

City of Henderson, Kentucky

NOTICE OF SPECIAL CALLED MEETING
FOR MONDAY, DECEMBER 12, 2016

December 9, 2016

Commissioner Jan M. Hite
Commissioner Jesse L. Johnston IV
Commissioner Robert M. Mills
Commissioner X Robert Royster III

Dear Board Members:

Please take notice that as Mayor of the City of Henderson, Kentucky, I hereby call a special called meeting of the Board of Commissioners on Monday, December 12, 2016, at 5:30 p.m., in the third floor assembly room, Municipal Center, 222 First Street, Henderson, Kentucky. The purpose of this called meeting is for the following:

1. Invocation: Reverend Todd Linn, First Baptist Church
2. Roll Call
3. Recognition of Visitors
4. Appearance of Citizens
5. Proclamations
6. Presentations: Tony Iriti, Kyndle Chief Executive Officer
7. Public Hearings
8. Consent Agenda:
 - Minutes: December 6, 2016 Called Meeting
 - Resolutions:
9. Ordinances & Resolutions:
 - Second Readings: Ordinance Relating to Pay Plan
 - Ordinance Amending Employee Manual
 - Ordinance Amending Budget and Appropriation Ordinance, FY 2017
 - Ordinance Authorizing Issuance of City of Henderson General Obligation Bonds, Series 2017A; General Obligation Refunding Bonds, Series 2017B to Refund Henderson Water Utility Bond, Series 2006A; and General Obligation Refunding Bonds, Series 2017C to Refund a Portion of City of Henderson General Obligation Bonds, Series 2007
 - Ordinance Relating to Mobile Food Units
 - Ordinance Establishing the Consumer Price Index Rate Adjustment

First Readings: Ordinance Relating to Pay Plan
Ordinance Amending Employee Manual
Ordinance Amending Budget and Appropriation
Ordinance, FY 2017

Resolutions

10. Municipal Orders

Bids & Contracts: Municipal Order Awarding Bid for Purchase of Aerial
Apparatus

11. Unfinished Business

12. City Manager's Report

13. Commissioners' Reports

14. Appointments

15. Executive Session

16. Miscellaneous

17. Adjournment

Respectfully,

Steve Austin, Mayor

A copy of the foregoing notice received and service thereof waived this 12th day of December, 2016.

Commissioner Jan M. Hite

Commissioner Jesse L. Johnston IV

Commissioner Robert M. Mills

Commissioner X Robert Royster III

City Commission Memorandum
16-263

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Presentations

Items scheduled under the Presentations section of the agenda for Monday, December 12, 2016 are as follows:

1. Presentation by Kyndle. Mr. Tony Iriti, new Chief Executive Officer, will be introduced.

City Commission Memorandum
16-264

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners
FROM: Russell R. Sights, City Manager *RS*
SUBJECT: Consent Agenda

The Consent Agenda for the meeting of Monday, December 12, 2016, contains the following:

Minutes: December 6, 2016 Called Meeting

Resolutions:

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Record of Minutes of _____ *A Special Called* _____ *Meeting on* _____ *December 06, 2016*

A special called meeting of the Board of Commissioners of the City of Henderson, Kentucky, was held on Tuesday, December 06, 2016, at 5:30 p.m., prevailing time, in the third floor Assembly Room located in the Municipal Center Building at 222 First Street, Henderson, Kentucky.

INVOCATION was given by Dr. Chuck Summers, First Christian Church followed by recitation of the Pledge of Allegiance to our American Flag.

There were present Mayor Steve Austin presiding:

PRESENT:

Commissioner Jan Hite
 Commissioner Jesse Johnston, IV
 Commissioner Robert M. (Robby) Mills
 Commissioner X R. Royster, III

ALSO PRESENT:

Mr. Russell R. Sights, City Manager
 Ms. Dawn Kelsey City Attorney
 Ms. Maree Collins, City Clerk
 Mr. William L. Newman, Jr. Assistant City Manager
 Mrs. Donna Stinnett, Public Information Officer
 Mr. Robert Gunter, Finance Director
 Mr. Charles Stauffer, Police Chief
 Members of the HPD
 Mr. Trace Stevens, Parks & Recreation Director
 Mrs. Connie Galloway, Human Resources Director
 Mr. Scott Foreman, Fire Chief
 Mr. Matt McClanahan, Fire Driver/Engineer
 Mr. Chris Watson, Fire Lieutenant
 Mr. Brandon Lingerfelt, Firefighter
 Mr. Brian Buedel, Fire Driver/Engineer
 Mr. Nick Mangarella, Fire Driver/Engineer
 Mr. Jesse Martin, Fire Lieutenant, Local 2290 Union President
 Members of the HFD
 Mr. John Stroud, Acting Codes Administrator
 Mr. David Wright, Network Administrator
 Mr. Tom Williams, HWU General Manager
 Mr. Dale Naylor, Knight Township Foundation
 Ms. Tammy Foreman, Knight Township Foundation
 Mr. Chris Wathen, Knight Township Foundation
 Mr. Bruce Farmer, Henderson County Coroner
 Mr. Chris Winstead, Ambulance Service Director
 Mr. Brad Staton, City Commissioner Elect
 Mrs. Patti Bugg, City Commissioner Elect
 Mr. Austin Vowels, City Commissioner Elect
 Mr. Robert Pruitt, City Commissioner Elect
 Mr. Mike Richardson, Reserve Police Officer
 Ms. Brittany Ross, SurfKy Reporter
 Ms. Laura Acchiardo, the Gleaner
 News 14

PRESENTATION: Knight Township Foundation Grant

SCOTT FOREMAN, Fire Chief, indicated that the dive team, which consists of both police and fire department divers, has become a leader in public safety dive in this area. A main concern when diving is risk benefit and one way to increase safety is by using a surface supply

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type system that allows a safer dive in case of entanglement or other hazards. Engineer McClanahan took it upon himself to look for options on how to fund a surface supply system and applied for this grant through the Knight Township Foundation. Chief Foreman then introduced Mr. Dale Naylor, Ms. Tammy Foreman and Mr. Chris Wathen with the Knight Township Foundation.

DALE NAYLOR, Knight Township Foundation, briefly explained that in 2010 the Knight Township Fire department through some unforeseen and unfortunate circumstances had to go out of business. With the remaining assets they joined the Vanderburgh County Foundation Alliance and the Fire Department Board has been charged with distributing funds on a yearly basis to public safety agencies that needed help. The Board meets on a regular basis to review requests from not just Vanderburgh County, but also from the surrounding area. Mr. Naylor indicated that this year the Henderson dive team presented a request, and having been in the dive department as firefighters back when they were in business they know how important it is to have a surface supply system. The Board reviewed the application and decided to help fund this project with the presentation of this check for \$35,501.00.

MAYOR AUSTIN thanked Mr. Naylor and his Board and also thanked Chief Foreman and the fire department staff for their work on putting this together to make the dive team safer and more productive.

PRESENTATION: Kentucky Recreation and Parks Society Awards

TRACE STEVENS, Parks and Recreation Director, indicated that the City of Henderson Parks & Recreation department was the recipient of two awards at this year's annual Kentucky Recreation & Parks Society awards conference held on November 18th. The KRPS is a professional organization of recreation leaders and organizers from various communities, churches and other groups across the state which divides agencies into categories based on the number of full-time employees, three to 19 full-time employees is Class 3. The City of Henderson Parks & Recreation department was awarded Department of the Year in our class category and the second award was for the East End Park project, which won Facility of the Year against some pretty high caliber recreation projects. Mr. Stevens stated that the application indicated that 'tiny little East End Park may not be the biggest, it may not be the most expensive, but it definitely is a project that has a lot to do with the City and it means the most to that community.' Mr. Stevens then presented the plaques to the Mayor.

MAYOR AUSTIN thanked Mr. Stevens and his staff for their hard work on this project and congratulated them on their accomplishment.

APPROVAL OF CONSENT AGENDA:

MAYOR AUSTIN asked the City Clerk to read the Consent Agenda.

Minutes: November 22, 2016, Regular Meeting

Resolutions: Resolution 59-16: Resolution Approving the Retaining of Hilliard Lyons, Louisville, Kentucky, to Provide Financial Advisor Services for Financing of Bonds for Improvements to the 911 Radio, CAD and Communications Operations, Renovation of a Public Works Facility, Property Acquisition for a New Fire Station, and Refinancing of Henderson Water Utility Bond Series 2006A, and City of Henderson 2007 General Obligation Bonds and Authorizing City Manager to Execute Agreement and All Related Documents

Motion by Commissioner X R. Royster, seconded by Commissioner Robert M. Mills, to

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approve the items on the Consent Agenda as presented.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the consent agenda items approved.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06, 2016

ATTEST:

Maree Collins, City Clerk _____

ORDINANCE NO. 35-16: SECOND READ:
ORDINANCE ACCEPTING PUBLIC IMPROVEMENTS

AN ORDINANCE ACCEPTING PUBLIC IMPROVEMENTS CONSTRUCTED IN THE FINLEY ADDITION (ALONG U.S. HWY 41-A, SPRINGFIELD DRIVE, AND WINCHESTER ROAD) CONSISTING OF WASTEWATER SYSTEM IMPROVEMENTS

MOTION by Commissioner Jan Hite, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date thereto and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

ORDINANCE NO. 37-16: SECOND READ:
ORDINANCE REGARDING ANNEXATION

AN ORDINANCE ANNEXING CERTAIN UNINCORPORATED TERRITORY TO THE CITY OF HENDERSON, KENTUCKY, BEING LOCATED AT 2120 SOUTH GREEN STREET, IN HENDERSON COUNTY, CONTAINING 1.28 ACRES, MORE OR LESS, OWNED BY MARY ANNE GONNELLA, d/b/a PALMER OIL COMPANY

MOTION by Commissioner X R. Royster, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:

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Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date thereto and ordered that the same be recorded.

/s/ Steve Austin
Steve Austin, Mayor
December 06 2016

ATTEST:
Maree Collins, City Clerk _____

ORDINANCE NO. 38-16: SECOND READ
ORDINANCE REGARDING ANNEXATION

AN ORDINANCE ANNEXING CERTAIN UNINCORPORATED TERRITORY TO THE CITY OF HENDERSON, KENTUCKY, BEING U.S. HWY 60 RIGHT-OF-WAY LOCATED AT 2120 SOUTH GREEN STREET, IN HENDERSON COUNTY, CONTAINING 0.034 ACRES, MORE OR LESS, OWNED BY THE KENTUCKY TRANSPORTATION CABINET (KYTC)

MOTION by Commissioner Jan Hite, seconded by Commissioner X R. Royster, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date thereto and ordered that the same be recorded.

/s/ Steve Austin
Steve Austin, Mayor
December 06 2016

ATTEST:
Maree Collins, City Clerk _____

ORDINANCE NO. 36-16: SECOND READ
ORDINANCE RELATING TO MERCHANTS USE OF SIDEWALK IN CENTRAL BUSINESS DISTRICT

ORDINANCE ESTABLISHING SECTION 20-11, *SALE OF MERCHANDISE ON SIDEWALK IN CENTRAL BUSINESS DISTRICT*, OF ARTICLE I, *IN GENERAL OF CHAPTER 20, STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES*, OF THE CODE OF ORDINANCES OF THE CITY OF HENDERSON PERMITTED TO BUSINESSES LOCATED IN THE CENTRAL BUSINESS DISTRICT

MOTION by Commissioner X R. Royster, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

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WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date thereto and ordered that the same be recorded.

/s/ Steve Austin
Steve Austin, Mayor
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ATTEST:
Maree Collins, City Clerk _____

ORDINANCE NO. 39-16: SECOND READ
ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE

AN ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE FOR THE FISCAL YEAR COMMENCING JULY 1, 2016 AND ENDING JUNE 30, 2017 FOR THE CITY OF HENDERSON, KENTUCKY

MOTION by Commissioner X R. Royster, seconded by Commissioner Jan Hite, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date thereto and ordered that the same be recorded.

/s/ Steve Austin
Steve Austin, Mayor
December 06 2016

ATTEST:
Maree Collins, City Clerk _____

ORDINANCE NO. 40-16: SECOND READ
ORDINANCE AMENDING JOB CLASSIFICATION AND PAY PLAN

ORDINANCE AMENDING JOB CLASSIFICATION AND PAY PLAN TO COMPLY WITH FEDERAL LABOR STANDARDS ACT (FLSA) BY MAINTAINING THE EXEMPT STATUS OF THE GOLF COURSE MANAGER AND INCREASING HIS ANNUAL SALARY TO THE THRESHOLD OF \$47,476; AND CHANGING FOUR (4) POLICE LIEUTENANTS POSITIONS AND ONE (1) RECREATION FACILITIES SUPERVISOR POSITION TO NON-EXEMPT STATUS

MOTION by Commissioner X R Royster, seconded by Mayor Steve Austin, that the ordinance be adopted.

RUSSELL R. SIGHTS, City Manager, indicated that as a result of the national injunction issued by the Federal Judge in Texas that this ordinance should be voted down at this time. Once a final ruling on the new FLSA regulations has been determined the proper action can then be taken.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Nay:
Commissioner Hite ----- Nay:
Commissioner Royster ---- Nay:
Commissioner Mills ----- Nay:
Mayor Austin ----- Nay:

WHEREUPON, Mayor Austin declared the ordinance denied on its second reading.

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ORDINANCE NO. 41-16: FIRST READ

COMMISSIONER HITE, indicated that this pay plan separates the police department from the city employee pay plan as far as pay grade and creates steps. This had been a conversation for a while and once the attrition numbers were presented to her it became apparent that there really wasn't any more time to wait. In the last five years the department has lost almost half of its officers or 29 out of a full complement of 61, which they haven't had a full complement in the past ten years. It costs the department approximately \$58,000.00 to train a replacement which has brought the cost to the city to replace these sworn officers to \$1.68 million over the last five years. Ms. Hite stated, "this is something that I feel that the Board of Commissioners needs to address now." The Plan is based after the Federal General Schedule Pay Rate with grades and steps and will add \$106,000.00 to the General Fund through the end of Fiscal Year 2017. She further indicated that by providing incentives for officers to stay, it will reduce the money spent on training new officers.

ORDINANCE NO. 41-16: ORDINANCE RELATING TO PAY PLAN

ORDINANCE ADOPTING AMENDED JOB CLASSIFICATION AND PAY PLAN FOR THE CITY OF HENDERSON WHICH RECLASSIFIES THE JOB CLASSIFICATION AND PAY PLAN FOR THE SWORN OFFICERS OF THE POLICE DEPARTMENT WITH EFFECTIVE DATE OF ORDINANCE OF DECEMBER 19, 2016

MOTION by Commissioner Jan Hite, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

COMMISSIONER ELECT ROBERT PRUITT indicated that he had been advocating pay increases for a long time and that salaries had been neglected a lot of years not just this year. He continued that he didn't understand why this Commission decided not to vote on a water rate increase but then wanted to do this for only the Police department and not include the Fire department as well as review of the other City departments.

COMMISSIONER HITE explained that this was the end of her fourth and final year. Commissioner Pruitt served six years prior to this current term and if he so desired to give a pay increase he had ample opportunity to do so. She continued that her intent with this plan was not to exclude any department, every department needs to be evaluated separately and fairly and that there does not need to be one lump pay plan that ends up with the exact same issue that we have right now under the current pay plan. The intent was to stop the bleeding, so to speak, at the Police department and their budget. The Fire department absolutely needs evaluation of their pay plan; however, the Police department lost half of their force in the last five years with only six of those being retirements. The Fire department lost 18 in the last five years with 12 of those being retirements. She indicated that one is not more deserved only that one must be addressed sooner rather than later. She went on to say that she hoped Commissioner Elect Pruitt would lead the new Commission to address each and every department within the City. Commissioner Elect Pruitt thanked her but wished that she would allow him to run with an overall plan in a few weeks.

COMMISSIONER ELECT BRADLEY STATON indicated that he didn't think that it mattered which Commission does what with whom but did ask the Commissioners to at least think about the effect on next year's budget and the ripple effect this will have as the other departments are reviewed. This \$180,000.00 could have an \$800,000.00 to \$1,000,000.00 effect on next year's budget by setting this precedent into effect now. He agreed that the Police deserve their raise, this pay plan looks great, but he would like to see it as part of an overall plan for the entire city as part of next year's budget instead of interrupting an existing budget with this particular pay raise. He reiterated that he is in favor of giving the Police department a raise, the attrition that they have experienced is just not acceptable and their labor pool is shrinking to a fraction of what it once was, but he asked the Commission to carefully consider how that is done and how it fits into an overall salary plan.

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COMMISSIONER JOHNSTON agreed with Commissioner Hite that this is to fix an issue and not just giving a blanket raise. The Police department has been under budget for the last three or four years partly due to hiring issues and not being completely staffed. This is to make changes that are needed to fix the problem and get the Police department where they need to be and then the next Commission can start to look toward the other departments and make changes there.

COMMISSIONER HITE commented that one of the things that will be addressed with this plan is that it solves the inherent pay inequality within the Police department. There will no longer be an officer in five years making the same as an officer that has been there nine years because it is based on time in rank and after a few years and once some of those anomalies either phase out or they promote up you won't run into those issues anymore. This is a very comprehensive plan that solves the problem not just giving everybody a certain amount of money to bring them up to the Kentucky League of Cities Wage Study for the median rate for cities our size. She indicated that she thought the Fire department could use a plan like that also.

COMMISSIONER ROYSTER indicated that before Robert Pruitt spoke his intention was to include the Fire department in this plan and ask Commissioner Hite to work with Chief Foreman on the same plan for them before the end of the year because he doesn't think it is right to do Police without Fire. Commissioner Hite responded that she would gladly work with the Fire department to develop a plan.

JESSE MARTIN, Fire Lieutenant, Local Union 2290 President, indicated that you can really say whatever you want to about this plan but ultimately what you are telling us by giving the Police department a raise over the Fire department is that a first year Police Officer is worth more than a first year Firefighter. He went on to say that police and fire go to a lot of the same emergencies together, but essentially you are telling the 60 guys at the Fire department that the Police department is worth more than they are. Fire department personnel do a lot more than just put out fires, we are also EMTs, Hazmat Techs, High Angle Techs, and a Dive Team which includes Police, but mostly the Fire department shoulders that burden. He indicated that he believes that this sets a dangerous precedent as far as separating the Police and Fire departments. He also indicated that the retention rate at the Fire department may start falling due to changes the state made to the retirement system, it has already started happening in other parts of the state, and we just had one leave to go to Bowling Green.

COMMISSIONER HITE commented that it was not her intent to state that one department was worth more than another and that is in no way how she feels or how the city should operate. This simply was a measure to get the ball rolling on this and force the new commission to address the issue. If this passes tonight we will have done all of the heavy lifting and will have started something that needed to happen for a long time. She indicated that she is more than willing to meet with Chief Foreman again and devise a plan for the Fire department.

COMMISSIONER MILLS indicated that in the sixteen years that he has been on the Board of Commissioners, probably the stickiest issue that has been dealt with was the pay plan. There is a reason that we have a pay plan that is equitable across all city employees and this plan that is being dealt with tonight is just the tip of the iceberg. Mr. Mills indicated that he thought Mr. Staton stated it very succinctly that the pay plan needs to be reevaluated. It is something that should be taken into consideration during the budget process. He stated that the City has borrowed a lot of money on the 911 System and those payments are going to start soon. He thinks it only fair to allow the new commission to look at this and evaluate it and weigh the cost benefits of what needs to be done versus the revenue that is coming in. He believes that this is something that needs more consideration and asked the following series of questions. Does the City continue with the pay plan model? What are other cities doing and are other cities actually stripping out hazardous duty versus non-hazardous duty? Do other cities have two pay plans and what is their success with that process? and What are the trends that are happening? He continued that he hoped that when the vote is called that many in the room have listened to what he said and don't read into the vote that he is not for Police or not for Fire department. He is

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thankful everyday that they get up and put their uniform on for our city, but really think that the next commission needs to look at this and weigh it with all of our other debt payments that are coming down the pike.

COMMISSIONER ELECT ROBERT PRUITT again asked that something this serious be delayed until the new commission takes office. He also agreed with Commissioner Mills that an outgoing commission should not be effecting the budget like that even when the salary increases are warranted.

COMMISSIONER HITE commented that she understands Commissioner Mills' desire to provide a smooth transition to the new commission; however, she has full confidence in the majority of the new commission that is coming on for them to be able to perform their duties effectively, efficiently, fairly, and equitably. This may not be traditional, it may not be polite but that doesn't mean that the right thing to do has to always meet those standards. Commissioner Royster just asked if I thought we could include the Fire department and do this by the end of the year. That would include another special called meeting to do a second reading if we were able to have this prepared and have first reading on the 12th. The Commission must decide if that is something that they want to do. That is something that she would be agreeable to if that is the only hang-up for some people in this room for not supporting this plan is that one is going to happen before the other one.

CHIEF STAUFFER indicated that they are unique in that we spend 1,440 hours in training with 23 of those weeks at Richmond Kentucky University, so husbands/wives are away from their families for weeks at a time. He continued that it takes 14 months from the time someone is hired until they are on the streets. He further indicated that there aren't many other occupations in the world that when you are not in uniform you are still known as that profession.

COMMISSIONER ELECT AUSTIN VOWELS indicated that this is certainly something that the new commission will be evaluating not just the Police or the Fire department but all of the city departments.

COMMISSIONER ELECT PATTI BUGG indicated that she had talked with police and fire personnel at their individual meetings and has said all along that she wants them to be at least in line with other cities that are of this same size. She continued that they should be assured that the new commission has their best interest at heart.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Nay:
 Mayor Austin ----- Aye:

MAYOR AUSTIN briefly explained his vote. He said, "I have always tried to support our emergency services and will continue to do so but I am somewhat conflicted on this particular proposal because of the impact on this year's and coming years budgets and finances. Our budget and four month financial report this year, as we stand right now, is more challenging than it has been in the last five years, primarily because of payments required on bonding actions. However, the Police Chief has indicated that he can reduce his upcoming and future budgets in the range of \$150,000.00 a year in areas other than payroll. So that will be a big help in balancing out some of the cost of this wage and benefit offering so I am going to vote with some caution yes in favor of the proposal."

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

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ORDINANCE NO. 42-16: FIRST READ
ORDINANCE AMENDING EMPLOYEE MANUAL

ORDINANCE AMENDING ARTICLE 136-TRANSFER POLICY, ARTICLE 212-ENTRANCE RATE OF PAY, ARTICLE 220-RATE OF PAY UPON JOB CLASSIFICATION CHANGE, ARTICLE 210-BASIC SALARY SCHEDULE AND ARTICLE 214-PAY PLAN OF THE EMPLOYEE MANUAL OF THE CITY OF HENDERSON

MOTION by Commissioner Jan Hite, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

RUSSELL R. SIGHTS, City Manager, explained that this action is necessary to effect the changes that were adopted in the previous ordinance.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Nay:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

ORDINANCE NO. 43-16: FIRST READ
ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE

AN ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE FOR THE FISCAL YEAR COMMENCING JULY 1, 2016 AND ENDING JUNE 30, 2017 FOR THE CITY OF HENDERSON, KENTUCKY

MOTION by Commissioner X R. Royster, seconded by Commissioner Jan Hite, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Nay:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

ORDINANCE NO. 44-16: FIRST READ

ROBERT GUNTER, Finance Director, indicated that there are three issues in this series. One is to refund the 2006 Water Revenue Bonds that will become General Obligation Bonds, the second will be to refinance the 2007 issue that the City did to build the Starlite Fire Station, and the third will be the final Bonding to finish the Municipal Service Center plus to pay for the fire property that the city just purchased, \$650,000.00. At this time I will ask Mr. Greg Phillips, our financial advisor with Hilliard Lyons to give you a recap of what the market looks like and the financial savings on the re-financings.

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GREG PHILLIPS, Financial Advisor, Hilliard Lyons, Louisville, Kentucky, explained that the new money financing will be just over \$3,000,000.00 and there are two refinancing issues to refund the 2006 Water and Sewer Commission Bonds and the 2007 General Obligation Bonds. Tax law only allows a governmental entity to issue up to \$10,000,000.00 in bonds each calendar year and keep those bank qualified. Bank qualified bonds receive a lower interest rate because of the fact that banks can buy the bonds. The plan is to sell them on the 11th of January, assuming market conditions hold. Interest rates after the presidential election have increased by about 75 basis points, or three quarters of one percent, which doesn't sound overly dramatic until you consider that will increase the debt service by about \$15,000.00 per year over the term of 20 years on the new money and lowers the savings on the refunding of the 2006 Bond to about \$200,000.00 and the 2007 refinancing has taken a bigger hit because it wasn't quite as attractive to begin with. The savings on that is now something less than \$100,000.00 and it is borderline of being viable at the current time. There are still several weeks before selling the bonds and we hope for a better climate. The market does appear to be leveling off and financing today for the University of Louisville came in about 15 to 20 basis points better than estimated. We will proceed with the process knowing that we have the ability to pull or reject bids on one or more of the refinancing if interest rates are such that they would become non-viable.

ORDINANCE NO. 44-16:

AN ORDINANCE OF THE CITY OF HENDERSON, KENTUCKY AUTHORIZING THE ISSUANCE OF (i) GENERAL OBLIGATION BONDS, SERIES 2017A IN THE AGGREGATE PRINCIPAL AMOUNT OF \$3,155,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$315,000) TO FINANCE VARIOUS PUBLIC IMPROVEMENTS, (ii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017B IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,530,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$255,000) TO CURRENTLY REFUND THE OUTSTANDING CITY OF HENDERSON, KENTUCKY WATER AND SEWER REVENUE BONDS, SERIES 2006A; AND (iii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017C IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,330,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$235,000) TO CURRENTLY REFUND A PORTION OF THE OUTSTANDING CITY OF HENDERSON, KENTUCKY GENERAL OBLIGATION BONDS, SERIES 2007; APPROVING THE FORMS OF BONDS; AUTHORIZING DESIGNATED OFFICERS TO EXECUTE AND DELIVER THE BONDS; PROVIDING FOR THE PAYMENT AND SECURITY OF THE BONDS; CREATING BOND PAYMENT FUNDS; MAINTAINING THE HERETOFORE CREATED SINKING FUND; AUTHORIZING ACCEPTANCE OF THE BIDS OF THE BOND PURCHASER OR PURCHASERS FOR THE PURCHASE OF THE BONDS; AND REPEALING INCONSISTENT ORDINANCES

MOTION by Commissioner X R. Royster, seconded by Commissioner Jan Hite, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

ORDINANCE NO. 45-16: FIRST READ

DAWN KELSEY, City Attorney, indicated that this ordinance reflects the changes that staff was directed to make at the November Work Session. The times at the Depot location are

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now 6:30 a.m. to 7:00 p.m. during winter months and beginning the weekend of Memorial Day through Labor Day times of operation will be 6:30 a.m. to 11:00 p.m. No changes were made to the east End Park or Atkinson Park areas. The lower parking lot at the JFK Center was added. No designated parking area was selected there and the times of operation will be 11:00 a.m. to 11:00 p.m. every day of the week all year round due to adequate lighting in that area. Also an additional parking space was designated on the north side of Third Street between Water and North Main Streets that will be available Monday through Sunday the same times as the Depot Parking Lot. No other changes were made from what had been presented at the work session.

ORDINANCE NO. 45-16:

ORDINANCE RELATING TO MOBILE FOOD TRUCKS

ORDINANCE ESTABLISHING ARTICLE IV, MOBILE FOOD UNITS, SECTIONS 17-63 THRU 17-71, OF CHAPTER 17, PARKS AND RECREATION, OF THE CODE OF ORDINANCES OF THE CITY OF HENDERSON

MOTION by Commissioner Jan Hite, seconded by Commissioner Robert M. Mills, that the ordinance be adopted.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

ORDINANCE NO. 46-16: FIRST READ

ORDINANCE ESTABLISHING THE CONSUMER PRICE INDEX RATE ADJUSTMENT

AN ORDINANCE APPROVING AND ADOPTING A SCHEDULE OF ELECTRIC RATES AND SERVICES FOR HENDERSON MUNICIPAL POWER & LIGHT TO ITS CUSTOMERS AND CONSUMERS TO BECOME EFFECTIVE FOR ALL SERVICES BILLED ON OR AFTER JANUARY 1, 2017; INCREASING RATES FOR SERVICES AND FEES BY AN AMOUNT EQUAL TO 1.6%, REPRESENTING THE CONSUMER PRICE INDEX AS ESTABLISHED BY THE U.S. BUREAU OF STATISTICS

MOTION by Commissioner X R. Royster, seconded by Commissioner Jesse Johnston, that the ordinance be adopted.

MAYOR AUSTIN, indicated that Henderson Municipal Power & Light General Manager, Gary Quick was in the audience and available if there were any questions relating to this action.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the ordinance adopted on its first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

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RESOLUTION 60-16:

RESOLUTION APPROVING THE ADVERTISEMENT FOR BID AND DISTRIBUTION OF A PRELIMINARY OFFICIAL STATEMENT FOR THE PURCHASE OF CITY OF HENDERSON, KENTUCKY GENERAL OBLIGATION BONDS, SERIES 2017A, GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017B AND GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017C IN THE AGGREGATE PRINCIPAL AMOUNTS OF APPROXIMATELY \$3,155,000, \$2,530,000 AND \$2,330,000, RESPECTIVELY

MOTION by Commissioner Jesse Johnston, seconded by Commissioner Jan Hite to approve the advertisement for bid and distribution of a preliminary official statement for the purchase of City of Henderson General Obligation and General Obligation Refunding Bonds, Series 2017A, 2017B, and 2017C.

COMMISSIONER MILLS, indicated that of this approximately \$8,000,000.00 there would be approximately \$3.1 million of new debt requiring additional monthly payments to be made.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the resolution adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

MUNICIPAL ORDER NO. 59-16:

RUSSELL R. SIGHTS, City Manager, indicated that this municipal order is in conjunction with the previous ordinance that was voted down in light of the injunction issued by the Federal Judge in Texas. It is recommended that the original action be rescinded by adopting this municipal order until something further occurs at the Federal level.

MUNICIPAL ORDER NO. 59-16: MUNICIPAL ORDER APPROVING ADJUSTING THE PAY FOR THE PUBLIC INFORMATION OFFICER (PIO) POSITION TO THE ORIGINAL CONTRACT AMOUNT OF \$41,829.15 SINCE THE NEW REGULATIONS CHANGING THE MINIMUM SALARY THRESHOLD FOR AN EXEMPT EMPLOYEE FROM THE FAIR LABOR STANDARDS ACT ARE CURRENTLY NOT IN EFFECT

MOTION by Commissioner Jan Hite, seconded by Commissioner X R. Royster, to adopt the municipal order adjusting the annual salary of the Public Information Officer to the original contract amount of \$41,829.15 since the new Fair Labor Standard Act regulations changing the minimum salary threshold for an exempt employee are not currently in effect due to national injunction issued by a Texas court.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:

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Commissioner Royster ---- Aye
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the municipal order adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

MUNICIPAL ORDER NO. 60-16:

Chris Winstead, Director Henderson and Union County Ambulance Service, reported that bids were received for a new ambulance with Muster Emergency Vehicles out of Calhoun, Kentucky submitting the low bid of \$88,317.00. Also there is a recommendation for the purchase of an accessory package from Stryker in the amount of \$17,395.00. This quote was obtained through the hospital's premier buying contract saving a little over \$3,000.00 versus purchasing the package with the ambulance through Muster. Fiscal Court approved these purchases at their meeting earlier today. Both of these purchases were included in the Ambulance Service budget and funding and came in under the budgeted amount.

MUNICIPAL ORDER NO. 60-16: MUNICIPAL ORDER AWARDING BID FOR PURCHASE OF ONE (1) TYPE II AMBULANCE FOR THE AMBULANCE SERVICE FROM MUSTER EMERGENCY VEHICLES OF CALHOUN, KY IN THE AMOUNT OF \$88,317.00

MOTION by Commissioner Robert M. Mills, seconded by Commissioner X R. Royster, to adopt the municipal order awarding the bid for the purchase of a Type II Ambulance from Muster Emergency Vehicles of Calhoun, Kentucky in the amount of \$88,317.00.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the municipal order adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

MUNICIPAL ORDER NO. 61-16:

MUNICIPAL ORDER ACCEPTING QUOTE FROM STRYKER, CHICAGO, IL FOR THE PURCHASE OF AMBULANCE ACCESSORIES IN THE AMOUNT OF \$17,395.00

MOTION by Commissioner Jan Hite, seconded by Commissioner Robert M. Mills, to adopt the municipal order accepting the quote from Stryker of Portage, Michigan with an office located in Chicago, Illinois, for the purchase of ambulance accessories in the amount of \$17,395.00.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:

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Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the municipal order adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

MUNICIPAL ORDER NO. 62-16:

MUNICIPAL ORDER AWARDING BID FOR REBRANDING AND REFURBISHING OF ENTRANCE SIGNS TO THE CITY OF HENDERSON TO ALVEY'S SIGNS EVANSVILLE, INDIANA IN THE AMOUNT OF \$17,911.00

MOTION by Commissioner Robert M. Mills, seconded by Commissioner Jesse Johnston, to adopt the municipal order awarding the bid for rebranding and refurbishing of entrance signs, Red Banks Park sign, and new Municipal Services Facility sign to Alvey's Signs, of Evansville, Indiana in the amount of \$17,911.00.

WILLIAM L. NEWMAN, JR., Assistant City Manager, indicated that pursuant to the work session a bid package was put together to receive bids to refurbish the existing sign bases.

DONNA STINNETT, Public Information Officer, reported that the samples from the September Work Session were utilized to follow the recommended colors and lettering for the new signage under the branding guidelines. The sign at Red Banks Park, and a new sign at the Municipal Services Center will be similar to the refurbished city entryway signage. Mrs. Stinnett said, "It seemed that this would give us an opportunity to take a leadership role in promoting the branding concept that was released earlier this year."

Mr. Newman further indicated that the project may be delayed until spring due to the weather conditions, but work will begin as soon as feasible.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the municipal order adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
 Steve Austin, Mayor
 December 06 2016

ATTEST:

Maree Collins, City Clerk _____

MUNICIPAL ORDER NO. 63-16:

MUNICIPAL ORDER ACCEPTING SECOND AMENDMENT TO THE SYSTEM PURCHASE AGREEMENT WITH ALERT TRACKING SYSTEMS, INC. (D/B/A ALERT PUBLIC SAFETY SOLUTIONS). AND AUTHORIZING MAYOR TO EXECUTE SECOND AMENDMENT TO ALERT AGREEMENT

MOTION by Commissioner Robert M. Mills, seconded by Commissioner Jesse Johnston, to accept the Second Amendment to the System Purchase Agreement with Alert Tracking

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Systems, Inc. (d/b/a Alert Public Safety Solutions).

WILLIAM L. NEWMAN, JR., Assistant City Manager, indicated that this is part of the 911 System and that there are three components to the System; the radio system; the software and hardware for the CAD system; and the third component was the furniture that would go in both the primary and secondary locations. The Alert Contract is the hardware and software component. In the proposal that we accepted, work at the primary and backup sites was to be done concurrently. Work at the backup center was not completed on schedule in the timeframe in which the primary site was completed. Alert has asked for a change in their contract to cover the cost for travel as well as labor to come back down and install the equipment at the backup center.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster ---- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

WHEREUPON, Mayor Austin declared the municipal order adopted, affixed his signature and the date thereto, and ordered that the same be recorded.

/s/ Steve Austin
Steve Austin, Mayor
December 06 2016

ATTEST:

Maree Collins, City Clerk _____

CITY MANAGER'S REPORT:

RUSSELL R. SIGHTS, City Manager, reported two things to discuss. The first is that the next meeting will be a special called meeting on Monday, December 12th for any agenda items that we have and then based on the action here tonight we will be subject to called meetings later on during the month as the issue progresses. We don't know at this time when those called meetings will be scheduled but will work that out at the convenience of the members as needed.

The second issue is whether or not to proceed with the purchase of the aerial ladder truck at Monday's meeting. Only one bid was received yesterday and it came in at \$1,048,000.00 or approximately \$100,000.00 over the \$950,000.00 budgeted for this critical piece of equipment. (a hand out was passed out at this time on specification and details of the truck) Chief Foreman and his committee members are here to present all the facts to you on the specifications, the bid process and the truck itself. There are two letters attached to the document that was passed out, stating why one vendor did not bid and the other one chose not to bid but did ask for an extension of time. It was determined that we could not give an extension past 21 days as required under state statute relating to advertisements.

SCOTT FOREMAN, Fire Chief, the truck in the video is a demo truck that was brought to us to actually try. It is similar to what we would be purchasing. The sales person gave us a demonstration and then we took the vehicle out to Red Banks Tower. The current operation of our ladder truck is a one man operation and it takes approximately five minutes to set up, be leveled and ready for operation. The magnetic mounts on the outrigger plates on this demonstration model helps speed up the set up and leveling process. Three vehicles were brought for review and we put all three through the same test. The committee put the spec of all three vehicles to make a combined base spec. The committee has over 500 hours of accumulated time into writing these specs. Some of the features include: eyelets on the ladder to assist in low angle rope rescue from trails, or along the riverfront and high angle rescue off a building; EMS equipment compartments, fully NFPA compliant; a smart wheel, which has all of the controls to activate lights and siren at the drivers fingertips; enhanced camera system; foam suppressant;

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Vogel Lube System, that will prolong the life of the truck and reduce maintenance costs; enhanced warning devices to make it better seen and heard; larger pumping capacity of 2000 GPM; ladder of 107' to better reach offset properties; and airbags.

CHRIS WATSON, Fire Lieutenant, indicated that the video was shot when he challenged one of his guys to be videoed setting up the truck after it was driven to the Red Banks Tower location. This is a one person operation, with the self leveling feature, on our city streets with the hills and topography we have that is very helpful. If you note the time it is set up, leveled and ready to get to the third floor of Red Banks Tower in almost less than two minutes.

RUSSELL R. SIGHTS, City Manager, indicated that there are a number of things to consider the first is that it is \$100,000.00 over budget which amortized over 20 years is \$5,000.00 per year. The second thing is if it were rebid we know there is a five percent price increase on January 1st bringing the price of the truck to \$1,097,000.00 and even though this is a reputable vendor there is no guarantee they will bid the next because their price is already on the street for all of the competition to know about. We have a truck that meets specs and will serve the city well; from a vendor that we have dealt with before; and is a brand, Farrara, that we are familiar with and currently own a pumper truck of this brand. Mr. Sights stated that it is his recommendation to include this purchase on the next agenda even though he is normally reluctant to award a bid with only one vendor responding.

COMMISSIONER JOHNSTON asked when the inspection of the current ladder truck is due and what repairs or medications might be necessary for that inspection.

CHIEF FOREMAN, indicated that the inspection is due in February and that the truck is in constant state of repair due to the age of the truck. At the last inspection the turntable cylinders had maximum seepage and may not pass a future inspection.

COMMISSIONER JOHNSTON indicated that the cost to replace the turntable is highly expensive and could easily surpass the extra \$100,000.00 for the new truck. He stated that he agreed with the recommendation of the City Manager to move forward with the purchase.

DISCUSSION WAS HELD on how to dispose of the old truck, its estimated value, the timeframe for receiving the new truck, and the number of visits to the manufacturer for inspections. No decision was determined on how to dispose of the vehicle at this time and its estimated value is probably between \$100,000.00 and \$150,000.00. The new truck is expected to be delivered to the City and have its first service upon delivery approximately 270 days from the date of approval and that three inspections are included in the proposal. Mr. Sights thanked the committee for their many hours of work putting this specification package together.

LIEUTENANT WATSON recognized and introduced the members of the committee: Firefighter Brandon Lingerfelt, Engineer Brian Buedel, and Engineer Nick Mangarella, who spent many long hours on the phone reviewing specs into the late hours of the night and without whom this probably wouldn't have gotten done.

COMMISSIONER'S REPORT:

COMMISSIONER JOHNSTON indicated that he would like to help with the firefighter pay plan, and asked the City Attorney when the deadline was for getting the information to her for the upcoming meeting. Mrs. Kelsey responded that noon on Thursday is generally the deadline for a Tuesday meeting and earlier since this is a Monday meeting.

Commissioner Johnston indicated that this was a hard decision but looks forward to it setting a precedent for the rest of the city employee population and moving to get this worked out correctly. He continued that it is a big concern of his to keep the consistency of the same people that protect us all in both police and fire.

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COMMISSIONER HITE indicated that she had been remiss in expressing her appreciation for Chief Stauffer's work on this as well as all of the staff that has put in long week night hours to help go through this. She also thanked the City Manager for his willingness to have staff provide the necessary information and assistance on this plan.

COMMISSIONER MILLS clarified that the vote tonight was to implement what was in the agenda and did not include looking at other departments. He went on to ask if the Board was directing the City Manager to develop a whole new pay plan for the Fire department. He indicated that there had been no vote on how to proceed with a plan for the Fire department. He asked if each department would have their own individual pay plans and are we deciding that tonight?

Mayor Austin indicated that it was his understanding that Commissioner Royster asked Commissioner Hite if she would work with the Fire department to develop a plan similar to the Police department plan before the end of the year and that she had agreed to work on a plan.

Mr. Sights confirmed that was also his understanding of the events on record.

Commissioner Mills asked if this direction was obligating the City Manager, and Assistant City Manager and our City Staff to developing our own pay plans now. He stated, "That is the road we are going down and I am just uncomfortable with that, but we are moving forward and I am the odd man out." The City has always had a pay plan where everybody was dealt with systematically in equitable terms. When one department got a raise the other departments got a raise. He continued that with all of the debt that we are getting ready to pay on like the 911 system improvements, the Public Service Facility, the new fire station property, the new ladder truck and then raises to all employees, that is a lot to burden the new commission with. We have done such a good job in this administration minding our finances and I am afraid that we are putting the new commission in a bad situation. He said, "I want to go out on friendly terms but I just feel obligated to make that known. I don't want to come back two years from now, or four years from now and say I told you so, but I'm afraid that is what is going to happen."

REAPPOINTMENT: CITY-COUNTY AIRPORT BOARD:

Dorin Luck and Steve Bennett – Term To Expire January 5, 2021

Motion by Commissioner X R. Royster, seconded by Commissioner Jan Hite, upon recommendation of Mayor Steve Austin, to reappoint Dorin Luck and Steve Bennett to four-year terms on the jointly appointed City-County Airport Board. Said term to expire January 5, 2021.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
Commissioner Hite ----- Aye:
Commissioner Royster --- Aye:
Commissioner Mills ----- Aye:
Mayor Austin ----- Aye:

REAPPOINTMENT: WATER & SEWER COMMISSION:

George F. Jones III – Term To Expire January 12, 2020

Motion by Commissioner Robert M. Mills, seconded by Commissioner X R. Royster, upon recommendation of Mayor Steve Austin, to reappoint George F. Jones III to a three-year term on the Water & Sewer Commission. Said term to expire January 12, 2020

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:

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Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

EXECUTIVE SESSION: Litigation

MOTION by Commissioner X R. Royster, seconded by Commissioner Jan Hite to go into Executive Session pursuant to the provisions of KRS 61.810 (1) (c) for the discussion of pending litigation against the city.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

MEETING RECONVENED:

MOTION by Commissioner Robert M. Mills, seconded by Commissioner Jan Hite, the Board of Commissioners reconvened in regular session.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

MEETING ADJOURN:

MOTION by Commissioner Robert M. Mills, seconded by Commissioner Jan Hite, to adjourn the meeting.

The vote was called. On roll call, the vote stood:

Commissioner Johnston --- Aye:
 Commissioner Hite ----- Aye:
 Commissioner Royster ---- Aye:
 Commissioner Mills ----- Aye:
 Mayor Austin ----- Aye:

WITHOUT OBJECTION, Mayor Austin declared the Meeting adjourned at approximately 7:00 p.m.

ATTEST:

 Maree Collins, City Clerk

 Steve Austin, Mayor
 December 12, 2016

City Commission Memorandum
16-265

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Separate Pay Plan for Police Department Sworn Officer Employees

Enclosed for final reading at the called meeting on December 12, 2016 is an ordinance adopting a separate pay plan for Police Department Sworn Officers.

December 1, 2016

TO: Mayor Steve Austin, Commissioner Robert M. "Robby" Mills,
Commissioner Jesse L. Johnston IV, and Commissioner X R Royster

FROM: Commissioner Jan M. Hite

SUBJECT: Henderson Police Department Sworn Officer Job Classification and Pay Plan
Revision

Enclosed for the agenda of Tuesday, December 6, 2016, is first reading of an ordinance that proposes a revision to the Henderson Police Department's sworn officer job classification and pay plan. The intent of this ordinance is to meaningfully reduce attrition, balance pay with years of service and time in-grade/rank, and make the City more competitive with other police departments within the Commonwealth.

In the last five years, the City has lost 29 sworn officers to either retirement (20 years) or other police departments. This is an annual average of 9.5% attrition rate. The approximate cost to the City to replace one officer, from advertisement through training, is \$58,000. This presents a cumulative cost of \$1,682,000. Despite the seemingly large initial investment, the City will statistically realize a decrease in spending by approximately \$136,000-\$158,000, depending on "spiking." In addition to the fiscal expense of replacing an officer, we need to recognize the length of time a new recruit spends training (23 weeks of Basic Training, 13 weeks of Field Training, and 1,440 hours of partner training) and the demands of an understaffed department.

Also in this classification, you will notice the sworn officers will operate under a pay plan that better compliments the structure of the department. This classification also provides a rank structure that ensures equitable compensation based on years of service and time in-grade. This pay plan eliminates merit-based salary increases as well as longevity pay, and will be affected by only cost-of-living adjustment granted annually by the Board of Commissioners.

Lastly, this classification and pay plan provides a means to bring each rank's average pay closer to the median pay (50%) for cities with a population of 20,000 – 99,999, published by the Kentucky League of Cities (Wage Study, 2016). This will improve our retention rates, increase our competitiveness with other police departments, as well as provide our sworn officers with compensation commensurate to the duties they perform.

I want to express my sincere appreciation to all City Employees who participated in any way with the preparation of this proposal.

Your approval of the attached ordinance is requested.

c: Russell Sights, City Manager
Charles Stauffer, Chief of Police
Dawn S. Kelsey, City Attorney
Robert Gunter, Finance Director
Connie Galloway, Human Resources Director

Human Resources Memorandum

16 – 124

December 1, 2016

TO: Russell R. Sights, City Manager

FROM: Connie Galloway, Human Resources Director

SUBJECT: Separate Pay Plan for Police Department Sworn Officer Employees

Pursuant to instructions of Commissioner Jan Hite, attached are the supporting documents outlining her recommendation to move the following police job classifications to the attached separate pay plan.

Classification Title	Code	FLSA
Deputy Police Chief	1016	E
Police Chief	1020	E
Police Lieutenant	1012	E
Police Major	1014	E
Police Officer	1004	N
Police Sergeant	1008	N

Commissioner Hite in conversation also instructed that employees in job classifications in the police pay plan would be ineligible for a 2.5% merit increase at six (6) month probationary periods and also ineligible for longevity pay.

Attached are amended Employee Manual articles that reflect the corresponding changes with Commissioner Hite's recommendation.

Employee Manual Articles
Article 136 – Transfer Policy
Article 210 – Basic Salary Schedule
Article 212 – Entrance Rate of Pay
Article 214 – Pay Plan
Article 220 – Rate of Pay Upon Job Classification Change



Connie Galloway

Cc Dawn Kelsey, City Attorney
Robert Gunter, Finance Director

Attachments

U.S. OFFICE OF PERSONNEL MANAGEMENT

PAY & LEAVE SALARIES & WAGES

SALARY TABLE 2016-GS

INCORPORATING THE 1% GENERAL SCHEDULE INCREASE

EFFECTIVE JANUARY 2016

Annual Rates by Grade and Step

Grade	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	WGI
1	18343	18956	19566	20173	20783	21140	21743	22351	22375	22941	VARIES
2	20623	21114	21797	22375	22629	23295	23961	24627	25293	25959	VARIES
3	22502	23252	24002	24752	25502	26252	27002	27752	28502	29252	750
4	25261	26103	26945	27787	28629	29471	30313	31155	31997	32839	842
5	28262	29204	30146	31088	32030	32972	33914	34856	35798	36740	942
6	31504	32554	33604	34654	35704	36754	37804	38854	39904	40954	1050
7	35009	36176	37343	38510	39677	40844	42011	43178	44345	45512	1167
8	38771	40063	41355	42647	43939	45231	46523	47815	49107	50399	1292
9	42823	44250	45677	47104	48531	49958	51385	52812	54239	55666	1427
10	47158	48730	50302	51874	53446	55018	56590	58162	59734	61306	1572
11	51811	53538	55265	56992	58719	60446	62173	63900	65627	67354	1727
12	62101	64171	66241	68311	70381	72451	74521	76591	78661	80731	2070
13	73846	76308	78770	81232	83694	86156	88618	91080	93542	96004	2462
14	87263	90172	93081	95990	98899	101808	104717	107626	110535	113444	2909
15	102646	106068	109490	112912	116334	119756	123178	126600	130022	133444	3422

OFFICERS				
YEAR 1	GS 7 STEP 1 - \$35,006			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
				\$5,990.40
	GS 7 STEP 2 - \$36,192			
YEAR 2	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$16.76	\$17.40	\$1,331.20
		\$17.14	\$17.40	\$540.80
		\$17.18	\$17.40	\$457.60
		\$17.18	\$17.40	\$457.60
				\$2,787.20
	GS 7 STEP 3 - \$37,356			
YEAR 3	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$17.18	\$17.96	\$1,622.40
		\$17.22	\$17.96	\$1,539.20
		\$17.44	\$17.96	\$1,081.60
		\$17.44	\$17.96	\$1,081.60
		\$17.22	\$17.96	\$1,539.20
		\$17.18	\$17.96	\$1,622.40
		\$17.40	\$17.96	\$1,164.80
		\$17.18	\$17.96	\$1,622.40
		\$17.35	\$17.96	\$1,268.80
		\$17.35	\$17.96	\$1,268.80
				\$13,811.20
	GS 7 STEP 4 - \$38,521			
YEAR 5	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$17.79	\$18.52	\$1,518.40
		\$17.83	\$18.52	\$1,435.20
		\$17.61	\$18.52	\$1,892.80
		\$17.61	\$18.52	\$1,892.80
				\$6,739.20

OFFICERS				
YEAR 7	GS 7 STEP 5 - \$39,686			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$17.97	\$19.08	\$2,308.80
		\$18.33	\$19.08	\$1,560.00
		\$17.97	\$19.08	\$2,308.80
				\$6,177.60
YEAR 9	GS 7 STEP 6 - \$40,851			
		\$19.07	\$19.64	\$1,185.60
				\$1,185.60
YEAR 10	GS 9 STEP 1 - \$42, 827			
		\$19.89	\$20.59	\$1,456.00
		\$19.02	\$20.59	\$3,265.60
				\$4,721.60
YEAR 11	GS 9 STEP 2 - \$44,262			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$20.29	\$21.28	\$2,059.20
				\$2,059.20
YEAR 12	GS 9 STEP 3 - \$45,677			
		\$21.18	\$21.96	\$1,622.40
		\$21.25	\$21.96	\$1,476.80
				\$3,099.20
YEAR 14	GS 9 STEP 4 - \$47,112			
		\$22.02	\$22.65	\$1,310.40
		\$21.89	\$22.65	\$1,580.80
		\$21.41	\$22.65	\$2,579.20
				\$5,470.40
YEAR 16	GS 9 STEP 5 - \$48,526			
		\$22.02	\$23.33	\$2,724.80
		\$22.02	\$23.33	\$2,724.80
		\$22.02	\$23.33	\$2,724.80
				\$8,174.40

OFFICERS				
YEAR 18	GS 9 STEP 6 - \$49,961			
		\$22.02	\$24.02	\$4,160.00
		\$22.02	\$24.02	\$4,160.00
				\$8,320.00
YEAR 20	GS 11 STEP 1 - \$51,812			
		\$22.02	\$24.91	\$6,011.20
				\$6,011.20
YEAR 22	GS 11 STEP 2 - \$53,539			
	LAST, FIRST		\$25.74	
YEAR 24	GS 11 STEP 4 - \$56,992			
		\$22.02	\$27.40	\$11,190.40
				\$11,190.40
YEAR 26	GS 11 STEP 5 - \$58,718			
	LAST, FIRST		\$28.23	
YEAR 28	GS 11 STEP 6 - \$60,444			
	LAST, FIRST		\$29.06	
YEAR 30	GS 11 STEP 7 - \$62,192			
	LAST, FIRST		\$29.90	
	OFFICER GRAND TOTAL			\$85,737.60
	CURRENT HPD OFFICER AVERAGE PAY:			\$38,745.78
	PROPOSED HPD OFFICER AVERAGE PAY:			\$40,651.06
	KLC MEDIAN (50%):			\$40,760.00

SERGEANTS				
YEAR 1	GS 9 STEP 1 - \$42827			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	
	LAST, FIRST		\$20.59	
YEAR 2	GS 9 STEP 2 - \$44,241			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$19.22	\$21.27	\$4,264.00
				\$4,264.00
YEAR 3	GS 9 STEP 3 - \$45,667			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$19.22	\$21.96	\$5,699.20
		\$19.75	\$21.96	\$4,596.80
				\$10,296.00
YEAR 5	GS 9 STEP 4 - \$47,112			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	
	LAST, FIRST		\$22.65	
YEAR 7	GS 9 STEP 5 - \$48,526			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	
	LAST, FIRST		\$23.33	
YEAR 9	GS 9 STEP 6 - \$49,961			
	LAST, FIRST		\$24.02	
YEAR 10	GS 11 STEP 1 - \$51,812			
		\$24.49	\$24.90	\$852.80
		\$24.29	\$24.90	\$1,268.80
				\$2,121.60
YEAR 11	GS 11 STEP 2 - \$52,539			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	
	LAST, FIRST		\$25.74	
YEAR 13	GS 11 STEP 3 - \$55,265			
		\$24.41	\$26.57	\$4,492.80
				\$4,492.80
YEAR 15	GS 11 STEP 4 - \$56,992			
	LAST, FIRST		\$27.40	
YEAR 17	GS 11 STEP 5 - \$58,718			
	LAST, FIRST		\$28.23	
YEAR 19	GS 11 STEP 6 - \$60,444			
	LAST, FIRST		\$29.06	
YEAR 20	GS 12 STEP 1 - \$62,108			
	LAST, FIRST		\$29.86	
	SERGEANT GRAND TOTAL			\$21,174.40
	CURRENT HPD SERGEANT AVERAGE PAY:			\$45,545.07
	PROPOSED HPD SERGEANT AVERAGE PAY:			\$49,074.13
	KLC MEDIAN (50%):			\$50,106.00

YEAR 3 SERGEANTS, EACH HAVE 15 YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID THE GRADE UP, TWO STEPS DOWN CONVERSION.

LIEUTENANT				
YEAR 1	GS 11 STEP 1 - \$51,812			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$24.90	
YEAR 2	GS 11 STEP 2 - \$53,539			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$23.32	\$25.79	\$5,137.60
		\$24.70	\$25.79	\$2,267.20
				\$7,404.80
YEAR 3	GS 11 STEP 3 - \$55,265			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$26.57	
YEAR 5	GS 11 STEP 4 - \$56,992			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$26.80	\$27.40	\$1,248.00
				\$1,248.00
				2 YEAR LIEUTENANT, 16 TOTAL YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID NOT DO THE GRADE UP, TWO STEPS DOWN CONVERSION, BECAUSE IT WOULD
YEAR 7	GS 11 STEP 5 - \$58,718			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$28.23	
YEAR 9	GS 11 STEP 6 - \$60,444			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$29.06	
YEAR 10	GS 11 STEP 7 - \$62,173			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$28.87	\$29.89	\$2,121.60
				\$2,121.60
				3 YEAR LIEUTENANT, 27 YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID THE GRADE UP, TWO STEPS DOWN CONVERSION.
	LIEUTENANT GRAND TOTAL			\$10,774.40
	CURRENT HPD LIEUTENANT AVERAGE PAY:			\$53,918.80
	PROPOSED HPD LIEUTENANT AVERAGE PAY:			\$56,612.40
	KLC MEDIAN (50%):			\$55,476.00

Major				
YEAR 1	GS 12 STEP 1- \$62,108			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$29.86	
YEAR 2	GS 12 STEP 2- \$64,168			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$30.85	
YEAR 3	GS 12 STEP 3 - \$66,248			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$31.85	
YEAR 5	GS 12 STEP 4- \$68,307			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$32.84	
YEAR 7	GS 12 STEP 5 - \$70,387			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$33.84	
YEAR 9	GS 12 STEP 6 - \$72,446			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$34.84	
YEAR 10	GS 12 STEP 7 - \$74,526			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$35.83	
	MAJOR GRAND TOTAL			N/A
	CURRENT HPD MAJOR AVERAGE PAY:			N/A
	PROPOSED HPD MAJOR AVERAGE PAY:			N/A
	KLC MEDIAN (50%):			\$71,769

DEPUTY CHIEF				
YEAR 1	GS 13 STEP 1 - \$73,840			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$32.65	\$35.50	\$5,928.00
				\$5,928.00
YEAR 2	GS 13 STEP 2 - \$76,315			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$36.69	
YEAR 3	GS 13 STEP 3 - \$78,769			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$36.39	
YEAR 5	GS 13 STEP 4 - \$81,224			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$39.05	
YEAR 7	GS 13 STEP 5 - \$83,699			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$40.24	
YEAR 9	GS 13 STEP 6 - \$86,153			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$41.42	
YEAR 10	GS 13 STEP 7 - \$88,618			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$41.95	
	DEPUTY CHIEF GRAND TOTAL			\$5,928.00
	CURRENT HPD DEPUTY CHIEF AVERAGE PAY:			\$67,912.00
	PROPOSED HPD DEPUTY CHIEF AVERAGE PAY:			\$73,840.00
	KLC MEDIAN (50%):			\$70,678

POLICE CHIEF				
YEAR 1	GS 14 STEP 2 - \$90,172			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$37.22	\$43.35	\$12,750.40
				\$12,750.40
YEAR 2	GS 14 STEP 3 - \$93,080			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$44.75	
YEAR 3	GS 14 STEP 4 - \$95,992			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$46.15	
YEAR 5	GS 14 STEP 5 - \$98,904			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$46.15	
YEAR 7	GS 14 STEP 6 - \$101,816			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$48.95	
YEAR 9	GS 14 STEP 7 - \$104,717			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$49.35	
YEAR 10	GS 14 STEP 8 - \$107,626			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$51.74	
	POLICE CHIEF GRAND TOTAL			\$12,750.40
	CURRENT HPD POLICE CHIEF AVERAGE PAY:			\$77,417.60
	PROPOSED HPD POLICE CHIEF AVERAGE PAY:			\$90,168.00
	KLC MEDIAN (50%):			\$89,330.00

OFFICERS
\$85,737.60

SERGEANTS
\$21,174.40

LIEUTENANTS
\$10,774.40

MAJOR
N/A

DEPUTY CHIEF
\$5,928.00

POLICE CHIEF
\$12,750.40

TOTAL INITIAL SALARY INVESTMENT
\$136,364.80

TOTAL INITIAL PENSION INVESTMENT (31.06%)
\$42,354.91

INITIAL INVESTMENT GRAND TOTAL
\$178,719.71

**City of Henderson, Kentucky
Police Grade & Salary Ranges
Effective December _____, 2016**

Grade	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10
PD1	18,343.00	18,956.00	19,566.00	20,173.00	20,783.00	21,140.00	21,743.00	22,351.00	22,375.00	22,941.00
PD2	20,623.00	21,114.00	21,797.00	22,375.00	22,629.00	23,295.00	23,961.00	24,627.00	25,293.00	25,959.00
PD3	22,502.00	23,252.00	24,002.00	24,752.00	25,502.00	26,252.00	27,002.00	27,752.00	28,502.00	29,252.00
PD4	25,261.00	26,103.00	26,945.00	27,787.00	28,629.00	29,471.00	30,313.00	31,155.00	31,997.00	32,839.00
PD5	28,262.00	29,204.00	30,146.00	31,088.00	32,030.00	32,972.00	33,914.00	34,856.00	35,798.00	36,740.00
PD6	31,504.00	32,554.00	33,604.00	34,654.00	35,704.00	36,754.00	37,804.00	38,854.00	39,904.00	40,954.00
PD7	35,009.00	36,176.00	37,343.00	38,510.00	39,677.00	40,844.00	42,011.00	43,178.00	44,345.00	45,512.00
PD8	38,771.00	40,063.00	41,355.00	42,647.00	43,939.00	45,231.00	46,523.00	47,815.00	49,107.00	50,399.00
PD9	42,823.00	44,250.00	45,677.00	47,104.00	48,531.00	49,958.00	51,385.00	52,812.00	54,239.00	55,666.00
PD10	47,158.00	48,730.00	50,302.00	51,874.00	53,446.00	55,018.00	56,590.00	58,162.00	59,734.00	61,306.00
PD11	51,811.00	53,538.00	55,265.00	56,992.00	58,719.00	60,446.00	62,173.00	63,900.00	65,627.00	67,354.00
PD12	62,101.00	64,171.00	66,241.00	68,311.00	70,381.00	72,451.00	74,521.00	76,591.00	78,661.00	80,731.00
PD13	73,846.00	76,308.00	78,770.00	81,232.00	83,694.00	86,156.00	88,618.00	91,080.00	93,542.00	96,004.00
PD14	87,263.00	90,172.00	93,081.00	95,990.00	98,899.00	101,808.00	104,717.00	107,626.00	110,535.00	113,444.00
PD15	102,646.00	106,068.00	109,490.00	112,912.00	116,334.00	119,756.00	123,178.00	126,600.00	130,022.00	133,444.00

Police Job Classifications & Grades

<u>Code</u>	<u>Grades</u>	<u>Classification Title</u>	<u>FLSA</u>
1016	PD13	Deputy Police Chief	E
1020	PD14	Police Chief	E
1012	PD11	Police Lieutenant	E
1014	PD12	Police Major	E
1004	PD7, PD9, PD11	Police Officer	N
1008	PD9, PD11, PD12	Police Sergeant	N

ORDINANCE RELATING TO PAY PLAN

SUMMARY: ORDINANCE ADOPTING AMENDED JOB CLASSIFICATION AND PAY PLAN FOR THE CITY OF HENDERSON WHICH RECLASSIFIES THE JOB CLASSIFICATION AND PAY PLAN FOR THE SWORN OFFICERS OF THE POLICE DEPARTMENT WITH EFFECTIVE DATE OF ORDINANCE OF DECEMBER 19, 2016.

WHEREAS, the Board of Commissioners has recognized the need to revise the job classification and pay plan for the sworn officers of the Henderson Police Department, so that the sworn officers will be compensated on a fair and equitable basis for the jobs they perform for the City; and

WHEREAS, it is in the best interest to make the pay for sworn officers of the Henderson Police Department more competitive with other police departments in the Commonwealth of Kentucky, so as to encourage sworn officers to remain with the Henderson Police Department; and

WHEREAS, in the last five years, the annual attrition rate for the Henderson Police Department's sworn officers has been an average of 9.5% at full compliment, at an expense to the City of \$1,682,000 to hire and train replacements; and

WHEREAS, the revised job classification and pay plan will promote better retention rates and greater engagement of sworn officers, will boost morale, and will provide for improved community-based policing and relations.

NOW, THEREFORE, BE IT ORDAINED by the City of Henderson, Kentucky as follows:

The Amended Job Classifications and Grades which includes new classification for sworn police officers as listed on the attached Exhibit A, and the Grades and Salary Ranges which includes new grade and salary for sworn police officers as listed on the attached Exhibit B, both being incorporated herein by reference, are hereby adopted as the Job Classification and Pay Plan of the City of Henderson effective December 19, 2016.

All ordinances or parts of ordinances in conflict herewith are hereby repealed and superseded to the extent of such conflict.

This ordinance shall become effective on December 19, 2016.

On first reading of the foregoing ordinance, it was moved by Commissioner Jan Hite, seconded by Commissioner Jesse Johnston, that the ordinance be adopted on its first reading.

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

On roll call the vote stood:

Commissioner Johnston:	<u>AYE</u>	Commissioner Mills:	<u>NAY</u>
Commissioner Hite:	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Royster:	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston:	_____	Commissioner Mills:	_____
Commissioner Hite:	_____	Mayor Austin:	_____
Commissioner Royster:	_____		

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

Steve Austin, Mayor

Date: _____

ATTEST:

Maree Collins, City Clerk

APPROVED AS TO FORM AND LEGALITY THIS 2 DAY OF DECEMBER, 2016.

