300-165-000-702511	23.62
Vendor 0947 - O'REILLY AUTO STORES INC Total:					72.59
Vendor: 11769 - OTTAWA BUS SERVICE, INC.					
OTTAWA BUS SERVICE, INC.	TOUR38973T	07/18/2023	FINAL PAYMENT FOR ALL ABOARD IOWA TOUR	540-000-000-702424	11,031.00
Vendor 11769 - OTTAWA BUS SERVICE, INC. Total:					11,031.00
Vendor: 10020 - PDC DIESEL AND AUTO LLC					
PDC DIESEL AND AUTO LLC	3369	07/18/2023	REPLACE BRAKES ON 2523	300-165-000-702511	1,349.32

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Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
PDC DIESEL AND AUTO LLC	3389	07/18/2023	SERVICE TRANSMISSION ON 2522	300-165-000-702511	371.11
PDC DIESEL AND AUTO LLC	3418	07/18/2023	REPLACE WATER PUMP DRIVE BELT ON 2522	300-165-000-702511	992.58
Vendor 10020 - PDC DIESEL AND AUTO LLC Total:					2,713.01
Vendor: 12339 - PEARL LEAL					
PEARL LEAL	51217033	07/18/2023	REFUND DEPOSIT ON CANCELLED RENTAL	300-000-000-021400	100.00
PEARL LEAL	51217033	07/18/2023	REFUND FOR CANCELLED RENTAL	300-000-000-402150	105.00
PEARL LEAL	51217033	07/18/2023	CANCELLED RENTAL PROCESSING FEE	300-000-000-402150	-25.00
Vendor 12339 - PEARL LEAL Total:					180.00
Vendor: 11541 - PEREGRINE CORPORATION					
PEREGRINE CORPORATION	523247	07/18/2023	SECT 5 JUNE BILLS (681/648)	300-125-000-702485	374.44
PEREGRINE CORPORATION	524113	07/18/2023	SECT 2 JULY BILLS (982/944)	300-125-000-702485	570.01
Vendor 11541 - PEREGRINE CORPORATION Total:					944.45
Vendor: 11867 - PI MANAGED SERVICES LLC					
PI MANAGED SERVICES LLC	INV0015678	07/18/2023	CORRECT MIMICAST ISSUE FOR PW OFFICE	300-190-000-702370	62.50
PI MANAGED SERVICES LLC	INV0016508	07/18/2023	SET UP PRINTER FOR ISTAS/REMOVE TERMINATED USERS	430-000-000-702370	93.75
Vendor 11867 - PI MANAGED SERVICES LLC Total:					156.25
Vendor: 0646 - PUSHWATER ENTERPRISES INC					
PUSHWATER ENTERPRISES INC	21054	07/18/2023	POST CARDS FOR FITNESS COURT RIBBON CUTTING	300-175-000-702485	44.00
Vendor 0646 - PUSHWATER ENTERPRISES INC Total:					44.00
Vendor: 10030 - QUALITY SPEAKS LLC					
QUALITY SPEAKS LLC	7244422	07/18/2023	FD PHONE SERVICE 6/7/23 - 7/7/23	300-165-000-702925	69.75
QUALITY SPEAKS LLC	7245253	07/18/2023	REACTIVATION FEE	300-165-000-702925	15.00
QUALITY SPEAKS LLC	7245735	07/18/2023	ADMINISTRATIVE SERVICE FEE	300-165-000-702925	6.00
QUALITY SPEAKS LLC	7264507	07/18/2023	FD PHONE SERVICE 7/7/23 - 8/7/23	300-165-000-702925	75.75
Vendor 10030 - QUALITY SPEAKS LLC Total:					166.50
Vendor: 10641 - REDISHRED KANSAS INC					
REDISHRED KANSAS INC	1193922	07/18/2023	SHREDDING SERVICES AT PD	300-185-000-702485	56.68
Vendor 10641 - REDISHRED KANSAS INC Total:					56.68
Vendor: 11773 - RONALD TILDEN					
RONALD TILDEN	107709	07/18/2023	TIRE REPAIR FOR 2502	300-165-000-702511	20.00
RONALD TILDEN	107737	07/18/2023	FLAT REPAIR	300-185-000-702510	50.00
RONALD TILDEN	107826	07/18/2023	FLAT REPAIR/OIL CHANGE FOR # 72	300-185-000-702510	94.95
RONALD TILDEN	107956	07/18/2023	OIL CHANGE ON UNIT 63	300-185-000-702510	69.95
RONALD TILDEN	107975	07/18/2023	REPAIR FLAT ON UNIT 72	300-185-000-702510	25.00
Vendor 11773 - RONALD TILDEN Total:					259.90
Vendor: 8441 - SHAWNEE COPY CENTER					
SHAWNEE COPY CENTER	135104	07/18/2023	K9 CAR SHOW FLYER	300-185-000-702485	98.00
Vendor 8441 - SHAWNEE COPY CENTER Total:					98.00
Vendor: 0930 - STANLEY R MCAFEE					
STANLEY R MCAFEE	0003000	07/18/2023	ATTORNEY FOR COURT APPOINTED CASES	300-170-000-702037	1,080.00
Vendor 0930 - STANLEY R MCAFEE Total:					1,080.00
Vendor: 12314 - TATUM BARTELS					
TATUM BARTELS	0002984	07/18/2023	JUNE MILEAGE REIMBURSEMENT	300-175-000-703420	66.16
Vendor 12314 - TATUM BARTELS Total:					66.16

Expense Approval Report

Payment Dates: 7/12/2023 - 7/21/2023

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 11906 - TENNANT SALES & SERVICE COMPANY					
TENNANT SALES & SERVICE C...	919671433	07/18/2023	FLOOR CLEANER REPAIR	300-165-000-702590	452.77
Vendor 11906 - TENNANT SALES & SERVICE COMPANY Total:					452.77
Vendor: 12340 - TFORCE FREIGHT INC					
TFORCE FREIGHT INC	746308076	07/18/2023	FREIGHT CHARGE FOR TRAFFICE CONTRO...	300-190-000-703081	57.50
Vendor 12340 - TFORCE FREIGHT INC Total:					57.50
Vendor: 10854 - THE JATH GROUP INC					
THE JATH GROUP INC	75838	07/18/2023	EXTRA CLEANING AT SOUTH PARK	300-175-000-702746	125.00
Vendor 10854 - THE JATH GROUP INC Total:					125.00
Vendor: 12341 - THE REINHALT - THOMAS CORPORATION					
THE REINHALT - THOMAS COR...	1219235	07/18/2023	NEW TIRES FOR VID # 617	300-190-000-702510	1,245.60
Vendor 12341 - THE REINHALT - THOMAS CORPORATION Total:					1,245.60
Vendor: 6802 - TOTAL ELECTRIC CONTRACTORS INC					
TOTAL ELECTRIC CONTRACTO...	13095	07/18/2023	REPAIR TRAFFIC SIGNAL AT K32 & K7	300-190-000-702510	787.50
TOTAL ELECTRIC CONTRACTO...	13116	07/18/2023	REPLACE RED LED BALL ON SIGNAL AT K7 & K32	300-190-000-702510	449.90
Vendor 6802 - TOTAL ELECTRIC CONTRACTORS INC Total:					1,237.40
Vendor: 12342 - TRUDY PETERSON					
TRUDY PETERSON	0003001	07/18/2023	LOGO DESIGN	300-165-000-702485	450.00
Vendor 12342 - TRUDY PETERSON Total:					450.00
Vendor: 11556 - U.S. BANK EQUIPMENT FINANCE					
U.S. BANK EQUIPMENT FINAN...	504676586	07/18/2023	COPIER RENTAL 4/17/23 - 5/17/23	300-190-000-703020	129.80
U.S. BANK EQUIPMENT FINAN...	504676586	07/18/2023	COPIER RENTAL 4/17/23 - 5/17/23	430-000-000-703020	129.81
U.S. BANK EQUIPMENT FINAN...	504798976	07/18/2023	FD PRINTER LEASE 6/20/23 - 7/20/23	300-165-000-702485	407.02
Vendor 11556 - U.S. BANK EQUIPMENT FINANCE Total:					666.63
Vendor: 11386 - UNIFIED GOVERNMENT TREASURER					
UNIFIED GOVERNMENT TREA...	JUNE 2023	07/18/2023	JUNE 2023 WYCO JAIL HOUSING	300-170-000-702999	2,058.00
Vendor 11386 - UNIFIED GOVERNMENT TREASURER Total:					2,058.00
Vendor: 6819 - UNIFIRST CORPORATION					
UNIFIRST CORPORATION	3281056881	07/18/2023	BLDG MAINT/RESTROOM SUPPLIES - STREETS	300-190-000-702746	13.87
UNIFIRST CORPORATION	3281056881	07/18/2023	UNIFORM RENTALS	300-190-000-702762	63.91
UNIFIRST CORPORATION	3281056881	07/18/2023	BLDG MAINT/RESTROOM SUPPLIES - WATER	430-000-000-702746	13.88
UNIFIRST CORPORATION	3281056881	07/18/2023	UNIFORM RENTALS	430-000-000-702762	49.28
UNIFIRST CORPORATION	3281059433	07/18/2023	BLDG MAINT/RESTROOM SUPPLIES	420-000-000-702746	74.97
UNIFIRST CORPORATION	3281059434	07/18/2023	BLDG MAINT/RESTROOM SUPPLIES - STREETS	300-190-000-702746	13.87
UNIFIRST CORPORATION	3281059434	07/18/2023	UNIFORM RENTALS	300-190-000-702762	63.91
UNIFIRST CORPORATION	3281059434	07/18/2023	BLDG MAINT/RESTROOM SUPPLIES - WATER	430-000-000-702746	13.88
UNIFIRST CORPORATION	3281059434	07/18/2023	UNIFORM RENTALS	430-000-000-702762	49.28
Vendor 6819 - UNIFIRST CORPORATION Total:					356.85
Vendor: 4137 - UNIVERSITY OF KS HOSPITAL AUTH					
UNIVERSITY OF KS HOSPITAL ...	00322024-00	07/18/2023	POST OFFER PHYSICAL FOR DUSKIE	300-175-000-702297	61.00
Vendor 4137 - UNIVERSITY OF KS HOSPITAL AUTH Total:					61.00
Vendor: 10838 - URBAN CORRIDOR COORDINATED TRANSIT COUNCIL INC					
URBAN CORRIDOR COORDINA...	0003002	07/18/2023	2023 - 2024 MEMBERSHIP DUES	575-000-000-702270	50.00
Vendor 10838 - URBAN CORRIDOR COORDINATED TRANSIT COUNCIL INC Total:					50.00

Expense Approval Report

Payment Dates: 7/12/2023 - 7/21/2023

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: 0712 - W W GRAINGER					
W W GRAINGER	9753513333	07/18/2023	AIR FILTERS FOR LIBRARY	525-000-000-703070	44.64
Vendor 0712 - W W GRAINGER Total:					44.64
Vendor: 2043 - WEIS FIRE & SAFETY EQUIPMENT					
WEIS FIRE & SAFETY EQUIPM...	190983	07/18/2023	FOAM FIRE FIGHTING	300-165-000-703283	1,440.00
Vendor 2043 - WEIS FIRE & SAFETY EQUIPMENT Total:					1,440.00
Vendor: 1321 - WESTLAKE HARDWARE					
WESTLAKE HARDWARE	14004801	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	37.82
WESTLAKE HARDWARE	14004942	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	34.99
WESTLAKE HARDWARE	14005041	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	79.33
WESTLAKE HARDWARE	14005048	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	13.99
WESTLAKE HARDWARE	14005055	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	20.97
WESTLAKE HARDWARE	14005063	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	10.99
WESTLAKE HARDWARE	14005101	07/18/2023	VEHICLE PUMP PARTS FOR 2561	300-165-000-702511	27.06
WESTLAKE HARDWARE	14005230	07/18/2023	SUPPLIES TO INSTALL RESTROOM WALLS/COUNTERTOPS	565-000-000-704880	126.17
WESTLAKE HARDWARE	14005251	07/18/2023	PLUMBING SUPPLIES FOR COMMUNITY CENTER RESTROOM	565-000-000-704880	9.99
WESTLAKE HARDWARE	14005256	07/18/2023	TOOL BOX FOR PAINT SUPPLIES	300-190-000-703193	25.99
WESTLAKE HARDWARE	14005259	07/18/2023	TREE LOPPER	300-190-000-703193	37.99
WESTLAKE HARDWARE	14005260	07/18/2023	BATTERIES FOR SHOP	300-190-000-703193	17.99
WESTLAKE HARDWARE	14005276	07/18/2023	PAINT REMOVAL GRINDER DISCS	300-190-000-703041	11.99
WESTLAKE HARDWARE	14005283	07/18/2023	PAINT SUPPLIES FOR LION'S PARK FOUL POLES	300-190-000-703041	21.15
WESTLAKE HARDWARE	14005285	07/18/2023	TOOL BAG/SCREWDRIVER SET/ADJ WRENCH FOR VID # 528	430-000-000-703193	88.98
WESTLAKE HARDWARE	14005291	07/18/2023	BUNGEE CORDS FOR SAND V-BALL/DOG WASTE DISPENSERS	300-190-000-703041	45.90
WESTLAKE HARDWARE	14005292	07/18/2023	STATION MAINTENANCE SUPPLIES	300-165-000-702746	22.99
WESTLAKE HARDWARE	14005295	07/18/2023	GAS CAN/ 2 CYCLE OIL	430-000-000-703193	31.58
WESTLAKE HARDWARE	14005296	07/18/2023	MIRRORS FOR POLARIS RANGER	300-190-000-703537	8.30
WESTLAKE HARDWARE	14005299	07/18/2023	WASP SPRAY/GRINDING WHEELS	300-190-000-703041	65.27
WESTLAKE HARDWARE	14005305	07/18/2023	HAND PRUNER/PAINT FOR LIONS PARK FOUL POLES	300-190-000-703041	79.98
WESTLAKE HARDWARE	14005306	07/18/2023	BOLTS FOR CHIPPER BOX	300-190-000-703081	40.25
WESTLAKE HARDWARE	14005308	07/18/2023	DRILL BIT SET FOR VID # 523	300-190-000-703193	33.99
WESTLAKE HARDWARE	14005322	07/18/2023	BALL VALVE FOR KELLY MUPRHY IRRIGATION REPAIR	300-190-000-703041	31.99
WESTLAKE HARDWARE	14005326	07/18/2023	WD-40	300-190-000-703193	18.98
WESTLAKE HARDWARE	14005328	07/18/2023	MISC BULK FASTENERS	300-190-000-703041	17.16
WESTLAKE HARDWARE	14005330	07/18/2023	INSECT GLUEBOARDS	300-190-000-703041	19.98
WESTLAKE HARDWARE	14005330	07/18/2023	TRENCH SHOVEL	300-190-000-703193	36.99
WESTLAKE HARDWARE	14005334	07/18/2023	CAM LOCK/DOOR STOPPER FOR COMMUNITY CENTER	565-000-000-704880	16.18
WESTLAKE HARDWARE	14005336	07/18/2023	HOSE FITTING FOR WATERING WAND	300-190-000-703041	9.59
WESTLAKE HARDWARE	14005337	07/18/2023	HORNET/WASP SPRAY	300-190-000-703041	19.96

Expense Approval Report

Payment Dates: 7/12/2023 - 7/21/2023

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
WESTLAKE HARDWARE	14005338	07/18/2023	CAM LOCK	300-190-000-703041	6.59
Vendor 1321 - WESTLAKE HARDWARE Total:					1,071.08
Vendor: 10810 - WILLIAM F TUCKER					
WILLIAM F TUCKER	1623	07/18/2023	BRUSH HOG MOWING	300-157-000-702037	1,000.00
WILLIAM F TUCKER	623	07/18/2023	MOWING	300-165-000-702746	148.00
WILLIAM F TUCKER	623	07/18/2023	MOWING	300-185-000-702746	80.00
WILLIAM F TUCKER	623	07/18/2023	MOWING	300-190-000-702746	2,976.00
WILLIAM F TUCKER	623	07/18/2023	MOWING	420-000-000-702746	766.00
WILLIAM F TUCKER	623	07/18/2023	MOWING	497-000-000-702746	3,976.00
Vendor 10810 - WILLIAM F TUCKER Total:					8,946.00
Vendor: 8411 - WILSON & COMPANY ENGINEERS					
WILSON & COMPANY ENGINE...	117272	07/18/2023	INSPECTION FEES FOR SANDSTONE POINTE TOWNHOMES	050-000-000-702250	5,477.80
WILSON & COMPANY ENGINE...	117273	07/18/2023	ENGINEERING SERVICES FOR FARMERS MARKET	620-175-000-704191	1,531.00
Vendor 8411 - WILSON & COMPANY ENGINEERS Total:					7,008.80
Vendor: 12343 - WRAP FACTORY KC LLC					
WRAP FACTORY KC LLC	1303	07/18/2023	NEW GRAPHICS FOR CODE VEHICLE	300-157-000-702511	120.00
Vendor 12343 - WRAP FACTORY KC LLC Total:					120.00
Grand Total:					1,694,707.22

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From:

Subject: Public Use Request - Fitness Court at Center Park Ribbon Cutting

Recommendation: Staff recommends approval

Action: Make a motion to approve the public use request for the fitness court ribbon cutting.

Background: The Recreation Department submitted a public use request for Thursday, August 10, 2023 from 4-7pm. The request includes closure of Highview Avenue from Armour to Nettleton.

Discussion:

Financial Impact:



City of Bonner Springs
KANSAS

Private Use of Parks, Streets, or Public Parking Lot Application

Fee \$50.00 (Non-Alcohol)

Fee \$250.00 (Alcohol on Premises)

Not-for-profit organizations or individuals exempt from fees. (Attach certification form or 501c status)

Date: 7/3/23

Date/Time of Requested Event: Aug 10th from 4pm - 7pm

Applicant Name: Justine Spease

Business or Organization: City of Bonner Springs

Street Address/Mailing Address: 200 East 3rd Street City/State/Zip: Bonner Springs, KS 66012

Phone: Home: N/A Work Cell: _____ Email: _____

Public Parking Lot(s) Requested:

☐ Clear diagram of the parking lot area to be used attached

(Events with alcohol or cereal malt beverages must be fenced and be at least 30 feet from Centennial Park).

Park Requested: ☐ Centennial Park ☐ Dog Park ☐ Lion's Park ☐ Kelly Murphy Memorial Park ☒ Center Park
☐ Kerry Roberts Memorial Park ☐ North Park ☐ South Park ☐ Trails: _____

Street(s) Requested: Highview Ave. from Armour St. to Nettleton Ave.

☒ Route Attached

Police, Fire, EMS or Other Municipal Services Needed: Yes ☐ No ☒ If yes, what services? _____

☐ Background check forms for security personnel for police chief approval attached.

☐ Certificate of insurance that names the city as an additional insured attached.

Tent will be Used: Yes ☒ No ☐ (Tent permit form required, if applicable) small pop up tent / no stakes in ground

Provide full, detailed explanation of purpose of event; include if admissions or space rental will be charged:

Small pop-up tent for shade
Ribbon cutting for new fitness court at Center Park

☒ List of vendors that will participate in event attached.

☒ List of planned activities attached

☒ Statement that the public property used and adjacent areas will be cleaned immediately after the event attached.

☒ Statement detailing how applicant will notify all affected property owners and tenants attached. If the applicant does not notify affected tenants, future requests may be denied.

Event to Raise Funds for Charitable Purposes: Yes ☐ No ☒ If yes, what Charitable Purpose? _____

☐ Organization Status Proof attached

Application Requirements:

- A. Submit this application and all required forms and information to the City Clerk's Office at least 30 days prior to the date of the event for City Council approval, but no more than one year in advance.
- B. Not-for-profit organizations, association or individuals must provide proof of their non-profit status. A not-for-profit certificate of good standing from the Kansas Secretary of State is an acceptable proof for purposes of this subsection.
- C. Unincorporated associations, organizations or individuals not registered with the Kansas Secretary of State must provide certification of their not-for-profit status.
- D. All applicants must have or obtain all applicable business licenses and ensure vendors that participate in the event have or obtain an occupational license from the City.

Restrictions:

- A. Unless otherwise allowed by ordinance, no more than four special event permits will be issued per calendar year to any individual, business, association, or organization for the use of a public parking lot.
- B. Any event or activity that a for-profit individual, business, association or organization co-sponsors, promotes or participates in any way with any not-for-profit qualified individual, business, association or organization as defined in Section 12-703, paragraph J or K of this ordinance, will count as an event for the for-profit entity.
- C. Unless otherwise allowed by ordinance, no permit will be issued for more than three consecutive days, except for the carnival for Tiblow Days.
- D. No permit will be issued which conflicts with the Annual Chamber of Commerce Tiblow Days, or any other city approved celebration.
- E. Approved event shall not take place between the hours of 12 a.m. midnight and 6 a.m. of any day.
- F. No permit will be issued in conflict with any other approved event, Zoning Ordinance, City Ordinance, policy, or regulation.
- G. Sale, possession and/or consumption of alcoholic beverages or cereal malt beverages require separate permits per Chapter III Beverages, Article 1 General Provisions, Sections 3-104 and 3-105 and Chapter 8 Temporary Permits of this Code. Applications for these permits shall be submitted at the same time as the permit required in this Article.

Display of Permit: A permit issued shall prominently display the permit at the special event site or have the permit available to display to any officer or employee of the City upon demand.

Revocation of Permit: The City Manager or designee may suspend or revoke a permit issued if: The permittee fails to meet the conditions imposed on the issuance of the permit; violates any provision of this Code or other ordinance of the City governing the activities permitted by the permit or if the permit was obtained by fraud or misrepresentation.

Hazard Prohibited: No person shall make any use of the public parking lot that constitutes an immediate hazard requiring immediate action to protect the public.

Penalty: Any person who violates the requirements of Ordinance No. 2304, upon conviction, shall be fined not less than \$20.00 nor more than \$500.00 or be imprisoned for not more than thirty (30) days, or be both so fined and imprisoned. Each day that a person violates the requirements of this Article shall constitute a separate offense.

I hereby confirm by signing this application that I understand the regulations and will comply with all regulations and ordinances of the City of Bonner Springs, as outlined above.


Signature of Applicant

City Receipt Number

Road Closure Request

Close off Highview Ave

Road Close

Road Close

 Food Truck

 Event Parking

 Fitness Court

 Event Parking

Thursday, Aug. 10th, 2023
from 4PM-7PM

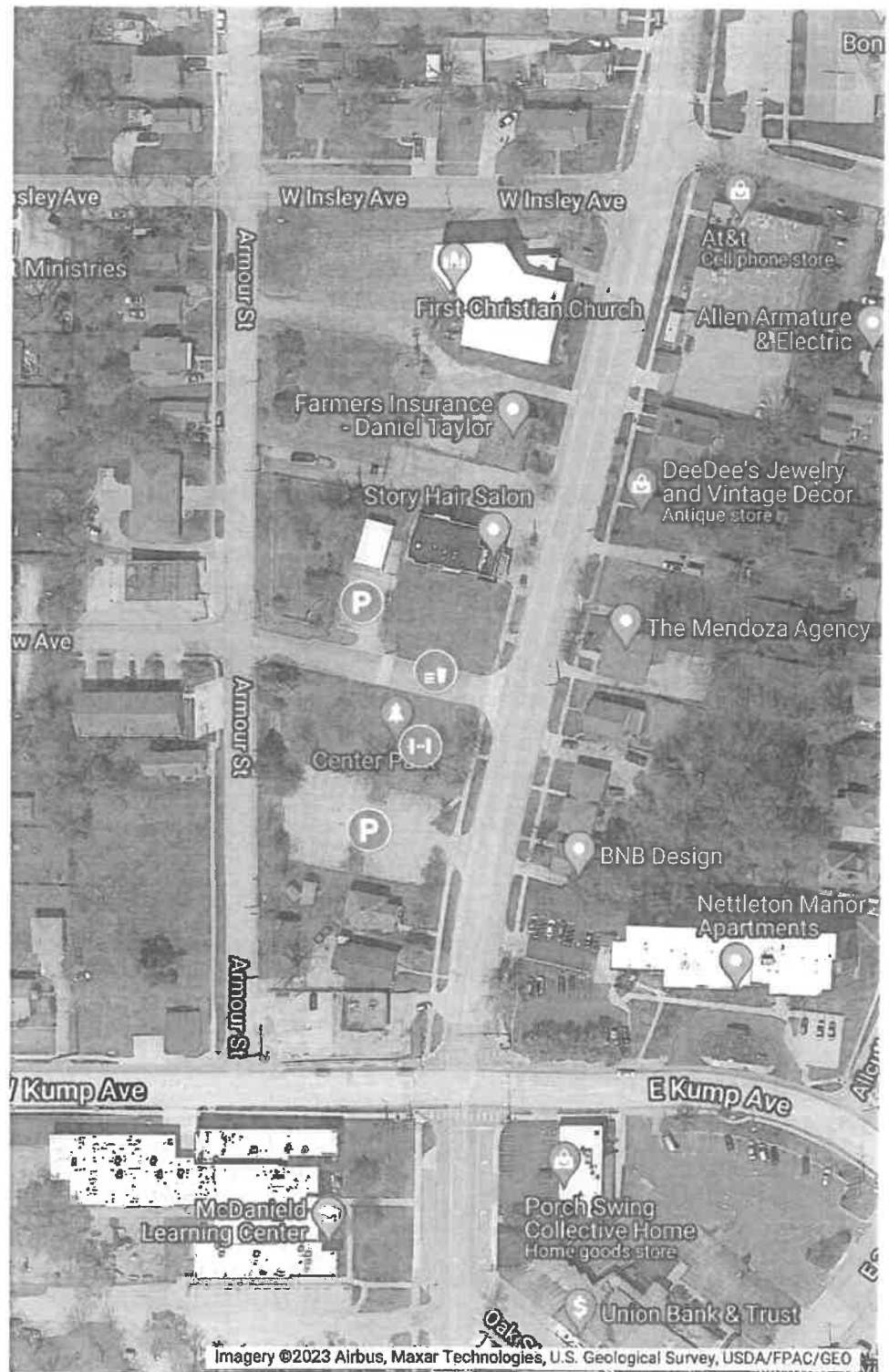
Planned vendors:

- City
- Food Truck (TBD)

Planned Activities:

- Ribbon Cutting
- Fitness Court Demonstration
- Snacks (water, cookies)
- mini competition on court

may have some passive games
available in grassy area N of court



Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Christina Brake

Subject: Voting Delegates for the Annual League of Kansas Municipalities Business Meeting

Recommendation: The Mayor recommends approval.

Action: Make a motion to approve the voting delegates for the annual League of Kansas Municipalities Conference business meeting.

Background: Per K.S.A. 12-1610f, the Governing Body annually selects voting delegates to participate in the League of Kansas Municipalities business and policy session. The session will be Monday October 9, 2023. Based on our population, Bonner Springs appoints two delegates. The nominations for the voting delegates for this year are the Mayor and the Council President. Upon approval, the City Clerk will submit the required forms to the League.

Discussion:

Financial Impact:

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Tim Richards

Subject: Aerial Fire Truck Purchase

Recommendation: The Fire Chief, Finance Director, and City Manager recommended approval.

Action: Make a motion to authorize the purchase of an aerial fire truck from Pierce Manufacturing in an amount not-to-exceed \$2.1 million and authorize the Assistant City Manager to enter into a lease-purchase agreement with either PNC Equipment Finance or Union Bank and Trust, whichever staff determines to be the best financial advantage for the City.

Background: The current primary aerial apparatus is a 2005 and needs replacement. According to the National Fire Protection Associate (NFPA) 1901, fire apparatuses older than 15 years that have been *well-maintained and remain in serviceable condition* should be placed in reserve status. With this apparatus's purchase, we plan to reduce our large fire apparatus fleet from three to two (one aerial apparatus and one engine). The current aerial, which has been in service for nearly two decades, has significantly surpassed its expected service life and can no longer meet the demands of our community. Technological advancements in firefighting equipment have allowed for the development of innovative features that greatly enhance firefighter efficiency, safety, and effectiveness.



Discussion: Our current large fire apparatus fleet consists of a 2005 Engine, a 2009 Engine, and a 2005 Aerial. As indicated above, the NFPA recommendation is that apparatus older than 15 years should serve in a reserve status. Many factors determine how long a given truck can reliably serve in a reserve capacity (typically two to five additional years). We will trade in or sell the two older apparatus listed above at an estimated \$50,000-150,000. The replacement will be a \$2.1 million Pierce Enforcer 100' Aerial Platform. Some general

specifications of the apparatus include 100 feet vertical and 93 feet horizontal reach, with a five-section heavy-duty steel ladder and tower on a vehicle with an overall height of 10'10" and length of only 41'5". For its size, this apparatus has excellent maneuverability and can serve in a dual role, serving both as a primary aerial apparatus and as a first-out fire engine with a 300-gallon tank and pump.

This unit is equipped with innovative features designed to minimize setup times and simplify operations while maintaining a high level of safety. These combined features are essential to maximum operational capabilities with limited staffing. Setup time is the fastest of any aerial on the market. The platform has a 1,000



lbs. tip load capacity, up to 20-degree below grade operation. These combined features make this an exceptionally usable asset both in our downtown core, as well as our new challenges faced by new commercial and multifamily residential development. Compliance with Regulatory Standards: Firefighting technology and safety standards have evolved significantly since the acquisition of the 2005 aerial apparatus. Replacing it will ensure compliance with the latest regulations, ensuring our fire and rescue department meets the industry's best practices and remains prepared for emergencies.

Financial Impact: The funding for the Aerial Fire Truck is included in the Equipment Reserve Five-Year plan with funding from the Emergency Services Sales Tax Fund. The ¼ cent sales tax which provides revenue in this fund was approved by voters for renewal in November of 2022 and will begin another 10-year ¼ cent sales tax for Emergency Services expenditures on October 1, 2023. A down payment of \$400,000 is included in the proposed 2023 Amended Emergency Services Sales Tax Fund Budget. The remaining cost will be paid through a lease-purchase agreement with lease payments made over a 10-year period from the Emergency Services Sales Tax Fund beginning in 2024.

The Aerial Fire Truck will be available for purchase on August 1. At that time, the actual cost will be known. The cost will include a pre-payment discount, so the lease-purchase agreement will need to be entered into in order to provide the payment at that time.

It is estimated that the vehicle will arrive in the first quarter of 2024. As stated above, the City will trade-in or sell the two older apparatus at an estimated \$50,000-150,000.



Option List

6/16/2023

Customer: Pierce Field Unit (original)
Representative Smits, Tom
Organization: Pierce Manufacturing Inc
Requirements Manager: Smits, Tom
Description: Enforcer 100' Tower Quint w/T3
Body: Aerial, 100AAT, Alum Body
Chassis: Enforcer Chassis, 100AAT

Bid Number: 2211
Job Number: 41043
Number of Units: 1
Bid Date: 05/04/2023
Stock Number: 41043
Price Level: 45 (Current: 45)
Lane: Lane 1

Line	Option	Type	Option Description	Qty
1	0010012		No Boiler Plates requested	1
2	0018180		Single Source Compliance, Aerials	1
3	0584456		Manufacture Location, Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0670275		Unit to be Similar in some Aspects, Excluding Pump Panel	1
			Fill in Blank - For engineering purposes only, similar to job 38668	
7	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
8	0533351		Quint Fire Apparatus	1
9	0588612		Vehicle Certification, Aerial w/Pump	1
10	0681278		Agency, Apparatus Certification, Aerial w/Pump, U.L.	1
11	0891947		Certification, Vehicle Inspection Program, NFPA 1901	1
12	0536644		Customer Service Website	1
13	0537375		Unit of Measure, US Gallons	1
14	0030006		Bid Bond Not Requested	1
15	0807703		Performance Bond, Not Requested	1
16	0000007		Approval Drawing	1
17	0002928		Electrical Diagrams	1
18	0729149		Enforcer Chassis, 100AAT	1
19	0000110		Wheelbase	1
			Wheelbase - 271.00	
20	0000070		GVW Rating	1
			GVW rating - 76,640#	
21	0729280		Frame Rails, 13.38 x 3.50 x .375, Enforcer	1
22	0889473		Frame Liner, "C/Inv L" 12.50" x 3.00" x .25", AXT/Vel/Imp/Enf, 57" Qval	1
23	0796912		Axle, Front, Oshkosh TAK-4, Non Drive, 24,000 lb, Enforcer	1
24	0090914		Suspension, Front TAK-4, 24,000 lb, DLX/Qtm/AXT/Vel/Enf/SFR	1
25	0087572		Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	1
26	0000322		Oil Seals, Front Axle	1
27	0679621		Tires, Front, Michelin, XZY3 (wb), 425/65R22.50, 20 ply, Fire Service Load Rtnng	1
28	0019611		Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot	1
29	0726771	SP	Axle, Rear, Oshkosh TAK-4 T3, 52,640 lb, Rear Steer, 2 Axle, 100AAT, ENF	1
30	0602744		Top Speed of Vehicle, Non-NFPA 2016 Compliant	1
			Top Speed of Vehicle - 65	
31	0639311	SP	Suspen, Rear, Oshkosh TAK-4, Independent, 52,640 lb	1
32	0000485		Oil Seals, Rear Axle	1
33	0614549	SP	Pump, Thru-Pump, Oshkosh TAK-4, T3 Rear Steer	1
34	0636818		Tires, Rear, Michelin, XZY3 (wb), 445/65R22.5, 20 ply,(IRS)Tandem,FS Load Rating	1
35	0693622		Wheels, Rear, 22.50" x 13.00", Steel, Hub Pilot, Tandem, AWS/IRS	1
36	0568081		Tire Balancing, Counteract Beads	1
37	0620569		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Tandem Axle	1
			Qty, Tire Pressure Ind - 10	
38	0801909		Lug Nut, Covers, Chrome	1
39	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
40	0002045		Mud Flap, Front and Rear, Pierce Logo	1
41	0639662		Wheel cover, S/S, Osh IRS, Tandem	1
42	0766669		Chocks, Wheel, SAC-44-E, Folding, 100AAT	1
			Qty, Pair - 01	
43	0766668		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal, 100AAT	1
			Qty, Pair - 01	

Line	Option	Type	Option Description	Qty
43			Location, Wheel Chocks - Left Side Rear Tire, Rearward	
44	0010673		ABS Wabco Brake System, Tandem Rear Axle	1
45	0030185		Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	1
46	0581433		Brakes, Bendix, Cam, Rear, 16.50 x 7.00"	1
47	0735527		Air Compressor, Brake, Wabco 26.8 CI, Paccar	1
48	0637583		Brake Reservoirs, 6,408 Cubic Inch Minimum Capacity, Saber FR/Enforcer	1
49	0790412		Air Dryer, Wabco System Saver 1200 IWT, Heated, SFR/Enf	1
50	0000790		Brake Lines, Nylon	1
51	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - a) DS Step Well, Forward	
			Qty, Air Coupling (s) - 1	
52	0586772		Box, Recessed, Alum Treadplate, for Air Fitting	1
			Location - forward in driver side step well of cab.	
			Qty, Air Coupling (s) - 1	
53	0070810		All Wheel Lockup (Aerial/Tanker Chassis)	1
54	0743490		Engine, Paccar MX13, 510HP, 1850 lb-ftW/OBD, EPA 2021, Enforcer	1
55	0001244		High Idle w/Electronic Engine, Custom	1
56	0735687		Engine Brake, Fully Integrated, Paccar MX13 Engine	1
			Switch, Engine Brake - MX13	
57	0644227		Clutch, Fan, Air Actuated, Saber FR/Enforcer	1
58	0640477		Air Intake, Metal Screen, Saber FR/Enforcer	1
59	0794743		Exhaust System, 5", X12/X15, MX13, Engine, Horizontal, Right Side	1
60	0788765		Radiator, Saber FR/Enforcer	1
61	0001090		Cooling Hoses, Rubber	1
62	0001125		Fuel Tank, 65 Gallon, Left Side Fill	1
63	0001129		Lines, Fuel	1
64	0734655		DEF Tank, 7.3 Gallon, LS Fill, Under Cab, Paccar, Fill Dr, ENF	1
			Door, Material & Finish, DEF Tank - Painted	
			Latch, Door, Access - SouthCo C2 chrome raised	
65	0552793		Not Required, Fuel Priming Pump	1
66	0552712		Not Required, Shutoff Valve, Fuel Line	1
67	0699437		Cooler, Chassis Fuel, Not Req'd.	1
68	0011125		Door, Fuel Fill Painted Job Color	1
			Qty, - 01	
69	0690880		No Selection Required From This Category	1
70	0801890		Trans, Allison 6th Gen, 4500 EVS P, w/Prognostics, Imp/Vel/Enf	1
71	0512762		Transmission, Shifter, 6-Spd, Push Button, 4500, Imp/Vel/Qtm/DCF/Enf	1
			Trans, ratio - 4500 EVS, 6Spd	
72	0684459		Transmission Oil Cooler, Modine, External	1
73	0001375		Driveline, Spicer 1810	1
74	0734211		Steering, Sheppard M110 w/Tilt, TAK-4, Paccar Pump, w/Cooler, Paccar	1
75	0605356		Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	1
76	0559647		Pierce Logo on Horn Button	1
77	0725710		Bumper, 15" Extended, Alum, Painted, Integrated, 100AAT, Enforcer	1
78	0778092		Lift & Tow Package, Enforcer	1
79	0522573		Tow Hooks Not Required, Due to Lift and Tow Package	1
80	0698960		Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black	1
81	0625650		Cab, Enforcer, 7000	1
82	0891214		Engine Tunnel, X12, MX13, Enforcer w/T3 Rear Axle	1
83	0633594		Rear Wall, Interior, Adjustable Seating	1
84	0632103		Rear Wall, Exterior, Cab, Saber FR/Enforcer	1
			Material, Exterior Rear Wall - Aluminum Treadplate	
85	0728889		Cab Lift, Elec/Hyd, Stabilizer Interlock, Enforcer 100AAT	1
86	0695930		Grille, Bright Finished, Front of Cab, Enforcer	1
87	0002224		Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	1
			Material Trim/Scuffplate - c) S/S, Polished	
88	0647932		Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	1
89	0087357		Molding, Chrome on Side of Cab	1
90	0772130		Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex, Marker Light	1
91	0517525		Mirrors, 8" K-10 Eyeball, PS Cab Front, Front Cross View	1
92	0648171		Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	1
			Key Model, Cab Doors - 751	

Line	Option	Type	Option Description	Qty
92			Cab, Exterior Door Handle, Finish - 4-Door, Chrome/Black	
93	0655543		Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	1
94	0630636		Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	1
95	0620344		Steps, 4-Door Cab, Dual, Saber FR/Enforcer	1
			Light, Step, Additional - P25 LED	
			Step Well Material - Aluminum Treadplate	
96	0770200		Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, 4-Door Cab	1
			Color, Handrail Light - Red	
			Control, Handrail Light - Parking Brake	
97	0892638		Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	1
			Color, Trim - Chrome Housing	
98	0583698		Fenders, S/S on cab, Extra Wide, Saber/Enf	1
99	0586967		Grab Handle, Chrome, Specify Location, Qty	2
			Location - one (1) on the driver and one (1) on the officer side door pan vertical near the upper door panel hinged side, to work as a high grab handle into cab.	
			Qty, - 02	
100	0630508		Window, Side of C/C, Fixed, Passenger Side Only, Saber FR/Enforcer	1
101	0737256	SP	Compt, Storage, 13.75 W x 38 H x 15 D, Right Side CC, Dbl Pan, 70" SFR/Enf	1
			Light, Aux Cab Compartment - Pierce, Hinged Side	
			Finish, Exterior Cab Compt - Cab Interior	
			Door, Cab Exterior Cabinet - Double Pan, Non-Locking	
			Door, Exterior Stop - Web Strap	
102	0798597		Holder, Cup, Cab/Crewcab, Each, Loc	2
			Location - driver and officer side of cab	
			Qty, - 02	
103	0894089		Dash, Heavy Duty Metal, Enforcer	1
			Material Finish, Metal Dash - Fire Smoke Gray	
104	0607217		Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer	1
			Mounting Provision Spacing - 1.00"	
			Material Finish, Cab Interior - Painted	
105	0750824		Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	1
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
			Engine Tunnel Cover - Dark Silver Gray Endure Vinyl	
			Cab Interior Rear Wall Material - Painted Aluminum	
106	0753903		Cab Interior, Paint Color, Saber FR/Enforcer	1
			Color, Cab Interior Paint - i) fire smoke gray	
107	0052100		Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	1
108	0722696		HVAC, Enforcer, CARE	1
			HVAC System, Filter Access - Tool Free Panel	
			Auxiliary Cab Heater - Both	
			HVAC System, Control Loc. - Panel Position #12	
			Plenum Cover Material - Metal, Painted	
109	0624005		Sun Visor, Vinyl/Fabric, AXT, Dash CF, Qtm, Saber FR/Enforcer	1
			Sun Visor Retention - Thumb Latch	
			Sun Visor, Vinyl/Fabric - Vinyl	
110	0622887		Grab Handles, Driver Door Post, Officer Door Post Low, Saber FR/Enforcer	1
111	0583938		Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED, Trim	1
			Qty, - 01	
112	0631830		Fluid Check Access, Saber FR/Enforcer, Arrow XT	1
			Latch, Door, Storage - Lift and Turn Latch, Flush	
113	0583042		Side Roll and Frontal Impact Protection	1
114	0622618		Seating Capacity, 5 Seats	1
115	0636955		Seat, Driver, Pierce PSV, Air Ride, High Back, Safety, Saber FR/Enforcer	1
116	0636942		Seat, Officer, Pierce PSV, Fixed, SCBA, Safety, Saber FR/Enforcer	1
117	0620420		Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	1
			Latch, Door, Storage - Lift and Turn Latch	
118	0757987		Cabinet, Rear Facing, LS, 23 W x 40.25 H x 26.75 D, Web, Ext Acc, SFR/Enf	1
			Type of fastener - spring clip and hook	
			Restraint Location - Bottom (towards the ground)	
			Light, Short Cabinet - Amdor H2O, Exterior, Left Side	
			Scuffplate, Material/Finish - S/S, Polished	
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (1) Shelf, Adjustable, 0.75" Up-Turned Lip	

Line	Option	Type	Option Description	Qty
118			Door, Cab Exterior Cabinet - Double Pan, Locking #751	
			Door, Exterior Stop - Web Strap	
			Louvers, Cabinet - 0-No Louvers	
119	0102783		Not Required, Seat, Rr Facing C/C, Center	1
120	0635969		Seat, Rear Facing C/C, PS Outboard, Pierce PSV, SCBA, Safety, Saber FR/Enforcer	1
121	0108189		Not Required, Seat, Forward Facing C/C, DS Outboard	1
122	0635957		Seat, Forward Facing C/C, Center, (2) Pierce PSV, SCBA, Safety, Saber FR/Enf	1
123	0108190		Not Required, Seat, Forward Facing C/C, PS Outboard	1
124	0766467		Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	5
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
			Qty, - 05	
125	0543991		Bracket, Air Bottle, Hands-Free II, Cab Seats	4
			Qty, - 04	
126	0603866		Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	1
			Seat Belt Color - Red	
127	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
128	0647647		Lights, Dome, FRP Dual LED 4 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	
			Control, Dome Lt White - Door Switches and Lens Switch	
			Control, Dome Lt Color - Lens Switch	
129	0896451		Enhanced Software for Cab and Crew Cab Dome Lts	1
130	0602622		Portable Hand Light, Provided by Fire Department, Quint NFPA 2016 Classification	1
131	0622803		Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	1
			Emergency Switching - Individual Switches	
132	0509511		Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	1
133	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
134	0743386		Messages, Open Dr/DNMT, Color Dsply, 100AAT	1
135	0622798		Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer	1
136	0802945		Wiper Control, 2-Speed with Intermittent, Stalk Control, Enf MUX	1
137	0731813		Hour Meter, Aerial, Included in Information Centers, ASL, AAT, ASP	1
138	0002615		Switch, Aerial 12V Master	1
139	0770696		Aerial PTO Activated with Aerial Master Sw	1
140	0548004		Wiring, Spare, 15 A 12V DC 1st	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - 15 amp power point plug	
			Location, Spare Wiring - switch panel #14	
141	0797189		Wiring, Spare, 4.8 A 12V DC, USB Termination Blue Sea 1045 1st	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Location - switch panel #14	
142	0615386		Vehicle Information Center, 7" Color Display, Touchscreen, MUX	1
			System Of Measurement - US Customary	
143	0734857		Collision Mitigation, HAAS Alert (R2V), HA5	1
			Subscription, HAAS R2V - R2V - 5 Year Data Plan Subscription	
144	0606247		Vehicle Data Recorder w/CZ Display Seat Belt Monitor	1
145	0696439		Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area	2
			Qty, - 02	
			Location, Antenna Mount - Left And Right Side	
146	0653526		Camera, Pierce, LS Mux, R, Camera	1
			Camera System Audio - Not Provided	
147	0890416		Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	1
			Color, Antenna - White Antenna	
			Module Housings - See Through Housings with LED Cuircuit Indicators	
148	0896456		Prognostics, Electrical System	1
149	0892649		ClearSky Telematics for Remote Fleet and On-scene Management	1
			Subscription, Telematics - 3 Year Subscription	
150	0733539		Electrical System, Enf MUX ESP	1
151	0079211		Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud	1

Line	Option	Type	Option Description	Qty
152	0008621		Battery System, Single Start, All Custom Chassis	1
153	0002698		Battery Compartment, Saber/Enforcer	1
154	0531315		Charger, Sngl Sys, IOTA, DSL-75, 75 Amp, Kussmaul 091-94-12 Ind, Qtm/Enf/SFR	1
155	0786339		Location, Charger, Cab Behind Driver Seat, Saber FR/Enforcer	1
156	0530949		Location, Bat Chrg Ind, Driver's Seat Riser	1
157	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	1
			Qty, - 01	
			Color, Kussmaul Cover - b) red	
			Shoreline Connection - Battery Charger	
158	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Cab, Frt Corner	
159	0647728		Alternator, 430 amp, Delco Remy 55SI	1
160	0092582		Load Manager/Sequencer, MUX	1
			Enable/Disable Hi-Idle - e)High Idle enable	
161	0783157		Headlights, Rect LED, JW Spkr Evo 2, Heat, AXT/DCF/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
162	0802935		Light, Directional, Wln M62T* LED, Cmn Bzl, Above Headlights, Sab/Enf	1
			Color, Lens, LED's - Clear	
			Color, Q Bezel and Trim - Polished Chrome	
			Flash Pattern, Directional Lts - Steady On (Arrow)	
163	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
164	0736083		Lights, Clearance/Marker, Side, P25 LED 2 Lts, Others With Visor Lt	1
165	0647899		Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	1
166	0670831		Lights, Clearance/Marker/ID, Rear, P25 LED 7Lts, 100AAT	1
167	0602938		Light, Marker End Outline, Rubber Arm, LED Marker Lamp, Rear Body	1
			Qty, Lights, Pair - 1	
168	0804514		Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw For Hsg	1
			Color, Lens, LED's - Match	
			Flash Pattern, Directional Lts - Steady On (Arrow)	
169	0806466		Lights, Backup, Wln M62BU, LED, For Tail Lt Housing	1
170	0889577		Bracket, License Plate & Light, P25 LED, Stainless Brkt	1
			Color, Trim - Chrome Housing	
171	0556842		Bezels, Wln, (2) M6 Chrome Pierce, For mtg (4) Wln M6 lights	1
172	0589905		Alarm, Back-up Warning, PRECO 1040	1
173	0769420		Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	1
174	0769564		Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 1lt	1
175	0763190		Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 3lts	1
			Control, Perimeter Lts - Parking Brake Applied	
176	0896454		Enhanced Software for Perimeter Lts	1
177	0735865		Step Illumination, Pump Panel Light Shield, 100AAT, w/Pump	1
178	0689256		Bracket, Alum. Painted, 12V Surface Mounted Flood Lights, Top of Cab, Each	2
			Location - above crew cab doors, one each side	
			Qty, - 02	
179	0762201	SP	Light, Visor, HiViz, FT-B-X-72-ML-*-* , Cntl Feat, Flush w/Cab	1
			Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS	
			Color, Lt Housing HiViz - Job Color	
			Scene Light Optics - Flood/Spot	
180	0897903		Lights, HiViz FT-MB-2.45-*-* 49.37", 1st	1
			Location - above driver side crew cab door	
			Qty, - 01	
			Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS	
			Color, Lt Housing HiViz - Job Color	
			Scene Light Optics - combination	
181	0897900		Lights, HiViz FT-MB-2.45-*-* 49.37", 2nd	1
			Location - above passenger side crew cab door	
			Qty, - 01	
			Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS	
			Color, Lt Housing HiViz - Job Color	
			Scene Light Optics - combination	
182	0764634		Lights, HiViz FT-B-72-* LED, 1st	1
			Location - driver side of body on catwalk above LS3.	
			Qty, - 01	
			Control, Scene Lts - DS Scene Lts	

Line	Option	Type	Option Description	Qty
182			Color, Lt Housing HiViz - Job Color	
183	0764632		Lights, HiViz FT-B-72-* LED, 2nd	1
			Location - passenger side of body on catwalk above RS3.	
			Qty, - 01	
			Control, Scene Lts - PS Scene Lts	
			Color, Lt Housing HiViz - Job Color	
184	0766802		Not Required, Deck Lights, Other Hose Bed & Rear Lighting, 100AAT	1
185	0729276		Lights, Hose Bed, Front/Rear, Light Strips, AAT	1
			Control, Hose Bed Lts - Cup Switch At Rear	
186	0737026		Lights, Rear Scene, WIn, M6ZC LED, M6P15* 15 Deg Brkt, 58" - 72" High	1
			Control, Rear Scene Lts - Cab Switch Panel DS, Pump Panel DS and	
			Body Switch, DS Rear Bulkhead	
			Color, Trim - Chrome Trim	
187	0892702		Lights, Walk Surf, Amdor AY-LB-12HW020, P25 LED, 100AAT	1
			Color, Trim - Chrome Housing	
188	0771870		Aerial, 100AAT, Alum Body	1
189	0554271		Body Skirt Height, 20"	1
190	0769002		Tank, Water, 300 Gallon, Poly, 100AAT	1
191	0751917		Overflow, 3.00" Water Tank, Poly	1
192	0028107		Not Required, Foam Cell Modification	1
193	0003429		Not Required, Direct Tank Fill	1
194	0769016		Hose Bed, Alum, Right Side, 100AAT	1
195	0723546		DA Finished Hose Bed/Cargo Area	1
196	0555137		Hose Bed Capacity 800' of 5.00", 100AAT, 100' RMAP	1
197	0748063		Hose Restraint, Front Vinyl/Treadplate, 1" Heavy Nylon Web Rear, RS, 100AAT	1
			Color, Vinyl Cover - c) black	
198	0003512		Running Boards, Ascendant, PAL	1
199	0735582		Turntable Steps, Swing-Down, Left Side, 100AAT	1
			Step, Flip - Flip Step, One Step Assembly	
			Body Handrail Finish - knurled aluminum	
			Step Surface, Turntable - Punched Grip	
200	0889980		Lights, Step (3), P25 LED, One Side	1
			Control, Scene Lts - Aerial master	
			EXCLUDED: [Color, Trim]. - Chrome Housing	
201	0690023		Wall, Rear, Smooth Aluminum	1
202	0074515		Tow Eyes (2), Painted Lower Job Color, 100AAT, Ascendant Single Axle, 75' HAL	1
203	0769019		Construction, Compt, Alum, 100AAT	1
204	0771504		Compt, Left Side, Roll, 100AAT	1
			Latch, Door, Access - SouthCo C2 black raised, pair	
205	0771505		Compt, Right Side, Roll, 100AAT	1
206	0766483		Doors, Gortite Rollup, Side Compartments	9
			Qty, Door Accessory - 09	
			Color, Roll-up Door, Gortite - Painted to Match Lower Body	
			Latch, Roll-up Door, Gortite - Non-Locking Liftbar	
207	0740006		Bumper, Rear, 3", Counterweight, Steel, Full 45 Degree Angled Corners, 100AAT	1
208	0603083		Lights, Compt,Pierce LED,Dual Light Strips,Each Side Dr,Ascend	9
			TA,75'HAL,PAP,HDL	
			Qty, - 09	
			Location, Compartment Lights - All Body Compts	
209	0687145		Shelf Tracks, Recessed, PUC/3rd Generation	1
210	0600289		Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations, Aerial	6
			Qty, Shelf - 06	
			Material Finish, Shelf - Painted - Spatter Gray	
			Location, Shelves/Trays, Predefined - RS1-Centered, RS2-Centered,	
			RS3-Centered, LS1-Centered, LS2-Centered and LS3-Centered	
211	0647772		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides, 3G	4
			Qty, - 04	
			location - LS2, LS4, RS2, RS4	
			Material - Painted - Spatter Gray	
212	0061917		Rub Rail, Aluminum Extruded, 3.12", Side of Body	1
213	0769018		Fender Crowns, Rear, S/S, w/Removable Fender Liner, Aerial, 3G, Two Pair	1
214	0519849		Not Required, Hose, Hard Suction	1

Line	Option	Type	Option Description	Qty
215	0893756		Handrails, Side Pump Panels, Per Print, Aerial	1
			Step, Runningboard - step	
216	0765324		Compt, Air Bottle/Extinguisher,Between Tandems,Three (3),w/Straps,100AAT,Bolt-In	2
			Qty, Air Bottle Comp - 2	
			Door Finish, Fender Compt - Painted	
			Location, Fender Compt - LS and RS	
			Latch, Air Bottle Compt - Southco C2 Black Raised, Pair	
			Insert, Air Bottle Compt - Rubber Matting	
			Door Type - lift up with pneumatic spring	
217	0795333		Compt, Air Bottle, Single, Fender Panel, Bolt-In	4
			Qty, Air Bottle Comp - 4	
			Door Finish, Fender Compt - Painted	
			Location, Fender Compt - Single - LS Fwd, Single - LS Rear, Single - RS	
			Fwd and Single - RS Rear	
			Latch, Air Bottle Compt - Southco C2 Black Raised	
			Insert, Air Bottle Compt - Rubber Matting	
218	0768635		Ladder, 35' Duo-Safety 1200A 2-Sect	2
			Qty, - 02	
219	0010406		Ladder, 28' Duo-Safety 1200A 2-Section	1
			Qty, - 1	
			Location, Extension Ladder - torque box	
220	0024232		Ladder, 16' Duo-Safety 875A Roof	1
			Qty, - 1	
221	0648681		Ladder, 14' Duo-Safety 875-DR Roof	1
			Qty, - 01	
			Location - fly section of aerial	
222	0014232		Ladder, 20' Duo-Safety 875A Roof	1
			Qty, - 1	
223	0024233		Not Required, Attic Extension Ladder	1
224	0768634		Ladder, 10' Duo-Safety Folding, 585A	2
			Qty, - 02	
			Location, Folding Ladder Aerial - torque box	
225	0806199		Ladders in Torque Box, Gortite Roll, Retainer Latch, 100AAT	1
			Color, Roll-up Door, Gortite - Satin finish	
			Latch, Roll-up Door, Gortite - Non-Locking, Rear	
			Latch, Door Ladder Storage - Southco C2 Chrome Raised, Pair	
			Latch, Anti-Migration Plate - Southco C2 chrome raised	
226	0766602		Lights, Torque Box Ladder Storage, Pierce LED Strip Lights, 2 Lts, 100AAT	1
227	0004998		Pike Pole, 12' Nupla, Fiberglass, I Beam, SPD-12	2
			Qty, - 02	
228	0594888		Pike Pole, 8' Nupla, Featherlight, YPD-8	2
			Qty, - 02	
229	0014347		Pike Pole, 6' Nupla, Featherlight, YPD-6, Aerial	2
			Qty, - 02	
230	0548410		Not Required, Pole, Pike, 3'	1
231	0770578		Pike Pole Tubes, in Torque Box/Ladder Storage, ABS	6
			Qty, - 06	
232	0765390		Pump House, Side Control, 42", 100AAT, Control Zone	1
233	0767048		Pump House Structure	1
234	0767622		Pump, Waterous, S100, 2000 GPM, Single Stage, 100' AAT	1
235	0504116		Seal, Mechanical, Waterous, w/S100 Pump	1
236	0559768		Trans, Pump, Waterous C20, S100 Pump Only	1
237	0635600		Pumping Mode, Stationary Only	1
238	0605126		Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	1
239	0003148		Transmission Lock-up, EVS	1
240	0004547		Auxiliary Cooling System	1
241	0014486		Not Required, Transfer Valve, Single Stage Pump	1
242	0746501		Valve, Relief Intake, Elkhart	1
			Qty - 1	
			Pressure Setting - 125 psig	
			Intake Relief Valve Control - Behind Right Side Pump Panel	
243	0794959		Controller, Pressure, Pierce, Pump Boss, PBA300	1
244	0072153		Primer, Trident, Air Prime, Air Operated	1

Line	Option	Type	Option Description	Qty
245	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
246	0602492		Plumbing, Stainless Steel and Hose, Single Stage Pump, 100AAT	1
247	0089437		Plumbing Without Foam System	1
248	0751029		Inlets, 6.00", (1) Left Side, (1) Right Side, 1500-2000 GPM Pump, 100AAT	1
249	0004646		Cap, Main Pump Inlet, Long Handle, NST, VLH	1
250	0084610		Valves, Akron 8000 series- All	1
251	0016158		Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	1
			Qty, Inlets - 1	
252	0004700		Control, Inlet, at Valve	1
253	0004660		Inlet (1), Left Side, 2.50"	1
254	0029147		Not Required, Inlet, Right Side	1
255	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
256	0767284		Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing, 100AAT	1
257	0004905		Outlet, Tank Fill, 1.50"	1
258	0062133		Control, Outlets, Manual, Pierce HW if applicable	1
259	0004940		Outlet, Left Side, 2.50"	2
			Qty, Discharges - 02	
260	0005091		Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
261	0004945		Outlet, Right Side, 2.50"	1
			Qty, Discharges - 01	
262	0025091		Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
263	0767613		Outlet, 4" w/4" Right, Sm Handwheel, 100AAT	1
			Valve, Brand - Akron	
264	0005097		Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz	1
			Qty, - 01	
265	0092572		Not Required, Outlet, Front	1
266	0752096		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Vinyl Covered Cable	1
267	0723042		Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	1
268	0029106		Not Required, Deluge Outlet	1
269	0767110		Waterway Outlet & Control, 4" Akron, Sm HW, 100AAT	1
270	0762277		Crosslays Sngl Sheet Unpainted, (1+) 1.50" Std. Cap, 100AAT	2
			Qty, Crosslays - 2	
271	0029196		Not Required, 2.50" Crosslay	1
272	0623374		Hose Restraint, Crosslays, 2" Nylon Web, Seat Belt Buckle, Tether, Bar, Sides	2
			Qty, - 02	
			Color, Strap - Orange	
273	0590891		Hose Restraint, Crosslay/Deadlay, Velcro Straps, Top	2
			Qty, - 02	
274	0044333		Not Required, Foam System	1
275	0012126		Not Required, CAF Compressor	1
276	0552517		Not Required, Refill, Foam Tank	1
277	0042573		Not Required, Foam System Demonstration	1
278	0045465		Not Required, Foam Tanks	1
279	0091110		Not Required, Foam Tank Drain	1
280	0091112		Not Required, Foam Tank #2 Drain	1
281	0738072		Approval Dwg, Pump Panel(s), Not Required	1
282	0032479		Pump Panel Configuration, Control Zone	1
283	0747651		Step, Slide-Out/Fold-Out, Pump Operator Platform, 100AAT	1
284	0667186		Light, Slide-Out Pump Operator Step, On Scene Solutions Access LED, Short Step	1
285	0629252		Material, Pump Panels, Side Control Black Vinyl	1
			Material Finish, Pump Panel, Side Control - Black Vinyl	
			Material, Pump Panel, Side Control - Aluminum	
286	0723264		Panel, Pump Access - Right Side Only, 100AAT	1
			Latch, Pump Panel Access, Side Mount - Flush Lift and Turn, Chrome,	
			AAT	
287	0583824		Light, Pump Compt, Wln 3SC0CDCR LED White	1
			Qty, - 01	
288	0586382		Gauges, Engine, Included With Pressure Controller	1
289	0005601		Throttle, Engine, Incl'd w/Press Controller	1
290	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle, Green	1
291	0549333		Indicators, Engine, Included with Pressure Controller	1
292	0745568		Indicator Light, Pump Panel, OK To Pump, Green	1

Line	Option	Type	Option Description	Qty
293	0511078		Gauges, 4.00" Master, Class 1, 30"-0-600psi	1
294	0511100		Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	1
295	0062586		Gauge, Water Level, Class 1, Pierce Std	1
296	0006774		Not Required, Foam Level Gauge	1
297	0735892		Light Shield, S/S LS & RS, 100AAT, Std LED	1
298	0762640		Air Horns, (2) Hadley, 6" Round, eTone, In Bumper, 100AAT	1
299	0606833		Location, Air Horns, Bumper, Each Side, Inside Frame (Pos #3 & #5)	1
300	0757092		Control, Air Horn, Multi Select	1
301	0757080		Control, Air Horn, Ft Sw, RS	1
302	0757084		Control, Air Horn, Horn Ring	1
303	0533071		Siren, Wln 295SLSC1, 100 or 200 Watt, w/Plug-in/Detachable Microphone Cord	1
304	0015283		Location, Elect Siren	1
			Location - panel position A	
305	0076156		Control, Elec Siren, Head Only	1
306	0601304		Speaker, (2) Wln, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	1
			Connection, Speaker - siren head	
307	0601557		Location, Speaker, Frt Bumper, Recessed, Ea Side, Outside Frame, Outbrd (Pos 1/7)	1
308	0895382		Siren, Federal Q2B, Enforcer, 100AAT	1
			Finish, Q2B Siren - Chrome	
309	0891153		Siren, Mechanical, Mounted Above Deckplate, Swivel, 100AAT	1
310	0026163		Control, Mech Siren, DS & PS Foot Sw	1
311	0897454		Sw, Siren Brake, Mom Rocker/Membrane, Red Outline, LS Overhead Sw Pnl, Mux	1
312	0740391		Sw, Siren Brake, Momentary Chrome Push Button, RS	1
313	0746353		Not Required, Warning Lights Intensity	1
314	0606775		Lightbar, Wln, Freedom IV-Q, 72", RRWRRR____RRRWRR	1
			Filter, Whl Freedom Ltbrs - No Filters	
315	0540384		Lights, Front Zone, Wln M6*C LED, Clear Lens, in Common Bzl	1
			Color, Lt DS Front - Red	
			Color, Lt PS Front - Red	
316	0558676		Daytime Running Lights, Headlights, Qtm, Vel/Imp, Enf/AXT-MUX, DCF (Low Beam)	1
317	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
318	0540692		Lights, Side Zone Lower, Wln M6*C LED, Clear Lens, 3pr, Ovr 25	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Middle - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Mid Side - Over Front Wheels	
			Location, Lights Rear Side - Between Tandem	
319	0653165		Lights, Side, Wln WION* LED, Recessed in Cab Steps, 4lts, AXT/DCF/Enf/Imp/Vel	1
			Color, Lights, Warning - gla) red	
			Control, Light - b) side warning	
320	0672937		Lights, Side, Wln WIONSMC* LED, Chrome Flange, Mounted In Rub Rail, 1st	4
			Location, Lights - centered in rub rail under LS2, LS4, RS2, RS4	
			Qty, - 04	
			Color, Lights, Warning - gla) red	
			Control, Light - b) side warning	
321	0564655		Lights, Rear Zn Lwr, Wln M6*C LED, Clear Lens, For Tail Lt Housing	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
322	0088745		Light, Rear Zone Up, Wln L31HRFN LED Beacon, Red LED	1
			Color, Dome, Rear Warning - j) both domes clear	
323	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
324	0791501		Light, Traffic Directing, Wln TAL65, 36" Long LED, Aerials	1
			Activation, Traffic Dir L - Not Connected	
325	0754854		Location, Traf Dir Lt, On Top of Body Below Turntable w/Box, Matrl Feature	1
			Material, Bracket - Aluminum Treadplate	
326	0723755	SP	Location, Traf Dir Lt Controller, Panel #13 in Center Console	1
327	0519934		Not Required, Brand, Hydraulic Tool System	1
328	0649753		Not Required, PTO Driven Hydraulic Tool System	1
329	0771866		Aerial, Ascendant 100' Aerial Tower	1

Line	Option	Type	Option Description	Qty
330	0680821		Boom Panel, Pair	1
			Paint Color, Predefined - #90 Red	
331	0526890		Not Required, Indicator, Extension	1
332	0688232		Rung Covers, Aerial Device	1
			Rung Cover Color - Safety Yellow	
333	0678539		Brackets Only, Roof/Wall Ladder, Aerial Fly Section	1
			Finish - Painted, Aerial Device Color	
			Roof Ladder, Make/Model - 14' Duo-Safety 875-A-DR	
334	0728982		Box, Saw Storage, w/Cover, Base Section Above Boom Panel, 100AAT, Door Sw	2
			Qty, - 02	
			Finish - Painted, Aerial Device Color	
			Latch, Door, Storage - "D" Handle Latch	
			Location, Aerial Device - each side	
			Louvers - no louvers	
335	0623645		Aerial Stability Test, Max Tip Options	1
336	0766887		Brackets, Stokes Storage, Base Section Above Boom Panel, 100AAT	1
			Qty, - 01	
			Finish - Painted, Aerial Device Color	
			Location, Aerial Device - right side	
337	0770598		Basket, 100AAT	1
338	0665552		Box, Ladder Belt Storage, Platform	1
			Latch, Door, Storage - Rubber Draw Latch	
			Quantity - 04	
			Location, Aerial Basket - right	
			Cover - cover	
339	0803225		Lights, Turntable Walkway, P25, On Scene, LED, 100AAT	1
			Color, Trim - Chrome Housing	
340	0767535		Light, Turntable Console, TecNiq E-10, LED	1
341	0732762		Basket Heat Shields, 100AAT	1
342	0766953		Control Stations, 100AAT	1
343	0751349		Lights, Basket Interior, Amdor AY-LB-12HW020-0, 20" 100AAT	1
344	0771862		Stabilizers, 100AAT, Three Sets	1
345	0729051		Stabilizer Pan and Trim Material	1
			Stabilizer Panels - stainless steel, painted to match lower body color	
			Stabilizer Trim - painted to match lower body color	
346	0746173		Door, Stabilizer Control Box, Aerial MUX, 100AAT	1
			Latch, Door, Storage - Southco C2 Black Raised	
			Hinge Location - Inboard	
			Door, Material & Finish, Stabilizer - Smooth aluminum	
347	0615058		Stabilizer Placement, Cameras w/Command Zone Color Display, 1 Set	1
348	0771218		Hydraulic System, 100AAT	1
349	0767932		Swivels, w/Encoder, 36, 100AAT	1
350	0767931		Electrical System, 100AAT	1
351	0783178		Lights, Tip, WIn MPB* LED, Front of Basket 2lts	1
			Color, WIn Lt Housing - White Paint	
352	0752453		Lights, Tracking, WIn MPB* LED, 100AAT 2lts	1
			Color, WIn Lt Housing - White Paint	
			Scene Lt Optics LH Base - L Spot	
			Scene Lt Optics RH Base - R Spot	
353	0743431		Basket Access, w/ Flip Down Step, Lift Bar Latch, 100AAT	1
			Finish, Step Well - aluminum treadplate	
354	0894586		Lights, Step (4), P25, Ladder Style Access Steps, Both Sides	1
			Control, Light - r) aerial master	
			Color, Trim - Chrome Housing	
355	0749120		Lighting, Rung, LED, TecNiq, 5 Section, Base, Low, Cent, Upper, Fly, 100AAT	1
			Control, Aerial Rung Lighting - Aerial Not Stowed	
			Color, Lt Aerial Fly Sect - Red	
			Color, Lt Aerial Base Sect - Red	
			Color, Lt Aerial Lower Mid Sect - Red	
			Color, Lt Aerial Upper Mid Sect - Red	
			Color, Lt Aerial Mid Sect - Red	
356	0540743		Lights, Stabilizer Warn (2) Sets, WIn M6*C LED, Clear Lens	1
			Color, Lt Rr Stabilzr Pan - r) Pan Light Red	