By: 
Dawn S. Kelsey
City Attorney

**City of Henderson, Kentucky
Job Classifications & Grades**

Code	Grade	Classification Title	<u>FLSA</u>
A			
0301	7	Account Clerk	N
0306	9	Account Representative	N
0304	11	Account Technician	N
0305	14	Account Technician, Senior	N
0314	35	Accounting Manager	E
0307	9	Administrative Clerk	N
0063	14	Administrative Secretary	N
0230	33	Applications Programming Manager	E
0315	36	Assistant Finance Director	E
1110	27	Assistant Fire Chief	N
B			
0062	14	Benefits Coordinator	N
3701	10	Bus Operator	N
4204	10	Bus Preventive Maintenance Technician	N
C			
0020	25	City Clerk	E
2320	37	City Engineer	E
1210	30	Code Administrator	E
1204	16	Code Inspector	N
1208	24	Code Inspector, Senior	N
1302	12	Communications Officer	N
1304	13	Communications Officer, Lead	N
1311	22	Communications Supervisor	E
8100	16	Community Development Specialist	N
4003	6	Crew Worker	N
4004	9	Crew Worker, Senior	N
6000	3	Custodial Worker	N
D			
0201	8	Data Entry Operator	N
1016	35 <u>PD13</u>	Deputy Police Chief	E
1203	16	Development Liaison	N
0321	47	Director, Finance	E
3020	45	Director, Gas System	E
0520	38	Director, Human Resources	E
E			
2310	31	Engineer	E
3104	13	Engineering Technician	N
4040	9	Equipment Operator	N
4041	11	Equipment Operator, Senior	N
0010	17	Executive Assistant	N
8020	21	Executive Director, Human Relations Commission	E
F			
1106	20	Fire Captain	N
1120	43	Fire Chief	E
1103	15.5	Fire Driver - Engineer	N
1104	18	Fire Lieutenant	N
1102	13.5	Firefighter	N
1100	13.5	Firefighter-In-Training (hourly)	N
1101	13.5	Firefighter-In-Training (shift)	N

EXHIBIT A

Exhibit "A"

City of Henderson, Kentucky Job Classifications & Grades

Code	Grade	Classification Title	<u>FLSA</u>
G			
4106	28	Garage Superintendent	E
3004	21	Gas Construction Supervisor	N
3002	17	Gas Distribution Crew Leader	N
3008	33	Gas Distribution Engineer	E
3006	30	Gas Distribution Superintendent	E
3005	11	Gas Distribution Technician	N
3105	12	Gas Measurement Technician	N
3106	19	Gas Measurement Technician Leader	N
3010	37	Gas Operations Manager	E
3108	14	Gas Servicer	N
3003	20	Gas System Analyst	N
3001	12	Gas System Equipment Operator	N
3012	9	Gas System Worker	N
4006	9	Golf Course Maintenance Worker	N
4010	18	Golf Course Manager	E
4000	5	Grounds/Maintenance Worker	N
H			
4043	14	Heavy Equipment Operator	N
4044	15	Heavy Equipment Operator, Senior	N
0507	11	Human Resources Generalist	N
0510	17	Human Resources Specialist	N
0063	14	HWU Administrative Assistant	N
4341	21	HWU Assistant Utility System Superintendent	N
4339	33	HWU Automation Manager	E
4338	21	HWU Automation Specialist	N
4308	37	HWU Chief Engineer	E
4303	17	HWU Construction Crew Leader	N
4337	18	HWU Construction Inspector	N
4329	30	HWU Construction Superintendent	E
4310	42	HWU Director of Field Operations	E
4357	38	HWU Director of Plant Operations	E
3104	13	HWU Engineering Technician	N
4355	16	HWU Environmental Compliance & Pretreatment Coordinator	N
4340	17	HWU GIS Analyst	N
4339	30	HWU GIS Manager	E
4331	33	HWU Information System Manager	E
0302	10	HWU Inventory Control Technician	N
4335	20	HWU Maintenance Team Leader	N
4325	10	HWU Maintenance Technician I	N
4326	14	HWU Maintenance Technician II	N
4327	18	HWU Maintenance Technician, Senior	N
4206	14	HWU Mechanic	N
4314	31	HWU Projects & Compliance Manager	E
4328	25	HWU Purchasing Manager	E
4349	9	HWU Receiving/Inventory Clerk	N
4307	20	HWU Safety & Training Coordinator	N
0060	9	HWU Secretary	N
0061	11	HWU Secretary, Senior	N
4306	9	HWU (SOC) Secretary	N
4305	11	HWU (SOC) Secretary, Senior	N
4313	13	HWU Utility Locator/Geospatial Technician	N
4302	17	HWU Utility System Crew Leader	N
4304	17	HWU Utility System Specialist	N
4311	30	HWU Utility System Superintendent	E
4312	9	HWU Utility System Worker I	N
4315	11	HWU Utility System Worker II	N

**City of Henderson, Kentucky
Job Classifications & Grades**

Code	Grade	Classification Title	FLSA
4319	14	HWU Utility System Worker III	N
4334	21	HWU Wastewater Treatment Operator Chief	N
4330	10	HWU Wastewater Treatment Operator I	N
4326	16	HWU Wastewater Treatment Operator II	N
4356	17	HWU Water Quality Specialist	N
4333	21	HWU Water Treatment Operator Chief	N
4321	10	HWU Water Treatment Operator I	N
4334	18	HWU Water Treatment Operator II	N
3100	16	HWU Welder/Fabricator	N
I			
0210	13	Information Technology Operations Technician	N
0302	10	Inventory Control Technician	N
L			
4007	7	Landscape Technician	N
0064	13	Legal Secretary	N
M			
3100	16	Maintenance Welder	N
3304	9	Meter Reader	N
6102	8	Municipal Facilities Assistant	N
6110	31	Municipal Facilities Superintendent	E
6104	13	Municipal Facilities Worker	N
6106	15	Municipal Facilities Worker, Senior	N
N			
0214	18	Network Administrator I	N
0213	22	Network Administrator II	N
O			
0389	17	Occupational Tax Representative Administrator	N
0391	9	Occupational Tax Representative	N
0112	7	Office Assistant	N
P			
1000	7	Parking Enforcement Officer	N
4101	21	Parks and Cemeteries Superintendent	E
1020	{44} <u>PD14</u>	Police Chief	E
1012	{22} <u>PD11</u>	Police Lieutenant	E
1014	{27} <u>PD12</u>	Police Major	E
1004	{13.5} <u>PD7, PD9, PD11</u>	Police Officer	N
1008	{18} <u>PD9, PD11, PD12</u>	Police Sergeant	N
0221	24	Programmer/Analyst	N
1202	12	Property Maintenance Inspector	N
4117	30	Public Works Engineer	E
R			
1306	17	Radio Network Systems Technician	N
7005	8	Recreation Center Worker	N
7006	15	Recreation Facilities Supervisor	E
7010	23	Recreation Program Manager	E
0312	20	Revenue Supervisor	N
S			
0515	20	Safety & Training Coordinator	N
4108	30	Sanitation Superintendent	E
4001	5	Sanitation Worker	N
4002	6	Sanitation Worker, Senior	N
4009	9	Scale Operator	N
1001	3	School Crossing Guard	N

**City of Henderson, Kentucky
Job Classifications & Grades**

Code	Grade	Classification Title	<u>FLSA</u>
0060	9	Secretary	N
0061	11	Secretary, Senior	N
4110	30	Street Superintendent	E
0212	17	System Administrator	N
T			
4039	12	Traffic Control Supervisor	N
4211	16	Transit Mechanic Supervisor	N
3711	30	Transit Superintendent	E
U			
3309	20	Utility Billing Supervisor	N
3303	12	Utilities Servicer	N
V			
4206	14	Vehicle Mechanic	N
4203	8	Vehicle Servicer	N
4202	6	Vehicle Servicer Helper	N

**City of Henderson, Kentucky
Grade & Salary Ranges
Effective July 1, 2016**

<u>Grade</u>	<u>Minimum</u>	<u>Midpoint</u>	<u>Maximum</u>
1	18,469.76	22,164.44	26,780.72
2	19,563.11	23,474.57	28,365.65
3	20,655.31	24,785.92	29,950.61
4	21,748.67	26,097.20	31,534.37
5	22,840.84	27,408.51	33,119.33
6	23,931.80	28,719.83	34,701.91
7	25,026.35	30,031.17	36,288.04
8	26,117.35	31,341.28	37,870.62
9	27,210.71	32,652.60	39,455.58
10	28,302.87	33,963.93	41,040.52
11	29,396.21	35,274.03	42,623.10
12	30,488.40	36,586.53	44,208.06
13	31,580.57	37,896.68	45,791.82
13.5	34,262.43	40,026.54	45,791.82
14	32,673.93	39,208.01	47,377.97
15	33,766.09	40,519.32	48,959.37
15.5	34,996.84	41,978.70	48,959.37
16	34,858.26	41,829.46	50,544.29
17	35,951.63	43,140.78	52,129.26
18	37,043.81	44,452.08	53,714.20
19	38,135.98	45,763.40	55,297.98
20	39,228.14	47,074.72	56,880.58
21	40,321.49	48,386.05	58,466.70
22	41,413.66	49,696.17	60,049.28
23	42,505.84	51,007.46	61,634.22
24	43,599.21	52,318.80	63,219.18
25	44,691.38	53,628.92	64,802.94
26	45,784.72	54,941.41	66,386.71
27	46,875.71	56,710.00	67,970.48
28	47,970.24	57,562.88	69,556.63
29	49,061.24	58,874.17	71,138.01
30	50,155.77	60,185.52	72,725.35
31	51,246.74	61,495.65	74,307.92
32	52,340.11	62,806.93	75,892.87
33	53,432.28	64,118.26	77,476.64
34	54,523.27	65,429.59	79,059.20
35	55,617.81	66,740.89	80,645.36
36	56,708.78	68,051.03	82,229.11
37	57,803.32	69,363.54	83,814.07
38	58,894.32	70,673.67	85,397.83
39	59,987.69	71,983.79	86,981.61
40	61,079.83	73,296.30	88,565.37
41	62,172.01	74,606.43	90,149.15
42	63,265.39	75,917.75	91,735.28
43	64,357.55	77,229.07	93,317.85
44	65,450.91	78,540.37	94,903.99
45	66,543.07	79,850.50	96,486.57
46	67,635.27	81,161.82	98,071.54
47	68,727.42	82,473.14	99,656.47
48	69,819.59	83,784.45	101,237.89
49	70,912.97	85,095.77	102,824.02
50	72,005.12	86,405.89	104,407.78

Police Department Sworn Officers Grade & Salary Ranges
Effective December , 2016

<u>Grade</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>	<u>Step 4</u>	<u>Step 5</u>	<u>Step 6</u>	<u>Step 7</u>	<u>Step 8</u>	<u>Step 9</u>	<u>Step 10</u>
PD1	18,343.00	18,956.00	19,566.00	20,173.00	20,783.00	21,140.00	21,743.00	22,351.00	22,375.00	22,941.00
PD2	20,623.00	21,114.00	21,797.00	22,375.00	22,629.00	23,295.00	23,961.00	24,627.00	25,293.00	25,959.00
PD3	22,502.00	23,252.00	24,002.00	24,752.00	25,502.00	26,252.00	27,002.00	27,752.00	28,502.00	29,252.00
PD4	25,261.00	26,103.00	26,945.00	27,787.00	28,629.00	29,471.00	30,313.00	31,155.00	31,997.00	32,839.00
PD5	28,262.00	29,204.00	30,146.00	31,088.00	32,030.00	32,972.00	33,914.00	34,856.00	35,798.00	36,740.00
PD6	31,504.00	32,554.00	33,604.00	34,654.00	35,704.00	36,754.00	37,804.00	38,854.00	39,904.00	40,954.00
PD7	35,009.00	36,176.00	37,343.00	38,510.00	39,677.00	40,844.00	42,011.00	43,178.00	44,345.00	45,512.00
PD8	38,771.00	40,063.00	41,355.00	42,647.00	43,939.00	45,231.00	46,523.00	47,815.00	49,107.00	50,399.00
PD9	42,823.00	44,250.00	45,677.00	47,104.00	48,531.00	49,958.00	51,385.00	52,812.00	54,239.00	55,666.00
PD10	47,158.00	48,730.00	50,302.00	51,874.00	53,446.00	55,018.00	56,590.00	58,162.00	59,734.00	61,306.00
PD11	51,811.00	53,538.00	55,265.00	56,992.00	58,719.00	60,446.00	62,173.00	63,900.00	65,627.00	67,354.00
PD12	62,101.00	64,171.00	66,241.00	68,311.00	70,381.00	72,451.00	74,521.00	76,591.00	78,661.00	80,731.00
PD13	73,846.00	76,308.00	78,770.00	81,232.00	83,694.00	86,156.00	88,618.00	91,080.00	93,542.00	96,004.00
PD14	87,263.00	90,172.00	93,081.00	95,990.00	98,899.00	101,808.00	104,717.00	107,626.00	110,535.00	113,444.00
PD15	102,646.00	106,068.00	109,490.00	112,912.00	116,334.00	119,756.00	123,178.00	126,600.00	130,022.00	133,444.00

City Commission Memorandum
16-271

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Amending Employee Manual in Relation to Police Department Sworn Officer Employees

Enclosed for final reading at the called meeting on December 12, 2016 is an ordinance amending Article 136 *Transfer Policy*, Article 212 *Entrance Rate of Pay*, Article 220 *Rate of Pay Upon Job Classification Change*, Article 210 *Basic Salary Schedule* and Article 214 *Pay Plan of the Employee Manual of the City of Henderson* in relation to Police Department Sworn Officers.

ORDINANCE NO. 42-16

ORDINANCE AMENDING EMPLOYEE MANUAL

SUMMARY: ORDINANCE AMENDING ARTICLE 136 –*TRANSFER POLICY*, ARTICLE 212-*ENTRANCE RATE OF PAY*, ARTICLE 220-*RATE OF PAY UPON JOB CLASSIFICATION CHANGE*, ARTICLE 210-*BASIC SALARY SCHEDULE AND ARTICLE 214 PAY PLAN OF THE EMPLOYEE MANUAL OF THE CITY OF HENDERSON*

WHEREAS, as part of the Police Department Sworn Officer Job Classification and Pay Plan amendment to the Job Classifications and Pay Plan, sworn police officers will no longer be eligible for a merit increase at six (6) months probationary periods or eligible for longevity pay;

WHEREAS, the amended Job Classifications and Pay Plan which includes the Police Department Sworn Officer Job Classification and Pay Plan will prevent police officers from being eligible to transfer to the Fire Department because they are no longer in the same job classifications; and

WHEREAS, the applicable portions of the Employee Manual must be amended to reflect these changes.

BE IT ORDAINED by the City of Henderson, Kentucky, that Articles 136-*Transfer Policy*, Article 212-*Entrance Rate of Pay*, Article 220-*Rate of Pay Upon Job Classification Change*, Article 210-*Basic Salary Schedule* and Article 214- *Pay Plan* of the City’s Employee Manual is hereby amended, copies of which are attached hereto, marked Exhibit “A”, and made a part hereof by reference.

This ordinance shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner Jan Hite, seconded by Commissioner Jesse Johnston, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston:	<u>AYE</u>	Commissioner Mills:	<u>NAY</u>
Commissioner Hite:	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Royster:	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston:	_____	Commissioner Mills:	_____
Commissioner Hite:	_____	Mayor Austin:	_____
Commissioner Royster:	_____		

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

Steve Austin, Mayor

Date: _____

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 7 DAY OF
DECEMBER, 2016.**

By: 
Dawn S. Kelsey
City Attorney

ARTICLE 136 – TRANSFER POLICY

- A. There are two types of transfer: Department initiated and employee initiated. Qualified employees may transfer between Departments or Divisions, provided the following conditions are met:
1. Department Initiated:
 - a. Department Heads of affected Departments are aware of the need for a transfer and agree in writing that the transfer is the best interest of the City and/or employee before official contact is made with the employee.
 - b. The employee shall have the best qualifications to fill the position.
 - c. The employee's position classification will not change as a result of the transfer except as referred to in (i).
 - i. For the purpose of the Transfer Policy, the position classifications of police officer or firefighter may also be considered a transfer provided the employee has fulfilled all contractual obligations including thirty-six (36) months of service following the completion of all initial training.
 - d. All transfers must be handled through the Human Resources Department and be approved by the City Manager upon written request of each Department Head as appropriate.
 2. Employee Initiated:
 - a. The employee, through the chain of command, must notify his/her current Department Head of the desire to transfer and the reason(s) for making such a request should be submitted in writing.
 - b. The employee shall have the best qualifications to fill the position.
 - c. The employee's position classification will not change as a result of the transfer. ~~[except as referred to in (i).~~
 - i. ~~For the purpose of the Transfer Policy, the position classifications of police officer or firefighter may also be considered a transfer provided the employee has fulfilled all contractual obligations including thirty six (36) months of service following the completion of all initial training.]~~
 - d. All transfers must be handled through the Human Resources Department and be approved by the City Manager upon written request of both Department Heads.
- B. The transfer will require a 6-month non-merit evaluation and a 12-month probationary period evaluation and the annual performance evaluation date of the transferred employee will remain the same.

ARTICLE 212 – ENTRANCE RATE OF PAY

The minimum rate of pay for a class shall normally be offered for recruitment purposes and shall be paid upon appointment to the class. However, an exception may be granted in the following cases:

- A. Original appointments above the minimum rate may be paid if a Department Head submits a written request outlining reasons for such actions and such request is approved in writing by the Human Resources Director and the City Manager.
- B. When a former City employee is approved for re-employment (subject to Article 142, herein) to a class in which he or she was previously employed, the reappointment may be based on the rate of pay which the employee had been receiving at the termination of the most recent previous employment. A request for such reappointment must be made in writing by the Department Head and must outline reasons for such action and is subject to the approval of the Human Resources Director.
- C. Any employee who is temporarily appointed to a higher classified position than their regular position shall be temporarily compensated at the entry rate assigned to the range of the higher classified position or a five percent (5%) increase in salary, whichever is greater, provided said employee shall serve in the temporary position for thirty (30) days or more. Employees who serve in such temporary capacity shall receive payment retroactive to the first day of service in the higher classified position. An employee on the police department sworn officer pay plan who is temporarily appointed to higher classification than their regular position shall be temporarily compensated at the entry rate assigned to the range of the higher classified position or the next step in grade, whichever is greater, provided said employee shall serve in the temporary position for thirty (30) days or more. Upon completion of the temporary appointment, said employee shall revert to the salary appropriate for the grade of his/her regular classified position.

ARTICLE 220 – RATE OF PAY UPON JOB CLASSIFICATION CHANGE**A. Demotion**

1. Upon demotion due to a reduction in forces or other cause which is not the fault of the employee, pay shall be at the same rate of pay in the lower grade in which the employee is placed unless the maximum rate for the lower grade has been reached in which case the rate of pay shall be the maximum rate of the lower grade.
2. Upon demotion for cause, the rate of pay in the lower grade shall be established by a disciplinary authority after considering the circumstances of the demotion.

B. Promotion

1. Any employee who is promoted to a higher classified position shall receive an increase in base pay which will result in a five percent (5%) increase unless the five percent (5%) increase results in reaching or exceeding the maximum rate for the new grade in which case the rate of pay shall be the maximum rate of pay for the grade. Employees in classifications on the police department sworn officer pay plan will move to the grade and step as established in the police department sworn officer pay plan.
2. Upon completion of a probationary period of six (6) months of service and based upon a satisfactory evaluation and approved by the respective Department Head and the City Manager, said employee shall be eligible for an additional increase of two and one-half percent (2½%) of base pay provided, however, that rate of pay shall not exceed the maximum rate established for the grade. Employees in the classifications on the police department sworn officer pay plan are not eligible for an increase at completion of the six (6) months of service in the probationary period.
3. At the end of one year, and based upon a satisfactory performance evaluation and approved by the respective Department Head and the City Manager, the employee shall have successfully completed his/her positional probationary period of employment in the higher classification and shall be eligible for additional merit pay increase per Article 152.
4. If an employee fails to successfully complete the positional probationary period of employment following a promotion and is recommended by his/her Department Head to return to a former classification and said recommendation is approved by the City Manager, pay shall be as though a promotion had not been granted. Said employee shall be eligible for any increases which would have been received had the promotion not occurred. However, there exists no inherent right of return to a previous classification.

ARTICLE 210 – BASIC SALARY SCHEDULE

- A. The salary schedule provides a series of grades with a salary range for each grade; each grade represents an increase in the salary range above the preceding grade.
- B. The salary schedule for each pay grade is based on proper analysis of all facets affecting salary levels.
- C. The ranges of pay shall consist of a minimum rate, midpoint rate, and a maximum rate.
- D. The police department sworn officer grade and salary ranges shall consist of grades and steps.

ARTICLE 214 – PAY PLAN

Except for differentials specifically authorized by this manual, every employee in the classified service shall be paid within a range established for the classification to which the employee is assigned. The specific rate to be paid each employee shall be in accordance with applicable sections of this manual.

- A. Each employee having successfully completed a probationary period of six (6) months of service immediately subsequent to their initial employment date with the City in a Civil Service position and based upon a satisfactory evaluation approved by the respective Department Head and by the City Manager shall be eligible for an increase of two and one-half percent (2½%) of base pay, provided that such initial employment began at the minimum rate of his/her grade and classification. Employees in classifications on the police department sworn officer pay plan are not eligible for an increase at the six (6) month probationary period. At the end of one (1) year the employee will be eligible for up to an additional percentage increase as approved in the current budget based upon a satisfactory evaluation and approved by the respective Department Head and the City Manager. All subsequent advancements in salary shall be based on a satisfactory annual evaluation and approved by the respective Department Head and the City Manager. The same probationary salary increases are applicable to Police and Fire Department probationary employees.
- B. All employees will be eligible to receive up to an additional percentage merit salary increase as approved in the current budget if they have not reached the maximum rate within their assigned grade and classification, with such merit adjustment being based upon a satisfactory performance evaluation approved by the respective Department Head and by the City Manager. Employees in classifications on the police pay plan will be eligible to move to the next step as established in the police department sworn officer pay plan as approved in the current budget if they have not reached the maximum rate within their assigned grade and classification, with such merit adjustment being based upon a satisfactory performance evaluation approved by the Police Chief and by the City Manager.
- C. Any employee who has served at the maximum rate of his/her assigned classification for one (1) full year shall be eligible to receive longevity pay of up to the same percentage increase as the merit increase percentage in the current budget of the salary approved for that employee's grade in the annual budget, and is ineligible for merit salary increases. The percentage of longevity payment is determined by his/her annual performance evaluation. All longevity payments shall be based upon a satisfactory annual evaluation approved by the respective Department Head and by the City Manager. Longevity payments will be paid through the payroll system and shall be subject to all withholding requirements. Longevity payments are not added to the employee's base salary. Employees in classifications on the police department sworn officer pay plan shall not be eligible to receive longevity pay.
- D. Any employee who advances to the maximum rate at any time this plan is in effect will be eligible for any annual cost of living salary increase in the amount approved by the Board of Commissioners.
- E. The annual salary amounts approved by the Board of Commissioners each fiscal year shall be used as the basis for determining bi-weekly payroll amounts. The annual salary will be based on 2,080 hours of work annually for all employees except Fire Department members who work a 24-hour shift every third work day. The annual salary of shift employees in the Fire Department shall be based on a combination of 2,080 hours of work at regular salary rates and 832 hours of work at overtime rates.
- F. All City employees are paid bi-weekly on every other Friday. Each paycheck will include earnings for all work performed through the end of the previous payroll period.
- G. Police and Firefighters who qualify receive monthly incentive pay for on-going training on the last day of the month.

- H. In the event that a regularly scheduled payday falls on a day off (e.g., a weekend or holiday), employees will receive pay on the last day of work before the regularly scheduled payday.
- I. Employees shall have pay directly deposited into approved credit union or bank accounts if they have completed all proper forms and the bank or credit union has sent a payroll authorization form to Human Resources. Employees will receive their check stub for wages when the City makes direct deposit on their behalf.
- J. Only the Department Head or designee from the Department is authorized to receive paychecks from the City Clerk's Office on the designated payday. Any employee absent from work may send a signed and dated statement to his/her Department Head requesting that his/her paycheck be released to a specific family member. Paychecks will be distributed to employees at the Department level. Human Resources may hold the paycheck of any employee who has not properly completed all required payroll forms in accordance with State and Federal wage and hour regulations.

City Commission Memorandum
16-272

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Amending Budget and Appropriation Ordinance, FY 2017, in Relation to Police Department Sworn Officer Employees

Enclosed for final reading at the called meeting on December 12, 2016 is an ordinance amending the Budget and Appropriation Ordinance for FY 2017 in relation to Police Department Sworn Officers.

ORDINANCE NO. 43-16

ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE

SUMMARY: AN ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE FOR THE FISCAL YEAR COMMENCING JULY 1, 2016 AND ENDING JUNE 30, 2017 FOR THE CITY OF HENDERSON, KENTUCKY

WHEREAS, on June 18, 2016, the City of Henderson adopted its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 21-16, and,

WHEREAS, on October 11, 2016, the City of Henderson amended its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 33-16, and,

WHEREAS, on December 6, 2016, the City of Henderson amended its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 39-16, and,

NOW, THEREFORE, BE IT ORDAINED by the City of Henderson, Kentucky, that Ordinance No. 39-16 is amended as follows:

1.

GENERAL FUND

ADMINISTRATION	\$	2,678,330	\$	2,678,330
FINANCE		2,349,210		2,349,210
FIRE		6,959,750		6,959,750
PARKS & RECREATION		1,907,470		1,907,470
POLICE		7,035,420		7,141,420
PUBLIC WORKS		2,794,760		2,794,760
INFORMATION TECHNOLOGY		1,099,510		1,099,510
TRANSFERS/AGENCIES		7,825,550		7,825,550
TOTAL	\$	32,650,000	\$	32,756,000

2. There is hereby appropriated from the General and Special Fund Accounts of the City of Henderson and allocated to the various Funds of the City the following amounts:

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

GENERAL FUND

GENERAL FUND EXPENDITURE TOTAL	\$ 27,011,000	\$ 27,117,000
TRANSFER TO PWI	1,176,000	1,176,000
TRANSFER TO MASS TRANSIT	684,000	684,000
TRANSFER TO CONSTRUCTION FUND	501,000	501,000
TRANSFER TO EMERGENCY COMM.	1,248,000	1,248,000
TRANSFER TO POLICE/FIRE PENSION	404,000	404,000
TRANSFER TO CIVIL SERVICE PENSION	179,000	179,000
TRANSFER TO CEMETERY	204,000	204,000
TRANSFER TO BOND FUND	1,243,000	1,243,000
TOTAL GENERAL FUND	<u>\$ 32,650,000</u>	<u>\$ 32,756,000</u>
NATURAL GAS FUND	\$ 16,613,000	
HEALTH REIMBURSEMENT ARRANGE.	\$ 420,000	
CIVIL SERVICE PENSION FUND	\$ 185,000	
POLICE & FIRE PENSION FUND	\$ 404,000	
CEMETERY FUND	\$ 405,000	
HEALTH INSURANCE FUND	\$ 7,543,000	
BOND FUND	\$ 4,308,000	
PUBLIC WAY IMPROVEMENT FUND	\$ 1,832,000	
CONSTRUCTION FUND	\$ 9,830,000	
FLOOD MITIGATION FUND	\$ 861,000	
HART OPERATING FUND	\$ 1,649,000	
SANITATION FUND	\$ 3,262,000	
EMERGENCY COMMUNICATIONS FUND	\$ 2,213,000	
COMMUNITY DEVELOPMENT FUND	\$ 510,000	
HOME FUND	\$ 84,000	
POLICE INVESTIGATION FUND	\$ 20,000	
TRI-COUNTY RECYCLING	\$ 20,000	

3. This Ordinance shall be effective as of July 1, 2016.

This ordinance of amendment shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner X R. Royster seconded by Commissioner Jan Hite, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston:	<u>AYE</u>	Commissioner Mills:	<u>NAY</u>
Commissioner Hite:	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Royster:	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for second reading at a regular meeting of the Board of Commissioners.

On second reading of the foregoing ordinance, it was moved by Commissioner seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called, on roll call the vote stood:

Commissioner Johnston:	_____	Commissioner Mills:	_____
Commissioner Hite:	_____	Mayor Austin:	_____
Commissioner Royster:	_____		

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered it be recorded.

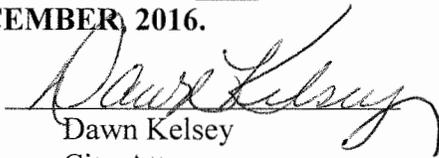
Steve Austin, Mayor

Date

ATTEST:

Maree Collins, City Clerk

APPROVED AS TO FORM AND LEGALITY THIS 2 DAY OF DECEMBER, 2016.

By: 
Dawn Kelsey
City Attorney

City Commission Memorandum
16-266

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: General Obligation Bonds, Series 2017A and General Obligation Refunding Bonds, Series 2017B and 2017C

An item for the meeting on Monday, December 12, 2016, is final reading of an ordinance authorizing the issuance of City General Obligation Bonds, Series 2017A and General Obligation Refunding Bonds, Series 2017B and 2017C for the purpose of providing funds for various public improvements in the City; refunding outstanding Water and Sewer Revenue Bonds, Series 2006A; refunding a portion of the outstanding General Obligation Bonds, Series 2007; and related costs in the principal amount of approximately \$3,155,000.00, \$2,530,000.00 and \$2,330,000.00, respectively.

The accompanying documents, prepared by Bond Counsel, include provisions for the terms and conditions for issuance, ordering and providing for the levy of an annual tax, to the extent necessary, sufficient to pay the principal and interest, revenue transfers, and provide for a public sale of the bonds. The Bonds will be payable from the tax revenues of the City and secured by an irrevocable pledge of the full faith, credit and taxing power of the City. The Bonds will be issued in fully registered form with Series 2017A scheduled to mature on March 1, 2037; Series 2017B scheduled to mature on November 1, 2026; and Series 2017C scheduled to mature on April 1, 2027 and to bear interest semiannually at rates established by competitive bidding.

Your approval of the attached ordinance is requested.

c: Dawn Kelsey
Robert Gunter

**HENDERSON WATER AND SEWER COMMISSION
RESOLUTION OF THE BOARD OF COMMISSIONERS**

**Resolution No. 2016 - 30
Requesting Issuance of City of Henderson
General Obligation Refunding Bonds, Series 2017B**

The following Resolution was duly adopted by the Board of Commissioners of the Henderson Water & Sewer Commission at a regular meeting held on Monday, 21 November 2016, at which meeting a quorum was present.

WHEREAS, The Henderson Water and Sewer Commission (the "Commission"), a component unit of the City of Henderson, Kentucky (the "City") has jurisdiction and control over the construction, equipping, management and operation of the City's water treatment and distribution system and the wastewater collection and treatment system (collectively, the "System"); and

WHEREAS, pursuant to an Ordinance adopted on August 8, 2006 (the "Prior System Ordinance"), the City, at the request of the Commission, heretofore issued its Water and Sewer Revenue Bonds, Series 2006A (the "Prior Bonds"), which Prior Bonds are secured by a first pledge of the revenues of the System on a parity with any future parity bonds issued under the Prior System Ordinance; and

WHEREAS, the Commission has determined that the present conditions of the municipal market are more favorable than at the time the Prior Bonds were issued, and it would therefore be advantageous and in the best interests of the City and the Commission for the City to proceed with the issuance of its General Obligation Refunding Bonds, Series 2017B in the approximate principal amount of \$2,530,000 (which amount may be increased or decreased by up to \$255,000) (the "Series 2017B Bonds") to currently refund and retire the outstanding Prior Bonds; and

WHEREAS, in order to induce the City to issue the Series 2017B Bonds, it is necessary for the Commission to authorize and direct that excess System revenues be transferred to the City's General

Fund (the "General Fund") on a timely basis in amounts sufficient to reimburse the General Fund for payment of that portion of semiannual debt service for the Series 2017B Bonds, all as authorized and prescribed by the Prior System Ordinance.; now,

BE IT RESOLVED, that the Henderson Water and Sewer Commission by and through its Board of Commissioners under the authority granted to the Board of Commissioners under Chapter 23 Article II Division 3 Sections 23-36 through 23-45.1 of the City Code of Ordinances, as follows:

Section 1. *Request and Petition for Issuance of Series 2017B Bonds by City.* The Commission hereby requests and petitions the City to proceed with the authorization, sale and issuance of the City's Series 2017B Bonds in the approximate principal amount of \$2,530,000 (which amount may be increased or decreased by up to \$255,000) to currently refund and retire the outstanding Prior Bond, thereby realizing substantial debt service savings.

Section 2. *Transfer of System Revenues to City's General Fund.* In order to induce the City to issue the Series 2017B Bonds, the Commission authorizes and directs that excess System revenues be transferred to the City's General Fund (the "General Fund") on a timely basis in amounts sufficient to reimburse the General Fund for payment of that portion of semiannual debt service for the Series 2017B Bonds, all as authorized and prescribed by the Prior System Ordinance.

Section 3. *Effective Date.* This resolution shall be effective from and after its date of adoption.

The General Manager is hereby authorized to deliver this Resolution to the City of Henderson, for action by the City Commission.

IN WITNESS WHEREOF, having come before the Board of Commissioners on Monday, 21 November 2016, and upon Motion made by Commissioner Julie Wischer, and seconded by Commissioner John Henderson, the Board of Commissioners voted as follows:

	<u>AYE</u>	<u>NAY</u>
Commissioner, R. Paul Bird, Jr.	<u>✓</u>	_____
Commissioner, George Jones, III	<u>✓</u>	_____
Commissioner, John Henderson	<u>✓</u>	_____
Commissioner, Gary Jennings	<u>✓</u>	_____
Commissioner, Julie Wischer	<u>✓</u>	_____



Tom Williams, P.E.
HWU General Manager

ORDINANCE NO. [44-16]

SUMMARY OF ORDINANCE

AN ORDINANCE OF THE CITY OF HENDERSON, KENTUCKY AUTHORIZING THE ISSUANCE OF (i) GENERAL OBLIGATION BONDS, SERIES 2017A IN THE AGGREGATE PRINCIPAL AMOUNT OF \$3,155,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$315,000) TO FINANCE VARIOUS PUBLIC IMPROVEMENTS, (ii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017B IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,530,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$255,000) TO CURRENTLY REFUND THE OUTSTANDING CITY OF HENDERSON, KENTUCKY WATER AND SEWER REVENUE BONDS, SERIES 2006A; AND (iii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017C IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,330,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$235,000) TO CURRENTLY REFUND A PORTION OF THE OUTSTANDING CITY OF HENDERSON, KENTUCKY GENERAL OBLIGATION BONDS, SERIES 2007; APPROVING THE FORMS OF BONDS; AUTHORIZING DESIGNATED OFFICERS TO EXECUTE AND DELIVER THE BONDS; PROVIDING FOR THE PAYMENT AND SECURITY OF THE BONDS; CREATING BOND PAYMENT FUNDS; MAINTAINING THE HERETOFORE CREATED SINKING FUND; AUTHORIZING ACCEPTANCE OF THE BIDS OF THE BOND PURCHASER OR PURCHASERS FOR THE PURCHASE OF THE BONDS; AND REPEALING INCONSISTENT ORDINANCES.

This Ordinance (the "Ordinance") sets forth general rules, regulations and conditions for the issuance of three series of general obligation bonds by the City of Henderson, Kentucky (the "City") in the aggregate principal amounts of approximately \$3,155,000 (the "Series A Bonds"), \$2,530,000 (the "Series B Bonds"), and \$2,330,000 (the "Series C Bonds," and together with the Series A Bonds and the Series B Bonds, the "Bonds"), for the purpose of, respectively, (i) financing various improvements (collectively, the "New Project") for use in furtherance of public purposes of the City; (ii) currently refunding the City's outstanding Water and Sewer Revenue Bonds, Series 2006A (the "Prior 2006 Bonds") the proceeds of which were used to finance the costs of the acquisition, construction, installation and equipping of certain improvements (the "2006 Project"), to the City's combined and consolidated municipal water, sanitary sewer and storm sewer system (the "System"), and (iii) currently refunding a portion of the City's outstanding General Obligation Bonds, Series 2007 (the "Prior 2007 Bonds") the proceeds of which were used to finance various improvements (the "2007 Project") for use in furtherance of the public purposes of the City (the New Project, 2006 Project, and 2007 Project, collectively, the "Project").

Provisions are made for the authorization and issuance of the Bonds; for the application of the proceeds of the Bonds; for the establishment of Bond Payment Funds; for the maintenance of the previously established sinking fund; and for certain covenants of the City with respect to the

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

Bonds. The Bonds are to be sold at public, competitive sale. The Bonds pledge the full faith and credit of the City and provision is made for the collection of a tax to pay the principal of, and interest on the Bonds, subject to certain credits, as provided in Section 7 of the Ordinance. As required by KRS 83A.060, the following Section 7 of the Ordinance is set forth in its entirety:

"Section 7 -- General Obligation; Creation of Sinking Fund. The Bonds shall be full general obligations of the City and, for the payment of said Bonds and the interest thereon, the full faith, credit and revenue of the City are hereby pledged for the prompt payment thereof. During the period the Bonds are outstanding, there shall be and there hereby is levied on all the taxable property in the City, in addition to all other taxes, without limitation as to rate, a direct tax annually in an amount sufficient to pay the principal of and interest on the Bonds when and as due, it being hereby found and determined that current tax rates are within all applicable limitations. Said tax shall be and is hereby ordered computed, certified, levied and extended upon the tax duplicate and collected by the same officers in the same manner and at the same time that taxes for general purposes for each of said years are certified, extended and collected. Said tax shall be placed before and in preference to all other items and for the full amount thereof provided, however, that in each year to the extent that the other lawfully available funds of the City are available for the payment of the Bonds and are appropriated for such purpose, the amount of such direct tax upon all of the taxable property in the City shall be reduced by the amount of such other funds so available and appropriated."

A copy of the Ordinance and of the form of the documents in connection with the issuance of the Bonds are on file in the office of the City Clerk.

I, the undersigned City Clerk of the City of Henderson, Kentucky, hereby certify that the foregoing Ordinance was adopted by the City Commission of the City of Henderson, Kentucky after second reading on December 12, 2016, and was further approved for publication following adoption according to law. I further certify that the foregoing summary was prepared for the City by Dirk M. Bedarff, Esq. of Dinsmore & Shohl LLP, Attorneys at Law, 50 East River Center Boulevard, Suite 1150, Covington, Kentucky 41011.

WITNESS my hand and seal of said City, this 12th day of December, 2016.

/s/ Maree Collins
City Clerk, City of Henderson, Kentucky

The undersigned Attorney at Law, licensed to practice in Kentucky, hereby certifies that the foregoing title summary of Ordinance No. _____ of the City of Henderson, Kentucky, was prepared under the supervision of a licensed attorney.

/s/ Dirk M. Bedarff
Dinsmore & Shohl LLP
50 East Rivercenter Blvd., Suite 1150
Covington, Kentucky 41011

ORDINANCE NO. 44-16

AN ORDINANCE OF THE CITY OF HENDERSON, KENTUCKY AUTHORIZING THE ISSUANCE OF (i) GENERAL OBLIGATION BONDS, SERIES 2017A IN THE AGGREGATE PRINCIPAL AMOUNT OF \$3,155,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$315,000) TO FINANCE VARIOUS PUBLIC IMPROVEMENTS, (ii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017B IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,530,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$255,000) TO CURRENTLY REFUND THE OUTSTANDING CITY OF HENDERSON, KENTUCKY WATER AND SEWER REVENUE BONDS, SERIES 2006A; AND (iii) GENERAL OBLIGATION REFUNDING BONDS, SERIES 2017C IN THE AGGREGATE PRINCIPAL AMOUNT OF \$2,330,000 (WHICH AMOUNT MAY BE INCREASED OR DECREASED BY UP TO \$235,000) TO CURRENTLY REFUND A PORTION OF THE OUTSTANDING CITY OF HENDERSON, KENTUCKY GENERAL OBLIGATION BONDS, SERIES 2007; APPROVING THE FORMS OF BONDS; AUTHORIZING DESIGNATED OFFICERS TO EXECUTE AND DELIVER THE BONDS; PROVIDING FOR THE PAYMENT AND SECURITY OF THE BONDS; CREATING BOND PAYMENT FUNDS; MAINTAINING THE HERETOFORE CREATED SINKING FUND; AUTHORIZING ACCEPTANCE OF THE BIDS OF THE BOND PURCHASER OR PURCHASERS FOR THE PURCHASE OF THE BONDS; AND REPEALING INCONSISTENT ORDINANCES.

WHEREAS, the City of Henderson, Kentucky (the "City") has determined the necessity of financing various improvements (collectively, the "New Project") for use in furtherance of proper public purposes of the City; and

WHEREAS, the City heretofore issued its Water and Sewer Revenue Bonds, Series 2006A (the "Prior 2006A Bonds"), the proceeds of which were used to finance the costs of the acquisition, construction, installation and equipping of certain improvements (the "2006 Project") to the City's combined and consolidated municipal water, sanitary sewer and storm sewer system (the "System"); and

WHEREAS, the City further heretofore issued its General Obligation Bonds, Series 2007 (the "Prior 2007 Bonds"), the proceeds of which were used to finance and refinance a portion of the costs of the acquisition, construction and installation of various public improvements in the

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

City (the “2007 Project”), and together with the New Project and the 2006 Project, the “Projects”); and

WHEREAS, the City has determined that it is in the best interests of the City that the City proceed at this time to finance the New Project through the issuance by the City of its General Obligation Bonds, Series 2017A in the approximate principal amount of \$3,155,000 (which amount may be increased or decreased by up to \$315,000) (the “Series 2017A Bonds”); and

WHEREAS, the City has further determined that the present conditions of the municipal market are more favorable than at the time the Prior 2006A Bonds and Prior 2007 Bonds were issued, and it is therefore advantageous and in the best interests of the City for the City to proceed with the issuance of its (i) General Obligation Refunding Bonds, Series 2017B in the approximate principal amount of \$2,530,000 (which amount may be increased or decreased by up to \$255,000) (the “Series 2017B Bonds”) to currently refund and retire the outstanding Prior 2006A Bonds, and (ii) General Obligation Refunding Bonds, Series 2017C in the approximate principal amount of \$2,330,000 (which amount may be increased or decreased by up to \$235,000) (the “Series 2017C Bonds,” and together with the Series 2017A Bonds and Series 2017B Bonds, the “Bonds”) to currently refund and retire a portion of the outstanding Prior 2007 Bonds; and

WHEREAS, pursuant to the Constitution and Laws of the Commonwealth of Kentucky, and particularly Sections 66.011 et. seq of the Kentucky Revised Statutes, as amended (the “General Obligation Act”), a city may issue bonds or refunding bonds, subject to the requirements of the General Obligation Act, to pay all or any portion of the costs of financing or refinancing any public project that such city is authorized to acquire, improve or construct; and

WHEREAS, the Bonds are to be sold and awarded to the successful bidders (each a “Purchaser,” and collectively, the “Purchasers”) at public, competitive sale in accordance with the provisions of Chapter 424 of the Kentucky Revised Statutes, as amended.

NOW, THEREFORE, BE IT ORDAINED BY BOARD OF COMMISSIONERS OF THE CITY OF HENDERSON, KENTUCKY, AS FOLLOWS:

Section 1 -- Necessity, Authorization and Purpose. The City hereby declares that it is desirable and necessary to issue and authorizes the issuance of its General Obligation Bonds, Series 2017A, in the approximate principal amount of \$3,155,000, subject to a permitted adjustment (the “Series 2017A Permitted Adjustment”) increasing or decreasing the principal amount of Series 2017A Bonds awarded to the purchasers thereof by up to \$315,000, for the purpose of (i) paying the costs of the New Project and (ii) paying the costs of issuance of the Series 2017A Bonds.

The City hereby further declares that it is desirable and necessary to issue and authorizes the issuance of its General Obligation Refunding Bonds, Series 2017B, in the approximate principal amount of \$2,530,000, subject to a permitted adjustment (the “Series 2017B Permitted Adjustment”) increasing or decreasing the principal amount of Series 2017B Bonds awarded to the purchasers thereof by up to \$255,000, for the purpose of (i) paying the costs of currently refunding the outstanding Prior 2006A Bonds and (ii) paying the costs of issuance of the Series 2017B Bonds.

The City hereby further declares that it is desirable and necessary to issue and authorizes the issuance of its General Obligation Refunding Bonds, Series 2017C, in the approximate principal amount of \$2,330,000, subject to a permitted adjustment (the “Series 2017C Permitted Adjustment,” and together with the 2017A Permitted Adjustment and 2017B Permitted Adjustment, the “Permitted Adjustments”) increasing or decreasing the principal amount of

Series 2017C Bonds awarded to the purchasers thereof by up to \$235,000, for the purpose of (i) paying the costs of currently refunding a portion of the outstanding Prior 2007 Bonds and (ii) paying the costs of issuance of the Series 2017C Bonds.

The exact principal amount of Series 2017A Bonds, Series 2017B Bonds and Series 2017C Bonds to be issued shall be established in the Certificate of Award (as hereinafter defined).

Notwithstanding anything contained in this Bond Ordinance to the contrary, (i) \$3,155,000 of Series 2017A Bonds, (ii) \$2,530,000 of Series 2017B Bonds and (iii) \$2,330,000 of Series 2017C Bonds shall be offered for sale in accordance with the provisions hereof, and the determination of the best bids for such Bonds shall be made on the basis of all bids submitted for exactly those principal amounts of Bonds; provided however, the Permitted Adjustments are reserved in the City hereunder, with such increases or decreases to be made in any principal maturity.

Section 2 -- Form of Bonds. The Series 2017A Bonds shall be issued as fully registered Bonds, shall be designated “General Obligation Bonds, Series 2017A” and shall each express upon their face the purpose for which they are issued, that they are issued under the General Obligation Act and shall be substantially in the form set forth in Annex A. The Series 2017B Bonds shall be issued as fully registered Bonds, shall be designated “General Obligation Refunding Bonds, Series 2017B” and shall each express upon their face the purpose for which they are issued, that they are issued under the General Obligation Act and shall be substantially in the form set forth in Annex B. The Series 2017C Bonds shall be issued as fully registered Bonds, shall be designated “General Obligation Refunding Bonds, Series 2017C” and shall each express upon their face the purpose for which they are issued, that they are issued under the General Obligation Act and shall be substantially in the form set forth in Annex C.

The Bonds shall be in denominations as requested by the Purchaser or Purchasers, which shall be in integral multiples of five thousand dollars (\$5,000). The Bonds shall each be dated their date of initial issuance and delivery, or such other date as is determined in a certificate of award accepting the bid of the successful bidder (the “Certificate of Award”) and awarding the Bonds to the Purchaser.

Interest on the Series 2017A Bonds shall be payable semi-annually on March 1 and September 1 of each year (a “Series 2017A Interest Payment Date”), commencing September 1, 2017 or such other initial interest payment date as shall be set forth in the Certificate of Award, at the stated interest rate or rates on the principal amount thereof, calculated on the basis of a 360 day year with 30 day months. The Series 2017A Bonds shall be serial or term Series 2017A Bonds maturing, on the basis of substantially level debt service, on March 1 of the years and in the amounts to be established in the Certificate of Award after advertised competitive sale of the Series 2017A Bonds based on the interest rates bid in the successful bid (the “Series A Bid”) and the provisions of this Section 2, provided that the final maturity date of the Series 2017A Bonds shall be no later than March 1, 2037.

Interest on the Series 2017B Bonds shall be payable each May 1 and November 1 (a “Series 2017B Interest Payment Date”), commencing May 1, 2017, or such other initial interest payment date as shall be set forth in the Certificate of Award, at the stated interest rate or rates on the principal amount thereof, calculated on the basis of a 360 day year with 30 day months. The Series 2017B Bonds shall be serial or term Bonds maturing on November 1, 2017 and each November 1 thereafter in the years and in the amounts to be established in the Certificate of Award after advertised competitive sale of the Series 2017B Bonds based on the interest rates set forth in the successful bid (the “Series B Bid”) and the provisions of this Section 2, provided that

the final maturity date of the Series 2017B Bonds shall be as set forth in the Certificate of Award but shall be no later than November 1, 2026.

Interest on the Series 2017C Bonds shall be payable each April 1 and October 1, commencing April 1, 2017 (a "Series 2017C Interest Payment Date," and together with the Series 2017A Interest Payment Date and Series 2017B Interest Payment Date, the "Interest Payment Dates"), or such other initial interest payment date as shall be set forth in the Certificate of Award, at the stated interest rate or rates on the principal amount thereof, calculated on the basis of a 360 day year with 30 day months. The Series 2017C Bonds shall be serial or term Bonds maturing on April 1, 2017 and each April 1 thereafter in the years and in the amounts to be established in the Certificate of Award after advertised competitive sale of the Series 2017C Bonds based on the interest rates set forth in the successful bids (the "Series C Bid," and together with the Series A Bid and Series B Bid, the "Bids") and the provisions of this Section 2, provided that the final maturity date of the Series 2017C Bonds shall be as set forth in the Certificate of Award but shall be no later than April 1, 2027.

The interest rate or rates on the Bonds shall be determined in the Certificate of Award based on the Bids; provided that the aggregate net interest cost of the Series 2017A Bonds shall not exceed five percent (5.00%), the aggregate net interest cost of the Series 2017B Bonds shall not exceed five percent (5.0%), and the aggregate net interest cost of the Series 2017C Bonds shall not exceed five percent (5.0%).

The Series 2017A Bonds maturing on and after March 1, 2028 shall be subject to optional redemption prior to their maturity on any date on or after March 1, 2027 in whole or in part, in such order of maturity as shall be designated in writing by the City, and by lot within a maturity, at the election of the City upon 45 days' written notice to Old National Bank d/b/a Old National Wealth Management, Evansville, Indiana (the "Paying Agent and Registrar"), at a redemption

price equal to the par amount thereof, plus accrued interest to the date of redemption. The Series 2017B Bonds and Series 2017C Bonds shall not be subject to optional redemption prior to their stated maturities.

If the successful bidder and original purchaser of the Bonds elects, in accordance with the provisions of the applicable Official Terms and Conditions of Bond Sale (the “Official Terms and Conditions of Bond Sale”), to combine the Bonds stated to mature on the maturity dates set out in the Bid of such original purchaser to comprise a term bond (“Term Bonds”), as set out in said successful Bid, then such Term Bonds shall be subject to mandatory redemption in part, at the selection of the Paying Agent and Registrar by lot in such manner as the Paying Agent and Registrar may determine, on each applicable maturing principal date at par plus accrued interest to the redemption date, according to the mandatory sinking fund redemption schedule or schedules set out in the Bid and in principal amounts corresponding to the maturity schedule set out in the Certificate of Award.

At least thirty (30) days before the optional or mandatory sinking fund redemption date of any Bonds, the Paying Agent and Registrar shall cause a notice of such redemption either in whole or in part, signed by the Paying Agent and Registrar, to be mailed, first class, postage prepaid, to all registered owners of the Bonds to be redeemed in whole or in part at their addresses as they appear on the registration books kept by the Paying Agent and Registrar, but failure to mail any such notice shall not affect the validity of the proceedings for such redemption of Bonds for which such notice has been sent. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the Bonds being payable by their terms on a single date then outstanding shall be called for redemption, the distinctive series, number or letters, if any, of such Bonds to be redeemed.

On the date so designated for redemption, notice having been mailed in the manner under the conditions hereinabove provided and moneys for payment of the redemption price being held in the Bond Payment Funds (as hereinafter defined) by the Paying Agent and Registrar for the registered owners of the Bonds to be redeemed, the Bonds so called for redemption shall become and be due and payable at the redemption price provided for redemption of such Bonds on such date, interest on the Bonds so called for redemption shall cease to accrue, and the registered owners of such Bonds shall have no right in respect thereof except to receive payment of the redemption price thereof.

The Bonds may be issued in book-entry-only form through the services of the Depository Trust Company (“DTC”). If the City determines to issue the Bonds in book-entry-only form the Designated Officers (hereinafter defined) are authorized to execute all documents necessary to accomplish such form of issuance.

Section 3 -- Execution and Delivery. The Bonds shall be executed by the manual or facsimile signature of the Mayor and duly attested by the manual or facsimile signature of the City Clerk (which, together with any other person as may be authorized by resolution are referred to as “Designated Officers”), and shall bear the manual authenticating signature of an authorized representative of the Paying Agent and Registrar. The Designated Officers are further authorized and directed to deliver the Bonds to the Purchasers, upon the terms and conditions provided herein, in the Certificate of Award and in the Bids, receive the proceeds therefor, execute and deliver such certificates and other closing documents and take such other action as may be necessary or appropriate in order to effectuate the proper issuance, sale and delivery of the Bonds.

The City authorizes and directs the Paying Agent and Registrar to authenticate the Bonds and to deliver the Bonds to the Purchasers following execution of the Certificate of Award and payment of the respective purchase price thereof.

Section 4 -- Payment. Payment of or on account of the interest on and principal of the Bonds shall be made directly to the Paying Agent and Registrar for the account of the registered owner. Interest on the Bonds shall be payable by check, mailed to the person whose name appears on the fifteenth day of the month preceding the applicable Interest Payment Dates on the bond registration records as the registered owner, on each Interest Payment Date or by other transfer of funds acceptable to such registered owner and the Paying Agent and Registrar. Principal shall be payable in such coin or currency of the United States of America as shall be legal tender for the payment of public and private debts at the time and place of payment upon delivery of the Bonds to the Paying Agent and Registrar or by other transfer of funds acceptable to the Paying Agent and Registrar and such registered owner. All such payments shall be valid and effectual to satisfy and discharge the liability upon such Bonds to the extent of the sum or sums so paid.

Section 5 – Filing. The Designated Officers are hereby authorized to undertake and cause all filings of notices or information which may be required by law to be filed by the City, including, but not limited to, the filing with the State Local Debt Officer required by law.

Section 6 -- Bond Payment Funds; Payment of Bonds. There is hereby established with the Paying Agent and Registrar a bond payment fund in the name of the City to be known as General Obligation Bonds, Series 2017A Bond Payment Fund (the “2017A Bond Payment Fund”), into which the City covenants to deposit, and into which the Designated Officers are hereby authorized and directed to deposit from the Bond Sinking Fund (hereinafter identified), on or before the twenty-fifth day of each month which precedes a Series 2017A Interest Payment Date,

the amount required to pay principal of and interest due on the Series 2017A Bonds on such Series 2017A Interest Payment Date. The Paying Agent and Registrar shall, without further authorization from the City, withdraw from the 2017A Bond Payment Fund, on such Series 2017A Interest Payment Date, the amounts necessary to pay principal of, and interest on, the Series 2017A Bonds to the registered owner of the same.

There is hereby further established with the Paying Agent and Registrar a bond payment fund in the name of the City to be known as General Obligation Refunding Bonds, Series 2017B Bond Payment Fund (the “2017B Bond Payment Fund”), into which the City covenants to deposit, and into which the Designated Officers are hereby authorized and directed to deposit from the Bond Sinking Fund on or before the twenty-fifth day of each month which precedes a Series 2017B Interest Payment Date, the amount required to pay principal of and interest due on the Series 2017B Bonds on such Series 2017B Interest Payment Date. The Paying Agent and Registrar shall, without further authorization from the City, withdraw from the 2017B Bond Payment Fund, on such Series 2017B Interest Payment Date, the amounts necessary to pay principal of, and interest on, the Series 2017B Bonds to the registered owner of the same.

There is hereby further established with the Paying Agent and Registrar a bond payment fund in the name of the City to be known as General Obligation Refunding Bonds, Series 2017C Bond Payment Fund (the “2017C Bond Payment Fund,” and together with the 2017A Bond Payment Fund and 2017B Bond Payment Fund, the “Bond Payment Funds”), into which the City covenants to deposit, and into which the Designated Officers are hereby authorized and directed to deposit from the sinking fund on or before the twenty-fifth day of each month which precedes a Series 2017C Interest Payment Date, the amount required to pay principal of and interest due on the Series 2017C Bonds on such Series 2017C Interest Payment Date. The Paying Agent and Registrar shall, without further authorization from the City, withdraw from the 2017C Bond

Payment Fund, on such Series 2017C Interest Payment Date, the amounts necessary to pay principal of, and interest on, the Series 2017C Bonds to the registered owner of the same.

The Paying Agent and Registrar is hereby appointed depository of the Bond Payment Funds with respect to the Bonds.

If the City shall fail or refuse to make any required deposit in the Bond Payment Funds from the Bond Sinking Fund, the Paying Agent and Registrar shall (i) notify any agency of the Commonwealth of Kentucky or any political subdivision thereof which may collect and distribute taxes or revenues for the City to seek any available necessary or proper remedial action; and (ii) upon being indemnified against cost and expense, exercise any remedy provided in the Act or at law or in equity for the benefit of the owners of the Bonds or their assignees, and shall disburse all funds so collected to the owners of the Bonds as payment of the Bonds.

Section 7 -- General Obligation. The Bonds shall be full general obligations of the City and, for the payment of said Bonds and the interest thereon, the full faith, credit and revenue of the City are hereby pledged for the prompt payment thereof. During the period the Bonds are outstanding, there shall be and there hereby is levied on all the taxable property in the City, in addition to all other taxes, without limitation as to rate, a direct tax annually in an amount sufficient to pay the principal of and interest on the Bonds when and as due, it being hereby found and determined that current tax rates are within all applicable limitations. Said tax shall be and is hereby ordered computed, certified, levied and extended upon the tax duplicate and collected by the same officers in the same manner and at the same time that taxes for general purposes for each of said years are certified, extended and collected. Said tax shall be placed before and in preference to all other items and for the full amount thereof provided, however, that in each year to the extent that the other lawfully available funds of the City are available for the payment of the Bonds and are appropriated for such purpose, the amount of such direct tax

upon all of the taxable property in the City shall be reduced by the amount of such other funds so available and appropriated.

Section 8 -- Maintenance of Bond Sinking Fund. There has previously been established a bond sinking fund with the City in accordance with the requirements of the Act (the “Bond Sinking Fund”), which is hereby ordered to be continued and maintained so long as any Bonds are outstanding. The funds derived from said tax levy hereby required or other lawfully available funds shall be placed in the Bond Sinking Fund and, together with interest collected on the same, are irrevocably pledged for the payment of the interest on and principal of all bonds issued under the Act and Tax-Supported Leases, as defined in the Act, when and as the same fall due. Amounts shall be transferred from the Bond Sinking Fund to the Bond Payment Funds at the times and in the amounts required by Section 6 hereof.

Section 9 -- Certain Utilities Revenue Transfers. The City owns and operates the System for the public benefit, welfare and convenience.

The revenues of the System currently secure several obligations of the City. The City currently has outstanding \$2,885,000 principal amount of the Prior 2006A Bonds, which were issued under authority of an Ordinance adopted on August 8, 2006 (the “Prior System Ordinance”) and, to the extent such are not refunded with the proceeds of the Series 2017B Bonds and other available funds, are obligations payable and secured by a first pledge of the revenues of the System on a parity with any future parity bonds issued under the Prior System Ordinance (collectively, “First Priority Obligations”).

It is provided in the Prior System Ordinance that the City may issue additional bonds ranking on a basis of parity and equality with the Prior 2006A Bonds for the purpose of paying the costs of extensions, additions and improvements to the System upon a showing of compliance with the parity bond coverage test set forth in the Prior System Ordinance. It is

further provided in the Prior System Ordinance that the City may incur obligations the security and source of payment of which are subordinate and subject to the priorities of the First Priority Obligations and any additional parity bonds and may apply any excess revenues of the System to the payment of subordinate obligations payable from System revenues and for any lawful purpose related solely to the System.

The City has previously ordered the transfer of excess System revenues to the City's General Fund in amounts sufficient to reimburse the General Fund for payment of semiannual debt service for the following obligations of the City:

(i) City of Henderson, Kentucky General Obligation Bonds, Series 2010B. (the "2010B Bonds"), issued pursuant to Ordinance No. 27-10 of the City (the "2010B Ordinance") and currently outstanding in principal amount of \$1,870,000; and

(ii) City of Henderson, Kentucky General Obligation Bonds, Series 2012A (the "2012A Bonds"), issued pursuant to Ordinance No. 44-11 of the City (the "2012A Ordinance") and currently outstanding in the principal amount of \$7,885,000; and

(iii) City of Henderson, Kentucky General Obligation Bonds, Series 2013A (the "2013A Bonds"), issued pursuant to Ordinance No. 09-13 of the City (the "2013A Ordinance") and currently outstanding in the principal amount of \$8,085,000; and

(iv) City of Henderson, Kentucky General Obligation Bonds, Series 2014 (the "2014 Bonds"), issued pursuant to Ordinance No. 27-14 of the City (the "2014 Ordinance") and currently outstanding in the principal amount of \$7,355,000; and

(v) City of Henderson, Kentucky General Obligation Refunding Bonds, Series 2015B (the "2015B Bonds"), issued pursuant to Ordinance No. 22-15 of the City (the "2015 Ordinance") and currently outstanding in the principal amount of \$1,555,000; and

(vi) City of Henderson, Kentucky General Obligation Refunding Bonds, Series 2015C (the “2015C Bonds”) issued pursuant to the 2015 Ordinance and currently outstanding in the principal amount of \$1,590,000; and

(vii) City of Henderson, Kentucky General Obligation Refunding Bonds, Series 2016B (the “2016B Bonds,” and together with the 2010B Bonds, 2012A Bonds, 2013A Bonds, 2014 Bonds, 2015B Bonds and 2015C Bonds, the “Prior GO Bonds”), issued pursuant to Ordinance No. 1-16 of the City (the “2016 Ordinance,” and together with the 2010B Ordinance, 2012A Ordinance, 2013A Ordinance, 2014 Ordinance and 2015 Ordinance, the “Prior GO Ordinances”), issued pursuant to the 2016 Ordinance and currently outstanding in the principal amount of \$7,515,000.

The Prior GO Bonds were issued for the benefit and purposes of the System. The Prior GO Ordinances provide that the transfer of excess System revenues previously described with respect to the Prior GO Bonds are made (a) on a basis subordinate and subject to in all respects the contractual rights and priorities existing in favor of the holders of First Priority Obligations issued under the Prior System Ordinance, and (b) for the sole benefit of the City’s General Fund and not in any respect for the benefit or security of the holders the Bonds.

Given that a portion of the Bonds are being issued for the benefit and purposes of the System, the City has elected to, and does hereby, order the transfer of excess System revenues to the City’s General Fund on a timely basis in amounts sufficient to reimburse the General Fund for payment of that portion of semiannual debt service for the Series 2017B Bonds as shall be set forth in the Certificate of Award, which order to make such transfers is and shall be (a) on a basis subordinate and subject to in all respects the contractual rights and priorities existing in favor of the holders of First Priority Obligations issued under the Prior System Ordinance, and (b) for the

sole benefit of the City's General Fund and not in any respect for the benefit or security of the holders of the Bonds.

Section 10 -- Sale of Bonds; Certificate of Award. The Designated Officers are hereby directed to sell the Bonds to the Purchasers at advertised competitive sale, the final principal amount of, the principal amortization of and the interest rate or rates on the Bonds to be established in accordance with the requirements of Sections 1 and 2 hereof and the Certificate of Award. Either the Mayor, City Manager or Finance Director is hereby authorized to execute the Certificate of Award without further action of the Board of Commissioners setting forth the terms of the Bonds and any other provisions required by and not inconsistent with this Bond Ordinance.

Section 11 -- Registered Owner; Transfer; Exchange. As long as the Bonds executed and delivered hereunder shall remain outstanding, the Paying Agent and Registrar shall maintain an office for the registration of such Bonds and shall also keep at such office books for such registration and transfers. The registered owner of the Bonds, as set forth in the registration books maintained by the Paying Agent and Registrar on the fifteenth day preceding an Interest Payment Date, or its assignees, for purposes of this Bond Ordinance, to the extent of its interest, shall be treated as the owner of the Bonds and shall be entitled to all rights and security of the owner of the Bonds hereunder.

Upon surrender for registration of transfer of the Bonds at the office of the Paying Agent and Registrar with a written instrument of transfer satisfactory to the Paying Agent and Registrar, duly executed by the registered owner or the registered owner's duly authorized attorney, the Paying Agent and Registrar shall execute and deliver, in the name of the designated transferee or transferees, one or more Bonds of the same series of any authorized denomination and of a like tenor and effect.

All Bonds, upon surrender thereof at the office of the Paying Agent and Registrar, may, at the option of the registered owner thereof be exchanged for an equal aggregate principal amount of Bonds of the same series of any authorized denomination.

In all cases in which the privilege of exchanging or transferring Bonds is exercised, the Paying Agent and Registrar shall execute and deliver Bonds in accordance with the provisions of this Section. Every such exchange or transfer of Bonds, whether temporary or definitive, shall be without charge; provided that the Paying Agent and Registrar may impose a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer, which sum or sums shall be paid by the person requesting such exchange or transfer as a condition precedent to the exercise of the privilege of making such exchange or transfer.

Section 12 -- Disposition of Proceeds. The proceeds of the sale of the Series 2017A Bonds shall be deposited, together with other available funds of the City, as follows: (a) an amount sufficient to pay the costs of issuing the Series 2017A Bonds shall be deposited to a special cost of issuance fund hereby directed to be established and designated as the “City of Henderson, Kentucky General Obligation Bonds, Series 2017A Cost of Issuance Fund” (the “Series A Cost of Issuance Fund”) and disbursed in accordance with written instructions of the Mayor or Finance Director of the City to pay the costs of issuance of the Series 2017A Bonds; and (b) the remainder of the proceeds shall be deposited to a special construction fund hereby directed to be established and designated as the “City of Henderson, Kentucky General Obligation Bonds, Series 2017A Construction Fund” (the “Construction Fund”) to be held by the construction fund depository designated in the Certificate of Award and used for the acquisition, construction, installation and equipping of the New Project.

Payments from the Construction Fund for costs of acquisition, construction, improvement, installation and equipping of the New Project shall be made only through vouchers signed by the Mayor or Finance Director certifying in each instance that the voucher represents a sum actually earned by and due to the proposed payee under a contract with the City for work performed or property, equipment or materials furnished in connection with the New Project, or represents a sum necessary to be expended for land or rights-of-way necessary to be acquired by the City in connection with the New Project, and all checks drawn against the Construction Fund shall be signed by the Mayor, Finance Director or other City official duly authorized by the Board of Commissioners. No expenditure shall be made from the Construction Fund for costs of the New Project except for proper and authorized expenses relating to the acquisition, construction, improvement and installation of the New Project in accordance with the plans and specifications for the New Project, for which contracts have been awarded or work has been authorized, including without limitation architectural, engineering, construction management, title, appraisal, legal, accounting and other professional and related services and interest costs during construction, or to pay any costs of issuance of the Series 2017A Bonds. Pending disbursement for the authorized purposes, the Construction Funds shall be subject to a first and paramount lien, change and security interest in favor of the holders of the Series 2017A Bonds.

Pending disbursement, all amounts held in the Construction Fund shall be invested solely in cash or obligations authorized pursuant to Section 66.480 of the Kentucky Revised Statutes, as amended from time to time. Upon completion of the New Project, as certified by the Finance Director, any balance then remaining on deposit in the Construction Fund shall, subject to any and all applicable legal requirements and compliance with applicable federal statutes and regulations necessary to assure the exclusion of interest on the Series 2017A Bonds from gross income for federal income tax purposes, upon order of the Finance Director be expended to pay

costs of such additional municipal facilities as the City's Board of Commissioners may determine.

The proceeds of the sale of the Series 2017B Bonds shall be deposited, together with other available funds of the City, as follows: (a) an amount sufficient to refund and retire the Prior 2006A Bonds within ninety days of the date of issuance and delivery of the Series 2017B Bonds shall be deposited in the bond payment fund established for the 2006A Prior Bonds (the "2006A Prior Bonds Bond Payment Fund"), and (b) the amount necessary to pay the costs of issuing the Series 2017B Bonds shall be deposited to a special cost of issuance fund hereby directed to be established and designated as the "City of Henderson, Kentucky General Obligation Refunding Bonds, Series 2017B Cost of Issuance Fund" (the "Series B Cost of Issuance Fund") and disbursed in accordance with written instructions of the Mayor or Finance Director of the City to pay the costs of issuance of the Series 2017B Bonds.