Line	Option	Type	Option Description	Qty
356			Color, Lt Fr Stabilzr Pan - r) Pan Light Red	
357	0068703		Lights, Grote Supernova LED, Stabilizer Beam, (1) Set	1
358	0762387		Lights, Stabilizer Scene, (3) sets, Amdor AY-LB-12HW012, 100AAT	1
359	0764091		DC Power To Tip, 12.88 Amp, 100AAT	1
360	0759577	SP	Light, Wln PSL1B*, 12 Volt Under Steps, 100AAT, 1st	2
			Qty, - 02	
			Location, Sw, Arl AC Lts - M)2 Pos	
			Color, Wln Lt Housing - White Paint	
			Location, Lts Under 100'AAT Steps - Left Side Front Corner and Right	
			Side Front Corner	
361	0016924		Intercom, 2-Way Atkinson (PAP)	1
362	0540918		Not Required, Breathing Air to Tip, Aerial Platform	1
363	0024742		Not Required, Mask, Breathing Air To Tip	1
364	0767396		Aerial Pedestal, 100AAT	1
365	0766834		Lyfe Brackets, 3-In-1, Used w/Duo-Safety 875 Ladders ONLY, 100AAT	1
366	0767149		Turntable Access, ManSaver Bar, Yellow	1
367	0804860		Waterway, 100AAT	1
			Aerial Waterway Drain 100AAT - Standard Location, Right Side	
368	0730399		Valves, (2) TFT VUM (Valve Under Monitor), Manual	1
369	0764417		Monitors, (2), TFT Monsoon, Y4-MP1A-P-01 Manual and Y4-EP1A-P Elec, (Use w/VUM)	1
			Nozzle, Monitor 1, PAP - TFT YST-4NN Tips	
			Nozzle, Monitor 2, PAP - TFT M-ERP2000 Electric 2000 gpm	
370	0086971		Flowmeter, Waterway, MUX, PAP	1
371	0009364		Inlet, 5.00", S/S, w/ Pump, Right Side, 100AAT	1
372	0047897		Tools, Aerial	1
373	0559491		Manuals and Training, 3 Consecutive Days, Platform	1
374	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
375	0047021		Reflective Emergency Triangles, Set of Three	1
			Qty, - 1	
376	0602497		NFPA Required Loose Equipment, Quint, NFPA 2016, Provided by Fire Department	1
377	0519913		Not Required, Soft Suction Hose	1
378	0027023		No Strainer Required	1
379	0533246		Extinguisher, 20 lb Dry Chemical	1
			Qty, Extinguishers - 1	
380	0602352		Extinguisher, 2.5 Gal. Pressurized Water, Quint, NFPA 2016, Provided by Fire Dept	1
381	0765595		Ladder Belts, Aerial	1
			Safety Belt, Large/XL - (2) two Large/XL (34"-42" waist)	
			Safety Belt, Small/Medium - 0) small/medium (26"-34" waist)	
			Safety Belt, XXL - (2) two XXL (42"-50" waist)	
382	0007482		Not Required, Crowbars	1
383	0007484		Not Required, Claw Tools	1
384	0602883		Axe, Flathead, Quint NFPA 2016, Provided by Fire Department	1
385	0602670		Axe, Pickhead, Quint NFPA 2016, Provided by Fire Department	1
386	0007494		Not Required, Sledgehammers	1
387	0741569		Paint Process / Environmental Requirements, Appleton	1
388	0709567		Paint, Single Color, Enforcer	1
			Paint Color, Cab - #90 Red	
389	0709845		Paint, Single Color, Body	1
			Paint, Body - Match Lower Cab	
390	0646901		Paint Chassis Frame Assy, With Liner, E-Coat, Standard	1
			Paint Color, Frame Assembly, Predefined - Gloss Black	
391	0693797		No Paint Required, Aluminum Front Wheels	1
392	0693795		Paint, Rear Wheels, Tandem Axle	1
			Paint, Wheels - Red #90	
393	0733739		Paint, Axle Hubs	1
			Paint, Axle Hub - Lower Job Color	
394	0007230		Compartment, Painted, Spatter Gray	1
395	0792638		Aerial Platform Paint	1
			Paint Color, Aerial Device - White 10	
			Paint Color, Turntable - White 10	
			Paint Color, Boom Support - red 90	

Line	Option	Type	Option Description	Qty
395			Paint Color, Cylinders - white 10 Paint Color, Aerial Torque Box - black 101 paint Paint Color, Aerial Stabilizers - black 101 Paint Color, Aerial Basket - white 10 Paint Color, Aerial Rotation Motor - White 10 Paint Color, Aerial Control Console - white 10	
396	0544111		Reflective Band, 10"	1
			Color, Reflect Band - A - a) white	
397	0007356		Reflective across Cab Face	1
398	0583454		Stripe, Chevron, Rear, Diamond Grade, Aerial	1
			Color, Rear Chevron DG - fluorescent yellow green	
399	0598754		Stripe, Reflective/Diamond Grade, 4.00" on Stabilizers	1
			Color, Reflect Band - A - p) fluorescent yellow green diamond grade	
400	0030634		Basket Reflective Stripe, 10.00", Center	1
			Color, Reflect Band - A - c) ruby red	
401	0027341		Jog, In Reflective Stripe, Single or Multiple	1
			Qty, - 1	
402	0017359		Stripe, Black Outline, Vinyl on Reflective Band	1
			Qty, - 01	
403	0593225		Stripe, Reflective, Cab Doors Interior, Diamond Grade	1
			Color, Reflect Band - A - p) fluorescent yellow green diamond grade	
404	0027286		Not Required, Lettering Specs	1
405	0007472		[Lettering not Requested]	1
406	0583547		Undercoating, Cab & Body, Stock/Demo Style, Aerial, Ziebart	1
407	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom	1
			Qty, - 01	
408	0772037		Manual, Chassis Service, USB Flash Drive, Custom	1
			Qty, - 01	
409	0773381		Manual, Chassis Operation, (1) USB Flash Drive, Custom	1
410	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
411	0735523		Warranty, Engine, Paccar MX13, 5 Year	1
412	0684953		Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	1
413	0596017		Warranty, Frame, 50 Year, Custom Chassis, WA0013	1
414	0595698		Warranty, Axle, 3 Year, TAK-4, WA0050	1
415	0644874		Warranty, Axle, 3 Year, TAK-4, IRS, WA0249	1
416	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
417	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
418	0744240		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
419	0524627		Warranty, Electronics, 5 Year, MUX, WA0014	1
420	0695416		Warranty, Pierce Camera System, WA0188	1
421	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
422	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
423	0685945		Warranty, Transmission Cooler, WA0216	1
424	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
425	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
426	0693127		Warranty, Gortite, Roll-up Door, 6 Year, WA0190	1
427	0734463		Warranty, Pump, Waterous, 7 Year Parts, WA0382	1
428	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
429	0641372		Warranty, Foam System, Not Available	1
430	0006999		Warranty, Structure, 20 Year, Aerial Device, WA0052	1
431	0687388		Warranty, Swivels, 5 Year, Aerial Device, WA0197	1
432	0685727		Warranty, Hydraulic System and Components, 3 Year/5 Year, WA0200	1
433	0687327		Warranty, Waterway, 10 Year, Aerial Device, WA0198	1
434	0595860		Warranty, Paint, 4 Year, Aerial Device, Pro-Rated, WA0047	1
435	0553455		Warranty, Electronics, 5 Year, MUX, WA0014	1
436	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
437	0593921		Not Required, Warranty, No Lettering	1
438	0683627		Certification, Vehicle Stability, CD0156	1
439	0735686		Certification, Engine Installation, Enf, Paccar MX13, 2021	1
440	0686786		Certification, Power Steering, CD0098	1
441	0892691		Certification, Cab Integrity, Saber FR/Enforcer, CD0189	1
442	0631973		Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	1

Line	Option	Type	Option Description	Qty
443	0631978		Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	1
444	0631974		Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	1
445	0631977		Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	1
446	0735949		Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	1
447	0545073		Amp Draw Report, NFPA Current Edition	1
448	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
449	0799248		Appleton/Florida BTO	1
450	0000053		Ascendant Tower	1
451	0000012		PIERCE CHASSIS	1
452	0735525		PACCAR MX13 ENGINE	1
453	0046396		EVS 4000 Series TRANSMISSION	1
454	0805943		WATEROUS PUMP S-100 AAT	1
455	0020009		POLY TANK	1
456	0028047		NO FOAM SYSTEM	1
457	0020006		SIDE CONTROL	1
458	0020007		AKRON VALVES	1
459	0020015		ABS SYSTEM	1
460	0658751		PUMPER BASE	1

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		Yes	No
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		Bidder Complies	
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<u>SINGLE SOURCE MANUFACTURER</u>			
Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab weldment, cab, pump house (including the sheet metal enclosure, valve controls, piping and operators panel) body and aerial device being designed, fabricated and assembled on the bidder's premises. The electrical system (hardwire or multiplex) shall be both designed and integrated by the same apparatus manufacturer. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body, pump house, cab weldment, chassis and aerial). The bidder shall provide evidence that they comply with this requirement. The bidder shall state the location of the factory where the apparatus is to be built.			
<u>SPECIAL INSTRUCTIONS</u>			
The apparatus being proposed shall be designed and built to match the For engineering purposes only, similar to job 38668 . However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.			
<u>NFPA 2016 STANDARDS</u>			
This unit shall comply with the NFPA standards effective January 1, 2016, except for fire department specifications that differ from NFPA specifications. These exceptions shall be set forth in the Statement of Exceptions. Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus. All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points shall be identified on the customer approval print and are shown as approximate. Actual location(s) shall be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.			

	Bidder Complies	
	Yes	No
A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating. The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company shall designate, in writing, who is qualified to witness and certify test results. <u>NFPA COMPLIANCY</u> Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA". <u>INSPECTION CERTIFICATE</u> A third party inspection certificate for the aerial device shall be furnished upon delivery of the aerial device. The certificate shall be Underwriters Laboratories Inc. Type 1 and shall indicate that the aerial device has been inspected on the production line and after final assembly. Visual structural inspections shall be performed on all welds on both aluminum and steel ladders. On critical weld areas, or on any suspected defective area, the following tests shall be conducted: • Magnetic particle inspection shall be conducted on steel aerials to assure the integrity of the weldments and to detect any flaws or weaknesses. Magnets shall be placed on each side of the weld while iron powder is placed on the weld itself. The powder shall detect any crack that may exist. This test shall conform to ASTM E709 and be performed prior to assembly of the aerial device. • A liquid penetrant test shall be conducted on aluminum aerials to assure the integrity of the weldments and to detect any flaws or weaknesses. This test shall conform to ASTM E165 and be performed prior to assembly of the aerial device. • Ultrasonic inspection shall be conducted on all aerials to detect any flaws in pins, bolts and other critical mounting components. In addition to the tests above, functional tests, load tests, and stability tests shall be performed on all aerials. These tests shall determine any unusual deflection, noise, vibration, or instability characteristics of the unit. <u>PUMP TEST</u> The pump shall be tested, approved and certified by Underwriter's Laboratory at the manufacturer's expense. The test results and the pump manufacturer's certification of		

	Bidder Complies	
	Yes	No
hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the manufacturer's record of pump construction details shall be forwarded to the Fire Department. <u>GENERATOR TEST</u> If the unit has a generator, the generator shall be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery. <u>BREATHING AIR TEST</u> If the unit has breathing air, the apparatus manufacturer shall draw an air sample from the air system and certify that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>. <u>VEHICLE INSPECTION PROGRAM CERTIFICATION</u> To assure the vehicle is built to current NFPA 1901 standards, the apparatus, in its entirety, shall be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus (no exception). A placard shall be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit. <u>AFTERMARKET SUPPORT WEBSITE</u> A Customer Service website shall provide authorized dealers access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool shall provide the authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips. This website shall also be accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized dealer for additional support and service. The website shall provide the following to the designated individuals: - Authorized dealer only - ability to access truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc. - Authorized dealer and customer - parts look-up capability, with the aid of digital photographs, part drawings, and assembly drawings. - Authorized dealer only - ability to electronically submit warranty claims directly to the factory for reimbursement.		

	Bidder Complies	
	Yes	No
- Authorized dealer only - accessibility to multiple dealer reports that allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts. - Authorized dealer and customer - access to all currently published Operation and Maintenance and Service publications. - Authorized dealer only - access to manufacturer Service Bulletins and Work Instructions containing information on current service topics and recommendations provided. - Authorized dealer and customer - access to upcoming training classes offered by the manufacturer. - Authorized dealer only - access to interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components. - Authorized dealer only - access to customer service articles, corporate news, quarterly newsletters, and key contacts. <u>BID BOND NOT REQUESTED</u> A bid bond shall not be included. If requested, the following shall apply: All bidders shall provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail. <u>PERFORMANCE BOND NOT REQUESTED</u> A performance bond shall not be included. If requested at a later date, one shall be provided to you for an additional cost and the following shall apply:		

	Bidder Complies	
	Yes	No
The successful bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter. Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates shall be made available, and a final firm delivery date shall be provided as soon as possible. <u>APPROVAL DRAWING</u> A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc. A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing. <u>ELECTRICAL WIRING DIAGRAMS</u> Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided. <u>CHASSIS</u> Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required. <u>WHEELBASE</u> The wheelbase of the vehicle shall be no greater than 271.00.		

	Bidder Complies	
	Yes	No
<u>GVW RATING</u> The gross vehicle weight rating shall be a minimum of 76,640#. <u>FRAME</u> The chassis frame shall be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails shall have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail shall have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails shall be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges. <u>FRAME REINFORCEMENT</u> In addition, a mainframe internal liner shall be provided. The liner shall be an internal "C" design that steps to an internal "L" design over the rear axle. It shall be heat-treated steel measuring 12.50" x 3.00" x 0.25" through the front portion of the liner, stepping to 9.38" x 3.00" x 0.25" through the rear portion of the liner. Each liner shall have a section modulus of 13.58 cubic inches, yield strength of 110,000 psi, and rbm of 1,494,042 in-lb. Total rbm at wheelbase center shall be 4,391,869 in-lb. The frame liner shall be mounted inside of the chassis frame rail and extend the full length of the frame. <u>FRONT NON DRIVE AXLE</u> The front axle shall be of the independent suspension design with a ground rating of 24,000 lb. Upper and lower control arms shall be used on each side of the axle. Upper control arm castings shall be made of 100,000-psi yield strength 8630 steel and the lower control arm casting shall be made of 55,000-psi yield ductile iron. The center cross members and side plates shall be constructed out of 80,000-psi yield strength steel. Each control arm shall be mounted to the center section using elastomer bushings. These rubber bushings shall rotate on low friction plain bearings and be lubricated for life. Each bushing shall also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations. There shall be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.		

	Bidder Complies	
	Yes	No
The upper control arm shall be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load. Camber at load shall be 0 degrees for optimum tire life. The ball joint bearing shall be of low friction design and be maintenance free. Toe links that are adjustable for alignment of the wheel to the center of the chassis shall be provided. The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle. The steering linkage shall provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase. The axle shall have a turning angle of up to 45 degrees. <u>FRONT SUSPENSION</u> Front independent suspension shall be provided with a minimum ground rating of 24,000 lb. The independent suspension system shall be designed to provide maximum ride comfort. The design shall allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment. Each wheel shall have a torsion bar type spring. In addition, each front wheel end shall also have energy absorbing jounce bumpers to prevent bottoming of the suspension. The suspension design shall be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms. The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side. The independent suspension shall have gone through a durability test that simulated a minimum of 140,000 miles of inner city driving. <u>FRONT SHOCK ABSORBERS</u> KONI heavy-duty telescoping shock absorbers shall be provided on the front suspension. <u>FRONT OIL SEALS</u> Oil seals with viewing window shall be provided on the front axle.		

	Bidder Complies	
	Yes	No
<u>FRONT TIRES</u> Front tires shall be Michelin 425/65R22.50 radials, 20 ply all-position XZY3 wide base tread, rated for 24,400 lb maximum axle load and 65 mph maximum speed. The tires shall be mounted on Alcoa 22.50" x 12.25" polished aluminum disc type wheels with a ten (10)stud, 11.25" bolt circle. <u>REAR AXLE</u> The rear axle shall be a tandem axle assembly, of the independent suspension design, with the ability to support a mechanical rear axle steering system. Tandem rear axles shall have a ground rating of 52,640 lb. The rear axles shall be designed for specific use of the independent suspension. The rear independent suspension driving axles shall be equipped with a carrier reduction of 1.69 to 1.00 with a planetary wheel end reduction of 3.55 to 1.00. Driving torque shall be transmitted from the center differential to the planetary wheel drive by means of a half shaft. Oil fills and level checks shall be required at the center differential and the planet wheel end locations. An inter-axle differential, which divides torque evenly between axles, shall be provided with an indicator light mounted on the cab instrument panel. <u>REAR AXLE STEERING</u> The tandem rear axle assembly shall include a mechanical rear steering system. The mechanical rear steering system shall be applied to both rear axles. The steering geometry shall be designed to minimize tire scrub of the rear tandem axle tires while reducing the overall turning diameter of the apparatus. The mechanical rear steering system shall not use electronic controls and shall not have a means to be disengaged. Coordinated steering is the only steering mode supported by the mechanical steering system. Rear steering system is actuated by a mechanical means of connecting the front master/slave steering gear system to a rear axle master/slave steering gear system. <u>TOP SPEED OF VEHICLE</u> NFPA 1901, 2016 edition requires limits on the top speed of vehicles. NFPA 4.15.2 requires that the maximum top speed of fire apparatus with a GVWR over 26,000 lb shall not exceed either 68 mph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. NFPA 4.15.3 requires that if the combined water tank and foam agent tank on the fire apparatus exceed 1250 gallons or the GVWR of the vehicle is over 50,000 lb, the maximum top speed of the apparatus shall not exceed either 60 mph or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus,		

	Bidder Complies	
	Yes	No
whichever is lower. It is the intention of the standard to improve safety by limiting the speed of all apparatus to 68 mph, and tankers or heavy apparatus to 60 mph. By requesting an exception to this requirement, the purchasing authority is consciously choosing to operate their apparatus at speeds above the limits designated as safe speeds by the NFPA Technical Committee on Fire Department Apparatus. The top speed of the apparatus as manufactured exceeds the NFPA requirements. Per fire department specification of a top speed that exceeds NFPA requirements, the apparatus shall be non-compliant to NFPA 1901 standards at time of contract execution. A rear axle ratio shall be furnished to allow the vehicle to reach an approximate top speed of 65 MPH. <u>REAR SUSPENSION</u> The rear suspension shall be a independent type with a minimum ground rating of 52,640 lbs. The independent suspension shall be configured with upper and lower control arms with a spring seat for a coil spring mounted to the lower control arm. The spring tower shall be integrated into the suspension frame mount. Each control arm has elastomeric bushings at the inner pivot locations with a ball joint bearing at the outer pivot location. All suspension pivot joints shall be of a maintenance free design. The rear independent suspension shall be provided with steering toe links providing tow adjustments and maintaining wheel control throughout the range of wheel travel. The independent suspension shall be designed to provide maximum ride quality when traveling at highway speeds over improved roads or a moderate speeds over secondary road surfaces with minimal transfer of shock and vibration to the apparatus. Each independent suspension shall utilize a coil type of spring. The design shall allow for removal of the spring without the use of any spring compression. The rear suspension shall provide a minimum wheel travel of 10.00", 6.00" jounce and 4.00" of rebound. <u>REAR OIL SEALS</u> Oil seals shall be provided on the rear axle(s). <u>REAR TIRES</u> Rear tires shall be four (4) Michelin super single 445/65R22.5 radials, 20 ply all position XZY3 wide base tread, rated for 52,640 lb maximum axle load and 65 mph maximum speed. The tires shall be mounted on 22.50" x 13.00" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.		

	Bidder Complies	
	Yes	No
<u>TIRE BALANCE</u> All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights. <u>TIRE PRESSURE MANAGEMENT</u> There shall be a RealWheels LED AirSecure™ tire alert pressure management system provided, that shall monitor each tire's pressure. A sensor shall be provided on the valve stem of each tire for a total of 10 tires. The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start to flash. <u>CHROME LUG NUT COVERS</u> Chrome lug nut covers shall be supplied on front and rear wheels. <u>FRONT HUB COVERS</u> Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided. <u>MUD FLAPS</u> Mud flaps shall be installed behind the front and rear wheels of the apparatus. <u>WHEEL COVERS (REAR)</u> Stainless steel wheel covers shall be furnished on the rear tandem wheels. <u>WHEEL CHOCKS</u> There shall be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks with easy-grip handle provided. <u>Wheel Chock Brackets</u> There shall be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets shall be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets shall be mounted rearward of the left side rear tire. <u>ANTI-LOCK BRAKE SYSTEM</u> The vehicle shall be equipped with a Wabco 4S4M, anti-lock braking system. The ABS shall provide a four (4) channel anti-lock braking control on both the front and rear wheels (rear tandem wheels). A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit then		

	Bidder Complies	
	Yes	No
shall reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control. <u>BRAKES</u> The service brake system shall be full air type. The front brakes shall be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system shall be certified, third party inspected, for improved stopping distance. The rear brakes shall be Bendix®, Model ES1657D, 16.50" x 7.00" cam operated with automatic slack adjusters. <u>AIR COMPRESSOR, BRAKE SYSTEM</u> The air compressor shall be a Wabco single piston compressor with a 26.8 CI displacement. <u>BRAKE SYSTEM</u> The brake system shall include: • Brake treadle valve • Heated automatic moisture ejector on air dryer • Total air system capacity of 6,408 cubic inches • Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi • Spring set parking brake system • Parking brake operated by a push-pull style control valve • A parking "brake on" indicator light on instrument panel • Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi • A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) • 1/4 turn drain valves on each air tank The air tank shall be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank shall be mounted with stainless steel brackets (no exception). <u>BRAKE SYSTEM AIR DRYER</u> The air dryer shall be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.		

		Bidder Complies	
		Yes	No
<u>BRAKE LINES</u>			
Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.			
<u>AIR INLET</u>			
One (1) air inlet with 3D series male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located forward in the driver side lower step well of cab. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system. A mating female fitting shall also be provided with the loose equipment.			
<u>RECESSED BOX FOR AIR FITTING</u>			
One (1) air inlet shall have an aluminum treadplate recessed box provided. The box(es) shall allow the air fitting to be recessed inside the stepwell to prevent damage. forward in driver side step well of cab..			
<u>ALL WHEEL LOCK-UP</u>			
An additional all wheel lock-up system shall be installed which applies air to the front brakes only. The standard spring brake control valve system shall be used for the rear.			
<u>ENGINE</u>			
The chassis shall be powered by an electronically controlled engine as described below:			
Make:	Paccar		
Model:	MX13		
Power:	510 hp at 1600rpm		
Torque:	1850 lb-ft at 1000rpm		
Governed Speed:	1900 rpm		
Emissions Certification:	EPA 2021		
Fuel:	Diesel		
Cylinders:	Six (6)		
Displacement:	12.9L		
Starter:	DP60		
Fuel Filters:	Dual cartridge style with check valve, water separator, and water in fuel sensor		
The engine shall include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system shall give the owner or repair technician access to state of health information for various vehicle sub systems. The system shall monitor vehicle systems, engine and after treatment. The system shall illuminate a malfunction indicator light on the dash console if a problem is detected.			

	Bidder Complies	
	Yes	No
<u>HIGH IDLE</u> A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation. The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle." <u>ENGINE BRAKE</u> The compression release brake option is a fully integrated MX engine braking system. It utilizes the turbocharger and backpressure valve, but adds in a hydraulically operated compression brake to increase overall retarding power. To maximize the effectiveness of the compression brake the MX engine brake system works in conjunction with the turbocharger and back pressure valve. The driver shall be able to turn the engine brake system on/off and have a high, medium and low setting <u>CLUTCH FAN</u> A fan clutch shall be provided. The fan clutch shall be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position. <u>ENGINE AIR INTAKE</u> The engine air intake shall be located above the engine cooling package. It shall draw fresh air from the front of the apparatus through the radiator grille. A stainless steel metal screen shall be installed at the inlet of the air intake system that shall meet NFPA 1901 requirements. The air cleaner and stainless steel screen shall be easily accessible by tilting the cab. <u>EXHAUST SYSTEM</u> The exhaust system shall include a Single Module™ aftertreatment device to meet current EPA standards. The exhaust system shall be stainless steel from the turbo to the inlet of the aftertreatment device, and shall be 5.00" in diameter. An insulation wrap shall be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust shall terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.		

	Bidder Complies	
	Yes	No
<u>RADIATOR</u> The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards. For maximum corrosion resistance and cooling performance, the entire radiator core shall be constructed using long life aluminum alloy. The radiator core shall consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. No solder joints or leaded material of any kind shall be acceptable in the core assembly. The radiator core shall have a minimum front area of 1060 square inches. Supply tank shall be made of heavy duty glass-reinforced nylon and the return tank shall be made of aluminum. Both tanks shall be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There shall be a full steel frame around the inserts to enhance cooling system durability and reliability. The radiator shall be compatible with commercial antifreeze solutions. The radiator assembly shall be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain. The radiator shall include a de-aeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15 psi pressure relief cap. A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system. Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator. <u>COOLANT LINES</u> Gates, or Goodyear, rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer. Hose clamps shall be stainless steel constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose. <u>FUEL TANK</u> A 65 gallon fuel tank shall be provided and mounted at the rear of the chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank shall be mounted with stainless steel straps (no exception).		

	Bidder Complies	
	Yes	No
A 0.75" drain plug shall be provided in a low point of the tank for drainage. A fill inlet shall be located on the left hand side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only." A 0.50" diameter vent shall be provided running from top of tank to just below fuel fill inlet. The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume. All fuel lines shall be provided as recommended by the engine manufacturer. <u>DIESEL EXHAUST FLUID TANK</u> A 7.3 gallon diesel exhaust fluid (DEF) tank shall be provided and mounted under the cab on the driver's side. A fill inlet shall be provided on the driver's side of the cab. The door shall be vertically hinged and secured by a SouthCo C2 chrome raised trigger lever latch and be painted. The tank shall meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing. <u>FUEL FILL DOOR</u> Fuel fill door shall be painted job color. <u>TRANSMISSION</u> An Allison 6th generation, Model EVS 4500P, electronic, torque converting, automatic transmission shall be provided. The transmission shall be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display shall indicate when service is due. Two (2) PTO openings shall be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock). A transmission temperature gauge with amber light and buzzer shall be installed on the cab instrument panel. <u>TRANSMISSION SHIFTER</u> A six (6)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.		

	Bidder Complies	
	Yes	No
The transmission ratio shall be: 1st - 4.70 to 1.00, 2nd - 2.21 to 1.00, 3rd - 1.53 to 1.00, 4th - 1.00 to 1.00, 5th - 0.76 to 1.00, 6th - 0.67 to 1.00, R - 5.55 to 1.00. <u>TRANSMISSION COOLER</u> A Modine plate and fin transmission oil cooler shall be provided using engine coolant to control the transmission oil temperature. <u>DRIVELINE</u> Drivelines shall be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts shall be dynamically balanced before installation. A splined slip joint shall be provided in each driveshaft where the driveline design requires it. The slip joint shall be coated with Glidecoat® or equivalent. <u>STEERING</u> Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, shall be provided. For reduced system temperatures, the power steering shall incorporate an air to oil cooler and Paccar hydraulic pump with integral pressure and flow control. All power steering lines shall have wire braded lines with crimped fittings. A tilt and telescopic steering column shall be provided to improve fit for a broader range of driver configurations. <u>STEERING WHEEL</u> The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design. <u>BUMPER</u> A one (1) piece aluminum bumper minimum of 10.00" high and 45 degree corners containing a 3/8" bend radius and 1.50" top and bottom flange shall be attached to the modular frame extension. The bumper shall be extended 15.00" from front face of cab. It shall have fully covered stabilizer cylinders that tip within a pocket inside the covers allowing the bumper to be a single wrap around piece. The bumper shall be metal finished and painted job color. <u>Gravel Pan</u> A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face. The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate. <u>LIFT AND TOW MOUNTS</u> Mounted to the frame extension shall be lift and tow mounts. The lift and tow mounts shall be designed and positioned to adapt to certain tow truck lift systems.		

	Bidder Complies	
	Yes	No
The lift and tow mounts with eyes shall be painted the same color as the frame. <u>TOW HOOKS</u> No tow hooks are to be provided. This truck shall be equipped with a lift and tow package with integral tow eyes. <u>FRONT BUMPER UL-LX COATING</u> Protective black UL-LX® coating shall be provided on the outside exterior of the top front bumper flange. It shall not be sprayed on the underside of the flange. The lining shall be properly installed by an authorized UL-LX dealer. <u>CAB</u> The cab shall be designed specifically for the fire service and manufactured by the chassis builder. The cab shall be built by the apparatus manufacturer in a facility located on the manufacturer's premises (no exception). For reasons of structural integrity and enhanced occupant protection, the cab shall be a heavy duty design, constructed to the following minimal standards. The cab shall have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar shall be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar shall be constructed from 0.13" wall extrusions. The rear wall shall be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members shall run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly. The front of the cab shall be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support shall run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin. The cab floors shall be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area shall also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing shall run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.		

	Bidder Complies	
	Yes	No
The cab shall be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability (no exception). The overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed shall be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension shall increase the overall height listed. The floor to ceiling height inside the crew cab shall be 54.50" in the center and outboard positions. The crew cab floor shall measure 46.00" from the rear wall to the back side of the rear facing seat risers. The medium block engine tunnel, at the rearward highest point (knee level), shall measure 61.50" to the rear wall. The big block engine tunnel shall measure 51.50" to the rear wall. The crew cab shall be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants. The cab shall be a full tilt cab style. A 3-point cab mount system with rubber isolators shall improve ride quality by isolating chassis vibrations from the cab. <u>CAB ROOF DRIP RAIL</u> For enhanced protection from inclement weather, a drip rail shall be furnished on the sides of the cab. The drip rail shall be painted to match the cab roof, and bonded to the sides of the cab. The drip rail shall extend the full length of the cab roof. <u>INTERIOR CAB INSULATION</u> The cab shall include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation. <u>FENDER LINERS</u> Full circular inner fender liners in the wheel wells shall be provided. <u>PANORAMIC WINDSHIELD</u> A one (1)-piece safety glass windshield shall be provided with over 2,775 square inches of clear viewing area. The windshield shall be full width and shall provide the occupants with a panoramic view. The windshield shall consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer shall provide superior chip resistance. The middle safety laminate layer shall prevent the windshield glass pieces from detaching in the event of breakage. The inner light shall provide yet another chip resistant layer. The cab windshield shall be bonded to the aluminum windshield frame using a urethane adhesive. A		

	Bidder Complies	
	Yes	No
custom frit pattern shall be applied on the outside perimeter of the windshield for a finished automotive appearance. <u>WINDSHIELD WIPERS</u> Three (3) electric windshield wipers with washer shall be provided that meet FMVSS and SAE requirements. The washer reservoir shall be able to be filled without raising the cab. <u>ENGINE TUNNEL</u> Engine hood side walls shall be constructed of 0.375" aluminum. The top shall be constructed of 0.125" aluminum and shall be tapered at the top to allow for more driver and passenger elbow room. The engine hood shall be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards. <u>INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)</u> The interior rear wall of the crew cab shall have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats shall be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change. <u>CAB REAR WALL EXTERIOR COVERING</u> The exterior surface of the rear wall of the cab shall be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered. <u>CAB LIFT</u> A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Lift controls shall be located on the front area of the body in a convenient location. The cab shall be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab shall be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms shall return to the normally closed and locked position. The hydraulic cylinders shall be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.		

	Bidder Complies	
	Yes	No
For increased safety, a redundant mechanical stay arm shall be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device shall be manually stowed to its original position before the cab can be lowered. <u>Cab Lift Interlock</u> The cab lift system shall be interlocked to the parking brake. The cab tilt mechanism shall be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism shall be disabled. The cab lift safety system shall also be interlocked to the front stabilizers in the bumper. The cab tilt mechanism shall be active only when the front stabilizers are fully stowed, and fully tilted outboard. The cab tilt mechanism shall not allow the front stabilizers to be tilted inboard until the cab has been fully lowered and locked into position. <u>GRILLE</u> A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, shall be provided on the front center of the cab. <u>DOOR JAMB SCUFFPLATES</u> All cab door jambs shall be furnished with a 1.00" polished stainless steel scuffplate, mounted on the striker side of the jamb. <u>SIDE OF CAB MOLDING</u> Chrome molding shall be provided on both sides of cab. <u>MIRRORS</u> A Retractable, dual vision, motorized, west coast style mirror, with chrome finish, shall be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass shall be heated and adjustable with remote control within reach of the driver. An amber marker light shall be provided on each mirror head. <u>FRONT CROSS VIEW MIRROR</u> There shall be one (1) 8.00" diameter eyeball mirror provided on the passenger side front corner of the cab. It shall be mounted high, above the windshield. The mirror shall provide the driver with a view of the front bumper and the front of the truck. The mirror housing, tubing, clamps and hardware shall be constructed of corrosion resistant stainless steel. Mirror head shall be K-10, EB50S-S, 8.00" stainless steel housing with three (3) arms. <u>DOORS</u> To enhance entry and egress to the cab, the forward cab door openings shall be a minimum of 37.50" wide x 63.37" high. The crew cab doors shall be located on the sides of the cab and shall		

	Bidder Complies	
	Yes	No
be constructed in the same manner as the forward cab doors. The crew cab door openings shall be a minimum of 34.30" wide x 63.37" high. The forward cab and crew cab doors shall be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins shall be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle shall be provided on the exterior of each cab door. The finish of the door handle shall be chrome/black. The exterior handle shall be designed specifically for the fire service to prevent accidental activation, and shall provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door shall also be provided with an interior flush, open style paddle handle that shall be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles shall provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands. The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys shall be Model 751. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed. A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf shall be provided on all cab doors. There shall be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit. A chrome handle shall be provided on the inside of each cab door for ease of entry. A red webbed grab handle shall be installed on the crew cab door stop strap. The grab handles shall be securely mounted. The bottom cab step at each cab door location shall be located below the cab doors and shall be exposed to the exterior of the cab. <u>Door Panels</u> The inner cab door panels shall be constructed out of brushed stainless steel. <u>ELECTRIC OPERATED CAB DOOR WINDOWS</u> All four (4) cab doors shall be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door shall have four (4) switches, one (1) to control each door window. Each switch shall allow intermittent or auto down operation for ease of use. Auto down operation shall be actuated by holding the window down switch for approximately 1 second.		

	Bidder Complies	
	Yes	No
<u>CAB STEPS</u> A dual step shall be provided below each cab and crew cab door. The steps shall be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps shall be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps shall be a minimum 25.00" wide, and the crew cab steps shall be 21.50" wide with a 7.00" minimum depth. The step design raises the middle step higher and closer to the cab floor, resulting in a 11.50" distance from the step to cab floor in the cab and a 10.25" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step shall be approximately 14.00" and from first step to middle step shall be approximately 12.00". The vertical surface of the upper step well shall be aluminum treadplate. The first step shall be lit by a white 12 volt DC LED light provided on the step. <u>CAB EXTERIOR HANDRAILS</u> A Hansen knurled aluminum handrail shall be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. Each handrail shall be provided with red LED lights. The lights shall be activated when the parking brake is applied. The LED lights may be load managed. <u>STEP LIGHTS</u> There shall be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps. • One (1) light for the left access steps. • Two (2) lights for the left side crew cab access steps. • Two (2) lights for the right side crew cab access steps. • One (1) light for the right side access step. In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The lights shall be activated when the battery switch is on and the adjacent door is opened. <u>FENDER CROWNS</u> Stainless steel fender crowns shall be installed at the cab wheel openings. <u>GRAB HANDLE(S)</u> There shall be two (2) chrome grab handle(s) mounted in the interior of the cab one (1) on the driver and one (1) on the officer side door pan vertical near the upper door panel hinged side, to work as a high grab handle into cab.. The grab handle(s) shall be securely mounted.		

	Bidder Complies	
	Yes	No
<u>CREW CAB WINDOW</u> One (1) fixed window with tinted glass shall be provided on the passenger side of the cab, to the rear of the front cab door. The window shall be sized to enhance light penetration into the cab interior and shall measure 18.70" wide x 23.75" high. There shall be no window provided on the driver side of the cab. <u>RIGHT SIDE STORAGE COMPARTMENT</u> Provided on the right side of the cab, to the rear of the crew cab access door, shall be a storage compartment. The compartment shall be 13.75" wide x 38.00" high x 15.00" deep. There shall be one (1) double pan door painted to match the cab exterior with a non-locking D-ring latch. A web strap shall be used as a door stop. The compartment interior shall be painted to match the cab interior. <u>Compartment Light</u> There shall be one (1) white LED strip light provided on the hinged side of the compartment door opening. The lighting shall be controlled by an automatic door switch. <u>CUP HOLDER</u> There shall be two (2) cup holder(s) provided. Each cup holder shall have self-adjusting fingers that automatically grip beverage containers of various sizes. A recess in the cup holder shall allow it to hold beverage containers with handles. The cup holder(s) shall be located driver and officer side of cab. <u>CAB DASH</u> The driver side dash, switch panel located to the right of the driver, and center console shall be constructed of aluminum and painted fire smoke gray. The officer side dash shall be a flat top design with an upper beveled edge to provide easy maintenance and shall be constructed out of aluminum and painted to match the cab interior. The instrument gauge cluster shall be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster. <u>MOUNTING PLATE ON ENGINE TUNNEL</u> Equipment installation provisions shall be installed on the engine tunnel. A 0.188" smooth aluminum plate shall be bolted to the top surface of the engine tunnel. The plate shall follow the contour of the engine tunnel and shall run the entire length of the engine tunnel. The plate shall be spaced off the engine tunnel 1.00" to allow for wire routing below the plate. The mounting surface shall be painted to match the cab interior.		