The proceeds of the sale of the Series 2017C Bonds shall be deposited, together with other available funds of the City, as follows: (a) an amount sufficient to refund and retire the Prior 2007 Bonds within ninety days of the date of issuance and delivery of the Series 2017C Bonds shall be deposited in the bond payment fund established for the 2007 Prior Bonds (the "2007 Prior Bonds Bond Payment Fund"); and (b) an amount sufficient to pay the costs of issuing the Series 2017C Bonds shall be deposited to a special cost of issuance fund hereby directed to be established and designated as the "City of Henderson, Kentucky General Obligation Bonds, Series 2017C Cost of Issuance Fund" (the "Series C Cost of Issuance Fund") and disbursed in accordance with written instructions of the Mayor or Finance Director of the City to pay the costs of issuance of the Series 2017C Bonds.

Section 13 – Disclosure Undertaking Procedures. In order to ensure compliance with certain continuing disclosure undertakings (the "Disclosure Undertakings") to be undertaken by

the City in connection with the issuance of the Bonds and submission of certain financial and operating data under Rule 15c2-12, as amended, of the Securities and Exchange Commission, the City hereby affirms that the procedures heretofore adopted by Ordinance No. 27-2014 with respect to its Disclosure Undertakings shall apply to the Bonds.

Section 14 -- Tax Covenants; Certifications and Designations. The City shall at all times do and perform all acts and things permitted by law and necessary or desirable in order to assure that interest paid by the City on the Bonds shall, for the purposes of Federal income taxation, be exempt from income taxation under any valid provision of the Internal Revenue Code of 1986, as amended and the Regulations promulgated thereunder (the "Code").

The City covenants that it shall not permit at any time or times any of the proceeds of the Bonds to be used directly or indirectly to acquire any securities or obligations the acquisition of which would cause any such Bonds to be "arbitrage bonds" as defined in Sections 103(b)(2) and 148 of the Code, as then in effect.

In order to assure compliance with this Section, thereby better securing and protecting the holders of the Bonds, the City covenants that it will not purchase any obligation or invest the proceeds of the Bonds in any obligations that produce a yield in excess of the applicable maximum yield as may be permitted by the Code.

The City further covenants that prior to the issuance of the Bonds, and as a condition precedent to such issuance, the City shall certify by issuance of a certificate of the Mayor or Finance Director of the City that on the basis of the facts, estimates and circumstances in existence on the date of issue of the Bonds, it is not expected that the proceeds of the Bonds will be used in a manner which would cause such obligations to be "arbitrage bonds" under the Code.

The City hereby certifies that it does not reasonably anticipate that less than 95% of the proceeds of the Bonds will be used for "local government activities" of the City.

The City designates the Bonds as “qualified tax-exempt obligations” for the purposes set forth in Section 265(b)(3) of the Code. The City does not anticipate issuing more than \$10,000,000 of “qualified tax-exempt obligations” during calendar year 2017.

The City further covenants that it will cause to be filed with the Internal Revenue Service the reporting statements required by the Code.

Section 15 -- Further Actions. In connection with the undertaking and implementation by the City of the plan of financing and refunding herein described, which is hereby expressly directed, the Designated Officers are hereby authorized and directed to take and carry out such further necessary, desirable or appropriate actions to effect such plan of financing and refunding.

Section 16 -- Discharge of Bond Ordinance. If the City shall pay or cause to be paid, or there shall otherwise be paid, to the owners of the Bonds the total principal and interest due or to become due thereon through maturity, in the manner stipulated therein and in this Bond Ordinance, then the pledges made under this Bond Ordinance, and all covenants, agreements and other obligations of the City hereunder, shall thereupon cease, terminate and become void and be discharged and satisfied.

Section 17 -- Further Actions. In connection with the undertaking and implementation by the City of the plan of financing herein described, which is hereby expressly directed, the Designated Officers are hereby authorized and directed to take and carry out such further necessary, desirable or appropriate actions to effect such plan of financing.

Section 18 -- Incorporation of Preambles. The preambles of this Ordinance are hereby incorporated as an integral part of this Ordinance, to the same extent as if repeated herein verbatim, it being declared that the statements of fact set forth in such preambles are true and accurate in all respects.

Section 19 -- Severability. If any one or more of the provisions of this Bond Ordinance should be determined by a court of competent jurisdiction to be contrary to law, then such provisions shall be deemed to be severable from all remaining provisions and shall not affect the validity of such other provisions.

Section 20 -- Inconsistent Actions. All prior ordinances, resolutions, orders or parts thereof inconsistent herewith are hereby repealed.

Section 21 -- Open Meetings Compliance. All meetings of the Board of Commissioners and of its committees and any other public bodies, at which the formal actions in connection with the issuance of the Bonds were taken, or at which deliberations that resulted in such formal actions were held, were open meetings, and such formal actions were taken and any such deliberations took place while such meetings, after proper notice, were open to the public, in compliance with all legal requirements including KRS Sections 61.810, 61.815, 61.820 and 61.823.

Section 22 -- Effective Date. This Ordinance shall become effective immediately upon adoption and publication of a summary thereof, as provided by law.

All ordinances or parts of ordinances in conflict herewith are hereby repealed and superseded to the extent of such conflict.

This ordinance shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner X R. Royster, seconded by Commissioner Jan Hite, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston:	<u>AYE</u>	Commissioner Mills:	<u>AYE</u>
Commissioner Hite:	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Royster:	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

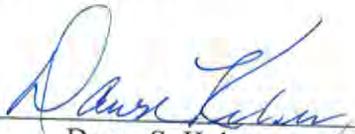
WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

Steve Austin, Mayor
Date: _____

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 2ND DAY OF
DECEMBER, 2016.**

By: 
Dawn S. Kelsey
City Attorney

CERTIFICATION

I, the undersigned, do hereby certify that I am the duly qualified and acting City Clerk of the City of Henderson, Kentucky, and as such City Clerk, I further certify that the foregoing is a true, correct and complete copy of an Ordinance duly enacted by the Board of Commissioners of the City at a duly convened meeting held on the 12th day of December, 2016, on the same occasion signed by the Mayor as evidence of his approval, and now in full force and effect, all as appears from the official records of the City in my possession and under my control.

Witness my hand as City Clerk of said City as of the ____ day of _____, 2017.

City Clerk

ANNEX A

CITY OF HENDERSON, KENTUCKY
 GENERAL OBLIGATION BOND, SERIES 2017A

RA-____ \$ _____

	DATE OF		
<u>INTEREST RATE</u>	<u>ORIGINAL ISSUE</u>	<u>MATURITY DATE</u>	<u>CUSIP</u>

REGISTERED HOLDER:

PRINCIPAL AMOUNT:

KNOW ALL PERSONS BY THESE PRESENTS: That the City of Henderson, Kentucky (the "City"), for value received, hereby acknowledges itself obligated to, and promises to pay to the registered holder identified above, or registered assigns, the principal sum identified above (or, if any part thereof has been paid, the balance thereof remaining unpaid), on the maturity date specified above, and to pay interest on said principal sum (or, if any part thereof has been paid, the balance thereof remaining unpaid) from the date hereof, payable each March 1 and September 1, commencing September 1, 2017, at the Interest Rate per annum identified above, calculated on the basis of a 360 day year with 30 day months, except as the provisions hereinafter set forth with respect to prior redemption may be and become applicable hereto. The principal and interest of this bond are payable, without deduction for exchange, collection, or service charges, in lawful money of the United States of America. Principal is payable at the designated office of Old National Bank, Evansville, Indiana, or any successor (the "Paying Agent and Registrar") or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. All interest on this bond and principal payable prior to the final maturity date shall be payable by check or draft mailed to the record date registered owner hereof at the address shown on the registration records kept by the Paying Agent and Registrar or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. The record date shall be the fifteenth day of the month preceding each interest payment date.

This Bond is one of an issue of Bonds of like tenor and effect, except as to denomination and maturity, numbered from RA-1 upward, inclusive, of the denomination of \$5,000 or any integral multiple thereof originally aggregating _____ dollars (\$_____) in principal amount, issued for the purpose of: paying the costs of (i) certain public improvements (collectively, the "Project"), and (ii) issuance of the Bonds, all pursuant to and in full compliance with the general laws of the Commonwealth of Kentucky and particularly Chapter 66 of the Kentucky Revised Statutes, and pursuant to an ordinance duly adopted by the Board of Commissioners of the City on the 12th day of December, 2016 (the "Bond Ordinance") upon the affirmative vote of at least a majority of the members of its Board of Commissioners at a public meeting duly and regularly held, and after filing of notice of the issuance of the Bonds with the State Local Debt Officer of the Commonwealth of Kentucky required under Section 66.310 of the Kentucky Revised Statutes.

This Bond and the issue of which it forms a part is a general obligation of the City and the full faith, credit and revenue of the City are pledged to the payments due hereunder. THIS

BOND IS CONTINUALLY SECURED BY THE FAITH, CREDIT AND REVENUE OF THE CITY.

The Bonds mature on March 1 of the following years, in the respective principal amounts and bear per annum interest at the following rates:

<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>
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The Bonds maturing on and after March 1, 2028 shall be subject to optional redemption prior to their maturity on any date on or after March 1, 2027, in whole or in part, in such order of maturity as the City may determine, and by lot within a maturity, at the election of the City upon 45 days' written notice to the Paying Agent and Registrar (hereinafter defined) at a redemption price equal to the principal amount to be redeemed, plus accrued interest to the date of redemption.

[Mandatory Sinking Fund provisions, if any, inserted here]

At least thirty (30) days before the redemption date of any Bonds the Paying Agent and Registrar shall cause a notice of such redemption either in whole or in part signed by the Paying Agent and Registrar, to be mailed, first class, postage prepaid, to all registered owners of the Bonds to be redeemed in whole or in part at their addresses as they appear on the registration books kept by the Paying Agent and Registrar, but failure to mail any such notice shall not affect the validity of the proceedings for such redemption of Bonds for which such notice has been sent. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the Bonds being payable by their terms on a single date then outstanding shall be called for redemption, the distinctive number or letters, if any, of such Bonds to be redeemed.

On the date so designated for redemption, notice having been published in the manner under the conditions hereinabove provided and moneys for payment of the redemption price being held in the Bond Payment Fund by the Paying Agent and Registrar for the registered owners of the Bonds to be redeemed, the Bonds so called for redemption shall become and be due and payable at the redemption price provided for redemption of such Bonds on such date, interest on the Bonds so called for redemption shall cease to accrue, and the registered owners of such Bonds shall have no right in respect thereof except to receive payment of the redemption price thereof.

No recourse shall be had for the payment of the principal of or the interest on this Bond, or for any claim based hereon, against any officer, agent or employee, past, present or future, of the City, as such, either directly or through the City, whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty, or otherwise; all such liability of such officers, agents or employees is hereby renounced, waived and released as a condition of and as consideration for the issuance, execution and acceptance of this Bond.

It is hereby certified that all acts, conditions and things required to be done, to occur or be performed precedent to and in the issuance of this Bond, or in the creation of the obligations of which this Bond is evidence, have been done, have occurred and have been performed in regular and due form and manner as required by law; that the faith, credit and revenue of the City are hereby irrevocably pledged for the prompt payment of the principal hereof and interest hereon; that the repayment obligation represented by this Bond is not in excess of any constitutional or statutory limitation; and that due provision has been made for the levy and collection of a tax sufficient in amount to pay the interest on this Bond as it falls due and to provide for the redemption of this Bond at maturity or upon earlier redemption.

IN WITNESS WHEREOF, the City has caused this Bond to be signed either manually or by facsimile in its name by its Mayor and duly attested either manually or by facsimile by its City Clerk, as of the date set forth above.

CITY OF HENDERSON, KENTUCKY

Mayor

Attest:

City Clerk

CERTIFICATE OF AUTHENTICATION

This is to certify that this Bond is one of the Bonds described hereinabove.

Dated: _____

Old National Bank, Evansville, Indiana,
Paying Agent and Registrar

By: _____
Authorized Signer

CERTIFICATE

It is hereby certified that the following is a correct and complete copy of the text of the legal opinion of Dinsmore & Shohl LLP, Attorneys, Covington, Kentucky, regarding the issue of which the within bond is one, the original of which opinion was manually executed, dated and issued as of the date of delivery of and payment for said issue and a copy of which is on file with the undersigned.

City Clerk

[FORM OF APPROVING OPINION]

ASSIGNMENT

The following abbreviations, when used in the inscription on the face of this Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common UNIF GIFT MIN ACT _____ Custodian _____
TEN ENT - as tenants by the entireties (Cust) (Minor)

under Uniform Gift to Minors

JT TEN - as joint tenants with right
of survivorship and not as _____
tenants Act in common (State)

Additional Abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED the undersigned hereby sells, assigns and transfers unto:

(Please print or typewrite name and address of transferee)

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints:
_____ attorney to transfer the within Bond on the
books kept for registration thereof, with full power of substitution in the premises.

Dated: _____

Signature

In the presence of:

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

ANNEX B

CITY OF HENDERSON, KENTUCKY
 GENERAL OBLIGATION REFUNDING BOND, SERIES 2017B

RB-_____ \$ _____

	DATE OF		
<u>INTEREST RATE</u>	<u>ORIGINAL ISSUE</u>	<u>MATURITY DATE</u>	<u>CUSIP</u>

REGISTERED HOLDER:

PRINCIPAL AMOUNT:

KNOW ALL PERSONS BY THESE PRESENTS: That the City of Henderson, Kentucky (the "City"), for value received, hereby acknowledges itself obligated to, and promises to pay to the registered holder identified above, or registered assigns, the principal sum identified above (or, if any part thereof has been paid, the balance thereof remaining unpaid), on the maturity date specified above, and to pay interest on said principal sum (or, if any part thereof has been paid, the balance thereof remaining unpaid) from the date hereof, payable each May 1 and November 1, commencing May 1, 2017, at the Interest Rate per annum identified above, calculated on the basis of a 360 day year with 30 day months, except as the provisions hereinafter set forth with respect to prior redemption may be and become applicable hereto. The principal and interest of this bond are payable, without deduction for exchange, collection, or service charges, in lawful money of the United States of America. Principal is payable at the designated office of Old National Bank, Evansville, Indiana, or any successor (the "Paying Agent and Registrar") or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. All interest on this bond and principal payable prior to the final maturity date shall be payable by check or draft mailed to the record date registered owner hereof at the address shown on the registration records kept by the Paying Agent and Registrar or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. The record date shall be the fifteenth day of the month preceding each interest payment date.

This Bond is one of an issue of Bonds of like tenor and effect, except as to denomination and maturity, numbered from RB-1 upward, inclusive, of the denomination of \$5,000 or any integral multiple thereof originally aggregating _____ dollars (\$ _____) in principal amount, issued for the purpose of: paying the costs of (i) currently refunding the City's outstanding Water and Sewer Revenue Bonds, Series 2006A, the proceeds of which financed certain improvements to the City's combined and consolidated water and sewer system, and (ii) issuance of the Bonds, all pursuant to and in full compliance with the general laws of the Commonwealth of Kentucky and particularly Chapter 66 of the Kentucky Revised Statutes, and pursuant to an ordinance duly adopted by the Board of Commissioners of the City on the 12th day of December, 2016 (the "Bond Ordinance") upon the affirmative vote of at least a majority of the members of its Board of Commissioners at a public meeting duly and regularly held, and after filing of notice of the issuance of the Bonds with the State Local Debt Officer of the Commonwealth of Kentucky required under Section 66.310 of the Kentucky Revised Statutes.

This Bond and the issue of which it forms a part is a general obligation of the City and the full faith, credit and revenue of the City are pledged to the payments due hereunder. THIS BOND IS CONTINUALLY SECURED BY THE FAITH, CREDIT AND REVENUE OF THE CITY.

The Bonds mature on November 1 of the following years, in the respective principal amounts and bear per annum interest at the following rates:

<u>Date</u>	<u>Amount</u>	<u>Interest Rate</u>
-------------	---------------	----------------------

The Bonds are not subject to optional redemption prior to their stated maturities.

[Mandatory Sinking Fund provisions, if any, inserted here]

[IF APPLICABLE] At least thirty (30) days before the mandatory sinking fund redemption date of any Bonds the Paying Agent and Registrar shall cause a notice of such redemption either in whole or in part signed by the Paying Agent and Registrar, to be mailed, first class, postage prepaid, to all registered owners of the Bonds to be redeemed in whole or in part at their addresses as they appear on the registration books kept by the Paying Agent and Registrar, but failure to mail any such notice shall not affect the validity of the proceedings for such redemption of Bonds for which such notice has been sent. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the Bonds being payable by their terms on a single date then outstanding shall be called for redemption, the distinctive number or letters, if any, of such Bonds to be redeemed.

On the date so designated for redemption, notice having been published in the manner under the conditions hereinabove provided and moneys for payment of the redemption price being held in the Bond Payment Fund by the Paying Agent and Registrar for the registered owners of the Bonds to be redeemed, the Bonds so called for redemption shall become and be due and payable at the redemption price provided for redemption of such Bonds on such date, interest on the Bonds so called for redemption shall cease to accrue, and the registered owners of such Bonds shall have no right in respect thereof except to receive payment of the redemption price thereof.

No recourse shall be had for the payment of the principal of or the interest on this Bond, or for any claim based hereon, against any officer, agent or employee, past, present or future, of the City, as such, either directly or through the City, whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty, or otherwise; all such liability of such officers, agents or employees is hereby renounced, waived and released as a condition of and as consideration for the issuance, execution and acceptance of this Bond.

It is hereby certified that all acts, conditions and things required to be done, to occur or be performed precedent to and in the issuance of this Bond, or in the creation of the obligations of which this Bond is evidence, have been done, have occurred and have been performed in regular

and due form and manner as required by law; that the faith, credit and revenue of the City are hereby irrevocably pledged for the prompt payment of the principal hereof and interest hereon; that the repayment obligation represented by this Bond is not in excess of any constitutional or statutory limitation; and that due provision has been made for the levy and collection of a tax sufficient in amount to pay the interest on this Bond as it falls due and to provide for the redemption of this Bond at maturity or upon earlier redemption.

IN WITNESS WHEREOF, the City has caused this Bond to be signed either manually or by facsimile in its name by its Mayor and duly attested either manually or by facsimile by its City Clerk, as of the date set forth above.

CITY OF HENDERSON, KENTUCKY

Mayor

Attest:

City Clerk

CERTIFICATE OF AUTHENTICATION

This is to certify that this Bond is one of the Bonds described hereinabove.

Dated: _____

Old National Bank, Evansville, Indiana,
Paying Agent and Registrar

By: _____
Authorized Signer

CERTIFICATE

It is hereby certified that the following is a correct and complete copy of the text of the legal opinion of Dinsmore & Shohl LLP, Attorneys, Covington, Kentucky, regarding the issue of which the within bond is one, the original of which opinion was manually executed, dated and issued as of the date of delivery of and payment for said issue and a copy of which is on file with the undersigned.

City Clerk

[FORM OF APPROVING OPINION]

ASSIGNMENT

The following abbreviations, when used in the inscription on the face of this Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common UNIF GIFT MIN ACT _____ Custodian _____
TEN ENT - as tenants by the entireties (Cust) (Minor)

under Uniform Gift to Minors

JT TEN - as joint tenants with right
of survivorship and not as _____
tenants Act in common (State)

Additional Abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED the undersigned hereby sells, assigns and transfers unto:

(Please print or typewrite name and address of transferee)

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints:
_____ attorney to transfer the within Bond on the
books kept for registration thereof, with full power of substitution in the premises.

Dated: _____

Signature

In the presence of:

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

ANNEX C

CITY OF HENDERSON, KENTUCKY
 GENERAL OBLIGATION REFUNDING BOND, SERIES 2017C

RC-_____ \$ _____

	DATE OF		
<u>INTEREST RATE</u>	<u>ORIGINAL ISSUE</u>	<u>MATURITY DATE</u>	<u>CUSIP</u>

REGISTERED HOLDER:

PRINCIPAL AMOUNT:

KNOW ALL PERSONS BY THESE PRESENTS: That the City of Henderson, Kentucky (the "City"), for value received, hereby acknowledges itself obligated to, and promises to pay to the registered holder identified above, or registered assigns, the principal sum identified above (or, if any part thereof has been paid, the balance thereof remaining unpaid), on the maturity date specified above, and to pay interest on said principal sum (or, if any part thereof has been paid, the balance thereof remaining unpaid) from the date hereof, payable each April 1 and October 1, commencing April 1, 2017, at the Interest Rate per annum identified above, calculated on the basis of a 360 day year with 30 day months, except as the provisions hereinafter set forth with respect to prior redemption may be and become applicable hereto. The principal and interest of this bond are payable, without deduction for exchange, collection, or service charges, in lawful money of the United States of America. Principal is payable at the designated office of Old National Bank, Evansville, Indiana, or any successor (the "Paying Agent and Registrar") or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. All interest on this bond and principal payable prior to the final maturity date shall be payable by check or draft mailed to the record date registered owner hereof at the address shown on the registration records kept by the Paying Agent and Registrar or by other transfer of funds acceptable to the Paying Agent and Registrar and such owner. The record date shall be the fifteenth day of the month preceding each interest payment date.

This Bond is one of an issue of Bonds of like tenor and effect, except as to denomination and maturity, numbered from RC-1 upward, inclusive, of the denomination of \$5,000 or any integral multiple thereof originally aggregating _____ dollars (\$ _____) in principal amount, issued for the purpose of: paying the costs of (i) currently refunding the City's outstanding General Obligation Bonds, Series 2007 maturing on or after April 1, 2019, the proceeds of which financed various public improvements in the City, and (ii) issuance of the Bonds, all pursuant to and in full compliance with the general laws of the Commonwealth of Kentucky and particularly Chapter 66 of the Kentucky Revised Statutes, and pursuant to an ordinance duly adopted by the Board of Commissioners of the City on the 12th day of December, 2016 (the "Bond Ordinance") upon the affirmative vote of at least a majority of the members of its Board of Commissioners at a public meeting duly and regularly held, and after filing of notice of the issuance of the Bonds with the State Local Debt Officer of the Commonwealth of Kentucky required under Section 66.310 of the Kentucky Revised Statutes.

This Bond and the issue of which it forms a part is a general obligation of the City and the full faith, credit and revenue of the City are pledged to the payments due hereunder. THIS BOND IS CONTINUALLY SECURED BY THE FAITH, CREDIT AND REVENUE OF THE CITY.

The Bonds mature on April 1 of the following years, in the respective principal amounts and bear per annum interest at the following rates:

<u>Date</u>	<u>Amount</u>	<u>Interest Rate</u>
-------------	---------------	----------------------

The Bonds are not subject to optional redemption prior to their stated maturities.

[Mandatory Sinking Fund provisions, if any, inserted here]

[IF APPLICABLE] At least thirty (30) days before the mandatory sinking fund redemption date of any Bonds the Paying Agent and Registrar shall cause a notice of such redemption either in whole or in part signed by the Paying Agent and Registrar, to be mailed, first class, postage prepaid, to all registered owners of the Bonds to be redeemed in whole or in part at their addresses as they appear on the registration books kept by the Paying Agent and Registrar, but failure to mail any such notice shall not affect the validity of the proceedings for such redemption of Bonds for which such notice has been sent. Each such notice shall set forth the date fixed for redemption, the redemption price to be paid and, if less than all of the Bonds being payable by their terms on a single date then outstanding shall be called for redemption, the distinctive number or letters, if any, of such Bonds to be redeemed.

On the date so designated for redemption, notice having been published in the manner under the conditions hereinabove provided and moneys for payment of the redemption price being held in the Bond Payment Fund by the Paying Agent and Registrar for the registered owners of the Bonds to be redeemed, the Bonds so called for redemption shall become and be due and payable at the redemption price provided for redemption of such Bonds on such date, interest on the Bonds so called for redemption shall cease to accrue, and the registered owners of such Bonds shall have no right in respect thereof except to receive payment of the redemption price thereof.

No recourse shall be had for the payment of the principal of or the interest on this Bond, or for any claim based hereon, against any officer, agent or employee, past, present or future, of the City, as such, either directly or through the City, whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty, or otherwise; all such liability of such officers, agents or employees is hereby renounced, waived and released as a condition of and as consideration for the issuance, execution and acceptance of this Bond.

It is hereby certified that all acts, conditions and things required to be done, to occur or be performed precedent to and in the issuance of this Bond, or in the creation of the obligations of which this Bond is evidence, have been done, have occurred and have been performed in regular

and due form and manner as required by law; that the faith, credit and revenue of the City are hereby irrevocably pledged for the prompt payment of the principal hereof and interest hereon; that the repayment obligation represented by this Bond is not in excess of any constitutional or statutory limitation; and that due provision has been made for the levy and collection of a tax sufficient in amount to pay the interest on this Bond as it falls due and to provide for the redemption of this Bond at maturity or upon earlier redemption.

IN WITNESS WHEREOF, the City has caused this Bond to be signed either manually or by facsimile in its name by its Mayor and duly attested either manually or by facsimile by its City Clerk, as of the date set forth above.

CITY OF HENDERSON, KENTUCKY

Mayor

Attest:

City Clerk

CERTIFICATE OF AUTHENTICATION

This is to certify that this Bond is one of the Bonds described hereinabove.

Dated: _____

Old National Bank, Evansville, Indiana,
Paying Agent and Registrar

By: _____
Authorized Signer

CERTIFICATE

It is hereby certified that the following is a correct and complete copy of the text of the legal opinion of Dinsmore & Shohl LLP, Attorneys, Covington, Kentucky, regarding the issue of which the within bond is one, the original of which opinion was manually executed, dated and issued as of the date of delivery of and payment for said issue and a copy of which is on file with the undersigned.

City Clerk

[FORM OF APPROVING OPINION]

ASSIGNMENT

The following abbreviations, when used in the inscription on the face of this Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common UNIF GIFT MIN ACT _____ Custodian _____
TEN ENT - as tenants by the entireties (Cust) (Minor)

under Uniform Gift to Minors

JT TEN - as joint tenants with right
of survivorship and not as _____
tenants Act in common (State)

Additional Abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED the undersigned hereby sells, assigns and transfers unto:

(Please print or typewrite name and address of transferee)

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints:
_____ attorney to transfer the within Bond on the
books kept for registration thereof, with full power of substitution in the premises.

Dated: _____

Signature

In the presence of:

NOTICE: The signature to this assignment must correspond with the name as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

City Commission Memorandum
16-267

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Establishing Article IV, *Mobile Food Units*, Sections 17-63 Through 17-71, of Chapter 17, *Parks and Recreation*, of the Code of Ordinances of the City of Henderson

An item for the agenda of Monday, December 12, 2016, is final reading of an ordinance regulating food trucks.

The proposed food truck ordinance is being presented to you based upon direction from the Board of Commissioners at the November 15, 2016 work session. The attached Legal Department Memorandum details the locations and times that Licensed Food Truck Vendors may operate on City properties.

Your approval of the attached ordinance is requested.

c: Dawn Kelsey

LEGAL DEPARTMENT

MEMORANDUM 16-09

To: Russell Sights, City Manager
Buzzy Newman, Asst. City Manager
Trace Stevens, Parks Director
John Stroud, Acting Codes Administrator
Brian Williams, Public Works Director

From: Dawn S. Kelsey, City Attorney 

Dated: November 30, 2016

Subject: Mobile Food Truck Ordinance

Pursuant to direction from the Board of Commissioners at the November 15th Work Session, the changes in the times for the Food Truck Vendors and the 2 additional locations for operation for the Food Truck Vendors have been inserted into the proposed Ordinance. The locations and times that Licensed Food Truck Vendors may operate on City property are stated below:

- 1) Henderson Depot Welcome Center (located adjacent to Water Street): Mobile Food Units may use the designated mobile food unit parking spots in the Henderson County Depot on Monday, Wednesday, Thursday, Fridays, Saturday and Sunday from 6:30 a.m. to 7:00 p.m. from the day after Labor Day through the Thursday before Memorial Day weekend and from 6:30 a.m. to 11:00 p.m. between Friday of Memorial Day weekend through Labor Day.
- 2) East End Park – Helm Street in the designated mobile food unit parking spots with the Food Truck conducting business towards the East End Park and not toward the street any day of the week during the hours of 11:00 a.m. to dusk.
- 3) Atkinson Park in the gravel parking loop next to the sand volleyball courts on any day of the week from 11:00 a.m. to dusk.
- 4) John F. Kennedy Community Center: Mobile Food Units may use the lower parking lot off of Alves Street any day of the week during the hours of 11:00 a.m. to 11:00 p.m.
- 5) North side of Third between Water Street and North Main Street in the designated mobile food unit parking spots any day of the week from 6:30 a.m. to 7:00 p.m. from the day after Labor Day through

Thursday before Memorial Day weekend and from 6:30 a.m. to 11:00 p.m. between Friday of Memorial Day weekend through Labor Day.

Mobile Food Unit Vendors may not park in the above referenced areas during any permitted special events in those areas unless authorized by the holder of the special event permit.

A Mobile Food Unit Vendor must have auto liability in the minimum state coverage and \$300,000 general liability insurance including products liability insurance policy from an insurance company with an A rating as the minimum amount of insurance to be carried on each licensed vehicle with the City of Henderson named as an additional insured.

Annual Permit fee is fifty dollars (\$50) and each additional unit is twenty-five dollars (\$25).

cc: Mayor Steve Austin

ORDINANCE RELATING TO MOBILE FOOD UNITS

SUMMARY: ORDINANCE ESTABLISHING ARTICLE IV, *MOBILE FOOD UNITS*, SECTIONS 17-63 THRU 17-71, OF CHAPTER 17, *PARKS AND RECREATION*, OF THE CODE OF ORDINANCES OF THE CITY OF HENDERSON

BE IT ORDAINED, by the City of Henderson that due to the popularity of the mobile food truck industry it has become necessary to establish Article IV, *Mobile Food Units*, Sections 17-63 thru 17-71, of Chapter 17, *Parks and Recreation*, of the City's Code of Ordinances as follows:

Article IV. Mobile Food Units:

17-63. Definitions.

(a) *Mobile Food Unit:* Food establishment which is on wheels, mobile and which is self propelled as a licensed vehicle including the sale of both prepared and pre-packaged foods (examples are a food truck and ice cream truck).

(b) *Mobile Food Unit Vendor:* An itinerant merchant who conducts business from a mobile food unit.

17-64. Mobile Food Vending License

A. Mobile Food Unit Vendor who operates on City of Henderson property shall be subject to the licensing and regulatory requirements under Chapter 4 of the Henderson Code of Ordinances and all other applicable ordinances, including zoning ordinances. Mobile Food Unit Vendors who do not operate on City of Henderson property, but operate as Temporary Sales under Appendix A Zoning Ordinance Section 4.33 of the City of Henderson Code of Ordinances is not required to obtain a Mobile Food Vending License, but will have to comply with the requirements with the applicable sections of the Zoning Ordinance.

B. The licensing of the vendor shall be on a per unit (food truck/vehicle) basis with each different Mobile Food Unit Vendor requiring a separate license for each Mobile Food Unit. All applications for licenses shall be accompanied with the required certificate of insurance, proof of health department approval, and required fee of fifty dollars (\$50.00). Any person operating more than one (1) mobile food unit shall pay an additional twenty-five dollars (\$25.00) fee for each additional unit. This fee will not be prorated and will be in effect for the same period of time as the license for the primary mobile food unit.

C. Mobile Food Vending License:

(1) Licenses are valid for 12 months unless otherwise invalidated, revoked or terminated prior to the end of the 12 month term. Mobile Food Unit Vendors must reapply (including payment of all applicable fees) each year.

(2) It shall be unlawful for any person to intentionally provide false information or to intentionally omit requested information on an application for any license pertaining to Mobile Food Unit Vendors.

(3) As a condition of issuance of any license, the Mobile Food Unit Vendor agrees to indemnify, hold harmless, and defend the City of Henderson and its officials, officers, employees, representatives, and agents against liability and/or loss arising from activities connected with and/or undertaken pursuant to the license. The City of Henderson shall not be liable for any business loss, property loss, or other damage that may result from use of the license, or suspension or revocation of the license, or the discontinuance of the practice of permitting such activity, and no such vendor shall maintain any claim or action against the City of Henderson and/or its officials, officers, employees, or agents on account of any suspension or revocation or discontinuance.

(4) Any license issued to a Mobile Food Unit Vendor shall be valid for the time period specified thereon. Re-application shall be required upon expiration of said license if the person wishes to continue such activity.

(5) Every Mobile Food Unit Vendor to whom a license is issued shall, at all times while engaged in that business, have the applicable license in his or her possession, prominently displayed for public viewing, and shall produce the same at the request of any City of Henderson official or at the request of any individual to whom the vendor is exhibiting his or her food or attempting to sell same.

(6) Each Mobile Food Unit Vendor must obtain all necessary licenses and permissions and comply with all requirements imposed by the health department and/or other regulatory agencies.

D. Nothing contained in this section shall relieve a Mobile Food Unit Vendor from obtaining its applicable merchant license(s) and any other permits required by state agencies or the local health department.

17-65. Permitted Area and Times

A. Properly Licensed Mobile Food Units may park on the following City property areas during the designated times:

- 1) Henderson Depot Welcome Center (located adjacent to Water Street): Mobile Food Units may use the designated mobile food unit parking spots in the Henderson County Depot on Monday, Wednesday, Thursday, Fridays, Saturday and Sunday from 6:30 a.m. to 7:00 p.m. from the day after Labor Day through the Thursday before Memorial Day weekend and from 6:30 a.m. to 11:00 p.m. between Friday of Memorial Day weekend through Labor Day.

- 2) East End Park – Helm Street in the designated mobile food unit parking spots with the Food Truck conducting business towards the East End Park and not toward the street any day of the week during the hours of 11:00 a.m. to dusk.
- 3) Atkinson Park in the gravel parking loop next to the sand volleyball courts on any day of the week from 11:00 a.m. to dusk.
- 4) John F. Kennedy Community Center: Mobile Food Units may use the lower parking lot off of Alves Street any day of the week during the hours of 11:00 a.m. to 11:00 p.m.
- 5) North side of Third between Water Street and North Main Street in the designated mobile food unit parking spots any day of the week from 6:30 a.m. to 7:00 p.m. from the day after Labor Day through Thursday before Memorial Day weekend and from 6:30 a.m. to 11:00 p.m. between Friday of Memorial Day weekend through Labor Day

B. Mobile Food Unit Vendors may not park in the above referenced areas during any permitted special events in those areas unless authorized by the holder of the special event permit. [See Ord. 25-4(g)]

C. Mobile Food Units may also be allowed on private property in the City of Henderson if they comply with Appendix A Zoning Ordinance Section 4.33 of the City of Henderson Code of Ordinances.

17-66. Regulation of Mobile Food Unit Vendors

All Mobile Food Unit Vendors must comply with the following:

- (a) The requirements of all applicable ordinances and regulations.
- (b) Shall at all times operate in a manner that ensures the safety of patrons, pedestrians and the public.
- (c) Shall not park or operate in a manner which prohibits others from parking in otherwise available spaces or areas.
- (d) Shall obtain any necessary permits and comply with the requirements of any applicable rules and regulations of the health department.
- (e) Shall not locate or operate within fifteen (15) feet of any driveway or other main entrance to a building without the express written permission of the affected property owner or her or his authorized agent.
- (f) Shall provide, in a prominent location, trash and recycling container(s) sufficient in size to collect all waste and recyclables generated by customers and staff of the vendor. All trash and debris related to the operation shall be collected by the vendor throughout the duration of their vending and deposited in their own trash or recycling container(s) and removed from the site by the vendor. Such waste shall not be placed in public trash receptacles. The vendor shall be responsible for any litter or debris located within a ten (10) feet radius of their unit, including sidewalks in the immediate vicinity.

(g) Shall not, during any City of Henderson recognized special event, locate, operate or vend inside the event footprint without the express written permission of the event organizer.

(h) Shall only use lighting which is permanently or semi-permanently affixed to its unit and which does not cause any glare that could be considered a public hazard, nuisance or distraction to vehicular movement, neighboring business operations or residential uses. No flashing or strobe lighting shall be permitted.

(i) Shall not use any electrical outlet located within the public right-of-way or on public property, unless specifically authorized by the City of Henderson or, if required, the utility company. A vendor shall not create any tripping or other hazard related to its use of electricity.

(j) Shall not block access to or use of, any public bench or any public utility pole or set up any chairs or tables on the public right-of-way.

(k) Shall not in any manner damage public property or the public right-of-way. Examples, include, but are not necessarily limited to, using stakes, rods or any method of support that is required to be drilled, driven or otherwise fixed in asphalt pavement, curbs, sidewalks or buildings. The vendor shall be solely responsible for any such damage.

(l) Shall not locate or operate within an area closed or not accessible due to an emergency.

(m) Must comply with all state and federal sales tax.

17-67. Insurance

A Mobile Food Unit Vendor must have auto liability in the minimum state coverage and \$300,000 general liability insurance including products liability insurance policy from an insurance company with an A rating as the minimum amount of insurance to be carried on each licensed vehicle with the City of Henderson named as an additional insured.

17-68. Receipts.

A Mobile Food Unit Vendor shall, on request by the customer, render to the customer, a receipt for the amount charged, either by a mechanically printed receipt or by a specially prepared receipt on which shall be the name of the license holder of the Mobile Food Vending Unit, all charges, and the date of transaction.

17-69. Clean and Safe Conditions

(a) Every Mobile Food Unit shall ensure that the interior, including the windows, shall be maintained in a clean and safe condition, free of grease, dirt, debris, or other trash.

(b) The exterior of the vehicle shall also be maintained in a clean, undamaged condition and present a favorable appearance, including:

- (1) The body of the vehicle;
- (2) The paint;
- (3) All glass;
- (4) Hubcaps (if installed);
- (5) Head and tail lights; and
- (6) Grill and bumpers.

(c) No person shall smoke within a Mobile Food Unit.

17-70. Records; Reports

(a) Every Mobile Food Unit Vendor shall keep accurate records of receipts from operations, and other expenses, capital expenditures, and other such operating information as may be required to comply with reporting income and expenses under the applicable provisions of the City of Henderson Code of Ordinance. Every Mobile Food Unit Vendor shall maintain the records containing such information and other dates required by this chapter at a place readily accessible for examination by the City Manager or his or her designee.

(b) All accidents arising from or in connection with the operation of Mobile Food Unit Vendor which result in death or injury to any person, or in damage to any vehicle, or to any property in an amount exceeding the sum of three hundred dollars (\$300.00) shall be reported by the license holder or driver within five (5) days from the time of occurrence to the Chief of Police or his or her designee.

All ordinances or parts of ordinances in conflict herewith are hereby repealed and superseded to the extent of such conflict.

This ordinance shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner Jan Hite, seconded by Commissioner Robert M. Mills, that the ordinance be adopted on its first reading. On roll call the vote stood:

Commissioner Johnston:	<u>AYE</u>	Commissioner Mills:	<u>AYE</u>
Commissioner Hite:	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Royster:	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

Steve Austin, Mayor

ATTEST:

Date: _____

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 30 DAY OF
NOVEMBER, 2016.**

By: 
Dawn S. Kelsey
City Attorney

City Commission Memorandum
16-268

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Adoption of Consumer Price Index Rate Adjustment

An item for the agenda of Monday, December 12, 2016 is final reading of an ordinance approving and adopting schedules of electric rates and services for consumption on and after January 1, 2017. On May 12, 2015, the City Commission approved and adopted a new rate schedule that included an annual Consumer Price Index (CPI). The CPI rate set by the U.S. Department of Labor is 1.6% and the HMP&L Board approved this increase at their recent Board meeting.

Electric rates offered by HMP&L will remain one of the lowest in Kentucky while continuing to provide reliable electric service to its customers. The last electric rate increase was effective in 2015.

Mr. Gary Quick, General Manager, Henderson Municipal Power and Light further details the Consumer Price Index Rate Escalation Schedule in the attached memorandum.

Your approval of the attached ordinance is requested.

c: Gary Quick
Dawn Kelsey
Robert Gunter



MEMORANDUM

To: Russell Sights, City Manager
Henderson City Commission

From: Gary Quick, General Manager, Henderson Municipal Power & Light

Dated: November 30, 2016

Subject: Consumer Price Index Rate Escalation Schedule

On the 12th day of May, 2015, the Henderson City Commission approved and adopted a Schedule of Electric Rates and Services for the Henderson Municipal Power & Light to its customers and consumers. This Schedule of Electric Rates and Services included a consumer price escalation schedule that would adjust all rate schedules for all customer classifications and service fees, based on the percentage change of the consumer price index as established by the United States Department of Labor. This CPI adjustment was determined by comparing the percentage difference between the CPI in effect in the month of October of the previous year to the CPI in effect for the month of October in the current year. The percentage difference between these two CPI's would be the percentage price adjustment rate used by HMP&L for the upcoming calendar year.

The percentage change in the CPI calculated by the Department of Labor amounted to a 1.6% adjustment to be applied to all rate schedules and fee services for the upcoming calendar year.

KRS 96.535 provides that the rates to be charged for services for utilities shall be fixed and revised from time to time by the board appointed to operate the utility, by and with the approval of the legislative body of the city.

HMP&L is presenting to the Commission for their approval the CPI percentage rate change, in the amount of 1.6%, to be applied to all rates, schedules and service fees for the calendar year 2017.

Respectfully submitted,


Gary Quick, General Manager
Henderson Municipal Power and Light

CPI Adjustment Calculation
January 1, 2017 Rate Increase

CPI for current period	241.729
Less CPI for previous period	237.838
Equals index point change	3.891
Divided by previous period CPI	237.838
Equals index point change	0.01636
Result multiplied by 100	100
Equals percent change	1.6 %

A percentage rate change of 1.6% will be applied to all rate schedules and service fees for calendar year 2017

City of Henderson, Kentucky
Henderson Municipal Power & Light

Consumer Price Index (CPI) Escalation Schedule Schedule CPI

Applicability – For all Customer Classifications, Rate Schedules, and Service Fees including Private Rental Lighting and Public Street Lighting

- (1) This CPI Escalation Schedule will adjust all Rate Schedules for all Customer Classifications and all service fees annually on January 1, beginning January 1, 2017, based on the increase of the Consumer Price Index (CPI – U). Price adjustments will be made in accordance with the percentage changes in the US Department of Labor Consumer Price Index (CPI-U) for All Urban Consumers, All Items, US City Average.
- (2) The Index Base Period will be 1982-84 = 100.
- (3) The annual rate adjustment will be determined by comparing the percentage difference between the CPI in effect for the month of October of the previous year to the CPI in effect for the month of October of the current year. For example, on January 1, 2017, all rate schedules and service fees will be increased by the percentage difference between the CPI in effect for October 2015 compared to the CPI in affect for October 2016. The percentage difference between those two CPIs will be the percentage price adjustment rate used by HMP&L for the 2017 calendar year.
- (4) Example:

If comparing the difference between October 2013 (233.546) and October 2012 (231.317), the following calculation would be performed:

CPI for current period	233.546	(October 2013)
Less CPI for previous period	231.317	(October 2012)
Equals index point change	2.229	
Divided by previous period CPI	231.317	(October 2012)
Equals	0.0096	
Result multiplied by 100	0.0096 x 100	
Equals percent change	0.96%	

A percentage rate change of 0.96% would be applied to all rate schedules and service fees for calendar year 2014.

- (5) If any major changes or CPI revisions arise, HMP&L will adjust the rates and service fees by the most accurate CPI rate available during the reference period as specified above. Additionally, if the CPI percentage rate change decreases, the rates and service fees will be adjusted by a 0% rate change, and if the percentage rate change increases the rate adjustment percentages are not to exceed 5%.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission

Effective: For all customer billings issued on and after January 1, 2017.

Table 1. Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, by expenditure category, October 2016
 [1982-84=100, unless otherwise noted]

Expenditure category	Relative importance Sep. 2016	Unadjusted indexes			Unadjusted percent change		Seasonally adjusted percent change		
		Oct. 2015	Sep. 2016	Oct. 2016	Oct. 2015- Oct. 2016	Sep. 2016- Oct. 2016	Jul. 2016- Aug. 2016	Aug. 2016- Sep. 2016	Sep. 2016- Oct. 2016
All items.....	100.000	237.838	241.428	241.729	1.6	0.1	0.2	0.3	0.4
Food.....	13.731	249.052	247.917	248.073	-0.4	0.1	0.0	0.0	0.0
Food at home.....	7.955	243.779	238.120	238.145	-2.3	0.0	-0.2	-0.1	-0.2
Cereals and bakery products.....	1.071	275.753	272.089	272.502	-1.2	0.2	0.0	0.1	0.0
Meats, poultry, fish, and eggs.....	1.776	261.568	246.642	244.770	-6.4	-0.8	-0.4	-0.2	-0.7
Dairy and related products.....	0.813	221.874	216.693	218.183	-1.7	0.7	0.0	0.1	0.3
Fruits and vegetables.....	1.345	297.931	293.423	295.616	-0.8	0.7	0.0	-0.3	0.2
Nonalcoholic beverages and beverage materials.....	0.952	169.045	166.573	166.793	-1.3	0.1	-0.1	-0.4	-0.4
Other food at home.....	1.997	210.636	209.426	208.985	-0.8	-0.2	-0.2	0.1	-0.1
Food away from home ¹	5.777	258.363	264.102	264.459	2.4	0.1	0.2	0.2	0.1
Energy.....	7.132	194.501	195.852	194.786	0.1	-0.5	0.0	2.9	3.5
Energy commodities.....	3.395	203.338	197.603	201.412	-0.9	1.9	-0.9	5.5	6.7
Fuel oil ¹	0.092	229.191	212.019	224.453	-2.1	5.9	-2.5	2.4	5.9
Motor fuel.....	3.221	199.996	194.660	198.212	-0.9	1.8	-0.9	5.7	6.9
Gasoline (all types).....	3.173	199.077	193.817	197.357	-0.9	1.8	-0.9	5.8	7.0
Energy services ²	3.737	194.713	202.941	197.279	1.3	-2.8	0.8	0.7	0.5
Electricity ²	2.949	205.604	214.381	206.397	0.4	-3.7	0.5	0.7	0.4
Utility (piped) gas service ²	0.788	159.422	165.881	167.049	4.8	0.7	2.1	0.8	0.9
All items less food and energy.....	79.137	243.985	248.731	249.218	2.1	0.2	0.3	0.1	0.1
Commodities less food and energy commodities.....	19.353	146.504	145.562	145.701	-0.5	0.1	0.1	-0.1	0.1
Apparel.....	3.177	129.446	128.429	130.328	0.7	1.5	0.2	-0.7	0.3
New vehicles.....	3.658	146.516	146.499	146.896	0.3	0.3	0.0	-0.1	0.2
Used cars and trucks.....	2.058	145.821	142.482	139.914	-4.1	-1.8	-0.6	-0.3	-0.1
Medical care commodities.....	1.865	355.894	374.142	373.792	5.0	-0.1	1.4	0.6	0.1
Alcoholic beverages.....	0.949	240.656	242.614	243.674	1.3	0.4	0.0	0.3	0.4
Tobacco and smoking products.....	0.656	940.901	970.921	973.535	3.5	0.3	0.7	0.4	0.3
Services less energy services.....	59.784	303.694	312.205	312.919	3.0	0.2	0.3	0.2	0.2
Shelter.....	33.403	281.499	290.445	291.407	3.5	0.3	0.3	0.4	0.4
Rent of primary residence ²	7.777	289.428	298.962	300.400	3.8	0.5	0.3	0.3	0.4
Owners' equivalent rent of residences ³	24.349	288.700	297.636	298.645	3.4	0.3	0.3	0.4	0.3
Medical care services.....	6.669	480.245	499.483	499.717	4.1	0.0	1.0	0.0	0.0
Physicians' services ²	1.700	366.652	382.134	381.406	4.0	-0.2	0.7	0.0	-0.1
Hospital services ^{2, 4}	2.234	295.282	306.404	307.433	4.1	0.3	1.7	0.0	0.2
Transportation services.....	5.836	291.969	298.129	299.622	2.6	0.5	0.1	0.0	-0.2
Motor vehicle maintenance and repair ¹	1.154	271.804	275.331	275.645	1.4	0.1	0.0	-0.2	0.1
Motor vehicle insurance.....	2.418	465.401	492.119	496.658	6.7	0.9	0.5	0.4	0.2
Airline fare.....	0.829	285.837	267.457	270.922	-5.2	1.3	-0.1	0.4	-2.2

¹ Not seasonally adjusted.

² This index series was calculated using a Laspeyres estimator. All other item stratum index series were calculated using a geometric means estimator.

³ Indexes on a December 1982=100 base.

⁴ Indexes on a December 1996=100 base.

NOTE: Index applies to a month as a whole, not to any specific date.

Table 1. Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, by expenditure category and commodity and service group

(1982-84=100, unless otherwise noted)

Item and group	Relative importance, December 2014	Unadjusted indexes		Unadjusted percent change to Oct. 2015 from—		Seasonally adjusted percent change from—		
		Sep. 2015	Oct. 2015	Oct. 2014	Sep. 2015	July to Aug.	Aug. to Sep.	Sep. to Oct.
Expenditure category								
All items	100.000	237.945	237.838	0.2	0.0	-0.1	-0.2	0.2
All items (1967=100)	-	712.777	712.458	-	-	-	-	-
Food and beverages	15.272	248.090	248.575	1.6	.2	.2	.4	.2
Food	14.257	248.632	249.052	1.6	.2	.2	.4	.1
Food at home	8.427	243.432	243.779	.7	.1	.3	.3	.1
Cereals and bakery products	1.138	273.530	275.753	1.6	.8	-1	-2	.8
Meats, poultry, fish, and eggs	2.014	263.227	261.568	.7	-6	.5	-3	-5
Dairy and related products ¹ .....	.898	222.310	221.874	-3.0	-2	-3	.7	-2
Fruits and vegetables	1.379	295.394	297.931	.1	.9	1.5	.7	.5
Nonalcoholic beverages and beverage materials .....	.955	168.054	169.045	1.0	.6	.1	-1	.2
Other food at home	2.043	210.659	210.636	2.0	.0	-2	.8	.1
Sugar and sweets ¹ .....	.299	218.193	216.697	3.5	-7	.1	.5	-7
Fats and oils .....	.245	228.236	230.541	-1.3	1.0	.5	.4	1.0
Other foods	1.499	224.787	224.702	2.3	.0	-4	.9	.2
Other miscellaneous foods ^{1 2} .....	.444	131.355	132.531	1.8	.9	-9	.3	.9
Food away from home ¹	5.830	257.830	258.363	2.9	.2	.2	.5	.2
Other food away from home ^{1 2} .....	.319	180.822	180.884	3.8	.0	-1	-1	.0
Alcoholic beverages	1.015	239.287	240.656	1.1	.6	.1	.1	.6
Housing	42.173	239.651	239.395	2.1	-1	.2	.3	.2
Shelter	32.711	280.814	281.499	3.2	.2	.2	.3	.3
Rent of primary residence ³	7.159	288.306	289.428	3.7	.4	.3	.4	.3
Lodging away from home ² .....	.839	154.657	152.228	2.1	-1.6	-6	.8	.8
Owners' equivalent rent of residences ^{3 4}	24.339	287.916	288.700	3.1	.3	.2	.3	.2
Owners' equivalent rent of primary residence ^{3 4}	22.918	287.871	288.656	3.1	.3	.2	.3	.2
Tenants' and household insurance ^{1 2} .....	.375	146.523	146.570	2.1	.0	.0	.1	.0
Fuels and utilities	5.273	232.417	226.784	-2.3	-2.4	.3	-2	.2
Household energy	4.051	196.580	190.269	-4.3	-3.2	.2	-5	.2
Fuel oil and other fuels ¹ .....	.236	236.603	238.466	-25.4	.8	-5.0	-1.4	.8
Energy services ³	3.815	201.575	194.713	-2.9	-3.4	.5	-4	.2
Water and sewer and trash collection services ²	1.222	216.173	216.380	4.2	.1	.7	.5	.0
Household furnishings and operations	4.189	122.406	122.422	-6	.0	-3	.3	-1
Household operations ^{1 2} .....	.848	168.092	168.166	2.4	.0	.4	-1	.0
Apparel	3.343	128.540	129.446	-1.9	.7	.3	-3	-8
Men's and boys' apparel .....	.834	120.686	121.393	-8	.6	.7	1.2	-1.0
Women's and girls' apparel	1.439	114.315	115.913	-3.5	1.4	-1	-9	-7
Infants' and toddlers' apparel .....	.135	125.132	123.786	3.4	-1.1	4.1	.1	-2.2
Footwear .....	.725	139.027	139.431	-9	.3	.4	-9	-4
Transportation	15.289	197.593	195.858	-7.9	-9	-1.3	-2.3	.1
Private transportation	14.167	192.689	190.464	-8.3	-1.2	-1.2	-2.5	.0
New and used motor vehicles ²	5.720	100.702	100.134	-4	-6	-2	-2	-2
New vehicles	3.551	146.570	146.516	.1	.0	.0	-1	-2
Used cars and trucks	1.591	148.520	145.821	-1.4	-1.8	-4	-2	-3
Motor fuel	3.979	208.121	199.996	-27.9	-3.9	-4.1	-8.9	.4
Gasoline (all types)	3.904	207.239	199.077	-27.8	-3.9	-4.1	-9.0	.4
Motor vehicle parts and equipment ¹ .....	.435	144.496	143.209	-8	-9	.0	.5	-9
Motor vehicle maintenance and repair ¹	1.168	271.119	271.804	1.4	.3	-1	.1	.3
Public transportation	1.122	259.430	266.338	-2.3	2.7	-1.7	-1	1.3
Medical care	7.716	447.289	450.065	3.0	.6	.0	.2	.7
Medical care commodities	1.772	355.746	355.894	2.8	.0	.3	-2	.2
Medical care services	5.944	476.466	480.245	3.0	.8	.0	.3	.8
Professional services	3.032	362.572	362.335	1.8	-1	-1	.2	.0

See footnotes at end of table.

City of Henderson, Kentucky
Henderson Municipal Power & Light

Demand Rate Schedule Schedule D

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For general commercial service or industrial service at any one (1) location where service is taken through one (1) meter at one (1) point of delivery and customer's estimated monthly demand is equal to or greater than 300 kilowatts.

Limitation of Service – Not available to residential customers. Minimum monthly kilowatt billing demand applies to all Demand Rate Schedule customers as provided herein. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	*240/480 Volts
– Four Wire	277/480 Volts
– Delta	*13,800 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Demand Charge - ~~*\$3.22~~ \$3.27 for each kilowatt of monthly metered billing demand.

* When a customer's service voltage delivery is 13,800 volts and the customer owns all transformer and voltage transformation facilities, the customer's monthly metered billing demand rate will be ~~\$2.78~~ \$2.82 for each kilowatt of monthly metered billing demand.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Demand Rate Schedule
Schedule D (continued)**

Minimum Monthly Billing Demand – To qualify for the Demand Rate Schedule, on and after March 1, 2007, a customer must have a minimum monthly billing demand equal to or greater than 300 kilowatts at each meter location. The minimum monthly billing demand shall be the maximum 15-minute measured demand in the month, subject to power factor adjustment, but not less than the greater of 50 Kw or 70 percent of the highest monthly billing demand established during the preceding year, May 1 through October 31. [Demand minimum billing = maximum 15-minute measured demand (May through October) x meter multiplier x Demand Charge x 70%]

Energy Charge – For all kilowatt hours billed on and after ~~November 1, 2016~~ January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>	<u>Kilowatt Hour Rate</u>
First 50,000 kilowatt hours	4.91¢ Kwh	4.99¢ Kwh
Next 50,000 kilowatt hours	3.87¢ Kwh	3.93¢ Kwh
All Over 100,000 kilowatt hours	3.50¢ Kwh	3.56¢ Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of ~~\$151.94~~ \$154.37 for each metered point of delivery.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015-December 12, 2016~~) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Demand Rate Schedule
Schedule D (continued)**

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Demand Rate customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Demand Rate customers.

Power Factor Billing Adjustment – As determined by HMP&L, random power factor tests may be conducted on individual Demand Rate customer's metered services. In the event power factor test results are less than 85 percent (0.85), the customer's total monthly billing cost shall be increased by multiplying the total monthly billing cost for metered energy by the power factor adjustment percent. The power factor adjustment percent shall be calculated as the quotient of 0.85 divided by the actual power factor determined by test. After a power factor adjustment has been applied to a customer's bill during any one month billing period, the power factor adjustment shall continue to be applied to all subsequent monthly billings. If the customer's power factor is less than 85 percent, the customer will have the option of installing sufficient power factor corrective equipment. Should the customer fail to exercise such option promptly, monthly demand measurement may also be a Kva demand meter, in which case 0.85 Kva will be considered the actual Kw. The monthly power factor adjustment shall be terminated when an HMP&L power factor test indicates a power factor equal to or greater than 85 percent (0.85).

Term of Service – To be established by HMP&L.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

General Service Rate Schedule Schedule GS

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For general commercial service or industrial service at any one (1) location where service is taken through one (1) meter at one (1) point of delivery and customer's monthly demand is less than 300 kilowatts. Electric service is provided at no cost to the City of Henderson. HMP&L's allocation of the actual electric service expenses to the City, however, are based upon the rates set forth herein.

Limitation of Service – Not available to residential customers. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

For customers with an estimated monthly demand equal to or less than 50 kilowatts.

Single Phase – Three Wire	120/240 Volts
Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts

For customers with an estimated monthly demand greater than 50 kilowatts, but less than 300 kilowatts.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	277/480 Volts
– Delta	13,800 Volts

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**General Service Rate Schedule
Schedule GS (continued)**

Energy Charge – For all kilowatt hours billed on and after ~~November 1, 2016~~ January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>	<u>Kilowatt Hour Rate</u>
First 2,000 kilowatt hours	7.33¢ Kwh	7.45¢ Kwh
Next 13,000 kilowatt hours	6.34¢ Kwh	6.44¢ Kwh
All Over 15,000 kilowatt hours	5.12¢ Kwh	5.20¢ Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of ~~\$7.57~~ \$7.69 for each metered point of delivery.

Monthly Facilities Charge – For single phase and three phase services, a monthly facility charge of ~~\$0.8838~~ \$0.8979 per Kva of installed transformer capacity will be applied to each metered point of delivery. The minimum monthly facility charge for single phase service shall be ~~\$8.83~~ \$8.97 and the minimum monthly facility charge for three phase service shall be ~~\$26.51~~ \$26.93.

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered General Service Rate customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered General Service Rate customers.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**General Service Rate Schedule
Schedule GS (continued)**

Power Factor Billing Adjustment – As determined by HMP&L, random power factor tests may be conducted on individual General Service Rate customer's metered services. In the event power factor test results are less than 85 percent (0.85), the customer's total monthly billing cost shall be increased by multiplying the total monthly billing cost for metered energy by the power factor adjustment percent. The power factor adjustment percent shall be calculated as the quotient of 0.85 divided by the actual power factor determined by test. After a power factor adjustment has been applied to a customer's bill during any one month billing period, the power factor adjustment shall continue to be applied to all subsequent monthly billings. If the customer's power factor is less than 85 percent, the customer will have the option of installing sufficient power factor corrective equipment. Should the customer fail to exercise such option promptly, monthly demand measurement may also be a Kva demand meter, in which case 0.85 Kva will be considered the actual Kw. The monthly power factor adjustment shall be terminated when an HMP&L power factor test indicates a power factor equal to or greater than 85 percent (0.85).

Term of Service – Monthly.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For Housing Authority, Church, and Public School buildings at any one (1) location where service is taken through one (1) meter at one (1) point of delivery. After March 1, 2007, a new customer's estimated monthly demand must be less than 300 kilowatts to qualify for this rate.

Limitation of Service – Not available to Private Schools or any other customers classified in other rate classifications. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

For customers with an estimated monthly demand equal to or less than 50 kilowatts.

Single Phase – Three Wire	120/240 Volts
Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts

For customers with an estimated monthly demand greater than 50 kilowatts, but less than 300 kilowatts when new service is requested after March 1, 2007.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	277/480 Volts
– Delta	*13,800 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS (continued)**

Energy Charge – For all kilowatt hours billed on and after ~~November 1, 2016~~ January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>	<u>Kilowatt Hour Rate</u>
All Consumption	5.33¢ Kwh	5.42¢ Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of ~~\$7.57~~ \$7.69 for each metered point of delivery.

Monthly Facilities Charge – For single phase and three phase services, a monthly facility charge of ~~\$0.8838~~ \$0.8979 per Kva of installed transformer capacity will be applied to each metered point of delivery. The minimum monthly facility charge for single phase service shall be ~~\$8.83~~ \$8.97 and the minimum monthly facility charge for three phase service shall be ~~\$26.51~~ \$26.93.

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Housing Authority, Church, and Public School Rate Schedule customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Housing Authority, Church, and Public School Rate Schedule customers.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS (continued)**

Term of Service – Monthly.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Miscellaneous Rate Schedule
Schedule MISC**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

(1) Disconnect/Reconnect Fees

HMP&L provides single phase and three phase electrical services to its Customers. In instances of Customer non-payment or termination of services, the City of Henderson provides meter personnel and services to disconnect/reconnect the Customers' electric meters, for the single phase services of 200 amps and below. For three phase electrical services, A-Base metered electrical services, or single phase services above 200 amps, HMP&L personnel are required to perform the electric service disconnection for non-payment or termination of service due to safety protocols. When HMP&L is required to perform the disconnection, the Customer will be charged an ~~\$86.82~~ \$88.21 disconnect fee on their electric utility billing account. Subsequently, in instances whereby HMP&L is required to perform the electric service reconnection, the Customer will be charged an ~~\$86.82~~ \$88.21 reconnect fee on their electric utility billing account. The disconnect/reconnect fee(s) must be paid prior to the electric service reconnection.

(2) Tamper Fees

Tamper means "to rearrange, injure, alter, interfere with, or otherwise prevent from performing a normal or customary function." In regards to electrical service, no one shall divert electrical service, prevent any meter or other device used in determining the charge for electrical service from accurately performing its measuring function by tampering or by any other means, tamper with any property owned by or used by HMP&L to provide electrical service, or connect or reconnect with property owned or used by HMP&L to provide service without the authorization or consent of HMP&L. All reports of tampering will be investigated. If tampering is suspected, the incident will be reported to local authorities and the electrical service will be disconnected. The Customer will be charged on their electric utility billing account a ~~\$115.76~~ \$117.61 tamper fee and an additional ~~\$57.89~~ \$58.82 damage fee, if HMP&L equipment is determined to be damaged. If there is damage requiring an electrician, the Customer is responsible for making the repair, the costs associated with the repair, and notifying HMP&L of the completion of the repair. HMP&L may require an inspection following the repair. The tamper fee(s) must be paid prior to the electrical service reconnection.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

Revised: ~~November 1, 2016~~ January 1, 2017
Cancels Schedule Dated: ~~May 1, 2016~~ November 1, 2016

Page 2 of 2

City of Henderson, Kentucky
Henderson Municipal Power & Light

Miscellaneous Rate Schedule Schedule MISC

In regards to the above fees, the account holder (Customer) is responsible for payment before service is reconnected.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all Miscellaneous Rate Schedule customers.

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
 Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
 Schedule SL**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L). This Private Rental Lighting and Public Street Lighting Service Rate Schedule SL cancels and supersedes all existing Customer Owned Security Light Lease Agreements executed prior to ~~November 1, 2016~~ January 1, 2017.

Applicability – For Private Rental Lighting and Public Street Lighting Services. Private Rental Lighting and Public Street Lighting Services in the HMP&L service area are provided at no cost to the City of Henderson. HMP&L’s allocation of the actual Private Rental Lighting and Public Street Lighting Services expenses to the City, however, are based upon the rates set forth herein.

Limitation of Service – As provided herein. Electric service is subject to HMP&L’s and the City of Henderson’s Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Lighting Fixture Monthly Rates – Rate Schedules are for one light.

INSTALLATION OF LIGHTING FIXTURE AND 30 FOOT WOOD POLE	MONTHLY RATE FOR INITIAL 60 MONTHS			MONTHLY RATE AFTER 60 MONTHS
	With 2 Foot Mast Arm	With 8 Foot Mast Arm	With 12 Foot Mast Arm	
NEMA 100 Watt HPSV Luminaire	\$15.27	\$16.08	\$16.54	\$11.34
	\$15.51	\$16.34	\$16.80	\$11.52
COBRA 250 Watt HPSV Luminaire	\$20.57	\$21.38	\$21.84	\$16.59
	\$20.90	\$21.72	\$22.19	\$16.86

- *NEMA– National Electrical Manufacturers Association (Standards)
- **HPSV – High Pressure Sodium Vapor
- ***MV – Mercury Vapor
- ****MH – Metal Halide

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
 Approved By: Henderson City Commission (~~May 12, 2015-December 12, 2016~~) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
 Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
 Schedule SL (continued)**

INSTALLATION OF LIGHTING FIXTURE ON EXISTING WOOD POLE	MONTHLY RATE			MONTHLY RATE
	With 2 Foot Mast Arm	With 8 Foot Mast Arm	With 12 Foot Mast Arm	
NEMA 100 Watt HPSV Luminaire	\$11.34 \$11.52	\$11.62 \$11.81	\$11.76 \$11.95	N/A
NEMA 175 Watt MV Luminaire (discontinued)	\$13.23 \$13.44	\$13.50 \$13.72	\$13.66 \$13.88	N/A
COLONIAL ORNAMENTAL 175 Watt MH Luminaire on Metal Pole (Restricted availability to City of Henderson. Monthly rate based on average Kwh consumption.)	N/A	N/A	N/A	\$4.68 \$4.75
COBRA 250 Watt HPSV Luminaire	\$16.59 \$16.86	\$17.41 \$17.69	\$17.87 \$18.16	N/A
COBRA 400 Watt MV Luminaire (discontinued)	\$21.91 \$22.26	\$22.20 \$22.56	\$22.35 \$22.71	N/A
FLOOD 400 Watt MH (discontinued)	N/A	N/A	N/A	\$24.84 \$25.24
FLOOD 1,000 Watt MH (discontinued)	N/A	N/A	N/A	\$46.86 \$47.61

- *NEMA– National Electrical Manufacturers Association (Standards)
- **HPSV – High Pressure Sodium Vapor
- ***MV – Mercury Vapor
- ****MH – Metal Halide

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
 Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
Schedule SL (continued)**

INSTALLATION OF 30 FOOT WOOD POLE	MONTHLY RATE
Install Additional 30 Foot Wood Tangent Conductor Support Pole	\$3.96 / each \$4.02 / each

Monthly Billing – Customers will be billed monthly for lighting services as provided herein.

Minimum Bill – Not applicable.

Term of Service – Monthly.

Fuel Adjustment Clause – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all Private Rental Lighting and Public Street Lighting Rates. (Each Monthly Lighting Rate herein includes \$0.006 / Kwh based upon an average 2006 Fuel Adjustment Clause Rate.)

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all Private Rental Lighting and Public Street Lighting Rate customers.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Residential Rate Schedule
Schedule R**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For a single family residential household and electric service is only used for domestic requirements. Electric service must be taken through one (1) meter at one (1) point of delivery.