	Bidder Complies	
	Yes	No
<u>CAB INTERIOR</u> The cab interior shall be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel shall be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls shall be painted aluminum. The rear wall shall be painted aluminum. Headliner shall be installed in both forward and rear cab sections. Headliner material shall be vinyl. A sound barrier shall be part of its composition. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling. Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs. All wiring shall be placed in metal raceways. Routing through holes in tubing shall not be accepted due to chaffing that installation shall cause. <u>CAB INTERIOR UPHOLSTERY</u> The cab interior upholstery shall be 36 oz dark silver gray vinyl. <u>CAB INTERIOR PAINT</u> The cab interior metal surfaces, excluding the rear heater panels, shall be painted fire smoke gray, vinyl texture paint. The rear heater panels shall be painted black, vinyl textured paint. <u>CAB FLOOR</u> The cab and crew cab floor areas shall be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler. The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels. <u>DEFROST/AIR CONDITIONING SYSTEM</u> A ceiling mounted combination heater, defroster and air conditioning system shall be installed in the cab above the engine tunnel area. <u>Cab Defroster</u> A 54,000 BTU heater-defroster unit with 690 SCFM of air flow shall be provided inside the cab. The heater-defrost shall be installed in the forward portion of the cab ceiling. Air outlets shall be strategically located in the cab header extrusion per the following:		

	Bidder Complies	
	Yes	No
• One (1) adjustable shall be directed towards the left side cab window • One (1) adjustable shall be directed towards the right side cab window • Six (6) fixed outlets shall be directed at the windshield The defroster shall be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system shall meet or exceed SAE J382 requirements. <u>Cab/Crew Auxiliary Heater</u> There shall be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions. <u>Air Conditioning</u> A condenser shall be a 59,644 BTU output that meets and exceeds the performance specification shall be mounted on the radiator. Mounting the condenser below the cab or body would reduce the performance of the system and shall not be acceptable. The air conditioning system shall be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test shall be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours. The evaporator unit shall be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator shall include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum shall be covered with a metal cover painted to match the cab interior. The evaporator unit shall have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications. Adjustable air outlets shall be strategically located on the forward plenum cover per the following: • Four (4) shall be directed towards the seating position on the left side of the cab • Four (4) shall be directed towards the seating position on the right side of the cab Adjustable air outlets shall be strategically located on the rear plenum cover per the following: • Minimum of five (5) shall be directed towards crew cab area A high efficiency particulate air (HEPA) filter shall be included for the system. Access to the filter cover shall be hinged with two (2) thumb latches.		

	Bidder Complies	
	Yes	No
The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician. <u>Climate Control</u> An automotive style controller shall be provided to control the heat and air conditioning system within the cab. The controller shall have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control. The system shall control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature. The AC system shall be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob shall engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position. The system controller shall be located within panel position #12. <u>Gravity Drain Tubes</u> Two (2) condensate drain tubes shall be provided for the air conditioning evaporator. The drip pan shall have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps shall be provided. <u>SUN VISORS</u> There shall be two (2) vinyl covered sun visors provided. The sun visors shall be located above the windshield with one (1) mounted on each side of the cab. There shall be a black plastic thumb latch provided to help secure each sun visor in the stowed position. <u>GRAB HANDLE</u> A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The officer's side grab handle shall be mounted on the lower portion of the door post. The grab handle shall be securely mounted to the post area between the door and windshield. <u>ENGINE COMPARTMENT LIGHTS</u> There shall be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination. These light(s) shall be activated automatically when the cab is raised. <u>ACCESS TO ENGINE DIPSTICKS</u> For access to the engine oil and transmission fluid dipsticks, there shall be a door on the engine tunnel, inside the crew cab. The door shall be on the rear wall of the engine tunnel, on the vertical surface.		

	Bidder Complies	
	Yes	No
The engine oil dipstick shall allow for checking only. The transmission dipstick shall allow for both checking and filling. The door shall have a rubber seal for thermal and acoustic insulation. One (1) flush lift and turn latch shall be provided on the access door. <u>CAB SAFETY SYSTEM</u> The cab shall be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and shall include the following: • A supplemental restraint system (SRS) sensor shall be installed on a structural cab member behind the instrument panel. The SRS sensor shall perform real time diagnostics of all critical subsystems and shall record sensory inputs immediately before and during a side roll or frontal impact event. • A slave SRS sensor shall be installed in the cab to provide capacity for eight (8) crew cab seating positions. • A fault-indicating light shall be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system. • A driver side front air bag shall be mounted in the steering wheel and shall be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt. • A passenger side knee bolster air bag shall be mounted in the modesty panel below the dash panel and shall be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt. • Air curtains shall be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall. • Suspension seats shall be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event. • Seat belts shall be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event. <u>Frontal Impact Protection</u> The SRS system shall provide protection during a frontal or oblique impact event. The system shall activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis shall have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor shall activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected (no exception).		

	Bidder Complies	
	Yes	No
The SRS system shall deploy the following components in the event of a frontal or oblique impact event: • Driver side front air bag • Passenger side knee bolster air bag • Air curtains mounted in the outboard bolster of outboard seat backs • Suspension seats shall be retracted to the lowest travel position • Seat belts shall be pre-tensioned to firmly hold the occupant in place <u>Side Roll Protection</u> The SRS system shall provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system shall analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints. The SRS system shall deploy the following components in the event of a side roll: • Air curtains mounted in the outboard bolster of outboard seat backs • Suspension seats shall be retracted to the lowest travel position • Seat belts shall be pre-tensioned to firmly hold the occupant in place <u>SEATING CAPACITY</u> The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) shall be five (5). <u>DRIVER SEAT</u> A seat shall be provided in the cab for the driver. The seat design shall be a cam action type, with air suspension. For increased convenience, the seat shall include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control shall be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat shall have an adjustable reclining back. The seat back shall be a high back style with side bolster pads for maximum support. For optimal comfort, the seat shall be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat shall include the following features incorporated into the side roll protection system: • Side air curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stowed position. • A suspension seat safety system shall be included. When activated in the event of a side roll, this system shall pretension the seat belt and retract the seat to its lowest travel position. The seat shall be furnished with a 3-point, shoulder type seat belt.		

	Bidder Complies	
	Yes	No
<u>OFFICER SEAT</u> A seat shall be provided in the cab for the passenger. The seat shall be a fixed type, with no suspension. For optimal comfort, the seat shall be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat back shall be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity shall be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat shall include the following features incorporated into the side roll protection system: • Side air curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stowed position. • A seat safety system shall be included. When activated, this system shall pretension the seat belt. The seat shall be furnished with a 3-point, shoulder type seat belt. <u>RADIO COMPARTMENT</u> A radio compartment shall be provided under the officer's seat. The inside compartment dimensions shall be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure. A drop-down door with one (1) lift and turn latch shall be provided for access. The compartment shall be constructed of smooth aluminum and painted to match the cab interior. <u>REAR FACING LEFT SIDE CABINET</u> A rear facing cabinet shall be provided in the crew cab at the left side outboard position. The cabinet shall be 23.00" wide x 40.25" high x 26.75" deep. The interior door shall be web netting. The netting is to be made with 1.00" wide nylon material with 2.00" openings. The nylon webbing shall be permanently fastened at the bottom side of the cabinet and have spring clip and hook fasteners on the opposite side to secure it. The clear door opening shall be 16.00" wide x 37.25" high. The cabinet shall also provide access from outside the cab with one (1) double pan door painted to match the cab exterior with a locking D-ring latch with #751 key. A web strap shall be provided as a door stop. The door shall be located on the side of the cab over the wheelwell. The clear door opening shall be 17.00" wide x 34.00" high. The cabinet shall include one (1) infinitely adjustable shelf with a 0.75" up-turned lip painted to match the cab interior.		

	Bidder Complies	
	Yes	No
The cabinet shall include no louvers. The exterior access shall be provided with a polished stainless steel scuffplate on the lower door frame. The cabinet shall be constructed of smooth aluminum and painted to match the cab interior. <u>Cabinet Light</u> There shall be one (1) Amdor H2O LED strip light installed on the left side of the exterior cabinet door opening. The lights shall be controlled by an automatic door switch and a rocker switch on the cabinet exterior. <u>REAR FACING PASSENGER SIDE OUTBOARD SEAT</u> There shall be one (1) rear facing seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat shall be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat back shall be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity shall be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat shall include the following features incorporated into the side roll protection system: • Side air curtain shall be mounted integral to the outboard bolster of the seat back. The air curtain shall be covered by a decorative panel when in the stowed position. • A seat safety system shall be included. When activated, this system shall pretension the seat belt. The seat shall be furnished with a 3-point, shoulder type seat belt. <u>FORWARD FACING CENTER SEATS</u> There shall be two (2) forward facing seats provided at the center position in the crew cab. For optimal comfort, the seats shall be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat backs shall be an SCBA style with 90 degree back. The SCBA cavity shall be adjustable from front to rear in 1.00" increments to accommodate different sized SCBA cylinders. Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat shall include the following features incorporated into the side roll protection system: • A seat safety system shall be included. When activated, this system shall pretension the seat belt.		

	Bidder Complies	
	Yes	No
The seats shall be furnished with a 3-point, shoulder type seat belt. <u>SEAT UPHOLSTERY</u> All seat upholstery shall be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab shall have five (5) seating positions. <u>AIR BOTTLE HOLDERS</u> All SCBA type seats in the cab shall have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket shall include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp shall constrain the SCBA bottle in the seat and shall exceed the NFPA standard of 9G. Bracket designs with manual restraints (belts, straps, buckles) that could be inadvertently left unlocked and allow the SCBA to move freely within the cab during an accident, shall not be acceptable. There shall be a quantity of four (4) SCBA brackets. <u>SEAT BELTS</u> All cab and tiller cab (if applicable) seating positions shall have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length shall meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts shall include height adjustment. This adjustment shall optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts shall be furnished with dual automatic retractors that shall provide ease of operation in the normal seating position. The 3-point shoulder type belts shall also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats shall include a 3-point shoulder type belts only. To ensure safe operation, the seats shall be equipped with seat belt sensors in the seat cushion and belt receptacle that shall activate an alarm indicating a seat is occupied but not buckled. <u>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.		

	Bidder Complies	
	Yes	No
<u>CAB DOME LIGHTS</u> There shall be four (4) dual LED dome lights with black bezels provided. Two (2) lights shall be mounted above the inside shoulder of the driver and officer and two (2) lights shall be installed and located, one (1) on each side of the crew cab. The color of the LED's shall be red and white. The white LED's shall be controlled by the door switches and the lens switch. The color LED's shall be controlled by the lens switch. In order to ensure exceptional illumination, each white LED dome light shall provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat. <u>ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS</u> The cab and crew cab dome lights shall remain on for 10 seconds for improved visibility after the doors are closed. The dome lights shall dim after 10 seconds or immediately if the vehicle's transmission is put into gear. <u>PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2016 edition, section 9.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus. The hand lights are not on the apparatus as manufactured. The fire department shall provide and mount these hand lights. <u>CAB INSTRUMENTATION</u> The cab instrument panel include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership. <u>Gauges</u> The gauge panel shall include the following ten (10) black faced gauges with black bezels to monitor vehicle performance: • Voltmeter gauge (volts): ○ Low volts (11.8 VDC) ▪ Amber caution indicator on the information center with intermittent alarm ▪ Amber caution light on gauge assembly		

	Bidder Complies	
	Yes	No
○ High volts (15.5 VDC) ▪ Amber caution indicator on the information center with intermittent alarm ▪ Amber caution light on gauge assembly ○ Very low volts (11.3 VDC) ▪ Red warning indicator on the information center with a steady alarm ▪ Amber caution light on gauge assembly ○ Very high volts (16.0 VDC) ▪ Red warning indicator on the information center with a steady alarm ▪ Amber caution light on gauge assembly • Engine Tachometer (RPM) • Speedometer MPH (Major Scale), KM/H (Minor Scale) • Fuel level gauge (Empty - Full in fractions): ○ Low fuel (1/8 full) ▪ Amber caution indicator on the information center with intermittent alarm ▪ Amber caution light on gauge assembly ○ Very low fuel (1/32 full) ▪ Red caution indicator on the information center with steady alarm ▪ Amber caution light on gauge assembly • Engine Oil pressure Gauge (PSI): ○ Low oil pressure to activate engine warning lights and alarms ▪ Red caution indicator on the information center with steady alarm ▪ Amber caution light on gauge assembly • Front Air Pressure Gauges (PSI): ○ Low air pressure to activate warning lights and alarm ▪ Red warning indicator on the information center with a steady alarm ▪ Amber caution light on gauge assembly • Rear Air Pressure Gauges (PSI): ○ Low air pressure to activate warning lights and alarm ▪ Red warning indicator on the information center with a steady alarm ▪ Amber caution light on gauge assembly • Transmission Oil Temperature Gauge (Fahrenheit): ○ High transmission oil temperature activates warning lights and alarm ▪ Amber caution indicator on the information center with intermittent alarm ▪ Amber caution light on gauge assembly • Engine Coolant Temperature Gauge (Fahrenheit): ○ High engine temperature activates an engine warning light and alarms ▪ Amber caution indicator on the information center with intermittent alarm ▪ Amber caution light on gauge assembly • Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions): ○ Low fluid (1/8 full) ▪ Amber indicator light in gauge dial		

	Bidder Complies	
	Yes	No
All gauges shall perform prove out at initial power-up to ensure proper performance. <u>Indicator Lamps</u> To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols. The following amber telltale lamps shall be present: • Low coolant • Trac cntl (traction control) (where applicable) • Check engine • Check trans (check transmission) • Aux brake overheat (Auxiliary brake overheat) • Air rest (air restriction) • Caution (triangle symbol) • Water in fuel • DPF (engine diesel particulate filter regeneration) • Trailer ABS (where applicable) • Wait to start (where applicable) • HET (engine high exhaust temperature) (where applicable) • ABS (antilock brake system) • MIL (engine emissions system malfunction indicator lamp) (where applicable) • Side roll fault (where applicable) • Front air bag fault (where applicable) The following red telltale lamps shall be present: • Warning (stop sign symbol) • Seat belt • Parking brake • Stop engine • Rack down The following green telltale lamps shall be provided: • Left turn • Right turn • Battery on The following blue telltale lamp shall be provided: • High beam		

	Bidder Complies	
	Yes	No
<u>Alarms</u> Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning message is present. Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) shall be provided whenever a caution message is present without a warning message being present. Alarm silence: Any active audible alarm shall be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms shall intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp shall act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition shall enable the steady or pulsing tones respectively. <u>Indicator Lamp and Alarm Prove-Out</u> A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out at initial power-up to ensure proper performance. <u>Control Switches</u> For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications. Headlight/Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights. Panel back lighting intensity control switch: A three (3)-position momentary rocker switch shall be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times shall allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use. Ignition switch: A three (3)-position maintained/momentary rocker switch shall be provided. The first switch position shall turn off and deactivate vehicle ignition. The second switch position shall activate vehicle ignition and shall perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position shall temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position shall terminate the alarm silence feature and reset function of cab alarm system.		

	Bidder Complies	
	Yes	No
Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation. Hazard switch shall be provided on the instrument panel or on the steering column. Heater, defroster, and air conditioning control panel. Turn signal arm: A self-canceling turn signal with high beam headlight controls shall be provided. Windshield wiper control shall include high, low, and intermittent modes. Parking brake control: An air actuated push/pull park brake control valve shall be provided. Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel. High idle engagement switch: A momentary rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged. "OK To Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement. Emergency switching shall be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included. An additional "Emergency Master" button shall be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground. <u>Custom Switch Panels</u> The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions. <u>Diagnostic Panel</u> A diagnostic panel shall be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing		

	Bidder Complies	
	Yes	No
a lower cost of ownership. Diagnostic switches shall allow ABS systems to provide blink codes should a problem exist. The diagnostic panel shall include the following: • Engine diagnostic port • Transmission diagnostic port • ABS diagnostic port • Roll sensor diagnostic port • Command Zone USB diagnostic port • ABS diagnostic switch (blink codes flashed on ABS telltale indicator) • Diesel particulate filter regeneration switch (where applicable) • Diesel particulate filter regeneration inhibit switch (where applicable) <u>Cab LCD Display</u> A digital four (4)-row by 20-character dot matrix display shall be integral to the gauge panel. The display shall be capable of showing simple graphical images as well as text. The display shall be split into three (3) sections. Each section shall have a dedicated function. The upper left section shall display the outside ambient temperature. The upper right section shall display the following, along with other configuration specific information: • Odometer • Trip mileage • PTO hours • Fuel consumption • Engine hours The bottom section shall display INFO, CAUTION, and WARNING messages. Text messages shall automatically activate to describe the cause of an audible caution or warning alarm. The LCD shall be capable of displaying multiple text messages should more than one caution or warning condition exist. <u>AIR RESTRICTION INDICATOR</u> A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm shall be provided. <u>"DO NOT MOVE APPARATUS" INDICATOR</u> A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On."		

	Bidder Complies	
	Yes	No
The same circuit that activates the Do Not Move Apparatus indicator shall activate a pulsing alarm when the parking brake is released. <u>DO NOT MOVE TRUCK MESSAGES</u> Messages shall be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages shall designate the item or items not in the stowed for vehicle travel position (parking brake released). The following messages shall be displayed (where applicable): • Do Not Move Truck • LS CAB DOOR, the left side cab door is open • LS CAB COMPT DOOR, the left side cab compartment door is open • LS CREWCAB DOOR, the left side crew cab door is open • STEP NOT STOWED, pump house step not stowed • LS TURNTABLE STEP, left side turntable step not stowed • AERIAL CONTROL DR, aerial override control compartment door is open • LS6 COMPT DR, the left side LS6 compartment door is open • LS5 COMPT DR, the left side LS5 compartment door is open • LS4 COMPT DR, the left side LS4 compartment door is open • LS3 COMPT DR, the left side LS3 compartment door is open • LS2 COMPT DR, the left side LS2 compartment door is open • LS1 COMPT DR, the left side LS1 compartment door is open • LS AIR BTL COMPT DR, the left side air bottle compartment door is open • LS BASKET STEP, the left side basket steps not stowed • STABILIZER CTRL DR, the rear stabilizer control compartment door is open • STABILIZER DEPLOYED, the stabilizers are not stowed. • LS CORD REEL DR, the left side cord reel compartment door is open • RS CORD REEL DR, the right side cord reel compartment door is open • B1 REAR COMPT DR, the rear B1 compartment door is open • TURNTBL CTRL CNSL, the turntable control console not stowed. • RS BASKET STEP, the right side basket steps not stowed • RS AIR BTL COMPT DR, the right side air bottle compartment door is open. • RS1 COMPT DR, the right side RS1 compartment door is open • RS2 COMPT DR, the right side RS2 compartment door is open • RS3 COMPT DR, the right side RS3 compartment door is open • RS4 COMPT DR, the right side RS4 compartment door is open • RS5 COMPT DR, the right side RS5 compartment door is open • RS6 COMPT DR, the right side RS6 compartment door is open • RS7 COMPT DR, the right side RS7 compartment door is open • RS CREWCAB DR, the right side crew cab door is open • RS CAB COMPT DR, the right side cab compartment door is open		

	Bidder Complies	
	Yes	No
• RS CAB DR, the right side cab door is open • LT TOWER NOT STOWED, the light tower is not stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved shall be displayed as a caution message after the parking brake is released. <u>SWITCH PANELS</u> The built-in switch panels shall be located in the lower console or overhead console of the cab. The switches shall be rocker-type and include an integral indicator light. For quick, visual indication the switch shall be illuminated whenever the switch is active. A 2-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch shall be placed below the switches. The label shall allow light to pass through the letters for improved visibility in low light conditions. Switches and light source are integral to the switch panel assembly. <u>WIPER CONTROL</u> For simple operation and easy reach, the windshield wiper control shall be an integral part of the directional light lever located on the steering column. The wiper control shall include high and low wiper speed settings, an intermittent wiper control and windshield washer switch. The control shall have a "return to park" provision, which allows the wipers to return to the stored position when not in use. <u>HOURLMETER - AERIAL DEVICE</u> The following aerial hour meter messages shall be included in the information centers: • Aerial Hours, that keeps track of the time the aerial device is in motion. • Aerial PTO Hours, that keeps track of the time the aerial master switch is on and the aerial PTO is engaged. <u>AERIAL MASTER</u> There shall be a master switch for the aerial operating electrical system provided. <u>AERIAL PTO ACTIVATION</u> The aerial PTO shall be activated when the aerial master switch is activated and the interlocks are met. <u>SPARE CIRCUIT</u> There shall be one (1) dual USB fast charge socket mounts installed on the apparatus. The above wires shall have the following features: • The positive wire shall be connected directly to the battery power. • The negative wire shall be connected to ground.		

	Bidder Complies	
	Yes	No
• Wires shall be protected to 4.8 amps at 12 volts DC. • The USB socket mount shall be switch panel #14. • Termination shall be a Blue Sea Systems part number 1045 dual USB charger socket. • Wires shall be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is applied. <u>SPARE CIRCUIT</u> There shall be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires shall have the following features: • The positive wire shall be connected directly to the battery power • The negative wire shall be connected to ground • Wires shall be protected to 15 amps at 12 volts DC • Power and ground shall terminate switch panel #14 • Termination shall be with 15 amp, power point plug with rubber cover • Wires shall be sized to 125 percent of the protection The circuit(s) may be load managed when the parking brake is set. <u>INFORMATION CENTER</u> An information center employing a 7.00" diagonal touch screen color LCD display shall be encased in an ABS plastic housing. The information center shall have the following specifications: • Operate in temperatures from -40 to 185 degrees Fahrenheit • An Optical Gel shall be placed between the LCD and protective lens • Five weather resistant user interface switches • Grey with black accents • Sunlight Readable • Linux operating system • Minimum of 1000nits rated display • Display can be changed to an available foreign language • A LCD display integral to the cab gauge panel shall be included as outlined in the cab instrumentation area. • Programmed to read US Customary <u>General Screen Design</u> Where possible, background colors shall be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background shall be used.		

	Bidder Complies	
	Yes	No
If a caution or warning situation arises the following shall occur: • An amber background/text color shall indicate a caution condition • A red background/text color shall indicate a warning condition • The information center shall utilize an "Alert Center" to display text messages for audible alarm tones. The text messages shall be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages shall cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" shall change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color shall be shown for all alert center messages. • A label for each button shall exist. The label shall indicate the function for each active button for each screen. Buttons that are not utilized on specific screens shall have a button label with no text or symbol. <u>Home/Transit Screen</u> This screen shall display the following: • Vehicle Mitigation (if equipped) • Water Level (if the water level system includes compatible communications to the information center) • Foam Level (if the foam level system includes compatible communications to the information center) • Seat Belt Monitoring Screen • Tire Pressure Monitoring (if equipped) • Digital Speedometer • Active Alarms <u>On Scene Screen</u> This screen shall display the following and shall be auto activated with pump engaged (if equipped): • Battery Voltage • Fuel • Oil Pressure • Coolant Temperature • RPM • Water Level (if equipped) • Foam Level (if equipped) • Foam Concentration (if equipped) • Water Flow Rate (if equipped) • Water Used (if equipped) • Active Alarms		

	Bidder Complies	
	Yes	No
<u>Virtual Buttons</u> There shall be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels. <u>Page Screen</u> The page screen shall display the following and allow the user to progress into other screens for further functionality: • Diagnostics ○ Faults ▪ Listed by order of occurrence ▪ Allows to sort by system ○ Interlock ▪ Throttle Interlocks ▪ Pump Interlocks (if equipped) ▪ Aerial Interlocks (if equipped) ▪ PTO Interlocks (if equipped) ○ Load Manager ▪ A list of items to be load managed shall be provided. The list shall provide a description of the load. ▪ The lower the priority numbers the earlier the device shall be shed should a low voltage condition occur. ▪ The screen shall indicate if a load has been shed (disabled) or not shed. ▪ "At a glance" color features are utilized on this screen. ○ Systems ▪ Command Zone • Module type and ID number • Module Version • Input or output number • Circuit number connected to that input or output • Status of the input or output • Power and Constant Current module diagnostic information ▪ Foam (if equipped) ▪ Pressure Controller (if equipped) ▪ Generator Frequency (if equipped) ○ Live Data ▪ General Truck Data • Maintenance ○ Engine oil and filter ○ Transmission oil and filter ○ Pump oil (if equipped) ○ Foam (if equipped) ○ Aerial (if equipped)		

	Bidder Complies	
	Yes	No
• Setup ○ Clock Setup ○ Date & Time ▪ 12 or 24 hour format ▪ Set time and date ○ Backlight ▪ Daytime ▪ Night time ▪ Sensitivity ○ Unit Selection ○ Home Screen ○ Virtual Button Setup ○ On Scene Screen Setup ○ Configure Video Mode ▪ Set Video Contrast ▪ Set Video Color ▪ Set Video Tint • Do Not Move ○ The screen shall indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices shall be indicated ▪ Driver Side Cab Door ▪ Passenger's Side Cab Door ▪ Driver Side Crew Cab Door ▪ Passenger's Side Crew Cab Door ▪ Driver Side Body Doors ▪ Passenger's Side Body Doors ▪ Rear Body Door(s) ▪ Ladder Rack (if applicable) ▪ Deck Gun (if applicable) ▪ Light Tower (if applicable) ▪ Hatch Door (if applicable) ▪ Stabilizers (if applicable) ▪ Steps (if applicable) • Notifications ○ View Active Alarms ▪ Shows a list of all active alarms including date and time of the occurrence is shown with each alarm ▪ Silence Alarms - All alarms are silenced • Timer Screen • HVAC (if equipped) • Tire Information (if equipped)		

	Bidder Complies	
	Yes	No
• Ascendant Set Up Confirmation (if equipped) Button functions and button labels may change with each screen. <u>COLLISION MITIGATION</u> There shall be a HAAS Alert®, Model HA5 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA5 cellular transponder module shall be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C. The transponder shall be connected to the vehicle's emergency master circuit and battery direct power and ground. While responding with emergency lights on, the HA5 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app. While on scene with emergency lights on, the HA5 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app. The HA5 Responder-to-Vehicle (R2V) collision avoidance system shall include the transponder and a 5 year cellular plan subscription. Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal. <u>VEHICLE DATA RECORDER</u> There shall be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line. The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs: • Vehicle Speed - MPH • Acceleration - MPH/sec • Deceleration - MPH/sec • Engine Speed - RPM • Engine Throttle Position - % of Full Throttle • ABS Event - On/Off		

	Bidder Complies	
	Yes	No
• Seat Occupied Status - Yes/No by Position • Seat Belt Buckled Status - Yes/No by Position • Master Optical Warning Device Switch - On/Off • Time - 24 Hour Time • Date - Year/Month/Day <u>Seat Belt Monitoring System</u> A seat belt monitoring system (SBMS) shall be provided on the color display. The SBMS shall be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following: • Seat Occupied & Buckled = Green LED indicator illuminated • Seat Occupied & Unbuckled = Red LED indicator with audible alarm • No Occupant & Buckled = Red LED indicator with audible alarm • No Occupant & Unbuckled = No indicator and no alarm The seat belt monitoring screen shall become active on the color display when: • The home screen is active: ○ and there is any occupant seated but not buckled or any belt buckled with an occupant. ○ and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS shall be activated. The SBMS shall include an audible alarm that shall warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park. <u>RADIO ANTENNA MOUNT</u> There shall be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed one (1) on the left side and one (1) on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap shall be installed on the mount. <u>VEHICLE CAMERA SYSTEM</u> There shall be a color vehicle camera system provided with the following: • One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse The camera images shall be displayed on the left side vehicle information center display. Audio from the microphone on the active camera shall be not provided. The following components shall be included: • One (1) SV-CW134639CAI, camera		

	Bidder Complies	
	Yes	No
• One (1) amplified speaker (if applicable) • All necessary cables <u>ELECTRICAL POWER CONTROL SYSTEM</u> The primary power distribution shall be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers shall be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers shall be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers shall be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays shall be easily accessible. Distribution centers located throughout the vehicle shall contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. Circuit protection devices, which conform to SAE standards, shall be utilized to protect electrical circuits. All circuit protection devices shall be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting). When required, automotive type fuses shall be utilized to protect electronic equipment. Control relays and solenoid shall have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA. <u>Solid-State Control System</u> A solid-state electronics based control system shall be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network shall consist of electronic modules, electronic control modules to include a see through housing, a power indicator, a status indicator and circuit indicators located near their point of use to reduce harness lengths and improve reliability. The control system shall comply with SAE J1939-11 recommended practices. The control system shall operate as a master-slave system whereas the main control module instructs all other system components. The system shall contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system shall utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership. For increased reliability and simplified use the control system modules shall include the following attributes: • Green LED indicator light for module power • Red LED indicator light for network communication stability status • Control system self test at activation and continually throughout vehicle operation • No moving parts due to transistor logic		

	Bidder Complies	
	Yes	No
• Software logic control for NFPA mandated safety interlocks and indicators • Integrated electrical system load management without additional components • Integrated electrical load sequencing system without additional components • Customized control software to the vehicle's configuration • Factory and field programmable to accommodate changes to the vehicle's operating parameters To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules shall meet the following specifications: • Module circuit board shall meet SAE J771 specifications • Operating temperature from -40C to +70C • Storage temperature from -40C to +70C • Vibration to 50g IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter) Operating voltage from eight (8) volts to 32 volts DC The main controller shall activate status indicators and audible alarms designed to provide warning of problems before they become critical. <u>Circuit Protection and Control Diagram</u> Copies of all job-specific, computer network input and output (I/O) connections shall be provided with each chassis. The sheets shall indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information. <u>On-Board Electrical System Diagnostics</u> The on-board information center shall include the following diagnostic information: • Text description of active warning or caution alarms • Simplified warning indicators • Amber caution indication with intermittent alarm • Red warning indication with steady tone alarm Advanced diagnostic feature shall be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process. <u>TCU Module with WiFi</u> An in cab module shall provide WiFi wireless interface and data logging capability (no exception). The WiFi interface shall comply with IEEE 802.11 b/g/n capabilities while		

	Bidder Complies	
	Yes	No
communicating at 2.4 Gigahertz. The module shall communicate through a white WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna. The module shall transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level shall allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level shall allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system. The TCU capability shall record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data shall be recorded at the time the fault occurs. The data TCU shall provide up to 2 Gigabytes of data storage. The TCU shall provide a means to download the TCU information and update software in the device. <u>Indicator Light and Alarm Prove-Out System</u> A system shall be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel. <u>Voltage Monitor System</u> A voltage monitoring system shall be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system shall provide visual and audible warning when the system voltage is below or above optimum levels. The alarm shall activate if the system falls below 11.8 volts DC for more than two (2) minutes. <u>Dedicated Radio Equipment Connection Points</u> There shall be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs shall consist of the following: • 12-volt 40-amp battery switched power • 12-volt 60-amp ignition switched power • 12-volt 60-amp direct battery power There shall also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center. <u>EMI/RFI Protection</u> To prevent erroneous signals from crosstalk contamination and interference, the electrical system shall meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system shall be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.		

	Bidder Complies	
	Yes	No
The apparatus shall have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system shall meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, shall provide EMC testing reports from testing conducted on an entire apparatus and shall certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself. EMI/RFI susceptibility shall be controlled by applying appropriate circuit designs and shielding. The electrical system shall be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility. <u>ELECTRICAL SYSTEM PROGNOSTICS</u> There shall be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events. The system shall send automatic indications to the information center and/or wireless enabled devices to proactively alert of upcoming service intervals. Prognostics shall include the following: • Engine oil and filter • Transmission oil and filter <u>TELEMATICS SYSTEM</u> There shall be a cellular based vehicle telematics system consisting of a Telematic Control Unit (TCU) with external cellular WiFi and GPS antenna, and access to a web-based user interface portal provided. The TCU shall be fully integrated into the electrical system. It shall monitor the vehicle through the CAN data bus and transmit data through a secure 4G LTE cellular connection, and be provided with a 3 year subscription.. After accepting the end user license agreement, the vehicle administrator shall have access to vehicle location information and vehicle data via a secure web-based interface portal. The web-based interface will allow users to access vehicle data and configure monitoring tools, providing a global view of the location of each connected asset and a summary of fleet data, which include: • User defined interval notifications • User defined fault alerts		

	Bidder Complies	
	Yes	No
• Remote access to Command Zone diagnostics • Vehicle analytics and activity monitoring • Vehicle system status <u>ELECTRICAL</u> All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment shall be installed utilizing the following guidelines: 1. All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof. 2. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body. 3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. 4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug). 5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area. 6. All electrical terminals in exposed areas shall have silicon applied completely over the metal portion of the terminal. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments. An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests shall be recorded and provided to the purchaser at time of delivery.		

	Bidder Complies	
	Yes	No
<u>BATTERY SYSTEM</u> There shall be six (6) 12 volt Stryten/Exide®, Model 31S950X3W, batteries that include the following features shall be provided: • 950 CCA, cold cranking amps • 190 amp reserve capacity • High cycle • Group 31 • Rating of 5700 CCA at 0 degrees Fahrenheit • 1140 minutes of reserve capacity • Threaded stainless steel studs Each battery case shall be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover shall be manifold vented with a central venting location to allow a 45 degree tilt capacity. The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance. <u>BATTERY SYSTEM</u> There shall be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel. <u>MASTER BATTERY SWITCH</u> There shall be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system. <u>BATTERY COMPARTMENTS</u> Batteries shall be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab and bolted directly to the chassis frame. The battery boxes shall have reinforced sides. The battery compartments shall be constructed of 0.188" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The battery hold-downs shall be of a non-corrosive material. All bolts and nuts shall be stainless steel. Heavy-duty battery cables shall be used to provide maximum power to the electrical system. Cables shall be color coded. Battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.		

	Bidder Complies	
	Yes	No
<u>JUMPER STUDS</u> One (1) set of battery jumper studs with plastic color-coded covers shall be included on the battery compartments. <u>BATTERY CHARGER</u> There shall be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided. The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger. There shall be a Kussmaul™, Model #091-94-12, remote indicator included. Battery charger shall be located in the cab behind the driver's seat. The battery charger indicator shall be located on the driver's seat riser. <u>AUTO EJECT FOR SHORELINE</u> There shall be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) shall include red weatherproof flip up cover(s). There shall be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) shall be connected to the battery charger. There shall be a mating connector body supplied with the loose equipment. There shall be a label installed near the inlet(s) that state the following: • Line Voltage • Current Rating (amps) • Phase • Frequency The shoreline receptacle shall be located on the driver side of cab, to the front of cab door. <u>ALTERNATOR</u> A Delco Remy®, Model 55SI, alternator shall be provided. It shall have a rated output current of 430 amps, as measured by SAE method J56. The alternator shall feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.		

	Bidder Complies	
	Yes	No
<u>ELECTRONIC LOAD MANAGER</u> An electronic load management (ELM) system shall be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system. For improved reliability and ease of use, the load manager system shall be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components shall not be allowed. The system shall include the following features: • System voltage monitoring. • A shed load shall remain inactive for a minimum of five minutes to prevent the load from cycling on and off. • Sixteen available electronic load shedding levels. • Priority levels can be set for individual outputs. • High Idle to activate before any electric loads are shed and deactivate with the service brake. ○ If enabled: ▪ "Load Man Hi-Idle On" shall display on the information center. ▪ Hi-Idle shall not activate until 30 seconds after engine start up. • Individual switch "on" indicator to flash when the particular load has been shed. • The information center indicates system voltage. The information center, where applicable, includes a "Load Manager" screen indicating the following: • Load managed items list, with priority levels and item condition. • Individual load managed item condition: ○ ON = not shed ○ SHED = shed <u>SEQUENCER</u> A sequencer shall be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation shall allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator. For improved reliability and ease of use, the load sequencing system shall be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components shall not be allowed.		

	Bidder Complies	
	Yes	No
Emergency light sequencing shall operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights shall be activated one by one at half-second intervals. Sequenced emergency light switch indicators shall flash while waiting for activation. When the emergency master switch is deactivated, the sequencer shall deactivate the warning light loads in the reverse order. Sequencing of the following items shall also occur, in conjunction with the ignition switch, at half-second intervals: • Cab Heater and Air Conditioning • Crew Cab Heater (if applicable) • Crew Cab Air Conditioning (if applicable) • Exhaust Fans (if applicable) • Third Evaporator (if applicable) <u>HEADLIGHTS</u> There shall be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights with heated lens mounted in the front quad style, chrome housing on each side of the cab grille: • the outside light on each side shall contain a part number 055***1 low beam module • the inside light on each side shall contain a part number 055***1 high beam module • the headlights to include chrome bezels The low beam lights shall be activated when the headlight switch is on. The high beam and low beam lights shall be activated when the headlight switch and the high beam switch is activated. <u>FRONT DIRECTIONALS</u> The front directional's shall be Whelen®, Model M62T, 4.31" high x 6.75" wide x 1.37" deep directional lights with amber LEDs. The lens color(s) to be clear. The directional's shall be housed in the same common bezel as the front warning light and shall be located above the headlights. The housing to be polished and the trim shall be chrome. The flash pattern of the directional lights shall be Steady On (Arrow). <u>INTERMEDIATE LIGHT</u> There shall be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light shall double as a turn signal and marker light.		

	Bidder Complies	
	Yes	No
<u>CAB CLEARANCE/MARKER/ID LIGHTS</u> There shall be two (2) amber LED lights provided to indicate the presence and overall length of the vehicle in the following locations: - Two (2) lights with amber LEDs as front side clearance lights shall be installed, one (1) on each side above the cab doors. All other forward facing clearance lights will be included with the visor scene light. <u>FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS</u> There shall be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab. The lights shall activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit. <u>REAR CLEARANCE/MARKER/ID LIGHTING</u> There shall be three (3) LED identification lights located at the rear of the apparatus installed per the following: - As close as practical to the vertical centerline and one (1) on each outside edge - Centers spaced not less than 6.00" or more than 12.00" apart - Red in color - All at the same height - All visible from the rear There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: - To indicate the overall width of the vehicle - One (1) each side of the vertical centerline - As near the top as practical - Red in color - To be visible from the rear - All at the same height There shall be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following: - To indicate the overall length of the vehicle - One (1) each side of the vertical centerline - As near the top as practical - Red in color - To be visible from the side - All at the same height		

	Bidder Complies	
	Yes	No
There shall be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There shall be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements. <u>MARKER LIGHTS</u> There shall be one (1) pair of amber and red LED marker lights with rubber arm, located at the rear most lower corner of the body. The amber lens shall face the front and the red lens shall face the rear of the truck. These lights shall be activated with the running lights of the vehicle. <u>REAR FMVSS LIGHTING</u> The rear stop/tail and directional lighting included in the rear tail light housing shall include the following: • Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs • Two (2) Whelen, Model M62T, 4.30" high x 6.70" wide x 1.40" deep directional lights with amber LEDs. The directional lights shall be set to Steady On (Arrow) flash pattern. • The lens color(s) to be the same as the LEDs. There shall be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing. <u>LICENSE PLATE BRACKET</u> One (1) license plate bracket constructed of stainless steel shall be provided at the rear of the apparatus. One (1) white LED light with chrome housing shall be provided to illuminate the license plate. A stainless steel light shield shall be provided over the light that shall direct illumination downward, preventing white light to the rear. <u>LIGHTING BEZEL</u> There shall be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights. <u>BACK-UP ALARM</u> A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute		

	Bidder Complies	
	Yes	No
and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels. <u>CAB PERIMETER SCENE LIGHTS</u> There shall be four (4) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" white LED strip lights provided, one (1) for each cab door. These lights shall be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights. <u>PUMP HOUSE PERIMETER LIGHTS</u> There shall be one (1) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" LED weatherproof strip light with bracket provided under the passenger's side pump panel running board. If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light shall be installed. The light shall be activated when the battery switch is on, and controlled by the same means as the body perimeter lights. <u>BODY PERIMETER SCENE LIGHTS</u> There shall be three (3) Amdor®, Model AY-LB-12HW012, 190 lumen, 12.00" long, white 12 volt DC LED strip lights provided. The lights shall be mounted in the following locations. • One (1) light shall be provided under the left side turntable access steps • One (1) light shall be provided under the left side basket access steps • One (1) light shall be provided under the right side basket access steps The perimeter scene lights shall be activated when the parking brake is applied. <u>ENHANCED SOFTWARE FOR PERIMETER LIGHTS</u> All perimeter lights shall be deactivated when the parking brake is released unless alternate control is selected. The cab and crew cab perimeter lights shall remain on for ten (10) seconds for improved visibility after the doors closed. <u>STEP ILLUMINATION</u> The running board(s) under the pump panel(s) shall be illuminated by the lights included in the overhead pump panel light shield. Additional steps on the apparatus shall be illuminated per the current edition of NFPA 1901.		

	Bidder Complies	
	Yes	No
<u>12 VOLT LIGHT BRACKET</u> There shall be two (2) painted smooth aluminum bracket(s) installed above crew cab doors, one each side for the surface mounted flood light. The bracket(s) shall have all wiring totally enclosed. <u>12 VOLT LIGHTING</u> There shall be a HiViz Model FT-B-X-72-ML-**-*, 2.49" high x 75.20" long x 2.45" deep 39,207 lumen, 12 volt DC LED light provided on the front cab roof as far forward as practical. The light shall be mounted on a visor bracket to hold the top of the light flush with the top of the cab. The light shall include white scene LEDs, three (3) amber LEDs as identification lights and two (2) amber LEDs as clearance lights. The white LEDs shall be configured with a combination of flood and spot optics. The painted parts of the light housing and brackets to be painted job color. The scene LEDs shall be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel. The identification and clearance LEDs shall be activated by the headlight switch. The white LEDs may be load managed when the parking brake is applied. <u>12 VOLT LIGHTING</u> There shall be one (1) HiViz®, Model FT-MB-2.45-**-*, 47,520 raw lumens 3.46" high x 49.37" long x 3.31" deep, 12 volt DC light(s) with white LEDs, a combination of flood and spot optics and adjustable mounting brackets installed on the cab above passenger side crew cab door . The painted parts of the light housing and brackets to be painted job color. The light(s) shall be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel. The light(s) may be load managed when the parking brake is applied. <u>12 VOLT LIGHTING</u> There shall be one (1) HiViz®, Model FT-MB-2.45-**-*, 47,520 raw lumens 3.46" high x 49.37" long x 3.31" deep, 12 volt DC light(s) with white LEDs, a combination of flood and spot optics and adjustable mounting brackets installed on the cab above driver side crew cab door. The painted parts of the light housing and brackets to be painted job color. The light(s) shall be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel. The light(s) may be load managed when the parking brake is applied.		

	Bidder Complies	
	Yes	No
<u>12 VOLT LIGHTING</u> There shall one (1) HiViz Model FT-B-72-*, 21,067 effective lumens 2.56" high x 72.69" long x 2.45" deep 12 volt DC light(s) with white LEDs and with a combination of spot, and flood optics installed on the apparatus located, driver side of body on catwalk above LS3.. The painted parts of the light housing and brackets to be painted job color. The light(s) shall be controlled by the same control that has been selected for the driver's side scene light(s). The light(s) may be load managed when the parking brake is applied. <u>12 VOLT LIGHTING</u> There shall one (1) HiViz Model FT-B-72-*, 21,067 effective lumens 2.56" high x 72.69" long x 2.45" deep 12 volt DC light(s) with white LEDs and with a combination of spot, and flood optics installed on the apparatus located, passenger side of body on catwalk above RS3.. The painted parts of the light housing and brackets to be painted job color. The light(s) shall be controlled by the same control that has been selected for the passenger's side scene light(s). The light(s) may be load managed when the parking brake is applied. <u>HOSE BED LIGHTS</u> There shall be 12 volt DC light strips with stainless steel protective covers and white LEDs provided to illuminate the hose bed area per the following: • A light strip shall be installed along the front edge of the hose bed facing rearward. • A light strip shall be installed under the boom support facing forward. The lights shall be activated by a cup switch at the rear of the apparatus no more than 72.00" from the ground. <u>REAR SCENE LIGHTS</u> There shall be two (2) Whelen®, Model M6ZC white LED scene lights mounted in Model M6P15*, 15 degree chrome trim angled downward, installed at the rear of the apparatus. These lights shall be installed between 58.00" and 72.00" above the ground. The lights shall be controlled by a switch at the driver's side switch panel, by a switch at the driver's side pump panel and by a cup switch at the driver's side rear bulkhead. <u>WALKING SURFACE LIGHT</u> There shall be two (2) Model P25 12 volt DC LED lights with chrome housing provided to illuminate the top of body walking surface. These LED lights shall be located on the rear facing surface of the upper portion of the body to illuminate the walking surface to the platform basket.		

	Bidder Complies	
	Yes	No
There shall be one (1) Amdor®, Model AY-LB-12HW020, 350 lumen, 20" long, white 12 volt DC LED strip light located on the tower cradle, facing the rear of the body, to illuminate the walking area directly behind the tower cradle. These lights shall be activated when "Aerial Master" is on. <u>WATER TANK</u> The water tank shall have a capacity of 300 gallons and shall be constructed of UV stabilized ultra high impact polypropylene plastic. The joints and seams shall be nitrogen welded inside and out. The tank shall be baffled in accordance with the current edition of NFPA 1901 requirements. The baffles shall have vent openings at both the top and bottom of each baffle to permit movement of air and water between compartments. The longitudinal partitions shall be constructed of 0.38" polypropylene plastic and extend from the bottom of the tank through the top cover to allow positive welding. The transverse partitions extend from 4.00" off the bottom to the underside of the top cover. All partitions interlock and shall be welded to the tank bottom and sides. The tank top shall be constructed of 0.50" polypropylene. It shall be recessed 0.38" and shall be welded to the tank sides and the longitudinal partitions. It shall be supported to keep it rigid during fast filling conditions. Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (0.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump shall be provided at the bottom of the water tank. The sump shall include a drain plug and the tank outlet. Tank shall be installed on top of the torque box with the use of two (2) brackets constructed of structural steel. The torque box shall resist transferring any torsional stress caused by the chassis frame flexing to the water tank. Rubber cushions, 0.50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on. Stops shall be provided to prevent an empty tank from bouncing excessively while moving vehicle.		

	Bidder Complies	
	Yes	No
Tank mounting system shall be approved by the manufacturer. Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 6.00" wide x 12.00" long. Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 3.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle. <u>HOSE BED</u> The hose bed shall be fabricated of 0.125" 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi. The hose bed shall be located between the aerial boom support and water tank. There shall be a hose chute to the side and rear of the hose bed on the right side to allow for payout/removal of the hose. The hose bed flooring shall consist of removable aluminum grating with a top surface that is perforated to aid in hose aeration. The hose bed/cargo area walls shall be unpainted and dual action finished. Hose capacity shall be a minimum of 800 feet of 5.00" large diameter hose. <u>AERIAL HOSE BED HOSE RESTRAINT</u> The hose in the hose bed shall be restrained as follows: • The hose bed forward of the aerial boom support and in the upper body area shall be restrained by a black vinyl cover with Velcro® securing all four (4) sides. • The hose bed chute located under the aerial basket shall be restrained by an aluminum treadplate cover and guide plate at the transition point of the upper hose bed to the lower hose chute. The cover shall hinge to the inside to allow ease of access to the hose. • The rear of the hose bed chute shall be restrained with black webbing that shall have 1.00" web straps that loop through footman loops and fasten with spring clip and hook fasteners. <u>RUNNING BOARDS</u> The running boards shall be fabricated of 0.125" bright aluminum treadplate and supported by structural steel angle assemblies bolted to the chassis frame rails. Running boards shall be 13.00" deep and are spaced away from the body 0.50".		

	Bidder Complies	
	Yes	No
A splash guard shall be provided to keep road dirt or water from splashing up onto the pump panels. The running boards shall have a riser on the body to protect the painted surface from damage by stepping on the running boards. The entire surface of the running boards shall be covered with bright aluminum treadplate. <u>TURNTABLE STEPS</u> Access to the turntable shall be provided by a set of swing-down steps on the left side of the truck. The bottom step shall be a flip down, stirrup step. The bottom step shall have a step height not exceeding 24.00" from the ground to the top surface of the step at any time. All steps shall have a height no greater than 14.00" from top surface to top surface. The access steps shall be located just behind the front body and in front of the middle stabilizer. The swing down step assembly shall be constructed of D/A finished aluminum with bright aluminum treadplate steps. The steps shall have a punched grip pattern design. The stepwell shall be lined with bright aluminum treadplate to act as scuffplates. A knurled aluminum handrail shall be provided on the left side of the steps. Holes shall be provided in each side step plate for hand holds. The steps shall be connected to the "Do Not Move Truck" indicator in the cab. <u>STEP LIGHTS</u> There shall be three (3) white P25 LED step lights provided for the aerial turntable access steps. In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The step lights shall be activated when the aerial master switch is activated. <u>SMOOTH ALUMINUM REAR WALL</u> The rear wall shall be smooth aluminum. <u>TOW EYES</u> Two (2) rear painted tow eyes shall be located at the rear of the apparatus and shall be mounted directly to the frame rails. The inner and outer edges of the tow eyes shall be radiused. Each tow eye shall be rated for 9000lb. Tow eyes shall be painted to match the lower job color.		

	Bidder Complies	
	Yes	No
<u>COMPARTMENTATION</u> Compartmentation shall be fabricated of 0.125" 5052 aluminum. Side compartments shall be an integral assembly with the rear fenders. Circular fender liners shall be provided. For prevention of rust pockets and ease of maintenance, the fender liners shall be formed from aluminum and removable for maintenance. Compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip. Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel. The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers shall have the corners welded. Side compartment covers shall be separate from the compartment tops. All screws and bolts, which are not Grade 8, shall be stainless steel and where they protrude into a compartment shall have acorn nuts on the ends to prevent injury. <u>UNDERBODY SUPPORT SYSTEM</u> The backbone of the body support system shall begin with the aerial torque box which is the strongest component of the apparatus and is designed for sustaining maximum loads. An aluminum body structure shall be mounted to the aerial torque box at four (4) points using neoprene elastomer isolators. The front mounts shall attach from structural steel brackets on the sides of the torque box to a structural tube on the body. The rear mounts shall attach structural members on the rear body to the top of the rear down rigger mounting structure. The combination of the elastomer isolators and the body structure design allow the chassis and torque box to flex without driving loads into the body. The compartment floor support design shall result in an 800 lb equipment support rating per lower compartment, and a 500 lb equipment support rating for the upper, over the axle compartments. <u>AGGRESSIVE WALKING SURFACE</u> All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards. <u>LOUVERS</u> All body compartments shall be vented to provide one (1) way airflow out of the compartment that prevents water and dirt from gaining access to the compartment.		

	Bidder Complies	
	Yes	No
<u>TESTING OF BODY DESIGN</u> Body structural analysis shall be fully tested. Proven engineering and test techniques such as finite element analysis, model analysis, and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the body and substructure. The body shall be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure shall include: • Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. • Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. • Driving the vehicle on at 35 mph on a washboard road. • Driving the vehicle at 55 mph on a smooth road. • Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. <u>LEFT SIDE COMPARTMENTATION</u> The override door forward of the stabilizer shall include a pair of SouthCo C2 black raised trigger lever latches. A full height rollup door compartment ahead of the rear wheels shall be approximately 29.16" wide x 23.25" high (floor to false ceiling) x 27.13" deep inside with a minimum clear door opening of approximately 26.38" wide x 21.37" high. One (1) rollup door compartment above the fender compartments and over the rear axles shall be provided. The compartment shall be approximately 84.00" wide x 16.50" high (floor to false ceiling) x 27.13" deep inside with a minimum clear door opening of approximately 81.25" wide x 15.25" high. A full height rollup door compartment behind the rear wheels shall be approximately 41.25" wide x 47.00" high (floor to false ceiling) x 27.13" deep. The minimum clear door opening shall be approximately 38.50" wide x 47.00" high. One (1) rollup door compartment behind the rear stabilizer shall be provided. The compartment shall be approximately 18.13" wide x 38.63" high (floor to false ceiling) x 27.13" deep inside with a minimum clear door opening of approximately 15.50" wide x 38.87" high. Roll-up door compartments shall include a drip pan below the roll of the door.		

	Bidder Complies	
	Yes	No
<u>RIGHT SIDE COMPARTMENTATION</u> A full height rollup door compartment ahead of the front stabilizer shall be provided. The compartment shall be approximately 18.38" wide x 27.75" high (floor to false ceiling) x 9.91" deep inside with a minimum clear door opening of approximately 15.63" wide x 28.37" high. A full height rollup door compartment ahead of the rear wheels shall be approximately 29.13" wide x 23.25" high (floor to false ceiling) x 27.13" deep inside with a minimum clear door opening of approximately 26.38" wide x 21.37" high. One (1) rollup door compartment above the fender compartments and over the rear axles shall be approximately 59.00" wide x 16.50" high (floor to false ceiling) x 15.75" deep inside with a minimum clear door opening of approximately 56.25" wide x 15.25" high. A full height rollup door compartment behind the rear wheels shall be approximately 41.25" wide x 47.00" high (floor to false ceiling). It shall be 27.13" deep in the lower 41.50" of compartment height and 15.75" deep in the remaining upper portion. The minimum clear door opening shall be approximately 38.50" wide x 47.00" high. One (1) rollup door compartment behind the rear stabilizer shall be approximately 18.13" wide x 38.63" high (floor to false ceiling) x 27.13" deep inside with a minimum clear door opening of approximately 15.50" wide x 38.87" high. Roll-up door compartments shall include a drip pan below the roll of the door. <u>SIDE COMPARTMENT ROLL-UP DOORS</u> There shall be nine (9) compartment doors installed on the side compartments. The Gortite doors shall be double faced aluminum construction and painted one (1) color to match the lower portion of the body. Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door. Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene. All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from plus 300 to minus 40 degrees Fahrenheit. Hardened plastic shall not be acceptable. A polished stainless steel lift bar to be provided for each roll-up door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.		

	Bidder Complies	
	Yes	No
Doors shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside. To conserve space in the compartments, the spring roller assembly shall not exceed 3.00" in diameter. A garage style roll door shall not be acceptable. The header for the rollup door assembly shall not exceed 4.00". A heavy-duty magnetic switch shall be used for control of open compartment door warning lights. <u>REAR BUMPER</u> A 3.00" rear bumper shall be furnished. Bumper shall be constructed of steel and shall be covered with polished aluminum treadplate. The bumper shall be 2.50" deep x 4.00" high and shall be spaced away from the body approximately 0.50". The corners of the bumper shall be angled at 45 degrees to be flush with the angled rear body. It shall extend the full width of the body. <u>COMPARTMENT LIGHTING</u> There shall be nine (9) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips shall be centered vertically along each side of the door framing. There shall be two (2) light strips per compartment. The dual light strips shall be in all body compartment(s). Any remaining compartments without light strips shall have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light shall have a number 1076 one filament, two wire bulb. Opening the compartment door shall automatically turn the compartment lighting on. <u>MOUNTING TRACKS</u> There shall be recessed tracks installed vertically to support the adjustable shelf(s). Tracks shall not protrude into any compartment in order to provide the greatest compartment space and widest shelves possible. The tracks shall be provided in each compartment except for the one that contains the pump operator's panel. <u>ADJUSTABLE SHELVES</u> There shall be six (6) shelves with a capacity of 500 lb provided. The shelf construction shall consist of .188" aluminum painted spatter gray with 2.00" sides. Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves shall be held in place by .12" thick stamped plated brackets and bolts.		

	Bidder Complies	
	Yes	No
The location(s) shall be in RS1 centered between the floor and the ceiling, in RS2 centered between the floor and the ceiling, in RS3 centered between the floor and the ceiling, in LS1 centered between the floor and ceiling, in LS2 centered between the floor and ceiling and in LS3 centered between the floor and ceiling. <u>SLIDE-OUT FLOOR MOUNTED TRAY</u> There shall be four (4) floor mounted slide-out tray(s) with 2.00" sides provided LS2, LS4, RS2, RS4. Each tray shall be rated for up to 500lb in the extended position. The tray(s) shall be constructed of .19" aluminum with non-welded corners. The finish shall be painted spatter gray. There shall be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides shall have a safety factor rating of 2. To ensure years of dependable service, the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides shall require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request. Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand. <u>RUB RAIL</u> Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail. Trim shall be 3.12" high with 1.50" flanges turned outward for rigidity. The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage. <u>BODY FENDER CROWNS</u> Polished stainless steel fender crowns shall be provided around the rear wheel openings. An unpainted fender liner shall be provided to avoid paint chipping. The liners shall be removable to aid in the maintenance of rear suspension components. A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion. The fender crowns shall be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion.		

	Bidder Complies	
	Yes	No
<u>HARD SUCTION HOSE</u> Hard suction hose shall not be required. <u>HANDRAILS</u> The handrails shall be 1.25" diameter knurled aluminum to provide a positive gripping surface. Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces. Drain holes shall be provided in the bottom of all vertically mounted handrails. Handrails shall be provided to meet NFPA 1901 section 15.8 requirements. The handrails shall be installed as noted on the sales drawing. A step shall be provided below the right side runningboard. <u>THREE AIR BOTTLE/EXTINGUISHER STORAGE COMPARTMENT</u> A total of two (2) air bottle compartments shall be provided and located on the left side and the right side centered between the tandem rear wheels. The compartment shall consist of individual bins each designed to hold an air bottles or extinguishers with a maximum diameter of 8.00" and a maximum depth of 26.00". Each compartment shall hold three (3), two (2) stored next to each other in the top area, and one (1) stored centered below. Each bin shall be separated by a partition. A drain hole and black rubber matting shall be provided on the floor of each compartment. A lift up with pneumatic spring with a pair of Southco raised trigger C2 black lever latches shall be provided for each compartment. The door shall be painted stainless steel. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal. <u>COMPARTMENT STRAP</u> Straps shall be provided in the compartment(s) to help contain the equipment. The straps shall wrap around the neck of each and attach to the wall of the compartment. <u>AIR BOTTLE STORAGE (SINGLE)</u> A quantity of four (4) air bottle compartments, approximately 7.50" wide x 7.50" tall x 26.00" deep, shall be provided on the left side forward of the rear wheels, on the left side rearward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels. The compartment will be square with angled corners. A painted stainless steel door with a Southco raised trigger C2 black lever latch shall be provided to contain the air bottle. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting shall be provided.		

	Bidder Complies	
	Yes	No
<u>EXTENSION LADDER</u> There shall be two (2) 35' two (2) section aluminum Duo-Safety Series 1200-A extension ladder(s) provided. <u>AERIAL EXTENSION LADDERS</u> There shall be one (1) 28' two (2) section aluminum Duo-Safety Series 1200-A extension ladder(s) provided and located in the aerial torque box. <u>ROOF LADDER</u> There shall be one (1) 16' aluminum Duo-Safety Series 875-A roof ladder(s) provided. <u>ADDED ROOF LADDER</u> There shall be one (1) aluminum, 14' Duo Safety 875-DR roof ladder provided fly section of aerial. <u>ADDED ROOF LADDER</u> There shall be one (1) 20' roof, aluminum, Series 875-A provided. <u>AERIAL FOLDING LADDER</u> There shall be two (2) 10' aluminum Duo-Safety Series 585-A folding ladder(s) provided and located in the aerial torque box. <u>GROUND LADDER STORAGE</u> The ground ladders are stored within the torque box and are removable from the rear. Ladders shall be enclosed to prevent road dirt and debris from fouling or damaging the ladders. The ladders rest in full length stainless steel slides and are arranged in such a manner that any one ladder can be removed without having to move or remove any other ladder. A Gortite rollup door shall be provided at the rear, double faced, aluminum construction, and an anodized satin finish. A polished stainless steel lift bar to be provided for the rear roll-up door. The latching mechanism shall consist of a full length lift bar lock with latches on the outer extrusion of the door frame. A 6.00" tall stainless plate with a two bend flange and a stainless steel hinge will be provided to secure the aerial ladder complement. The plate assembly will be mounted to the bottom of the entrance of the torque box ladder storage area. When the plate is vertical, it will secure the ladders and prevent them from migrating to the rear of the apparatus. When the plate is down and not securing the ladders, the roll-up door can not close, which will activate the "Open Door Indicator Light" within the cab. The roll-up door together with a Southco raised trigger C2 chrome lever latch on each side of the plate will secure the plate in place during driving operations.		

	Bidder Complies	
	Yes	No
<u>Compartment Storage</u> Below the ground ladder storage shall be a water resistant storage compartment with interior measurements of 36.75" wide x 14.88" high x 19.75" deep. The compartment shall have a single pan, drop down door with a pair of Southco raised trigger C2 chrome latches. The compartment and door material shall match body interior. The opening shall be 32.38" wide x 11.75" high. <u>LADDER STORAGE LIGHTING</u> There shall be 36.00" white 12 volt DC LED strip lights provided to illuminate the torque box ladder storage area and the compartment directly below the ladder storage. One (1) light shall be provided on each side of the ladder storage area. The lights shall be activated when the ladder storage compartment door is opened. <u>PIKE POLES</u> There shall be two (2) Nupla "I" beam, 12 foot pike pole(s) with fiberglass handles provided. The pike pole(s) shall be stored in tubular holders located in the ground ladder storage compartment. <u>PIKE POLES</u> There shall be two (2) 8' Nupla pike pole(s), Featherlite provided. <u>PIKE POLE 6 FT</u> There shall be two (2) Nupla 6 foot pike pole(s) with featherlight handles provided. The pike pole(s) shall be stored in tubular holders located in the ground ladder storage compartment. <u>PIKE POLE STORAGE IN TORQUE BOX/LADDER STORAGE</u> There shall be ABS tubing provided in the torque box/ladder storage area for a total of six (6) pike poles. If the head of a pike pole can come into contact with a painted surface, a stainless steel scuffplate shall be provided. <u>PUMP COMPARTMENT</u> The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment shall be constructed of the same material as the body compartmentation. The pump compartment substructure shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.		

	Bidder Complies	
	Yes	No
<u>PUMP MOUNTING</u> Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump. <u>LEFT SIDE PUMP CONTROL PANELS</u> All pump controls and gauges shall be located at the left side of the apparatus and properly identified. Layout of the pump control panel shall be ergonomically efficient and systematically organized. The pump operator's control panel shall be removable in two (2) main sections for ease of maintenance: The upper section shall contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels shall be removable from the face of the pump panel for ease of maintenance. Below the sub panels shall be located all valve controls and line pressure gauges. The lower section of the panel shall contain all inlets, outlets, and drains. All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding. The linkage from the control rod to the valve shall be stainless steel, this shall not include the clevis ends of the linkage which shall remain anodized steel. <u>IDENTIFICATION TAGS</u> The identification tag for each valve control shall be recessed in the face of the tee handle. All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges shall be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting shall be removable from the face of the pump panel for ease of maintenance. The casting shall be color coded to correspond with the discharge identification tag. All remaining identification tags shall be mounted on the pump panel in chrome plated bezels. Trim rings shall be installed around all inlets and outlets.		

	Bidder Complies	
	Yes	No
<u>MIDSHIP FIRE PUMP</u> Midship fire pump shall be a Waterous S100, 2000 gpm single (1) stage midship mounted centrifugal type. Pump shall be the class "A" type. Pump shall deliver the percentage of rated discharges at the pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. -70% of rated capacity at 200 psi net pump pressure. -50% of rated capacity at 250 psi net pump pressure. Entire pump and both suction and discharge passages shall be hydrostatically tested to a pressure of 600 psi (40.8 bar). Pump shall be fully tested at the pump manufacturer's factory to the performance requirements outlined in the current NFPA 1901 standards and shall be free from objectionable pulsation and vibration. Pump body and related parts shall be of fine grain, alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). Pumps utilizing castings made of lower tensile strength cast iron shall not be acceptable. All moving parts in contact with water shall be of high quality bronze or stainless steel. <u>MECHANICAL SEAL ON PUMP</u> Pump shall be equipped with a self-adjusting, maintenance-free, mechanical shaft seal. The mechanical seal shall consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring shall press against a highly polished stainless steel stationary ring that is sealed within the pump body. In addition, a throttling ring shall be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance shall not deteriorate, nor shall the pump lose prime, while drafting if the seal fails during pump operation. Wear rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.		

	Bidder Complies	
	Yes	No
<u>PUMP TRANSMISSION</u> Pump transmission shall be made of a three (3) piece, high tensile aluminum, horizontally split casing. Power transfer to pump shall be through a passive lubricated, Morse HY-VO drive chain. Drive shafts shall be a minimum of 2.35" diameter hardened and ground alloy steel. All shafts shall be ball bearing supported. The case shall be designed as to eliminate the need for water cooling. <u>PUMPING MODE</u> An interlock system shall be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system shall be designed to allow stationary pumping only. <u>AIR PUMP SHIFT</u> Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control shall also be located on the left side pump panel. Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump". The pump shift shall be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab shall be illuminated to meet NFPA requirements. <u>TRANSMISSION LOCK-UP</u> The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control in the cab is activated. <u>AUXILIARY COOLING SYSTEM</u> A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger shall be plumbed to the master drain valve. <u>INTAKE RELIEF VALVE - PUMP</u> There shall be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig. The relief valve(s) shall have a working range of 75 psi to 250 psi.		

	Bidder Complies	
	Yes	No
The outlet shall terminate below the frame rails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag. The relief valve pressure control shall be located behind the right side pump panel with a stainless steel access door . <u>PRESSURE CONTROLLER</u> A Pierce Pump Boss Model PBA300 pressure governor shall be provided. A pressure transducer shall be installed in the water discharge manifold on the pump. The display panel shall be located at the pump operator's panel. <u>PRIMING PUMP</u> The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control shall open the priming valve and start the pump primer. <u>PUMP MANUALS</u> There shall be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals shall be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual shall cover pump operation, maintenance, and parts. <u>PLUMBING, STAINLESS STEEL AND HOSE</u> All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's shall be equipped with brass or stainless steel couplings. All stainless steel hard plumbing shall be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings. Plumbing manifold bodies shall be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or shall be equipped with individual drain valves. All drain lines shall be extended with a hose to drain below the chassis frame. All water carrying gauge lines shall be of flexible polypropylene tubing. All piping, hose and fittings shall have a minimum of a 500 PSI hydrodynamic pressure rating.		

	Bidder Complies	
	Yes	No
<u>MAIN PUMP INLETS</u> Two (2) 6.00" pump inlets shall be provided. One (1) on the left side and One (1) on the right side of the vehicle. The suction inlets shall include removable zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump. <u>MAIN PUMP INLET CAP</u> The main pump inlets shall have National Standard Threads with a long handle chrome cap. The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception). <u>VALVES</u> All ball valves shall be Akron® Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves shall have a ten (10) year warranty. The location of the valve for the one (1) inlet shall be recessed behind the pump panel. <u>INLET CONTROL</u> The side auxiliary inlet(s) shall incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism shall indicate the position of the valve. <u>LEFT SIDE INLET</u> There shall be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet shall be provided with a strainer, chrome swivel and plug. <u>INLET BLEEDER VALVE</u> A 0.75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails. <u>TANK TO PUMP</u> The booster tank shall be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel.		

	Bidder Complies	
	Yes	No
Tank to pump line shall run from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing. A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank. <u>TANK REFILL</u> A 1.50" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel. <u>DISCHARGE OUTLET CONTROLS</u> The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve. If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel. Any 3.00 inch or larger discharge valve shall be a slow-operating valve in accordance with NFPA 16.7.5.3. <u>LEFT SIDE DISCHARGE OUTLETS</u> There shall be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter. <u>LEFT SIDE OUTLET ELBOWS</u> The 2.50" discharge outlets located on the left side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception). <u>RIGHT SIDE DISCHARGE OUTLETS</u> There shall be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter. <u>RIGHT SIDE OUTLET ELBOWS</u> The 2.50" discharge outlets located on the right side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		

	Bidder Complies	
	Yes	No
<u>LARGE DIAMETER DISCHARGE OUTLET</u> There shall be a 4.00" discharge outlet with a 4.00" Akron valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet shall be actuated with a small handwheel control at the pump operator's control panel. An indicator shall be provided to show when the valve is in the closed position. <u>LARGE DIAMETER OUTLET ELBOWS</u> The 4.00" outlet(s) shall be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap. <u>DISCHARGE CAPS/ INLET PLUGS</u> Chrome plated, rocker lug, caps with vinyl covered cables shall be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with vinyl covered cables shall be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception). <u>OUTLET BLEEDER VALVE</u> A 0.75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves shall be located behind the panel with a T swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The T swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails. <u>AERIAL OUTLET</u> The aerial waterway shall be plumbed from the pump to the water tower line with 5.00" pipe and a 4.00" Akron valve. The small handwheel control for the waterway valve shall be located at the pump operator's panel. An indicator shall be provided to show the position of the valve.		