Limitation of Service – Not available to industrial customers, commercial customers, or customers classified in other rate classifications. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

Single Phase – Three Wire 120/240 Volts
Three Phase – Four Wire *120/240 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Energy Charge – For all kilowatt hours billed on and after ~~November 1, 2016~~ January 1, 2017.

<u>Period of Consumption</u>	<u>Kilowatt Hour Rate</u>	<u>Kilowatt Hour Rate</u>
June 1 through September 30	6.67¢ Kwh	6.78¢ Kwh
October 1 through May 31	5.28¢ Kwh	5.36¢ Kwh

Approved By: Henderson Utility Commission (March 30, 2015) Effective: For all customer billings
Approved By: Henderson City Commission (~~May 12, 2015~~ December 12, 2016) issued on and after
~~November 1, 2016~~ January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Residential Rate Schedule
Schedule R (continued)**

Monthly Customer Service Charge – Fixed monthly charge of ~~\$7.57~~ \$7.69 for each metered point of delivery.

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Residential Rate Schedule customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Residential Rate Schedule customers.

Seasonal Service Minimum Monthly Billing – In addition to the Monthly Customer Service Charge set forth herein, the minimum monthly billing for energy shall be ~~\$6.45~~ \$6.55.

Term of Service – Monthly.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

ORDINANCE NO. 46-16

ORDINANCE ESTABLISHING THE CONSUMER PRICE INDEX RATE ADJUSTMENT

SUMMARY: AN ORDINANCE APPROVING AND ADOPTING A SCHEDULE OF ELECTRIC RATES AND SERVICES FOR HENDERSON MUNICIPAL POWER & LIGHT TO ITS CUSTOMERS AND CONSUMERS TO BECOME EFFECTIVE FOR ALL SERVICES BILLED ON OR AFTER JANUARY 1, 2017; INCREASING RATES FOR SERVICES AND FEES BY AN AMOUNT EQUAL TO 1.6%, REPRESENTING THE CONSUMER PRICE INDEX AS ESTABLISHED BY THE U.S. BUREAU OF LABOR STATISTICS.

WHEREAS, Chapter 23, ARTICLE V, Section 23-97 of the Henderson City Code of Ordinances provides that all utility rates and charges be determined from time to time by the City Board of Commissioners and kept on file in the City Clerk's office; and

WHEREAS, the City's current electric rates and service fees are set forth in tables made a part of Ordinance No. 9-15; and

WHEREAS, the Schedule of Electric Rates and Services was revised by the City of Henderson Utility Commission following a public hearing held on March 30, 2015, to include a recommendation that the City of Henderson adopt a new Consumer Price Index Escalation Rate Schedule; and

WHEREAS, the City of Henderson by and through the City Board of Commissioners adopted said recommendation by Ordinance No. 9-15 and adopted a Consumer Price Index (CPI) Escalation Rate Schedule;

NOW, THEREFORE, BE IT ORDAINED by the City of Henderson as follows:

1. That the rates and services described in the schedule of electric rates and services, as established and adopted by the City of Henderson in Ordinance No. 9-15, effective date May 12, 2015, are hereby increased 1.6% on all rate schedules, fees and minimums for all customer classifications.
2. That the revised Schedule of Electric Rates and Services shall become effective on all services provided to the customers and consumers of Henderson Municipal Power & Light by the City of Henderson on and after January 1, 2017.

All ordinances or parts of ordinances in conflict herewith are hereby repealed and superseded to the extent of such conflict.

This ordinance shall become effective upon its legal adoption.

PUBLICATION DATE: _____

FIRST READ: 12/6/2016
SECOND READ: _____

On first reading of the foregoing ordinance, it was moved by Commissioner X R. Royster, seconded by Commissioner Jesse Johnston, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston	<u>AYE</u>	Commissioner Royster	<u>AYE</u>
Commissioner Hite	<u>AYE</u>	Mayor Austin:	<u>AYE</u>
Commissioner Mills	<u>AYE</u>		

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston	_____	Commissioner Royster	_____
Commissioner Hite	_____	Mayor Austin:	_____
Commissioner Mills	_____		

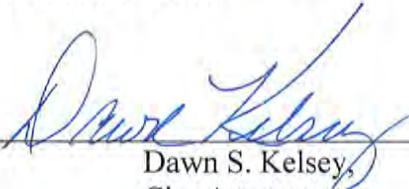
WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

Steve Austin, Mayor
Date: _____

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 1 DAY OF
DECEMBER, 2016**



Dawn S. Kelsey,
City Attorney

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Demand Rate Schedule
Schedule D**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For general commercial service or industrial service at any one (1) location where service is taken through one (1) meter at one (1) point of delivery and customer's estimated monthly demand is equal to or greater than 300 kilowatts.

Limitation of Service – Not available to residential customers. Minimum monthly kilowatt billing demand applies to all Demand Rate Schedule customers as provided herein. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	*240/480 Volts
– Four Wire	277/480 Volts
– Delta	*13,800 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Demand Charge - *\$3.27 for each kilowatt of monthly metered billing demand.

* When a customer's service voltage delivery is 13,800 volts and the customer owns all transformer and voltage transformation facilities, the customer's monthly metered billing demand rate will be \$2.82 for each kilowatt of monthly metered billing demand.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
issued on and after January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Demand Rate Schedule
Schedule D (continued)**

Minimum Monthly Billing Demand – To qualify for the Demand Rate Schedule, on and after March 1, 2007, a customer must have a minimum monthly billing demand equal to or greater than 300 kilowatts at each meter location. The minimum monthly billing demand shall be the maximum 15-minute measured demand in the month, subject to power factor adjustment, but not less than the greater of 50 Kw or 70 percent of the highest monthly billing demand established during the preceding year, May 1 through October 31. [Demand minimum billing = maximum 15-minute measured demand (May through October) x meter multiplier x Demand Charge x 70%]

Energy Charge – For all kilowatt hours billed on and after January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>
First 50,000 kilowatt hours	4.99¢ Kwh
Next 50,000 kilowatt hours	3.93¢ Kwh
All Over 100,000 kilowatt hours	3.56¢ Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of \$154.37 for each metered point of delivery.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Demand Rate Schedule
Schedule D (continued)**

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Demand Rate customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Demand Rate customers.

Power Factor Billing Adjustment – As determined by HMP&L, random power factor tests may be conducted on individual Demand Rate customer's metered services. In the event power factor test results are less than 85 percent (0.85), the customer's total monthly billing cost shall be increased by multiplying the total monthly billing cost for metered energy by the power factor adjustment percent. The power factor adjustment percent shall be calculated as the quotient of 0.85 divided by the actual power factor determined by test. After a power factor adjustment has been applied to a customer's bill during any one month billing period, the power factor adjustment shall continue to be applied to all subsequent monthly billings. If the customer's power factor is less than 85 percent, the customer will have the option of installing sufficient power factor corrective equipment. Should the customer fail to exercise such option promptly, monthly demand measurement may also be a Kva demand meter, in which case 0.85 Kva will be considered the actual Kw. The monthly power factor adjustment shall be terminated when an HMP&L power factor test indicates a power factor equal to or greater than 85 percent (0.85).

Term of Service – To be established by HMP&L.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**General Service Rate Schedule
Schedule GS**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For general commercial service or industrial service at any one (1) location where service is taken through one (1) meter at one (1) point of delivery and customer's monthly demand is less than 300 kilowatts. Electric service is provided at no cost to the City of Henderson. HMP&L's allocation of the actual electric service expenses to the City, however, are based upon the rates set forth herein.

Limitation of Service – Not available to residential customers. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

For customers with an estimated monthly demand equal to or less than 50 kilowatts.

Single Phase – Three Wire	120/240 Volts
Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts

For customers with an estimated monthly demand greater than 50 kilowatts, but less than 300 kilowatts.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	277/480 Volts
– Delta	13,800 Volts

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**General Service Rate Schedule
Schedule GS (continued)**

Energy Charge – For all kilowatt hours billed on and after January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>
First 2,000 kilowatt hours	\$7.45 Kwh
Next 13,000 kilowatt hours	\$6.44 Kwh
All Over 15,000 kilowatt hours	\$5.20 Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of \$7.69 for each metered point of delivery.

Monthly Facilities Charge – For single phase and three phase services, a monthly facility charge of \$0.8979 per Kva of installed transformer capacity will be applied to each metered point of delivery. The minimum monthly facility charge for single phase service shall be \$8.97 and the minimum monthly facility charge for three phase service shall be \$26.93.

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered General Service Rate customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered General Service Rate customers.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**General Service Rate Schedule
Schedule GS (continued)**

Power Factor Billing Adjustment – As determined by HMP&L, random power factor tests may be conducted on individual General Service Rate customer's metered services. In the event power factor test results are less than 85 percent (0.85), the customer's total monthly billing cost shall be increased by multiplying the total monthly billing cost for metered energy by the power factor adjustment percent. The power factor adjustment percent shall be calculated as the quotient of 0.85 divided by the actual power factor determined by test. After a power factor adjustment has been applied to a customer's bill during any one month billing period, the power factor adjustment shall continue to be applied to all subsequent monthly billings. If the customer's power factor is less than 85 percent, the customer will have the option of installing sufficient power factor corrective equipment. Should the customer fail to exercise such option promptly, monthly demand measurement may also be a Kva demand meter, in which case 0.85 Kva will be considered the actual Kw. The monthly power factor adjustment shall be terminated when an HMP&L power factor test indicates a power factor equal to or greater than 85 percent (0.85).

Term of Service – Monthly.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For Housing Authority, Church, and Public School buildings at any one (1) location where service is taken through one (1) meter at one (1) point of delivery. After March 1, 2007, a new customer's estimated monthly demand must be less than 300 kilowatts to qualify for this rate.

Limitation of Service – Not available to Private Schools or any other customers classified in other rate classifications. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

For customers with an estimated monthly demand equal to or less than 50 kilowatts.

Single Phase – Three Wire	120/240 Volts
Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts

For customers with an estimated monthly demand greater than 50 kilowatts, but less than 300 kilowatts when new service is requested after March 1, 2007.

Three Phase – Four Wire	120/208 Volts
– Four Wire	120/240 Volts
– Four Wire	277/480 Volts
– Delta	*13,800 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
issued on and after January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS (continued)**

Energy Charge – For all kilowatt hours billed on and after January 1, 2017.

<u>Monthly Consumption</u>	<u>Kilowatt Hour Rate</u>
All Consumption	\$5.42 Kwh

Gross Energy Reduction Allowance – When HMP&L installs primary metering and the customer owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter, the customer will be billed for 98 percent (2 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer. When HMP&L installs primary metering and HMP&L owns, installs, operates, maintains, and replaces all electrical distribution facilities located on the load side of the primary meter up to the connection point of the customer's service line, the customer will be billed for 99 percent (1 percent reduction) of the actual total monthly metered kilowatt hours consumed by the customer.

Monthly Customer Service Charge – Fixed monthly charge of \$7.69 for each metered point of delivery.

Monthly Facilities Charge – For single phase and three phase services, a monthly facility charge of \$0.8979 per Kva of installed transformer capacity will be applied to each metered point of delivery. The minimum monthly facility charge for single phase service shall be \$8.97 and the minimum monthly facility charge for three phase service shall be \$26.93.

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Housing Authority, Church, and Public School Rate Schedule customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Housing Authority, Church, and Public School Rate Schedule customers.

Term of Service – Monthly.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Housing Authority, Church, and Public School Rate Schedule
Schedule HCS (continued)**

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Miscellaneous Rate Schedule
Schedule MISC**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

(1) Disconnect/Reconnect Fees

HMP&L provides single phase and three phase electrical services to its Customers. In instances of Customer non-payment or termination of services, the City of Henderson provides meter personnel and services to disconnect/reconnect the Customers' electric meters, for the single phase services of 200 amps and below. For three phase electrical services, A-Base metered electrical services, or single phase services above 200 amps, HMP&L personnel are required to perform the electric service disconnection for non-payment or termination of service due to safety protocols. When HMP&L is required to perform the disconnection, the Customer will be charged an \$88.21 disconnect fee on their electric utility billing account. Subsequently, in instances whereby HMP&L is required to perform the electric service reconnection, the Customer will be charged an \$88.21 reconnect fee on their electric utility billing account. The disconnect/reconnect fee(s) must be paid prior to the electric service reconnection.

(2) Tamper Fees

Tamper means “to rearrange, injure, alter, interfere with, or otherwise prevent from performing a normal or customary function.” In regards to electrical service, no one shall divert electrical service, prevent any meter or other device used in determining the charge for electrical service from accurately performing its measuring function by tampering or by any other means, tamper with any property owned by or used by HMP&L to provide electrical service, or connect or reconnect with property owned or used by HMP&L to provide service without the authorization or consent of HMP&L. All reports of tampering will be investigated. If tampering is suspected, the incident will be reported to local authorities and the electrical service will be disconnected. The Customer will be charged on their electric utility billing account a \$117.61 tamper fee and an additional \$58.82 damage fee, if HMP&L equipment is determined to be damaged. If there is damage requiring an electrician, the Customer is responsible for making the repair, the costs associated with the repair, and notifying HMP&L of the completion of the repair. HMP&L may require an inspection following the repair. The tamper fee(s) must be paid prior to the electrical service reconnection.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
issued on and after January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Miscellaneous Rate Schedule
Schedule MISC**

In regards to the above fees, the account holder (Customer) is responsible for payment before service is reconnected.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all Miscellaneous Rate Schedule customers.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
issued on and after January 1, 2017.

City of Henderson, Kentucky
 Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
 Schedule SL**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L). This Private Rental Lighting and Public Street Lighting Service Rate Schedule SL cancels and supersedes all existing Customer Owned Security Light Lease Agreements executed prior to January 1, 2017.

Applicability – For Private Rental Lighting and Public Street Lighting Services. Private Rental Lighting and Public Street Lighting Services in the HMP&L service area are provided at no cost to the City of Henderson. HMP&L’s allocation of the actual Private Rental Lighting and Public Street Lighting Services expenses to the City, however, are based upon the rates set forth herein.

Limitation of Service – As provided herein. Electric service is subject to HMP&L’s and the City of Henderson’s Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Lighting Fixture Monthly Rates – Rate Schedules are for one light.

INSTALLATION OF LIGHTING FIXTURE AND 30 FOOT WOOD POLE	MONTHLY RATE FOR INITIAL 60 MONTHS			MONTHLY RATE AFTER 60 MONTHS
	With 2 Foot Mast Arm	With 8 Foot Mast Arm	With 12 Foot Mast Arm	
NEMA 100 Watt HPSV Luminaire	\$15.51	\$16.34	\$16.80	\$11.52
COBRA 250 Watt HPSV Luminaire	\$20.90	\$21.72	\$22.19	\$16.86

- *NEMA– National Electrical Manufacturers Association (Standards)
- **HPSV – High Pressure Sodium Vapor
- ***MV – Mercury Vapor
- ****MH – Metal Halide

Approved By: Henderson Utility Commission (March 30, 2015)
 Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
 issued on and after January 1, 2017.

City of Henderson, Kentucky
 Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
 Schedule SL (continued)**

INSTALLATION OF LIGHTING FIXTURE ON EXISTING WOOD POLE	MONTHLY RATE			MONTHLY RATE
	With 2 Foot Mast Arm	With 8 Foot Mast Arm	With 12 Foot Mast Arm	
NEMA 100 Watt HPSV Luminaire	\$11.52	\$11.81	\$11.95	N/A
NEMA 175 Watt MV Luminaire (discontinued)	\$13.44	\$13.72	\$13.88	N/A
COLONIAL ORNAMENTAL 175 Watt MH Luminaire on Metal Pole (Restricted availability to City of Henderson. Monthly rate based on average Kwh consumption.)	N/A	N/A	N/A	\$4.75
COBRA 250 Watt HPSV Luminaire	\$16.86	\$17.69	\$18.16	N/A
COBRA 400 Watt MV Luminaire (discontinued)	\$22.26	\$22.56	\$22.71	N/A
FLOOD 400 Watt MH (discontinued)	N/A	N/A	N/A	\$25.24
FLOOD 1,000 Watt MH (discontinued)	N/A	N/A	N/A	\$47.61

- *NEMA – National Electrical Manufacturers Association (Standards)
- **HPSV – High Pressure Sodium Vapor
- ***MV – Mercury Vapor
- ****MH – Metal Halide

Approved By: Henderson Utility Commission (March 30, 2015)
 Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings
 issued on and after January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Private Rental Lighting and Public Street Lighting Service Schedule
Schedule SL (continued)**

INSTALLATION OF 30 FOOT WOOD POLE	MONTHLY RATE
Install Additional 30 Foot Wood Tangent Conductor Support Pole	\$4.02 / each

Monthly Billing – Customers will be billed monthly for lighting services as provided herein.

Minimum Bill – Not applicable.

Term of Service – Monthly.

Fuel Adjustment Clause – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all Private Rental Lighting and Public Street Lighting Rates. (Each Monthly Lighting Rate herein includes \$0.006 / Kwh based upon an average 2006 Fuel Adjustment Clause Rate.)

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all Private Rental Lighting and Public Street Lighting Rate customers.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Residential Rate Schedule
Schedule R**

Service Area – All areas served by Henderson Municipal Power & Light (HMP&L).

Applicability – For a single family residential household and electric service is only used for domestic requirements. Electric service must be taken through one (1) meter at one (1) point of delivery.

Limitation of Service – Not available to industrial customers, commercial customers, or customers classified in other rate classifications. Electric service is subject to HMP&L's and the City of Henderson's Ordinances, Policies, General Terms and Conditions of Service, Safety Policies, and Service Rules and Regulations, as amended.

Services Available – Sixty hertz alternating current as provided herein.

Single Phase – Three Wire	120/240 Volts
Three Phase – Four Wire	*120/240 Volts

* When HMP&L facilities are available.

Monthly Billing – Customers will be billed monthly for each service taken through one (1) meter at one (1) point of delivery.

Energy Charge – For all kilowatt hours billed on and after January 1, 2017.

<u>Period of Consumption</u>	<u>Kilowatt Hour Rate</u>
June 1 through September 30	6.78¢ Kwh
October 1 through May 31	5.36¢ Kwh

Monthly Customer Service Charge – Fixed monthly charge of \$7.69 for each metered point of delivery.

Approved By: Henderson Utility Commission (March 30, 2015)
Approved By: Henderson City Commission (December 12, 2016)

Effective: For all customer billings issued on and after January 1, 2017.

City of Henderson, Kentucky
Henderson Municipal Power & Light

**Residential Rate Schedule
Schedule R (continued)**

Fuel Adjustment – See Fuel Adjustment Clause Rate Schedule FA, which is applicable to all metered Residential Rate Schedule customers.

CPI Adjustment – See CPI Escalation Schedule CPI, which is applicable to all metered Residential Rate Schedule customers.

Seasonal Service Minimum Monthly Billing – In addition to the Monthly Customer Service Charge set forth herein, the minimum monthly billing for energy shall be \$6.55.

Term of Service – Monthly.

Payment – Due on or before each monthly billing due date.

Late Payment Fee – A late payment fee will be imposed on all individual payments actually received by HMP&L after the monthly billing due date. The late payment fee will be equal to an additional five (5) percent of the customer's total monthly billing including taxes and other fees, if applicable.

City Commission Memorandum
16-270

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Separate Pay Plan for Fire Department Suppression Personnel and Staff Officers

Enclosed is an ordinance proposing to adopt a separate pay plan for Fire Department suppression personnel and staff officers. This proposal has been submitted by Commissioners Jan Hite and Jesse Johnston with a request that it be considered for first reading at the called meeting on December 12, 2016.

December 8, 2016

TO: Mayor Steve Austin, Commissioner Robert M. "Robby" Mills,
Commissioner Jesse L. Johnston IV, and Commissioner X R Royster

FROM: Commissioner Jan M. Hite

SUBJECT: Henderson Fire Department Suppression Personnel and Staff Officers Classification
and Pay Plan Revision

Enclosed for the agenda of Monday, December 12, 2016, is first reading of an ordinance that proposes a revision to the Henderson Fire Department's suppression personnel and staff officer's job classification and pay plan. The intent of this ordinance is to meaningfully balance pay with years of service and time in-grade/rank, adjust pay to closer reflect the median wage provided in the KLC Wage Study, and make the City more competitive with other fire departments within the Commonwealth.

In this classification, you will notice the suppression personnel and staff officer's will operate under a pay plan that better compliments the structure of the department. This classification also provides a rank structure that ensures equitable compensation based on years of service and time in-grade. This pay plan eliminates merit-based salary increases as well as longevity pay, and will be affected by only cost-of-living adjustment granted annually by the Board of Commissioners.

This classification and pay plan provides a means to brings each rank's average pay closer to the median pay (50%) for cities with a population of 20,000 – 99,999, published by the Kentucky League of Cities (Wage Study, 2016). This will help to maintain retention rates, increase our competitiveness with other fire departments, as well as provide our suppression personnel and staff officers with compensation commensurate to the duties they perform.

I want to express my sincere appreciation to all City Employees who participated in any way with the preparation of this proposal.

Your approval of the attached ordinance is requested.

c: Russell Sights, City Manager
Scott Foreman, Fire Chief
Dawn S. Kelsey, City Attorney
Robert Gunter, Finance Director
Connie Galloway, Human Resources Director

ORDINANCE NO. _____

ORDINANCE RELATING TO PAY PLAN

SUMMARY:

ORDINANCE ADOPTING AMENDED JOB CLASSIFICATION AND PAY PLAN FOR THE CITY OF HENDERSON WHICH RECLASSIFIES THE JOB CLASSIFICATION AND PAY PLAN FOR THE SUPPRESSION PERSONNEL AND STAFF OFFICERS OF THE FIRE DEPARTMENT AND MERGES IT WITH THE POLICE DEPARTMENT SWORN OFFICERS JOB CLASSIFICATION AND PAY PLAN, TO BE KNOWN AS THE HAZARDOUS DUTY PAY PLAN WITHIN THE CITY OF HENDERSON'S JOB CLASSIFICATION AND PAY PLAN WITH EFFECTIVE DATE OF ORDINANCE OF JANUARY 2, 2017.

WHEREAS, the Board of Commissioners has recognized the need to revise the City of Henderson's Job Classification and Pay Plan for the suppression personnel and staff officers of the Henderson Fire Department, so that the suppression personnel and staff officers will be compensated on a fair and equitable basis for the jobs they perform for the City; and

WHEREAS, the revisions to the Pay Plan will assist with retention rates and greater engagement of fire suppression personnel and staff officers, will ensure morale is high, and will provide the community with highly trained and motivated suppression personnel and staff officers; and

WHEREAS, in the last two years, the Fire Department has seen an influx of new leadership with unequal pay among ranks, and having equality will promote a healthy and fair work environment for our personnel who have accepted this greater responsibility; and

WHEREAS, it is in the best interest to make the pay for suppression personnel and staff officers of the Henderson Fire Department more competitive with other fire departments in the Commonwealth of Kentucky; and

WHEREAS, the Board of Commissioners on December 12th passed on second reading Ordinance No. 41-16 amending the City of Henderson's Job Classification and Pay Plan to include the Police Department Sworn Officer's Pay Plan; and

WHEREAS, the proposed amendments to the City of Henderson's Job Classification and Pay Plans for the suppression personnel and staff officers of the Fire Department follows the Police Department Sworn Officer's Pay Plan and can be merged into a Grade and Salary range to be known as the Hazardous Duty Pay Plan.

NOW, THEREFORE, BE IT ORDAINED by the City of Henderson, Kentucky as follows:

The Amended Job Classifications and Grades which includes amended classification for fire suppression personnel and staff officers as listed on the attached Exhibit A with the pre-fix of "HD" (Hazardous Duty), and the Grades and Salary Ranges which includes new grade and salary for fire suppression personnel and staff officers which has been merged into the Police Department Sworn Officer's Pay Plan and is now known as the Hazardous Duty Pay Plan, which includes the Hazardous Duty grade and step up schedule, as listed on the attached Exhibit B, both being incorporated herein by reference, are hereby adopted as the Job Classification and Pay Plan of the City of Henderson effective January 2, 2017.

All ordinances or parts of ordinances in conflict herewith are hereby repealed and superseded to the extent of such conflict.

This ordinance shall become effective on January 2, 2017.

On first reading of the foregoing ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

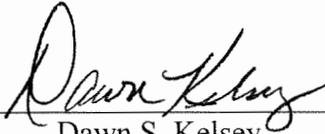
Steve Austin, Mayor

Date: _____

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 9 DAY OF
DECEMBER, 2016.**

By: 

Dawn S. Kelsey
City Attorney

City of Henderson, Kentucky Job Classifications & Grades

Code		Grade	Classification Title	FLSA
A				
0301		7	Account Clerk	N
0306		9	Account Representative	N
0304		11	Account Technician	N
0305		14	Account Technician, Senior	N
0314		35	Accounting Manager	E
0307		9	Administrative Clerk	N
0063		14	Administrative Secretary	N
0230		33	Applications Programming Manager	E
0315		36	Assistant Finance Director	E
1110	{27}	<u>HD12</u>	Assistant Fire Chief	N
B				
0062		14	Benefits Coordinator	N
3701		10	Bus Operator	N
4204		10	Bus Preventive Maintenance Technician	N
C				
0020		25	City Clerk	E
2320		37	City Engineer	E
1210		30	Code Administrator	E
1204		16	Code Inspector	N
1208		24	Code Inspector, Senior	N
1302		12	Communications Officer	N
1304		13	Communications Officer, Lead	N
1311		22	Communications Supervisor	E
8100		16	Community Development Specialist	N
4003		6	Crew Worker	N
4004		9	Crew Worker, Senior	N
6000		3	Custodial Worker	N
D				
0201		8	Data Entry Operator	N
1016	{PD13}	<u>HD13</u>	Deputy Police Chief	E
1203		16	Development Liaison	N
0321		47	Director, Finance	E
3020		45	Director, Gas System	E
0520		38	Director, Human Resources	E
E				
2310		31	Engineer	E
3104		13	Engineering Technician	N
4040		9	Equipment Operator	N
4041		11	Equipment Operator, Senior	N
0010		17	Executive Assistant	N
8020		21	Executive Director, Human Relations Commission	E
F				
1106	{20}	<u>HD10</u>	Fire Captain	N
1120	{43}	<u>HD13</u>	Fire Chief	E
1103	{15.5}	<u>HD8, HD10</u>	Fire Driver - Engineer	N
1104	{18}	<u>HD9, HD11, HD12</u>	Fire Lieutenant	N
1102	{13.5}	<u>HD7, HD9, HD11</u>	Firefighter	N
1100	{13.5}	<u>HD7</u>	Firefighter-In-Training (hourly)	N
1101	{13.5}	<u>HD7</u>	Firefighter-In-Training (shift)	N

City of Henderson, Kentucky Job Classifications & Grades

Code	Grade	Classification Title	<u>FLSA</u>
G			
4106	28	Garage Superintendent	E
3004	21	Gas Construction Supervisor	N
3002	17	Gas Distribution Crew Leader	N
3008 +	33	Gas Distribution Engineer	E
3006	30	Gas Distribution Superintendent	E
3005	11	Gas Distribution Technician	N
3105	12	Gas Measurement Technician	N
3106	19	Gas Measurement Technician Leader	N
3010	37	Gas Operations Manager	E
3108	14	Gas Servicer	N
3003	20	Gas System Analyst	N
3001	12	Gas System Equipment Operator	N
3012	9	Gas System Worker	N
4006	9	Golf Course Maintenance Worker	N
4010	18	Golf Course Manager	E
4000	5	Grounds/Maintenance Worker	N
H			
4043	14	Heavy Equipment Operator	N
4044	15	Heavy Equipment Operator, Senior	N
0507	11	Human Resources Generalist	N
0510	17	Human Resources Specialist	N
0063	14	HWU Administrative Assistant	N
4341	21	HWU Assistant Utility System Superintendent	N
4339 +	33	HWU Automation Manager	E
4338	21	HWU Automation Specialist	N
4308	37	HWU Chief Engineer	E
4303	17	HWU Construction Crew Leader	N
4337	18	HWU Construction Inspector	N
4329	30	HWU Construction Superintendent	E
4310	42	HWU Director of Field Operations	E
4357	38	HWU Director of Plant Operations	E
3104	13	HWU Engineering Technician	N
4355	16	HWU Environmental Compliance & Pretreatment Coordinator	N
4340	17	HWU GIS Analyst	N
4339	30	HWU GIS Manager	E
4331	33	HWU Information System Manager	E
0302	10	HWU Inventory Control Technician	N
4335	20	HWU Maintenance Team Leader	N
4325	10	HWU Maintenance Technician I	N
4326	14	HWU Maintenance Technician II	N
4327	18	HWU Maintenance Technician, Senior	N
4206	14	HWU Mechanic	N
4314	31	HWU Projects & Compliance Manager	E
4328	25	HWU Purchasing Manager	E
4349 +	9	HWU Receiving/Inventory Clerk	N
4307	20	HWU Safety & Training Coordinator	N
0060	9	HWU Secretary	N
0061	11	HWU Secretary, Senior	N
4306	9	HWU (SOC) Secretary	N
4305	11	HWU (SOC) Secretary, Senior	N
4313	13	HWU Utility Locator/Geospatial Technician	N
4302	17	HWU Utility System Crew Leader	N
4304	17	HWU Utility System Specialist	N
4311	30	HWU Utility System Superintendent	E
4312	9	HWU Utility System Worker I	N
4315	11	HWU Utility System Worker II	N
4319	14	HWU Utility System Worker III	N
4334	21	HWU Wastewater Treatment Operator Chief	N
4330	10	HWU Wastewater Treatment Operator I	N

City of Henderson, Kentucky Job Classifications & Grades

Code		Grade	Classification Title	FLSA	
4326		16	HWU Wastewater Treatment Operator II	N	
4356		17	HWU Water Quality Specialist	N	
4333		21	HWU Water Treatment Operator Chief	N	
4321		10	HWU Water Treatment Operator I	N	
4334		18	HWU Water Treatment Operator II	N	
3100		16	HWU Welder/Fabricator	N	
I					
0210		13	Information Technology Operations Technician	N	
0302		10	Inventory Control Technician	N	
L					
4007		7	Landscape Technician	N	
0064	+	13	Legal Secretary	N	
M					
3100		16	Maintenance Welder	N	
3304		9	Meter Reader	N	
6102		8	Municipal Facilities Assistant	N	
6110		31	Municipal Facilities Superintendent	E	
6104		13	Municipal Facilities Worker	N	
6106		15	Municipal Facilities Worker, Senior	N	
N					
0214		18	Network Administrator I	N	
0213		22	Network Administrator II	N	
O					
0389		17	Occupational Tax Representative Administrator	N	
0391		9	Occupational Tax Representative	N	
0112		7	Office Assistant	N	
P					
1000		7	Parking Enforcement Officer	N	
4101		21	Parks and Cemeteries Superintendent	E	
1020	{PD14}	<u>HD14</u>	Police Chief	E	
1012	+	{PD11}	<u>HD11</u>	Police Lieutenant	E
1014	{PD12}	<u>HD12</u>	Police Major	E	
1004	{PD7, PD9, PD11}	<u>HD7, HD9, HD11</u>	Police Officer	N	
1008	{PD9, PD11, PD12}	<u>HD9, HD11, HD12</u>	Police Sergeant	N	
0221		24	Programmer/Analyst	N	
1202		12	Property Maintenance Inspector	N	
4117		30	Public Works Engineer	E	
R					
1306		17	Radio Network Systems Technician	N	
7005		8	Recreation Center Worker	N	
7006		15	Recreation Facilities Supervisor	E	
7010		23	Recreation Program Manager	E	
0312		20	Revenue Supervisor	N	
S					
0515		20	Safety & Training Coordinator	N	
4108		30	Sanitation Superintendent	E	
4001		5	Sanitation Worker	N	
4002		6	Sanitation Worker, Senior	N	
4009	+	9	Scale Operator	N	
1001		3	School Crossing Guard	N	
0060		9	Secretary	N	
0061		11	Secretary, Senior	N	
4110		30	Street Superintendent	E	
0212		17	System Administrator	N	
T					
4039		12	Traffic Control Supervisor	N	

City of Henderson, Kentucky Job Classifications & Grades

Code †	Grade	Classification Title	<u>FLSA</u>
4211	16	Transit Mechanic Supervisor	N
3711	30	Transit Superintendent	E
		U	
3309	20	Utility Billing Supervisor	N
3303	12	Utilities Servicer	N
		V	
4206	14	Vehicle Mechanic	N
4203	8	Vehicle Servicer	N
4202	6	Vehicle Servicer Helper	N

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[Police Department Sworn Officers] Hazardous Duty Grade & Salary Ranges
Effective December , 2016

<u>Grade</u>	<u>Grade</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>	<u>Step 4</u>	<u>Step 5</u>	<u>Step 6</u>	<u>Step 7</u>	<u>Step 8</u>	<u>Step 9</u>	<u>Step 10</u>
PD1	HD1	18,343.00	18,956.00	19,566.00	20,173.00	20,783.00	21,140.00	21,743.00	22,351.00	22,375.00	22,941.00
PD2	HD2	20,623.00	21,114.00	21,797.00	22,375.00	22,629.00	23,295.00	23,961.00	24,627.00	25,293.00	25,959.00
PD3	HD3	22,502.00	23,252.00	24,002.00	24,752.00	25,502.00	26,252.00	27,002.00	27,752.00	28,502.00	29,252.00
PD4	HD4	25,261.00	26,103.00	26,945.00	27,787.00	28,629.00	29,471.00	30,313.00	31,155.00	31,997.00	32,839.00
PD5	HD5	28,262.00	29,204.00	30,146.00	31,088.00	32,030.00	32,972.00	33,914.00	34,856.00	35,798.00	36,740.00
PD6	HD6	31,504.00	32,554.00	33,604.00	34,654.00	35,704.00	36,754.00	37,804.00	38,854.00	39,904.00	40,954.00
PD7	HD7	35,009.00	36,176.00	37,343.00	38,510.00	39,677.00	40,844.00	42,011.00	43,178.00	44,345.00	45,512.00
PD8	HD8	38,771.00	40,063.00	41,355.00	42,647.00	43,939.00	45,231.00	46,523.00	47,815.00	49,107.00	50,399.00
PD9	HD9	42,823.00	44,250.00	45,677.00	47,104.00	48,531.00	49,958.00	51,385.00	52,812.00	54,239.00	55,666.00
PD10	HD10	47,158.00	48,730.00	50,302.00	51,874.00	53,446.00	55,018.00	56,590.00	58,162.00	59,734.00	61,306.00
PD11	HD11	51,811.00	53,538.00	55,265.00	56,992.00	58,719.00	60,446.00	62,173.00	63,900.00	65,627.00	67,354.00
PD12	HD12	62,101.00	64,171.00	66,241.00	68,311.00	70,381.00	72,451.00	74,521.00	76,591.00	78,661.00	80,731.00
PD13	HD13	73,846.00	76,308.00	78,770.00	81,232.00	83,694.00	86,156.00	88,618.00	91,080.00	93,542.00	96,004.00
PD14	HD14	87,263.00	90,172.00	93,081.00	95,990.00	98,899.00	101,808.00	104,717.00	107,626.00	110,535.00	113,444.00
PD15	HD15	102,646.00	106,068.00	109,490.00	112,912.00	116,334.00	119,756.00	123,178.00	126,600.00	130,022.00	133,444.00

HAZARDOUS DUTY GRADE & STEP SCHEDULE

FIRE FIGHTER				
YEAR 1	GS 7 STEP 1 - \$35,006			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
	\$10.30	\$10.51	\$698.88	
	\$10.30	\$10.51	\$698.88	
	\$10.30	\$10.51	\$698.88	
	\$10.30	\$10.51	\$698.88	
	\$2,795.52			
YEAR 2	GS 7 STEP 2 - \$36,192			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
	\$10.71	\$10.87	\$532.48	
	\$10.71	\$10.87	\$532.48	
	\$10.71	\$10.87	\$532.48	
	\$10.66	\$10.87	\$698.88	
	\$10.71	\$10.87	\$532.48	
	\$2,828.80			
YEAR 3	GS 7 STEP 3 - \$37,356			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
	\$10.87	\$11.22	\$1,164.80	
	\$10.87	\$11.22	\$1,164.80	
	\$10.87	\$11.22	\$1,164.80	
	\$10.87	\$11.22	\$1,164.80	
	\$10.87	\$11.22	\$1,164.80	
	\$10.82	\$11.22	\$1,331.20	
	\$10.87	\$11.22	\$1,164.80	
	\$10.87	\$11.22	\$1,164.80	
	\$9,484.80			
YEAR 5	GS 7 STEP 4 - \$38,521			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
	\$11.06	\$11.57	\$1,697.28	
	\$1,697.28			
YEAR 7	GS 7 STEP 5 - \$39,686			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
	\$11.60	\$11.92	\$1,064.96	
	\$11.15	\$11.92	\$2,562.56	
	\$11.37	\$11.92	\$1,830.40	
	\$5,457.92			
YEAR 9	GS 7 STEP 6 - \$40,851			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
			\$12.27	
	\$12.27			
YEAR 10	GS 9 STEP 1 - \$42,827			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>	
			\$12.86	
	\$12.86			

YEAR 11		GS 9 STEP 2 - \$44,262		
NAME	CURRENT	NEW	DIFFERENCE	
	\$12.37	\$13.29	\$3,061.76	
			\$3,061.76	
YEAR 12		GS 9 STEP 3 - \$45,677		
NAME	CURRENT	NEW	DIFFERENCE	
		\$13.72		
			\$13.72	
YEAR 14		GS 9 STEP 4 - \$47,112		
NAME	CURRENT	NEW	DIFFERENCE	
		\$14.15		
			\$14.15	
YEAR 16		GS 9 STEP 5 - \$48,526		
NAME	CURRENT	NEW	DIFFERENCE	
	\$13.76	\$14.58	\$2,728.96	
			\$2,728.96	
YEAR 18		GS 9 STEP 6 - \$49,961		
NAME	CURRENT	NEW	DIFFERENCE	
	\$13.77	\$15.01	\$4,126.72	***** STIPEND
			\$4,126.72	
YEAR 20		GS 9 STEP 7 - \$51,385		
NAME	CURRENT	NEW	DIFFERENCE	
		\$15.56		
			\$15.56	
YEAR 22		GS 9 STEP 8 - \$52,812		
NAME	CURRENT	NEW	DIFFERENCE	
		\$16.08		
			\$16.08	
YEAR 24		GS 9 STEP 9 - \$54,239		
NAME	CURRENT	NEW	DIFFERENCE	
		\$17.12		
			\$17.12	
YEAR 25		GS 9 STEP 10 - \$55,666		
NAME	CURRENT	NEW	DIFFERENCE	
		\$17.64		
			\$17.64	

FIRE FIGHTER GRAND TOTAL \$32,181.76

CURRENT HFD FIRE FIGHTER AVERAGE PAY:	\$36,981.01
PROPOSED HFD FIRE FIGHTER AVERAGE PAY:	\$38,321.92
KLC MEDIAN (50%):	\$38,400.00

ENGINEER			
YEAR 1	GS 8 STEP 1 - \$38,771		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
			\$11.64
YEAR 2	GS STEP 2 - \$40,063		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$11.99	\$12.03	\$133.12
			\$133.12
YEAR 3	GS 8 STEP 3 - \$41,355		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$12.08	\$12.42	\$1,131.52 **
	\$12.08	\$12.42	\$1,131.52 **
	\$12.13	\$12.42	\$965.12 **
			\$3,228.16
YEAR 5	GS 8 STEP 4 - \$42,647		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$12.50	\$12.81	\$1,031.68 **
			\$1,031.68
YEAR 7	GS 8 STEP 5 - \$43,939		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$12.83	\$13.20	\$1,231.36 **
	\$12.83	\$13.20	\$1,231.36 **
	\$13.03	\$13.20	\$565.76
			\$3,028.48
YEAR 9	GS 8 STEP 6 - \$45,231		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$13.54	\$13.59	\$166.40 **
	\$13.54	\$13.59	\$166.40 **
	\$13.42	\$13.59	\$565.76 **
			\$898.56
YEAR 10	GS 10 STEP 1 - \$47,158		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$13.95	\$14.17	\$732.16 **
			\$732.16
YEAR 11	GS 10 STEP 2 - \$48,730		
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$14.38	\$14.64	\$865.28
	\$14.32	\$14.64	\$1,064.96 **
			\$1,064.96

LIEUTENANT

YEAR 1 GS 9 STEP 1 - \$42,827			
NAME	CURRENT	NEW	DIFFERENCE
			\$12.86

YEAR 2 GS 9 STEP 2 - \$44,241			
NAME	CURRENT	NEW	DIFFERENCE
	\$13.09	\$13.29	\$665.60
			\$665.60

ANOMALY, YEAR 1 LT. IMPLEMENT AS YEAR 2

YEAR 3 GS 9 STEP 3 - \$45,667			
NAME	CURRENT	NEW	DIFFERENCE
	\$13.45	\$13.72	\$898.56
			\$898.56

ANOMALY, YEAR 1 LT. IMPLEMENT AS YEAR 3

YEAR 5 GS 9 STEP 4 - \$47,112			
NAME	CURRENT	NEW	DIFFERENCE
	\$13.74	\$14.16	\$1,397.76
			\$1,397.76

ANOMALY, YEAR 1 LT. IMPLEMENT AS YEAR 5

YEAR 7 GS 9 STEP 5 - \$48,526			
NAME	CURRENT	NEW	DIFFERENCE
			\$14.58

YEAR 9 GS 9 STEP 6 - \$49,961			
NAME	CURRENT	NEW	DIFFERENCE
	\$14.69	\$15.01	\$1,064.96
			\$1,064.96

ANOMALY, YEAR 2 LT. IMPLEMENT AS YEAR 9

YEAR 10 GS 11 STEP 1 - \$51,812			
NAME	CURRENT	NEW	DIFFERENCE
	\$15.00	\$15.56	\$1,863.68
			\$1,863.68

YEAR 11 GS 11 STEP 2 - \$53,539			
NAME	CURRENT	NEW	DIFFERENCE
	\$15.59	\$16.08	\$1,630.72
	\$15.98	\$16.08	\$332.80
	\$15.83	\$16.08	\$832.00
	\$15.78	\$16.08	\$998.40
			\$998.40

ANOMALY, YEAR 1 LT. IMPLEMENT AS YEAR 11

YEAR 12 GS 11 STEP 3 - \$55,265			
NAME	CURRENT	NEW	DIFFERENCE
	\$16.14	\$16.61	\$1,564.16
	\$16.14	\$16.61	\$1,564.16
			\$3,128.32

ANOMALY, YEAR 11 LT. IMPLEMENT AS YEAR 12

ANOMALY, YEAR 9 LT. IMPLEMENT AS YEAR 12

YEAR 14 GS 11 STEP 4 - \$56,992			
NAME	CURRENT	NEW	DIFFERENCE
			\$17.12

YEAR 16 GS 11 STEP 5 - \$58,718			
NAME	CURRENT	NEW	DIFFERENCE
			\$17.64

YEAR 18 GS 11 STEP 6 - \$60,444			
NAME	CURRENT	NEW	DIFFERENCE
			\$18.16

YEAR 20 GS 12 STEP 1 - \$62,108			
NAME	CURRENT	NEW	DIFFERENCE
	\$16.14	\$18.66	\$8,386.56
			\$8,386.56

LIEUTENANT GRAND TOTAL \$18,403.84

CURRENT HFD LIEUTENANT AVERAGE PAY:	\$50,355.41
PROPOSED HFD LIEUTENANT AVERAGE PAY:	\$52,122.03
RLC MEDIAN (50%):	\$51,856.00

CAPTAIN				
YEAR 1	GS 10 STEP 6 - \$55,018			
NAME	CURRENT	NEW	DIFFERENCE	
			\$26.45	

YEAR 3	GS 10 STEP 7 - \$56,590			
NAME	CURRENT	NEW	DIFFERENCE	
			\$27.20	

YEAR 5	GS 10 STEP 8 - \$58,162			
NAME	CURRENT	NEW	DIFFERENCE	
	\$27.35	\$27.96	\$1,268.80 **	
			\$1,268.80	

YEAR 7	GS 10 STEP 9 - \$59,734			
NAME	CURRENT	NEW	DIFFERENCE	
			\$28.71	

YEAR 9/10	GS 10 STEP 10 - \$61,306			
NAME	CURRENT	NEW	DIFFERENCE	
	\$26.29	\$29.47	\$6,614.40	
			\$6,614.40	

+ CAPTAIN GRAND TOTAL **\$7,883.20**

CURRENT HFD CAPTAIN AVERAGE PAY:	\$55,785.60
PROPOSED HFD CAPTAIN AVERAGE PAY:	\$59,727.20
KLC MEDIAN (50%):	\$55,476.00

+

+

ASSISTANT CHIEF

YEAR 1			
GS 12 STEP 1 - \$62,108			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	\$15.19	\$18.66	\$11,548.16
	\$16.01	\$18.66	\$8,819.20
	\$17.37	\$18.66	\$4,293.12
			\$24,660.48

YEAR 2			
GS 12 STEP 2 - \$64,168			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$19.28	

YEAR 3			
GS 12 STEP 3 - \$66,248			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$19.90	

YEAR 5			
GS 12 STEP 4 - \$68,307			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$20.52	

YEAR 7			
GS 12 STEP 5 - \$70,387			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$21.15	

YEAR 9			
GS 12 STEP 6 - \$72,446			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$21.78	

YEAR 10			
GS 12 STEP 7 - \$74,526			
<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$22.39	

MAJOR GRAND TOTAL \$24,660.48

CURRENT HFD ASST CHIEF AVERAGE PAY:	\$53,880
PROPOSED HFD ASST CHIEF AVERAGE PAY:	\$62,100
KLC MEDIAN (50%):	\$70,024

FIRE CHIEF			
YEAR 1	GS 13 STEP 3 - \$78,770		
NAME	CURRENT	NEW	DIFFERENCE

YEAR 2			
GS 13 STEP 4 - \$81,232			
NAME	CURRENT	NEW	DIFFERENCE
	35.79	\$39.05	\$6,780.80
			\$6,780.80

YEAR 3			
GS 13 STEP 5 - \$83,694			
NAME	CURRENT	NEW	DIFFERENCE
		\$40.23	

YEAR 5			
GS 13 STEP 6 - \$86,156			
NAME	CURRENT	NEW	DIFFERENCE
+		\$41.42	

YEAR 7			
GS 13 STEP 7 - \$88,618			
NAME	CURRENT	NEW	DIFFERENCE
		\$42.60	

YEAR 9			
GS 13 STEP 8 - \$91,080			
NAME	CURRENT	NEW	DIFFERENCE
		\$43.79	

YEAR 10			
GS 13 STEP 9 - \$93,542			
NAME	CURRENT	NEW	DIFFERENCE
		\$44.97	

FIRE CHIEF GRAND TOTAL \$6,780.80

CURRENT HFD FIRE CHIEF AVERAGE PAY:	\$74,443.20
PROPOSED HFD FIRE CHIEF AVERAGE PAY:	\$81,224.00
KLC MEDIAN (50%):	\$82,720.00

+

+

OFFICERS				
YEAR 1	GS 7 STEP 1 - \$35,006			
	NAME	CURRENT	NEW	DIFFERENCE
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
		\$16.47	\$16.83	\$748.80
				\$5,990.40
GS 7 STEP 2 - \$36,192				
YEAR 2	NAME	CURRENT	NEW	DIFFERENCE
		\$16.76	\$17.40	\$1,331.20
		\$17.14	\$17.40	\$540.80
		\$17.18	\$17.40	\$457.60
		\$17.18	\$17.40	\$457.60
				\$2,787.20
GS 7 STEP 3 - \$37,356				
YEAR 3	NAME	CURRENT	NEW	DIFFERENCE
		\$17.18	\$17.96	\$1,622.40
		\$17.22	\$17.96	\$1,539.20
		\$17.44	\$17.96	\$1,081.60
		\$17.44	\$17.96	\$1,081.60
		\$17.22	\$17.96	\$1,539.20
		\$17.18	\$17.96	\$1,622.40
		\$17.40	\$17.96	\$1,164.80
		\$17.18	\$17.96	\$1,622.40
		\$17.35	\$17.96	\$1,268.80
		\$17.35	\$17.96	\$1,268.80
				\$13,811.20
GS 7 STEP 4 - \$38,521				
YEAR 5	NAME	CURRENT	NEW	DIFFERENCE
		\$17.79	\$18.52	\$1,518.40
		\$17.83	\$18.52	\$1,435.20
		\$17.61	\$18.52	\$1,892.80
		\$17.61	\$18.52	\$1,892.80
				\$6,739.20

OFFICERS				
YEAR 7	GS 7 STEP 5 - \$39,686			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$17.97	\$19.08	\$2,308.80
		\$18.33	\$19.08	\$1,560.00
		\$17.97	\$19.08	\$2,308.80
				\$6,177.60
YEAR 9	GS 7 STEP 6 - \$40,851			
		\$19.07	\$19.64	\$1,185.60
				\$1,185.60
YEAR 10	GS 9 STEP 1 - \$42,827			
		\$19.89	\$20.59	\$1,456.00
		\$19.02	\$20.59	\$3,265.60
				\$4,721.60
YEAR 11	GS 9 STEP 2 - \$44,262			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$20.29	\$21.28	\$2,059.20
				\$2,059.20
YEAR 12	GS 9 STEP 3 - \$45,677			
		\$21.18	\$21.96	\$1,622.40
		\$21.25	\$21.96	\$1,476.80
				\$3,099.20
YEAR 14	GS 9 STEP 4 - \$47,112			
		\$22.02	\$22.65	\$1,310.40
		\$21.89	\$22.65	\$1,580.80
		\$21.41	\$22.65	\$2,579.20
				\$5,470.40
YEAR 16	GS 9 STEP 5 - \$48,526			
		\$22.02	\$23.33	\$2,724.80
		\$22.02	\$23.33	\$2,724.80
		\$22.02	\$23.33	\$2,724.80
				\$8,174.40

OFFICERS				
YEAR 18	GS 9 STEP 6 - \$49,961			
		\$22.02	\$24.02	\$4,160.00
		\$22.02	\$24.02	\$4,160.00
				\$8,320.00
YEAR 20	GS 11 STEP 1 - \$51,812			
		\$22.02	\$24.91	\$6,011.20
				\$6,011.20
YEAR 22	GS 11 STEP 2 - \$53,539			
	LAST, FIRST		\$25.74	
YEAR 24	GS 11 STEP 4 - \$56,992			
		\$22.02	\$27.40	\$11,190.40
				\$11,190.40
YEAR 26	GS 11 STEP 5 - \$58,718			
	LAST, FIRST		\$28.23	
YEAR 28	GS 11 STEP 6 - \$60,444			
	LAST, FIRST		\$29.06	
YEAR 30	GS 11 STEP 7 - \$62,192			
	LAST, FIRST		\$29.90	
	OFFICER GRAND TOTAL			\$85,737.60
	CURRENT HPD OFFICER AVERAGE PAY:			\$38,745.78
	PROPOSED HPD OFFICER AVERAGE PAY:			\$40,651.06
	KLC MEDIAN (50%):			\$40,760.00

+

SERGEANTS				
YEAR 1	GS 9 STEP 1 - \$42827			
	NAME	CURRENT	NEW	
	LAST, FIRST		\$20.59	
YEAR 2	GS 9 STEP 2 - \$44,241			
	NAME	CURRENT	NEW	DIFFERENCE
		\$19.22	\$21.27	\$4,264.00
				\$4,264.00
YEAR 3	GS 9 STEP 3 - \$45,667			
	NAME	CURRENT	NEW	DIFFERENCE
		\$19.22	\$21.96	\$5,699.20
		\$19.75	\$21.96	\$4,596.80
				\$10,296.00
YEAR 5	GS 9 STEP 4 - \$47,112			
	NAME	CURRENT	NEW	
	LAST, FIRST		\$22.65	
YEAR 7	GS 9 STEP 5 - \$48,526			
	NAME	CURRENT	NEW	
	LAST, FIRST		\$23.33	
	GS 9 STEP 6 - \$49,961			
YEAR 9	LAST, FIRST		\$24.02	
	GS 11 STEP 1 - \$51,812			
YEAR 10		\$24.49	\$24.90	\$852.80
		\$24.29	\$24.90	\$1,268.80
				\$2,121.60
	GS 11 STEP 2 - \$52,539			
YEAR 11	NAME	CURRENT	NEW	
	LAST, FIRST		\$25.74	
	GS 11 STEP 3 - \$55,265			
YEAR 13		\$24.41	\$26.57	\$4,492.80
				\$4,492.80
	GS 11 STEP 4 - \$56,992			
YEAR 15	LAST, FIRST		\$27.40	
	GS 11 STEP 5 - \$58,718			
YEAR 17	LAST, FIRST		\$28.23	
	GS 11 STEP 6 - \$60,444			
YEAR 19	LAST, FIRST		\$29.06	
	GS 12 STEP 1 - \$62,108			
YEAR 20	LAST, FIRST		\$29.86	
	SERGEANT GRAND TOTAL			\$21,174.40
	CURRENT HPD SERGEANT AVERAGE PAY:			\$45,545.07
	PROPOSED HPD SERGEANT AVERAGE PAY:			\$49,074.13
	KLC MEDIAN (50%):			\$50,106.00

YEAR 3 SERGEANTS, EACH HAVE 15 YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID THE GRADE UP, TWO STEPS DOWN CONVERSION.

LIEUTENANT				
YEAR 1	GS 11 STEP 1 - \$51,812			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$24.90	
YEAR 2	GS 11 STEP 2 - \$53,539			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$23.32	\$25.79	\$5,137.60
		\$24.70	\$25.79	\$2,267.20
				\$7,404.80
YEAR 3	GS 11 STEP 3 - \$55,265			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$26.57	
YEAR 5	GS 11 STEP 4 - \$56,992			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$26.80	\$27.40	\$1,248.00
				\$1,248.00
				2 YEAR LIEUTENANT, 16 TOTAL YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID NOT DO THE GRADE UP, TWO STEPS DOWN CONVERSION, BECAUSE IT WOULD
YEAR 7	GS 11 STEP 5 - \$58,718			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$28.23	
YEAR 9	GS 11 STEP 6 - \$60,444			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$29.06	
YEAR 10	GS 11 STEP 7 - \$62,173			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$28.87	\$29.89	\$2,121.60
				\$2,121.60
				3 YEAR LIEUTENANT, 27 YEARS OF SERVICE. ANOMALY, IN ORDER TO AVOID DECREASE IN PAY, WE DID THE GRADE UP, TWO STEPS DOWN CONVERSION.
	LIEUTENANT GRAND TOTAL			\$10,774.40
	CURRENT HPD LIEUTENANT AVERAGE PAY:			\$53,918.80
	PROPOSED HPD LIEUTENANT AVERAGE PAY:			\$56,612.40
	KLC MEDIAN (50%):			\$55,476.00

Major				
YEAR 1	GS 12 STEP 1- \$62,108			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$29.86	
YEAR 2	GS 12 STEP 2- \$64,168			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$30.85	
YEAR 3	GS 12 STEP 3 - \$66,248			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$31.85	
YEAR 5	GS 12 STEP 4- \$68,307			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$32.84	
YEAR 7	GS 12 STEP 5 - \$70,387			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$33.84	
YEAR 9	GS 12 STEP 6 - \$72,446			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$34.84	
YEAR 10	GS 12 STEP 7 - \$74,526			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$35.83	
	MAJOR GRAND TOTAL			N/A
	CURRENT HPD MAJOR AVERAGE PAY:			N/A
	PROPOSED HPD MAJOR AVERAGE PAY:			N/A
	KLC MEDIAN (50%):			\$71,769

DEPUTY CHIEF				
YEAR 1	GS 13 STEP 1 - \$73,840			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$32.65	\$35.50	\$5,928.00
				\$5,928.00
YEAR 2	GS 13 STEP 2 - \$76,315			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$36.69	
YEAR 3	GS 13 STEP 3 - \$78,769			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$36.39	
YEAR 5	GS 13 STEP 4 - \$81,224			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$39.05	
YEAR 7	GS 13 STEP 5 - \$83,699			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$40.24	
YEAR 9	GS 13 STEP 6 - \$86,153			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$41.42	
YEAR 10	GS 13 STEP 7 - \$88,618			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$41.95	
	DEPUTY CHIEF GRAND TOTAL			\$5,928.00
	CURRENT HPD DEPUTY CHIEF AVERAGE PAY:			\$67,912.00
	PROPOSED HPD DEPUTY CHIEF AVERAGE PAY:			\$73,840.00
	KLC MEDIAN (50%):			\$70,678

POLICE CHIEF				
YEAR 1	GS 14 STEP 2 - \$90,172			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
		\$37.22	\$43.35	\$12,750.40
				\$12,750.40
YEAR 2	GS 14 STEP 3 - \$93,080			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$44.75	
YEAR 3	GS 14 STEP 4 - \$95,992			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$46.15	
YEAR 5	GS 14 STEP 5 - \$98,904			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$46.15	
YEAR 7	GS 14 STEP 6 - \$101,816			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$48.95	
YEAR 9	GS 14 STEP 7 - \$104,717			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$49.35	
YEAR 10	GS 14 STEP 8 - \$107,626			
	<u>NAME</u>	<u>CURRENT</u>	<u>NEW</u>	<u>DIFFERENCE</u>
	LAST, FIRST		\$51.74	
	POLICE CHIEF GRAND TOTAL			\$12,750.40
	CURRENT HPD POLICE CHIEF AVERAGE PAY:			\$77,417.60
	PROPOSED HPD POLICE CHIEF AVERAGE PAY:			\$90,168.00
	KLC MEDIAN (50%):			\$89,330.00

City Commission Memorandum
16-273

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Amending Employee Manual in Relation to Fire Department
Suppression Personnel and Staff Officers

Contingent upon the Ordinance Relating to Pay Plan passing, enclosed for first reading at the called meeting on December 12, 2016 is an ordinance amending Article 136 *Transfer Policy*, Article 152 *Annual Performance Evaluation Policy*, Article 212 *Entrance Rate of Pay*, Article 220 *Rate of Pay Upon Job Classification Change*, Article 210 *Basic Salary Schedule*, Article 214 *Pay Plan*, and Article 216 *Performance Pay Increases for Civil Service Employees* of the Employee Manual of the City of Henderson in relation to Fire Department suppression personnel and staff officers. Your consideration of this request is appreciated.

LEGAL DEPARTMENT

MEMORANDUM 16-11

To: Russell Sights, City Manager
Connie Galloway, Human Resources Director
Charles "Chip" Stauffer, Chief of Henderson Police Department
Scott Foreman, Chief of the Henderson Fire Department

From: Dawn S. Kelsey, City Attorney *ds*

Dated: December 9, 2016

Subject: Employee Handbook Revisions

Provided the Commission adopts the Amended Job Classification and Pay Plan to include the reclassification of Suppression Personnel and Staff Officers of the Fire Department and merges it with the Police Department Sworn Officer Job Classification and Pay Plan to create a Hazardous Duty Pay Plan, then corresponding revisions reflecting those changes will need to be made to the City of Henderson Employee Manual.

Article 136 Transfer Policy

At the December 6, 2016 Commission meeting, the Commission approved changes to Article 136 Transfer Policy removing the option of transfer for police and fire employees because of the change of the Police Sworn Officer Pay Plan. However, with the new Hazardous Duty Pay Plan, the transfer option can be reinserted, and both chiefs have indicated their desire to have this option.

Article 152 Performance Evaluation

Under the new Hazardous Duty Pay Plan, a police officer or firefighter must achieve the minimum score of 75 on his/her performance evaluation to be considered for a step or grade increase and also be due for a change in step under the Hazardous Duty grade and step schedule. Article 152 is revised to reflect this requirement.

Article 212 Entrance Rate of Pay

The change clarifies pay policy for hazardous duty employees who are temporarily assigned to a higher classification.

Article 220 Rate of Pay Upon Job Classification Change

This change clarifies how hazardous duty employees will move to grade and steps. It also clarifies that hazardous duty employees will not be eligible for a pay increase after the first six (6) months in probationary service.

Article 210 Basic Salary Schedule

The change clarifies that hazardous duty employee's ranges of pay consists of grades and steps. Civil Service employees' salaries are in grades with salary ranges with minimum rate, midpoint rate and a maximum rate (as opposed to steps).

Article 214 Pay Plan

The revisions in this Article reflect the requirement of a minimum score of 75 on the Hazardous Duty Performance Evaluation (along with approval of the City Manager and respective Department Head) for a hazardous duty employee to move to a next step after their first year of service. It again clarifies that hazardous duty employees are not eligible for an increase at the six (6) month probationary period. It also clarifies that hazardous duty employees must receive a minimum score of 75 on their annual performance evaluation in order to be eligible for an increase in step or grade. Also, it clarifies that even if a hazardous duty employee does receive a minimum score of 75 on their annual performance evaluation, if an increase in the step is not due under the Hazardous Duty grade and step schedule, then the employee will not be moved to the next step. Additionally, it clarifies that hazardous duty employees are not eligible for longevity pay.

Article 216 Performance Pay Increase for Civil Service Employees

The revision in this article reflects that Performance Pay increases apply to civil service employees not to hazardous duty employees.

ORDINANCE NO. _____

ORDINANCE AMENDING EMPLOYEE MANUAL

SUMMARY: ORDINANCE AMENDING ARTICLE 136 –*TRANSFER POLICY*,
ARTICLE 152-ANNUAL PERFORMANCE EVALUATION POLICY,
ARTICLE 212-ENTRANCE RATE OF PAY, ARTICLE 220-*RATE OF PAY UPON JOB CLASSIFICATION CHANGE*, ARTICLE 210-*BASIC SALARY SCHEDULE*, ARTICLE 214 *PAY PLAN* AND ARTICLE 216 - *PERFORMANCE PAY INCREASES FOR CIVIL SERVICE EMPLOYEES* OF THE EMPLOYEE MANUAL OF THE CITY OF HENDERSON

WHEREAS, as part of the Hazardous Duty Job Classification and Pay Plan amendment to the City of Henderson Job Classifications and Pay Plan, hazardous duty employees will no longer be eligible for a merit increase at six (6) months probationary periods or eligible for longevity pay;

WHEREAS, the amended City of Henderson Job Classifications and Pay Plan which includes the Hazardous Duty Job Classification and Pay Plan may allow police officers or firefighters to be eligible to transfer between departments if they are in the same job classifications; and

WHEREAS, the applicable portions of the Employee Manual must be amended to reflect these changes.

BE IT ORDAINED by the City of Henderson, Kentucky, that Articles 136-*Transfer Policy*, Article 152-*Annual Performance Evaluation Policy*, Article 212-*Entrance Rate of Pay*, Article 220-*Rate of Pay Upon Job Classification Change*, Article 210-*Basic Salary Schedule*, Article 214- *Pay Plan* and Article 216-*Performance Pay Increases for Civil Service Employees* of the City’s Employee Manual is hereby amended, copies of which are attached hereto, marked Exhibit “A”, and made a part hereof by reference.

This ordinance shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for a second reading at a meeting of the Board of Commissioners.

On second reading of the ordinance, it was moved by Commissioner _____, seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called. On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered that it be recorded.

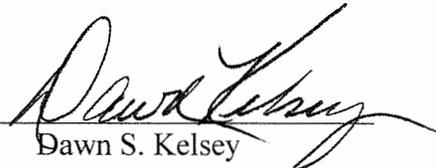
Steve Austin, Mayor

Date: _____

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 9 DAY OF
DECEMBER, 2016.**

By: 
Dawn S. Kelsey
City Attorney

ARTICLE 136 – TRANSFER POLICY

- A. There are two types of transfer: Department initiated and employee initiated. Qualified employees may transfer between Departments or Divisions, provided the following conditions are met:
1. Department Initiated:
 - a. Department Heads of affected Departments are aware of the need for a transfer and agree in writing that the transfer is the best interest of the City and/or employee before official contact is made with the employee.
 - b. The employee shall have the best qualifications to fill the position.
 - c. The employee's position classification will not change as a result of the transfer except as referred to in (i.).
 - i. For the purpose of the Transfer Policy, the position classifications of police officer or firefighter may also be considered a transfer provided the employee has fulfilled all contractual obligations including thirty-six (36) months of service following the completion of all initial training.
 - d. All transfers must be handled through the Human Resources Department and be approved by the City Manager upon written request of each Department Head as appropriate.
 2. Employee Initiated:
 - a. The employee, through the chain of command, must notify his/her current Department Head of the desire to transfer and the reason(s) for making such a request should be submitted in writing.
 - b. The employee shall have the best qualifications to fill the position.
 - c. The employee's position classification will not change as a result of the transfer except as referred to in (i.).
 - i. For the purpose of the Transfer Policy, the position classifications of police officer or firefighter may also be considered a transfer provided the employee has fulfilled all contractual obligations including thirty-six (36) months of service following the completion of all initial training.
 - d. All transfers must be handled through the Human Resources Department and be approved by the City Manager upon written request of both Department Heads.
- B. The transfer will require a 6-month non-merit evaluation and a 12-month probationary period evaluation and the annual performance evaluation date of the transferred employee will remain the same.

ARTICLE 152 – ANNUAL PERFORMANCE EVALUATION POLICY

The City shall require each Department Head, Supervisor, or designee to complete a performance evaluation for each regular full-time and regular part-time employee on an annual basis. All new employees in any classification shall be evaluated at the end of their first six (6) months of service. This evaluation system allows an employee and his/her Supervisor to discuss job performance and productivity, as well as any concerns or problems that may exist, with the objective of correcting any deficiencies or problems.

- A. Department Heads/Supervisors shall furnish a written narrative to support any rating that does not meet expectations, sometimes meet expectations or usually exceeds expectations rating given in any category.
- B. Civil Service e[E]mployees must obtain the minimum score(s) on the written annual performance evaluation to be considered for a merit pay increase. Hazardous Duty employees must achieve a minimum score of 75 to be considered for a step or grade increase and an increase is due under the Hazardous Duty grade and step schedule.
- C. If there are other reasons or extenuating circumstances that should be considered in making a decision on whether or not an individual employee is to receive a merit pay or a step or grade increase, the Department Head must submit these reasons in writing to the City Manager who shall determine whether or not the reasons or circumstances provided shall be relevant to the Department Head's recommendation for or against a merit pay or a step or grade increase.
- D. Annual performance evaluations shall be reviewed with and signed by the employee evaluated. Any employee who disagrees with a written evaluation may note his/her reasons for disagreement in writing at the time of the evaluation.
- E. Evaluations shall be submitted to the Human Resources Director on the appropriate form and shall be forwarded to the City Manager.
- F. Any disagreement an employee has noted in writing on an evaluation shall be reviewed by the City Manager. The City Manager will review all comments made by individual employees. The City Manager or his designee will discuss all written comments with individual Department Heads and respond to the employee in writing.
- G. The City Manager shall approve or disapprove all recommendations.
- H. All evaluation records shall be filed in the Human Resources Department for future reference relative to promotion, job status, or pay increases.
- I. The period for these evaluations shall commence on the employee's annual performance evaluation date. The same provisions for annual evaluation and merit pay increase shall apply to the City Manager and City Attorney except that the evaluation shall be performed by the Board of Commissioners.
- J. An employee must undergo a performance evaluation prior to a job promotion. Any merit increase resulting from the performance evaluation will be pro-rated based upon whole months of service completed in the current evaluation period. A Hazardous Duty employee is not eligible for an evaluation prior to a job promotion.