	Bidder Complies	
	Yes	No
<u>CROSSLAY HOSE BEDS</u> Two (2) crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls shall be at the pump operator's panel. The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a brushed finish. Stainless steel vertical scuffplates shall be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) shall also be equipped with a stainless steel scuffplate. Crosslay bed flooring shall consist of removable perforated brushed aluminum. <u>CROSSLAY HOSE RESTRAINT</u> A 2.00" black nylon webbing design restraint shall be provided at each of the ends of two (2) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays, with footman loops and a permanent attachment, and is to attach at the top outside corners with seat belt buckles. The female end of the seat buckle shall be permanently attached at the top corner of the opening. A bar shall be attached to the female ends of the seat belt buckles to allow a single pull release. A single orange nylon strap shall be attached to the bar for releasing the buckles on the webbing. <u>CROSSLAY/DEADLAY HOSE RESTRAINT</u> The crosslay/deadlay hosebed(s) shall have two (2) 2.00" wide black nylon straps with Velcro fasteners provided across the top to secure the hose during travel. The straps shall extend from the front to back across the top of the hosebed(s). <u>FOAM SYSTEM</u> A foam system shall not be required on this apparatus. <u>PUMP PANEL CONFIGURATION</u> The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation. <u>PUMP OPERATOR'S PLATFORM</u> A pull out, flip down platform shall be provided at the pump operator's control panel. The front edge and the top surface of the platform shall be made of DA finished aluminum with a Morton Cass insert.		

	Bidder Complies	
	Yes	No
The platform shall be approximately 13.75" deep when in the stowed position and approximately 22.00" deep when extended. The platform stepping surface shall be 28.00" wide. The platform shall lock in the retracted and the extended position. The platform shall be wired to the "step not stowed" indicator in the cab. <u>PUMP OPERATOR'S PLATFORM PERIMETER LIGHT</u> There shall be an On Scene Solutions, Model Night Stick Access, 20.00" white 12 volt DC LED strip light provided to illuminate the ground area. <u>PUMP AND GAUGE PANEL</u> The pump and gauge panels shall be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding shall be provided around each panel. <u>PUMP ACCESS</u> <u>Right Side Panel</u> The right side upper pump panel shall be removable. <u>Panel Fastener</u> The removable panels shall be secured with chrome flush lift and turn latch. The left side pump panels shall be attached with screws. The right side lower pump panel (drain bank) shall be attached with screws. <u>PUMP COMPARTMENT LIGHT</u> There shall be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment. Engine monitoring graduated LED indicators shall be incorporated with the pressure controller. Also provided at the pump panel shall be the following: - Master Pump Drain Control <u>THROTTLE READY GREEN INDICATOR LIGHT</u> There shall be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode. <u>OK TO PUMP INDICATOR LIGHT</u> There shall be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.		

	Bidder Complies	
	Yes	No
<u>VACUUM AND PRESSURE GAUGES</u> The pump vacuum and pressure gauges shall be liquid filled and manufactured by Class 1 Incorporated ©. The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel. Test port connections shall be provided at the pump operator's panel. One (1) shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label. This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube. <u>PRESSURE GAUGES</u> The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1©. They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering. Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges shall have a pressure range of 30"-0-400#. The individual pressure gauge shall be installed as close to the outlet control as practical. This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube. <u>WATER LEVEL GAUGE</u> There shall be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights shall be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators shall be as follows: • 100 percent = Green • 75 percent = Yellow • 50 percent = Yellow • 25 percent = Yellow		

	Bidder Complies	
	Yes	No
• Refill = Red The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the water tank is empty. The level measurement shall be based on the sensing of head pressure of the fluid in the tank. The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from water and environmental elements. An industrial pressure transducer shall be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level. <u>PUMP PANEL ILLUMINATION</u> There shall two (2) stainless steel light shields installed over the pump operators panels per the following: • One (1) shield over the left side pump panel • One (1) shield over the right side pump panel The shields shall include three (3) 12 volt DC lights with white LEDs to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. The outside lights shall be activated by the pump panel light switch. The left side center light shall be activated when the pump is in "Ok to Pump" mode. There shall be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel. <u>AIR HORN SYSTEM</u> Two (2) Hadley round air horns with 6.00" bell shall be recessed in the front bumper. The horn system shall be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air in the air brake system. The horns shall be in position 3 & 5. <u>Air Horn Location</u> The air horns shall be located on each side of the bumper, inside of the frame rails. <u>Air Horn Control</u> The air horn(s) shall be activated by the following: • Right side foot switch • Steering wheel horn ring with electric/air horn selector switch		

	Bidder Complies	
	Yes	No
<u>ELECTRONIC SIREN</u> A Whelen, Model: 295SLSC1, electronic siren with a plug-in, detachable noise canceling microphone shall be provided. This siren to be active when the battery switch is on and that emergency master switch is on. <u>ELECTRIC SIREN, LOCATION.</u> Siren head shall be mounted panel position A. The electronic siren shall be controlled on the siren head only. No horn button or foot switches shall be required. <u>SPEAKERS</u> There shall be two (2) Whelen®, Model SA315P, black nylon composite, 100-watt, speakers with through bumper mounting brackets and polished stainless steel grille provided. Each speaker shall be connected to the siren amplifier. The speakers shall be recessed in each side of the front bumper, towards the outside. <u>AUXILIARY MECHANICAL SIREN</u> There shall be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B siren shall be chrome finish. The siren shall have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and shall be labeled Q2B+ at the battery. The power solenoid shall only be enabled when the emergency master switch is on. The siren shall have a 2-gauge ground wire connected to the chassis battery stud. The cable shall be labeled Q2B- at the battery. The mechanical siren shall be mounted on the bumper deck plate. It shall be mounted in the center. The siren shall be mounted on a bracket that swivels to the outside of the bumper to prevent the siren from damage when the cab is tilted. A proximity switch shall be installed with the swivel mount that shall interlock to the cab lift system. The mount shall be constructed of polished stainless steel. The mechanical siren shall be actuated by two (2) foot switches, one (1) located on the officer's side and one (1) on the driver's side. A momentary switch shall be included in the left side overhead switch panel to activate the siren brake. There shall be a red outline decal around the switch.		

	Bidder Complies	
	Yes	No
A momentary chrome push button switch shall be included in the right side dash panel to activate the siren brake. <u>FRONT ZONE UPPER WARNING LIGHTS</u> There shall be one (1) 72.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar shall include the following: • One (1) red flashing LED module in the driver's side end position. • One (1) red flashing LED module in the driver's side front corner position. • One (1) white flashing LED module in the driver's side first front position. • One (1) red flashing LED module in the driver's side second front position. • One (1) red flashing LED module in the driver's side third front position. • One (1) red flashing LED module in the driver's side fourth front position. • Open in the driver's side fifth front position. • Open in the driver's side sixth front position. • Open in the passenger's side sixth front position. • Open in the passenger's side fifth front position. • One (1) red flashing LED module in the passenger's side fourth front position. • One (1) red flashing LED module in the passenger's side third front position. • One (1) red flashing LED module in the passenger's side second front position. • One (1) white flashing LED module in the passenger's side first front position. • One (1) red flashing LED module in the passenger's side front corner position. • One (1) red flashing LED module in the passenger's side end position. There shall be clear lenses included on the lightbar. There shall be a switch in the cab on the switch panel to control this lightbar. The white LEDs shall be disabled when the parking brake is applied. The six (6) red flashing LED modules in the front positions may be load managed when the parking brake is applied. <u>LIGHTS, FRONT ZONE LOWER</u> Two (2) Whelen model M6*C LED flashing warning lights shall be installed on the cab face above the headlights, in a common bezel with the directional lights. The driver's side front warning light to be red. The passenger's side front warning light to be red.		

	Bidder Complies	
	Yes	No
Both lights shall include a clear lens. There shall be a switch located in the cab on the switch panel to control the lights. <u>DAYTIME RUNNING LIGHTS (HEADLIGHTS)</u> The low-beam headlights used as daytime running lights shall be activated with the following measures: • Ignition switch is turned on • Parking brake is released These lights shall be deactivated with any one of the following measures: • Headlight switch is turned on • High-beam flash is turned on • Parking brake is set <u>HEADLIGHT FLASHER</u> The high beam headlights shall flash alternately between the left and right side. There shall be a switch installed in the cab on the switch panel to control the high beam flash. This switch shall be live when the battery switch and the emergency master switches are on. The flashing shall automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set. <u>SIDE ZONE LOWER LIGHTING</u> There shall be six (6) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following: • Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. • Two (2) lights, one (1) each side above the front wheels. The side middle lights to be red. • Two (2) lights, one (1) each side located between the tandems. The side rear lights to be red. • The lights shall include clear lenses. There shall be a switch in the cab on the switch panel to control the lights. <u>SIDE WARNING LIGHTS</u> There shall be four (4) Whelen, Model WION* wide angle flashing LED warning lights with Whelen, Model IONK1B black bail mounts provided:		

	Bidder Complies	
	Yes	No
• One (1) recessed in the driver's side cab step on the front, vertical surface, below bottom of door. • One (1) recessed in the driver's side crew cab step on the front, vertical surface, below bottom of door. • One (1) recessed in the passenger's side crew cab on the front, vertical surface, below bottom of door. • One (1) recessed in the passenger's side cab step on the front, vertical surface, below bottom of door. The color of the lights shall be red. These lights shall be activated with the side warning switch. These lights may be load managed when the parking brake is applied. <u>SIDE WARNING LIGHTS</u> There shall be four (4) Whelen, Model WIONSMC* LED light(s) provided and located in the body rub rails centered in rub rail under LS2, LS4, RS2, RS4. The lights shall only be mounted with the rubber gasket if clearance allows it. The color of each light shall be red LED with a clear lens. Each light shall be provided with a chrome plated ABS flange. The light(s) shall be activated with the side warning switch. <u>REAR ZONE LOWER LIGHTING</u> There shall be two (2) Whelen®, Model M6*C, LED flashing warning lights located at the rear of the apparatus. • The driver's side rear light to be red • The passenger's side rear light to be red Both lights shall include a lens that is clear. There shall be a switch located in the cab on the switch panel to control the lights. <u>REAR/SIDE ZONE UPPER WARNING LIGHTS</u> There shall be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There shall be a switch located in the cab on the switch panel to control the beacons. The color of the lights shall be red LEDs with both domes clear.		

	Bidder Complies	
	Yes	No
<u>TRAFFIC DIRECTING LIGHT</u> There shall be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. The Whelen, Model TACTL5, control head shall be included with this installation. The controller shall be energized when the battery switch is on. The auxiliary flash not activated. This traffic directing light shall be mounted on top of the body below the turntable, inside a aluminum treadplate box at the rear of the apparatus. The traffic directing light controller shall be located within switch panel #13 on the center console. <u>AERIAL GENERAL INFORMATION</u> It is the intent of these specifications to describe a mid-mounted telescoping, elevating platform. The unit shall consist of a five (5) section, steel ladder with a self-leveling basket attached to the ladder fly section. <u>Operation on Grades</u> The aerial unit shall be capable of operating safely, on any slope up to 10 degrees at full capacities. (Operation beyond this limit shall be at the operator's discretion). <u>Construction Standards</u> The ladder shall be constructed to meet all of the requirements as described in the current edition of NFPA 1901. These capabilities shall be established in an unsupported configuration. All structural load supporting elements of the aerial device that are made of a ductile material shall have a design stress of not more than 50 percent of the minimum yield strength of the material based on the combination of the live load and the dead load. This 2:1 structural safety factor meets the current NFPA 1901 standard. All structural load supporting elements of the aerial device that are made of non-ductile material shall have a design stress of not more than 20 percent of the minimum ultimate strength of the material, based on the combination of the rated capacity and the dead load. This 5:1 safety factor meets the current 1901 NFPA standard. The aerial device shall be capable of sustaining a static load one and one-half times its rated tip load capacity (live load) in every position in which the aerial device can be placed when the vehicle is on a firm level surface.		

	Bidder Complies	
	Yes	No
The aerial device shall be capable of sustaining a static load one and one-third times its rated tip load capacity (live load) in every position the aerial device can be placed when the vehicle is on a slope of five degrees downward in the direction most likely to cause overturning. With the aerial device out of the cradle in the in the fully extended position at zero degrees elevation, a test load shall be applied in a horizontal direction normal to the centerline of the ladder. The turntable shall not rotate and the ladder shall not deflect beyond what the product specification allows. All welding shall be in compliance with the American Welding Society standards. All welding personnel shall be certified, as qualified under AWS welding codes. The aerial device shall be capable of operating in either of the two (2) following conditions: • Conditions of high wind up to 35 mph • Conditions of icing, up to a coating of 0.25" over the entire aerial structure All of the design criteria must be supported by the following test data: • Strain gage testing of the complete aerial device The following criteria for materials are to be used in the design of the aerial device: • Materials are to be certified by the mill that manufactured the material • Material testing that is performed after the mill test shall be for verification only and not with the intent of changing the classification. <u>Ladder Construction</u> The ladder shall be comprised of five (5) sections and shall extend to a nominal height, of 100' above the ground, as measured by 1901 recommendations. The ladder (handrails, baserails, trusses, k-braces and rungs) shall be constructed of welded, high strength steel certified by the manufacturer as being a minimum of 100,000 lb per square inch of yield strength. All critical points shall be reinforced, for extra rigidity, and to provide a high strength-to-weight ratio. Ladder rungs shall be round and welded to each section in two (2) places with "K" bracing for torsional rigidity. A minimum of 70.25" of overlap between each of the aerial sections shall be provided. The inside width dimensions of the ladder shall be: Base Section: 56.12" Lower Mid Section: 46.12" Center Mid Section: 36.62" Upper Mid Section: 28.12" Fly Section: 22.12"		

	Bidder Complies	
	Yes	No
The height of the handrails above the centerline of the rungs shall be: Base Section: 40.72" Lower Mid Section: 39.08" Center Mid Section: 32.32" Upper Mid Section: 29.02" Fly Section: 26.37" <u>Vertical Height</u> The height of the unit shall extend to no less than 100', as measured by a plumb line from the top surface of the basket handrail assembly to the ground, with the basket raised to a 77 degree angle. <u>Horizontal Reach</u> The rated horizontal reach shall be 93'. The measurement of horizontal reach shall be consistent with NFPA standards. <u>Mounting of Elevating Platform</u> The aerial device shall be mid mounted, to a torque box, on the truck chassis. <u>Torque Box</u> A "torsion box" subframe shall be installed between two sets of stabilizers. The torque box shall be constructed of 100,000 lb per square inch yield steel with an integral ladder storage box. The torque box assembly shall be capable of withstanding all torsional and horizontal loads when the unit is on the stabilizers. The torque box shall be bolted to the chassis frame rails using forty-eight 0.750" SAE grade 8 bolts with nuts. <u>Turntable</u> The turntable shall be coated with a non-skid, chemical resistant material in the walking areas. The stepping surfaces shall meet the skid-resistance requirements in the current NFPA 1901 standard. The turntable shall serve as a step for access to the ladder. The turntable handrails shall be a minimum 42.00" high and shall not increase the overall travel height of the vehicle. The handrails shall be constructed from 1.62" diameter extruded 6061-T6 aluminum with a slip resistant knurled surface. The handrails shall be anodized to resist corrosion. <u>Elevation System</u> Two (2) double acting, lift cylinders shall be utilized to provide smooth, precise elevation from 15 degrees below horizontal to 77 degrees above horizontal. The lift cylinder shall be attached to each side of the base section. The lift cylinders shall have a 7.50" internal diameter (bore), 3.50" diameter cylinder rod and a 53.89" stroke. The lift cylinder rod shall be chrome plated, to		

	Bidder Complies	
	Yes	No
provide smooth operation of the aerial and reduce seal wear. The lift cylinders shall be equipped with integral holding valves located in the cylinder, to prevent the unit from descending should the charged lines be severed, at any point within the hydraulic system and to maintain the ladder in the bedded position during road travel. The integral holding valves shall NOT be located in the transfer tubes. The elevation system shall be controlled by the microprocessor. The microprocessor shall provide the following features: • Collision avoidance of the elevation system to prevent accidental body damage • Automatic deceleration when the aerial device is lowered into the cradle • Automatic deceleration at the end of stroke, in maximum raise and lower positions • Deceleration of the aerial device from 0 to -15 degrees <u>Extension/Retraction System</u> A hydraulically powered, extension and retraction system shall be provided through dual hydraulic cylinders and wire ropes. The extension cylinder shall have a 6.50" internal diameter (bore), 2.75" diameter rod and a 53.12" stroke. Each set shall be capable of operating the ladder in the event of a failure, of the other. For safety, systems that use only a single extension/retraction system shall not be acceptable. The extension cylinder rod shall be chrome plated to provide smooth operation of the aerial device and reduce seal wear. The extension/retraction cylinders shall be equipped, with integral holding valves, to prevent the unit from retracting should the charged line be severed, at any point within the hydraulic system. The integral holding valves shall NOT be located in the transfer tubes. Wire ropes and attaching systems used to extend and retract the fly sections shall have a 5:1 safety factor based on the ultimate strength under all operating conditions. The factor of safety for the wire rope shall remain above 2:1 during any extension or retraction stall. The minimum ratio of the diameter of wire rope used to the diameter of the sheave used shall be 1:12. Wire ropes shall be constructed of seven (7) strands over an inner wire core for increased flexibility. The wire rope shall be galvanized to reduce corrosion. The extension/retraction system shall be controlled by the microprocessor. The microprocessor shall provide the following features: • Automatic deceleration at the end of stroke, in maximum extend and retract positions • Controls the rate of retraction while flowing water All sheaves and sheave pins shall utilize greasable bronze bushings. Sheave pins shall be polished stainless steel (no exception). <u>Rotation System</u> A 54.00" diameter, external tooth, monorace rotation bearing shall be used for the rotation system and shall provide 360 degree continuous rotation. The turntable shall be bolted to the bearing using 30 SAE grade 8, 0.875" diameter bolts. To secure the bearing to the base		

	Bidder Complies	
	Yes	No
support, 36 grade 8, 0.875" diameter bolts shall be used. The turntable base and the torque box bearing plate shall be machined to fit the bearing, thereby providing even distribution of forces. Two (2) hydraulically driven, planetary gear boxes, with drive speed reducer, shall be used to provide infinite and minute rotation control, throughout the entire rotational travel. Each planetary gearbox has a torque rating of 130,000 lb per square inch. A spring applied, hydraulically released, disc type, swing brake shall be furnished to provide positive braking of the turntable assembly. Provisions shall be made for auxiliary operation of the rotation system should complete loss of normal hydraulic power occur. The rotation system shall be controlled by the microprocessor. The microprocessor shall provide the following features: • Automatic deceleration as you near a cab or body collision zone • Envelope control of rotation system to prevent accidental body damage • Prevent the aerial from being rotated into the short-jacked side of the unit <u>Manual Override Controls</u> Manual override controls shall be provided for all aerial and stabilizer functions. <u>Ladder Slide Mechanism</u> Wear pads shall be used between the telescoping ladder sections, to reduce friction for smoother operation. Slide pads shall also be used to control side play between the ladder sections. <u>Basket Leveling System</u> A basket leveling system shall be provided and so designed, that the basket with it's rated load, can be supported and maintained level, relative to the turntable, regardless of the elevation or flexion of the ladder. The leveling of the basket features a hydraulic cylinder system mounted between the ladder fly section and the basket with each side capable of supporting the load, while maintaining the basket level. The hydraulic circuitry includes pressure operated counter balance valves, on the load side of the cylinders, to prevent the basket from tipping should the hydraulic lines be severed. The microprocessor shall control the level of the basket during bedding operations, preventing the basket from hitting the body deck when the truck is setup on unlevel ground. <u>Rotation Interlock</u> The microprocessor shall be used to prevent the rotation of the aerial device, to the side in which the stabilizers have not been fully deployed (short-jacked). The microprocessor shall allow full and unrestricted use of the aerial, in the 180 degree area, on the side(s) where the stabilizers have been fully deployed. The system shall also have a manual override, to comply with NFPA 1901. SYSTEMS THAT PERMIT THE AERIAL TO ROTATE TO THE "SHORT		

Bidder Complies	
Yes	No

JACK" SIDE, WITHOUT AUTOMATICALLY STOPPING THE ROTATION AND/OR WITHOUT ACTUATION OF THE "MANUAL OVERRIDE", SHALL NOT BE ACCEPTED. SYSTEMS THAT ONLY INCLUDE AN ALARM ARE NOT CONSIDERED AN INTERLOCK AND SHALL NOT BE ACCEPTED.

Load Capacities

The following load capacities shall be established with the stabilizers at full horizontal extension and placed in the down position to level the truck and to relieve the weight from the tires and axles. Capacities shall be based upon full extension and 360 degree rotation.

A load chart, visible at the operator's station, shall be provided. The load chart shall show the recommended safe load at any condition of the aerial device's elevation and extension (no exception).

35 MPH Wind Conditions/Dry

Degree of Elevation	-15 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 77
Basket	1000	1000	1000	1000	1000	1000	1000
Fly	-	-	-	-	250	250	500
Upper Mid	-	-	-	-	250	250	500
Center Mid	-	-	250	250	250	500	500
Lower Mid	-	-	250	250	500	500	500
Base	-	250	500	500	500	500	750

Water Tower Operation

The following capacities shall be based upon continuous 360 degree rotation and full extension.

35 MPH Wind Conditions/Water Charged

Degree of Elevation	-15 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 77
Basket	500	500	500	500	500	500	500
Fly	-	-	-	-	-	-	250
Upper Mid	-	-	-	-	-	250	250
Center Mid	-	-	-	-	250	250	500
Lower Mid	-	-	-	250	250	500	500
Base	-	-	250	250	250	500	500

Elevation -15 to 77 Degrees

The aerial device shall be able to maintain the above load capacities while flowing up to 1500 GPM and a nozzle position of 0 to 90 degrees to either side of the ladder centerline, and as far above and below horizontal to the platform as nozzle design allows.

	Bidder Complies	
	Yes	No
The aerial device shall be able to maintain the above load capacities while flowing up to 2000 GPM and a nozzle position of 0 to 45 degrees to either side of the ladder centerline, and 30 degrees above horizontal and as far below horizontal to the platform as nozzle design allows. Reduced loads in the basket can be redistributed in 250 lb Increments to the fly, mid, or base as needed. <u>Ladder Cradle Interlock System</u> A ladder cradle interlock system shall be provided through the microprocessor to prevent the lifting of the aerial device from the nested position until the operator places all the stabilizers in a load supporting configuration. A switch shall be installed at the boom support to prevent operation of the stabilizers once the aerial has been elevated from the nested position. <u>AERIAL BOOM PANEL</u> There shall be one boom panel provided on each side of the aerial ladder base section. The boom panel shall be painted #90 red. The boom panels shall be designed so no mounting bolts are in the face of the panel. This shall keep the lettering surface free of holes. <u>AERIAL DEVICE RUNG COVERS</u> Each rung shall be covered with a secure, heavy-duty, fiberglass pultrusion that incorporates an aggressive, no-slip coating. The rung covers shall be glued to each rung, and shall be easily replaceable should the rung cover become damaged. The center portion of each rung cover shall be black and the outside 2.00" edge at each side shall be safety yellow. Under no circumstances shall the rung covers be fastened to the rungs using screws or rivets (no exception). The rung covers shall have a 10-year, limited warranty. <u>SAW STORAGE BOX</u> There shall be a total of two (2) storage box(es) provided at the base section of the aerial ladder, one (1) on each side of the aerial device. The box(es) shall be painted to match the aerial device and located at the tip of the base section. The box(es) shall have a hinged cover with D-handle latch and gas struts to secure the saw. The cover shall have the same finish as the box. The cover shall be tied in to the open door indicator circuitry when in the open position. The box shall have no louvers. The maximum capacity of each box shall be 25 lb.		

	Bidder Complies	
	Yes	No
<u>STABILITY TEST</u> An aerial stability test shall be run on this apparatus using the maximum weight allowance for tip options. <u>STOKES STORAGE BRACKETS</u> There shall be one (1) aluminum bracket(s) provided at the base section of the aerial ladder on the right side of the aerial device while viewed from the turntable. The brackets shall be located above the aerial boom panel. The brackets shall be painted to match the aerial device and include locking pins to secure the basket. <u>LADDER STORAGE MOUNTING BRACKETS</u> There shall be brackets that are painted to match the aerial device provided near the end of the fly section of the aerial for mounting a roof ladder. The mounting brackets shall accommodate a 14' Duo-Safety 875-A-DR roof/wall ladder as determined by the type of aerial device and the available space. <u>BASKET STRUCTURE</u> The complete basket structure shall be constructed of welded high strength steel certified by the manufacturer to have a minimum of 100,000 lb per square inch yield strength on all structural members. The aerial basket shall be fully tested and independent third party certified. The flooring of the basket shall be multi-piece Morton Cass material, preventing the accumulation of water on the standing surface. The floor shall measure approximately 33.63" long x 72.75" wide. The stepping surfaces shall meet the skid-resistance requirements of current NFPA 1901 standard. The outside basket steps used for transferring in and out of the basket shall be at the same level as the basket floor and shall be constructed of aluminum treadplate. The steps on the front and sides are approximately 8.00" deep. The front corners of the basket step shall be mitered at 45 degrees to allow the basket to be maneuvered closer to buildings when approaching at an angle. Four (4) stainless steel pompier belt safety loops shall be attached to the inside of the basket. Two (2) lifting eyes shall be provided on the bottom side of the basket support structure. Each lifting eye shall be rated for 500lb. Four (4) rubber bumpers are provided on the bottom side of the basket structure for damage protection when setting it down on a surface. The basket interior shall be illuminated as required per the current edition of NFPA 1901. Electrical sub-components shall be mounted under the basket in a enclosed area providing protection from heat exposure while allowing for easy servicing and maintaining an unobstructed basket interior.		

	Bidder Complies	
	Yes	No
<u>BASKET SIDES</u> The sides of the basket shall be of tubular steel construction and aluminum sheet skin, and along with the basket doors, shall form a continuous 42.00" high wall around the basket. <u>PLATFORM ENTRANCES/EXITS</u> Two (2) swing-in, spring-loaded, self-closing doors shall be of steel frame construction with an aluminum sheet skin and shall be provided on the 45 degree angles at the front of the platform. A paddle style door latch shall allow the basket doors to be opened from the outside by applying pressure to the paddle with the hand. The rear of the platform shall be equipped with a vertical self-closing gate for transfer to and from the platform's ladder device. <u>ACCESSORY MOUNTING RECEPTACLES</u> Universal accessory mounting receptacles shall be permanently affixed on the left side of the basket to receive options such as the rescue basket holders, rappelling arms, roof ladder brackets, winch, etc. Complete interchangeability shall be required without modification to the basket. <u>LADDER BELT BOX AT PLATFORM</u> There shall be a ladder belt box with a cover and rubber draw latch provided at the platform. The box shall be located at the right side of the basket when viewed from the turntable and shall match the finish of the aerial basket. The box shall be sized to fit four (4) ladder belts <u>LIGHTS FOR TURNTABLE WALKWAY</u> There shall be On Scene Model 73006-WHW 6.00" long white LED lights and P25 white LED lights with chrome housing provided at the aerial turntable. The lights shall be located to illuminate the entire walking surface of the turntable including the area around the turntable console. These lights shall be activated by the aerial master switch. <u>TURNTABLE CONSOLE LIGHTING</u> There shall be one (1), TecNiq Model E10, white LED light mounted in the turntable console cover to illuminate the controls located on both the upper and lower portion of the turntable control station. These lights shall be activated by the aerial master switch. <u>BASKET HEAT SHIELDS</u> A heat reflective shield constructed of 0.063 aluminum shall be provided on the front, sides, bottom, and access doors of the basket. The front, side and access door heat shields shall be painted to match the aerial basket. The heat shields on the bottom of the basket shall be easily removable for ease of servicing components located under the basket. These heat shields shall be provided with a non-glare finish.		

	Bidder Complies	
	Yes	No
<u>INFORMATION CENTER</u> There shall be an information center provided. The information center shall operate in temperatures from -40 to 185 degrees Fahrenheit. The information center shall employ a Linux operating system and a 7.00" (diagonal measurement) LCD display. The LCD shall have a 1000 nits rated color display. The LCD shall be daylight visible. The LCD display shall be encased in an ABS, grey plastic housing with a black decal. There shall be five (5), weather-resistant user interface buttons provided. The LCD display can be changed to an optional single foreign language. <u>Operation</u> The information center shall be designed for easy operation in everyday use. There shall be a page button to cycle from one screen to the next screen in a rotating fashion. A video button shall allow an NTSC camera signal into the information center to be displayed on the LCD. If any button is pressed while viewing a video feed, the information center shall return to the vehicle information screens. There shall be a menu button to provide access to maintenance, setup, and diagnostic screens. All other button labels shall be specific to the information being viewed. <u>General Screen Design</u> Where possible, background colors shall be used to provide vehicle information <i>At A Glance</i>. If the information provided on a screen is within acceptable limits, a green background color shall be used. If the information provided on a screen is not within acceptable limits, an amber background color shall indicate a caution condition and a red background color shall indicate a warning condition. Every screen in the information center shall include the aerial tip temperature, the time (12- or 24-hour mode) and a text Alert Center. The time shall be synchronized between all Command Zone color displays located on the vehicle. The Alert Center shall display text messages for audible alarms. The text messages shall identify any items causing the audible alarm to sound. If more than one (1) audible alarm is activated, the text message for each alarm shall cycle every second until the problems have been resolved. The background for the Alert Center shall change to indicate the severity of the warning message. Amber shall indicate a caution condition and red shall indicate a warning condition. If a warning and a caution condition occur simultaneously, the red background color shall be shown for all Alert Center messages. A label shall be provided for each button. The label shall indicate the function for each active button for each screen. If the button is not utilized on specific screens, it shall have a button label with no text. Symbols shall accurately depict the aerial device type the information pertains to such as rear mount ladder, rear mount platform, mid-mount ladder or mid-mount platform. <u>Page Screens</u> The Information center shall include the following pages:		

	Bidder Complies	
	Yes	No
The Aerial Main and Load Chart page shall indicate the following information: Rungs Aligned and Rungs Not Aligned shall be indicated with text and respective green or red colored ladder symbols. Ladder Elevation shall be indicated via a fire apparatus vehicle with ladder symbol with the degree of elevation indicated between the vehicle and ladder. Water Flow (if applicable) shall be indicated via a water nozzle symbol and text indicating flow / time. Breathing Air Levels shall be indicated via an air bottle symbol and text indicating the percent (%) of air remaining. A green bar graphs shown inside the bottle shall indicate oxygen levels above 20 percent. A red bar graph shall indicate oxygen levels at or below 20 percent. When oxygen levels are at or below 10 percent the red bar graph shall flash. The Aerial Load Chart shall indicate the load limit on each section of the ladder based on actual ladder position and water flow (if applicable). <i>At A Glance</i> color features shall be utilized on this screen. Caution type conditions shall be indicated via a yellow background. Warning type conditions shall be indicated via a red background. Conditions operating within acceptable limits shall be indicated via a green background. The Aerial Reach and Hydraulic Systems page shall indicate the following information: Aerial Hydraulic Oil Temperature shall be indicated with symbol and text. At a glance features shall be utilized. Aerial Hydraulic Oil Pressure shall be indicated with a symbol and text. At a glance features shall be utilized. The following calculations shall be indicated on a representative vehicle symbol: Aerial Device Extension length. Aerial Device Height indicating the height of the aerial device tip from the ground. Aerial Device Reach indicating the horizontal distance the aerial reaches from the turntable. Aerial Device Angle indicating the angle from the vehicle which the device is at. <i>At A Glance</i> color features shall be utilized on this screen. Caution type conditions shall be indicated via a yellow background. Warning type conditions shall be indicated via a red background. Conditions operating within acceptable limits shall be indicated via a green background.		

	Bidder Complies	
	Yes	No
The Level Vehicle page shall indicate the following information: The grade of the vehicle shall be indicated via a fire apparatus vehicle symbol with the degree of grade shown in text format. The symbol shall tilt dependent on the vehicle grade. The slope of the vehicle shall be indicated via a fire apparatus vehicle symbol with the degree of slope shown in text format. The symbol shall tilt dependent on the vehicle slope. Outriggers status shall be indicated via a colored symbol for each outrigger present. Each outrigger status shall be defined as one of the following: Outrigger stowed indicated with a silver pan located close to the vehicle Outrigger fully extended indicated with a fully deployed green outrigger Outrigger short-jacked indicated by a yellow outrigger partially deployed Outrigger not set indicated by a red outrigger that is not set on the ground A text box located on the vehicle symbol shall be utilized to identify the overall status of the outrigger leveling system. The following status shall be indicated in the text box: Deployed status shall indicate all outriggers are properly set on the ground at full extension Shortjacked status shall indicate one or more outriggers are set on the ground but not fully extended. Not Set status shall indicate one or more outriggers is not properly set on the ground. Stowed status shall indicate all outriggers are stowed for vehicle travel. A bedding assist alert shall indicate that the aerial device is being aligned by the Command Zone system as the operator lowers the aerial device into the cradle with the joystick. <i>At A Glance</i> color features shall be utilized on this screen. Caution type conditions shall be indicated via a yellow background. Warning type conditions shall be indicated via a red background. Conditions operating within acceptable limits shall be indicated via a green background. <u>Menu Screens</u> The following screens shall be available through the Menu button: The View System Information screen shall display aerial device hours, aerial PTO hours, ladder aligned for stowing, aerial rotation angle, total water flow (if applicable), and aerial waterway valve status (if applicable). The Set Display Brightness screen shall allow brightness increase and decrease and include a default setting button.		

	Bidder Complies	
	Yes	No
The Configure Video Mode screen shall allow setting of video contrast, video color and video tint. The Set Startup screen allows setting of the screen that shall be active at vehicle power-up. The Set Date and Time screen has a 12- or 24-hour format, and allows setting of the time and date. The View Active Alarms screen shows a list of all active alarms including the date and time of each alarm occurrence and shows all alarms that are silenced. The System Diagnostics screen allows the user to view system status for each module and it's respective inputs and outputs. Viewable data shall include the module type and ID number; the module version; and module diagnostics information including input or output number, the circuit number connected to that input or output, the circuit name (item connected to the circuit), status of the input or output, and other module diagnostic information. Aerial calibrations screen indicates items that may be calibrated by the user and instructions to follow for proper calibration of the aerial device. Button functions and button labels may change with each screen. <u>LOWER CONTROL STATION</u> A lower control station with pendant control shall be located at the rear of the apparatus in an easily accessible area. The controls and indication labels shall be illuminated for nighttime operation. The following items shall be furnished at the lower control station and shall be clearly identified and conveniently located for ease of operation and viewing: • Level assist switch • Override switch to override microprocessor • Emergency power unit switch <u>AERIAL DEVICE CONTROL STATIONS</u> There shall be two (2) aerial device control stations, one (1) shall be referred to as the basket control station, and the other as the turntable control station. All elevation, extension, and rotation controls shall operate from both of these locations. The controls shall permit the operator to regulate the speed of the aerial functions, within the safe limits as determined by the manufacturer and NFPA standards. The controls shall be clearly marked and illuminated for night time operation. Each control shall be equipped with an operator presence, preventing accidental activation. <u>TURNTABLE CONTROL STATION</u> The turntable control station shall be located on the right side of the turntable so the operator may easily observe the basket while operating the controls. A console cover shall be provided at the turntable control station. The controls shall be so designed to allow the turntable control		

	Bidder Complies	
	Yes	No
station to immediately override the basket controls even if the ladder is being operated by the basket controls. The following items shall also be provided at the turntable control station and be clearly identified and illuminated for nighttime operation and conveniently located for ease of operation and viewing: • Three (3) separate controls for raise/lower, extend/retract, and left/right rotation • Intercom controls • Tip tracking light switch • Emergency power unit switch • Operator's load chart • Two (2) position switch for selecting aerial operational speed • Aerial monitor switches <u>BASKET CONTROL STATION</u> The basket control station shall be located at the front, center of the platform basket. The following items shall also be provided at the basket control station and be clearly identified and illuminated for nighttime operation and conveniently located for ease of operation and viewing: • Three (3) separate controls for raise/lower, extend/retract, and left/right rotation • Intercom controls • Tip tracking light switch • Basket leveling switches • Operator's load chart • Aerial monitor switches <u>HIGH IDLE</u> The high idle shall be controlled by the microprocessor. The microprocessor shall automatically adjust the engine rpm, to compensate for the amount of load placed upon the system. The system shall include a safety device that allows activation of the high idle, only when the parking brake is set and the transmission is placed in neutral. <u>INTERIOR BASKET ILLUMINATION</u> There shall be three (3) Amdor Model AY-LB-12HW020-0, 350 lumens 20.00" weather resistant strip lights with white LEDs and stainless steel shield provided to illuminate the interior of the aerial basket. • One (1) light over the control console • One (1) light on the left side rear of the basket • One (1) light on the right side rear of the basket The lights shall be activated when the battery switch is on and the aerial master switch is on.		