ARTICLE 212 – ENTRANCE RATE OF PAY

The minimum rate of pay for a class shall normally be offered for recruitment purposes and shall be paid upon appointment to the class. However, an exception may be granted in the following cases:

- A. Original appointments above the minimum rate may be paid if a Department Head submits a written request outlining reasons for such actions and such request is approved in writing by the Human Resources Director and the City Manager.
- B. When a former City employee is approved for re-employment (subject to Article 142, herein) to a class in which he or she was previously employed, the reappointment may be based on the rate of pay which the employee had been receiving at the termination of the most recent previous employment. A request for such reappointment must be made in writing by the Department Head and must outline reasons for such action and is subject to the approval of the Human Resources Director.
- C. Any employee who is temporarily appointed to a higher classified position than their regular position shall be temporarily compensated at the entry rate assigned to the range of the higher classified position or a five percent (5%) increase in salary, whichever is greater, provided said employee shall serve in the temporary position for thirty (30) days or more. Employees who serve in such temporary capacity shall receive payment retroactive to the first day of service in the higher classified position. An employee on the ~~[police department sworn officer]~~ Hazardous Duty pay plan who is temporarily appointed to higher classification than their regular position shall be temporarily compensated at the entry rate assigned to the range of the higher classified position or the next step in grade, whichever is greater, provided said employee shall serve in the temporary position for thirty (30) days or more. Upon completion of the temporary appointment, said employee shall revert to the salary appropriate for the grade of his/her regular classified position.

ARTICLE 210 – BASIC SALARY SCHEDULE

- A. The salary schedule provides a series of grades with a salary range for each grade; each grade represents an increase in the salary range above the preceding grade.
- B. The salary schedule for each pay grade is based on proper analysis of all facets affecting salary levels.
- C. The ranges of pay for civil service employee shall consist of a minimum rate, midpoint rate, and a maximum rate.
- D. The [~~police department sworn officer~~] Hazardous Duty pay plan ranges of pay shall consist of grades and steps. The ranges of pay for hazardous duty employees consist of a minimum step and a maximum step.

ARTICLE 214 – PAY PLAN

Except for differentials specifically authorized by this manual, every employee in the classified service shall be paid within a range established for the classification to which the employee is assigned. The specific rate to be paid each employee shall be in accordance with applicable sections of this manual.

A. 1) Civil Service Employees

Each civil service employee having successfully completed a probationary period of six (6) months of service immediately subsequent to their initial employment date with the City in a Civil Service position and based upon a satisfactory evaluation approved by the respective Department Head and by the City Manager shall be eligible for an increase of two and one-half percent (2½%) of base pay, provided that such initial employment began at the minimum rate of his/her grade and classification. ~~[Employees in classifications on the police department sworn officer pay plan are not eligible for an increase at the six (6) month probationary period.]~~ At the end of one (1) year the employee will be eligible for up to an additional percentage increase as approved in the current budget based upon a satisfactory evaluation and approved by the respective Department Head and the City Manager. All subsequent advancements in salary shall be based on a satisfactory annual evaluation and approved by the respective Department Head and the City Manager. ~~[The same probationary salary increases are applicable to Police and Fire Department probationary employees.]~~

2) Hazardous Duty Employees

At the end of the one (1) year probationary period each Hazardous Duty employee will be eligible for an increase of one step on the Hazardous Duty pay plan as approved in the current budget based upon achievement of a minimum score of 75 on his/her evaluation and approved by the respective Department Head and the City Manager. Employees in the Hazardous Duty Pay Plans are not eligible for an increase at the six (6) month probationary period.

B. 1) Civil Service Employees

All civil service employees will be eligible to receive up to an additional percentage merit salary increase as approved in the current budget if they have not reached the maximum rate within their assigned grade and classification, with such merit adjustment being based upon a satisfactory performance evaluation approved by the respective Department Head and by the City Manager.

2) Hazardous Duty Employees

Employees in classifications on the ~~[police department sworn officer]~~ Hazardous Duty pay plan will be eligible to move to the next step as established in the ~~[police department sworn officer]~~ Hazardous Duty pay plan as approved in the current budget if they have not reached ~~[the maximum rate]~~ maximum step within their assigned grade and classification, with such ~~[merit]~~ adjustment being based upon ~~[a satisfactory]~~ achievement of a score of 75 on his/her annual performance evaluation approved by the [Police Chief] respective Department Head and by the City Manager. No employee under the Hazardous Duty Pay Plan will be eligible for an increase in step or in grade unless they achieve a minimum score of 75 on their annual evaluation and an increase is due under the Hazardous Duty grade and step schedule.

C. Any civil service employee who has served at the maximum rate of his/her assigned classification for one (1) full year shall be eligible to receive longevity pay of up to the same percentage increase as the merit increase percentage in the current budget of the salary approved for that employee's grade in the annual budget, and is ineligible for merit salary increases. The percentage of longevity payment is determined by his/her annual performance evaluation. All longevity payments shall be based upon a satisfactory annual evaluation approved by the respective Department Head and by the City Manager. Longevity payments will be paid through the payroll system and shall be subject to all withholding requirements. Longevity payments are not added to the employee's base salary.

Employees in classifications on the [~~police pay sworn officer~~] Hazardous Duty pay plan shall not be eligible to receive longevity pay.

- D. Any employee who advances to the maximum rate at any time this plan is in effect will be eligible for any annual cost of living salary increase in the amount approved by the Board of Commissioners.
- E. The annual salary amounts approved by the Board of Commissioners each fiscal year shall be used as the basis for determining bi-weekly payroll amounts. The annual salary will be based on 2,080 hours of work annually for all employees except Fire Department members who work a 24-hour shift every third work day. The annual salary of shift employees in the Fire Department shall be based on a combination of 2,080 hours of work at regular salary rates and 832 hours of work at overtime rates.
- F. All City employees are paid bi-weekly on every other Friday. Each paycheck will include earnings for all work performed through the end of the previous payroll period.
- G. Police and Firefighters who qualify receive monthly incentive pay for on-going training on the last day of the month.
- H. In the event that a regularly scheduled payday falls on a day off (e.g., a weekend or holiday), employees will receive pay on the last day of work before the regularly scheduled payday.
- I. Employees shall have pay directly deposited into approved credit union or bank accounts if they have completed all proper forms and the bank or credit union has sent a payroll authorization form to Human Resources. Employees will receive their check stub for wages when the City makes direct deposit on their behalf.
- J. Only the Department Head or designee from the Department is authorized to receive paychecks from the City Clerk's Office on the designated payday. Any employee absent from work may send a signed and dated statement to his/her Department Head requesting that his/her paycheck be released to a specific family member. Paychecks will be distributed to employees at the Department level. Human Resources may hold the paycheck of any employee who has not properly completed all required payroll forms in accordance with State and Federal wage and hour regulations.

ARTICLE 220 – RATE OF PAY UPON JOB CLASSIFICATION CHANGE

A. Demotion

1. Upon demotion due to a reduction in forces or other cause which is not the fault of the employee, pay shall be at the same rate of pay in the lower grade in which the employee is placed unless the maximum rate or step for the lower grade has been reached in which case the rate of pay shall be the maximum rate or step of the lower grade.
2. Upon demotion for cause, the rate of pay in the lower grade shall be established by a disciplinary authority after considering the circumstances of the demotion.

B. Promotion

1. Any civil service employee who is promoted to a higher classified position shall receive an increase in base pay which will result in a five percent (5%) increase unless the five percent (5%) increase results in reaching or exceeding the maximum rate for the new grade in which case the rate of pay shall be the maximum rate of pay for the grade. Employees in classifications on the [~~police department sworn officer~~] Hazardous Duty pay plan will move to the grade and step as established in the [~~police~~] Hazardous pay plan.
2. Upon completion of a probationary period of six (6) months of service and based upon a satisfactory evaluation and approved by the respective Department Head and the City Manager, said employee shall be eligible for an additional increase of two and one-half percent (2½%) of base pay provided, however, that rate of pay shall not exceed the maximum rate established for the grade. Employees in the classifications on the [~~police department sworn officer~~] Hazardous Duty pay plan are not eligible for an increase at completion of the six (6) months of service in the probationary period.
3. At the end of one year, and based upon a satisfactory performance evaluation and approved by the respective Department Head and the City Manager, the employee shall have successfully completed his/her positional probationary period of employment in the higher classification and shall be eligible for additional merit pay increase per Article 152.
4. If an employee fails to successfully complete the positional probationary period of employment following a promotion and is recommended by his/her Department Head to return to a former classification and said recommendation is approved by the City Manager, pay shall be as though a promotion had not been granted. Said employee shall be eligible for any increases which would have been received had the promotion not occurred. However, there exists no inherent right of return to a previous classification.

ARTICLE 216 – PERFORMANCE PAY INCREASES FOR CIVIL SERVICE EMPLOYEES

- A. Except as provided in Article 214, each civil service employee shall be reviewed annually per Article 152 on his/her performance evaluation date for the purpose of determining eligibility for a merit increase.
- B. Each Department Head shall review personnel records, performance records, and length of service of each employee on an annual basis.
- C. With the approval of the City Manager, and a satisfactory annual evaluation, civil service employees may be eligible for an additional a merit increase until the maximum rate of their appropriate grade has been reached.
- D. Approved increases and longevity pay shall be effective at the beginning of the payroll period following the performance evaluation date.

City Commission Memorandum
16-274

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Amending Budget and Appropriation Ordinance, FY 2017, in Relation to Fire Department Suppression Personnel and Staff Officers

Enclosed for first reading at the called meeting on December 12, 2016 is an ordinance amending the Budget and Appropriation Ordinance for FY 2017 in relation to Fire Department suppression personnel and staff officers.

ORDINANCE NO. _____

ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE

SUMMARY: AN ORDINANCE AMENDING BUDGET AND APPROPRIATION ORDINANCE FOR THE FISCAL YEAR COMMENCING JULY 1, 2016 AND ENDING JUNE 30, 2017 FOR THE CITY OF HENDERSON, KENTUCKY

WHEREAS, on June 18, 2016, the City of Henderson adopted its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 21-16, and,

WHEREAS, on October 11, 2016, the City of Henderson amended its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 33-16, and,

WHEREAS, on December 6, 2016, the City of Henderson amended its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 39-16, and,

WHEREAS, on December 12, 2016, the City of Henderson amended its annual budget and appropriation ordinance for the fiscal year commencing July 1, 2016 and ending June 30, 2017, being Ordinance No. 43-16, and,

NOW, THEREFORE, BE IT ORDAINED by the City of Henderson, Kentucky, that Ordinance No. 43-16 is amended as follows:

1.

GENERAL FUND

ADMINISTRATION	\$	2,678,330	\$	2,678,330
FINANCE		2,349,210		2,349,210
FIRE		6,959,750		7,036,750
PARKS & RECREATION		1,907,470		1,907,470
POLICE		7,141,420		7,141,420
PUBLIC WORKS		2,794,760		2,794,760
INFORMATION TECHNOLOGY		1,099,510		1,099,510
TRANSFERS/AGENCIES		7,825,550		7,825,550
TOTAL	\$	<u>32,756,000</u>	\$	<u>32,833,000</u>

2. There is hereby appropriated from the General and Special Fund Accounts of the City of Henderson and allocated to the various Funds of the City the following amounts:

GENERAL FUND

GENERAL FUND EXPENDITURE TOTAL	\$ 27,117,000	\$ 27,194,000
TRANSFER TO PWI	1,176,000	1,176,000
TRANSFER TO MASS TRANSIT	684,000	684,000
TRANSFER TO CONSTRUCTION FUND	501,000	501,000
TRANSFER TO EMERGENCY COMM.	1,248,000	1,248,000
TRANSFER TO POLICE/FIRE PENSION	404,000	404,000
TRANSFER TO CIVIL SERVICE PENSION	179,000	179,000
TRANSFER TO CEMETERY	204,000	204,000
TRANSFER TO BOND FUND	1,243,000	1,243,000
TOTAL GENERAL FUND	<u>\$ 32,756,000</u>	<u>\$ 32,833,000</u>

NATURAL GAS FUND	\$ 16,613,000
HEALTH REIMBURSEMENT ARRANGE.	\$ 420,000
CIVIL SERVICE PENSION FUND	\$ 185,000
POLICE & FIRE PENSION FUND	\$ 404,000
CEMETERY FUND	\$ 405,000
HEALTH INSURANCE FUND	\$ 7,543,000
BOND FUND	\$ 4,308,000
PUBLIC WAY IMPROVEMENT FUND	\$ 1,832,000
CONSTRUCTION FUND	\$ 9,830,000
FLOOD MITIGATION FUND	\$ 861,000
HART OPERATING FUND	\$ 1,649,000
SANITATION FUND	\$ 3,262,000
EMERGENCY COMMUNICATIONS FUND	\$ 2,213,000
COMMUNITY DEVELOPMENT FUND	\$ 510,000
HOME FUND	\$ 84,000
POLICE INVESTIGATION FUND	\$ 20,000
TRI-COUNTY RECYCLING	\$ 20,000

3. This Ordinance shall be effective as of July 1, 2016.

This ordinance of amendment shall become effective upon its legal adoption.

On first reading of the foregoing ordinance, it was moved by Commissioner _____ seconded by Commissioner _____, that the ordinance be adopted on its first reading.

On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted on first reading and ordered that it be presented for second reading at a regular meeting of the Board of Commissioners.

On second reading of the foregoing ordinance, it was moved by Commissioner _____ seconded by Commissioner _____, that the ordinance be adopted.

WHEREUPON, the vote was called, on roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

WHEREUPON, Mayor Austin declared the ordinance adopted, affixed his signature and the date and ordered it be recorded.

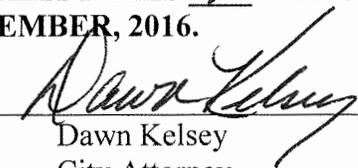
Steve Austin, Mayor

Date

ATTEST:

Maree Collins, City Clerk

**APPROVED AS TO FORM AND
LEGALITY THIS 2 DAY OF
DECEMBER, 2016.**

By: 
Dawn Kelsey
City Attorney

City Commission Memorandum
16-269

December 9, 2016

TO: Mayor Steve Austin and the Board of Commissioners

FROM: Russell R. Sights, City Manager 

SUBJECT: Purchase of Aerial Apparatus for the Fire Department

The accompanying municipal order authorizes the purchase of aerial apparatus for the Fire Department from Mid-America Fire & Safety, LLC, Evansville, Indiana in the amount of \$1,045,880.00.

The Ferrara truck is fully equipped with all the latest technology and safety equipment, and is multi-purpose and can act as a Ladder and an Engine Company.

Bid packages were sent to six vendors and advertised in the Gleaner and on the City's website, with one bid received. The bid of Mid-America Fire & Safety fully complies with the bid specifications and award is recommended accordingly.

Although the bid is over the budgeted amount in the Fiscal 2017 budget for this purchase, the Fire Chief and City Manager are of the opinion that this purchase is important enough to proceed with awarding the bid received from Mid-America. Your approval of the attached municipal order is requested.

c: Scott Foreman
Robert Gunter

Fire Department Memorandum
16-22

December 7, 2016

TO: Russell Sights, City Manager
FROM: Scott Foreman, Fire Chief
SUBJECT: Award of bid 16-31 for aerial apparatus

Specifications for an Aerial Apparatus were mailed to various vendors and advertised in area newspapers and on the City of Henderson website. All vendors were given twenty-one days to submit a bid. The bid was opened on Monday, December 5, 2016.

Mid-America Fire & Safety submitted the only bid of \$1,045,880.

Based upon Mid-America Fire & Safety meeting specifications in full, the Truck Committee and I recommend that the quote be awarded to Mid-America Fire & Safety.



Scott Foreman

cc: Robert Gunter, Finance Director

Ladder Truck Discussion Points:

- BIDS
 - Vogelpohl requested an extension and was denied by the city due to our deadline with commission meeting.
 - 11/18/2016 around 10AM Request Made
 - 11/18/2016 11:30AM both Mr. Sights and myself agreed to no extension.
 - They cited inability to submit competitive bid for the required specifications within the timeline given
 - Pierce had no contact with any committee member to ask questions or educate out committee.
 - On November 29 he contacted the Chief via Text to ask which cab we looking at, we responded that day. No other conversation was made in reference to this spec.
 - There rebuttal of Black Ruggedized material: this material is common and used by all vendors. This is also an easy exception to be made as a whole or specific to areas that they don't apply the product to.
 - The metal grade was specified to all vendors.
 - Delivery date was verified by Pierce as being 12-13 months
 - Other vendors contacted the Committee chairman Lt. Watson and were informed that they were not sole source which was a requirement in our boilerplate. Sole source makes just one source responsible for the product.
 - Per manufacture and industry wide there will be a 5% increase after January, 1 2017. Our price is good for 60 days. And increase of approx \$55,000
 - Man-hours applied to this project on the FD side would be collectively 500 hours. Lt. Watson and Engineer Mangarella.
 - Bid was written to encompass all vendors with vague terminology

- **Price**

- \$950,000 awarded by city to spend on apparatus.
- \$1,048,880 was received bid from Mid-America on the Ferrara.
 - Truck is fully equipped with all the latest technology and safety equipment.
 - Truck is multi-purpose and can act as a Ladder and an Engine Company.

- **Equipment**

- Truck has a Foam System (New / Engine 3)
- Generator with reels and receptacles (Current with this ladder with the addition of reels)
- EMS compartment
- 5" supply hose (New to ladder)
- Electric at tip to provide power to elevated locations
- Pre-piped gate valve at tip so the truck can function as a standpipe system
- Scene lighting (New to Ladder)
- Bumper Cross lays and storage for tools

- **Safety**

- Air Bags / Rollover Protection (New Tech)
- Safety restraint pre-tensioning system when enabled will lock the occupant down into the seat. (New Tech)
- Power adjustable seat with memory
- Smart wheel – All controls on steering wheel
 - Truck is currently operated with one operator, this enable the driver to operate apparatus without removing hands from the wheel (New Tech)
- Back-up camera and side cameras (Current and New tech)

- Compartments inside the cab to secure equipment which is NFPA compliance
- Slide out in every compartment to prevent back injuries.
- Ladder Rungs illuminated (NFPA/New Tech)
- Apparatus General
 - Vogel Lube System (New Tech)
 - Will prolong life of the truck and reduce maintenance cost.
 - Audible /Visible
 - Truck is equipped with more than adequate warning devices
 - Wireless Fire-Com Headsets with reach of 1600'
 - Safety (hearing) and fire ground communications
 - Safety eyelets for rope rescue at the tip of apparatus.
 - Larger pumping capacity 2000GPM
 - Multi-function nozzle, able to apply more water
 - Longer ladder with better reach for offset properties
- Evaluation
 - Similar was demoed in Henderson and performed well above expectations. (Video at Redbanks)
 - Functionality well exceeds our current apparatus
 - Has all safety features desired by FD
 - Warranty
 - 2 years Bumper to Bumper
 - 10 Year Paint
 - 20 Year ladder
 - Lifetime Chassis



Vogelpohl Fire Equipment, Inc

2770 Circleport Dr. Erlanger, Ky 41018
Office: 859-282-1000 Fax: 859-282-1550 800-797-8317

December 4, 2016

City of Henderson
222 First St.
Henderson KY 42420
Attn: Office of the Director of Finance

Re: Bid No. 16-31 Aerial Apparatus

Thank you for the opportunity to submit a bid for your aerial apparatus.

Vogelpohl Fire Equipment, Inc. is a full sales and service E-ONE dealer with offices and shop in Erlanger, Kentucky. We have experienced emergency vehicle sales personnel, trained emergency vehicle technicians, and mobile service to meet our customer's needs.

E-ONE produces a comprehensive line of fire and emergency apparatus. E-ONE is the nation's pioneer and leader in heavy-duty extruded aluminum apparatus bodies and Custom Fire Chassis. After reviewing the request for bids we do not feel that we can provide a competitive bid for this apparatus and meet the intent of the specifications within the given timeline. As such, we must supply a **NO BID** for this request.

Thank you for the opportunity to submit a bid proposal, and please keep us in mind for future needs.

Sincerely,

Kevin Kleman
E-ONE Dealer Representative
Vice President VFE
kevink@vogelpohlfire.com





5255 N State Route 60 NW * McConnelsville, Ohio 43100
800-545-3280 * 740-962-4328 * Fax 740-962-5422
www.finleyfire.com

City of Henderson, Ky.

Thank you for the opportunity to bid on your new Aerial Truck. Due to the Spec being written around one Manufacturer, we will not be bidding. One of the main reasons is all the Black ruggedized material on all the outer surfaces, stepping surfaces, and Aerial areas. This material is not NFPA certified for a stepping surface, and does not offer the longevity for life of service to meet Pierce requirements, and looks bad after a few years, therefore Pierce will not use this procedure on its Apparatus, except in hose trays, in compartments, and on top of Bumper. Manufacturers are using a lower grade metal and covering it with this rubberized product, and Pierce Apparatus are expected to last many years for service, and will not sacrifice quality. Our Delivery is 12-13 months, and with the penalty of 2 points per day we would not meet timeframe. We thank you for the opportunity, but respectfully decline to bid.

A handwritten signature in black ink that reads "K. Puckett". The signature is written in a cursive style with a large, prominent "K" and "P".

Keith Puckett
Ky. Sales Manager
270-256-7577

City of Henderson, Kentucky
Invitation to Bid

Bid Reference No. 16-31

SPECIAL CONDITIONS

The City of Henderson is soliciting sealed bids for purchase of an aerial apparatus.

1. General Requirements

Only manufacturers who fabricate their own apparatus chassis, cab, and body will be considered. The apparatus must be built and painted in a facility owned and operated by the bidder by a staff that is directly employed by the bidder. At least 15 units, similar to the type described herein, must have been sold and delivered within the past year. The competency and responsibility of bidders will be considered in making the award. These specifications, together with any other documents required herein, will be included in the final contract. Each bidder will submit a copy of his proposed contract form. If a vendor represents more than one Fire Apparatus Company, they will only bid the top of the line that meets specifications. Bids will not be considered from firms, individuals or the same owners of separate companies submitting more than one bid.

The body is to be completely built, painted, and installed by the prime body manufacturer, which minimizes third party involvement on engineering, design, service, and warranty issues. Apparatus using a subcontracted body will not be acceptable. The purchaser reserves the right to reject any or all bids, or to reject the bid of the bidder who, in the judgment of the buying authority is not in a position to perform the contract. The purchaser will not accept any bids, which do not meet these specifications and is the sole decider to deem which bid is in the best interest of the purchaser. The purchaser reserves the right to reject a bid based on unacceptable provisions of a bidder's contract and does not obligate itself to accept the lowest or any bid.

All specifications contained herein are considered minimum requirements for the manufacture and delivery of the "new" apparatus chassis and body specified herein. The terms "minimum" and "maximum" shall define the respective constraints that apply to the overall design, dimensions or quality level established by the City of Henderson, hereafter called "purchaser". The term "or equivalent" shall define the degree of determined quality level and shall be the sole responsibility of the purchaser to judge whether the proposed "equivalent" submitted by the bidder meets the minimum established quality level. Where brand names are referenced, the bidder shall make all efforts to provide that specified item; any substitutions shall be of equivalent or higher quality and shall be specifically noted by the bidder.

The specified apparatus shall comply with all Federal, State, and local requirements pertaining to vehicles used as emergency vehicles. All standards in effect at the time a contract is released to the successful bidder are to be met, whether or not they are specified herein. The apparatus shall conform to the National Fire Protection Association (NFPA) Standard for Automotive Fire Apparatus, Number 1901, the most current edition,

unless otherwise specified in this document. Only the specified fire service apparatus and equipment listed in these specifications shall be provided. The apparatus shall further conform to all Federal Motor Vehicle Safety Standards (FMVSS) applicable at the time of manufacture.

2. Intent of Specifications

It shall be the intent of these specifications to cover the furnishing and delivery of a complete apparatus equipped as hereinafter specified. These specifications cover only the general requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features. Loose equipment shall be provided only as stated in the following pages. It is the intent of the technical specifications contained herein to ensure the custom cab and chassis specified shall be engineered, designed, and manufactured exclusively for heavy-duty continuous use in extreme environments and rigorous adverse conditions. Each custom cab and chassis shall be manufactured in strict compliance with all applicable requirements as set forth in the current edition of the NFPA (National Fire Protection Association) pamphlet 1901 with maximum safety as the key focus throughout the design and development phase of each fire and rescue chassis. All bids shall remain valid for a period of 60 days after bid.

3. Substitutions

Substitutions may be permitted provided they are equal or superior to that specified and provided they are listed and fully explained on a separate page. All substitutions shall be stated no matter how seemingly minor. Any substitutions not taken shall be assumed by the purchaser to be included in the proposal, regardless of the cost to the bidder.

Certified engineering performance information and thickness of materials will be furnished in the bidder's specifications. All specifications herein contained are considered as minimum. No exceptions to these minimum standards will be allowed relating to gauge, alloy, and type of metal, size of compartments and overall design. Bidders must state the brand of any item provided which is a substitute for the brand or model specified for evaluation by the bidder. The buyer reserves the right to require a bidder to provide proof in each case that a substituted item is equal to that specified. The buyer will be the sole judge in determination of acceptable substitutes. Submit only one bid that meets or exceeds the minimum specifications herewith. No substitutes, stock units, or alternates will be permissible unless such units are requested later in the specifications. If this is done, then the bidder will be automatically disqualified.

EXCEPTIONS

These specifications are based upon design and performance criteria, which have been developed by the fire department resulting from extensive research and careful analysis. Subsequently these specifications reflect the only type of fire apparatus that is acceptable at this time. Therefore, major exceptions to specifications will not be accepted. The bidder will make accurate statements as to the apparatus weight and dimensions. All bids will include a complete set of detailed manufacturer's specifications. The purchaser's

standards for bidding Automotive Fire Apparatus must be strictly adhered to, and all bid forms and questions must be complete and submitted with the bid. Omissions and variations will result in immediate rejection of the bid. To the right side of each paragraph of the fire department specifications, the bidder will state "Yes" or "No" indicating compliance with the specifications. All deviations, no matter how slight, will be clearly explained on a separate cover sheet entitled "Exceptions to Specifications". Any exceptions or variations to these specifications must be set forth on separate sheets, indicating page number(s) of the specifications, and must be submitted with the bid. Any bids deemed as taking total exception to these published specifications will result in immediate rejection of the bid. Proposals that are found to have deviations without listing them will be rejected. No prototype apparatus will be considered and all design, operational and material features must fully comply with the State and Federal Motor Vehicle Safety Standards.

4. Bid Response

Bids shall be enclosed in a sealed packet endorsed on the outside of the envelope "Bid 16-31 for Aerial Apparatus", pursuant to specifications provided, with the name of the bidder prominently displayed on the face of the packet. All bids shall be delivered at or before the time and place stated herein. Bids received after the stated date and time will be returned unopened to the bidder.

The bidder shall respond using only those forms contained herein. Any substitution shall be described in detail on a separate page attached to the bid response entitled "Substitutions". Substitutions shall be listed by specification reference number, corresponding bid page number, and detailed description of substitution, in column form. Failure to disclose a substitution will indicate total compliance. Final determination of acceptability of any substitution will be at the sole judgment of the purchaser.

Each bid must be accompanied by a set of detailed construction specifications consisting of a detailed description of the apparatus and equipment proposed. All bid specifications must be in the same sequence as the advertised specification for ease of comparison. These specifications shall include size, location, type and model of all component parts being furnished. Detailed information shall be provided on the materials used to construct all facets of the apparatus body. Terms such as "intent of" are considered vague and unacceptable responses and will disqualify the bid.

If the bid is submitted by a dealer/agent in the name of a particular manufacturer, the bidder will include in the bid proposal, a copy of the appropriate Letter of Authorization, authorizing the dealer/agent to sign on behalf of the manufacturer.

5. Withdrawal of Bids

Bids may be withdrawn any time prior to the bid opening. This may be accomplished by submitting such request in writing on the issuing company's letterhead either in person, by certified mail or facsimile. No bids may be withdrawn after the established bid opening date or time, unless the purchaser has extended the opening date.

6. Service and Warranty/Product Liability

The bidder shall supply information in this bid for the service and warranty work that may be needed. Information provided shall include at a minimum the service company that will be performing the work, address of the service company, and a phone number for contact. The bidder, if his bid is accepted will defend against all suits, and assume all liability for the use of any patented process, advice or article forming a part of the apparatus of any appliance furnished under contract. Each bidder will supply proof of product liability and facility insurance equal to or exceeding \$25,000,000.00.

7. Materials

Materials shall conform to the specifications listed herein. When not specifically listed, materials shall be of the best quality for the purpose of commercial practice. Materials shall be free of all defects and imperfections.

8. Compliance

Should any components of the accepted bid be found noncompliant at the time of delivery and that component was not substituted and accepted by the purchaser at the time of contract award, the bidder shall be liable for all cost associated with correction. Final acceptance of the apparatus will not be made, nor any payments executed, until such time as all discrepancies are corrected to the satisfaction of the purchaser. If the discrepancies are not corrected within ten business days of initial delivery attempt, the bidder may be deemed in default of contract.

9. Pre-Construction Conference

Immediately after notification of contract award, the successful bidder shall schedule a pre-construction conference between the appointed representatives of the purchaser and the contractor. The conference shall be held not later than 30 calendar days after notification, at a location deemed by the purchaser. The conference shall be held at the manufacturer's facility with up to seven representatives of the Fire Department and appropriate representatives of the manufacturer. The contractor shall present a set of construction drawings and line item production order complying with the specifications outlined herein. Should the purchaser deem that the contractor has not properly interpreted the specifications or does not intend to manufacture the emergency support vehicle as specified, appropriate corrective actions shall be agreed upon and the conference shall be rescheduled within 30 calendar days. Should the purchaser determine, at the second conference, that the contractor remains unable to meet the specifications of the contract; the contract may be deemed null and void. A pre-construction conference shall be held prior to the actual construction of the vehicles. The conference shall be held at the manufacturer's facility with up to eight representatives of the Fire Department and appropriate representatives of the manufacturer.

10. Purchaser Inspections

The purchaser shall be permitted to perform inspections at the following stages of construction: frame and chassis post modification (if any), pre-paint, and pre-delivery, mid-point, and final. All inspections shall be made at the bidder's facility. Any defects, imperfections, poor workmanship, or non-compliance of specifications, as may be deemed by the purchaser shall be corrected by the bidder, at the bidders cost, prior to the

next stage of construction or delivery. There will be a mid-point inspection for three representatives of the buying authority at the facility where the apparatus is being constructed. The customer shall specify when the inspection will occur. Factory and Sales representatives will be available at the time of inspection. There will be a final inspection for up to eight representatives of the buying authority at the facility where the apparatus is being constructed. The inspection trip will be completed when the apparatus is complete. Factory and Sales representatives will be available at the time of inspection. The final inspection will include the following aspects at a minimum:

- Full access to the build file and factory personnel to provide answers for any issues found.
- Unit will be placed on a lift that will allow full inspection of the undercarriage.
- Road test shall be accommodated.
- Unit will be taken to pump test area where the pump and plumbing can be inspected while flowing water.
- General apparatus orientation and operation shall be provided at the pump test pit.

11. Delivery and Transportation

The successful bidder shall state the time required for delivery of the completed apparatus on the Bid Pricing Sheet. Delivery is expected within a maximum of 240 days from bid award date, and the apparatus shall be delivered within 300 calendar days after receipt of the approved signed off pre construction changes. The manufacturer shall not be held liable for changes arising from its failure to make or delay in making delivery because of fire, flood, strike, riot, chassis shortage, accidents, acts of God, or any circumstances beyond our control. The bid price shall include all delivery costs to the Henderson Fire Department. To insure proper break-in of all components while still under warranty, the apparatus shall be delivered over the road under its own power (rail and/or truck freight shall not be acceptable). The completed apparatus shall be delivered to the purchaser with full instructions and onsite training provided to Fire Department personnel on operation, care and maintenance of apparatus and appurtenances at the purchaser's location. Such training shall be at bidder's expense.

PRE-DELIVERY SERVICE

- After transportation from the factory, and immediately prior to delivery, the apparatus shall receive a pre-delivery service consisting of engine oil and filter change, chassis lubrication, fuel filter(s) changed, adjustment of engine to manufacturer's specifications, complete inspection including all electrical and mechanical devices for proper operation, and correction of leaks or obvious problems. In addition, the unit shall be cleaned and fully detailed. The reason for the pre-delivery service is to prepare the apparatus for delivery after it is driven from the factory. The engine oil and filters were installed when the chassis was constructed and have undergone a pump test as well as a drive from the facility. This also requires the local dealer to inspect for any leaks that might have developed, to check out all of the systems to ensure proper operation, and thoroughly clean the unit for delivery.
- If the location of the manufacturer is 300 miles or less, the service shall be performed six months after delivery. Sometimes the builder is extremely close to

the customer, and an oil change is unnecessary. When this is the case, it calls for the service to be done after the apparatus has been in service for six months.

12. Questions

Technical questions may be directed to Chris Watson at 270-831-1270 or 812-449-5188 (cell) or you may email him at ckwatson@cityofhendersonky.org. Procedural questions may be directed to Assistant Finance Director, Penny Hahn, at 270-831-4920 or you may email her at pnhahn@cityofhendersonky.org.

- End of Section -

06-01-14E

City of Henderson, Kentucky
Invitation to Bid

Bid Reference No. 16-31

TECHNICAL SPECIFICATIONS

INFORMATION REQUIRED WITH BID

A written review of the company, in chronological order, detailing the background of the manufacturer shall be provided as part of the bid proposal. The fire apparatus and equipment to be furnished in meeting these specifications must be the product of an established reputable fire apparatus manufacturer of five years or more. Each bidder will furnish satisfactory evidence of the manufacturer's ability to construct, supply service, parts and technical assistance for the apparatus specified. The bidder must state the location of the factory and full service center. The general construction of the apparatus will give due consideration to the nature and distribution of the load to be sustained and the general character of the service to which the apparatus is to be subjected when placed in service. The body will be modular in design and construction of the latest modern type, for transfer of body to another chassis without cutting or welding. Each bidder must submit a detailed proposal, which accurately specifies the construction method to be used in the apparatus. The purchaser will utilize this proposal to compare the unit proposed with the specifications. To facilitate comparison all bid proposal specifications will be submitted in the same sequence as the advertised specification for ease of comparison. Any bidder who fails to submit a set of construction specifications, or who photo copies and submits these specifications as their own construction details will be considered non-responsive. This will render such proposal ineligible for award. For the purpose of evaluation of the construction methods, components, and materials from various vendors the make up the apparatus body, the Fire Department may request each bidder to supply a cross section of a side body compartment no smaller than 1/4" in scale using full size components including the compartment door and hardware. The sample will remain with the fire department for a minimum of 14 days after the bid opening.

YES

VIRTUAL MANUFACTURING

The manufacturer shall have a website available for the customers to "watch/view" their unit being produced. The "Trucks in Production" shall be updated a minimum of three times per week. The website shall also include documentation of cab and body crash tests, take a virtual tour of the production facility, videos of both current and new innovative products, updates on trade shows, photos of new deliveries and the opportunity to include customer 'Action Photos'. Customer shall be able to access the website without the requirement of a password. Photos may be sent minimum of three times per week as an alternative.

YES

INFORMATION/CERTIFICATIONS

The following information and original certifications will be required at time of delivery. This information will be supplied by the apparatus manufacturer:

YES

- (1) The manufacturer's record of apparatus construction details, including the following information:
 - Owner's name and address
 - Apparatus manufacturer, model, and serial number
 - Chassis make, model, and serial number
 - GVWR of front and rear axles
 - Front tire size and total rated capacity in pounds (kilograms)
 - Rear tire size and total rated capacity in pounds (kilograms)

- Chassis weight distribution in pounds (kilograms) with water and manufacturer-mounted equipment (front and rear)
 - Engine make, model, and serial number, rated horsepower, related speed and governed speed
 - Type of fuel and fuel tank capacity
 - Electrical system voltage and alternator output in amps
 - Battery make, model, and capacity in cold cranking amps (CCA)
 - Chassis transmission make, model, and serial number; and if so equipped, chassis transmission PTO(s) make, model, and gear ratio
 - Pump make, model, rated capacity in gallons per minute (liters per minute where applicable), and serial number
 - Pump transmission make, model, serial number, and gear ratio
 - Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable), and serial number
 - Water tank certified capacity in gallons or liters
 - Foam tank (if provided) certified capacity in gallons or liters
 - Aerial device type, rated vertical height in feet (meters), rated horizontal reach in feet (meters), and rated capacity in pounds (kilograms)
 - Paint manufacturer and paint number(s)
 - Company name and signature of responsible company representative
- (2) Certification of slip resistance of all stepping, standing, and walking surfaces
 - (3) If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability
 - (4) If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications
 - (5) If the apparatus has a fire pump or an industrial supply pump, the engine manufacturer's certified brake horsepower curve for the engine furnished, showing the maximum governed speed
 - (6) If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of the hydrostatic test
 - (7) If the apparatus has a fire pump or an industrial supply pump, the certification of inspection and test for the fire pump or the industrial supply pump
 - (8) The certification of inspection and test for the aerial device
 - (9) All the technical information, required for inspections to comply with NFPA 1914, Standard for Testing Fire Department Aerial Devices
 - (10) If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source
 - (11) If the apparatus is equipped with an air system, test results of due air quality, the SCBA fill station, and the air system installation
 - (12) Weight documents from a certified scale showing actual loading on the front axle, rear axle(s), and overall fire apparatus (with the water tank full but without personnel, equipment, and hose)
 - (13) Written load analysis and results of the electrical system performance tests required in Chapter 13
 - (14) When the apparatus is equipped with a water tank, the certification of water tank capacity

The Fire Apparatus Manufacture will also provide documentation of the following items for the entire apparatus and each major operating system or major component of the apparatus:

- (1) Manufacturer's name and address
- (2) Country of manufacture
- (3) Source for service and technical information
- (4) Parts replacement information
- (5) Descriptions, specifications, and ratings of the chassis, pump (if applicable), and aerial device
- (6) Wiring diagrams for low voltage and line voltage systems to include the following information:
 - (a) Pictorial representations of circuit logic for all electrical components and wiring
 - (b) Circuit identification
 - (c) Connector pin identification
 - (d) Zone location of electrical components
 - (e) Safety interlocks
 - (f) Alternator-battery power distribution circuits
 - (g) Input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems
- (7) Lubrication charts
- (8) Operating instructions for the chassis, any major components such as a pump or aerial device, and any auxiliary systems
- (9) Precautions related to multiple configurations of aerial devices, if applicable
- (10) Instructions regarding the frequency and procedure for recommended maintenance
- (11) Overall apparatus operating instructions
- (12) Safety considerations
- (13) Limitations of use
- (14) Inspection procedures
- (15) Recommended service procedures
- (16) Troubleshooting guide
- (17) Apparatus body, chassis, and other component manufacturer's warranties
- (18) Special data required by this standard
- (19) Copies of required manufacturer test data or reports, manufacturer certifications, and independent third-party certifications of test results
- (20) A material safety data sheet (MSDS) for any fluid that is specified for use on the apparatus
- (21) One copy of the latest edition of FAMA's Fire Apparatus Safety Guide

The Fire Apparatus Manufacture shall deliver with the apparatus all manufacturers' operations and service documents supplied with components and equipment that are installed or supplied.

PRINCIPAL DIMENSIONS

The apparatus shall have the following dimensions:

Overall Length: minimum 39.5 feet

Overall Height: maximum 12 feet

YES

FRONT BUMPER

There shall be an 80,000 PSI high tensile strength painted steel bumper provided. The bumper shall be painted according to departments color red with a black ruggedized material on top surface and lip.

YES

RECESSED BUMPER POCKETS

The front bumper ends shall have recessed pockets to allow for mounting of warning lights.

YES

LIGHTS, UNDER BUMPER

There shall be two 4" round clear LED waterproof lights mounted, one each side under the front bumper illuminating the area below. The lights shall automatically activate when any cab door is opened and by a switch located in the cab.

YES

TOW HOOKS, FRONT

Two tow hooks shall be mounted to the bottom of the front bumper frame extension rails. The hooks shall be painted with a black ruggedized material. The tow hooks shall be attached with grade eight bolts.

YES

FRONT BUMPER EXTENSION

There will be a 28" frame extension (or necessary extension) from the front face of the cab. The extension shall be made from heavy-duty steel in both C-channel and tubular shapes. Extension shall be bolted to the chassis frame rails through reinforcement plates, backed by the engine mounting crossmember. Fasteners utilized shall be grade eight bolts.

YES

GRAVELSHIELD

A gravelshield constructed of 1/8" embossed aluminum tread plate shall be installed above the frame extension between the bumper and the front face of the cab. The tread plate shall be painted with a black ruggedized material.

YES

BUMPER COMPARTMENT, CENTER

There shall be a compartment provided in the front bumper gravelshield, centered between the frame rails fabricated of 1/8" smooth aluminum plate. This compartment shall be weather-sealed to protect from the outside environment.

YES

COVER, CENTER FRONT BUMPER COMPARTMENT

The center bumper compartment shall have a hinged aluminum tread plate cover to secure the contents. The cover shall be secured in the closed position with a stainless steel latch. The cover shall be cut-out for access. This cover and all accessories shall be painted with a black ruggedized material. There shall be a light located within the compartment, activated when the compartment door is opened.

YES

BUMPER COMPARTMENT, OFFICER'S SIDE

There shall be a compartment provided in the front bumper gravelshield, passenger's side fabricated of 1/8" smooth aluminum plate with drain holes to promote airflow.

YES

COVER, OFFICER'S SIDE FRONT BUMPER COMPARTMENT

VES

The officer's side bumper compartment shall have a hinged aluminum tread plate cover to secure the contents. The cover shall be secured in the closed position with a stainless steel latch. This cover and all accessories shall be painted with a black ruggedized material. There shall be a light located within the compartment, activated when the compartment door is opened.

SPEAKER, PASSENGER'S SIDE

YES

There shall be one speaker shall be installed thru the front face of the bumper, passenger side, outboard. The speaker shall be 100 watts, wired to the electronic siren.

AIR HORN, PASSENGER'S SIDE

YES

There shall be one 24" long Grover air horn installed in compliance with NFPA thru the front bumper, passenger's side, outboard of the frame rail. The air horn shall be plumbed to the chassis, air supply system thru an air protection valve, and manufactured from spun brass material with an easily separated die cast sounding unit for serviceability. The air horn shall be painted with a black ruggedized material.

AIR HORN, DRIVER'S SIDE

YES

There shall be one 24" long Grover air horn installed in compliance with NFPA thru the front bumper, driver's side, outboard of the frame rail. The air horn shall be plumbed to the chassis, air supply system thru an air protection valve, and manufactured from spun brass material with an easily separated die cast sounding unit for serviceability. The air horn shall be painted with a black ruggedized material.

NATHAN TRAIN HORN

VES

One Nathan train horn set shall be installed in a manner where it does not reduce ground clearance, and also where its installation will not interfere with the noise-dampening of the cab in ways where it would be difficult to hear radio traffic or in-cab communications among crew members during its activation. The train horn shall be active in "Response Mode" only.

MECHANICAL SIREN

YES

One Federal Signal Q2B siren model Q2B-012NNSD electro-mechanical siren shall be installed thru the front bumper, driver's side outboard. The Q2B siren shall be a streamlined, chrome plated siren designed to provide reliable and long-life operation. The electro-mechanical siren shall produce the distinctive Q2B sound that is a registered trademark of Federal Signal, and shall be provided with a heavy duty clutch and an electric brake. The Q2B siren shall measure 10.5" high x 14" long x 10" deep and shall produce 123 decibels at 10'. The siren shall operate off the vehicle's 12 volt system. The Q2B siren shall be recess mounted in the front of the vehicle. The siren shall be painted with a black ruggedized material. Two siren brake switches shall be installed: one within reach of the driver and one within reach of the officer.

SIREN WIRING

VES

The siren activation switch shall be wired thru the chassis park brake and operate in the "Response Mode" only.

SIREN FOOT SWITCH

VES

A foot operated switch shall be installed on the driver's side wired to the mechanical siren. The location will be determined at pre-build.

SIREN DASH SWITCH, OFFICER'S SIDE

VES

A dash mounted switch shall be installed on the officer's side wired to the mechanical siren.

RECEIVER HITCH, BELOW FRONT BUMPER

One class three receiver hitch shall be installed below the front bumper centered between the frame rails utilizing grade eight bolts. There shall be one 12 volt Quick Connect, battery powered lead, wired to the chassis electrical system to supply a portable winch. The connector shall be located at the receiver location. A safety sign, FAMA28, shall be located on or near the receiver or anchor stating the maximum straight line pull rating.

YES

RECEIVER HITCHES, LEFT/RIGHT SIDE OF BODY

Two class three receiver hitches shall be installed, one each side below the left and right side rear body compartments utilizing grade eight bolts. A safety sign, FAMA28, shall be located on or near each receiver or anchor stating the maximum straight line pull rating.

YES

AIR HORN WIRING

The air horns shall be active in both the "Scene" and "Response Mode".

YES

SWITCH, HORN/AIR HORN SELECTOR

A driver controlled horn/air horn selector switch shall be installed in the cab and operate either air horn or chassis electric horn through the horn ring button.

YES

AIR HORN AND NATHAN TRAIN HORN SWITCHES

Dash mounted switches shall be installed on the officer's side wired to the air horn and train horns. A foot switch shall be installed on the driver's side, next to the mechanical siren switch, to operate the train horn.

YES

FRONT AXLE

The front axle shall be a Meritor MFS-20 with 23,000 pound capacity equipped with oil seals and transparent cover for oil level inspection.

YES

CHASSIS WHEELBASE

The chassis wheelbase shall be minimum 238".

YES

CHASSIS FRAME RAILS

The chassis frame rails shall be constructed of 110,000 PSI minimum yield steel. The frame rails shall be powder coated in order to insure superior paint adhesion. Frame cutouts for the engine shall be made with a plasma torch in order to minimize the heat-affected zone caused by the cut. All frame-mounted components shall be secured with grade eight bolts with hardened washers and distorted thread locknuts. Flanged head bolts with nylon locking nuts, or huck bolts shall not be acceptable.

PAINT, FRAME RAIL

The chassis frame rails, cross members, fuel tank and air reservoirs shall be completely encapsulated in a ruggedized, protective coating. The air reservoirs, reservoir hanger straps and fuel tank shall all be treated separately prior to assembly. The frame, cross members, bumper backing reinforcement plate, radiator skid plate, spring hangers, cab lock mounts and required bolts shall all be in place prior to treatment to ensure complete coverage. The color of the protective coating shall be black.

YES

STEERING SYSTEM

The steering system shall be a package certified by TRW for the application. All components after the steering column to the drag link shall be manufactured by TRW. The steering system shall use a TAS-65 steering gear with an RCS-55 slave gear, which has the capacity to static steer

YES

the chassis loaded to 22,500 pounds with 425 size tires. The use of two equal size gears or a single gear with an assist cylinder shall not be acceptable.

CHASSIS ALIGNMENT

The chassis frame rails shall be measured to insure the length is correct and cross checked to make sure they run parallel and are square to each other. The front and rear axles shall be laser aligned. The front tires and wheels shall be aligned and toe-in set on the front tires by the chassis manufacturer. Cramp angle is set to achieve the greatest turning radius possible with the selected components of the vehicle. Each front wheel is set to 0°. The wheel is then turned until it reaches the steering stops. This measurement is the cramp angle.

YES

FRONT SUSPENSION

The front suspension shall be parabolic (taper leaf) spring type with four leaves 23,000 pounds capacity. The leaves shall be a minimum of 4" wide x 54" long (flat), with grease fittings for lubrication installed in the spring pins. Axle stops with energy absorbing jounce bumpers shall be supplied on the spring top pad. Double acting Koni shock absorbers shall be provided on the front suspension.

YES

FRONT BRAKES

The front axle shall be equipped with air operated disc brakes and ventilated rotors.

YES

CRAMP ANGLE

The cramp angle of the front axle shall be minimum 41° to the left and right.

YES

FRONT TIRES

The front tires shall be Michelin 425/65-R22.5 Load Range "L" G-296 MSA all-weather treads. The Intermittent Fire Service load capacity shall be 23,000 pound with a speed rating of 68 MPH when properly inflated to 120 PSI.

YES

FRONT WHEELS

The front axle wheels shall be Alcoa Polished Aluminum for 425 tires with a rating of 23,000-pounds.

YES

FRONT WHEEL TRIM

The front axle wheels shall be trimmed with stainless steel hub and lug nut covers. The axle's hub covers shall be equipped with holes for oil level viewing.

YES

MUD FLAPS, FRONT

The front axle mud flaps shall be constructed from hard black rubber and installed behind the front axle.

YES

TANDEM REAR AXLE

The rear tandem axle shall be a Meritor RT-58-185 with a 60,000 pound service rating. The axles shall be equipped with "Oil Bath" wheel end seals.

YES

REAR SUSPENSION

The rear suspension shall be rated to match the capacity of the rear axle.

YES

TANDEM REAR AXLE DIFFERENTIAL

The Meritor RT series rear axle shall have a standard differential in each axle.

YES

VEHICLE TOP SPEED

The rear axle shall be geared for a top speed of 60 MPH at governed engine speed for vehicles over 50,000 GVWR.

YES

REAR BRAKES

The rear tandem axles shall be equipped with S-Cam air operated brakes with automatic slack adjusters.

YES

REAR TIRES

The rear tires shall be Michelin 315/80R 22.5 18 Ply "J" Regional RHD II Rocky Environment traction treads. The Intermittent Fire Service load capacity shall be 60,000 pound with a speed rating of 75 miles per hour when properly inflated to 125 pounds PSI with steel or aluminum wheels.

YES

REAR WHEELS

The rear wheels shall be Alcoa Polished aluminum, 9" x 22.5" 10-bolt, hub-piloted. The outside wheels shall be polished on the outside surface.

YES

REAR WHEEL TRIM

The rear axle wheels shall be trimmed with stainless steel "Lincoln Hat" hub and lug nut covers.

YES

TIRE PRESSURE MONITORING SYSTEM

Each tire installed on the apparatus shall be equipped with a tire pressure monitoring device. The device shall consist of a valve stem cap to with an LED tire alert to indicate tire pressure conditions. The LED shall flash when the tire drops 8 PSI below the factory setting.

YES

TIRE CHAINS, AUTOMATIC

The rear axle shall be equipped with an ON-SPOT automatic tire chain system. The system shall provide instant traction at the touch of a switch, without having to stop the vehicle. The driver's dash shall have an electric control switch, clearly labeled for operation of the tire chains. The switch shall be provided with a guard to prevent accidental deployment of the tire chains. The switch when activated shall open a frame mounted solenoid, allowing air from the chassis air system to enter the spring loaded air cylinder and lower the chain wheel. The rubber covered chain wheel shall contact the inside of the tire causing the chain wheel to rotate and deploy the chains. The ON-SPOT automatic chains shall have six lengths of chain, spaced at 60° intervals on the chain wheel, ensuring two chains between the tire and road surface for instant traction in slippery conditions whether accelerating, braking, or in a wheel lock up condition. The ON-SPOT chains can be activated with speeds of 2 MPH to 25 MPH. The ON-SPOT chains shall be operable in either forward or reverse for speeds up to 35 MPH. When the chains are no longer needed the process is reversed, the dash board switch is turned off and the air is exhausted from the cylinder. The return springs in the air cylinder brings the chain wheels back to their resting position.

YES

VOGEL AUTOMATIC LUBRICATION SYSTEM

The chassis shall be equipped with a VOGEL Centralized Lubrication System. This system shall provide automatic grease application to the following wear points:

YES

FRONT AXLE, SUSPENSION & STEERING

Kingpins (4), Tie Rods (2), S-Cams (2), Slack Adjusters (2), Spring Pins (6), Draglink (2), No Cab Tilt Pivots

YES

REAR AXLE & SUSPENSION

S-Cams (2), Slack Adjusters (2), Spring Pins (2)

YES

This grease system shall utilize NLGI000. The system shall be powered by an electrically driven gear pump, 12 volt 192 watts. The gear pump shall be mounted to a reservoir with a capacity of 2.7 liters. The pump is to operate against a back pressure of 38 bar nominal, with an output of 160 cc/min. Distribution to all lubrication points is by piston distributors. The distributors shall utilize metering nipples. Metering for the nipples shall be in the increments of 0.1, 0.2, 0.3, 0.4, 0.6, and 1.0 cc. The metering nipples shall be able to be field changed to provide a tailored grease application to the chassis points. The distributor shall dispense a metered volume of lubricant into the lube point after the electric motor gear pump has cycles to the off-time mode. The cycle time of the system shall be determined by an electronic controller, which regulates the on and off time of the pump. The controller shall permit the feedback of the pressure switch to highlight the end of the lube cycle.

ACCESSORIES

A hand pump and container of grease shall be shipped loose with the chassis for initial maintenance by the department.

YES

HOSE AND HARNESS ROUTING

Battery cables, hydraulic hoses, and air lines shall be routed through the vertical face of the chassis frame rails using bulkhead connectors. The use of grommets through frame rails, as well as, running hoses or cables under, over or ahead of the chassis frame rails to achieve positive connections shall not be acceptable. For ease of maintenance, the wiring harnesses, hydraulic hoses and air hoses shall be divided down each frame rail. The hydraulic and air hoses shall be run, primarily, down the inside of the right side frame rail, while the electrical harnesses shall be run, primarily, down the left side frame rail. Harnesses and hoses shall be mounted using rubber coated, stainless steel holders, and, where necessary, heat resistant zip loom.

AIR BRAKE SYSTEM

The air brake system shall meet the requirements of FMVSS-121. The system shall consist of four reservoirs with a total capacity of 8,000 cubic inches. The system shall be of dual circuit and quick build up design powered by an engine mounted gear driven air compressor. The system shall be protected by a heated air dryer with heated automatic moisture ejector on the wet tank and quarter turn brass drain valves on the other tanks. The entire chassis air system shall be plumbed utilizing reinforced nylon air lines. All of the airlines shall be color coded to correspond with an air system schematic and shall be adequately protected from heat and chafing. The system shall be plumbed using color-coded nylon airlines with brass push-lock fittings.

YES

ANTI-LOCK BRAKES W/ATC & ELECTRONIC STABILITY CONTROL

The apparatus shall have ABS-based Electronic Stability Control (ESC), which offers another level of vehicle control. This automatic braking management system reduces the possibility of a side rollover and assists in the directional stability of apparatus. Upon reaching critical lateral acceleration thresholds, the system intervenes to regulate the vehicles deceleration and braking functions. Reducing the engine's RPM by overriding the foot throttle input and applying the engine retarder (if equipped) to slow the apparatus giving the driver added control and maneuverability. The ESC shall also apply braking power to selective wheel of the front and rear axles to assist in stabilizing the apparatus to its intended direction. This selective braking application and reduction of speed and torque reduces the possibility of spinouts and side rollovers even in adverse conditions. The system includes a six channel Anti-Lock Braking System and shall be installed which includes six wheel sensors and four modulators to control and compensate braking force at each wheel. This system shall monitor all wheel ends regardless of suspension type, and which axle it sees braking forces first. An ABS warning light shall be installed on the driver's dash that remains illuminated until the vehicle is moving at least 4 MPH.

YES

An ABS test switch shall be installed in the "Diagnostic Information Panel" that when pressed, sends the system into diagnostic mode causing the ABS light to blink (I/O) indicating a flash code. Automatic Traction Control (ATC) shall be installed to sense wheel slip, apply air pressure to brakes, and reduce engine torque to provide improved traction. An indicator light installed in the cab shall illuminate when the system is engaged. A mud and snow switch shall be provided. When the switch is in the "On" position, it shall allow momentary wheel slip to obtain traction under extreme mud and snow conditions. The system also includes a Steering Angle Sensor (SAS), which informs the system of the degree in which the steering is turned to one side or the other. Along with the SAS, an ESC module is mounted mid frame at the rear of the chassis cab to detect roll, pitch, and yaw angles and computes which wheel's brakes shall be acted upon.

AIR DRYER

The air system will include an air dryer with integral 12 volt heated moisture ejector. The air dryer shall have a desiccant cartridge and incorporate an integral turbo cutoff valve. The turbo cutoff allows the air dryer to purge water and contaminants without any loss of turbo boost or engine horsepower.

ENGINE

The vehicle shall be equipped with a (minimum) Cummins ISX12 (11.9) 500 turbocharged diesel engine. Standard features include an electronic governor, electronically controlled unit injectors, Farr air cleaner, a 12 volt starter Delco 39 MT, and an 18.7 CFM compressor. The oil filter shall be a full flow and bypass design. Engine is equipped with Exhaust Gas Recirculation. This engine conforms to the US 2016 EPA regulations for heavy-duty diesel engines.

ENGINE SPECIFICATIONS

- Model: ISX12 (11.9)
- Number of Cylinders: 6
- Bore and Stroke: 5.11" X 5.91"
- Displacement: of 12 (11.9) L
- Rated Horsepower: 500 @ 2000 RPM
- Peak Torque: 1645 @ 1200 RPM
- Governed Speed: 2100 RPM

TRANSMISSION

The chassis shall be equipped with an Allison 4000 EVS automatic transmission. It shall be equipped with 4th gear operating controls and programmed for Fire Apparatus vocation. An electronic oil level indicator shall be provided as well as a diagnostic reader port connection. The transmission shall be geared to provide one-to-one ratio in fourth gear for fire pump applications. This dedicated "lockup" circuit is provided for pump operation. The transmission fifth gear shall be an overdrive ratio, permitting the vehicle to reach its top speed at the governed engine speed. The transmission shall be equipped with an automatic neutral feature. Applying the parking brake shall command the transmission to neutral, regardless of drive range requested on the shift selector which shall require re-selecting the drive range to shift out of neutral. The transmission shall be equipped with dual PTO ports with engine speed capabilities. The transmission shall be cooled by the radiator-mounted heat exchanger. The transmission fluid shall meet Allison specification TES-295.

TRANSMISSION SHIFTER, PUSH BUTTON

The transmission shall be controlled by an Allison push button shifter internally illuminated for night operation. The shifter shall be mounted on the dash to the right of the steering column. The transmission shall be capable of five speed operation. The transmission shall be equipped with the oil level sensor (OLS); this sensor shall allow the operator to obtain an indication of the fluid

level the shift selector. The sensor display shall provide the following checks, correct fluid level, low fluid level and high fluid level.

DRIVELINES

The chassis shall be equipped with a Neapco 1810 or equivalent series driveshaft with full round yokes and universal joints. The driveshaft tubing shall be a minimum of 4.50" in diameter with .134" wall thickness. The drivelines shall be balanced at a minimum of 3,000 RPM.

YES

FIRE PUMP MOUNTING

Extra heavy-duty mounting brackets shall be bolted to the chassis frame rails for the installation of the fire pump. The mounting brackets shall be positioned aligning the pump insuring the angular velocity of the driveline joints are the same at each end allowing for full capacity performance with minimal vibration.

YES

ENGINE COMPRESSION BRAKE

The engine shall come equipped with a Jacobs "C-Brake" compression brake. The brake shall be controlled by an On/Off and low/medium/high switches located in the cab. The compression brake shall interface with the anti-lock brake controller to prevent engine brake operation during adverse braking conditions. When activated, the Jacobs engine brake shall cut off the flow of fuel to the cylinders and alter the timing of the exhaust valves. This shall transform the engine into a high-pressure air compressor, driven by the wheels, and the horsepower absorbed by the engine in this mode shall slow the vehicle. The selector switch allows the driver to select the amount of retarding power. When the On/Off switch is in the "On" position, the engine brake shall be automatically applied whenever the accelerator is in the idle position and the automatic transmission is in the lock-up mode. If the accelerator is depressed or if the On/Off switch is placed in the "Off" position, the engine brake shall immediately release and allow the engine to return to its normal function. A pump shift, interlock circuit shall be provided to prevent the engine brake from activating during pumping operation.

YES

ENGINE COOLING SYSTEM

The engine cooling system shall have the capacity to cool the engine according to the engine manufacture's requirements.

YES

RADIATOR

The engine radiator shall be of a bolted design and have a minimum core area of 1,570 square inches.

YES

COOLING SYSTEM FAN

The engine cooling system shall incorporate a thermostatically controlled fan clutch. When the fan clutch is disengaged, the vehicle shall have improved vehicle performance, cab heating in cold climates, and fuel economy, while eliminating the potential dangers associated with a fan going from non-rotating to rotating as found with other style fan clutches. The fan shall automatically lock-up when the vehicle is placed in pumping mode. A shroud and recirculation shields system shall be used to ensure that once air has passed through the radiator, the same air is not drawn through again.

YES

RADIATOR COOLANT, LONG LIFE

The coolant system shall contain a mixture to keep the coolant from freezing to a temperature of 34°F. The coolant supplied shall be Long Life Coolant compatible with the engine manufacturer's requirement.

YES

✓ **COOLANT HOSES**

The chassis shall be equipped with silicone hoses for the radiator and heater circuits.

YES

✓ **COOLANT HOSE CLAMPS**

Constant tension hose clamps shall be provided for all coolant and heater hoses of 1/4" diameter and greater.

YES

✓ **AUXILIARY ENGINE COOLER**

The cooling system shall have a tube and bundle engine cooler mounted in the upper radiator water pipe. Water from the fire pump shall be circulated through 1/2" tubing to the cooler. A valve located on the pump panel shall control the cooling circuit.

YES

✓ **FUEL TANK**

The chassis shall be equipped with a minimum 50 gallon rear mounted fuel tank. The tank shall be constructed of 12 gauge steel with stainless steel mounting straps and rubber isolators secured to the bottom flange of the chassis frame rails. The tank shall be baffled to prevent sloshing, vented, and have a drain plug installed on the bottom. A 240-33 ohm fuel-sending unit shall be provided and broadcast across the SAE J1939 data link. The tank shall be certified to meet FMCSR 393.65 and 393.67.

YES

✓ **FUEL LINES**

The fuel lines shall be wire braid reinforced fuel grade hose. They shall have reusable fittings and be routed along the inside of the frame rails. Fuel lines shall be protected against chaffing by non-conductive, frame mounted standoff fasteners and, where necessary, with heavy-duty plastic zip loom.

YES

✓ **FUEL SHUTOFF VALVE(S)**

One fuel shutoff valve shall be installed in the suction side of the fuel lines near the fuel filters to prevent the loss of prime during fuel filter maintenance.

YES

✓ **FUEL FILTER, SECONDARY**

The Cummins engine shall be supplied with a secondary fuel filter mounted to the engine.

YES

✓ **FUEL/WATER SEPARATOR, PRIMARY FILTER**

The Cummins ISX engine shall be supplied with a Racor model 3150R primary fuel water separator with a bottom drain valve mounted in the chassis frame. The LMC will display "Water in Fuel", and an alarm will sound when the water needs to be drained from the fuel water separator.

YES

✓ **EXHAUST SYSTEM**

The apparatus shall contain a particulate filter and SCR (Selective Catalytic Reduction) device downstream of the engine's turbo. This filter and SCR device are required to maintain US 2010 EPA Emissions. This filter and SCR device replaces the conventional style filter. The location has been engineered, tested, and set to allow for proper regeneration. Therefore, this filter cannot be removed, altered, or relocated. An indicator light panel for this system shall be located in the cab informing the driver of the system's status. At times a forced regeneration may be required, which would be indicated by a combination of illuminating and/or flashing lights depending on the engine model. A momentary switch labeled "Regen" shall be located within reach of the driver's seated position. The regeneration switch initiates the forced regeneration. A momentary DPF inhibit switch prevents the vehicle from having the ability to regenerate. Once the inhibit feature has been activated the ignition switch must be cycled off/on to return the vehicle to normal regen. All vehicles equipped with pumping applications shall allow for passive

YES

regeneration whenever the system requires and the engine is at its proper parameters unless inhibited by the DPF inhibit switch. In no way shall this feature affect the RPM of the engine being controlled by the pump operator. The engine exhaust system shall be horizontal in design using stainless steel tubing mounted under the frame rail right side extending forward of the rear wheels. An exhaust temperature mitigation device shall be installed. The temperature mitigation device shall lower the temperature of the exhaust by combining ambient air with the exhaust gasses at the exhaust outlet.

ALTERNATOR

The alternator shall be a Delco Remy model 55SI 430 amp or equivalent. The alternator shall be engine driven via a poly-groove power belt with an automatic tensioner. The alternator shall be a brushless design. The alternator shall meet all current applicable NFPA 1901 Edition requirements for performance.

YES

BATTERY SYSTEM

The battery system shall be properly sized consisting of Group 31, 12 volt DC, heavy-duty, high cycle automotive batteries. The battery bank shall have a minimum group rating of 3,750 cold cranking amperes (CCA) and a reserve of 1,080 minutes at 80°F. All battery wiring shall be welded battery cable capable of handling 125% of the actual load. It shall be run through a heat resistant flexible nylon "HTZL" loom rated at a minimum of 300°F. All cable connections shall be machine crimped and soldered.

YES

BATTERY BOXES

The chassis batteries shall be mounted in welded and bolted stainless steel battery box. The battery hold-downs shall be made of structural, stainless steel angle. Painted carbon steel battery boxes shall not be acceptable.

YES

BATTERY JUMPER STUDS

One set of battery jumper studs shall be provided on the chassis. The studs shall be connected to the chassis batteries with 1/0 color coded cables, red for the positive cable and black for the negative cable. The studs shall be protected with color coded plastic covers when not being used. A tag shall be provided for positive/negative terminals. The battery jumper studs shall terminate at the driver's side battery box.

YES

SWITCH, MASTER BATTERY DISCONNECT

The chassis batteries shall be wired in parallel to a single 12 volt electrical system, controlled through a heavy-duty, Guest brand or equivalent rotary type, master disconnect switch. The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab. All electrical circuits shall be disconnected when the switch is in the "Off" position.