	Bidder Complies	
	Yes	No
<u>STABILIZERS</u> The vehicle shall come equipped with a stabilization system consisting of six (6) hydraulically operated stabilizers. The middle two (2) shall be out and down style, the front and rear two (2) shall be down only. This system shall meet or exceed all requirements of the NFPA specifications related to stabilization and setup on sloped surfaces. The stabilizer/leveling jacks shall have a maximum spread of 18' measured from the centerline of the jack footpads when the beams are fully extended. The beams shall be 6.81" wide x 13.00" high with 1.00" thick top and bottom plates and 1/2" thick sides of 100,000-PSI minimum yield strength steel. The cylinders shall have pilot-operated check valves with thermal relief designed to ensure that the beams shall not drift out of the stowed position during travel. Wear pads shall guide the stabilizers. The horizontal extension cylinders shall be totally enclosed within the beams and shall incorporate telescoping hydraulic tubing to supply the jack cylinder hydraulic power. Stabilizer hydraulic hoses shall remain stationary during operation of the stabilizers to prevent hose wear and potential failure. The cylinders shall be equipped with decelerators to reduce the speed of extension and retraction when the beams are near the fully retracted and extended positions. The stabilizer extension hydraulic cylinders shall have the following dimensions: 2.25" bore, 1.38" rod, and 62.25" stroke. The front vertical jack cylinders shall be capable of 15.00" ground penetration. The middle and rear vertical jack cylinders shall be capable of 18.00" ground penetration. The cylinders shall be supplied with pilot operated check valves on each jack cylinder to hold the cylinder in the stowed or working position, should a charged line be severed at any point in the hydraulic system. For safety, the integral holding valves shall be located in the cylinder base, NOT in the transfer tube. Vertical jack cylinder rods shall be fully enclosed by a telescoping inner box to protect the cylinder rods from damage. The stabilizer jack hydraulic cylinders shall have the following dimensions: 4.25" bore, 3.00" rod, and 34.88" stroke. The middle and rear stabilizer jack shall have a pan that shall be a maximum of 14.00" wide so as to allow the extension of the stabilizer between parked cars or other obstacles. This pan shall serve as a protective guard and a mounting surface for warning lights. The top, forward, and rear edges shall be flanged back 90 degrees for added strength. The front stabilizers shall be designed for easy cab tilt. <u>STABILIZER PADS</u> The stabilizer footpad shall include an integrated stabilizer pad. The footpad shall be attached to the jack cylinder rod by means of a machined ball at the end of the jack cylinder rod which mates to a socket machined into the footpad. The footpad shall automatically position itself when being stowed so that no portion of the foot extends outside the body.		

	Bidder Complies	
	Yes	No
<u>STABILIZER CONTROLS</u> A portable stabilizer control pendant shall be provided. The control pendant shall be weatherproof and oil resistant. Each function and indicator light shall be labeled on a mylar lexan panel. The control pendant can be taken as far away as 15' from the vehicle with an attached coil cable. The stabilizer control pendant shall include the following: • One (1) green power indicator light for stabilizer control that shall be illuminated when the Stabilizer Power Enable switch has been activated. This shall be interlocked such that the aerial master must be activated, the ladder is in the cradle, or the Global Override at the rear of the apparatus is activated. • Two (2) electric toggle switches for stabilizers: each toggle switch shall control the extend/retract (middle only) and raise/lower (front/middle/rear) of its respective stabilizer to allow vehicle set up in restricted areas and/or on uneven surfaces. • Level assist switch: The stabilizer control system shall incorporate a computerized leveling system to enhance the stabilizer set up. The computerized system shall ensure full stabilizer extension, proper jack penetration, and shall level the vehicle within eight tenths of a degree of level for safe operation of the aerial device. • Stow assist switch: The stabilizer control system shall incorporate a computerized system to move all six (6) stabilizer shoes to the full raised position while this switch is held. • Tilt assist toggle switch: The stabilizer control system shall incorporate a computerized system to tilt the chassis to five (5) degrees for enhanced side angle deployment of the aerial device. • One (1) electric push button switch for the engaging the emergency power unit. • One (1) red "stabilizer not stowed" indicator light: this light shall illuminate when the stabilizers are not in the fully stowed position. • Two (2) fully extended beams green indicator lights: these lights shall be illuminated when each of the respective stabilizer beams are fully extended. • Six (6) firm on ground green indicator lights: each light shall be illuminated when its respective stabilizer shoe is in the load supporting condition. Each toggle switch shall activate the engine fast idle automatically. Manual override shall be supplied for each stabilizer control valve. A stabilizer deployment audible warning alarm shall be provided and activated by the stabilizer movement. A "Stabilizers Not Stowed" indicator shall be provided in the driver's compartment. It shall illuminate automatically whenever the stabilizers are not fully stowed to prevent damage to the apparatus if moved. The stabilizer system shall also be wired to the "Do Not Move Indicator		

	Bidder Complies	
	Yes	No
Light", which shall flash whenever the apparatus parking brake is not fully engaged and the stabilizers are not fully stowed. <u>CRADLE INTERLOCK SYSTEM</u> A cradle interlock system shall be provided, to prevent the lifting of the aerial from the nested position, until the operator has positioned all the stabilizers in a load supporting configuration. A switch shall be installed at the cradle, to prevent operation of the stabilizers once the aerial has been elevated from the nested position. <u>STABILIZER PAN AND TRIM MATERIAL</u> The aerial stabilizer pans shall be stainless steel, painted to match the lower body color and the aerial stabilizer trim shall be painted to match lower body color . <u>STABILIZER CONTROL BOX DOOR</u> A vertically hinged smooth aluminum door shall be provided over the stabilizer control box. The door shall be hinged along the inboard edge and provided with a Southco C2 black powder coated raised trigger latch. <u>STABILIZER PLACEMENT</u> There shall be two (2) cameras provided and installed on the body, one (1) directly above each stabilizer. The cameras shall be activated with a switch in the cab and shall provide a picture to specify the fully extended stabilizer position allowing the driver the ability to position the vehicle with the proper clearance for stabilizer deployment. <u>HYDRAULIC SYSTEM</u> All hose assemblies shall be assembled and crimped by the hose manufacturers certified technician. All manufacturing employees responsible for the installation of hydraulic components shall be properly trained. Training shall include: proper handling, installation, torque requirements, cleanliness and quality control procedures for hydraulic components. Hoses used in the aerial hydraulic system shall be of a premium quality hose with a high abrasion resistant cover. All pressure hoses shall have a working pressure of 4000 psi and a burst pressure rating of 16,000 psi. All hydraulic fittings and tubing shall be plated or constructed of 304 stainless steel to minimize corrosion. The fitting shall use an O-ring seal where possible to minimize hydraulic leaks. An interlock shall be provided that prevents activation of the hydraulic pump until the transmission is placed in neutral and the parking brake is set as outlined in the current NFPA 1901 standard.		

	Bidder Complies	
	Yes	No
The system shall meet the performance requirement of the current NFPA 1901 standard, which requires adequate cooling less than 2.5 hours of operations. All hydraulic components that are non-sealing whose failure could result in the movement of the aerial shall comply with current NFPA 1901 standards and have burst strength of 4:1. Dynamic sealing components whose failure could cause aerial movement shall have a margin of 2:1 on maximum operating pressure per the current NFPA 1901 standard. All hydraulic hoses, tubes, and connections shall have a minimum burst strength of 3:1 per the current NFPA 1901 standard. A chassis mounted positive displacement piston pump for consistent pressure and rapid responses shall supply hydraulic power for all aerial operations. The positive displacement pump shall provide 3,000psi. The hydraulic pump shall be solely dedicated to aerial operations (no exception). Each aerial shall be evaluated as to the region and climate where it shall be used to determine the optimum viscosity and proper oil grade. Oil viscosity shall be based on an optimum range of 80 to 1000 SUS during normal aerial use. Before shipment of the unit, an oil sample shall be taken and analyzed to confirm the oil is within the allowable ISO grade tolerance. The aerial hydraulic system shall have a minimum oil cleanliness level of ISO 18/15/13 based on the ISO 4406:1999 cleanliness standard. Each customer shall receive a certificate of actual cleanliness test results and an explanation of the rating system. Oil samples can be taken from the hydraulic manifold GP1 port which is also used for verifying system pressure. Ball valves shall be provided in the hydraulic suction lines to permit component servicing without draining the oil reservoir. The aerial shall incorporate the use of trombone steel tubes inside the stabilizer beams to eliminate hydraulic hose wear and leaks. Hydraulic power to the ladder shall be transferred from the pedestal by a hydraulic swivel. The system hydraulic pressure shall be displayed on the turntable display. The hydraulic system shall be additionally protected from excessive pressure by a secondary pressure relief valve set at 3,500 psi. In the event the main hydraulic pump compensator malfunctions, the secondary relief shall prevent system damage. <u>HYDRAULIC CYLINDERS</u> All cylinders used on the aerial device shall be produced by a manufacturer that specializes in the manufacture of hydraulic cylinders.		

	Bidder Complies	
	Yes	No
Each cylinder shall include integral safety holding cartridges. No manifold or transfer tube mounted cartridge shall be acceptable. Each cylinder shall be designed to a minimum safety factor of 4:1 to failure. All safety holding cartridges shall be installed at the cylinder manufacturer, in a controlled clean environment to avoid possible contamination and or failure. <u>POWER TAKEOFF/HYDRAULIC PUMP</u> The apparatus shall be equipped with a power takeoff driven by the chassis transmission and actuated by an electric shift, located inside the cab. The power takeoff which drives the hydraulic pump shall meet all the requirements for the aerial unit operations. An amber indicator light shall be installed on the cab instrument panel to notify the operator that the power takeoff is engaged. An interlock shall be provided that allows operation of aerial power only after the chassis spring brake has been set and the chassis transmission has either been placed in the neutral position or drive position after the driveline has been disengaged from the rear axle. The hydraulic system shall be supplied by a variable displacement load and pressure compensating piston pump. The pump shall meet the demands of all three simultaneous aerial functions. The pump shall provide proper flow for single aerial function with the engine at idle speed. A switch shall be provided on the control console to increase the engine speed for multiple function operation. <u>EMERGENCY PUMP</u> The hydraulic system shall be designed with an auxiliary power unit meeting the guidelines of the current NFPA 1901 standard. The aerial shall be equipped with an emergency hydraulic pump, electrically driven from the truck batteries. The pump shall be capable of running for 30 minutes for limited aerial functions to stow the unit in case of a main pump or truck system failure. A momentary switch shall be located at the stabilizer and aerial control locations to activate the emergency pump. <u>AERIAL CONTROL VALVE</u> The aerial hydraulic control valve shall be designed with special spool flows, limiting the oil flow for the designed function speed. The valve shall be electrically controlled and be located below the swivel and integrated with the stabilizer control manifold. The handles shall be oriented outward and shall be spaced 1.80" apart. The valve spools shall be designed to bleed off downstream pressure, in the neutral position and allow proper sealing of any cylinder holding cartridge.		

	Bidder Complies	
	Yes	No
<u>OIL RESERVOIR</u> The oil reservoir shall have a minimum capacity of 39 gallons. The oil fill location shall be easily accessible and be labeled "Hydraulic Oil Only" and also indicate the grade of oil that is installed in the reservoir. A drain port shall be provided. Two suction ports shall be provided, one for the main hydraulic pump and one for the emergency pump. The emergency suction port shall be raised slightly off the bottom of the reservoir. Magnetic filter shall be installed in line with the return hose. A float type sending unit in the reservoir shall provide an indication of oil level on an electronic display. A temperature sending unit in the reservoir shall provide indication of the oil temperature on an electronic display. The hydraulic oil reservoir shall be labeled per the current edition of NFPA 1901 standard. <u>RETURN FILTER</u> The low pressure oil return filter shall be remote mounted in the return line and designed to prevent oil loss during filter change. A 50 psi bypass shall be included to protect the element and hydraulic system during lower than normal operating temperatures. The system shall incorporate the following filter to provide dependable service: • return filter: beta 1000 at 6 micron <u>HYDRAULIC SWIVEL</u> The aerial ladder shall be equipped with a three (3) port, high pressure hydraulic swivel which shall connect the hydraulic lines from the hydraulic pump and reservoir through the rotation point to the aerial control bank. The hydraulic swivel shall allow for 360 degree continuous rotation of the aerial. <u>ELECTRIC SWIVEL</u> The ladder shall be equipped with an electric swivel to allow 360 degrees rotation of the aerial while connecting all electrical circuits through the rotation point. A minimum of 36 collector rings shall be provided that are capable of supplying 20 amp continuous service. All collector rings shall be enclosed and protected with desiccant plugs against condensation and corrosion. No oil or silicone shall be used. <u>WATER SWIVEL</u> Water shall be transferred to the aerial waterway by means of a 5.00" internal diameter waterway, through the swivel, permitting 360 degree continuous rotation. <u>13-BIT ABSOLUTE ENCODER</u> The aerial ladder shall be equipped with a 13-Bit Absolute Encoder which provides 8192 counts per shaft turn for position and direction reference.		

	Bidder Complies	
	Yes	No
The 13-Bit Absolute Encoder shall provide a unique binary word to reference each position and direction for all 360 degrees of rotation. If the power is interrupted for any reason, the 13-Bit Absolute Encoder shall allow power to be returned to the system without having to re-zero the settings. The 13-Bit Absolute Encoder shall be an integral part of a micro-processor based control system. <u>ELECTRICAL SYSTEM</u> The aerial device shall utilize a microprocessor-based control system. The system shall consist of the following components: - Control System Modules Each of the control system modules shall be configured as follows: - Sealed to a NEMA 4X rating - Operating range from -40 degrees F to 156 degrees F (-40 degrees C to 70 degrees C) - Communicate using J1939 data link - Two (2) diagnostic LED lights - One (1) green light that illuminates when module has power (B+) and ground - One (1) red light that flashes to indicate the module is capable of communicating via the data link - Up to 16 diagnostic LEDs on each module - Ground matrix identification system The following control system modules shall be used: - Control Module - Main controller for the system - USB connection allows for computer diagnostics - Power Module - Built-in fault sensing - Eight (8) digital outputs - Pulse width modulating (PWM) capable 10A continuous per output - Circuit protection based on actual current draw (not affected by heat) - Current Control Module - Built-in fault sensing - Three (3) analog inputs - Eight (8) digital outputs - Pulse width modulating (PWM) capable 3A continuous per output		

	Bidder Complies	
	Yes	No
○ Closed Loop System ○ Circuit protection based on actual current draw (not affected by heat) • Input Module ○ 16 software selectable (digital or analog) inputs • Output Module ○ 16 digital outputs • Input/Output Module ○ Eight (8) software selectable (digital or analog) inputs ○ Eight (8) digital outputs • Valve Module ○ 36 digital inputs ○ 36 digital outputs <u>TIP LIGHT</u> There shall be two (2) Whelen® Model MPB*, 4,100 lumens 12 volt DC LED lights with adjustable mounts installed on the front of the basket. The painted parts of this light assembly to be white. The lights shall be controlled with the tracking lights. <u>TRACKING LIGHTS</u> There shall be two (2) Whelen® MPB*, 5,695 lumens 12 volt DC LED lights with bail bracket mounts installed near the tip of the base section of the aerial device. The lights are installed at the tip so the overall width of the apparatus is not affected. The lights shall be mounted below the top edge of the aerial device so the overall height of the apparatus is not affected. • One (1) located on the left side with spot optics • One (1) located on the right side with spot optics • The painted parts of this light assembly to be white. Power to the lights shall be controlled by a master on/off switch at the turntable control operator's position. <u>BASKET ACCESS</u> Access to the basket shall be provided by a pull-out, swing-down climbing ladder. The 2.25" deep climbing ladder surfaces shall be constructed with Traction Tread®. The bottom step shall be a flip-down, stirrup step. The access ladder shall be recessed into the angled corners of the rear body on each side. Hand holds shall be provided in each side of the ladder. The step well finish shall be aluminum treadplate. All stepping surfaces shall have a height not greater than 14.00" from top surface to top surface.		

	Bidder Complies	
	Yes	No
The bottom stepping height shall not exceed 24.00" from the ground to the top of the stepping surface at any time. <u>STEP LIGHTS</u> There shall be two (2) white LED step lights with chrome housing provided for each set of aerial basket access steps. In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The step lights shall be actuated with aerial master switch. These lights shall meet NFPA requirements for step lighting. <u>LIGHTING ON AERIAL DEVICE</u> There shall be TecNiq, Model D02, LED rung lighting provided on both sides of the aerial ladder base, lower mid, middle, upper mid and fly sections. The lighting shall be located adjacent to the ladder rungs along the lower rail of the ladder sections and shall run the length of the ladder section. The color of the sections shall be per the following: • The base section of the ladder to be red. • The lower mid section of the ladder to be red. • The mid section of the ladder to be red. • The upper mid section of the ladder to be red. • The fly section of the ladder to be red. The LED rung lighting shall be activated when the aerial is raised from the cradle. The lights may be load managed when the parking brake is applied. <u>STABILIZER WARNING LIGHTS</u> There shall be our (4) Whelen®, Model M6*C, LED flashing warning lights with Whelen, Model M6FC, chrome flanges installed, one (1) on each stabilizer cover panel. • The front stabilizer pan lights shall be red LED with a clear lens • The rear stabilizer pan lights shall be red LED with a clear lens These warning lights shall be activated by the same switch as the side warning lights. <u>STABILIZER BEAM WARNING LIGHTS</u> Two (2) 4.00" diameter red LED flashing lights shall be mounted on each stabilizer, one (1) facing forward and one (1) facing rearward.		

	Bidder Complies	
	Yes	No
The lights shall be Grote Supernova 40 series LED lights. The lights shall be recessed in the horizontal beam of the stabilizer. These warning lights shall be activated with the aerial master switch. <u>STABILIZER SCENE LIGHTS</u> There shall be one (1) Amdor®, Model AY-LB-12HW012, 190 lumen, 12" long, white LED strip light installed under each stabilizer beam to illuminate the surrounding area. A total of six (6) lights shall be installed. The lights shall be activated by the aerial master switch. <u>DC POWER CABLE TO TIP</u> There shall be a cable installed in the aerial device to provide 12.88 amps @ 12 volts DC to the tip of the aerial device. <u>UNDER PLATFORM LIGHTING</u> There shall be two (2) Whelen® Model PSL1B*, 4,500 lumens light(s) with white LEDs and adjustable bail bracket(s) provided under the left side front corner basket step and the right side front corner basket step. The painted parts of this light assembly to be white. The light(s) shall be controlled from a switch(es) at the platform/tip and turntable. <u>COMMUNICATION SYSTEM</u> An Atkinson communication system shall be furnished between the platform and the turntable operator's position. The master control located at the turntable control console shall have the transmitting and receiving volume controls along with the push to talk button. A self-contained "hands-off" speaker microphone shall be located front and center of the platform which shall require no operator attention to transmit or receive. <u>AERIAL PEDESTAL</u> The aerial pedestal shall accommodate the height of the cab. <u>3-IN-1 BASKET OPTION BRACKETS</u> Brackets shall be provided to increase the safety of firefighters during fire ground and rescue operations. The removable brackets shall have the following three (3) functions: securing a roof ladder to the basket, two (2) rappelling anchor points, and mounting bars to allow the secure mounting of a rescue basket stretcher. The roof ladder mounting bracket shall be designed to allow firefighter access below the basket using up to a 20' roof ladder. The ladder shall be secured through its beams and one (1) rung, by a 1.00" diameter aluminum rod capable of being positively latched in place and able to withstand a minimum of a 500lb load. There shall be a latch to keep the ladder in a vertical position at all times. A set of nylon guides shall be provided to aid in positioning the roof ladder on the mounting brackets.		

	Bidder Complies	
	Yes	No
Two (2) rappelling arms shall be provided. Forged stainless steel eyebolts with a 1.38" inside diameter shall be incorporated into the design of the brackets for use as a rappel line anchor. Each anchor point shall have a capacity of 300lb. Rescue basket support brackets shall be provided to allow patient transport using the aerial. Two (2) quick clip basket straps shall be used to secure the basket to the brackets. Strain gauging and testing shall have been completed on the system (ladder and complete holding device) to ensure structural integrity of all components and maintain a minimum of two to one (2:1) safety factor. <u>AERIAL TURNABLE MANSAVER™ BAR</u> A ManSaver™ bar shall be installed at the aerial turntable. <u>AERIAL WATERWAY</u> The aerial waterway shall be capable of being supplied by either a midship mounted pump or an external water source through a 5.00" intake at the side of the apparatus. A 5.00" water swivel shall be installed below the aerial turntable permitting the ladder to rotate 360 degrees continuously. A 5.00" water swivel shall be installed at the aerial heel pivot pin that shall permit water tower operations of -15 degrees to 77 degrees. The heel pivot pin shall not be integral with the waterway swivel at any point. The waterway design shall allow complete servicing of the waterway swivel without disturbing the heel pivot pin. A telescoping aluminum waterway shall be installed on the side of the aerial ladder sections. The waterway shall consist of a 5.50" diameter tube for the base section, 5.00" diameter tube for the lower mid section, 4.50" diameter tube for the center mid section, 4.00" diameter tube for the upper mid section, and 3.50" diameter tube for the fly section. A 1.50" drain shall be provided for the waterway. The drain shall be located below the body on the right side rearward of the running board . <u>WATERWAY SEALS</u> The waterway seals shall be of type-B PolyPak design, composed of nitroxile seal and a nitrile wiper, which together offer maximum stability and extrusion resistance on the waterway. The seal shall be capable of withstanding pressures up to 2000 psi, temperatures in excess of 250 degrees Fahrenheit and have resistance to all foam generating solutions. The seals shall be internally lubricated. The waterway seals shall have automatic centering guides constructed of synthetic thermalpolymer. The guides shall provide positive centering of the extendible sections within each other and the base section to insure longer service life and smoother operation.		

	Bidder Complies	
	Yes	No
<u>PLATFORM WATER SYSTEM</u> A 4.00" (internal diameter) water swivel shall connect the fly section waterway to the platform waterway. The water swivel shall permit water tower operations from -15 degrees to 77 degrees. The water shall be routed from the swivel to a 4.00" gear operated valve(s) on the front of the platform using a combination of 4.00" tubes and piping. The monitor(s) shall be bolted onto the valve(s). A 2.50" preset pressure relief valve shall be provided in the waterway system. It shall be designed to protect the aerial waterway from excess pressure. It shall dump water to the ground when operating. A shower nozzle rated at 75 gpm shall be provided beneath the platform for heat protection for the platform personnel. A direct linkage control for the shower nozzle shall be provided. <u>VALVE UNDER MONITOR</u> A TFT Valve Under Monitor (VUM) valve and manifold shall be provided under each monitor at the aerial platform. Each VUM shall be manually controlled at the basket with a crank control. The outboard facing port of each VUM shall have one (1) gated elbow with 2.50" NH threads. One (1) 1.50" x 2.50" reducer and cap shall be provided on the gated elbow. All remaining ports of the VUM shall be provided with a blind plug. An automatic ball drain shall be provided on each VUM. <u>AERIAL MONITOR</u> There shall be two (2) Task Force Tips monitors provided at the platform. One shall be a Y4-MP1A-P-01 double crank controlled monitor with a TFT YST-4NN stacked tips. The other shall be a Y4-EP1A-P electric monitor with a TFT 2000 gpm Model M-ERP2000 electric nozzle. The controls for the electronic monitor shall be located at the platform and the turntable control console. <u>WATERWAY FLOWMETER</u> Waterway flow, including total water flowed, shall be monitored by the microprocessor. An LCD display shall be located at the upper and lower control stations. <u>WATERWAY INLET</u> There shall be a 5.00" schedule 10 stainless steel inlet pipe on the right side of the apparatus. The inlet shall be connected to the base of the ladder, through the turntable swivel, to assure continuous rotation. The inlet shall terminate with a 5.00" NST chrome adapter and a long handled chrome cap.		

	Bidder Complies	
	Yes	No
<u>TOOLS</u> The following tools shall be provided for retorquing of all specified bolts as recommended by the manufacturer: • Torque Wrench • All Required Extensions, Sockets and Adapters • 4-to-1 Multiplier <u>MANUALS</u> The aerial manufacturer shall provide two (2) operator maintenance manuals and two (2) wiring diagrams pertaining to the aerial device. <u>INITIAL INSTRUCTION</u> On initial delivery of the fire apparatus, the contractor shall supply a qualified representative to demonstrate the apparatus and provide initial instruction to the fire department regarding the operation, care, and maintenance of the apparatus for a period of three (3) consecutive days. <u>LOOSE EQUIPMENT</u> The following equipment shall be furnished with the completed unit: • One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit One (1) set of reflective emergency triangles shall be provided. <u>NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT</u> The following loose equipment as outlined in NFPA 1901, 2016 edition, section 9.9.3 and 9.9.4 shall be provided by the fire department. • 800 ft (240 m) of 2.50" (65 mm) or larger fire hose, in any combination. • 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose, in any combination. • One (1) handline nozzle, 200 gpm (750 L/min) minimum. • Two (2) handline nozzles, 95 gpm (360 L/min) minimum. • One (1) playpipe with shutoff and 1.00" (25 mm), 1.125" (29 mm), and 1.25" (32 mm) tips. • One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. • One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). • One (1) first aid kit. • Four (4) salvage covers, each a minimum size of 12 ft × 14 ft (3.6 m × 5.5 m). • Four (4) combination spanner wrenches.		

	Bidder Complies	
	Yes	No
• Two (2) hydrant wrenches. • One (1) double female 2.50" (65 mm) adapter with National Hose threads. • One (1) double male 2.50" (65 mm) adapter with National Hose threads. • One (1) rubber mallet, for use on suction hose connections. • Four (4) ladder belts meeting the requirements of NFPA 1983. • One (1) 150 ft (45 m) light-use life safety rope meeting the requirements of NFPA 1983. • One (1) 150 ft (45 m) general-use life safety rope meeting the requirements of NFPA 1983. • One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. • Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. • Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. • One (1) automatic external defibrillator (AED). • If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, shall be carried mounted in brackets fastened to the apparatus. • If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3.00" (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6. • If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. • If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake. <u>SOFT SUCTION HOSE</u> There shall be no soft suction hose provided. <u>DRY CHEMICAL EXTINGUISHER</u> There shall be One (1) extinguisher, 20 lb dry chemical extinguisher(s) provided.		

	Bidder Complies	
	Yes	No
<u>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2016 edition, section 9.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher. <u>AERIAL LADDER BELTS</u> The following ladder belts shall be provided: • no small/medium belts • two (2) large/extra large belts for 34"-42" waist • two (2) XXL belts for 42"-50" waist <u>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2016 edition, Section 9.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe. <u>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2016 edition, Section 9.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe. <u>PAINT PROCESS</u> The exterior custom cab and body painting procedure shall consist of a seven (7) step finishing process as follows: 1. <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces shall be removed and sanded to a smooth finish. Exterior seams shall be sealed before painting. Exterior surfaces that shall not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. 2. <u>Chemical Cleaning and Pretreatment</u> - All surfaces shall be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces shall be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces shall be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion.		

	Bidder Complies	
	Yes	No
3. <u>Surfacer Primer</u> - The Surfacer Primer shall be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. 4. <u>Finish Sanding</u> - The Surfacer Primer shall be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. 5. <u>Sealer Primer</u> - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated. 6. <u>Basecoat Paint</u> - Two coats of a high performance, two component high solids polyurethane basecoat shall be applied. The Basecoat shall be applied to a thickness that shall achieve the proper color match. The Basecoat shall be used in conjunction with a urethane clear coat to provide protection from the environment. 7. <u>Clear Coat</u> - Two (2) coats of Clear Coat shall be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors shall be Clear Coated to match the body. Paint warranty for the roll-up doors shall be provided by the roll-up door manufacturer. After the cab and body are painted, the color shall be verified to make sure that it matches the color standard. Electronic color measuring equipment shall be used to compare the color sample to the color standard entered into the computer. Color specifications shall be used to determine the color match. A Delta E reading shall be used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim shall be removed and painted separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. These requirements must be met in order for the exterior paint finish to be considered acceptable. The manufacture's written paint standards shall be available upon request. <u>Environmental Impact</u> Contractor shall meet or exceed all current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:		

	Bidder Complies	
	Yes	No
• Topcoats and primers shall be chrome and lead free. • Metal treatment chemicals shall be chrome free. The wastewater generated in the metal treatment process shall be treated on-site to remove any other heavy metals. • Particulate emission collection from sanding operations shall have a 99.99 percent efficiency factor. • Particulate emissions from painting operations shall be collected by a dry filter or water wash process. If the dry filter is used, it shall have an efficiency rating of 98 percent. Water wash systems shall be 99.97 percent efficient • Water from water wash booths shall be reused. Solids shall be removed on a continual basis to keep the water clean. • Paint wastes are disposed of in an environmentally safe manner. • Empty metal paint containers shall be recycled to recover the metal. • Solvents used in clean-up operations shall be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations. <u>CAB PAINT</u> The cab shall be painted #90 red. <u>BODY PAINT</u> The body shall be painted to match the lower section of the cab. <u>PAINT CHASSIS FRAME ASSEMBLY</u> The chassis frame assembly shall be finished with primer and gloss black paint before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components that are included with the chassis frame assembly that shall be painted are: • Frame rails • Frame liners • Cross members • Axles • Suspensions • Steering gear • Battery boxes • Bumper extension weldment • Frame extensions • Body mounting angles		

	Bidder Complies	
	Yes	No
• Rear Body support substructure (front and rear) • Pump house substructure • Air tanks • Steel fuel tank • Castings • Individual piece parts used in chassis and body assembly Components treated with epoxy E-coat protection prior to paint: • Two (2) C-channel frame rails • Two (2) frame liners The E-coat process shall meet the technical properties shown. <u>PAINT, REAR WHEELS</u> All wheel surfaces, inside and outside, shall be provided with powder coat paint #90 red. <u>AXLE HUB PAINT</u> All axle hubs shall be painted to match lower job color. <u>COMPARTMENT INTERIOR PAINT</u> The interior of all compartments shall be painted with a gray spatter type paint. <u>AERIAL DEVICE PAINT COLOR</u> The aerial device paint procedure shall consist of a seven (7) step finishing process as follows: 1. <u>Manual Surface Preparation</u> - All exposed metal surfaces on the aerial device structural components above the rotation point shall be thoroughly cleaned and mechanically shot-blasted to remove metal impurities and prepare the aerial for painting. 2. <u>Zinc Rich Primer</u> - Zinc rich primer shall be applied to the torque box and stabilizers. 3. <u>Primer/Surfacer Coats</u> - A two (2) component epoxy primer/surfacer shall be applied to the mechanically shot-blasted metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface. All seams shall be caulked with a two (2) component epoxy caulk before painting. 4. <u>Hand Sanding</u> - The primer/surfacer coat of the outer surfaces of the hand rails and base rails shall be lightly sanded to a smooth finish. 5. <u>Primer Coat</u> - A two (2) component epoxy primer coat shall be applied over the sanded primer. 6. <u>Topcoat Paint</u> - Urethane base coat shall be applied to opacity for correct color matching.		

	Bidder Complies	
	Yes	No
7. <u>Clear Coat</u> - Two (2) coats of an automotive grade two (2) component urethane shall be applied. Surfaces that shall not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. All buy out components, such as monitor, nozzle, gauges, etc. shall be supplied as received from the vendor. Removable items such as brackets shall be removed and painted separately to ensure paint coverage behind all mounted items. The aerial device components shall be painted as follows using the aforementioned seven (7) step finishing process: • Aerial basket and basket leveling cylinders at tip: white 10 • Aerial device ladder sections and extension cylinders: white 10 • Aerial turntable and leveling cylinders (if applicable) at turntable: white 10 • Aerial control console: white 10 • Aerial lift cylinders: white 10 • Aerial rotation motor (if applicable): white 10 • Aerial torque box, support structure and components below the rotation point: black 101 paint • Aerial stabilizers (middle and rear only): black 101 • Aerial boom support: red 90 <u>REFLECTIVE BAND</u> A 10.00" white reflective band shall be provided across the front of the vehicle and along the sides of the body. The reflective band provided on the cab face shall be at the headlight level. <u>REAR CHEVRON STRIPING</u> There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus. Covered surfaces shall include the rear wall and aluminum doors. Rear compartment doors, stainless steel access doors, and the rear bumper shall not be covered. The colors shall be red and fluorescent yellow green diamond grade. Each stripe shall be 6.00" in width. This shall meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface shall be covered with chevron striping.		

	Bidder Complies	
	Yes	No
<u>REFLECTIVE STRIPE ON STABILIZERS</u> There shall be a 4.00" wide fluorescent yellow green diamond grade reflective stripe provided on the forward and rear facing side of all aerial stabilizers. <u>REFLECTIVE BASKET STRIPE</u> A 10.00" ruby red reflective stripe shall be installed around the center of the basket. <u>JOG(S) IN REFLECTIVE BAND</u> The reflective band located on each side of the apparatus body shall contain one (1) jog(s) and shall be angled at approximately a 45 degrees when installed. <u>REFLECTIVE STRIPE OUTLINE</u> A black outline shall be applied on the top and the bottom of the reflective band. There shall be one (1) set of outline stripes required. <u>CAB DOOR REFLECTIVE STRIPE</u> A 6.00" x 16.00" fluorescent yellow green diamond grade reflective stripe shall be provided across the interior of each cab door. The stripe shall be located approximately 1.00" up from the bottom, on the door panel. This stripe shall meet the NFPA 1901 requirement. <u>UNDERCOATING, CAB & BODY</u> The apparatus shall be properly treated by an authorized Ziebart dealer. The underside of the apparatus shall be undercoated with an asphalt petroleum based material, dark in color. The undercoating material utilized on the apparatus shall be formulated to resist corrosion and deaden unwanted sound or road noise. Coating texture shall appear firm, flexible, and resistant to abrasion. Minimum dry film thickness shall be in the range of 8.00 to 12.00 mils. The material shall be applied to the following areas: -Body and cab wheel well fender liners, on the back side only. -Underside of body and cab sheet metal, and structural components. -Underside and vertical sides of all sheet metal compartmentation, including support angles. -Structural support members under running boards, rear platforms, battery boxes, walkways, etc.		