YES

TOTAL SYSTEM LOAD MANAGER W/HIGH IDLE

The apparatus shall be equipped with a Class 1 Total System Manager (TSM) for performing electrical load management. The TSM shall have two modes of operation, a "Calling Right of Way" and a "Blocking Right of Way". The "Blocking Right of Way" mode is activated only when the park brake is set. Load shedding shall "only" occur when the apparatus is in the "Blocking Right of Way" mode or when the battery voltage level reaches your programmed shed level. Outputs 1 through 12 shall be independently programmable to sequence on with the ignition or master warning switch. Outputs 1 through 12 shall also be programmable to be activated during the "Calling Right of Way" mode and or the "Blocking Right of Way" mode. Output 13 is user configurable output and is programmable for activating between 10.5 and 15 volts. Output 14 shall provide a low voltage warning for an isolated battery. Output 15 shall be designated to activate a fast idle system. Output 16 shall provide a low voltage alarm that

YES

activates at the NFPA required 11.8 volts. The Total System Manager shall have an internal digital display to indicate systems voltage is in normal operation mode and indicates the output configuration during programmable mode. The Total System Manager shall be protected against reverse polarity and shorted outputs, and be enclosed in a metal enclosure to enhance EMR/RFI protection.

YRS

AIR COMPRESSOR/BATTERY CHARGER

A Kussmaul Pump Plus 1,200 or equivalent air compressor and battery charger package Model 091-9-12V-1200 shall be installed. The Auto Pump 12 volt driven air compressor shall ensure that the air brake system is properly pressurized for immediate response of the unit. A pressure switch shall regulate operation and shall automatically sense low air pressure in the brake system and restore the proper pressure. The unit shall have no interference with the vehicle mounted air compressor. The compact compressor shall have sealed bearings and a 15 amp circuit breaker installed in pressure switch assembly. The air compressor power mode selector switch shall select: 1) DC power full time from vehicle battery 2) AC powered only from the battery when vehicle is plugged into shore power and automatically shuts off air compressor when disconnected from shore power. The air compressor shall have the following ratings:

- 1) 100 PSI maximum rating
- 2) Pre-set at 75 PSI "ON" and 95 PSI "OFF"
- 3) Adjustable differential range of 20 PSI to 100 PSI
- 4) Output:
 - 0.30 SCFM @ 80 PSI
 - 0.35 SCFM @ 60 PSI
- 5) Rating: 12 volt at 11 amps

The battery charger shall be a Pump Plus 1200 Series 40 amp high output battery charger or equivalent shall be installed. The charger shall have the following operational specifications: 120 volts AC input at 10 amps and 12 volts DC output at 40 amps. The battery charger shall supply a 'single battery bank' with automatic operation and with an aluminum enclosure. The system shall have a built-in sense circuit to check battery voltage 120 times a second; the system shall compensate for voltage drop in charging wires and provide quick recharging with no over-charging. The unit shall include front panel connections for a remote display and auxiliary loads.

YRS

SUPER AUTO-EJECT, 20 AMP

There shall be provided one super auto-eject type receptacle(s) model 091-55-20. A solenoid wired to the vehicle starter is energized when the engine is started. This instantaneously drives the plug from the receptacle. The receptacle shall be provided with a weatherproof cover. The cover shall be spring loaded to close, preventing water from entering when the shoreline is not connected. The super auto eject receptacle shall be mounted in a location specified by the department and is designed to accept a 120V AC from a shoreline plug. The UL maximum allowable amperage draw on receptacles is generally 80% of their listed rating, for example, the 20 amp receptacle should not carry more than 16 amp continuous load. When adding the different amperage draws of the components being installed on the chassis, be sure to figure in whether the components shall draw a continuous load or intermittent load. This is to be located above driver's side Front Wheel. The Auto Eject cover(s) shall be a Kussmaul or equivalent, red in color.

YRS

SHORE POWER INLET PLATE

A shore-power "Inlet Plate" shall be permanently affixed at or near the power inlet. The plate shall indicate the following: type of line voltage, current rating in amps, and power inlet type (DC or AC).

STATUS CENTER

The Deluxe Auto Charge Status Center is a remotely mounted, digital voltage and amperes display, a five segment bar graph display to indicate output current, and four LEDs to show the condition of the batteries. The High and Low Battery Condition LEDs blink to indicate that there may be a problem with the vehicles electrical system. This indicator is an option for the Auto Charge 1200, the Auto Charge 1200 Remote, Pump Plus 1200 and others to come. There is a 3 1/2 digit indicator that displays battery voltage with an accuracy of 30 millivolts, and a 3 digit indicator that displays charger current with an accuracy of 100 millivolts. The indicator is water tight and rugged. The unit is designed to be mounted on the outside of a vehicle to readily indicate the battery condition. Bezel color will be red. The indicator comes with a three year warranty. The location of the unit is TBD.

YES

CUSTOM CAB

The cab shall be an engine forward extended, medium four-door, (raised roof, notched) full tilt cab. The cab shall be an "Open Interior" roll cage design requiring no inner walls or vertical interior supports. The cabs roof shall be raised, providing additional headroom above the crew area. The raised portion shall start midway over the driver and officer seats. The cab's seating capacity for emergency personnel shall be five. A 48" wide notch shall be provided in the cabs roof for nesting of an aerial device without increasing the overall height of the apparatus. All storage areas inside the cab shall fully comply with NFPA 1901 restraint requirements of 9 Gs.

YES

CRASH TEST

The cab shall exceed the strict and detailed requirements of the Economic Commission for Europe Structural Standard, ECE-29R. The test shall consist of an impact load test and a vertical load test to the cab. The cab shall have a frontal impact tests via pendulum, with an impact load in excess of 127% of the ECE-29R Standard. The estimated speed of the 3,736 pounds (1,698 kilograms) pendulum shall be a minimum of 18.2 MPH. The cab doors shall be closed during the impact test but be able to open after impact. There shall be no passenger intrusions or any structural component failures. The cab shall meet or exceed all criteria of this portion of the test. In conjunction with the frontal impact test, a vertical load test shall be implemented to the cab. The cab roof shall be loaded with a minimum of 65,979 pounds (29.53 metric tons). There shall be no failure to the cab structure or mountings, any passenger compartment intrusion or degradation of occupant survival space, or any other structural failure. The cab shall meet or exceed all criteria of this portion of the test. A complete photographic, video, data, and dimensional record of these tests shall be available and placed on record for customer evaluations.

YES

CAB MATERIALS

The vehicle shall be designed by an all-welded aluminum and fully enclosed tilt cab. The cab shall be designed exclusively for fire/rescue service and shall be pre-engineered to ensure long life. It shall incorporate an integral welded substructure that is aesthetically appealing, functionally durable, and characterized by increased personnel safety. The cab shall be minimally constructed entirely of aluminum alloy extrusions 3/16" thick, 5052-H32 alloy, marine grade aluminum sheets. The corner posts, door slam posts, roof rails and doorframes shall be made of custom extrusions designed specifically for this cab with slots for inserting the skin. The rear wall and roof shall be reinforced with a grid of rectangular extrusions, which are welded to the overall cab extrusion framework. The front corner caps shall consist of castings designed specifically for this cab with relief areas cast in place for attachment of roof skin and intersecting structural extrusions. Overlapping formed corner caps are not acceptable.

YES

CAB DIMENSIONS

- Overall width skin to skin: 96" minimum
- Overall vehicle width: 120 inches maximum (w/standard mirrors)
- Overall length: 136 inches minimum
- Cab Height Rear: 95" maximum
- Windshield area: 3,300 square inches minimum
- Cab full tilt angle: 45°
- Floor to ceiling in front: 60" minimum
- Floor to ceiling in outer rear: 66" minimum
- Floor to ceiling in inner rear: 58" minimum
- Engine cover height: not to exceed 27 ½" in the front and 33 ½" at the rear
- The Driver shall have no less than 24 ¼" of hip room
- The Officer shall have no less than 23 ¼" of hip room and 21 ¾" with ISX15 engine

DOUBLE WALL CAB FACE

The cab front shall be minimally constructed of double wall construction resulting in a sealed firewall. The inner and outer shall both be formed from 3/16" thick, 5052 H32 alloy aluminum with structural aluminum reinforcements. This design provides for increased structural integrity, crew safety, and reduced road noise in the passenger area. The outer wall is used for mounting forward lighting, grill and windshield wipers. The inner portion shall be treated with a heavy black undercoating material for corrosion prevention.

SEALED ENGINE TUNNEL

The engine tunnel shall be a structural part of the passenger cab, constructed from welded 3/16" aluminum plate and reinforced with aluminum extrusions. The rear of the engine tunnel shall be no less than 57" from the rear wall of the cab, allowing maximum legroom for forward facing passenger. After welding, the seams shall be completely sealed with silicone caulking. Engine enclosures that are not an integral part of the cab structure are not acceptable. The interior of the engine tunnel shall be insulated with 1" thick foil backed insulating foam, attached with stud and button method. A cross-section analysis of the insulation shall reveal a 1/8" thick barrier material for additional noise and heat insulation.

CAB FLOORS

Cab floors shall be constructed minimally from an aluminum extruded frame and 3/16" thick aluminum plate. Floor mats and insulation are detailed later in this specification. The forward cab floor shall be as large as possible for both the driver and officer. Floorboards shall extend in width from the side of the engine tunnel, all the way to the cab door inner panel. They shall extend forward from the seat riser to the inner portion of the double wall cab face. The officer shall have approximately 28" of foot room. The entire rear floor of the cab, to reduce trip and fall hazards, shall be a single plane. In applications requiring the use of a top-mounted PTO, a raised area in the floor may be required. For maximum crew comfort and eliminate leg fatigue during emergency responses, the floor beneath the rear facing jump seats shall be large enough for a seated firefighter to rest both feet side-by-side. Cab floor designs that are wide enough for only one foot shall not be accepted.

CAB CORROSION PROTECTION

A corrosion preventative material shall be applied during cab construction. A ten year warranty against corrosion perforation shall be provided for the cab.

WHEEL WELL LINERS

Full wheel well liners shall be installed beneath the cab to protect the bottom of the cab from road splash. The liners shall be constructed of aluminum and be full width. The wheel well liners shall be attached with threaded fasteners and be easily removable for service.

YES

FENDERETTES

Ruggedized black fenderettes shall be installed at the wheel well openings. A rubber gasket shall be installed between the fenderette and cab to eliminate contact of dissimilar metals.

YES

WINDSHIELD

The windshield shall be provided with tinted automotive safety glass, with a wraparound design. A .03" thick vinyl layer shall separate the laminated glass. All other cab glass shall be tinted and tempered.

YES

INTERMITTENT WINDSHIELD WIPERS

Electric "Pantograph" style windshield wipers shall be installed on the front face of the cab. The motors shall operate through a 72° sweep and include 24" blades to give superior wiper coverage. A washer reservoir of not less than 70 ounces shall be mounted a latched door recessed in the officer's step. A switch located on the turn signal control arm shall operate the intermittent wipers.

YES

YES

EXTERIOR GRAB HANDLES

Stainless steel handrails with a knurled, slip-resistant finish shall be positioned behind each cab door. Grab rails shall be a minimum of 24" in length. Molded rubber gasket shall be mounted between the grab handles and the cab in order to prevent corrosion due to dissimilar metals being in contract. Handrails shall be coated in a black, ruggedized finish.

YES

EXTREME DUTY CAB INTERIOR

Cab floors shall be covered with a pebble grain rubber matting with barrier type insulation. Edges of the insulation shall be trimmed with a cast aluminum foot plate for a pleasing appearance. An insulated covering shall be fitted over the engine tunnel. Made from the same material as the cab floor insulation, this covering shall insulate the cab from engine heat and noise. A Cast Products aluminum door on the rear of the engine tunnel shall provide access for fluid checks. The back side of the engine cover, as well as, a 2" to 3" return on the top side, shall be covered with a sprayed aluminum panel and be of sufficient strength to allow for 9G resistant mounting of any optional hand lights, entry tools, or other fire rescue equipment specified by the customer. The cab shall have a custom built, smooth aluminum plate dashboard, overhead console, glove box, instrumentation panel and switch panel. The front overhead shall include room for the three sun visors and the door open indicator light. The front door posts shall be trimmed with styled aluminum covers that conceal any wiring, as well as, including a mounting area for rubberized grab handles. The center windshield post shall be covered with a ruggedized paint finish. Prior to installing the headliner and rear wall padding, minimum R-7 insulation, shall be installed between the interlocking extrusions. These covers serve to finish the interior, cover wiring harnesses and insulate the interior from sound and heat.

YES

CAB STEPS

All cab steps shall be of a stationary, fixed design that use no moving parts and requires no periodic maintenance other than cleaning. There shall be an open-grip step at each cab door opening. The area under the step shall be enclosed to prevent road dirt from entering the cab. There shall be provisions made at the front of the step for easily flushing out any dirt accumulation. At each door, opening there shall also be an intermediate cab step. Intermediate

steps shall be full width of the doorstep area and constructed from embossed aluminum tread plate. Steps and assemblies shall be coated in a black, ruggedized protective finish.

CAB STEP HEIGHTS

The distance from level ground to the first cab step shall be 19" to 21" without using swing-down style or under-cab "stirrup" auxiliary steps. The distance from first cab step to intermediate step shall be approximately 12.5" front and rear. The distance from intermediate step to cab floor shall be approximately 9.5" inches in the front and 12" in the rear.

YES

UREA STORAGE TANK

There shall be a five gallon urea tank located under the extended portion on the cab. A urea level gauge shall be provided in the cab on the main instrument panel. There shall be a DEF fuel fill assembly mounted in the left crew cab extension. The fill assembly shall have cast aluminum door and fuel fill cap with retention ring. The assembly shall be properly labeled "Diesel Exhaust Fluid Only". The DEF door shall be painted with a black ruggedized material.

YES

CAB DOORS

All cab doors shall be full length, designed to cover the step well area. Each cab door shall be flush type with a minimum opening of 85°. The doors shall include a bulb style rubber seal around the perimeter of each door frame ensuring a weather tight fit. The cab entry doors shall be equipped with exterior pull handles, suitable for use while wearing firefighter gloves. The handles shall be made of aluminum with a black ruggedized finish. The interior latch shall be cast aluminum, oversized for easy access with a gloved hand.

YES

DOOR HINGES

Each cab door shall be attached to the cab with two concealed automotive style hinges with restraining strap.

YES

CAB DOOR LOCKS

The door locks shall be electric over manual with individual master controls at each door. Each rocker switch shall control all locks on all cab doors. There shall be individual twist type door locks at each door handle. In accordance with FMVSS 206, all exterior door locks shall be keyed alike.

YES

DOOR ENTRY KEY PAD

One keyless entry system with keypad and two wireless fobs shall be provided. The keyless pad shall be backlit for nighttime convenience, with multiple user codes. The system shall have a multiple incorrect entry alarm feature that flashes the interior dome light with a 30 second lock out. The key pad shall be installed on the driver's door both the pad and wireless fobs shall operate the electric door locks.

YES

CAB DOOR WINDOWS, ELECTRIC

All cab door windows shall be electrically operated. The driver's door shall contain four switches to control the operation at each door. All remaining doors shall contain one heavy-duty switch to control the window operation located on top of the door panel.

YES

EXTERIOR EMS COMPARTMENT ACCESS, LEFT SIDE

One rollup door for access to the interior EMS compartment shall be installed. The door shall be painted job color and include a locking mechanism. Opening of this door shall activate the interior lighting of the EMS compartment.

YES

FIXED CAB WINDOW, RIGHT SIDE

A window of not less than 16½" wide x 33½" high shall be installed in the right sidewall of the cab between the front and rear door. The glass shall be tempered, dark tinted and retained with one piece triple locking rubber lacing.

YES

CAB TILT LOCK

The cab shall be supported at four points. At the front, there shall be two center bonded bronze bushings. At the rear, there shall be two hydraulic locking latches. The cab shall tilt 45° by means of a pair of hydraulic cylinders driven by the electric pump. The tilt system geometry shall be designed in such a way that the maximum hydraulic pressure in the system does not exceed one-half the pressure rating of the cylinders or pump when the cab is empty. This allows the Fire Department to leave some equipment in the cab when maintenance is required (although this equipment must be secured). Once the cab is fully tilted, a safety latch shall automatically engage and act as a positive lock. The lock is released by a pull cable. The hydraulic cylinders shall be equipped with velocity fuses to prevent the cab from falling, should the hydraulic system fail. The front of the cab pivots and rides on the center bonded bushings by means of lubricated pivot pins that retain the cab yoke in the bushings. The bushings allow limited movement of the cab, and isolate the cab from noise and vibration. The rear mounts consist of a pair of hydraulic cab latches mounted on rubber cushioned mounting brackets. Latches release when the pressure in the tilt system exceeds 500 PSI. An ignition interlock system shall be installed for cab tilt operation. Cab tilt operation requires the master battery switch to be in the on position with the parking brake applied.

YES

CAB TILT PUMP W/MANUAL BACKUP

An electric over hydraulic cab lifting pump shall be provided to tilt the cab for engine and transmission service. The pump shall be operated by a remotely wired control box with coiled cord, weather resistant plug, and receptacle. An interlock shall be provided preventing the cab from inadvertently rising until the transmission is placed in the neutral position and the parking brake is set. In the event of electrical failure, a hydraulic manual backup shall be provided to tilt the cab.

YES

FRONT CIRCULATION FANS

Two 6" circulation fans shall be mounted on the front overhead console, one for driver and one for officer side of the vehicle.

YES

HEATING/AIR CONDITIONING SYSTEM

The climate control system shall use appropriately-sized heater-air conditioner units. The units shall blow up toward the windshield through adjustable vents in the dash. Additionally, there shall be two adjustable vents each side to direct air at the lower portion of the driver and officer seating areas. Two switches, including low/med/high and heat/off/ ac, shall control the front system. A blend air switch shall be installed to operate both the front heating and cooling systems. This provides hot and dry air for defogging purposes. Switches including high/med/low and heat/off/AC shall control the units. In addition to the rear control switches, there shall be an On/Off switch located near the driver to disable the rear unit if needed. The entire roof and back wall shall be heavily insulated with 1" foam to enhance the cooling system. Heaters shall be plumbed with a shut off valve at the engine. The roof top condenser housing(s) shall be red in color.

YES

SEAT COLOR

The cab seats shall be gray in color.

YES

DRIVER'S SEAT

The driver's seat shall be an Emergency 911 Seating Model 911 XL Highback with air ride suspension. The seat shall have powered ten-way adjustability with multiple user memory by the driver in accordance with SAE J1517. The seat shall be equipped with an integrated three point seat belt with an automatic retractor. The belt shall be red in color to meet current NFPA requirements.

YES

OFFICER'S SEAT

One Emergency 911 Seating Model 911 XL SCBA shall be installed. Seat features shall include six way electric and ready reach feature. There shall be a SmartDock Gen II hands-free SCBA holder provided with the seat. The SCBA holder shall be a strap-free docking station with single motion insertion and hands-free release when the occupant rises out of the seat. There shall one SCBA seat cavity removable panel provided for a smooth back when the breathing air apparatus is not in use.

YES

COMPARTMENT, DRIVER'S SIDE OUTBOARD REAR FACING

One full height EMS compartment constructed of 1/8" smooth aluminum shall be mounted in the cab. This cabinet shall be installed rear facing behind the driver's seat. The cabinet shall be supplied with a sprayed finish to match the interior of the cab.

YES

EMS COMPARTMENT COVER, INTERIOR

An NFPA compliant cover will be attached to secure the contents of the compartment. Cargo netting consisting of multiple seat belt style buckles will not be acceptable.

YES

LIGHT(S), EMS COMPARTMENT

There shall be one 36" OnScene Solutions Access model 73036 shall be installed in the driver's side EMS compartment. The light shall provide 15HB of surface mounted LEDs per 10" sections and produce a minimum of 200 lumens per 10" of length. A switch to activate this light shall be located on the exterior wall of the compartment, easily accessible by the rear crew member. Additionally, this light shall illuminate when the exterior rollup door is opened.

YES

SHELVES, EMS COMPARTMENT

There shall be two vertically adjustable shelves installed in the driver's side EMS cabinet. The shelf shall be constructed of smooth aluminum and have a 2" lip at the front, sides and rear of the shelf.

YES

120V SHORE POWER RECEPTACLE, EMS COMPARTMENT

There shall be one 120V duplex receptacle installed in the driver's side EMS compartment. The outlet shall be a household type with straight blade plugs. The outlet shall be located in the lower left corner of the cabinet. This outlet shall be powered by the shore line and will be labeled as such.

YES

12V POWER OUTLETS, EMS COMPARTMENT

There shall be two 12 volt power outlets installed in the driver's side EMS compartment.

YES

CREW SEAT, OFFICER'S SIDE REAR FACING

One outboard, rear facing, seat shall be installed behind the officer. The seat shall be an Emergency 911 Seating 911 XL SCBA non-suspension seat. The seat shall include the ready reach system. There shall be a SmartDock Gen II hands-free SCBA holder provided with the seat. The SCBA holder shall be a strap-free docking station with single motion insertion and hands-free release when the occupant rises out of the seat.

CREW SEATS, INBOARD FORWARD FACING

Two inboard, forward-facing seats shall be installed against the rear cab wall. The seats shall be an Emergency 911 Seating 911 XL SCBA non-suspension seat. The seats shall include the ready reach system. These seats shall be spaced apart as far as possible to allow for crew member comfort and maneuverability. There shall be a SmartDock Gen II hands-free SCBA holder provided with the seats. The SCBA holder shall be a strap-free docking station with single motion insertion and hands-free release when the occupant rises out of the seat.

YES

CUSTOM FRONT GRILLE

The front grille shall be covered in a black, ruggedized coating.

YES

INTAKE GRILLE, RIGHT SIDE W/EMBER SEPARATOR

A right stainless steel grille shall be installed. This grille shall be covered in a black, ruggedized material.

YES

HEATED/REMOTE CAB MIRRORS

Two side mounted rear view mirrors shall be installed with a 14.5" x 7" mirror head and a separate 6" x 8" parabolic mirror. The mirror head shall be heated and remotely adjustable by the driver. The mirrors shall be aerodynamically designed to reduce wind buffeting and resultant vibration. The housings shall be finished in a black ruggedized material. The mirrors support tubes shall be 7/8" stainless steel, with breakaway mounting brackets.

YES

EXTERIOR TRIM, REAR CAB STEP WELL

The rear cab door stepping surfaces shall be trimmed with aluminum tread plate. There shall be tread plate covers that provide access to the chassis battery system. This tread plate shall be painted with a black ruggedized material.

YES

ADDITIONAL CAB INSULATION SPRAY

In addition to the standard insulation package the complete under cab, inside the cab ceiling and back wall (before standard insulation is installed), engine tunnel and floor shall be coated with VL-37 spray.

YES

UNDER CAB INSULATION

The underside of the cab tunnel surrounding the engine and the underside of the entire cab floor shall be lined with multi-layer insulation, engineered for application inside diesel engine compartments. The insulation shall act as a noise barrier, absorbing noise thus keeping the decibel level in the cab well within NFPA recommendations. As an additional benefit, the insulation shall assist in sustaining the desired temperature within the cab interior.

YES

CAB CORROSION PROTECTION AND SOUND DEADENING

The apparatus cab shall be completely covered in one of two types of paint, prior to installation of any interior or exterior components, including insulation and floor mats. This process shall be required to guard against corrosion as well as to keep the cab as quiet as possible for firefighters. The entire underside and double wall area at the front of the cab shall be cleaned, primed and sprayed with black ruggedized material as a finish coat. This shall include any areas that are not normally visible after the cab is complete. The entire cab interior shall be sprayed with a ruggedized material, as described later in these specifications. The cab exterior shall be completely finish painted with DuPont or equivalent paint, as described later in these specifications. This shall include the areas under any optional rear wall or cab roof diamond plate overlays. The fire department shall, through the Virtual Manufacturing feature described earlier in these specifications, have the ability to see these areas covered with the ruggedized coating prior to installation of items such as engine tunnel insulation, cab interior insulation and

YES

headliners, engine tunnel covering, floor mats, cab inner door panels, etc. As a result of these cab corrosion protection measures, a ten year warranty against cab corrosion shall be provided to the fire department.

INTERIOR CAB FINISH

The interior of the cab shall be painted with a black ruggedized material. The cab metal finish shall be covered with a coat of adhesion promoting primer. The front and rear headliners, as well as, rear wall (if applicable) shall be covered with heavy-duty black vinyl.

YES

FLOOR MATS/ENGINE TUNNEL COVERING

The floor mats and engine tunnel shall be covered with black pebble grain vinyl with 1/4" foam backing. The edges of the floor mats shall be trimmed with a cast aluminum foot plate for a pleasing appearance.

YES

INTERIOR TRIM, REAR WALL ALUMINUM PANEL

The entire interior rear wall of the cab shall be covered with a Pack Trac mounting system.

YES

CAB GRAB HANDLES, INTERIOR

Two interior grab handles installed in the cab on the "A" posts with one on each side. The grab handles shall be constructed of rubberized steel. Four interior grab handles shall be installed in the cab, one each side on top of the front door panels adjacent to fixed window and one each side on the rear door panels. The grab handles shall be constructed of 1 1/4" knurled stainless steel. The grab rails shall be mounted with chrome plated end stanchions. There shall be one interior grab handle installed on the inside of each rear cab door. The handles shall extend horizontally with width of the window just above the window sill. The grab handles shall be constructed of bright stainless steel.

YES

GLOVE BOX

The glove box shall be an integral part of the welded aluminum dashboard assembly and located on the officer side of the cab. The storage area of the glove box shall bolt in place for easy service access. The door shall be drop down style and constructed from brushed stainless steel with a recessed latch. The area above the glove box shall be flat for a work surface or optional MDT mounting.

YES

SUN VISORS

The cab shall be equipped with three sun visors. The visors shall be installed on the overhead panel and provide approximately 90% coverage across the width of the cab. The visors shall be approximately 26" wide and 6" tall.

YES

UPPER DOOR PANELS, INTERIOR

There shall be four interior upper front and rear door panels installed covered with a ruggedized material extending from the window down to the lower kick plate. The color of the panels shall match the interior of the cab unless otherwise specified.

YES

LOWER DOOR PANELS, INTERIOR

There shall be four interior lower front and rear door panels installed covered with a ruggedized material extending from the window down to the lower kick plate. The color of the panels shall match the interior of the cab unless otherwise specified.

YES

INTERIOR DOOR REFLECTIVE STOP SIGNS

Large reflective stop signs, covering a minimum of 96 square inches shall be located within the lower door panel.

YES

EQUIPMENT MOUNTING PLATE, ENGINE TUNNEL

There shall be one equipment mounting plate installed on the engine tunnel with 45° bends on the driver and officer sides constructed of 3/16" smooth aluminum plate covered with a ruggedized material.

YES

EQUIPMENT MOUNTING PLATE, RAISED ENGINE TUNNEL PORTION

There shall be one equipment mounting plate installed on the raised portion of the engine tunnel constructed of 3/16" smooth aluminum plate covered with a ruggedized material.

YES

ENGINE TUNNEL REINFORCEMENT, EXPANDED ALUMINUM

The engine tunnel insulation shall be covered and reinforced with expanded aluminum. The expanded aluminum overlay shall assist in retaining the insulation tight against the cab.

YES

PAC-TRAC TOOL BOARDS

The following Pac-Trac tool boards shall be installed in the cab for the mounting of additional equipment along the entire rear wall, side of EMS compartment, and compartments TBD at pre-construction. The tool board slats shall be provided with Trac Lock inserts and fasteners.

YES

INSTRUMENTATION

For easy viewing, gauges shall be white faced with black lettering and adjustable intensity LED backlighting. The gauges shall meet SAE J-1939 protocol to eliminate redundant sending units. Gauges must be fully sealed to 6 PSI. The gauge crystal shall be polycarbonate, anti-fog, and anti-scratch coated. The panels shall be divided into groups of instruments that make identification sensible and easy to view. The following instruments shall be included in the gauge panel in front of the driver:

YES

- Dial Type voltmeter gauge
- Dial Type coolant temperature gauge with warning light
- Dial Type engine oil pressure gauge with warning light
- Engine hour/trip hour red reset button
- Dial Type tachometer with digital engine hour meter and trip hour meter along with a digital, fourline diagnostic display
- Driver information display panel with alarm output for gauge warning lights
- Dial type primary air pressure gauge with warning light
- Panel light dimmer control knob
- Dial type secondary air pressure gauge with warning light
- Dial type fuel level gauge with low fuel indicator level
- Dial type Diesel Exhaust Fluid gauge with low level indicator
- Dial type transmission temperature gauge with warning light
- Odometer/trip odometer red reset button
- Dial type speedometer gauge with digital odometer and trip odometer that is active when pumping

The following indicator lights shall be provided in the gauge panel:

- Air cleaner restriction light
- High beam indicator
- Parking brake indicator
- Turn signal indicators
- Low primary air
- Low secondary air
- Battery voltage error
- Door ajar
- Auto chassis lubrication system (if equipped)

- Emergency engine shutdown (if equipped)
- Diagnostic indicators for airbag, engine, transmission, and ABS

The lower dash to the left of the steering column shall contain the ignition, start and headlight switches. When a multiplexed electrical system is used with a display screen the headlight switch will be located in this screen. The lower dash to the right of the steering column shall contain the regeneration and traction control switches. The electronic diagnostic connections for the engine, transmission, and ABS brakes shall be located in the lower left firewall.

Yes

SERVICE ACCESS

The driver's instrumentation area shall be made of textured black non-glare panels affixed to the aluminum dash. There shall be a single gauge panel, secured with a bottom hinge and four quarter-turn fasteners. Access to the gauge clusters shall be accomplished simply by releasing the latches and pulling the panel outward. Other gauge access designs are not acceptable. The chassis electrical panel shall be located in the center of the aluminum dash, between the switch panel and the windshield. There shall be a lift up cover, with two recessed lift-and-turn latches for quick access to the panel. The underside of the panel shall have a pre-printed diagram that clearly depicts the function of each circuit breaker and relay. The vehicle load manager shall be located in this panel. The opening to the electrical shall measure approximately 19" wide near the switch panel and 37" wide toward the windshield.

Yes

DRIVER'S INFORMATION DISPLAY

There shall be a display panel on the driver's gauge cluster that will illuminate various caution and warning indicator lamps. This display also contains a 340 x 90 monochrome LCD for display of specific and user selectable data. The display unit reads data from the J1939-11 power train communications network. Display will be capable of but not limited to the following features:

- Auto SelfTest
- Viewing the state of each digital or analog input to the unit
- Viewing the state of each output
- Allows users ability to set service reminders by distance or hours of operation
- Allows users ability to set data screens in various formats i.e. bar graph / text
- Viewable active and stored powertrain ECU fault data.
- Diagnostics screen allows user to select and view a specific source such as engine / transmission
- Display is selectable between English and metric readings.
- Messages and Icons will pop up in display when a condition exists such as: transmission oil life, filter or other service needed as reported by the Allison Transmission ECU engine conditions: low oil pressure, high coolant temperature, low coolant level, water in fuel, check / stop engine, regeneration needed, high exhaust temperature. Indicator lights may also accompany pop up messages: Door ajar indicator will also pop up a "DO NOT MOVE VEHICLE, CHECK ALL DOORS AND ITEMS THAT RAISE OR EXTEND BEYOND APPARATUS CAB OR BODY" message

Yes

CHASSIS ELECTRICAL SYSTEM

The chassis shall be equipped with a Weldon V-Mux multiplexed electrical system. The multiplex system shall consist of all solid-state components contained inside sealed aluminum extrusions and/or weatherproof Deutsch enclosures referred to as nodes. Each extruded node shall consist of 24 output channels and 19 input channels. Each extruded node is to have a set of diagnostic LED indicators. The system shall also incorporate, as needed, miniature nodes. The mini nodes shall have 12 digital outputs and 5 inputs. Each mini node must have a set of diagnostic multiple switch signals to be available to the electronics system. All inputs and

outputs shall be configured into a scalable electrical harness utilizing Deutsch connectors. The nodes shall not have special mounting requirements. The system, at a minimum, shall be capable of performing the following functions: load management and sequencing, switch loads, receive digital and analog signals, perform and report diagnostics, continuously report vehicle status, and system is expandable. Placement of nodes within the cab of the chassis enables a reduction in wire harness bundles, elimination of redundant harnessing and separate circuit boards, relay and circuit breakers, electrical hardware, separate electrical or interlock subsystems and associated electronics for controlling various electrical loads and inputs. The multiplex system shall be field reprogrammed and re-configurable by an authorized service center. This complete system shall eliminate the need for the following separate components or devices: load manager, load sequencer, warning lamp flasher, headlamp flasher, door open notification system, interlock modules, separate volt meter, ammeter and temperature monitor. The base system includes: total load management, load shedding capabilities, load sequencing capabilities, on board diagnostics readout, very reliable, solid state hardware, error reporting, continuous system monitoring and reporting, emergency warning lamp flasher, field configurable, expandability capabilities, and advanced pc diagnostics. As programmed electrical system reports shall be generated by the multiplex system designer software and furnished in the apparatus manuals. A master circuit list of electrical circuits that the apparatus builder installs shall be furnished in the delivery manuals.

✓ **MAIN CENTER DASH**

YES

The main center dash area shall include three removable panels located as follows: one to the right of the driver position, one in the center of the dash, and one to the left of the officer position. The center panel shall be within comfortable reach of both the driver and officer. The panel shall be constructed of 5052-H32 Marine Grade, 1/8" thick aluminum plate.

SWITCH PANEL, DRIVER'S SIDE

YES

The driver's side panel shall be constructed of 5052-H32 Marine Grade, 1/8" thick aluminum plate. The dash panel shall include the following: transmission shifter and pump shift control. The remaining panel shall house a full color graphical Weldon Vista IV display that offers many enhanced features for display, control, and diagnostics of the multiplex system. The Vista IV incorporates seven switches with custom legends and has a wide temperature operating range. The Vista IV shall control most all required switches including automatic climate control for front air conditioner equipped chassis. The climate control panel shall also include switching to enable or disable the rear under seat air conditioner/heater unit if so equipped. Features shall include: Operates in 12 or 24 volt applications, virtual switches, color display, virtual gauges, rear view camera (if applicable), visual door indicator, automatic climate control, reprogrammable by OEM, peer to peer network, onboard diagnostics, onboard service information, displays inside/outside temperature, and video ready for: backup camera, thermal cameras, DVD and GPS.

✓ **SWITCH PANEL, CENTER**

YES

The center panel shall be constructed of 5052-H32 Marine Grade 1/8" thick aluminum plate. The dash panel shall include the following: the left side of the panel shall house the Mirror Control (joystick type) and parking brake control in the lower portion, the mirror heat switch shall be located in the display screen, and the remainder of the panel shall house the electronic siren control head, Firecom system, and fire radio.

✓ **SWITCH PANEL, OFFICER'S SIDE**

YES

The officer's side panel shall be constructed of 5052-H32 Marine Grade 1/8" thick aluminum plate. The dash panel shall include Vista IV display.

VEHICLE DATA RECORDER

YES

The chassis shall have a Weldon Vehicle Data Recorder (VDR) system installed. The system shall be designed to meet NFPA 1901. The following information shall be recorded: vehicle speed, acceleration, deceleration, engine speed, engine throttle position, abs event, seat occupied status, seat belt status, master optical warning device switch position, time, and date. Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system.

SEAT BELT WARNING SYSTEM

YES

A Weldon seat belt warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall provide visual warning indicator in the cab, and indicator light in the instrument panel, and an audible alarm. The warning system shall activate when any seat is occupied with a minimum of 60 pounds, the corresponding seat belt remains unfastened, and the park brake is released. The warning system shall also activate when any seat is occupied, the corresponding seat belt was fastened in an incorrect sequence, and the park brake is released. Once activated, the visual indicators and audible alarm shall remain active until all occupied seats have the seat belts fastened.

STEERING COLUMN AND SMART WHEEL

YES

The steering column shall be a Douglas Autotec tilt and telescope. A lever mounted on the side of the column shall control the tilt and telescope features. A Signal-Stat (self-canceling) turn signal switch shall be mounted to the column. The steering shaft from the column to the meter box shall have a rubber boot to cover the shaft slip and a second rubber boot to seal the passage hole in the floor. Spacing between this rubber boot and the brake pedal shall be large enough as to allow for ample spacing between column, brake, and accelerator pedals. The steering wheel shall be 18" in diameter and include the programmable Smart Wheel feature. Smart Wheel controls shall control the following: air horns, Nathan Train Horns, and Mechanical Q-siren. The Signal-Stat turn signal switch shall include the following functions: left and right turn signals, high beam dimmer control, hazard warning switch, two speeds with intermittent windshield wiper control, and windshield washer control.

SWITCH, MANUAL FAST IDLE

YES

There shall be a manual fast idle switch mounted on the dash. When activated, the switch shall increase the engine idle speed to approximately 1,200 RPM to allow the alternator to supply additional charging of the apparatus battery system. The fast idle switch shall only operate if all interlocks are met. Apparatus transmission must be in neutral with the parking brake set and the fire pump (if equipped) must not be engaged.

12-VOLT FUSE BLOCK

YES

There shall be one Blue Sea fuse block 5025 installed in a location determined by the customer. The unit shall include six 12 volt constant power supply ports and grounding buss with easily changeable fuses. The unit shall have a 100 amp total operating range. The location shall be the top shelf of EMS compartment.

CHARGING PORTS, 12-VOLT USB

YES

There shall be three 12 volt USB charging ports provided in the cab. The location is TBD.

CUSTOM CONSOLE

YES

A custom console shall be fabricated and installed on the engine tunnel. The console shall have a map book storage area with a hinged lid. The front of the console shall be equipped with a center

storage slot for medical gloves and a cup holder on each side. The console shall be constructed of smooth aluminum painted with a rugged material to match the interior of the cab.

RADIO

A Jensen radio with weather band, AM/FM stereo receiver and rear iPod input pigtail connector, satellite radio capability, a front panel mini stereo input jack, and four speakers shall be installed in the cab. The radio shall be installed in the driver's side overhead position. The speakers shall be installed inside the cab with two speakers recessed within the headliner of the front of the cab just behind the windshield and two speakers on the upper rear wall of the cab. Deactivate radio when in the response mode, unless parking brake is engaged. A small antenna shall be located on the left hand side of the cab roof for AM/FM and weather band reception.

YES

RADIO POWER CIRCUIT

A 50 amp switched battery power circuit with manual reset shall be installed behind the officer's seat to activate the radio.

YES

POWER AND GROUND STUDS

The electrical distribution panel shall include two power studs. The studs shall be size 10 and each of the power studs shall be circuit protected with a fuse of the specified amperage. One power stud shall be capable of carrying up to a 40 amp battery direct load and one power stud shall be capable of carrying up to a 20 amp ignition switched load. The two power studs shall share one size 10 ground stud.

YES

12 VOLT POWER OUTLETS

There shall be four 12 volt power outlets provided in the cab. The power outlets shall be wired to direct battery power with the appropriate wire size and fuse. The locations are TBD.

YES

ELECTRONIC SIREN

There shall be one Whelen or equivalent siren control head mounted in the cab. It shall incorporate a 12V/200W remote siren amplifier on an aluminum alloy chassis covered by an aluminum alloy housing with a powder coated black top for maximum protection. The control shall be furnished with a flush mount black polycarbonate powder coated control head. It shall have the ability for either 100 or 200 watt output. The front overlay of the control head shall be made of a black polycarbonate and powder coated. The lettering and artwork on the overlay shall be illuminated with adjustable backlighting of soft LED non-glaring green. The control head operating controls will consist of a power switch, manual button, and a function rotary switch. The control head shall include a 20A/32V fuse. The microphone shall be hardwired to the 295HFS2. The 295HFS2 PC board shall have input polarity protection, output short circuit protection. The solid state siren speaker amplifier shall be vibration resistant. The 295HFS2 shall have four Scan-Lock™ siren tones with two manual functions for additional siren tones. The siren amplifier shall have the ability to customize the placement of each siren tone with the rotary switch. The siren amplifier shall have a "Siren in Use" icon driver and adjustable preset repeat radio volume. The PTT (push to talk) switch on the microphone shall override all siren functions. The 295HFS2 shall have a combination On/Off and horn ring transfer switch with Bi-polarity horn/ring activation control. The 295HFS2 shall have SI Test® capability to perform a complete diagnostic silent test of amplifier and speaker(s). The siren amplifier shall have a quick disconnect plug. The 295HFS2 shall have the ability to activate siren tones with "Aux Enable" input either with a slide switch, power controls, or relay-to-ground connector. The 295HFS2 shall meet Class A requirement for SAE, AMECA, KKK1822, and California Title XII. The siren amplifier shall include stainless steel hardware for installation. The 295HFS2 is covered by a five year factory warranty. Siren shall also include the Whelen Powercall siren tone. The location is TBD.

YES

HORN, ELECTRIC

A single electric horn activated by the steering wheel horn button shall be provided.

YES

BACK-UP ALARM

There shall be one Whelen model WBUA107, 107 dB, electronic back-up alarm installed at the rear of the apparatus. The alarm shall be wired to the transmissions output signal and is automatically activated when the transmission is shifted into reverse.

YES

LIGHTS, CAB DOME

Four Whelen 6" Round Super-LED model 60CREGCS shall be provided in the cabs headliner. The steady burn 12V interior light shall incorporate six red and six clear Super-LEDs and a clear non-optic translucent hard coated polycarbonate lens for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The conformal coated PC board and foam in place gasket shall provide additional protection against environmental elements. The 60CREGCS includes Hi/Low intensity mode standards and On/Off dual switch function. The solid state interior light shall be vibration resistant. The interior light is covered by a five year factory warranty. The white LED lights shall be activated when any cab door is in the open position automatically switching off all red lights currently on and reactivated when the door is closed.

YES

LIGHTS, ADDITIONAL CAB DOME

There shall be two additional Whelen 6" Round Super LEDs model 60CREGCS shall be provided in the cabs headliner. The steady burn 12 volt interior light shall incorporate six red and six clear Super-LEDs and a clear non-optic translucent hard coated polycarbonate lens for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The conformal coated PC board and foam in place gasket shall provide additional protection against environmental elements. The 60CREGCS includes Hi/Low intensity mode standards and On/Off dual switch function. The solid state interior light shall be vibration resistant. The interior light is covered by a five year factory warranty. The white LED lights shall be activated when any cab door is in the open position automatically switching off all red lights currently on and reactivated when the door is closed.

YES

LIGHTS, DOOR COURTESY

One Whelen TIR6 LED courtesy lights shall be mounted on the lower portion of each door panel. The lights shall activate when the door is opened.

YES

MULTIPLE DOOR AND SAFETY WARNING INDICATOR PANEL

There shall be a door ajar and safety warning light system with indicator panel located in the cab. The panel is mounted to the ceiling between the driver and the officer. The indicator panel has multiple LED lights that activate under one or all of the following conditions: cab door is open, compartment door is open, and outrigger is not in the stowed position. An audible alarm shall be installed in conjunction with the door ajar and outrigger portion of the system. The panel only operates when the ignition switch is in the "On" position and the parking brake released.

YES

LIGHTS, STEP WELL

Six TecNiq D04 Linear Dragon LED lights shall be provided, two in each front cab step well and one in each rear cab step well. Each light shall activate when the cab door is opened.

YES

LIGHTS, SWIVEL MAP

A light module with dual map lights shall be located in the overhead panel, centered over the engine tunnel.

YES

LIGHTS, ENGINE MAINTENANCE

Two white 4" LED round lights shall be mounted under the cab. The lights shall automatically activate when the cab is tilted.

YES

FRONT LIGHTING

The headlamps, turn signals, front warning and intersection lights shall be located within warning light modules, painted with a black ruggedized material with one on each side front of the apparatus.

YES

HEADLIGHTS

Four HID rectangular headlights shall be installed in the warning light modules, two each side. The headlights shall be mounted in the upper positions of the module.

YES

DAYTIME RUNNING LIGHTS

The apparatus shall be equipped with Daytime Running Lights. This feature shall control 80% of the low beam headlamp illumination. The Daytime Running lights shall operate only when the ignition switch is in the "On" position and the parking brake is released. The headlight circuitry shall override the Daytime Running Lamp feature when the headlight switch is in the "On" position. The vehicle identification lamps shall not illuminate in the Daytime Running Lamp mode.

YES

TURN SIGNALS, FRONT

Two Whelen M6 series LED model M6T turn signal lamps shall be installed, one each side directly below the low beam headlights in the warning light modules. The M6T configuration shall consist of 64 amber 5mm Super-LEDs® and an amber non-optic polycarbonate lens. The turn arrow, with the aid of two screws, shall have the ability to be installed as a surface mount warning light. The M6T shall include two Scan-Lock flash patterns of Steady (Brake) Default and SignalAlert™ Steady. The encapsulated assembly shall be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The light engine shall be installed at the rear of the unit and be vacuum tested to ensure proper sealing. The 5mm LED populated arrow shaped PC board shall be conformal coated for additional protection. The M6T shall be furnished with 6" unterminated pigtails, a rubber gasket, screws, and screw grommets shall be included for installation. The turn arrow light shall meet SAE specifications J1395, J588, and J1330. The M6T is covered by a five year factory warranty.

YES

LIGHTS, TURN SIGNAL/MARKER

Two Whelen 400 series model 40A00AAR amber LED lights shall be mounted, one each side outboard of the turn signal at a 45° angle off the front of the cab. The lights shall be part of the warning light module and are visible from both the front and sides of the vehicle.

YES

LIGHTS, LED CORNING

Two Whelen 400 series model 40R02Z*R flashing LED cornering lights shall be mounted, one each side below the marker lights in the warning light module. The lights shall be mounted at a 45° angle off the front of the cab and are visible from the sides and front of the vehicle. The warning light shall incorporate four red Super-LED, an optic hard coated polycarbonate lens, and utilize a metalized reflector with integrated TIR hybrid optics for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The conformal coated PC board and with the lens fitted with foam in place gasket assembly shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 25 Scan-Lock™ flash patterns including synchronize feature and steady burn. An installation kit including mounting hardware

YES

and rubber gasket shall be provided for surface mounting. The 40R02Z*R will contain a 12" non-terminated pigtail. The warning light is covered by a five year factory warranty.

LIGHTS, FRONT DOT

There shall be five Whelen OS series LED marker lights installed on the cabs roof located as high as practical and spaced per DOT guidelines. These lights shall be incorporated into the brow light.

YES

LIGHTS, INBOARD LOWER FRONT

Two Whelen M6 Series Super-LED model M6RC lights shall be installed, inboard of the turn signal in the warning light modules. The warning light shall incorporate red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty.

YES

FRONT WARNING LIGHTS

A ROTO RAY LED warning light shall be installed on the front of the cab below the windshield. The light shall have three sealed beam lights (two red and one white) and rotate at 200 RPM in a vertical plane.

YES

LIGHTS, CAB GROUND

There shall be one Whelen 2G Series model 20C0CDCD 4" LED light mounted under each cab door illuminating the area below providing a safe entrance and exit for cab occupants. All cab ground lights shall automatically activate when any cab door is opened and by a switch located on the dash. The 12 volt steady burn compartment lights shall incorporate 12 clear LED and a clear optic hard coated polycarbonate lens. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated coated PC board and lens fitted with foam in place gasket assembly shall provide additional protection against environmental elements. The solid state compartment light shall be vibration resistant. The 20C0CDCD will contain 350 usable lumens. An installation kit including mounting hardware and rubber gasket shall be provided. The 20C0CDCD will contain a 12" terminated pigtail with a waterproof Deutsch® connector. The compartment light is covered by a five year factory warranty.

YES

WIRELESS INTERCOM SYSTEM, FIRECOM

A wireless FIRECOM 5000D series intercom system shall be installed to provide noise suppression while providing clear voice communications for five seated positions in the cab. Communications are provided by five under the helmet headsets. This system includes intercom system, UH51 headsets, UH52 headsets, and optional mobile radio interface. The driver and officer headsets include the intercom and two-way radio communication functions, while the crew headsets are capable of intercom communications and radio communications listening.

YES

MASTER INTERCOM STATION

A Firecom model 5100D with single radio monitoring and primary transmit selection intercom shall be provided and installed. This system shall have the capability of installing up to six positions for wireless base stations and/or wired headsets. A single auxiliary input/output for an MP3 player, cell phone interface, or GPS shall be provided. The control head shall have a touch pad with adjustable volume and squelch with advanced digital noise reduction. The intercom shall

YES

have a rugged steel casing and a 12 volt nominal power supply. This intercom shall come with a two year warranty from date of purchase.

INTERFACE CABLES, MOBILE RADIO

The intercom system shall be provided with one Firecom mobile radio interface cable between the Departments radio and the Firecom system.

YES

HEADSET, DRIVERS POSITION

There shall be a wireless under the helmet headset provided for the driver's position. The headset shall have radio transmit and intercom capabilities. The Firecom UH-51 wireless headset delivers all the benefits of hands-free, full-duplex communication with your crew. Operating with a stand-alone intercom system or integrated with a mobile radio, the flexible design brings all crew members into constant communication. Behind-the-head band configuration with adjustable over-head strap easily accommodates use with helmets. Water resistant and comfortable ear seals, extended operating temperature, and robust design make this headset ready for action in virtually any foreground environment. The headset shall have a two year warranty. There shall be one HM10 headset plug in module provided for the driver's headset. The module is used to connect the intercom via the module RJ-14 jack. The module features a connector guard to protect against moisture and dust.

YES

HEADSET, OFFICERS POSITION

There shall be a wireless under the helmet headset provided for the officer's position. The headset shall have radio transmit and intercom capabilities. The Firecom wireless headset delivers all the benefits of hands-free, full-duplex communication with your crew. Operating with a stand-alone intercom system or integrated with a mobile radio, the flexible design brings all crew members into constant communication. Behind-the-head band configuration with adjustable over-head strap easily accommodates use with helmets. Water resistant and comfortable ear seals, extended operating temperature, and robust design make this headset ready for action in virtually any foreground environment. The headset shall have a two year warranty.

YES

HEADSETS, CREW POSITIONS

There shall be three wireless headsets provided for the crew positions. The headsets shall have intercom only capabilities. The Firecom wireless headset delivers all the benefits of hands-free, full-duplex communication with your crew. Operating with a stand-alone intercom system or integrated with a mobile radio, the flexible design brings all crew members into constant communication. Broad padded headband remains comfortable for hours of wear. Water-resistant and comfortable ear seals, extended operating temperature, and robust design make this headset ready for action in virtually any fire ground environment. The headsets shall have a two year warranty.

YES

BACK UP CAMERA SYSTEM

One Federal Signal model CAMSET-70 color camera system shall be installed on the vehicle. The system shall be wired to the vehicle's 12 volt electrical system. The 7" LCD color monitor shall be installed in cab in easy reach of the driver while in the seated position. The color camera shall be installed facing rearward giving a clear and unobstructed view behind the vehicle. The system shall activate when the transmission is shifted in the reverse position. A switch located on the monitor shall activate the system regardless of the transmissions shifted position. This system shall consist of the following components:

YES

- One 7" CAMLCD color monitor installed in the cab
- One color camera model CAMCCD-REARNTSC with night vision and audio installed high at the rear of the vehicle
- 65.5' of camera-to-monitor extension cable (CAMCABLE-20)

- Multiple camera control box (CAMBOX-4NTSC/CAMBOX-PAL)
- Mounting bracket and hardware (CAMLCD-BRACKET)

ADDITIONAL CAMERA, OFFICER'S SIDE

One Federal Signal model CAMCCD-SIDETSC side view camera shall be installed on the officer's side of the vehicle wired to the monitor. The camera shall be equipped with night vision and audio.

YES

CAB PAINT FINISH, SINGLE

The custom cab shall have a single paint finish. The paint color shall be furnished by the customer. All cab exterior components including doors and glass, shall be removed. The complete cab exterior shall be thoroughly sanded, solvent cleaned and finished with high luster polyurethane paint before mounting of body to assure full coverage of paint to all surfaces.

YES

UPPER CAB PAINT FINISH

The upper cab exterior shall have no mounted components prior to painting to assure full coverage of metal treatments. These steps are followed as recommended by the paint manufacturer to provide a lasting and high quality gloss finish. All paint products shall be provided by DuPont.

YES

UPPER CAB PAINT COLOR/CODE

The upper cab paint code shall be Red, 854008

YES

PRIMARY/LOWER CAB PAINT FINISH

The primary/lower cab exterior shall have no mounted components prior to painting to assure full coverage of metal treatments. These steps are followed as recommended by the paint manufacturer to provide a lasting and high quality gloss finish. All paint products shall be provided by DuPont.

YES

PRIMARY/LOWER CAB PAINT COLOR/CODE

The primary/lower cab paint code shall be Red, 854008.

YES

CAB PAINT BREAK LINE STRIPE

This shall be determined at pre-construction meeting.

YES

SAFETY SIGNS, GENERAL REQUIREMENTS

Safety signs with text shall conform to the general principles of ANSI/NEMA Z535.4, *Product Safety Signs and Labels*. Safety signs without text shall conform to the general principles for two-panel safety signs of ISO 9244, *Earth-Moving Machinery - Machine Safety Labels*. Apparatus built for sale in the United States shall employ safety signage that complies with ANSI/NEMA Z535.4. Apparatus built for sale outside the United States shall employ safety signage that complies with ANSI/NEMA Z535.4 or ISO 9244. Safety signs referenced in this standard beginning with the letters FAMA shall conform to the text and graphics of the referenced safety sign number found in FAMA TC010, *Standard Product Safety Sign Catalog for Automotive Fire Apparatus*. All signs must be permanently attached. Automotive tape is not acceptable.

YES

CARRYING CAPACITY PLATE

A permanently attached carrying capacity plate in accordance with the current NFPA 1901 Standards shall be installed in plain view of the driver. The tag shall include the following: overall height, overall length, GVWR, and seating capacity.

YES

SAFETY SIGNS, SEATED & BELTED

Safety signs FAMA07, which warns of the importance of seat belt use, shall be visible from each seat that is intended to be occupied while the vehicle is in motion.

YES

SAFETY SIGN, CAB EQUIPMENT MOUNTING

A safety sign FAMA10, which warns of the need to secure items in the cab, shall be visible inside the cab.

YES

SAFETY SIGN, FIRE SERVICE TIRE RATING

A safety sign FAMA12, which warns of the special requirements for fire service-rated tires, shall be visible to the driver entering the cab of any apparatus so equipped.

YES

SAFETY SIGN, CAB SEATING

A safety sign FAMA14 shall be located in the cab visible to the operator. The sign shall read: "THIS VEHICLE HAS A SEATING CAPACITY OF 5 PERSONNEL. CARRYING ADDITIONAL PERSONNEL MAY RESULT IN DEATH OF SERIOUS INJURY."

YES

SAFETY SIGNS, HELMET WORN IN CAB

A safety sign FAMA15, which warns not to wear helmets while the vehicle is in motion, shall be visible from each seat that is intended to be occupied while the vehicle is in motion.

YES

SAFETY SIGNS, CLIMBING METHOD INSTRUCTION

Safety signs FAMA23, which warns of the proper climbing method, shall be visible to personnel entering the cab and at each designated climbing location on the body.

YES

SAFETY SIGNS, RIDING ON EXTERIOR

Safety signs FAMA24, which warns personnel not to ride on the vehicle, shall be located at the rear step areas and at any cross walkways.

YES

PLATE, OVERALL HEIGHT/LENGTH/WEIGHT

An Overall Height/Length/Weight information plate shall be installed that can be clearly identified and visible to the driver while in the seated position showing the apparatus completed overall height, length, (in feet and inches) and gross vehicle weight (in tons) current to the apparatus manufactured date. If changes to the vehicle occur while in service, the department must revise the overall height-length-weight plate.

YES

PLATE, FLUID CAPACITY

A permanently affixed fluid data plate shall be installed in the driving compartment to indicate the type and quantities of the following fluid used in the vehicle: Engine Oil, Engine Coolant, Chassis Transmission Fluid, Pump Transmission Lubrication Fluid (if applicable), Pump Primer Fluid (If Applicable), Drive Axle Lubrication Fluid, Air Conditioning Refrigerant, Air Conditioning Lubrication Oil, Power Steering Fluid, Cab Tilt Mechanism Fluid, Transfer Case Fluid, Equipment Rack Fluid, Air Compressor System Lubricant, Generator System Lubricant, Front Tire Pressure – Cold, And Rear Tire Pressure – Cold. The following information shall also be supplied on the Fluid Data Plate: Chassis Manufacturer, Production Number, Paint Number, Year Built, Date Shipped, and Vehicle Identification Number.

YES

SAFETY SIGN, APPARATUS MOVEMENT

A permanently affixed movement warning plate shall be installed near the door ajar light that reads: "DO NOT MOVE APPARATUS WHEN LIGHT IS ON".

YES

PUMP ENCLOSURE, SIDE CONTROL

The pump enclosure superstructure shall be constructed minimally of aluminum tubing, channel, angle, and break-formed components. The framework shall be formed by beveled aluminum alloy extrusions and electrically seam welded both internally and externally at each joint using 5356 aluminum alloy welding wire. The main, frame work shall be constructed of 3 x 3.5 6063-T6 aluminum extrusions. The break-formed components shall be constructed from 3/16" aluminum. The cross members support the substructure and the exterior panels independently from the cab and body. The cross members shall be isolated from the frame rails using torsion mounts. The pump enclosure shall be supported at the top of the frame rails, in a minimum of four places. The module shall be secured with angle brackets bolted to both the pump enclosure support cross rails and the side of the chassis frame rails. This design is required to eliminate shifting and stress on the pump enclosure, pump panels, and running boards. The front of the pump module shall be covered with aluminum tread plate to keep road debris from the front of the pump. The pump enclosure provides an area above the pump for the installation of crosslays or dunnage area. Any pump enclosure constructed using any material other than aluminum or utilizing any other mounting method is not acceptable.

SEPARATE PUMP MODULE

The pump module will be a self-supported structure mounted independently from the body and chassis cab. The pump module will be constructed entirely of extrusions and aluminum plate and shall be bolted to the chassis frame rails. The framework will be formed from beveled aluminum alloy extrusions and electrically seam welded both internally and externally at each joint using 5356 aluminum alloy welding wire. The main framework shall be 3 x 3.5 6063-T6 aluminum extrusion. Aluminum angle will be welded such that a recessed pump panel can be mounted inside the extrusion perimeter. The module shall be mounted to the chassis frame rails utilizing a "U" bolt spring mounting system. The pump module design must allow normal frame deflection without imposing stress on the pump module structure or side running boards.

PUMP PANELS

The operator's controls and gauges shall be mounted on pump panels constructed of 1/8" black anodized, non-glare aluminum. No vinyl coverings shall be acceptable as these surfaces are subjected to rough service and vinyl is susceptible to tearing. The operator's master gauge panel shall be vertically hinged with push style latch for access to gauges and auxiliary controls. The operator's control panel shall be located below the master gauge panel and constructed of 1/8" black anodized, non-glare aluminum. All gauges and controls shall be properly identified with color-coded metal tags. The tags shall be affixed with 3M brand industrial adhesive. The gauges shall be functionally grouped above each control. The right side upper panel shall be vertically hinged with double doors and push style latches for pump compartment access. The doors shall be constructed of 1/8" aluminum tread plate and painted with a black ruggedized material. The right side lower panel shall be removable for serviceability. The panel shall be constructed of 1/8" black anodized, non-glare aluminum. All instruments and controls shall be provided and installed as a group at the pump panel. The central midpoint or centerline of any valve control shall be no more than 72" vertically above the ground or platform that is designed to serve as the operator's standing position. The instruments shall be placed to keep the pump operator as far as practical from all discharge and intake connections and in a location where they are readily visible and operationally functional while the operator remains stationary. A safety sign FAMA25, which warns of the need for training prior to operating the apparatus, shall be located on the pump operator's panel.

FULLY HINGED PUMP PANEL, RIGHT SIDE

One vertically hinged pump panel with push style latch shall be installed and constructed of the same material as stated in the pump module specifications. The hinged panel replaces the current

right hand lower removable panel for ease of access to the pump compartment during routine maintenance.

PUMP PANEL LIGHT, LEFT SIDE

One individual OnScene Access LED pump panel light with on/off switch shall be mounted under the light shield left side. For optimum visibility during nighttime operations, the light shall be mounted as high as possible.

YES

PUMP PANEL LIGHT, RIGHT SIDE

One individual OnScene Access LED pump panel light with on/off switch shall be mounted under the light shield right side. For optimum visibility during nighttime operations, the light shall be mounted as high as possible.

YES

LIGHT, PUMP COMPARTMENT

One LED compartment light shall be installed in the pump compartment for inspection or routine maintenance wired to the pump panel light switch.

YES

RUNNING BOARD, LEFT SIDE

A running board shall be provided on the left side of pump module constructed of "Embossed" 3/16" aluminum tread plate flanged down and in 2.5" x 1" for maximum rigidity then bolted to the modules substructure to facilitate removal. The running board stepping surface shall comply with the latest version of NFPA 1901. The running board shall be painted with a black ruggedized material.

YES

RUNNING BOARD, RIGHT SIDE

A running board shall be provided on the right side of pump module constructed of "Embossed" 3/16" aluminum tread plate flanged down and in 2.5" x 1" or maximum rigidity then bolted to the modules substructure to facilitate removal. The running board stepping surface shall comply with the latest version of NFPA 1901. The running board shall be painted with a black ruggedized material.

YES

PUMP OPERATOR'S PLATFORM

One slide-out platform shall be installed under the operator's panel constructed from 3/16" aluminum tread plate. Two sealed roller bearing slides, with a total capacity of 500 pounds shall be installed one each side of the platform mechanically held in both the retracted and extended positions with a rugged quick-action latch. The slide-out platform shall be wired to the open door indicator system activating the light in the cab when the step is in the extended position. The platform and mounting accessories shall be painted with a black ruggedized material.

YES

AIR OUTLET, PUMP PANEL

There shall be an air outlet with a valve installed on the pump panel. There shall be a 25' of .375" utility type air hose with "quick release" type fittings compatible with those on the apparatus provided. This shall be plumbed into the chassis air system.

YES

AIR HORN SWITCH, PUMP PANEL

A push button momentary switch mounted on the pump panel shall activate the chassis air horns.

YES

PRESSURE GAUGES, 2½"

The discharges shall be provided with 2½" pressure gauges. The discharge gauges shall be liquid filled with a solution to assure visual readings and reduce inner lens condensation. The body of the gauges shall be constructed of Zytel nylon with chrome-plated bezels. The face of the gauges shall be Spun Metal with black background and white markings reading from 0 to 400 PSI. The

YES

gauges shall be installed at each discharge control on the pump operator's panel. On side mount pump applications with push pull handles each gauge shall incorporate a Thuemling Instrument Group one piece module assembly consisting of the gauge, push-pull and trim bezel. The pressure gauges shall maintain performance of all features and be free from defects in material and workmanship which includes fluid fill leakage and discoloration for seven years.

GAUGE BEZELS, COLOR CODED

The pump panel master and pressure gauge bezels shall be color coded.

YES

PUMP PANEL TAGS

All discharges, gauges, and controls will be properly identified by color-coded metal tags. The metal tags shall not be affixed with 3M industrial adhesive. They must be mechanically attached.

YES

PUMP SYSTEM, HALE QMAX SINGLE STAGE

The pump system shall be Hale QMAX single stage.

YES

PUMP ASSEMBLY

The entire pump shall be cast, manufactured, and tested at the pump manufacturer's factory. The pump shall be driven by a driveline from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance specs as outlined by the latest NFPA Pamphlet No. 1901. The pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain, cast iron alloy, with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable. Pump body shall be horizontally split, on a single plane, in two sections, for easy removal of entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in chassis. The pump shall have one double suction impeller. The pump body shall have two opposed discharge volute cutwaters to eliminate radial unbalance. Pump shaft to be rigidly supported by three bearings for minimum deflection. One high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite the drive unit). The sleeve bearing is to be lubricated by a force-fed, automatic oil lubricated design, pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated. The pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eyes shall be hand ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. The impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body, and of wraparound double labyrinth design for maximum efficiency. The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel, to be super-finished under packing with galvanic corrosion (zinc separators in packing) protection for longer shaft life. Pump shaft must be sealed with double lip oil seal to deep road dirt and water out of drive unit.

YES

DRIVE UNIT

The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. Pump drive unit shall be of sufficient size to withstand up to 16,000 foot pounds of torque of the engine in both road and pump operating conditions. The drive unit is designed with ample capacity for lubrication reserve to maintain proper operating temperature. The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2³/₄" in diameter, on both the input and output drive shafts. They shall withstand the full torque of the engine in both road and

YES

pump operating conditions. All gears drive and pump, shall be of highest quality electric furnace, chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running, and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrusts. The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected. If drive unit is equipped with a power shift, the shifting mechanism shall be a heat-treated, hard-anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in road or pump. Three warning lights with plates shall be provided to alert the operator when the drive unit has fully shifted from road to pump position. Two lights shall be located on the cabs instrument panel and the other on the pump panel adjacent to the throttle. A 3" clapper check valve shall be installed between the suction side of the pump and the tank-to-pump valve. This 3" clapper valve shall remove the possibility of a water surge expanding the booster tank. Pump system shall have an integral discharge manifold system that allows a direct flow of water to all discharge valves.

PACKING GLANDS

The pump shaft shall have only one packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland must be a full circle threaded design to exert uniform pressure on packing and to prevent "cocking" and uneven packing load when it is tightened. It shall be easily adjusted by hand with rod or screwdriver, with no special tools or wrenches required. The packing rings shall be of a unique, permanently lubricated, long life graphite composition and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion.

PUMP SHIFT

An air operated pump shift shall be installed in the chassis cab to engage the fire pump. Provisions shall be made for placing the pump drive system in operation using controls and switches that are clearly identified and within convenient reach of the operator while in the cab. A green indicator light shall be installed on the cab dash and labeled "Pump Engaged". Where an automatic chassis transmission is provided, a green indicator light in the driving compartment and a green indicator light located at the pump operator's position shall be provided and shall be energized when both the pump shift has been completed and the chassis transmission is engaged in pump gear. The light in the driving compartment shall be labeled "Okay to Pump". The light on the pump operator shall be positioned adjacent to and preferably above the throttle control and shall be labeled "WARNING: DO NOT OPEN THROTTLE UNLESS LIGHT IS ON". The green light on the pump operator's panel shall be energized when the pump is engaged, the transmission is in drive, and the parking brake is set.

PRIMING SYSTEM, PUMP

The priming pump shall be a Trident Emergency Products automatic compressed air powered, high efficiency, multi-stage, venturibased AirPrime™ System. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. A single panel mounted control will activate the priming pump and open the priming valve to the pump. The priming system shall have a five year warranty.

U.L. TEST POINTS

An Underwriters Laboratories approved engine speed counter shall be located on the pump panel to provide a means to certify the tachometer. In addition, two U.L. test plugs shall be pump panel mounted for testing of vacuum and pressures.

U.L. CERTIFICATION, 2,000 GPM

The vehicle shall be third party tested and certified by Underwriters Laboratories, Inc. UL testing is recognized as a leading, third party, product safety certification organization for over 100 years. UL has served on the NFPA (National Fire Protection Association) technical committee for over 30 years. The testing organization must meet the following minimum requirements:

- Must be nationally recognized testing laboratory recognized by OSHA
- Must comply with the ASTM (American Society for Testing Materials) standard E543 "Determining the qualifications for nondestructive testing agencies"
- Must have more than 40 years of Automotive Fire Apparatus safety testing experience and more than 15 years of factory aerial device testing and Certification experience
- Must not represent, be associated with, or in the manufacture or repair of automotive fire apparatus
- Must provide proof of \$10,000,000 in excess liability insurance for bodily injury and property damage combined

The pump shall meet and perform the following test to receive a U.L. Certification.

- 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

PUMP TEST CERTIFICATION PLATE

A permanently affixed plate shall be installed at the pump operator's panel. It shall provide the rated discharge and pressures together with the speed of the engine as determined by the certification test for each unit. It shall also provide the position of the parallel/series pump used and the no load governed speed of the engine as stated by the engine manufacturer on a certified brake horsepower curve. A label shall be provided on the pump operator's panel that states the following: "WARNING: DEATH OR SERIOUS INJURY MIGHT OCCUR IF PROPER OPERATING PROCEDURES ARE NOT FOLLOWED". The pump operator, as well as, individuals connecting supply or discharge hoses to the apparatus must be familiar with water hydraulics hazards and component limitations.

SUCTION HEADERS

A 6" NST non-gated suction header with removable screen, and long handled cap shall be provided on the left side of the pump. A 6" NST non-gated suction header with removable screen, and long handled cap shall be provided on the right side of the pump.

INTAKE RELIEF VALVE

There shall be an Akron Model 59 suction side relief valve provided in the pump system. The relief valve is adjustable from 50 to 175 PSI and set at the factory at 125 PSI.

PRESSURE GOVERNOR

The apparatus shall be equipped with a Class 1 "Total Pressure Governor Plus" (TPG+) system.

MASTER GAUGES, 4½"

Two compound 4½" master gauges shall be provided and installed on the pump operator's panel. The intake and discharge gauges are liquid filled with a solution to assure visual readings and reduce inner lens condensation. The body of the gauges shall be constructed of Zytel nylon with chrome-plated bezels. The face of the gauges shall be Spun Metal with black background and white markings accurate within 1%. The pressure gauges shall maintain performance of all features and be free from defects in material and workmanship which includes fluid fill leakage and discoloration for seven years.

FILL SUBSURFACE/RETURN LINE

There shall be one subsurface/return line installed in the booster tank. The subsurface/return line shall prevent aeration of the water in the booster tank under low water conditions. The subsurface/return line piping shall be of the same size as the "Tank Fill".

yes

yes

TANK TO PUMP

One 3" ball valve shall be installed between the pump and the water tank. The tank to pump valve shall be a quarter turn fixed pivot design constructed from bronze. The valve shall be controlled by a chrome push/pull locking "T" handle installed at the left pump panel.

yes

FOAM SYSTEM

There shall be a Hale FoamLogix 3.3 fully automatic electronic direct injection foam proportioning system furnished and installed on the apparatus. The system shall be equipped with a digital electronic control display. It shall be installed on the pump operators panel and enable the pump operator to perform the following control and operation functions:

yes

STAINLESS STEEL FOAM MANIFOLD

The foam manifold shall be constructed of stainless steel.

yes

FLOWMETER, 2 1/2" TEE MOUNT W/COUPLING KIT

There shall be a paddle wheel style flowmeter mounted in a 2 1/2" NPT pipe tee for mounting in a 2 1/2" discharge line. A groove less Victaulic coupling shall be provided for installation of the flowmeter. A water check valve shall be installed before the flowmeter and between the water pump and the foam injection point.

yes

FOAM PROPORTIONING SYSTEM TEST

Testing shall be performed in accordance with NFPA 1901.

yes

NFPA 1901 PERFORMANCE REQUIREMENTS

The proportioning system shall be capable of proportioning foam concentrate in accordance with the foam concentrate manufacturer's recommendation for the type of foam concentrate used in the system over the system's design range of flow and pressure. The foam proportioning systems water flow characteristics and the range of proportioning ratios shall be specified. The foam system shall comply with NFPA 1901 Chapter 17.0 as it relates to the specified system.

yes

FOAM TANK PIPING

The foam supply line shall be non-collapsible. There shall be a means provided to prevent water backflow in to the foam proportioning system and storage tanks. Either a filter or strainer provided on the foam concentrate supply side of the foam proportioning to prevent any debris that may affect the operation of the foam proportioning system from entering the system. The strainer assembly shall consist of a removable straining element, housing, and retainer. The strainer assembly shall allow full flow capacity of the foam supply line.

yes

FLUSHING

Foam concentrate system flush lines shall be provided as required by the foam system manufacturer. The design shall incorporate a means to prevent water backflow into the concentrate tank or water tank during the flushing operation. Where the foam proportioning system is connected to more than one foam storage tank, provisions shall be made to flush all common lines to avoid contamination of dissimilar foam concentrates.

CONTROLS FOR FOAM SYSTEM

The foam proportioning system operation controls shall be located at or near the pump operator's position and shall be clearly labeled. All foam-proportioning systems that require flushing shall provide controls, which enable the operator to flush the system in accordance with the foam manufacturer's instructions. Foam proportioning systems that incorporate foam concentrate metering valves shall have each metering valve calibrated to indicate the rate(s) of flow of the foam concentrate proportioning available as determined by the design of the system. Foam proportioning systems that incorporate automatic proportioning features shall be equipped with controls, which enable the operator to isolate the automatic feature and operate the system in a manual mode.

YES

YES

NAMEPLATE, LABELS, INSTRUCTION SPECIFICATIONS

There shall be a nameplate provided that is clearly marked with the identification and function of each control gauge and indicator related to the foam proportioning system. There shall be a label provided on the operator's panel that identifies the type(s) of foam concentrate(s) the system is designed to use. This label shall state the minimum/maximum foam-proportioning rate at the minimum/maximum foam proportioning rated system flow and pressure. Foam proportioning system instruction plate shall be provided. This includes a minimum piping schematic of the system and basic operating instructions. Two copies of an operations and maintenance manual shall be provided. These manuals shall include a complete diagram of the system, along with operating instructions and details outlining all recommended maintenance procedures.

YES

FOAM PROPORTIONING SYSTEM TESTING

The apparatus manufacturer shall test the accuracy of the foam proportioning system prior to delivery of the apparatus. If the manufacturer's rated proportioning ratio is below 3%, the foam system shall proportion foam concentrate within 0% /+40% of the manufacturer's rated proportioning ratio across the manufacturer stated range of water flow and pressure. If the manufacturer's rated proportioning ratio is above 3%, the foam system shall proportion foam concentrate within 0% /+40% of the manufacturer's rated proportioning ratio or one percentage point, whichever is less across the manufacturer's stated range of water flow and pressure.

YES

GAUGE, FOAM LEVEL

A Fire Research TankVision Pro model WLA360-A00 tank indicator kit shall be installed on the pump operator's panel. The kit shall include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator shall show the volume of Class A foam concentrate in the tank on nine easy to see super bright RGB LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180°. The indicator case shall be waterproof, manufactured of Polycarbonate/Nylon material, and have a distinctive green label. The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six programmable colored light patterns to display tank volume, adjustable brightness control levels and a datalink to connect remote indicators. Low water warnings shall include flashing LEDs at ¼ tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

YES

LOW TANK LEVEL SWITCH

A low tank level switch shall be installed in each foam concentrate tank that supplies the foam proportioning system. The low tank level sensor shall be connected to the foam proportioning system to provide protection against dry running of the foam pump. The low tank level sensor can be mounted on the side, bottom, or top of the foam concentrate tank. The low tank level sensor and electrical connections shall be sealed to prevent infusion of foam concentrate into the wiring and possible short circuit of the tank level sensor.

OPERATING SYSTEMS INSTRUCTION PLACARD, SINGLE TANK

There shall be a placard installed on the pump panel, a schematic of the Foam Pro (single tank) operating system, which has been installed.

YES

YES

FOAM TANK NO. 1

The foam tank shall have a capacity of 20 gallons designed as an integral part of the water tank and shall have a manual fill tower. The fill tower shall be constructed of 1/2" PT3™ polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter. Each foam fill tower shall be constructed of a colored material (yellow, green and black) indicating which tower is to receive each type of foam utilized. The capacity of the tank shall be engraved on the top of the fill tower lid. The tower shall be located in the right front corner of the tank unless otherwise specified. The tower shall have a 1/4" thick removable polypropylene screen and a stainless steel hinged-type cover. Inside the fill tower, approximately 1 1/2" down from the top, there shall be an anti-foam fill tube that extends down to the bottom of the tank. A pressure vacuum vent shall be provided in the lid of the fill tower.

YES

FOAM TANK NO. 1 REFILL SYSTEM, HALE EZ-FILL

The apparatus shall be equipped with an electric, automatic, concentrate refill system. System shall operate independently of the foam proportioning allowing simultaneous sue. Refill operation shall not require apparatus or fire pump to be running. They system shall be capable of handling Class A or Class B foam concentrates, emulsifiers, gels and decontamination concentrates. The apparatus shall be plumbed from the externally accessed intake/flush ports to the concentrate cell following manufacturer's recommendations. The refill operation shall be based on direct measurement of concentrate level in tank. System must be capable of automatically stopping when cell is full and include a manual override feature. The system shall be equipped with an electronic control suitable for installation on the pump panel. Incorporate within the control shall be a microprocessor that receives input from the system while controlling foam concentrate pump output. An all bronze three-way valve shall be included to allow the operator to flush the system after use. Valve control, intake, and flush ports shall be located within corresponding panel plate. The system shall enable the operator to perform the following control/operation functions and status indicators for the refill operation: provide push button start/stop control of foam refill, solid green light advises operator concentrate cell is full, flashing green indicates system is running, green light off, system off, allow override of "full tank" condition, and provide a means to flush the pump and intake piping. System shall include a 12V electric motor driven, positive displacement concentrate pump. Pump deliver minimum flow of 10 GPM at 20 PSI with all concentrates currently utilized in fire apparatus. Pump body to be of all bronze construction and other wetted components and piping to be constructed of non-corrosive materials. The system shall draw a maximum of 38 amps at 12V DC. A pump/motor solenoid (mounted on the base of the pump) shall receive signals from the computer control display and readings when the concentrate tank is full and stop operation to prevent overflow. Components of the complete refill system shall include: operator control and display with Weather- Pac connectors, refill/flush, quick connect cam-lock fittings and cap, check valves, pump/motor assembly and solenoid, strainer, tank level switch, three way fill/ flush valve, stainless steel pick up wand and 6' of reinforced suction hose, 1' in diameter to allow maximum flow, and panel placards. An installation and operations manual shall be provided, along with a one year limited warranty. When two types of concentrates are to be used, a separate refill system must be specified for each.

YES

FOAM OUTLETS

Foam shall be plumbed to the following outlets: Front Bumper Discharge, No. 1 Crosslay, No. 2 Crosslay, and No. 3 Crosslay.

VALVE, MASTER DRAIN

There shall be a master drain valve recessed mounted below the pump module under the side running board, connecting all drain lines, with the capacity to discharge water simultaneously from all locations to below the chassis frame rails.

YES

VALVE, INDIVIDUAL DRAIN

All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible and labeled. One individual quarter turn drain valve shall be furnished for each 1/2" or larger discharge port and each 2 1/2" gated auxiliary suction. The drain/bleeder valves shall be located at the bottom of the side pump module panels. All drains and bleeders shall discharge below the running boards.

YES

TANK FILL

There shall be a 2" pump to tank fill line installed, with a 2" inline bronze valve and high-pressure flexible hose tested to 1,200 PSI. The valve shall be (locking "T" handle) push-pull controlled at the pump operator's panel.

YES

YES

ENGINE COOLER

The engine cooler shall be installed in-line from the discharge side of the pump, and installed in the engine cooling system. There shall be 1/2" quarter turn valve installed thru the pump panel and shall be clearly labeled.

YES

PUMP COOLER

The pump shall have a 3/8" line installed from the pump discharge, to the water tank to cool the pump during long periods of pumping when water is not being discharged. The pump cooler shall be controlled from the pump operator's panel by a 3/8" valve consisting of a cast bronze body with quarter turn chrome plated bronze ball, reinforced Teflon seals, and blow-out-proof stem rated to 600 PSI. The valve shall be installed thru the pump panel and clearly labeled.

YES

PLUMBING SYSTEM

All suction and discharge lines of 2" or larger shall be constructed of a minimum of Schedule 40 galvanized steel pipe, where vibration or chassis flexing may damage or loosen threaded pipes, Victaulic or Roustabout couplings shall be used. All suction and discharge outlets shall have National Standard Threads (NST) and designed for 500 PSIG including, valves, drain cocks, lines, intake, and outlet closures, excluding the tank fill and tank to pump lines (tank side of the valves).

PUMP PAINTING

The pump shall be painted black in color.

YES

AKRON PUSH-PULL CONTROL VALVE PACKAGE

All discharge valves shall be Akron Heavy-Duty Swing-Out push/pull controlled from the pump operator's panel unless otherwise specified. The Akron Swing-Out Heavy-Duty valves are designed for operating pressures to 250 PSI (17 bars)

YES

- Ten year warranty against manufacturer's defects
- Available in 1" to 4" sizes
- 90° handle travel 316 stainless steel ball with Hydromax technology
- Improved sealing & increased gating ability
- Flow optimization reduces turbulence while in the gated position and requires lower operating forces
- No lubrication or regular maintenance required

- Simple two seated design (no O-Rings to cut or lose during assembly or maintenance)
- Wide range of available adapters
- Designed and tested to exceed NFPA requirements

All valve packages shall meet current NFPA 1901 Standards for valve operating speeds when controlled by gear, electric actuator, or slow close device.

SUCTION, 2½" LEFT FRONT PANEL

YES

One 2½" swing operated ball valve shall be installed at the pump panel, left front plumbed to the suction side of the pump with 2½" inch piping, 2½" FNST chrome inlet swivel, brass inlet strainer, chrome plug with chain, and 3/4" drain valve. A warning plate permanently affixed in close proximity of the suction inlet shall be installed stating: "WARNING - SERIOUS INJURY OR DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

YES

DISCHARGE ELBOWS

All 2½" side discharge outlets shall terminate with chrome-plated 30° elbows with 2½" MNST threads, 2½" by 1½" NST chrome reducers, 1½" chrome vented cap and chain. Caps shall automatically release pressure in the discharge outlet before the threads are completely disengaged unless the outlet and the cap are equipped with drains or bleeder valves.

YES

DISCHARGE DRAIN VALVES

All discharges shall be equipped with automatic drain valves.

YES

FRONT BUMPER DISCHARGE

There shall be one front discharge installed thru the gravelshield, driver's side outboard of the frame rail. The front bumper discharge shall terminate 2" NPT x 1½" NST with a 90° swivel. One 2" brass valve with 3/4" automatic drain shall be installed on the discharge side of the pump plumbed to the front swivel with flexible high-pressure hose and victaulic stainless steel couplings tested to 1,200 PSI, the front discharge shall be push/pull controlled at the pump operator's panel. A tread plate stop shall be provided preventing the front bumper discharge swivel from incidental contact with the cab. The stop shall be painted with a black ruggedized material.

NO. 1 CROSSLAY, 1¾" DOUBLE LAY

YES

One pre-connected crosslay compartment shall be provided above the side mount operator's panel accommodating 200' of 1¾" double jacket hose. Stainless steel nylon guided rollers shall be installed at each end with stainless steel scuff plates around the perimeter to protect the painted surface. One 2" ball valve with mechanical swivel shall be installed. The valve shall be plumbed to the crosslay with 2" high-pressure flexible hose and stainless steel couplings. The high pressure hose shall be tested to 1,200 PSI. The crosslay valve shall be push-pull controlled at the pump operator's panel. Each discharge is equipped with an automatic drain valve. Threaded connection for crosslay shall be located as close to the side panel as possible. Crosslay height shall be a maximum of 68" from the ground level.

NO. 2 CROSSLAY, 1¾" DOUBLE LAY

YES

One pre-connected crosslay compartment shall be provided above the side mount operator's panel accommodating 200' of 1¾" double jacket hose. Stainless steel nylon guided rollers shall be installed at each end with stainless steel scuff plates around the perimeter to protect the painted surface. One 2" ball valve with mechanical swivel shall be installed. The valve shall be plumbed to the crosslay with 2" high-pressure flexible hose and stainless steel couplings. The high pressure hose shall be tested to 1,200 PSI. The crosslay valve shall be push-pull controlled at the

pump operator's panel. Each discharge is equipped with an automatic drain valve. Threaded connection for crosslay shall be located as close to the side panel as possible. Crosslay height shall be a maximum of 68" from the ground level.

YES

NO. 3 CROSSLAY, 2½" DOUBLE LAY

One pre-connected crosslay compartment shall be provided above the side mount operator's panel accommodating 200' of 1¾" double jacket hose. Stainless steel nylon guided rollers shall be installed at each end with stainless steel scuff plates around the perimeter to protect the painted surface. One 2½" ball valve with mechanical swivel shall be installed. The valve shall be plumbed to the crosslay with 2½" high-pressure flexible hose and stainless steel couplings. The high pressure hose shall be tested to 1,200 PSI. The crosslay valve shall be push-pull controlled at the pump operator's panel. Each discharge is equipped with an automatic drain valve. Threaded connection for crosslay shall be located as close to the side panel as possible. Crosslay height shall be a maximum of 68" from the ground level.

YES

CROSSLAY DIVIDERS

Two crosslay hosebed dividers shall be provided manufactured from ¼" smooth aluminum plates, extruded aluminum bases mounted in an extruded track for horizontal adjustment, with radius corners, and DA sanded to prevent damage to the hose.

YES

CROSSLAY COVER

There shall be a Hypalon crosslay cover provided with the apparatus secured by twist-lock connectors along the top, and Velcro closures on each end protecting the crosslay hose. The cover prevents hose from inadvertently deploying during normal operations meeting the current NFPA requirements. A safety sign FAMA22, which warns of the need to secure hose, shall be visible to personnel at the hose storage area. The covers shall be black in color.

YES

DISCHARGE, 2½" LEFT FRONT PANEL

One Akron 2½" Heavy-Duty ball valve with automatic drain shall be installed at the pump panel left front plumbed to the discharge side of the pump push/pull controlled from the pump operator's panel.

YES

DISCHARGE, 2½" LEFT REAR PANEL

One Akron 2½" Heavy-Duty ball valve with automatic drain shall be installed at the pump panel, left rear, plumbed to the discharge side of the pump push/pull controlled from the pump operator's panel.

YES

AERIAL WATERWAY DISCHARGE

The aerial waterway discharge shall be provided with a 4" full-flow brass valve with Teflon ball. The waterway discharge shall be connected from the pump to the aerial waterway with the use of heavy steel pipe. The discharge valve shall be hand wheel controlled. The control shall be located at the left side pump panel and shall have a liquid filled 2½" pressure gauge.

YES

FLOWMETER, PUMP PANEL

There shall be one Fire Research Insight model DFA 400-040 digital flowmeter kit shall be installed, per NFPA 1901, section 19.12.7, to monitor the flow of the aerial waterway. The flow meters display shall be located on the pump operator's panel left side. The kit shall include a display module, paddle wheel flow sensor, sensor housing with a mount and a 10' sensor cable. The flowmeter case shall be waterproof, manufactured of anodized machined aluminum, and have dimensions not to exceed 3¼" high x 3¼" wide x 2½" deep. It shall have an LED display with super bright digits more than ½" high. Flow rate shall be displayed in GPM (Gallons per Minute).

SUCTION, 2½" RIGHT FRONT PANEL

One 2½" swing operated ball valve shall be installed at the pump panel, right front plumbed to the suction side of the pump with 2½" piping, 2½" FNST chrome inlet swivel, brass inlet strainer, chrome plug with chain, and ¾" drain valve. A warning plate permanently affixed in close proximity of the suction inlet shall be installed stating: "WARNING - SERIOUS INJURY OR DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

YES

DISCHARGE, 3" RIGHT FRONT PANEL

One Akron 3" Heavy-Duty (Slo-Close) ball valve with automatic drain shall be installed at the pump panel, right front, plumbed to the discharge side of the pump equipped with 5" Storz connection, controlled at the pump operator's panel.

YES

DISCHARGE, 2½" RIGHT REAR PANEL

One Akron 2½" Heavy-Duty ball valve with automatic drain shall be installed at the pump panel, right rear, plumbed to the discharge side of the pump push/pull controlled from the pump operator's panel.

YES

DISCHARGE, 2½" LEFT REAR

One Akron 2½" Heavy-Duty ball valve with automatic drain shall be plumbed to the left rear of the apparatus terminating 2½" FNPT x 2½" MNST with chrome cap and chain push-pull controlled at the pump operator's panel.

YES

WATER TANK

The tank shall have a capacity of 500 U.S. gallons and shall be constructed of PT3™ polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from ½" to 1" as required. Internal baffles are generally 3/8" in thickness.

YES

ISO CERTIFICATION

The tank must be rectangular in design and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

YES

DESIGN

Each tank is designed to the customer's specification and/or drawing submittal. An approval drawing is sent to the customer prior to commencing manufacturing. Upon receipt of the signed approval drawing, the tank is scheduled for production.

YES

CONSTRUCTION

The booster and/or foam tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method shall provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3™ polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to

YES

the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.

WATER FILL TOWER AND COVER

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3™ polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall be located in the left front corner of the tank unless otherwise specified by the tank manufacturer to the purchaser. The tower shall have a 1/4" thick removable polypropylene screen and a PT3™ polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 4" that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction. The tank cover shall be constructed of 1/2" thick PT3™ polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank covers shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and shall assist in keeping the covers rigid under fast filling conditions. A minimum of two lifting dowels shall accommodate the necessary lifting hardware.

SUMP

There shall be one sump standard per tank. The sump shall be constructed of a minimum of 1/2" PT3™ polypropylene and be located in the left front quarter of the tank, unless specified otherwise. On all tanks that require a front suction, a 3" schedule 40 polypropylene pipe shall be installed that shall incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3" NPT threaded outlet on the bottom for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor.

OUTLETS

There shall be two standard tank outlets: one for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump; and, one for tank fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 GPM. The addition of rear suction fittings, nurse valve fittings, dump valve fittings, and through-the-tank sleeves to accommodate rear discharge piping must be specified. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture.

MOUNTING

The UPF Poly-Tank® III shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40", cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area. The tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of 1/4" x 1" and a Shore A Hardness of approximately 60 durometer. The rubber must be installed so it shall not become dislodged during normal operation of the vehicle. Additionally, the tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to

prevent tank from shifting during vehicle operation. A picture frame type cradle mount with a minimum of 2" x 2" x 1/4" mild steel, stainless steel, or aluminum angle shall be provided or the use of corner angles having a minimum dimension of 4" x 4" x 1/4" by 6" high are permitted for the purpose of capturing the tank. Although the tank is designed on a free floating suspension principle, it is required that the tank have adequate vertical hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on top of the tank, half way between the front and the rear on each side of the tank. These stops can be constructed of steel, stainless steel or aluminum angle having minimum dimensions of 3" x 3" x 1/4" and shall be approximately 6" to 12" long. These brackets must incorporate rubber isolating pads with a minimum thickness of 1/4" inch and a hardness of 60 durometer affixed on the underside of the angle. The angle should then be bolted to the body side walls of the vehicle while extending down to rest on the top outside edge of the upper side wall of the tank. Hose beds floors must be so designed that the floor slat supports extend full width from side wall to side wall and are not permitted to drop off the edge of the tank or in any way come in contact with the individual covers where a puncture could occur. Tank top must be capable of supporting loads up to 200 lbs. per sq. foot when evenly distributed. Other equipment such as generators, portable pumps, etc. must not be mounted directly to the tank top unless provisions have been designed into the Poly-Tank® III for that purpose. The tank shall be completely removable without disturbing or dismantling the apparatus structure.

YES

CAPACITY CERTIFICATION

All water and foam tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank® III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification.

YES

TANKNOLOGY™ TAG

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foams, the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code shall allow the user to connect with the tank manufacturer for additional information and assistance.

YES

WATER TANK SIZE CERTIFICATION

The manufacturer shall certify the capacity of the water tank prior to the delivery of the apparatus. This capacity shall be recorded on the manufacturer's record of construction and the certification shall be provided when the apparatus is delivered.

YES

GAUGE, WATER LEVEL

A Fire Research TankVision Pro model WLA300-A00 tank indicator kit shall be installed on the pump operator's panel. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the volume of water in the tank on nine easy to see super bright RGB LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180°. The indicator case shall be waterproof, manufactured of Polycarbonate/Nylon material, and have a distinctive blue label. The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six programmable colored light patterns to display tank volume, adjustable brightness control levels and a datalink to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

GAUGE, AUXILIARY WATER LEVEL

YES

There shall be a pair of Whelen "PS Tank" water level status lights, with 96 steady burn green, blue, amber, and red LEDs. The light shall provide bright, easy indication of water status. The unit is surface mounted, has low current consumption, fully encapsulated, and carries a five year warranty from Whelen. The lights shall be mounted per customer requirements, typically one each side on or near the cab. The units shall activate with the application of the park brake.

YES

AERIAL BODY

The apparatus body and subframe shall be constructed entirely of aluminum plate and extrusions.

CRADLE, WATER TANK

YES

The water tank cradle shall be located at the forward portion of the apparatus body and shall be of an all welded construction. Longitudinal and latitudinal members of the cradle shall be spaced on centers sufficient to support the specified water tank. The tank shall be captured front-to-rear and side-to-side with vertical corner sections. The booster tank and cradle shall be isolated through a heavy-wall, C-channel neoprene extrusion. Absolutely no pop-rivets, screws or any other hardware shall be used to hold the rubber tank cushion in place.

BODY CONSTRUCTION

YES

All body compartment floors shall be formed from .1875" aluminum tread plate and shall be painted with a black ruggedized material. The floors shall be welded in place with a continuous weld all around the perimeter to insure maximum strength and water tightness. The external compartment tops shall be constructed of .125" aluminum tread plate. This tread plate shall be painted with a black ruggedized material. The compartment tops shall be bolted in place to allow ease of removal for easy access to the body wiring harnesses. The compartment side walls shall be of one piece construction. The walls shall be formed from .1875" 5052 H-32 smooth aluminum plate to add strength to the compartment shelving. Each front body corner shall be a 3½" x 9¾" 6063 T-6 aluminum alloy extruded corner section with .210" wall thickness and welded as an integral part of the body. This extrusion shall have a large 1" corner radius. The corner sections shall have provisions for easy removal of a panel inside each forward compartment to provide ready access to body wiring harnesses. The horizontal and vertical frame member extrusions shall be 2.0" x 4.0" with a .190" wall thickness. The extrusion shall be made from 6063 T6 aluminum alloy. This extrusion shall have .190" outside radius corners. The longitudinal frame member, below the lower compartments shall be a 2.0" x 4.0" 6063 T6 aluminum alloy extrusion with .190" radius corners.

COMPARTMENT CONSTRUCTION

YES

All body compartment floors shall be formed from .1875" aluminum tread plate. Floors shall be painted with a black ruggedized material. The floors shall be welded in place with a continuous weld all around the perimeter to insure maximum strength and water tightness. The external compartment tops shall be constructed of .125" aluminum tread plate. The compartment tops shall be bolted in place to allow ease of removal for easy access to the body wiring harnesses. The compartment side walls shall be of one piece construction. The walls shall be formed from .1875" 5052 H-32 smooth aluminum plate to add strength to the compartment shelving. Interior rear walls of all compartments shall have Pack Trac panels installed. The compartment seams shall be sealed with permanent pliable silicone caulking and each compartment shall be louvered to provide adequate ventilation. The compartment seams shall be sealed with permanent pliable silicone caulking. Each compartment shall be vented through a louver that is machined stamped in a panel located in each body corner extrusion. The panel shall be removable to provide access to service wiring and other mounted components.

✓ **ACCESS DOOR, STABILIZER MANUAL OVERRIDE**

There shall be a hinged door in the driver side outrigger panel to provide access to the stabilizer manual override block. The door shall be made from aluminum diamond plate and shall be painted with a black ruggedized material. It shall measure approximately 9" wide x 9" high and have a stainless steel piano hinge and a push button latch. The door shall have a gasket on the inside.

YES

WHEEL WELL PANELS, PAINTED ALUMINUM

The wheel well shall be constructed from 2" x 4" x .190" wall thickness. The extrusion shall be made from 6063T6 aluminum alloy and have .190" outside radius corners. The extrusion shall be slotted the full length to permit an internal fit of 3/16" (.187") painted aluminum panels. The wheel well liners shall be constructed of 3003 H-14 smooth aluminum plates. They shall be bolted in place for ease of maintenance. The wheel well fenderettes shall be constructed of a #304 Stainless steel with a black ruggedized finish. A deflection shield shall be mounted to the body subframe to keep road debris from entering the water tank area.

YES

✓ **COMPARTMENTS, LEFT SIDE**

All compartments will be built to allow for the largest cubic feet of storage space as possible.

YES

L1 - There shall be one high side compartment over the front outriggers. This compartment shall have one horizontally hinged lift up style door.

L2 - There shall be one compartment forward of the rear wheels. This compartment shall have one vertically hinged lift up style door.

L3/L4 - There shall be one high side compartment over the rear wheels. The compartment shall have two door openings. Each compartment shall have one horizontally hinged lift up style door.

L5 - There shall be one high side compartment over the rear outrigger. This compartment shall have one horizontally hinged lift up style door.

L6 - There shall be one compartment ahead of the rear outrigger. This compartment shall have one vertically hinged door.

L7 - There shall be one compartment behind the rear outrigger. This compartment shall have one vertically hinged door.

✓ **HOSE CHUTE, LEFT REAR**

There shall be one hose deployment opening at the left rear of the apparatus allowing easy removal of the fire hose. The hose opening shall have a door constructed from .125" aluminum tread plate. The door shall be painted with a black ruggedized material. The door shall have a stainless steel piano type hinge with quarter turn latch mechanisms.

YES

✓ **HOSE TRAY, LEFT REAR**

One heavy duty E-Z Stack roll-out hose tray shall be installed in the left rear of the body with a vertically hinged smooth aluminum plate door and positive latching assembly. The roll out hose tray shall have the capacity of storing 250' of 2½" double jacket fire hose. The tray shall be manufactured from ¼" smooth aluminum plate with two oval shaped access holes large enough to accommodate gloved hands, mounted on roller bearing locking slides for ease of operation.

YES

COMPARTMENT DOORS, LEFT SIDE HINGED

YES

The specified left side compartment doors shall be constructed entirely from 5052-H32 smooth aluminum plate using a box pan configuration. The outer panel shall be constructed from 3/16" smooth aluminum plate and the inner pan stitch welded in place from 1/8" smooth aluminum plate. There shall be a 1/4" hole installed in the lower corners of the inside door pans for drainage. The doors shall have a closed cell neoprene rubber gasket installed around the perimeter of the door to remove water. Exterior door latches shall incorporate a polished D-paddle handle with rotary style latch. For ease of operation, the D-handle opening shall be large enough to accommodate a gloved hand. The D-paddle latching design shall be subjected to corrosion, water infiltration, and cycle testing to 35,000 cycles. Double doors shall utilize concealed rotary latches on the secondary door, actuated by a recessed stainless steel paddle handle. The door design shall not impede into the compartment opening when in the open position. The watertight door seal shall exceed the current KKK-1822 water infiltration standards. The doors shall be securely fastened to the apparatus body with full length stainless steel piano hinges using 1/4" stainless bolts and locking nuts, minimum 20. The hinges shall be slotted to allow for adjustments. Absolutely no self-tapping screws or pop rivets shall be acceptable to mount the door mechanisms or slam latch assemblies.

COMPARTMENTS, RIGHT SIDE

YES

All compartments shall be built to provide the largest cubic feet of storage space as possible.

R1 - There shall be one high side compartment over the front outriggers. This compartment shall have one horizontally hinged lift up style door.

R2 - There shall be one compartment forward of the rear wheels. This compartment shall have one vertically hinged door.

R3 - There shall be one high side compartment over the rear wheel. This compartment shall have one horizontally hinged lift up style door.

R4 - There shall be one compartment ahead of the rear outrigger. This compartment shall have one vertically hinged door.

R5 - There shall be one compartment behind the rear outrigger. This compartment shall have two vertically hinged doors.

HOSE BED, EZ STACK RIGHT SIDE

YES

The aerial apparatus body shall be equipped with an "E-Z Stack" hose bed on the right side the apparatus body to allow for easy removal of fire hose. The hose shall stack above the low side compartments. The interior hosebed side shall be constructed of .1875" 5052 H-32 smooth aluminum plates welded to the extruded framework. There shall be a 3" x 3 1/2" 6063 T6 aluminum extrusion with .190" wall thickness running the entire length of the interior hosebed at the top for structural rigidity. The exterior hosebed side shall be constructed from 2" x 4" .190" wall thickness extrusions. The extrusions shall be made from 6063 T6 aluminum alloy and have .190" outside radius corners. In order to protect the body appearance, the exterior hosebed sides shall be of a double thickness of 3/16" aluminum plate, 5052 H-32 aluminum alloy. The plates shall be welded to the extruded aluminum framework, with the exterior panel being continuously welded. The continuous weld process shall be completed in such a manner so as to not warp or deform the body sides. The hosebed decking shall be entirely constructed from anodized aluminum extrusions. The extrusions shall be 3/4" x 8.125" and have 1/2" x 3" flat bar welded to the underside to form a one-piece grid. Absolutely no pop rivet or other types of fasteners shall be acceptable on the hosebed floor. The entire hosebed shall be removable in one piece to allow

ease of maintenance to the tank. The hosebed shall include an extrusion across the front and rear of the compartment to allow the installation of adjustable hosebed dividers. For the safety of firefighters working on the apparatus, the hosebed must be completely open across the top, from front to rear. The floor shall be in a single plane (completely flat) and the top shall be completely open when the hosebed cover is opened. Other than adjustable hosebed dividers, no obstructions shall be allowed in the hose bed. The finished hosebed shall accommodate either an ISO or NFPA compliant hose load. The hosebed shall have a rear opening of 21" wide x 18" high. LED light strips shall be provided across the length of the hosebed. The lights shall be waterproof up to one meter (3.3 feet). The lights shall be wired to the work light switch in the cab.

COMPARTMENT DOORS, RIGHT SIDE HINGED

The specified right side compartment doors shall be constructed entirely from 5052-H32 smooth aluminum plate using a box pan configuration. The outer panel shall be constructed from 3/16" smooth aluminum plate and the inner pan stitch welded in place from 1/8" smooth aluminum plate. There shall be a 1/4" hole installed in the lower corners of the inside door pans for drainage. The doors shall have a closed cell neoprene rubber gasket installed around the perimeter of the door to remove water. Exterior door latches shall incorporate a polished D-paddle handle with rotary style latch. For ease of operation, the D-handle opening shall be large enough to accommodate a gloved hand. The D-paddle latching design shall be subjected to corrosion, water infiltration, and cycle testing to 35,000 cycles. Double doors shall utilize concealed rotary latches on the secondary door, actuated by a recessed stainless steel paddle handle. The door design shall not impede into the compartment opening when in the open position. The watertight door seal shall exceed the current KKK-1822 water infiltration standards. The doors shall be securely fastened to the apparatus body with full-length stainless steel piano hinges using 1/4" stainless bolts and locking nuts, 20 minimum. The hinges shall be slotted to allow for adjustments. Absolutely no self-tapping screws or pop rivets shall be acceptable to mount the door mechanisms or slam latch assemblies.

HANDRAILS, AERIAL ACCESS

There shall be a pair of handrails manufactured from 1 1/4" diameter knurled aluminum tubing installed on the apparatus. One handrail shall be 30" inches in length with chrome plated end stanchions. One rear aerial egress handrail be of "pool" style design and terminate atop the rear of the aerial body to provide maximum firefighter safety. The handrails shall be mounted vertically at the rear of the aerial body to facilitate access to the aerial turntable. The handrails shall be painted in a black ruggedized material.

TURNTABLE ACCESS, LEFT REAR SWING OUT

There shall be a swing out ground-to-turntable access ladder provided at the left rear of the body. The ladder shall be constructed from aluminum plate and five heavy-duty cast aluminum steps. To assure a safe climbing angle, the uppermost portion of the ladder shall be immediately adjacent to the upper fire body, while the lowest step on the ladder shall be approximately 14" from the edge of the body. The steps shall each measure a minimum of 16" wide x 6" deep and placed on approximate 13" centers. Steps shall be open grip type with a raised, slip-resistant surface, exceeding the requirements of NFPA 1901, 15.7.4. The steps shall be attached to side rails constructed of minimum 1/2" thick x 3" wide aluminum plate, creating a sturdy, long lasting structure. All step surfaces shall comply with NFPA 1901. There shall be two Whelen PELCC LED strip lights to light the step areas. The LED lights shall have a polished bezel. The lights shall activate with the work light switch.

COMPARTMENT, LADDER STORAGE

A single ladder storage module shall be provided beneath the aerial device. To avoid confusion of ground ladder locations and to provide simpler fire ground operations, proposals that include

more than one rear ladder storage module shall not be accepted. The ladder module shall have interior measurements not less than 44" wide x 26" high and have storage capacity for the specified ladders, with access to the ladders via an opening at the rear. The contents of the ladder tunnel shall be held in place so as not to contact the entry door. The ladders shall be separated by dividers and held in place. All ladders can be removed individually without having to remove other ladders. The ladders shall slide on thin poly-carbonate sheet material. A roll-up door shall be installed on the rear ladder compartment. Slats are 1" double-wall (box frame) aluminum extrusion. Exterior surfaces are to be flat. Interior surfaces are to be concave to prevent loose equipment from jamming doors. The slats must be anodized to eliminate oxidation. The slats are to have inner-locking end shoes on every slat secured by a Punch-Dimple process. The slats are to have interlocking joints with a folding locking flange. Between each slat shall be a PVC/vinyl inner seal to prevent any metal-to-metal contact. The track shall be one-piece aluminum, which has an attaching flange and finishing flange incorporated into its design, which provides a finish look to installation without additional trim or caulking. The track is to have a replaceable side seal. The side seal shall prevent water and dust intrusion into the compartment. There shall be an aluminum drip rail above each compartment door with a built in replaceable wiper seal. Each roll up door shall have a counter balance to assist in lifting and eliminate the risk of accidental closing. A full width lift bar, operable by one hand, shall be used as a positive latch device for securing each individual compartment door in the closed position. The outside door shall have a natural finish. There shall be an anodized aluminum sill plate installed over the compartment door. Ladder storage shall be compliant with ISO on supplemental ladders.

STORAGE TUBES, PIKE POLE/NEW YORK HOOK

Twelve (12) aluminum tubes shall be installed on the apparatus for pike pole and New York Hook storage. One end shall be notched to allow the poles to be locked in place.

STORAGE SLOT, BACKBOARD

There shall be one slot with the capacity to hold one long style backboard installed as specified by the fire department. The department must supply make and model of backboard.

COVER PLATES, OUTRIGGERS

Cover plates shall be provided over each outrigger location. The plates shall be painted with a black ruggedized material. The outrigger covers shall be a maximum of 15" wide to allow the deployment of the outrigger between parked cars.

VERTICAL LOAD TEST, APPARATUS BODY

The fire body shall exceed a vertical load testing. The vertical load test to the fire body shall follow the same strict and detailed requirements of the Economic Commission for Europe Structural Standard, ECE-29R as applied to the cab. The fire body shall be placed under a vertical load test to show structural integrity. There shall be 65,979 pounds applied to the fire body. There shall be no structure failures to the body and body compartments. A complete photographic, video, data, and dimensional record of these tests shall be available and placed on record for customer evaluations.

WHEEL WELL AIR BOTTLE COMPARTMENT, LEFT FRONT

There shall be DUAL aluminum air bottle compartments located in the left front body wheel well. Each compartment shall house two spare SCBA cylinders. The floor and sides of the compartments shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartments shall be supported to eliminate breakage. The compartments shall be vented to facilitate moisture drainage.

✓ E

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✓ ES

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WHEEL WELL AIR BOTTLE COMPARTMENT, LEFT CENTER

YES

There shall be DUAL aluminum air bottle compartments located in the left center body wheel well. Each compartment shall house two spare SCBA cylinders. The floor and sides of the compartments shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartments shall be supported to eliminate breakage. The compartments shall be vented to facilitate moisture drainage.

WHEEL AIR BOTTLE COMPARTMENT, LEFT REAR

YES

There shall be DUAL aluminum air bottle compartments located in the left rear body wheel well. Each compartment shall house two spare SCBA cylinders. The floor and sides of the compartments shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartments shall be supported to eliminate breakage. The compartments shall be vented to facilitate moisture drainage.

WHEEL WELL EXTINGUISHER COMPARTMENT, RIGHT FRONT

YES

There shall be an aluminum extinguisher compartment located in the right front body wheel well to house two extinguishers 2½" water and 20 pound ABC. The floor and sides of the compartment shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartment shall be supported to eliminate breakage. The compartment shall be vented to facilitate moisture drainage.

WHEEL WELL AIR BOTTLE COMPARTMENT, RIGHT CENTER

YES

There shall be DUAL aluminum air bottle compartments located in the right center body wheel well. Each compartment shall house two spare SCBA cylinders. The floor and sides of the compartments shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartments shall be supported to eliminate breakage. The compartments shall be vented to facilitate moisture drainage.

WHEEL WELL EXTINGUISHER COMPARTMENT, RIGHT REAR

YES

There shall be an aluminum extinguisher compartment located in the right rear body wheel well left rear to house one 15 pound CO2 extinguisher. The floor and sides of the compartment shall be lined with a polypropylene sheet and the back wall shall be lined with rubber matting to provide scuff protection. The bottom of the compartment shall be supported to eliminate breakage. The compartment shall be vented to facilitate moisture drainage.

BODY TRIM

YES

The standard body trim shall include the following characteristics. There shall be drip rail installed over the compartment door openings. The vertical rear face of the body shall be covered with smooth aluminum plate. This plate shall be painted with a black ruggedized material.

FUEL FILL, RECESSED WITH DOOR

YES

There shall be a recessed fuel fill assembly with a non-locking door mounted on the left side of the apparatus body. The fuel fill assembly shall be equipped with a fuel fill cap, retention ring and hinged door. The assembly shall be properly labeled "DIESEL FUEL ONLY". The door shall be painted with a black ruggedized material.

MUD FLAPS, REAR

YES

The rear axle mud flaps shall be constructed from hard black rubber and installed at the rear of the body fenders.

RUBRAIL

There shall be an aluminum rubrail installed on both sides of the lower body compartments. The rubrail shall be constructed from "C" channel extrusion. The aluminum rubrail shall be bolted in place with stainless steel bolts, and spaced from the fire body to provide body protection. The solid rubrail shall serve as protection to the side doors when encountering close objects. Tread plate rubrails or welded on shall not be acceptable. The rubrail shall be painted black with a ruggedized material.

YES

FOLDING STEP, FRONT OF BODY

There shall be six large folding steps with a minimum surface area of 35 square inches. The steps shall be mounted on the front face of the forward compartment as directed by the customer. There shall be an LED light installed above and below each step. The steps shall be painted with a black ruggedized material.

YES

TOW EYES, REAR

Two 1" thick rear tow eyes constructed of A-36 steel shall be mounted below the frame at the rear of the vehicle. The tow eyes shall be attached to steel weldments that are mounted to the apparatus. The eyes shall have a minimum dimension of 3" diameter. The tow eyes shall be used for towing, not lifting the vehicle.

YES

HANDRAIL, FRONT OF BODY

There shall be one 1 1/4" knurled stainless steel handrail installed on the front face of the compartments. It shall be approximately 12" in length. The handrail shall be painted with a black ruggedized material.

YES

HOSE BED DIVIDER

One hose bed divider shall be manufactured from 1/4" smooth aluminum plate with an extruded aluminum base welded to the bottom. The divider shall have an extruded track to slide in to allow the hose bed to adjust for different hose capacities. One end of the divider shall have a 3" radius corner. The divider shall be sanded to prevent damage to hose.

YES

HOSE BED COVER

A hose bed cover constructed of 16 oz. heavy-duty Hypalon shall be provided. Cover shall be fire retardant and installed over hose bed. The cover shall have chrome twist-locks and Velcro installed around the perimeter of the hose bed. The end of the hose bed cover shall be secured and cover the hose bed opening. The cover shall completely protect the hose in the hose bed and prevent hose from inadvertently deploying during normal operation. A safety sign FAMA22, which warns of the need to secure hose, shall be visible to personnel at the hose storage area. The end flaps shall be secured using footman loops. The cover shall completely protect the hose and prevent the hose from inadvertently deploying during normal operation. The cover shall meet the TIA 03-1 NFPA requirement. The cover shall be black in color.

YES

HOSE BED CAPACITY

The hose bed shall have the capacity to be compliant with NFPA 1901 and shall be determined at pre-construction meeting

YES

SHELVES, ADJUSTABLE

There shall be five adjustable shelves constructed from 3/16" smooth aluminum. The shelf shall be approximately 37-48" wide x 24-28" deep. The adjustable track shall be made from aluminum extrusions. Each shelf shall have a 2" lip on all sides for additional strength.

YES

TRAYS, 500 POUND ROLL OUT

There shall be two roll out trays supplied, constructed from 3/16" smooth aluminum plate. The trays shall be approximately 37-48" wide x 45" deep. The trays shall have a 3" lip on all sides for additional strength. The trays shall be mounted on **Grant slides** with a combined capacity of 500 pounds.

Yes

TRAYS, 500 POUND ROLL OUT

There shall be two roll-out trays supplied, constructed from 3/16" smooth aluminum plate. The trays shall be approximately 37-48" wide x 24-28" deep. The trays shall have a 3" lip on all sides for additional strength. The trays shall be mounted on **Slide Master slides** with a combined capacity of 500 pounds.

Yes

TRAYS, 30° ROLL-OUT/TILT

There shall be three roll-out trays supplied, constructed from 3/16" smooth aluminum plate. The tray shall be approximately 37-48" wide x 24-28" deep. The trays shall have a 3" lip on all sides for additional strength. The trays shall be mounted on Slide Master Slides with a combined capacity of 250 pounds. The trays and the rail system shall be designed to tilt 30° with 70% extension. The trays shall be mounted in a compartment specified by the department.

Yes

TOOL BOARD, VERTICAL ROLL OUT

There shall be one vertical tool board mounted in a specified compartment. Each tool board shall be manufactured from 3/16" smooth aluminum plate. The tool board shall be approximately 24-28" deep x full height and designed to extend 100% of the slide length. One set of Grant 250 pound slides shall be installed per tool board.

Yes

TOOL BOARD, HINGED ALUMINUM

One 3/16" thick aluminum tool board shall be installed in the specified compartment for the mounting of additional equipment. The board shall be welded to a 2" x 2" perimeter mounted aluminum extrusion for strength to form a hinged tool board. The tool board shall be secured to a stainless steel piano style hinge bolted to a reinforcing extrusion welded to the front wall of the compartment left side. The resulting hinge mounting shall space the tool board away from the compartment wall sufficiently so that tools may be mounted on both sides of the board. The door shall be held in the open position by a gas shock. The door shall be held in the closed position by a non-locking lever latch with two point catch.

Yes

COMPARTMENT DIVIDER

One compartment divider shall be mounted in the specified compartment. The divider shall be constructed of 3/16" smooth aluminum plate.

Yes

COMPARTMENT FLOORING, TURTLE TILE

There shall be Turtle Tile installed on the compartment floors. The color of the tile shall be black. The Turtle Tile shall be completely removable for cleaning. If the compartment has a roll out tray mounted directly on the floor, the Turtle Tile will be mounted in the tray.

Yes

HEAVY-DUTY REAR MOUNT LADDER

It is the responsibility of each bidder to provide the purchaser, as part of the bid evaluation, evidence the aerial device being bid is engineered, designed, and manufactured for heavy-duty, continuous use in the extreme type of environments found within the fire service. Each section of the specifications must have a written response from the bidder. No exception. Each aerial apparatus shall be manufactured in strict compliance with all applicable requirements as set forth in the current edition of NFPA (National Fire Protection Agency) 1901. Firefighter safety, ease of maintenance and product reliability shall all be of paramount importance during the design and

Yes

build phase of the aerial ladder apparatus. The ladder shall be comprised of at least four sections extending to a minimum height of 105' at 72°, measured in a vertical plane from the top rung of the fly section to the ground, per NFPA 1901, 19.2.2 and 19.2.4. The aerial device shall be designed and tested with a safety factor of at least 2:1 as required by NFPA 1901 using the following terms and formula, with the waterway flowing capacity:

NFPA SAFETY FACTOR AND RATED CAPACITIES

The methodology, definitions, testing, and criteria used by the aerial manufacturer to determine the preceding and following Safety Factor and Rated Capacity of the aerial device shall be in strict compliance with the definitions of such, as found in current edition of NFPA 1901 and these specifications.

YES

RATED CAPACITIES AND SAFETY FACTORS

The aerial manufacturer shall use predetermined methodology, definitions, testing, and criteria to determine the rated capacity and safety factor of the aerial ladder. The rated capacity and safety factors shall be in strict compliance with the definitions found in NFPA 1901, 19.2 thru 19.6 and 19.17 thru 19.25. All rated capacities and safety factors shall be verified by a nationally recognized, independent third party testing company, with the results provided to the purchaser at the time of delivery. The purchaser desires to purchase with these specifications, a 105' aerial device with a minimum safety factor of at least 2:1 as required and defined by NFPA 1901. Therefore, the aerial manufacturer shall hereby certify, by submitting a bid for these specifications that the aerial device meets or exceeds the following requirements. The design stress or primary stress within all structural load-supporting members of the aerial device shall not exceed 50% of the minimum as welded yield strength of the material based on the combination of the dead load of the aerial plus the rated capacity of 750 pounds at the tip of a 105' aerial while flowing 1500 GPM, at a 90° angle to ladder centerline OR the dead load of the aerial plus the rated capacity of 750 pounds at the tip with the waterway uncharged. With the structural load supporting members of the aerial device at either: an ambient temperature of 70°F; OR an elevated temperature of 350° F; thereby exhibiting a safety factor of at least 2:1 in all feasible operational conditions. These capabilities shall be valid and true when the apparatus is deployed in the unsupported configuration, based upon 360° rotation, up to full extension, and at any degree of elevation (-6° to +72°) that the aerial can achieve.

YES

SERVICE LIFE OF AERIAL LADDER SAFETY FACTOR

The purchaser desires to purchase with these specifications, an aerial device with a safety factor that remains NFPA compliant and constant throughout the life of the aerial device. The Safety Factor of every structural load-bearing member in the aerial device shall remain above 2:1 for a "Safety Factor Service Life" of up to a minimum of 20 years.

YES

REAR MOUNT AERIAL LADDER

The aerial ladder shall be of the rear mount design with the turntable mounted at the rear of the apparatus. The ladder tip shall be over the cab of the apparatus when in the stowed position.

YES

OPERATIONAL ENVELOPE AND REACH

The aerial ladder shall have minimum of an operational range of -6° to +72° elevation. The ladder shall have the ability to rotate a minimum 180° in the -6° position. The aerial ladder shall be comprised of four sections extending to a height of 105' at 72°, measured in a vertical plane from the top rung of the fly section to the ground, per NFPA 1901, 19.2.2 and 19.2.4. A minimum horizontal reach of 94.6' shall be measured from the turntable center point to the outermost rung on the outermost fly section, with the aerial at full extension and at 0° elevation, per NFPA 1901, 19.2.3 and 19.2.4.

107' YES

107'

107'

STRUCTURAL MATERIAL

YES

The primary load support members of the aerial ladder, i.e., handrails, base cords and vertical trusses, shall be constructed of certified minimum 100,000 PSI yield strength steel or aluminum.

RUNG COVERS, SERRATED RUBBER

YES

Each aerial ladder rung shall be covered with secure, heavy-duty, deep serrated rubber sheathing. Attachment of the sheathing to the rung shall be by a combination of non-invasive mechanical fastener and an adhesive application. Under no circumstance shall the covers turn when a rung is at ambient temperature (75°F) or at an elevated temperature (350°F). In the interest of firefighter safety, there shall be no exception to this requirement. The mechanical fastener shall in no way penetrate or encounter any portion of the ladder rung. The sheathing shall be easily replaceable if the rubber becomes worn, however the rung covers shall be designed, constructed, and installed with lifetime service as the objective.

EGRESS, BOLT-ON

YES

A bolt on removable egress shall be installed on the tip of the fly section. Only certified structural fasteners shall be utilized to attach the egress to the tip of the fly section. Additionally, the fasteners shall be stainless steel. This design shall allow for easy replacement should the egress become damaged during rescue operations. This shall prevent the department from experiencing serious downtime, as is common with welded on egresses. For this reason, a design that allows the egress to be welded to the fly section shall not be acceptable. Additionally, the egress shall have handrails that match the fly section handrails for an unnoticeable transition between the two. When the ladder is at 0° elevation, the egress section shall be on a plane of minus 11°. This shall provide a smoother transition onto the ladder from the tip, when it is at a high angle elevation. The egress shall have handrails that match the fly section handrails for an unnoticeable transition between the two. The rung on the egress shall be held to the same design load criteria as the rungs of the aerial ladder sections. This shall mean that each egress rung shall be able to support a design load of 500 pounds minimum, distributed across the rung, as specified in NFPA 1901, 19.2.2 and 19.3.1. Because of the obvious fire ground advantages of the bolt-on egress section, as well as the reduced replacements costs associated with damage, no exceptions shall be allowed to the bolt-on egress requirement. The color of the bolt-on egress shall be bright yellow.

FOLDING STEPS, FLY SECTION

YES

One set of folding steps shall be installed at the tip of the ladder to provide solid footing for personnel while operating the elevated master stream device. In the interest of fire fighter safety, the step surfaces shall be from Morton Cast material and be significantly oversized, with each step measuring approximately 6" x 13". In order to meet NFPA 19.5.4(4), a kick plate constructed of Morton Cast, approximately 2" x 6", shall be provided with each step. When folded out of the way, the steps shall not present any obstruction to climbers on the apparatus. Proper installation of the steps shall require that rubber gaskets be installed under the mounting surface where the step is secured to the aerial ladder section with certified structural fasteners.

LOAD LIFTING / RAPPELLING EYES, AERIAL FLY SECTION

YES

The aerial ladder should be equipped with two load lifting / rappelling eyes at the tip of the fly section. The load lifting/rappelling eyes, as a pair, shall be rated at 500 pounds.

EXTENSION INDICATOR

YES

There shall be numerals affixed to the inside of the handrail of the base section, opposite the turntable control console. The numerals shall be at appropriate intervals, indicating total aerial extension in five feet increments. A band on the first fly section shall align with these marks at the appropriate extension distance. The extension indicator color shall provide a high contrast

with the color of the ladder section to which it is applied. This shall make the length of aerial extension easily readable by the operator by merely glancing at the indicators. Numerals indicating length of extension shall be placed adjacent to indicating bands.

ANGLE INDICATOR, LIGHTED

There shall be a liquid filled angle indicator mounted on the base section of the aerial ladder. The indicator shall give accurate elevation in degrees from -20° to +80° in relation to level. The liquid shall be of proper viscosity and composition to stay in liquid form even when exposed to below zero temperatures. Reading of the indicator shall be accomplished by observing the position of a suspended ball in relation to the degrees of elevation as marked on the indicator housing. The indicator shall be lighted for nighttime operations.

YES

SIGN PLATES, LADDER

There shall be two sign plates provided on either side of the aerial base section. The sign plates shall measure approximately 16" tall x 133" long constructed from 1/8" smooth aluminum plate. The sign plates shall be painted black to match top of cab.

YES

TORQUE BOX

A torque box subframe shall be installed on the chassis frame rails, integral with the stabilizers. The torque box subframe assembly shall be capable of withstanding all torsion and horizontal loads when the unit is on the stabilizers.

YES

LADDER TRAVEL SUPPORT, HEAVY-DUTY

A heavy duty ladder rest with poly pads shall be provided for support of the ladder in the travel position. The location of the travel support shall be directly behind the chassis cab. The travel support shall be fabricated from heavy-duty steel tubing. The travel support shall be designed to be easily removable to allow for ease of maintenance and repair when necessary. The base section of the ladder shall contain stainless steel scuff plates shall where the ladder comes into contact with the ladder support. An indicator light shall be provided on the turntable to indicate when the ladder is aligned with the travel support and may be lowered into it. The ladder rest shall be illuminated for night time operation. The illumination light shall automatically turn on with the aerial master switch.

YES

HYDRAULIC SYSTEM

The tubing and hoses used in the hydraulic system shall have a high pressure rating, with the tubing having a minimum burst pressure of 9,600 to 17,400 PSI and the hoses being a minimum of 8,000 to 13,000. The hydraulic oil reservoir shall be the low profile type, and have an approximate capacity of 45 gallons. A dipstick shall be provided to check the oil level. The oil fill shall be furnished with a cap that shall act as a ventilator provide clean fresh air into the oil tank and a 40 micron filter to provide positive protection from contaminates. A magnetic drain plug shall be provided in a low point of the oil tank. An easily accessible three micron replaceable oil filter shall be installed on the hydraulic oil tank. The hydraulic oil tank shall be furnished with two pick-up tubes, one tube being used for normal operation and the other for emergency operation. The emergency pick-up tube shall extend further down into the oil tank to provide for some reserve oil in case a hydraulic line is broken. The hydraulic system shall be protected from possible hydraulic pump malfunctions by a relief valve which shall route the excess oil into the oil tank when the pressure in the hydraulic system exceeds 3,500 PSI. The hydraulic control valves shall also be protected by being plumbed to a pressure relief valve to protect them from high pressure. The hydraulic tank shall be mounted in the center portion of the ladder travel support in order to maximize useable space in the pump compartment.

YES

✓ **PUMP, POWER TAKE-OFF**

The apparatus shall be equipped with a power take off (PTO) driven by the chassis transmission and actuated by an electric shift, located inside the cab. The PTO, which drives the hydraulic pump, shall meet all the requirements for the aerial unit operations. Installed on the cabs instrument panel shall be an amber light notifying the operator that the PTO is engaged. The aerial PTO rocker switch shall engage the PTO, and drive the aerial hydraulic pump and the generator hydraulic pump (if applicable).

✓ 25

✓ 6

✓ **HYDRAULIC PUMP**

A pressure compensated, load sensing, variable gallonage type pump shall be used to supply the aerial hydraulic system. There shall be sufficient capacity to pump proper volume and pressure of hydraulic fluid in order that all ladder functions may operate at once without a noticeable loss of speed. Because it has a load sensing design, it shall pump aerial hydraulic oil only when the ladder or platform is in motion, thereby preventing overheating of the hydraulic oil, in compliance with NFPA 1901, 19.19.6 and 19.19.7. An interlock shall be provided to allow the PTO to be shifted only after the chassis parking brake has been set and the chassis transmission has been placed either in the neutral position or in the drive position if the driveline has been disengaged from the rear axle. The aerial master power switch shall be interlocked, allowing operation of the aerial device only after the chassis spring brake has been set, and the chassis transmission has been placed either in the neutral position or in the drive position if the driveline has been disengaged from the rear axle. An amber indicator light shall be integrated into the chassis PTO switch installed on the cab instrument panel to notify the operator that the PTO is engaged. The indicator light shall only illuminate after the PTO has obtained fluid pressure. The PTO must also use the Allison Transmission PTO logic for proper operation and limit controls.

✓ **HYDRAULIC PRESSURE GAUGES**

Hydraulic pressure gauges shall be provided at the ground level control station and at the turntable control station. The gauges shall be liquid filled type. The liquid shall not be vulnerable to freezing in subzero temperatures. The lower control station gauge shall read pressure constantly. The turntable control stations gauge shall read pressure whenever the system lock is disengaged and the aerial controls are active.

✓ 6

✓ 6

SERVICE VALVES, HYDRAULIC SYSTEM

There shall be ¼ turn ball valves installed in the hydraulic lines to isolate the hydraulic filters from the hydraulic system. This shall minimize the hydraulic fluid loss when changing pressure filter elements during routine maintenance.

✓ 6

PUMP, EMERGENCY

The apparatus shall be equipped with one emergency hydraulic pump electrically driven from the chassis battery system. The emergency pump shall be capable of providing adequate ladder functions to stow the unit in case of main hydraulic pump failure. Two control switches for this emergency pump shall be provided. One switch shall be installed at each one of the following two control stations: Turntable Control Console and Stabilizer Control Station. Each control switch shall be a spring-loaded momentary switch. A red indicator light shall be mounted adjacent to each switch to indicate activation of the emergency pump.

✓ 6

✓ **SWIVEL, HYDRAULIC**

A hydraulic swivel shall be provided on the aerial to connect the hydraulic lines from beneath to above the point of aerial rotation. The hydraulic swivel shall allow for 360° continuous rotation of the aerial ladder with no loss of speed or capacity in its functions.

SWIVEL, ELECTRICAL

An electrical swivel shall be provided on the aerial to connect the electrical wiring from beneath to above the point of aerial rotation. The electrical swivel shall allow for 360° continuous rotation of the aerial ladder with no loss of speed or capacity in its functions. A minimum of 32 collector rings shall be provided for adequate electrical power to the aerial device.

YES

YES

ELEVATION SYSTEM

Two double acting lift cylinders shall be utilized to provide smooth precise elevation from a minimum of 6° below horizontal to 72° above horizontal. The lift cylinders shall have a 6" internal diameter (bore) and a 2½" solid cylinder rod. The lift cylinders shall be equipped with integral holding valves located on the cylinder to prevent the unit from lowering should the charged lines be severed at any point within the hydraulic system. The lowering of the ladder shall be controlled by a pressure-limiting valve limiting the downward pull of the ladder when it is bedded. Both raising and lowering functions shall be influenced by flow compensation, which shall maintain ladder tip speed within the design speed regardless of load, angle, or extension. Ladder tip speed shall be decelerated above 65° in order to reduce tip-lash. Ladder lowering shall be controlled on the down motion to prevent the cylinders from completely retracting, thus allowing a cushion of oil for continuous ladder load readout. Elevation cylinder upper and lower pivot pins shall be installed with a means provided to keep the pins in place. The design shall not inhibit the pins from being removed by a trained mechanic.

YES

EXTENSION/RETRACTION SYSTEM

A full hydraulic powered extension and retraction system shall be provided using two sets of Siamese hydraulic cylinders and cables. This extension system provides a total of four cylinders and, between sections one and two, and four cables. The remaining sections shall have two cables each. Aerial ladder designs utilizing only one cable per section shall not be considered. For added safety, each set of cylinders and cables shall be capable of operating the ladder in the event of a failure of the other. The extension cylinders shall each have a 3½" internal diameter (bore) and a 1½" diameter solid rod. Extension and retraction of the telescopic sections shall be internally limited within the cylinders, eliminating excess strain on the cables, sheaves, and ladder structure. Each of the cylinder, cable, and sheave assemblies shall be completely independent of the other, so as provide a safety factor wherein a failure of one assembly shall not affect the function and operation of the other. The extension cylinders shall be equipped with counter balance holding valves to synchronize the cylinders for smoother operation and prevent the unit from retracting should the charged lines be severed at any point within the hydraulic system. The reeling of the cable shall be such as to provide synchronized, simultaneous movement of all sections from full extension to full retraction. All pulleys and sheaves shall be enclosed as an added safety feature as well as to prevent personnel on the ladder from becoming entangled in them, in compliance with NFPA 1901, 19.18.4. {No Exceptions}

YES

AERIAL CABLE DIAMETERS

The extension/retraction cables shall be as follows:

- Base to lower mid-section: .50" diameter
- Lower mid- to upper mid-section: .38" diameter
- Upper mid- to upper section: .31" diameter

All cables shall have a minimum 8:1 safety factor, exceeding the requirement of NFPA 1901, 19.20.3. {No Exceptions}

CERTIFIED CABLE SWAGED SHACKLES

All swaged shackles ends shall have a certification test from the manufacturer of the assembly.

YES

PULLEY SYSTEM

The extension and retraction pulley system shall be greaseable.

YES
yes

SLIDE PADS, OUTRIGGER AND LADDER

Nylon wear pads impregnated with molybdenum disulfide and high in molecular weight shall be used between the telescoping sections for maximum weight distribution, strength, and smoothness of operation. This impregnation shall provide a lubricating function. Stainless steel adjustment screws shall be provided on the wear pads to permit proper side tension. Plates shall be installed on the side of the slide pads where adjustment screws encounter them. No exceptions shall be allowed to this requirement to keep the adjustment screws from embedding themselves into the pads, which may cause the pad to crack and fail.

YES

ROTATION GEAR, HEAVY DUTY

A 44" diameter external tooth, swing circle bearing should be used for the rotation system. The bearing shall provide 360° continuous rotation. The bearing shall be designed specifically for the aerial device in place of the aerial device being designed to accommodate a particular bearing. The turntable shall be bolted to the bearing using 30 SAE grade 8 (0.625") diameter bolts. The bearing shall be bolted to the base support structure with 30 SAE grade 8 (0.625") diameter bolts. Welding on the bearing in any manner shall not be acceptable. The turntable base and the torque box bearing plate surfaces that contact the bearing shall be machined to prevent loading the bearing when the attaching bolts are brought to full torque. Machining of the surfaces shall be done after all welding to assure no further distortion of the material. Shims shall not be acceptable as they shall reduce the surface contact area significantly thereby causing a concentration of forces at the shims.

YES

BOLT TORQUING FROM TOP SIDE

All rotation bearing bolts shall be able to be torque from the top side of the turntable without the bolt or nut being held under the turntable by a person. This shall require a design that shall stop all chance of the bolt "spinning" while torque is being applied to the fastener. Application of Loctite or a similar compound alone, without any other means provided to hold the fastener; shall not be acceptable. Additionally, this design feature shall not incorporate drilling, bending, welding on, or in any way; modifying the structural fastener, nut, or washers.