	Bidder Complies	
	Yes	No
-Inside surfaces of the pump heat enclosure. (when installed) -Suspension mounts. -Transmission cooler fittings. -Engine mounts. -Bottom of torque boxes -Bottom and outside of frameraills behind the forward edge of the water pump. Exclusions shall be: -Engine -Transmission -Drive lines -PTO's -Stabilizer controls (Aerials) -Proximity Switches (Aerials) -Schroeder valves and tank drains -Intake valves -Air Horns, sirens and back-up alarms -Frameraills forward of the forward edge of the water pump. <u>FIRE APPARATUS PARTS MANUAL</u> There shall be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) shall contain the following: • Job number • Part numbers with full descriptions • Table of contents • Parts section sorted in functional groups reflecting a major system, component, or assembly • Parts section sorted in alphabetical order • Instructions on how to locate parts		

	Bidder Complies	
	Yes	No
Each manual shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies. <u>Service Parts Internet Site</u> The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly. <u>CHASSIS SERVICE MANUALS</u> There shall be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual shall contain the following sections: • Job number • Table of contents • Troubleshooting • Front Axle/Suspension • Brakes • Engine • Tires • Wheels • Cab • Electrical, DC • Air Systems • Plumbing • Appendix The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies. <u>CHASSIS OPERATION MANUAL</u> The chassis operation manual shall be provided on one (1) USB flash drive. <u>ONE (1) YEAR MATERIAL AND WORKMANSHIP</u> Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception).		

	Bidder Complies	
	Yes	No
<u>ENGINE WARRANTY</u> A Paccar five (5) year limited engine warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package. <u>STEERING GEAR WARRANTY</u> A Sheppard three (3) year limited steering gear warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package. <u>FIFTY (50) YEAR STRUCTURAL INTEGRITY</u> The chassis frame shall be provided with a fifty (50) year material and workmanship limited warranty. The warranty shall cover the chassis frame as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</u> Independent front suspension shall be provided with a three (3) year material and workmanship limited warranty. The manufacturer's warranty shall provide that the independent front suspension and steering gears be free from any defect related to material and workmanship on the portion of the apparatus built by the manufacturer that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>REAR AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</u> Independent rear suspension shall be provided with a three (3) year material and workmanship limited warranty. The manufacturer's warranty shall provide that the independent rear suspension be free from any defect related to material and workmanship on the portion of the apparatus built by the manufacturer that would arise under normal use and service. <u>ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</u> A Meritor Wabco™ ABS brake system three (3) year limited warranty shall be provided. <u>TEN (10) YEAR STRUCTURAL INTEGRITY</u> The new cab shall be provided with a ten (10) year material and workmanship limited warranty. The warranty shall cover such portions of the cab built by the manufacturer as being free from structural failures caused by defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</u> Each new piece of apparatus shall be provided with a ten (10) year pro-rated paint and corrosion limited warranty on the apparatus cab. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect		

	Bidder Complies	
	Yes	No
caused by defective manufacturing methods or paint material selection that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>FIVE (5) YEAR MATERIAL AND WORKMANSHIP</u> The electronic modules and display(s) shall be provided with a five (5) year material and workmanship limited warranty. The warranty shall cover electronic modules to be free from failures caused by defects in material and workmanship. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>CAMERA SYSTEM WARRANTY</u> A fifty four (54) month warranty shall be provided for the camera system. <u>COMPARTMENT LIGHT WARRANTY</u> A ten (10) year material and workmanship limited warranty shall be provided for the Pierce 12 volt DC LED strip lights. The warranty shall cover the LED strip lights to be free from defects in material and workmanship that would arise under normal use. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TRANSMISSION WARRANTY</u> The transmission shall have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty is to be provided by Allison Transmission and not the apparatus builder. <u>TRANSMISSION COOLER WARRANTY</u> The transmission cooler shall carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty shall also be in effect for the first three (3) years of the warranty coverage and shall not exceed \$10,000 per occurrence. A copy of the warranty certificate shall be submitted with the bid package. <u>WATER TANK WARRANTY</u> The UPF poly water tank shall be provided with a lifetime material and workmanship limited warranty. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TEN (10) YEAR STRUCTURAL INTEGRITY</u> Each new piece of apparatus shall be provided with a ten (10) year material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception).		

	Bidder Complies	
	Yes	No
<u>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</u> A Gortite roll-up door limited warranty shall be provided. The mechanical components of the roll-up door shall be warranted against defects in material and workmanship for the lifetime of the vehicle. A six (6) year limited warranty shall be provided on painted and satin roll up doors. A copy of the warranty certificate shall be submitted with the bid package. <u>PUMP WARRANTY</u> The Waterous pump shall be provided with a Seven (7) year material and workmanship limited warranty. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TEN (10) YEAR PUMP PLUMBING WARRANTY</u> The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years or 100,000 miles. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TWENTY (20) YEAR AERIAL DEVICE STRUCTURAL INTEGRITY WARRANTY</u> The aerial device shall be provided with a twenty (20) year material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. This warranty shall be limited to the torque box, turntable, aerial sections and other structural components. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>AERIAL SWIVEL WARRANTY</u> An Amity five (5) year limited swivel warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>HYDRAULIC SYSTEM COMPONENTS WARRANTY</u> Aerial hydraulic system components shall be provided with a five (5) year material and workmanship limited warranty. <u>HYDRAULIC SEAL WARRANTY</u> Aerial hydraulic seals shall be provided with a three (3) year material and workmanship limited warranty. A copy of the warranty certificates shall be submitted with the bid package (no exception).		

	Bidder Complies	
	Yes	No
<u>AERIAL WATERWAY WARRANTY</u> An Amity ten (10) year limited waterway warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>FOUR (4) YEAR PRO-RATED PAINT AND CORROSION</u> The aerial device shall be provided with a four (4) year pro-rated paint and corrosion limited warranty. The warranty shall cover exterior painted surfaces of the aerial device to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>FIVE (5) YEAR MATERIAL AND WORKMANSHIP</u> The electronic modules and display(s) shall be provided with a five (5) year material and workmanship limited warranty. The warranty shall cover electronic modules to be free from failures caused by defects in material and workmanship. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</u> Each new piece of apparatus shall be provided with a ten (10) year pro-rated paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception). <u>VEHICLE STABILITY CERTIFICATION</u> The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification shall be provided at the time of bid. <u>ENGINE INSTALLATION CERTIFICATION</u> The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification shall be provided at the time of delivery. <u>POWER STEERING CERTIFICATION</u> The fire apparatus manufacturer shall provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification shall be provided at the time of bid.		

	Bidder Complies	
	Yes	No
<u>CAB INTEGRITY CERTIFICATION</u> The fire apparatus manufacturer shall provide a cab crash test certification with this proposal. The certification shall state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events shall be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer shall provide a state licensed professional engineer to witness and certify all testing events. Testing shall meet or exceed the requirements below: • SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. • European Occupant Protection Standard ECE Regulation No.29. • SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. <u>Side Impact</u> The cab shall be subjected to dynamic preload where a 14,320-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab shall see in a rollover incident. <u>Frontal Impact</u> The same cab shall withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420. <u>Additional Frontal Impact</u> The same cab shall withstand a frontal impact of 65,098 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420) <u>Roof Crush</u> The cab shall be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons. <u>Additional Roof Crush</u> The same cab shall be subjected to a roof crush force of 110,000 lbs. (Four and a half times the load criteria of ECE 29) The same cab shall withstand all tests without any measurable intrusion into the survival space of the occupant area. There shall be no exception to any portion of the cab integrity certification. Nonconformance shall lead to immediate rejection of bid. <u>CAB DOOR DURABILITY CERTIFICATION</u> Robust cab doors help protect occupants. Cab doors shall survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder shall certify that the		

	Bidder Complies	
	Yes	No
sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear. <u>WINDSHIELD WIPER DURABILITY CERTIFICATION</u> Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria. <u>ELECTRIC WINDOW DURABILITY CERTIFICATION</u> Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design shall complete 30,000 complete up-down cycles and still function normally when finished. The bidder shall certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear. <u>SEAT BELT ANCHOR STRENGTH</u> Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design shall withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder shall certify that each anchor design was pull tested to the required force and met the appropriate criteria. <u>SEAT MOUNTING STRENGTH</u> Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design shall be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder shall certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria. <u>PERFORMANCE CERTIFICATIONS</u> <u>Cab Air Conditioning</u> Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system shall cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder shall certify that a substantially similar cab has been tested and has met these criteria. <u>Cab Defroster</u> Visibility during inclement weather is essential to safe apparatus performance. The defroster system shall clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And		

	Bidder Complies	
	Yes	No
Multipurpose Vehicles. The bidder shall certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria. <u>Cab Auxiliary Heater</u> Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater shall warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder shall certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria. <u>AMP DRAW REPORT</u> The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus shall provide the following: • Documentation of the electrical system performance tests. • A written load analysis, which shall include the following: ○ The nameplate rating of the alternator. ○ The alternator rating under the conditions specified per: ▪ Applicable NFPA 1901 or 1906 (Current Edition). ○ The minimum continuous load of each component that is specified per: ▪ Applicable NFPA 1901 or 1906 (Current Edition). ○ Additional loads that, when added to the minimum continuous load, determine the total connected load. ○ Each individual intermittent load. All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).		

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Amber Vogan

Subject: Atmos Franchise Agreement Notification of Renegotiation

Recommendation: Staff recommends approval.

Action: Make a motion to authorize staff to provide written notification to Atmos of the City's intent to renegotiate the franchise agreement.

Background: The current franchise agreement with Atmos has been in place since 2013 with automatic renewals every 5 years.

Discussion: The current franchise agreement allows for renegotiation written notice given 90 days prior to the expiration of the current 5 year period which ends October 27, 2023. With Council's approval, staff intends to provide this written notice to Atmos requesting the agreement be opened for renegotiation. Staff will then work with Atmos to draft a new agreement for the Council's approval.

Financial Impact: There is no financial impact with opening the agreement for renegotiation. Any financial impact from the new agreement would be presented to Council once the terms are drafted.

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Christina Brake

Subject: Ordinance to Adopt the Standard Traffic Ordinance 50th Edition

Recommendation: The City Attorney and City Clerk recommend approval.

Action: Make a motion to adopt an ordinance to adopt the Standard Traffic Ordinance 50th Edition.

Background: The League of Kansas Municipalities annually prepares the Standard Traffic Ordinance (STO). The City Attorney's office reviewed the 2023 edition and recommends approval. If approved, the STO will be codified into our City Code and published on the website.

Discussion:

Financial Impact:

ORDINANCE NO. _____

An ordinance adopting the 2023 Edition of the Standard Traffic Ordinance for Kansas Cities, with certain omissions, changes, and additions; prescribing additional regulations; providing certain penalties; and repealing Ordinance No. 2515.

Be It Ordained by the Governing Body of the City of Bonner Springs, Kansas:

Section 1. Incorporating Standard Traffic Ordinance. Section 15-101 of Article 1 of Chapter XV of the Bonner Springs City Code is hereby amended to read as follows:

There is hereby incorporated by reference for the purpose of regulating traffic within the corporate limits of the City of Bonner Springs, Kansas, that certain standard traffic ordinance known as the *Standard Traffic Ordinance for Kansas Cities*, 50th Edition, prepared and published in book form by the League of Kansas Municipalities, Topeka, Kansas, save and except such articles, sections, parts, or portions as are hereafter omitted, deleted, modified, or changed by this ordinance. Not less than one (1) official copy of said *Uniform Public Offense Code* shall be marked or stamped “Official Copy as Adopted by Ordinance No. _____,” with all sections or portions intended to be omitted clearly marked to show any such omission or change, and to which shall be attached a copy of this ordinance and filed with the city clerk to be open to inspection and available to the public at all reasonable hours. The police department, municipal judge, and all administrative departments of the city charged with enforcement of the ordinance shall be supplied, at the cost of the city, such number of official copies of such Standard Traffic Ordinance similarly marked, as may be deemed expedient.

Section 2. Traffic Infractions and Traffic Offenses.

(a) An ordinance traffic infraction is a violation of any section of this ordinance that prescribes or requires the same behavior as that prescribed or required by a statutory provision that is classified as a traffic infraction in K.S.A. 8-2118.

(b) All traffic violations that are included within this article and are not ordinance traffic infractions as defined in subsection (a) of this section shall be considered traffic offenses.

Section 3. Penalty for Scheduled Fines. The fine for a violation of an ordinance traffic infraction or any other traffic offense for which the municipal judge has established a fine in a fine schedule, shall not be less than \$20.00 nor more than \$500.00. A person convicted for violation of an ordinance traffic infraction or other traffic offense for which a fine has not been established in a schedule of fines shall pay a fine fixed by the court not to exceed \$500.00.

Section 3. Amendments to Standard Traffic Ordinance. The Standard Traffic Ordinance incorporated by Section 1 is hereby amended as provided in sections 4 through 11 of this ordinance.

Section 4. Definitions. In addition to the definitions set forth in Article 1, Section 1 of the Standard Traffic Ordinance, the following definition is added:

Center Lines. A continuous or broken line marked upon the surface of a roadway by paint or otherwise to indicate each portion of the roadway allocated to traffic proceeding in opposite directions, and if the line is not so painted or otherwise marked, it is an imaginary line in the roadway equally distant from the edges of the roadway.

Section 5. Authority to Make Emergency, Temporary, and Experimental Regulations. Article 2, Section 3 of the Standard Traffic Ordinance is hereby amended to read as follows:

The Chief of Police, City Manager, or City Engineer are each hereby empowered to make regulations necessary to make effective the provisions of this and other traffic ordinances of the city, to establish no parking zones on special occasions to expedite traffic or for safety purposes, signs being properly posted, to make and enforce temporary or experimental regulations to cover emergencies or special conditions or to determine the advisability of permanent regulations for recommendation to the governing body, and test traffic-control devices under actual conditions of traffic. No temporary or experimental regulation shall remain in force for more than one (1) year. The City Clerk shall keep a record of all regulations adopted under the power and authority herein granted. A copy of this record shall be kept in the City offices and be subject to public inspection.

Section 6. Careless Driving. Article 6 of the Standard Traffic Ordinance is hereby amended by adding a new Section 29.1 as follows:

No person shall operate any vehicle in such a manner as to indicate a careless or heedless disregard for the rights or the safety of others, or in such a manner as to endanger, or be likely to endanger, any person or property. A violation of this section is a standard traffic infraction.

Section 7. Maximum Speed Limits. Article 7, Section 33(a) of the Standard Traffic Ordinance is amended as follows:

- (a) Except when a special hazard exists or except as provided by subsection (b) of this section that requires lower speed for compliance with Section 32, the limits specified in this section or established as hereinafter authorized shall be maximum lawful speeds and no person shall drive a vehicle at a speed in excess of such maximum speed limits:
 - 1. In any business or urban district, 20 miles per hour;
 - 2. In any park, 10 miles per hour;
 - 3. On any separated multilane highway, as designated and posted by the Kansas Secretary of Transportation, 75 miles per hour or such lower

- speed as posted;
4. In all other districts of the City not specifically designated, 30 miles per hour;

Notwithstanding any other ordinance to the contrary, the governing body of the City by separate ordinance may specify and establish other speed limits for specific streets or portions of streets.

Section 8. Officers Authorized to Remove Vehicles. Article 13, Section 84 of the Standard Traffic Ordinance is hereby amended by adding the following as subsection (c)(4).

- (4) Said motor vehicle either does not display a license plate, or displays a license plate that has been reported stolen.

Section 9. Stopping, Standing or Parking Prohibited in Specified Places. Article 13, Section 85 of the Standard Traffic Ordinance is hereby amended by adding the following as subsection (a)(12):

- (12) At any location where the curb has been painted yellow which is the official curb paint color of the City indicating “no parking.”

Section 10. Parking Prohibited at All Times in Designated Places of Certain Vehicles. Article 13, Section 96 of the Standard Traffic Ordinance is hereby amended to read as follows:

- (a) When authorized signs are erected giving notice thereof, no person shall park a vehicle at any time upon that portion of any of the streets so posted or signed for “No Parking.”
- (b) It shall be unlawful for the driver, owner, or operator of any trailer, truck-trailer, tractor-trailer, semi-trailer, farm or road tractor or any other similar vehicle or vehicles with license capacity of more than 16,000 pounds (8 tons) to park or be left unattended at any time on any street, avenue, public roadway or City-owned parking lot within the City of Bonner Springs, except those streets constructed of concrete or untreated gravel; it being specifically intended that no vehicle of more than 16,000 pounds (8 tons) capacity shall park on any street paved with bituminous concrete mat, asphalt or sealed with bituminous oil sealant.
- (c) This section shall not apply to those vehicles parked or left unattended for the purposes of emergency refueling and emergency repairs or for loading or unloading.

Section 11. Spilling Loads on Highways Prohibited. Article 17, Section 179(a) is hereby amended to read as follows:

- (a) No vehicle shall be driven or moved upon any street, highway, road or alley in the City of Bonner Springs, Kansas, unless such vehicle is so constructed, loaded and securely covered as to prevent any of its load from spilling, dropping, sifting, leaking or otherwise escaping therefrom, and no vehicle shall be driven or moved upon any street, highway, road or alley creating a hazard by reason of mud, debris, or dirt dropping from the tires of said vehicle. The dropping of sand for the purpose of securing traction, or water, or other substances being sprinkled upon any street, highway, road or alley in the cleaning or maintaining of such street, highway, road or alley is hereby excepted from the provisions of this section.

Section 13. Repeal. Ordinance No. 2515 of the City of Bonner Springs shall be and is hereby repealed.

Section 14. Effective Date. This ordinance shall be in full force and effect from and after its passage and publication in the official city newspaper.

Adopted by the Bonner Springs City Council and signed by the Mayor on this _____ day of _____, 2023.

Jeff Harrington, Mayor

Attest:

Christina Brake, City Clerk

Memorandum

Date: July 24, 2023
To: Mayor and City Council
From: Christina Brake

Subject: Ordinance to Adopt the Uniform Public Offense Code 39th Edition

Recommendation: The City Attorney and City Clerk recommend approval.

Action: Make a motion to adopt an ordinance to adopt the Uniform Public Offense Code 39th edition

Background: The City annually adopts the Uniform Public Offense Code prepared by the League of Kansas Municipalities. The City Attorney's office reviewed the 2023 edition and recommends approval

Discussion:

Financial Impact:

ORDINANCE NO. _____

An ordinance to adopt the 2023 Edition of the Uniform Public Offense Code for Kansas Cities, with certain omissions; providing certain penalties; and repealing Ordinance No. 2514.

Be It Ordained by the Governing Body of the City of Bonner Springs, Kansas:

Section 1. Incorporating Uniform Public Offense Code. Section 12-101 of Article 1 of Chapter XII of the Bonner Springs City Code is hereby amended to read as follows:

There is hereby incorporated by reference for the purpose of regulating certain public offenses within the corporate limits of the City of Bonner Springs, Kansas, that certain code known as the Uniform Public Offense Code, 39th Edition, prepared and published in book form by the League of Kansas Municipalities, Topeka, Kansas, save and except those sections as are deleted by this ordinance. Not less than one (1) official copy of said Uniform Public Offense Code shall be marked or stamped "Official Copy as Adopted by Ordinance No. _____," with all sections or portions intended to be omitted clearly marked to show any such omission or change, and to which shall be attached a copy of this ordinance and filed with the city clerk to be open to inspection and available to the public at all reasonable hours. The police department, municipal judge, and all administrative departments of the city charged with enforcement of the ordinance shall be supplied, at the cost of the city, such number of official copies of such Uniform Public Offense Code similarly marked, as may be deemed expedient.

Section 2. Omissions. The following sections of the Uniform Public Offense Code are hereby deleted and omitted:

Article 10, Section 10.5	Unlawful Discharge of Firearms.
Article 10, Section 10.6	Air gun, air rifle, bow and arrow, slingshot, BB gun, or paintball gun.
Article 10, Section 10.7	Seizure of weapon.
Article 10, Section 10.8	Unlawful aiding and abetting.
Article 10, Section 10.13	Barbed wire.

Section 3. Repeal. Ordinance No. 2514 of the City of Bonner Springs, Kansas shall be and is hereby repealed.

Section 4. Effective Date. This ordinance shall be in full force and effect from and after its passage and publication in the official city newspaper.

Adopted by the Bonner Springs City Council and signed by the Mayor on this _____
day of _____, 2023.

Jeff Harrington, Mayor

Attest:

Christina Brake, City Clerk

City Manager's Update

Date: July 21, 2023

To: Mayor and City Council

General

- KDOT has completed their paperwork for the right-of-way with Old Dominion. This will allow Old Dominion to submit the final plat and public dedications for Council approval, and market the remaining commercial lots.
- Staff has received a final draft of the Uniform Development Ordinance from Freese and Nichols. After review, it will be submitted to the Planning Commission for review and approval.
- The Comprehensive Plan update is nearing completion. Planning Commission reviewed the draft in June and provided staff with feedback which staff has been working on. It was submitted for final review at the July Planning Commission meeting and a public hearing is set for August 15th.
- Join us for the first ever Tiblow Days Pickleball Tournament! All proceeds go towards the Bonner Parks & Rec youth sports program! This will be held on Saturday, 8/26 at 1PM inside the Community Center. The cost is \$20/team and registration is at fellowshipwest.com/pickleball
- **Residential Street Tree Program** - In partnership with the Kansas Forest Service, the City of Bonner Springs is excited to offer FREE trees to its residents. Kansas Forest Service foresters will provide advice on the best location and species of tree within the Right-of-Way. This program is limited to one tree per address (Bonner Springs residents only) and will be awarded based upon site suitability. Planting is expected to take place during the Spring 2024 (March-May) planting season.

Participation form and electronic waiver: <https://www.bonnerrsprings.org/FormCenter/Community-and-Economic-Development-7/Residential-Street-Tree-Program-Particip-72>

Library

- There are several events coming up at the Bonner Springs Library. Please visit the library official website [HERE](#) for more details.
- **End of Summer Reading** - Travel around the world from continent to continent at our End of Summer Reading party on Saturday, July 29. Each continent will feature a snack from a country located there, as well as a craft or game. This is also the last day to turn in your Summer Reading Bingo Board!

Recreation

- July is Parks & Recreation Month! Check out the [calendar](#) of all the fun activities planned.
- Adult slow pitch softball starts Thursday, July 20
- Youth Soccer registration deadline is August 1
- Fall Ball registration deadline is August 1
- Youth Volleyball registration deadline is September 4
- Pool closes August 13. Memberships are now half price.
- Doggie Poolooza is Friday, August 18 from 6pm-8pm.
- City Band concerts are on Thursdays as follows:
 - July 27
 - August 25 – Tiblow Days
- Senior Center:
 - Senior Day at the Tonganoxie Fair Grounds on Friday, July 28 from 9:00am-1:00pm. Join the Council on Aging at the Leavenworth County Fair grounds in Tonganoxie. Under the Big Top Tent there will be Bingo, Door Prizes, Free Lunch for adults 50 and better.
 - Wii bowling every Thursday from 12:30-1:30

- Mahjong Game every Wednesday from 1-4:00pm
- Pitch Card Game every Tuesday and Wednesday from 12-3:00pm

Chamber

Sat. 7/22 Barbie Bash Sale at Good Vibe Society: 9AM-2PM
 Tues. 8/1 Primary Elections
 Thurs. 8/3 Chamber Luncheon at Harrington Event Center: 11:30AM
 Thurs. 8/3 Back to School Bash: Cram the Cruiser at Olde Mill Building: 5PM-7PM
 Thurs. 8/10 Ribbon Cutting at Center Park: 5:30PM
 Thurs. 8/10 Evenings on Oak: 5PM-8PM
 Mon. 8/14 USD 204 - Staff Welcome Back: 10AM-11:30AM *Seeking prizes for teachers
 Tues. 8/15 Happy Hour at Outfield Brewery: 4PM-7PM
 Thurs. 8/24 Mayor's Banquet at City Hall
 Fri. 8/25 - Sat. 8/26 Tiblow Days
 Thurs. 8/31 Morning Mingle at Advena Living: 9AM-11AM



END OF SUMMER READING PARTY

11:00 am - 12:00pm

**Travel from continent to continent without ever
leaving the library!**

SATURDAY,
29 JULY
2023

BONNER SPRINGS CITY
LIBRARY 201 N. NETTLETON AVE.
BONNER SPRINGS, KS

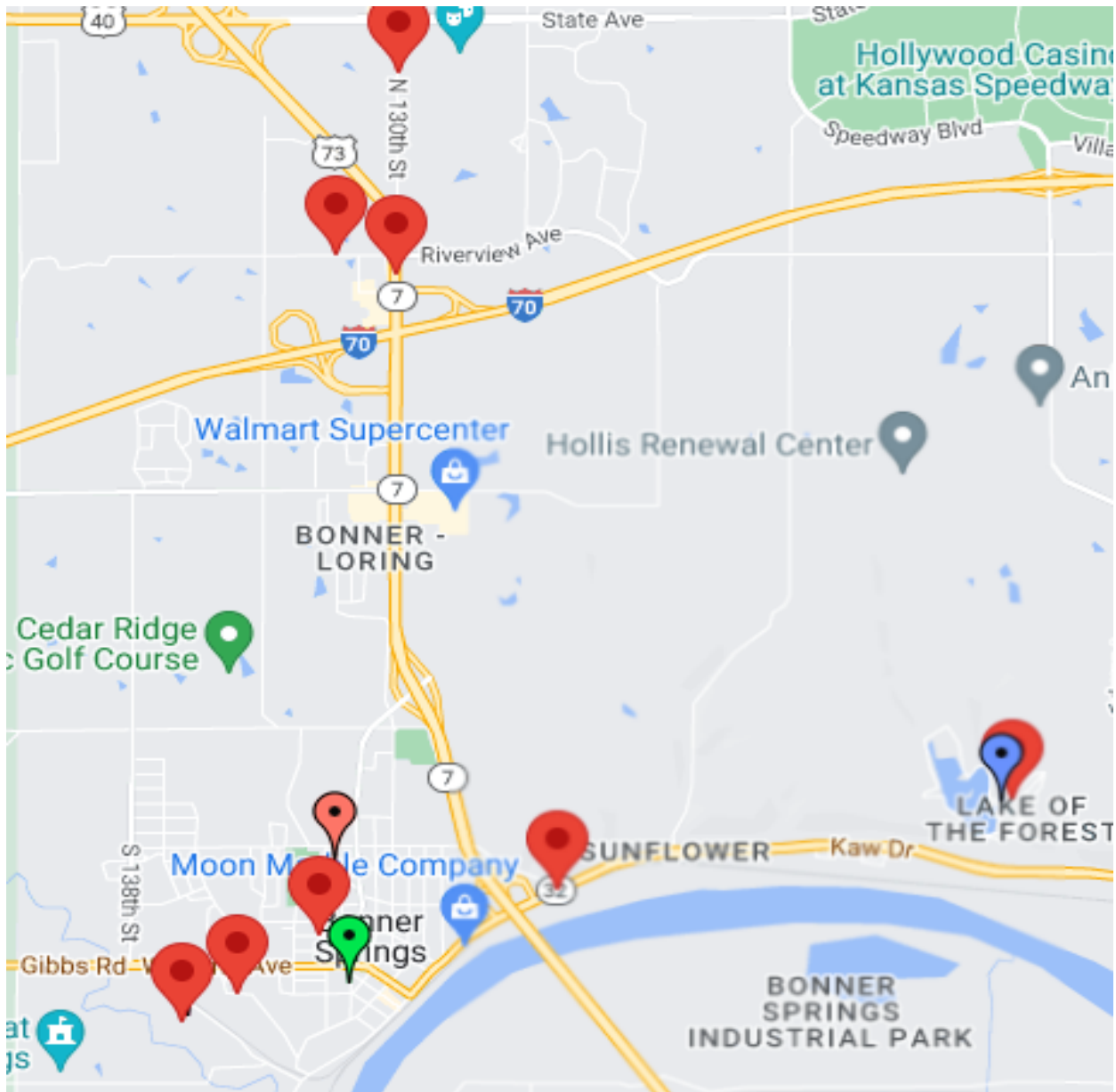
Case No.	Application Date	Project Name	Address	Project Type	Project Status	Board of Zoning Appeals	Approved/ Denied	Planning Commission	Approved/ Denied	Governing Body	Approved/ Denied	Applicant	Current Zoning or Future Land Use	Requested Zoning	No. Lots	Total Acres
COMPLETED PLANNING PROJECTS - 2023																
NOVEMBER 2022 SUBMITTALS - CUT OFF DATE 11/14 FOR 1/17 PC MEETING																
BSCP-02-22	November 14, 2022	Bonner Springs Industrial	720 N. 118th Street	Comp Plan Change	PC APPROVED			January 17, 2023	APPROVED	February 13, 2023	APPROVED	VanTrust Real Estates	MX	I-1	1	80+/-
BSRZ-03-22	November 14, 2022	Bonner Springs Industrial	720 N. 118th Street	Rezoning	PC APPROVED			January 17, 2023	APPROVED	February 13, 2023	APPROVED	VanTrust Real Estates	MX	I-1	1	80+/-
DECEMBER 2022 SUBMITTALS - CUT OFF DATE 12/19 FOR 2/21 PC MEETING																
FP-01-22	December 7, 2022	Ensign Storage	399 N. 130th St	Final Plat	APPROVED			February 28, 2023	APPROVED	March 27, 2023	APPROVED	Triangle Self Storage LLC	C-S and A-1	NA	1	13.11
RP- 01-23	January 6, 2023	LOF Lot 242	524 Lake Forest Drive	Replat	APPROVED			February 28, 2023	APPROVED	March 27, 2023	APPROVED	Atlas Land Consulting on behalf of Gayleene Sander	R-1	NA	1	0.35
JANUARY 2023 SUBMITTALS - CUT OFF DATE 1/16 FOR 3/21 PC MEETING																
ST-01-23	January 25, 2023	Built to Fit, Inc. - New Building	11733 Kaw drive	Site/Landscape Plan Review	APPROVED			March 21, 2023	APPROVED			Bond/Hoffine	C-S	NA	1	.554+/-
SUP-01-23	January 13, 2023	Multifamily SUP - Emerald Homes	212 W. Kump Ave	Special Use Permit	APPROVED			March 21, 2023	APPROVED	April 10, 2023	APPROVED	Emerald Homes Inc	R-1A	NA	1	0.24
SUP-02-23	January 13, 2023	Multifamily SUP - Emerald Homes	209 Shadyside Ave	Special Use Permit	APPROVED			March 21, 2023	APPROVED	April 10, 2023	APPROVED	Emerald Homes Inc	R-1A	NA	1	0.23
SUP-03-23	January 13, 2023	Multifamily SUP - Emerald Homes	224 Coronado Rd	Special Use Permit	APPROVED			March 21, 2023	APPROVED	April 10, 2023	APPROVED	Emerald Homes Inc	R-1A	NA	1	0.28
BSZO-01-23	January 16, 2023	Accessory Building Zoning Ord. Amendment	City Wide	Zoning Ord. Amendment	APPROVED			March 21, 2023	APPROVED	April 10, 2023	APPROVED	City of Bonner Springs	NA	NA	NA	NA
LS-01-23	February 3, 2023	Spencer Lot Split	13901 Archer Road	Lot Split	APPROVED			Aprli 18, 2023	APPROVED			Sharon Spencer	AG	NA	2	20+/- each
FEBRUARY 2023 SUBMITTALS - CUT OFF DATE 2/13 FOR 4/18 PC MEETING																
SUP-04-23	February 10, 2023	Brian Walters	11845 Kaw Drive	Special Use Permit	APPROVED			April 18, 2023	APPROVED	May 8, 2023	APPROVED	Redpoint Properties; Brian Walters	I-1	NA	1	4.8
BZA-01-23	March 13, 2023	Jerry Lee Jarrett Life Center	143 W. Insley	Sign Variance	APPROVED	May 16, 2023	PENDING					Marti Palmer - View Sign and Light	R-1-A	NA	1	
MARCH 2023 SUBMITTALS - CUT OFF DATE 2/13 FOR 4/18 PC MEETING																
EV-01-23	March 17, 2023	Guy Tiner	518 N. Nettleton Ave	Right of way vacation	DENIED			May 16, 2023	DENIED	June 12, 2023	DENIED	Guy Tiner	R-1	NA	1	
MAY 2023 SUBMITTALS - CUT OFF DATE 5/15 FOR 7/18 PC MEETING																
ST-02-23	May 17, 2023	Olde Mill Properties Garage Addition	611 W. 2nd Street	Site and Landscape Plan Review	APPROVED			June 20, 2023	PENDING			Olde Mill Properties - Hunter Salsbury	C-2	NA	1	6.89

REPORT OF BUILDING PERMITS ISSUED

ISSUED DATES: 7/3/2023 THRU 7/16/2023

STATUS: OPENED, COMPLETED

TYPE OF PERMIT	NUMBER OF PERMITS
COMMERCIAL NEW/ADDITION.....	2
COMMERCIAL REMODEL.....	0
COMMERCIAL ROOF.....	0
DECK.....	0
DRIVEWAY.....	0
DEMOLITION.....	1
ELECTRICAL.....	2
FENCE.....	0
FIREWORKS.....	0
GENERAL INSPECTION.....	0
MECHANICAL.....	0
OPEN FLAME.....	0
PLUMBING.....	1
POOL, ABOVE GROUND.....	0
POOL, IN GROUND.....	0
RESIDENTIAL ACCESSORY STRUCTURE.....	0
RESIDENTIAL MANUFACTURED MOVE-IN.....	1
RESIDENTIAL NEW/ADDITION.....	2
RESIDENTIAL REMODEL.....	0
RESIDENTIAL ROOF.....	1
RIGHT OF WAY.....	0
SIGN.....	0
TENT.....	0
UTILITIES OFF.....	0
=====	
TOTAL NEW PERMITS.....	10
TOTAL ACTIVE PERMITS.....	151



CODE ENFORCEMENT INCIDENT ACTIVITY REPORT

INCIDENT CODE: *-All

USER: mstites

DATES: 7/3/2023 THRU 7/16/2023

	NEW INCIDENTS	RESOLVED/ CLOSED	CUMULATIVE ACTIVE CASES
BRUSH.....	0.....	8.....	11
GENERAL.....	0.....	110.....	51
INOPERABLE/UNLICENSED/ON-GRASS.....	1.....	138.....	140
OUTSIDE STORAGE.....	0.....	139.....	79
PERMIT CHECK.....	0.....	211.....	0
PROPERTY MAINTENANCE.....	0.....	69.....	27
SIGNS.....	0.....	378.....	0
SNOW & ICE.....	0.....	7.....	0
TALL GRASS/WEEDS.....	3.....	103.....	121
=====			
TOTALS.....	4.....	1163.....	429

Report shows number of locations with multiple violations at many locations; does not include site re-inspections.