YES

ROTATION GEAR REDUCTION BOX

A hydraulically driven planetary gearbox with a drive speed reducer shall be used to provide infinite and minute rotation control throughout the entire rotational travel. The rotation gear reduction box shall be installed on the top side of the turntable so that it is easily accessible, yet shall be installed so as not to provide an obstruction or tripping hazard to persons on the turntable. Specifically, it shall be installed toward the front of the turntable, under the aerial ladder base section. Under no circumstance shall the gearbox present any interference with the aerial device, even at low elevations. 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 manual operation of the rotation system should complete loss of hydraulic power occur. These provisions shall include a hand crank supplied with the unit. The hydraulic system shall be equipped with pressure relief valves, which shall limit the rotational torque to a nondestructive power. All moving parts of the rotation gear reduction box shall be enclosed or under the turntable decking so that no safety hazards are present.

YES

MAINTENANCE TOOLS

Some tools required for periodic maintenance of the aerial device shall be provided with the apparatus at the time of delivery. These tools shall be as follows:

- One ½" drive, torque wrench

- One ½" drive, 15/16" socket
- One combination ½" x 9/16" box end wrench
- One set of Allen wrenches (5/64", 3/32", 1/8", 5/32", 3/16", 7/32", ¼")

MANUAL ROTATION HAND CRANK

One manual rotation hand crank shall be provided as a means to rotate the turntable in the unlikely event of power loss. This hand crank shall be provided as standard equipment.

VBS

STABILIZERS, FRONT/REAR

The body shall be designed to accommodate a four stabilizer system. The openings shall be framed in aluminum extrusions. A stabilizer cover made from treadplate shall be supplied on the extendable stabilizer. The cover shall provide a pleasing appearance and mounting location for a red stabilizer warning light as outlined in NFPA 1901. The stabilizer openings shall be supplied with clear lights to illuminate the stabilizers and the ground surrounding the openings. The lights shall illuminate when any stabilizer is moved from the stored position. The stabilizers shall be an integral part of the torque box. The stabilizers shall be connected to the hazard light circuit to warn the driver if they are not stowed when the parking brake is released. The treadplate covers shall be painted in a black ruggedized material.

VBS

PADS, AUXILIARY STABILIZER

Four auxiliary pads shall be provided for load distribution for each stabilizer. The pads shall be 24" x 24" x 7/8" thick. These pads shall be constructed of lightweight high capacity cast nylon material with a load capacity on hard foundation of 150,000 pounds. These auxiliary pads shall meet all FEA testing criteria and retain shape after use, regardless of surface setup. Each pad shall be equipped with a center mounted heavy duty rope handle for ease of placement and pick up. Each pad shall be mounted in a 3/16" smooth plate aluminum rack, with two pads located each side of the apparatus below the compartment immediately behind the outrigger. Installation of the bracket shall not interfere with the vehicle's angle of departure. The aluminum plate storage racks shall be equipped with a proximity switch, connected to the door ajar circuit, to alert the driver in case the outrigger pads are not properly stowed.

VBS

LOCKS, MECHANICAL STABILIZER

The vertical portion of each outrigger cylinder shall be equipped with a mechanical pin, designed to lock the outrigger in the working position. The pin shall be zinc plated and shall have a yellow dipped vinyl handle for increased visibility. The locking system shall be incorporated into the outriggers outer protective cover, preventing damage to the cylinder rod. The inner jack tube and outer protective covering shall be double thickness in the pinning area for additional strength. All makes and brands of holding valves inherently pass fluid and any seal within the cylinder may develop a leak. Therefore, in the interest of firefighter safety, mechanical stabilizer locks shall be supplied at each outrigger, in addition to holding valves. There shall be no exception to this requirement.

VBS

OUTRIGGER ASSEMBLIES, GALVANIZED

The extending stabilizer beams, inner jack tubes, and stabilizer pads shall be wheel-o-braided to remove any mill scale, or contamination prior to galvanizing. Following this preparation, the individual components shall be hot dip galvanized. The galvanizing process shall require that the entire assembly be completely submerged. Following the galvanizing process, the surface shall be ground smooth to remove dross. This preparation shall provide maximum protection for these critical components. No exceptions shall be allowed to this requirement due to stabilizers being exposed to salt spray and road debris.

VBS

✓ **WEAR PADS/BEARING SURFACES**

Nylon wear pads impregnated with molybdenum disulfide and high in molecular weight shall be used between the stabilizer housing assembly and the extension tube for maximum smoothness of operation. Two Nylatron wear pads shall be installed in each stabilizer extension system. There shall be one wear pad located on the top back portion of the extension tube assembly that shall glide on the inner wall of the top housing tube wall. There shall be an additional pad located on the inner wall of the bottom housing tube wall that shall separate the bottom side of the extension tube and the bottom wall of the housing tube. The pads shall be installed in such a manner as to reduce friction for ease of operation and to reduce the amount of metal-to-metal contact. Each stabilizer down-jack housing tube shall contain four wear pads, one on each side of the tubes.

VES

VES

LIGHTS, STABILIZER WORK

A 4" LED flood light shall be provided at each stabilizer location to illuminate the surrounding area. The lights shall be activated by the aerial master switch.

LIGHTS, STABILIZER WARNING

Two Whelen model TIR6 LED red flashing lights shall be mounted below each stabilizer beam, facing front and rear. These warning lights shall be activated by the aerial master switch.

YES

VES

✓ **STABILIZER CONTROLS, ELECTRIC ACTUATED HYDRAULIC**

The outriggers shall be incapable of movement with the aerial ladder out of the travel position, per NFPA 1901, 19.17.5(1). In compliance with NFPA 1901, 19.21.4.1, the outrigger controls shall be arranged so that the operator has a direct line-of-sight to the stabilizers being positioned. Use of mirrors or other indirect means of watching the outrigger deployment are not acceptable. The stabilizer controls shall be located at the rear of the apparatus. Two control stations shall be provided, one on each side at the rear. All stabilizer control functions shall be electric paddle type. The outrigger controls must move in the same direction the operator would anticipate the outrigger moving. The make and model of the actuator shall be the P-Q controls, model M105. The controls shall be designed to allow the stabilizers to be operated independently so that the vehicle may be set up in a restricted area or uneven terrain. An electrically actuated diverter valve shall be provided in conjunction with the stabilizer controls as a safety device. The diverter valve shall allow the hydraulic fluid to flow to either the stabilizer circuit or the turntable and ladder circuit, but not both simultaneously. A stabilizer deployment warning alarm, activated by moving the diverter valve to the stabilizer mode and deploying an outrigger shall be provided at each stabilizer to warn personnel. The warning alarm shall deactivate only when all stabilizers are in the load-supporting configuration, or when the diverter switch is no longer in the stabilizer mode.

GROUND CONTROL STATION

A control station shall be located at the rear of the apparatus in an easily accessible area. Per NFPA 1901, 19.17.6, the control panel shall be arranged so the controls are easy to distinguish and operate, illuminated for nighttime operation, and properly labeled. To protect the controls and instrumentation, an aluminum tread plate door shall be provided over the rear control station. The door shall be painted with a black ruggedized material. The door shall be attached with piano style hinge and have two push button quick release latches. The following items shall be furnished at the control console, clearly identified, and located for ease of operation and viewing:

VES

- Individual stabilizer down indicator lights
- Aerial PTO engaged indicator light
- High idle switch with indicator light
- Emergency hydraulic pump control with indicator light
- Stabilizer/Aerial diverter control with indicator light
- Side to Side leveling bubble

A front to rear level indicator shall be provided inside the torque box. A weatherproof compartment shall be furnished behind the control panel containing the aerial circuit breakers, interlock components, and control circuit distribution terminals. A recessed work light shall be provided in the access door.

TURNTABLE

The turntable shall be a minimum of 95" side to side and 95" forward to aft. The turntable deck shall be covered with a rugged tread decking to allow the walking surface to shed liquids with unparalleled ease and comply with NFPA intent, to provide secure footing for the operator in all weather conditions. A downward lip shall skirt the turntable decking around its entire circumference to provide protection from hazards. There shall be three handrails provided at the turntable. Handrails shall be fabricated from high quality, 1 1/4" diameter, stainless steel tubing with a deep knurled finish to meet NFPA slip resistance requirements. Each handrail section shall be of a one-piece construction and provide large sweep corners at the edge of the turntable. Each handrail section shall be 42" high. The handrails shall be installed around the rear 180° perimeter of the turntable for operator and personnel safety. Each individual handrail shall be secured to the turntable by the use of two minimum 5/8" anchor bolts on the underside of the turntable. Additionally, chrome plated stanchions with rubber gaskets shall be provided on the top surface of the turntable where each railing meets the decking surface. All hoses and electrical lines shall be routed under removable covers so they do not present a tripping hazard. The covers shall also be designed to prevent damage from occurring to these components. Likewise, the center of the turntable shall have a removable step cover to prevent tripping hazards as well as provide for easier transition to the first rung of the aerial ladder. A single access staircase shall be supplied on the driver's side of the apparatus to the aerial turntable. The angled staircase shall be supplied with extruded aluminum handrails on both sides of the staircase frame. All handrails shall be painted in a black ruggedized material.

YES

AERIAL PIVOT PINS

The aerial device pivot pins shall be located on the turntable and shall attach the aerial device base section to the turntable. To maintain a suitable safety factor, the pivot pins shall be composed of certified structural steel. In the interest of safety, the pivot pins shall be located as low as possible, and shall be at the aerial device base rails. This shall keep the pivot points away from the areas where persons egress to and from the aerial base section. Aerial pivot pins shall be installed with a means provided to keep the pins in place. The design shall not inhibit the pins from being removed by a trained mechanic.

YES

MANSAVER BARS

Fire Research Mansaver MSA120 safety bars shall be installed between the two gaps in the handrails at the left and right side entranceways to the turntable. The safety bars shall be permanently attached at one end they shall open either upward or inward, and are spring loaded automatically returning to the horizontal closed position. The safety bars shall be uncovered constructed from aluminum and stainless steel. The bars shall be painted in a black ruggedized material.

YES

CONTROL CONSOLE, TURNTABLE

A street-side control console shall be provided on the turntable. The console shall have a hinged aluminum tread plate cover, painted with a black ruggedized material, and illuminated for nighttime operation. Gas shock hold open devices shall be provided to secure the lid in the open position. The gas shock shall assist in closing the cover when it is positioned over center. The console surface shall be angled toward the operator so controls may be viewed and operated ergonomically. When the console lid is closed, the lid and control panel shall be isolated from

YES

each other, preventing metal-to-metal contact. Three handles for the ladder hydraulic functions (elevation, rotation, and extension) shall be installed at the control console. To comply with NFPA 1901, 19.17.7, the controls shall be distinct from the remainder of the other actuators and instruments on the turntable control console, and be manual for safety and durability reasons. There shall be no exceptions allowed to this requirement. A cast alloy plate with openings for the aerial function levers to extend through shall be provided, which shall encircle the control levers. The function of each control lever shall be cast into the plate under the appropriate lever. The levers shall be separated by enough distance so that a gloved hand shall not disturb an adjacent control, per NFPA 1901, 19.17.6.5. The controls shall be capable of being operated independently or simultaneously with a gloved hand. The speed of movement caused by moving any control shall be minimally affected when multiple controls are moved. In compliance with NFPA 1901, 19.17.6.2, a push/pull systems engagement control shall be installed at the control pedestal. The control shall energize the hydraulic system for ladder function and provide flow of hydraulic fluid to the master valve bank. An automatic throttle switch shall be attached to the systems engagement control that advances the engine speed to a preset RPM, when the midship pump is not engaged. Each item provided on the console not labeled from the manufacturer, shall be provided with a permanent cast alloy label. The information on the label shall be stamped or professionally engraved for lasting durability. A hinged service door shall be provided on the front of the control console. This door shall be provided with a lift and turn latch. Opening of this door shall allow access to the electrical wiring, valves, and inner components for inspection purposes. A recessed work light shall be provided on the outside of the service door to aid in lighting the deck area. The following items shall be furnished at the console, clearly identified, and located for ease of operation and viewing:

- Elevation, Extension and Rotation Controls
- Lighted Push/Pull Button to Deactivate Hydraulic System
- Fast Idle Switch
- Cover Mounted Panel Light
- Rung Alignment Light
- Bed Zone Indicator Light
- Ladder Light Switches
- Ladder Overload Warning Horn
- Hydraulic System Pressure Gauge
- LoadMinder display panel
- AirMinder display panel and alarm (if equipped with breathing air)
- Emergency Pump Unit Momentary Switch and Light
- Electric Monitor Controls
- Straight/Fog
- Up/Down
- Left/Right
- Intercom with Push-to-Talk and Volume Controls
- Operators Load Chart
- Warning Signs

✓ CREEPER CONTROLS AT LADDER TIP

There shall be a set of aerial ladder creeper controls at the tip of the fly section. The control module shall consist of three spring loaded, triple-pole, double-throw, and return to center switches, one for each aerial ladder function: raise/lower, extend/retract, and left/right rotation. Each function switch shall have a permanently affixed black and white label adjacent to the switch. Each switch shall be encircled by a rubber boot to protect it from collecting moisture. The creeper control shall allow the crew member on the tip of the ladder to operate these three functions within the speed limitations as set forth in NFPA 1901, 19.5.4(1) through 19.5.4(4). A stainless steel guard shall be installed to help prevent switches from being damaged or actuated

from activity on the tip of the aerial ladder. A foot pedal shall be installed at the lower control station to activate the system. When in the normal position, the system shall be de-energized. When the pedal is depressed and held down, power shall be available to the person at the tip.

YES

LOAD MINDER

There shall be a LoadMinder at the operator's pedestal indicating the load on the aerial device. The display shall be in the form of an LED illuminated bar graph. The instrument shall be readable in day and night conditions. The display shall be a "real time" display, thereby giving immediate readings to the operator. Additionally, a color-coded bar shall be above and below the actual LED bar graph, to surround the actual reading given to the operator; thereby making the display easier and faster to read. The color-coded bars shall progress from Green to Yellow, and finally to Red. When the LED bar graph illuminates, representing a load on the aerial ladder, the operator need only glance at the display to determine the load applied to the aerial device - in relation to 100% rated aerial device capacity. The readout given by the display shall be continuous and relative to the NFPA compliant aerial device rated capacity as stated in these specifications. The Load Minder display shall include, but not be limited to, the following items:

- Accumulated equipment on all ladder sections, or at the platform including manufacturer installed items or customer installed items
- Accumulated personnel on all ladder sections or at the platform
- Accumulated ice buildup on all ladder sections or at the platform
- The total load suspended from any load lifting / rappelling eye installed by the manufacturer
- Any load reaction from dynamic loads placed on or realized by the aerial structure
- Any water weight or reactionary force realized by the aerial structure
- Any combination of the above items

The Load Minder as described shall be designed in such a manner that the operator shall not have to refer to an angle indicator, extension tape, or load chart; or be required to guess at, or try to calculate the loads or forces applied to, or interacting with the aerial device at any given time, and in any situation. This shall comply with the current edition of NFPA 1901. Systems that require the use of a load chart, angle indicator, or extension tape shall not be acceptable for safety reasons. The Load Minder shall be connected to a 100 dB alarm at the operator's control station that shall sound when the ladder load is above the rated capacity. This alarm system shall also be connected to two amber strobe lights on the end of the base section, one on each side, to provide further notice to the operator of an unsafe condition. A second audible and visual alarm shall be installed at the tip of the ladder.

AIR HORN SWITCH, TURNTABLE

A push button momentary switch shall be mounted on the aerial turntable console to activate the chassis air horns.

YES

INTERLOCK SYSTEM, AERIAL STOW OPERATION

A safety feature shall be included in the aerial operational system that limits the possibility of damage to the apparatus when stowing the aerial. When the aerial is positioned over the cab area of the apparatus, the interlock system shall not allow the downward movement of the aerial to go below a preset angle of elevation, unless the aerial is rotated into the stow-zone envelope. The stow-zone shall be approximately 2° of rotation to the left and right side of the center of the aerial bed support. Once this stow-zone envelope is attained, downward movement of the aerial shall be allowed for proper positioning into the bed support. An indicator light shall be located at the turntable control station to inform the aerial operator when the stow-zone envelope is attained.

YES

VBS

INTERLOCK SYSTEM, APPARATUS BODY DAMAGE CONTROL

A safety feature shall be included in the aerial operational system that minimizes the possibility of damage to the apparatus body at all angles for all standard (non-override) operational modes. The system shall automatically stop the downward movement of the aerial at a preset angle of elevation unless the aerial has been rotated at least 80°, left, or right, from the center of the ladder support. Once this rotation point is reached, full range downward movement to -6° shall be allowed. The aerial manufacturer shall determine and set the angle of elevation where downward aerial movement is stopped. The highest point of an apparatus, in relation to the distance from the turntable, shall be used to determine the preset elevation angle stopping point. The system shall also minimize the possibility of accidental damage to the apparatus body from aerial rotation whenever the aerial elevation is below the preset elevation angle stopping point. Aerial rotation shall be automatically stopped before the aerial contacts the body of the apparatus and the rotational speed shall be reduced by approximately 50% when the aerial is rotated to within a minimum of 10° of a body avoidance stopping point. The body damage interlock system shall have no effect on aerial operation when the aerial is raised above the preset downward movement stopping point. The body damage interlock system shall not reduce the operating envelope to protect components such as telescopic lights that are in a raised position.

VBS

INTERLOCK SYSTEM, ROTATION

The aerial device shall be equipped with a rotation interlock system to prevent the ladder from being rotated to any side where the stabilizers are not sufficiently extended to provide for the full tip load rating. The system shall monitor the stabilizers for extension. When the apparatus has a stabilizer not fully extended, or short-jacked, to provide full tip load rating, the system shall prevent the aerial from being rotated more than 12° past the front or rear centerline into the short-jacked side of the apparatus. Once activated, the system shall prevent the aerial from being rotated past the front or rear corner of the apparatus where a stabilizer is not properly deployed. A slowdown feature shall be built into the rotation interlock system. When the aerial is operating in a short-jacked mode, the rotational speed shall be automatically reduced, by approximately 50%, when the aerial is rotated to within approximately 10° of the front or rear centerline of the apparatus. The rotational speed shall remain reduced throughout an arc of approximately 20° over the front or rear of the apparatus, regardless of the direction of the rotation movement. The rotation function shall automatically stop when the aerial approaches the front or rear corner area of the short-jacked side of the apparatus. The rotation interlock system shall allow for normal operation on the side of the apparatus where the stabilizers are sufficiently extended for full tip load rating.

VBS

INTERLOCK SYSTEM, RETRACTION

An integral part of the extension/retraction system shall be a safety system to prevent injury to personnel on the end of the fly section while the ladder is being retracted. This system shall be designed in such a manner as to prevent retraction of the aerial device any time the folding steps at the end of the fly section are in overlap with the rungs of another section. When the steps are in an overlap condition, retraction shall only be accomplished by an operator at the primary control station depressing and holding a momentary switch while the retraction control is operated. In the interest of firefighter safety, no exception shall be allowed to the retraction safety interlock.

VBS

INTERLOCK SYSTEM, CRADLE

A cradle interlock system shall be provided to prevent the lifting of the ladder from the nested position until the operator has positioned all of 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. There shall be a manual override switch, which allows the ladder to be lifted from the cradle when the aerial is set up in the short-jacked configuration.

AERIAL WATERWAY

A four-section, telescopic aerial waterway shall be provided, consisting of a 5" outside diameter steel pipe in the base section, a 4.5" diameter pipe on the next section, and a 4" outside diameter pipe on the third section, and a 3.5" outside diameter pipe in the fly section. The waterway pipe shall be connected to the waterway swivel. A 4" inside diameter pipe shall be routed through the rotation point swivel up to the heel pin swivel. The heel pin swivel shall allow the rated flow of the waterway while elevating the aerial ladder from -6° to +72°. The heel pivot pin shall not be integral with the waterway swivel at any point. The design of the water way shall allow complete servicing of the waterway swivel without disturbing the heel pivot pin. A 4½" outside diameter pipe shall be connected from the waterway discharge valve to the water swivel at the rotation point of the turntable. The water swivel shall allow the ladder to rotate 360° while continuing the rated water flow of 1,500 GPM.

YES

DUAL POSITION WATERWAY

The waterway monitor shall be capable of being placed in one of two positions, either at the end of the fly section or at the end of the third ladder section. This is required to keep the ladder tip clear of obstructions when the aerial device is used in rescue operations, as described in NFPA 1901, A.19.6.4.5. The waterway shall retain the same 1,500 GPM flow capacity, regardless of monitor position.

YES

WATER FLOW CAPABILITIES

Rotational torque shall be more adequate to rotate the ladder into a full 1500 GPM water stream directed at 90° to the side while maintaining the 750 pound tip load at 0° elevation. Flowing at the rated 1,500 GPM shall in no way affect the rated load or impose any restrictions on operation.

YES

CONTROL STATIONS, ELEVATED MASTER STREAM

The aerial master stream device shall have two separate control stations. One station shall be at the main aerial turntable control console the other station shall be located at the tip of the ladder. Each station shall have the capability of controlling the nozzle pattern as well as the horizontal and vertical position of the device.

YES

AUTO STOW

The monitor shall be equipped with an auto-stow feature that shall position the monitor at horizontal when the ladder is stowed. A stow button shall be provided on the turntable control console. Interlocks shall be provided that prevent the ladder from being lowered into the cradle if the monitor is not in the travel position.

YES

DISCHARGE, LADDER TIP

There shall be a 2½" discharge located at the tip of the aerial ladder. The discharge shall have a Task Force Tips VUM, model AKM13-B181D manually controlled monitor valve provided under the monitor. The valve shall be controlled with an NFPA compliant slow-close crank handle gear operator. A position indicator shall be provided to allow for quick visualization of the status of the valve in the open, closed or partial positions. The unit shall have a flow capability of up to 2,000 GPM with friction loss no more than 6 PSI. For maximum corrosion protection the aluminum casting shall be hard coat anodized, with a silver powder coat internal and external finish. The valve ball shall be stainless steel and have an automatic drain for draining waterway when valve is closed and unpressurized. The unit shall have a unique serial number and be covered by a five year warranty. The valve shall be configured with a 4" ANSI 150 flange inlet and 4" ANSI 150 flange outlet. Port C1 shall have a left hand elbow quarter turn ball valve with 2½" NH male outlet installed, extended 4¾" from main valve. C2 and C4 shall have blind plugs installed. C3 shall have an External Automatic Drain Valve. All 2½" NH male

YES

discharges shall have a 2½" NH female by 1½" NH male thread reducer and a 1½" NH female cap with lanyard.

VALVE, WATERWAY RELIEF

A ¾" safety relief valve shall be installed in the base section waterway. The relief valve shall be pre-set at 240 PSI. The valve shall protect the waterway from overpressure. This valve is not intended to act as a relief for the total flow of the system.

YES

VALVE, WATERWAY DUMP

There shall be an automatic relief valve installed in the aerial waterway to prevent over pressurization of the waterway seals.

YES

VALVE, WATERWAY DRAIN

There shall be a 1½" drain valve installed in the lower section of the aerial plumbing, beneath the aerial swivel, under the truck. The valve shall be controlled with a push-pull rod that utilizes stainless steel universal swivel joints for an easy pull. The valve, when opened, shall drain the aerial waterway and associated plumbing.

YES

REAR INLET/OUTLET, AERIAL WATERWAY

The aerial waterway shall be capable of being supplied by both an onboard pump and by an external water source. Additionally, the aerial waterway inlet piping shall have a two-position valve allowing the waterway inlet to be used as a pump discharge. The two-way shall be air actuated and controlled from the pump panel with the actuator adjacent to the waterway discharge valve. The air actuator shall be labeled "WATERWAY INLET" and "REAR DISCHARGE". There shall be an additional label reading "WATERWAY DISCHARGE VALVE MUST BE OPEN AND AIR ACTUATOR IN REAR DISCHARGE MODE TO USE AS A REAR DISCHARGE". A 4" diameter waterway piping shall be provided the rear of the apparatus to the aerial pre-piped water system. A female 4" pipe thread to 4" NST male chrome plated adapter with screen and cap shall be provided for the connection of adapters or Siamese for fire hose. A 2½" diameter liquid filled water pressure gauge shall be located above the rear inlet. A 1½" push-pull waterway drain valve shall be provided beneath the turntable with controls located below the rear inlet. Warning plates shall be permanently affixed in a location in proximity to the aerial waterway inlet that read: "WARNING - SERIOUS INJURY OR DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE" and "WARNING - SERIOUS INJURY OR DEATH COULD OCCUR IF WATERWAY INLET CAP IS REMOVED WHILE WATERWAY IS FLOWING".

YES

ELEVATED MASTER STREAM APPLIANCE

An Akron Brass Sabermaster 1250, remote controlled, all electric, single waterway monitor shall be installed at the tip of the ladder. The monitor shall be equipped with two 90° drive positioning motors, one each for vertical and horizontal movement. Each positioning control shall be equipped with a manual override. The monitor shall be capable of vertical positioning from -135° to +30° and horizontally 90° from side to side for a full 180° sweep. The rated tip load of the aerial device, when nozzle is flowing at horizontal or below, shall not be affected by the position of the nozzle throughout the entire range as listed above. The rated tip load of the aerial device, with the nozzle flowing above horizontal, shall be reduced by 250 pounds. The monitor shall be painted the same color as the bolt on egress, unless otherwise specified by the customer.

YES

INTERCOM SYSTEM, AERIAL

A two-way, two-station Fire Research ACT intercom system shall be furnished on the aerial ladder. Intercom communication shall be between the ladder tip and the turntable control console. The turntable station shall be push-to-talk with separate transmit and receive volume

YES

control knobs. The ladder tip station shall have a hands-free speaker/microphone unit, requiring no operator attention to transmit or receive.

COMMUNICATION PRE-WIRE, TIP TO TURNTABLE

Wiring for a headset style intercom system shall be provided from the aerial ladder tip to the turntable. This shall be used for installation of fire department specified intercom equipment. The department shall specify the manufacturer of the communication system to be used, i.e., David Clark, Sigtronics, Firecom, and SetCom; so the manufacturer can purchase the correct wiring and harness kits. Other components of the intercom system to be provided by the manufacturer shall be specified by the fire department.

YES

LIGHTS, TURNTABLE WORK

The turntable shall be lighted for nighttime operation with a minimum of three LED work lights. The lights shall activate automatically through the aerial master switch, day or night. The work lights shall be positioned so that the light shall be directed toward the decking. The lights shall have black ruggedized hoods to keep light from glaring upward into the operator's eyes. An additional LED light shall be recess mounted in the front access door of the control stand.

YES

LIGHTS, BASE SECTION TRACKING

Two Whelen Pioneer Micro MPBW, 12V LED lights shall be furnished, one on each side on the base section lower chord. The tracking lights shall be controlled from the turntable control station. The 45 watt +12 DC Micro Pioneer lighthouse configuration shall incorporate 12 white Super-LED® with a TIR reflector installed in white die-cast powder coated aluminum housing. The MPBW shall have a standard 8° spot light lens and have the ability to change the optics with three different flood light pattern lenses provided with the Micro Pioneer. The additional lens patterns are 40° x 20° flood, 40° x 8° flood, and 90° x 20° flood. The MPBW4B shall include a white powder coated bail bracket with a 3/8" stainless steel stud carriage bolt and stainless steel mounting hardware. The Micro Pioneer light shall have 4,100 usable lumens. A cast aluminum alloy lens retainer with a liquid injected silicone gasket shall protect against environmental conditions. The hard coated lenses shall provide extended life/luster protection against UV and chemical stresses. The MPBW shall be vibration resistant. The Pioneer PC boards shall be conformal coated for additional protection. The MPBW shall have extended LED operation with low current consumption and low operating temperature. Two breathable membrane patches shall be installed to the bottom of the housing to maintain a consistent internal pressure. The MPBW shall be furnished with a 6' 2/C 18GA unterminated cable. The MPBW is covered by a five year factory warranty.

NO

LIGHT, LEFT LADDER TIP

There shall be one Whelen PFP1 light furnished at the tip of the fly section left side. A switch located on the lamp head shall activate the light. The Whelen Pioneer Plus Model PFP1 shall be provided. The 75 watt + 12V DC Pioneer lighthouse shall incorporate Super-LED single flood light installed in die-cast white powder coated aluminum housing. The PFP1 configuration shall consist of 30 white Super-LEDs, a clear optic collimator/metalized reflector assembly and a clear non-optic polycarbonate lens. The Pioneer flood light shall have 8,100 usable lumens. The lens/reflector assembly shall utilize a liquid injected molded silicone gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The PFP1 shall be vibration resistant. The Pioneer PC boards shall be conformal coated for additional protection. Two breathable membrane patches shall be installed to the bottom of the housing to maintain a consistent internal pressure. The PFP1 shall have extended LED operation with low current consumption and low operating temperature. The PFP1 is covered by a five year factory warranty.

YES

LIGHT, RIGHT LADDER TIP

There shall be one Whelen PSP1 light furnished at the tip of the fly section right side. A switch located on the lamp head shall activate the light. The Whelen Pioneer Plus Model PSP1 shall be provided. The 75 watt + 12V DC Pioneer lighthouse shall incorporate Super-LED single spot light installed in die-cast white powder coated aluminum housing. The PSP1 configuration shall consist of 30 white Super LEDs with 8° TIR reflector and a clear non-optic polycarbonate lens. The Pioneer spot light shall have 8,000 usable lumens. The lens/reflector assembly shall utilize a liquid injected molded silicone gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The PSP1 shall be vibration resistant. The Pioneer PC boards shall be conformal coated for additional protection. Two breathable membrane patches shall be installed to the bottom of the housing to maintain a consistent internal pressure. The PSP1 shall have extended LED operation with low current consumption and low operating temperature. The PSP1 is covered by a five year factory warranty.

YES

120-VOLT RECEPTACLE

There shall be one 120 volt twist lock receptacle mounted on the end of the fly section. The receptacle shall be wired through the electrical swivel, and shall be controlled from the breaker box located in the body. This outlet will be powered by either a rear compartment portable generator, or by an apparatus-mounted generator (TBD). The outlets shall be rated for 15 amp service, unless otherwise specified by the customer.

YES

YES

LIGHTING, RUNG SAFETY

The aerial ladder sections shall be equipped with permanently mounted blue LED rung lighting on the three lower sections, and red LED lighting on the fly section. The lights shall be mounted inside each of the four ladder sections, along the base chord facing inward. They shall be in an alternating arrangement. The blue and red LEDs shall serve to illuminate climbing rungs without inducing any glare, which would hinder safety. A minimum of six lights shall be provided on the fly section and a minimum of four lights on each of the three lower sections. The lights shall be energized by a switch on the turntable control station. Each light shall be equipped with an integral guard to protect it from damage. The light itself shall be positioned such that all light shall be directed inward toward the rungs of the aerial sections, maximizing safety for all climbers during night operations. The lights shall also aid the operator in locating aerial ladder section in conditions of reduced visibility. Reflective tape, phosphorescent paint, or similar non-electrically powered products shall not be an acceptable substitute for blue rung lighting. For the reasons of fire fighter safety, there shall be no exception to this requirement.

AERIAL FINISH

All aerial components, above the rotation point, that are not chrome plated, anodized aluminum, aluminum tread plate, or stainless steel shall be painted. All areas to be painted shall be sanded to remove any metal flakes and smooth any rough surfaces. All surfaces to be painted shall be phosphatized to remove metal impurities, aid paint adhesion and inhibit rust. The components shall be prime painted with a low VOC high solids non-isocyanate primer and finish painted with a low VOC extremely durable, single stage ultra-high solids high gloss polyurethane paint. The support structure and components below the rotation point shall be painted black. To enhance durability and appearance, the high gloss polyurethane paint applied to the aerial ladder sections and other components above the rotation point, shall be cured at an elevated temperature for a period not less than two hours. The temperature shall not be less than 180°F. Curing of the paint shall promote a chemical reaction within the substrate that shall harden the paint. The curing shall be performed in a clean, sealed, controlled atmosphere. The atmosphere shall comply with all environmental standards and any air entering the chamber shall be filtered.

YES

✓ **AERIAL DEVICE PAINT COLOR**

The aerial device shall be painted gray.

VES

VES

✓ **OUTRIGGER FINISH**

The extending stabilizer beams, inner jack cylinder protective tubes, and stabilizer pads shall be hot dip galvanized as follows. The extending stabilizer beams, inner jack tubes, and stabilizer pads shall be wheel-o-braided to remove any mill scale, or contamination prior to galvanizing. Following this preparation, the individual outrigger assembly components shall be hot dip galvanized. The galvanizing process shall require that the entire assembly be completely submerged. Following the galvanizing process, the surface shall be ground smooth to remove dross. This preparation shall provide maximum protection for these critical components. Following surface preparation, components shall be coated with black water base self-etching coating.

VES

✓ **LOAD CHART**

There shall be a load chart (instruction plate) installed at the turntable control console of the aerial ladder. The load chart shall cover the full operating range of the ladder, with the waterway dry or flowing water.

VES

✓ **SAFETY SIGNS, NFPA 2016**

The following safety signs shall be provided where applicable:

- FAMA 25 (Training Required): One sign visible to the operator at the main aerial controls
- FAMA 30 (Stabilizer Crush): One sign visible to personnel near each stabilizer and one sign at the stabilizer deployment controls
- FAMA 31 (Stabilizers with Pins) or FAMA 32 (Stabilizers without Pins): One sign in a location visible to personnel at the stabilizer deployment controls
- FAMA 32 (Stabilizer Pads): Visible to stabilizer deployment operator
- FAMA 33 (Stabilizer not Extended): Visible to stabilizer deployment operator
- FAMA 34 (Fall Restraint Required): One sign in a location visible to personnel at the base of any aerial device with a ladder capable of being climbed and one sign visible to personnel in any aerial platform
- FAMA 35 (Electrocution): One sign in a location visible to the aerial operator and one sign in a location visible to the pump operator
- FAMA 36 (Electrocution): One sign on each side of the vehicle and one sign on the back
- FAMA 37 (Aerial Device Load Capacity): One sign visible to operators at any location where the aerial can be controlled
- FAMA 38 (Aerial Ladder Rung Pinch): One sign visible to operators at any location where the aerial can be controlled
- FAMA 39 (Aerial Inspection and Maintenance): One sign visible to the operator at the main aerial controls

- FAMA 40 (Fall Protection Anchor): Visible next to each fall protection anchor
- FAMA 46 (Aerial Device Pinch): One sign on aerial device visible to personnel on the turntable at the foot of the device
- FAMA 47 (Aerial Operator Attention Required): Visible to aerial operator at turntable, in the platform, and at tip controls

PLATE, AERIAL INFORMATION SPECIFICATION y B S

A permanent affixed plate shall be installed on the apparatus and disclose the following information relative to the aerial device.

- Make
- Model
- Insulated or Non Insulated
- Serial Number
- Date of Manufacturer
- Rated Capacity
- Rated Vertical Height
- Rated Horizontal Reach
- Maximum Hydraulic System
- Hydraulic Oil Type and capacity

CERTIFICATIONS, INDEPENDENT THIRD PARTY y B S

All bids shall include copies of the certification of testing of the aerial device. The purchaser desires a device that has been tested by a third party for compliance with the 2:1 safety factor specified by NFPA 1901, section 19.24 through 19.25. Devices that have not been certified by an engineer that is independent of the manufacturer shall not be acceptable. To meet or exceed the intent of NFPA 1901, section 19.22, the following system shall be employed by the manufacturer. Welds shall be tested using two non-destructive methods by an independent third party inspection firm. Steel and aluminum ladders shall, at a minimum, have all welds tested using two separate NDT methods, in accordance with NFPA 1901, 19.22.2. Aerial structures shall have 100% of all structural welds tested using both magnetic particle method and visual testing method. Aerials that are fabricated of aluminum shall have 100% of all structural welds tested using dye penetrate method and visual method. Manufacturers who rely only on visual inspection, performed in-house or by a third party, as a primary method of testing shall not be considered and their bid shall be rejected. y B S

NFPA AERIAL STABILITY FACTOR & TESTING y B S

A minimum of 1.5:1 stability factor shall be provided, per NFPA 1901, 19.21.2 and 19.24.2. These capabilities shall be established in an unsupported configuration. Since the device is rated while flowing water stability testing shall account for the distributed weight of water in a full waterway and water reactionary force as required by NFPA 1901. The following are specific descriptions of what test are to be performed, the conditions they shall be performed under, and strictly adhered to by the aerial manufacture set forth in these specifications and the current edition of NFPA 1901. For both of the following tests, the only obstructions to a full 360° rotation with the aerial at 0° elevation and full extension; shall be presented by the apparatus itself (if any), and not external obstructions at the manufacturer's test location. The aerial device manufacturer shall ensure that the testing grounds present no obstruction, i.e., trees, buildings, etc., to the full 360° rotation at 0° elevation and full extension, which may cause the need to raise the aerial to clear the obstruction.

TEST 1

After the above conditions have been satisfied, the aerial shall be subjected to the following test in the presence of the third party testing company that complies with these specifications. Specifically, the aerial device shall be placed on level ground with the stabilizers deployed per manufacturer recommendations. The aerial device shall then have 1½ times the rated capacity placed at the tip of the aerial, with the device at full extension and at 0° elevation, which is the most stringent configuration. The device shall be rotated 360° rising and lower the aerial as needed to clear the cab of the apparatus. The aerial shall prove to be stable during the entire test and no component of the aerial shall permanently deform.

TEST 2

After the above conditions have been satisfied, the aerial shall be subjected to the following test in the presence of the third party testing company that complies with these specifications. Specifically, the aerial device shall be placed on a 5° downward slope with the stabilizers deployed per manufacturer recommendations. The aerial device shall then have 1.33 times the rated capacity placed at the tip of the aerial, with the device at full extension and at 0° elevation, which is the most stringent configuration. The device shall be rotated 360° rising, and lower the aerial as needed to clear the cab of the apparatus. The aerial shall prove to be stable during the entire test and no component of the aerial shall permanently deform.

INSPECTION CERTIFICATE, NFPA 1901 COMPLIANCE

A third party inspection certificate for the aerial device shall be furnished upon delivery of the aerial device. The purpose of this NFPA 1901 compliance inspection shall be to serve as proof to the customer that all applicable standards have been met or exceeded by the responsible aerial manufacturer. The following objectives shall be achieved as a result (this listing shall not be construed as being all inclusive):

- The device shall be inspected and tested in accordance with NFPA 1901 and NFPA 1911 standards for fire department aerials.
- All welds for structural components are to be performed by certified welders under the guidelines of AWS D1.1, D1.2, and D1.3.
- All testing shall be conducted by ASNT Level II or Level III technicians certified to ASNT CP-189 standard.
- All welds shall be inspected to AWS B1.10, Guide for the Non-Destructive Examination of Welds.
- All magnetic particle inspections shall meet ASTM E 709 Standard Guide for Magnetic Particle Testing.
- Ensure that all hardness and/or acoustic emission testing meets ASTM standards.
- Ensure that where applicable, components, equipment, and loose equipment carry the appropriate classifications, and / or certifications.
- Ensure that applicable instruction plates and signs are installed in visual positions.

AERIAL INSTRUCTION

There shall be three days of instruction shall be provided by a factory-employed trainer. Because the trainer should be extremely familiar with the apparatus being delivered, proposals that offer training by an independent contractor shall not be acceptable. The instruction program shall be designed to instruct the individual who has never utilized an aerial device, as well as, experienced operators. Fire department personnel shall be thoroughly taught the operating systems of the aerial device, including emergency operation. Introductory service skills utilizing the vehicle shall also be provided.

INSTRUCTION PROGRAM

The aerial apparatus instruction program shall instruct fire department personnel in the proper

operation, preventative maintenance and care of the aerial device. This instruction program shall be oriented toward a hands-on approach utilizing the new apparatus.

- Review personnel skill level and determine specific instruction requirements.
- Explain operation of the entire aerial device.
- Each participant shall be taught the necessary steps for safe operation and operate the aerial.
- Troubleshooting shall be emphasized and reinforced continually throughout the training period.
- Preventative maintenance procedures shall be set up and definite schedules developed to assure proper maintenance of the aerial device.
- Instruction on the proper use of tools, how to replace minor assemblies, and equally important in this program shall be when to call appropriate personnel for assistance.

WARRANTY, TWENTY-YEAR STRUCTURAL INTEGRITY

The aerial device shall be free of structural or design failure or workmanship for a period of 20 years from and after the date on which the apparatus is first delivered to the original purchaser or 100,000 miles whichever occurs first.

WARRANTY, TEN-YEAR WATERWAY & SEAL

There shall be a ten year warranty covering the waterway between the waterway swivel and the monitor at the tip, including the waterway seals. The warranty shall be effective from the date of delivery and shall require no special maintenance at the scene of the fire or special procedures other than following the normal ten hour preventative maintenance schedule.

WARRANTY, THREE-YEAR HYDRAULIC CONNECTIONS

- ✓ The aerial hydraulic connections (tube/hose and port end) shall be free of defects in material and workmanship and leak free for a period of three years starting 30 days after the original invoice date. Hose assemblies shall be covered for a period of one year. Stainless steel hydraulic piping and fittings shall be covered for a period of three years.

WARRANTY, TWENTY-YEAR INTERNAL CORROSION

The majority of the internal structural members of the aerial structure shall be 100% concealed from oxygen. Concealed members are not subject to the possibility of corrosion attacking the metal from the interior. Structural tubing of the aerial structure that contains drilled holes or is exposed to outside air and elements shall be protected to eliminate the possibility of corrosion occurring from the inside of the tube. The interior of exposed tubing shall be coated with a compound labeled NWAC 120-4. The application of the coating shall be applied after the welding process of the aerial structure is complete and shall cover 100% of the interior of the structural tube. NWAC 120-4 is an effective cavity corrosion inhibitor that provides long-term protection for both ferrous and non-ferrous metals. The resulting water-repellant, flexible, air-dried film has a remarkable crevice penetrating, spreading, and clinging characteristic. The product dries to a nearly transparent film and provides maximum corrosion protection for all void spaces subject to humidity and condensation. Use of this process shall constitute a 20 year internal corrosion warranty for the aerial structure.

BRACKET, ROOF LADDER AT BASE SECTION

There shall be one set of brackets on the outside of the base section for a roof ladder. The brackets shall be installed between the aerial base section and the ladder sign plate. The brackets shall be formed using break and bend techniques for added strength and an outstanding appearance. To enhance durability, the brackets shall be coated with a bed liner type scratch resistant coating. Where the ladder rack is bolted to the aerial section or ladder sign, stainless steel fasteners shall be employed. When installed in the brackets, the roof ladder shall be retained

VBS

VBS

VBS

VBS

VBS

so that it shall not come out of the brackets unexpectedly.

COMPARTMENT, STOKES BASKET AT BASE SECTION

There shall be one stokes basket mounting bracket on aerial ladder base section. The brackets shall be formed using break and bend techniques for added strength. Where the brackets are bolted to the aerial section, stainless steel fasteners shall be employed. When installed in the brackets the Stokes basket shall be retained so that it will not come out of the brackets unexpectedly. A water tight hinged lid shall be installed over the stokes basket storage compartment. The lid shall be painted with a black ruggedized material.

YES

ELECTRICAL SYSTEM

A 5 kw hydraulic generator and all appropriate wiring and electrical panels shall be installed. The generator shall supply power to the following: aerial fly section receptacle, cord reel (location to be determined), and three body-mounted receptacles (locations to be determined).

YES

BODY ELECTRICAL

The body electrical system shall be designed as an integrated electrical package specifically engineered for fire apparatus application. The integrated electrical system shall be comprised of power distribution panels, which interface to the body and chassis through an engineered harnessing system. All chassis wiring shall be type "GXL" in accordance with S.A.E. J1128 and NFPA-1901. Wiring shall be color coded and include function codes every 3" inches on both sides. The electrical wiring harness shall be covered by a black split convoluted loom, rated at a minimum of 275° F.

YES

DISTRIBUTION PANELS

The electrical distribution panels and circuits must be housed in each rear corner compartment or extrusion. The distribution panel shall incorporate a power and ground stud for connection to the internal circuits. All internal wire end terminals, including locking bulkhead connectors, shall be mechanically affixed to the wire ends by machine terminal crimping presses. No hand-crimped terminals shall be acceptable. All internal splices shall be ultrasonically welded connections - no butt style connections shall be acceptable. All internal wiring shall be of the high temperature GXL type wire and shall be protected by wiring duct wherever possible. Each side electrical distribution panel shall consist of 15 power distribution relays. The power distribution relays shall be replaceable, SPDT automotive style, rated at a minimum of 30 amps. The power distribution relays shall incorporate separate inputs, which are able to accept outputs from a load management system. The load management inputs must allow for the addition of a load management system before, during or after the time of delivery without requiring a rewiring of the existing distribution panel circuits. Connections to the distribution panel shall utilize Deutsch style bulkhead connectors. Screw clamp type connections are not acceptable. The distribution panel shall also contain circuit's ancillary to the required DOT signals and other body functions. The complete body electrical system shall be 100% documented and contain independent circuit diagrams with point to point wiring information, as shall as a general component diagram included in the apparatus manual. The body electrical panel shall be capable of being completely disconnected and fully tested by a computerized circuit analyzer. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the driver. Light switches shall be of the marine grade rocker type with integral indicator light to show when lights are energized. All switches shall be appropriately identified.

YES

WIRING PROTECTION

All 12 volt wiring shall be run in high temperature, rated at a minimum of 275° F, split loom for easy access to wires when trouble shooting.

YES

12 VOLT TESTING

The apparatus low voltage system shall be tested and certified. A copy of certification shall be provided to the purchaser with the apparatus. YES

Reserve Capacity Test

The unit shall be run until all engines, engine compartment temperatures are stabilized and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load be activated for ten minutes. All electrical loads shall be shut-off after ten minutes and the battery system shall then be capable of restarting the engine.

Alternator Performance Test at Idle

Minimum continuous electrical loads shall be activated while the unit is at idle speed.

Alternator Performance Test at Full Load

The total continuous electrical load shall be activated with the engine running up to the manufacturer's governed speed. The test duration shall be a minimum of two hours. Activation of the load management system shall be permitted during the test. If however, an alarm is sounded by excessive battery discharge as detected by the system or a system voltage of less than 11.8 volts DC for a 12 volt nominal system for more than 120 seconds, shall be considered a test failure.

Low Voltage Alarm Test

The engine shall be shut off and the total continuous electrical load shall be activated and continue to be applied until the excessive battery discharge alarm activates. The test shall be considered a failure if the alarm has not sounded within 140 seconds after the voltage drops to 11.8 volts. YES

EMI/RFI PROTECTION

The apparatus shall be manufactured to incorporate the latest designs in the electrical system with components that are state of the art to insure electromagnetic interference (EMI) and radio frequency interference (RFI) emissions are suppressed at the source. The apparatus shall have the ability to operate in typical fire and rescue situations with no adverse effects from EMI and/or RFI. The apparatus shall utilize components that are fully protected and wiring that utilizes shielding and loop backgrounds where required to control EMI/RFI susceptibility. The apparatus shall be bonded through ground straps. Relays and solenoids that are suspect to generating spurious electromagnetic radiation are diode and/or resistor protected to prevent transient voltage spikes. In order to prevent the radio frequency interference completely the purchaser shall be requested to provide a listing of the type, power output, and frequencies of all radio and bio medical equipment that is proposed to be used on the apparatus. YES

BACK-UP ALARM

There shall be one Whelen model WBUA107, 107 dB, electronic back-up alarm installed at the rear of the apparatus. The alarm shall be wired to the transmissions output signal and is automatically activated when the transmission is shifted into reverse. YES

LIGHTS, COMPARTMENT

LED strip compartment lights shall be provided on the apparatus. The lighting shall actuate when the compartment door is opened. Lighting must have polycarbonate lens to eliminate breakage from impact and eliminate heat buildup. The system shall exceed NFPA 1901 standard of one-foot candle average per four cubic feet of area. The maintenance-free LEDs last up to 100,000 hours. The lights operate in a range from 9 to 16 VDC, allowing the compartment lights to work even when the vehicle is idling. The track type lighting shall illuminate the entire compartment, YES

reducing shadows and dark spots from shelves or equipment. Two separate light fixtures in each compartment, including ladder tunnel.

DOOR AJAR SWITCHES

YES

All apparatus body doors shall be provided with an auto door switch. These switches shall operate the compartment interior lights and activate the door ajar indicator on each side of apparatus body when the door is opened. There shall be a red door ajar light mounted in the cab, in view of the driver to indicate an unsecured door. There shall be a buzzer mounted in the cab that shall alert the driver.

LIGHTBARS, 22" FORWARD FACING

YES

A pair of Whelen Mini Edge Ultra Freedom IV Linear Super-LED LC Series light bars model F4NMINI shall be provided, one on each side of the cab roof outboard forward facing. The F4NMINI shall consist of two 22" Mini Ultra Freedom IV light bars. Each Mini Ultra Freedom IV light bar shall incorporate an anodized extruded aluminum heavy duty base and cover chassis with two red Linear LED corner modules, two white Linear-LED light in the front center, and one red Linear-LED endcap light with clear optic lenses. The front of each corner module shall consist of 12 red Linear Super-LEDs installed on a conformal coated PCB board with a thermal pad/aluminum bracket heat sink assembly. The short red endcap Linear Super LED lights shall incorporate six red Super-LED installed on a conformal coated PCB board with a thermal pad/aluminum bracket heat sink assembly. The two short white center Linear Super-LED lights shall incorporate six white Super-LED installed on a conformal coated PCB board with a thermal pad/aluminum bracket heat sink assembly. The all modules will utilize a Diamond Optix metalized reflector and two optic collimators. All electronic components shall be conformal coated to provide additional protection. The outer lens construction shall consist of two clear Uni-Dome top lenses with a clear center lens and utilize a liquid injection molded wiper seal divider for maximum protection against environmental elements. Metal top shields installed on the Uni-Domes and center lens shall provide protection from climatic conditions and provides passive solar radiation to direct heat away from internal components. All light heads shall be installed in the F4NMINI with the aid of black polycarbonate snap-in mounting brackets. The solid state F4NMINI shall be vibration resistant. The light bars shall have a PCB light bar LED flashers with 15 Scan-Lock flash patterns with five Pattern Phases for each flash pattern. The light bars will contain a 20' 9/c 18GA unterminated power/control cable. The F4NMINI shall be SAE Class 1 and California Title XIII compliant. The F4NMINI will also meet NFPA 1901 Zone A upper lighting standards. All electrical components are covered by a five year factory warranty. The F4NMINI shall include a permanent mount kit with stainless steel hardware. The light bars shall be controlled in the following manner: Calling for Right of Way - All Positions and Blocking Right of Way - Clear shall not be Active. The lights shall be activated by a single emergency light switch located on the light switch panel in the cab. The light bars shall meet NFPA 1901 edition as configured.

LIGHTS, ZONE C UPPER INBOARD

YES

Two Whelen M6 Series Super-LED model M6RC shall be installed, one each side on the upper rear of the apparatus in the inboard position. The warning light shall incorporate red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty. The surface mount module includes a black ruggedized flange and hardware for horizontal mounting.

LIGHTS, ZONE B/D FRONT LOWER

Two Whelen M6 Series Super-LED model M6RC lights shall be installed, one on each side forward portion of the apparatus. The warning light shall incorporate red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty. The surface mount module includes a black ruggedized flange and hardware for horizontal mounting.

YES

LIGHTS, ZONE B/D MIDSHIP LOWER

Two Whelen M6 Series Super-LED model M6RC lights shall be installed, one on each side midship of the apparatus. The warning light shall incorporate red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty. The surface mount module includes a black ruggedized flange and hardware for horizontal mounting.

YES

WARNING LIGHTS, OUTRIGGER COVER PLATES

Four Whelen M6 series Super LED model M6 lights shall be mounted: two on each of the outrigger cover plates. The warning lights shall be activated by an emergency warning light switch. The warning light shall incorporate red Super LEDs, a non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty. The surface mount module includes a black ruggedized flange and hardware for horizontal mounting.

YES

LIGHTS, ZONE B/D REAR LOWER

Two Whelen TIR6 Series Super-LED model 50R03ZRR lights shall be installed, one on each side rearward portion of the apparatus. The warning lights shall incorporate red Linear Super LEDs, a red optic hard coated polycarbonate lens. The surface mount module includes a black ruggedized flange and hardware for horizontal mounting.

YES

LIGHTS, ZONE C LOWER

Two Whelen M6 Series Super-LED model M6RC shall be installed, one on each side on the lower rear of the apparatus. The warning light shall incorporate red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 164 Scan-Lock flash

YES

patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty.

STOP, TURN AND BACK-UP LIGHTS

Stop, turn and backup lights shall be Whelen M6 Series, individual fixtures. The red stop (LED) light shall be model M6BTT, the turn light shall be model M6T amber (LED) type with directional arrow, and the backup light shall be white (LED) model M6BUW.

YES

HOUSING, REAR TAIL LIGHT ASSEMBLY

The fixtures shall be mounted on each rear face of the body in a four lighthouse black ruggedized housing.

YES

CLEARANCE LIGHTS AND REFLECTORS

Clearance lights and reflectors shall be LED lights, which include two red marker lights, four red rectangular reflectors, two amber rectangular reflectors, and one red three light cluster recessed in the rear step.

YES

LIGHT, LICENSE PLATE

A Whelen OS Series LED model 0SC0EDCR shall be provided at the rear of the apparatus to illuminate the license plate. The steady burn illumination light shall incorporate three clear LED and a clear non-optic hard coated polycarbonate lens. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated assembly shall provide protection against environmental elements. The solid state illumination light shall be vibration resistant. An installation kit including mounting hardware, neoprene gasket and 45° angle chrome housing shall be provided for surface mounting. The 0AC0EDCR will contain a 12" non-terminated pigtail. The illumination light meets SAE J592 requirements and is covered by a five year factory warranty.

YES

LIGHT(S), LED PERIMETER ILLUMINATION

Six Whelen 3" Round Super-LED® model 3SC0CDCR perimeter illumination lights shall be provided as specified. The steady burn illumination light shall incorporate six clear Super-LED and a clear non-optic hard coated polycarbonate lens for maximum output. The hard coated sealed lens shall provide extended life/luster protection against UV and chemical stresses. The light shall be wet sealed and vacuum tested to ensure proper sealing. The conformal coated PC board, powder coated die cast housing, and exterior rubber gasket shall provide additional protection against environmental elements. The 3SC0CDCR shall provide 360 usable lumens. The solid state illumination light shall be vibration resistant. The 3SC0CDCR will contain a 6" unterminated pigtail. The illumination light is covered by a five year factory warranty. The 3SC0CDCR requires a 3/4" wire entry hole in the body of the vehicle and includes mounting screws and grommet.

YES

LIGHTS, 12 VOLT SURFACE MOUNT SCENE

One pair of 65" Firetech Hiviz scene lights shall be provided and installed on the apparatus. The steady burn scene lights shall incorporate Linear Super-LED® and Smart LED® technology. The scene lights shall be installed, one each side of the cab, horizontally centered across the raised section of cab roof. The cab mounted scene lights shall be controlled by individual scene light switches located in the cab labeled LEFT SCENE and RIGHT SCENE and when the respective side cab doors are opened. The light head and mounting hardware shall be painted job color.

YES

LIGHTS, 12-VOLT SURFACE MOUNT SCENE

YES

One pair of Whelen M6 Series Model M6ZC scene lights shall be provided and installed on the apparatus. The steady burn scene light shall incorporate Linear Super-LED® and Smart LED® technology. The M6ZC configuration shall consist of 12 clear gradient Super-LEDs and a clear optic polycarbonate lens. The scene light, with the aid of two screws, shall have the ability to be installed as a surface mount scene light. The M6ZC shall meet KKK 1822F and AMD024 specifications. The lens/reflector assembly shall be sealed and resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The light engine shall be installed at the rear of the unit and be vacuum tested to ensure proper sealing. The PC board shall be conformal coated for additional protection. The scene lights shall be installed, one each side on the upper rear inboard corners of the body. The upper rear body mounted scene lights shall be controlled by a scene light switch located in the cab labeled REAR SCENE and when the transmission is placed into reverse.

BROW LIGHT

YES

One 72" Firetech Hiviz LED brow light kit with incorporated DOT marker lights shall be installed on the front cab. Wiring shall extend from a weatherproof strain relief at the rear of the lamp head. The cab mounted brow light shall be controlled by a light switches located in the cab labeled BROW LIGHT and will allow for flood, spot, and total scene operations. The light head and mounting hardware shall be painted job color which shall be determined at pre-construction meeting.

LIGHTS, PEDESTAL MOUNT

YES

There shall be a pedestal mount light installed on each side above the specified compartments. Four Whelen Pioneer Plus Model PFP1 light heads shall be provided. The 75 watt +12v DC Pioneer lightheads shall incorporate Super-LED single flood light installed in a die cast white powder coated aluminum housing. The PFP1 configuration shall consist of 30 white Super-LEDs, a clear optic collimator/metalized reflector assembly and a clear non-optic polycarbonate lens. The Pioneer flood light shall have 8,100 usable lumens. The lens/reflector assembly shall utilize a liquid injected molded silicone gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The PFP2 shall be shall be vibration resistant. The Pioneer PC boards shall be conformal coated for additional protection. Two breathable membrane patches shall be installed to the bottom of the housing to maintain a consistent internal pressure. The PFP2 shall have extended LED operation with low current consumption and low operating temperature. The PFP2 is covered by a five year factory warranty. The lights shall be installed with a pedestal adaptor with a 1 1/8" adjustable sleeve, junction box and a large anodized aluminum alloy ergonomic knob at the knuckle. The lights shall be installed with a black fiberglass enforced poly carbonated handle. The pedestal mount lights shall be controlled by a switch located on the pump panel.

BODY PAINT FINISH, SINGLE COLOR

YES

The body exterior shall have no mounted components prior to painting to assure full coverage of metal treatments. Box pan compartment doors shall be painted separately to assure proper paint coverage on body, doorjamb, and door edges. All painted surfaces shall follow the following procedure to insure a lasting finish: Metal surfaces shall be sanded to remove all burrs and imperfections, before etching and treatment. A wax and grease solvent shall be used to clean and prep the aluminum surface. The surface shall then be rinsed with fresh water. This step removes wax, grease and other surface contaminants, thus leaving a bright, clean, and conditioned surface. A self-etching, metal primer shall be applied next. The self-etching primer shall fill all of the minor imperfections, scratches, etc. in the metal. This step produces a corrosion resisting

conversion coating that prevents off oxidation and other surface contaminants leaving a surface that gives excellent paint adhesion. A sandable primer shall be sprayed on the metal that seals the surface for the polyurethane paint. A minimum coating thickness of 2 MIL shall be applied. Primer is then sanded smooth leaving the best surface for topcoat. The apparatus body shall then be painted with a minimum of three coats of color. These steps are followed as recommended by the paint manufacturer to provide a lasting and high quality gloss finish. DuPont shall provide all paint products.

PAINT, INTERIOR COMPARTMENT

The interior of the body compartments shall be painted with a ruggedized material.

YES

PAINT, FRONT BUMPER

The front bumper shall be painted job color and shall be determined at pre-construction meeting.

YES

PAINT, FRONT BUMPER LIP

The front bumper lip shall be painted with black ruggedized material.

YES

PAINT, FRONT BUMPER GRAVELSHIELD

The front bumper gravelshield shall be painted with black ruggedized material.

YES

PAINT, FRONT BUMPER COMPARTMENT

The front bumper compartment shall be painted with black ruggedized material.

YES

PAINT, FRONT BUMPER COMPARTMENT LID

The front bumper compartment lid shall be painted with black ruggedized material.

YES

PAINT, ROOF LADDER BRACKETS AT BASE

The roof ladder brackets at the base section of the ladder shall be painted with black ruggedized material

YES

PAINT, STOKES BASKET MOUNTING BRACKETS

The stokes basket mounting brackets shall be painted with black ruggedized material.

YES

PAINT, AERIAL TURNTABLE

The aerial turntable shall be painted with black ruggedized material.

YES

PAINT, AERIAL TURNTABLE CONSOLE & LID

The aerial turntable console and lid shall be painted with black ruggedized material.

YES

SCOTCHLITE STRIPE

There shall be a 4" wide Scotchlite stripe, with an additional 1" wide stripe located above and below. The stripes shall be located no higher than 60" from the ground installed on the apparatus cab and body. The stripes shall cover a minimum of 60% of each side of the apparatus and 40% of the front and rear of the apparatus. The stripe shall be installed to meet the current NFPA requirements. The striping shall be black in color. The pin/secondary stripe shall be black in color. The reflective stripe shall run straight from the headlights to the rear of the body on each side of the apparatus.

YES

STRIPE, REAR CHEVERON

A minimum of fifty percent of the rear vertical surface of the unit shall be overlaid with a reflective material, installed in an alternating "Chevron" pattern (sloping down and away from the centerline) at a 45° angle. Each stripe shall be 6" wide and the colors of stripping shall be in

YES

compliance, with the current edition of NFPA 1901. The Chevron striping shall be 3M red and lime green.

LETTERING

There shall be a maximum of 60 3" tall Spun Gold letters applied to the apparatus. The lettering shall also have a one color shade applied and shall be determined at pre-construction meeting.

YES

LETTERING, AERIAL BANNER PLATES

There shall be 46 letters applied to the aerial lettering plates as directed. Lettering color and shading shall be determined by the Fire Department.

YES

WARRANTY, BODY PARTS & LABOR

There shall be a two year body mechanical parts and labor warranty provided with the apparatus. The apparatus shall be free of defects in material and workmanship for a warranty period of two years after the date on which the apparatus is first delivered to the original purchaser.

YES

WARRANTY, CAB/CHASSIS PARTS & LABOR

The manufacturer shall provide a limited parts and labor warranty to the purchaser of the cab and chassis for a period of two years or 24,000 miles, whichever occurs first. The warranty period shall commence on the date the vehicle is delivered to the end user.

YES

WARRANTY, CAB STRUCTURAL

The cab structure shall be warranted for a period of ten years or 100,000 miles which ever may occur first. The warranty period shall commence on the date the vehicle is delivered to the end user.

YES

WARRANTY, BODY STRUCTURAL

There shall be a ten year body warranty on each new fire body/heavy-duty rescue apparatus. The bodies are to be free of structural failures caused by defective design or workmanship for a warranty period of ten years after the date on which the vehicle is first delivered to the original purchaser or 100,000 miles, whichever occurs first.

YES

WARRANTY, BODY PAINT/CORROSION

The apparatus manufacturer shall provide a ten year non pro-rated paint and corrosion perforation warranty for the cab and body. This warranty shall cover paint peeling, cracking, blistering, and corrosion provided the vehicle is used in a normal and reasonable manner. The warranty period shall begin upon delivery of the apparatus to the original user-purchaser. A copy of the warranty document shall be provided with the proposal. **No Exceptions.**

YES

WARRANTY, FRAME CORROSION

Lifetime

YES

WARRANTY, FRAME RAIL

The chassis frame and cross members shall be provided with a lifetime material and workmanship limited warranty to the original purchaser. The warranty shall cover the chassis frame and cross members as being free from defects in material and workmanship that would arise under normal use and service. Proposals offering warranties for frames not including cross members shall not be considered.

YES

WARRANTY, MERITOR AXLE

YES

FRONT AXLE - The front axle shall be warranted by Meritor for two years with unlimited miles under the general service application.

REAR AXLE - The rear axle shall be warranted by Meritor for two years with unlimited miles under the general service application.

WARRANTY, DIESEL ENGINE

YES

The Cummins engine shall be warranted for a period of five years or 100,000 miles, whichever occurs first.

WARRANTY, TRANSMISSION

YES

The Allison EVS series transmission shall be warranted for a period of five years with unlimited mileage. Parts and labor shall be included in the warranty.

WARRANTY, ANTI LOCK BRAKE SYSTEM

YES

The ABS brake system shall be warranted for a period of three years or 300,000 miles, whichever occurs first.

WARRANTY, HALE FIRE PUMP

YES

EXPRESS WARRANTY

Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale are free of defects in material and workmanship for a period of five years from the date the product is first placed into service or five and one-half years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period Hale will cover parts and labor for the first two years and parts only for years three through five.

LIMITATIONS

HALE'S obligation is expressly conditioned on the Product being:

- Subjected to normal use and service
- Properly installed and maintained in accordance with HALE'S Instruction Manual and Industry Standards as to recommended service and procedures
- Not damaged due to abuse, misuse, negligence, or accidental causes
- Not altered, modified, serviced (non-routine), or repaired other than by an Authorized Service facility
- Manufactured per design and specifications submitted by the original buyer
- Used with an appropriate engine as determined by the engine manufacturers published data
- Excluded are normal wear items identified as but not limited to packing, strainers, anodes, filters, light bulbs, intake screens, wear rings, mechanical seals, etc.

WARRANTY, PLUMBING SYSTEM

YES

There shall be a ten year pump plumbing warranty provided. The warranty covers all plumbing components used in construction of the fire apparatus water/foam plumbing system against defects and workmanship, provided the apparatus is used in a normal and reasonable manner. The warranty is extended only to the original user-purchaser for a period of ten years from the date of delivery.

WARRANTY, WATER TANK

YES

The poly tank manufacturer warrants each tank to be free from manufacturing defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in fire

suppression). The warrant is transferable, with written approval of the manufacturer. Each tank is inspected and tested for leaks prior to leaving the manufacturing facility. The tank shall be installed in the vehicle in accordance to the manufacture's guidelines. There are no warranties, expressed or implied, which extend beyond the description of the face hereof. There is no expressed or implied warranty of merchantability or a warranty of fitness for a particular purpose. Additional, this warranty is in lieu of all other obligations or liabilities on the part of the manufacturer.

MANUAL, CHASSIS OPERATION

There shall be two digital copies of the chassis operation manual provided with the chassis. The digital data shall include a parts list specific to the chassis model.

Yes

MANUALS, ENGINE AND TRANSMISSION OPERATION

There shall be two printed hard copy sets of the engine operation manual and two printed hard copy sets of the transmission operation manual specific to the model ordered included with the chassis.

Yes

MANUALS, APPARATUS BODY

The contractor shall supply, at time of delivery, at two sets of complete operation and service documentation covering the completed apparatus as delivered and accepted. The documentation shall address at least the inspection, service, and operations of the fire apparatus and all major components thereof.

Yes

MANUALS, FIRE PUMP

There shall be two copies of pump manuals provided to the department.

Yes

SAFETY GUIDE

One copy of the latest edition of FAMA's Fire Apparatus Safety Guide shall be provided with the completed apparatus.

Yes

WIRING DIAGRAMS, CAB/CHASSIS

There will be a complete digital set of electrical schematics provided at the time of delivery. These schematics will have each circuit properly numbered and in color. The schematic will show each connector in the circuitry and the position in which each circuit enters, exits, or terminates. The schematic will be drawn in such a manner as to allow individual circuitry to be followed throughout the apparatus. These schematics will not have the circuitry condensed into a single line or sets of lines. Multiple sheets will be acceptable so long as each of the harnesses is properly identified to the connecting sheet and harness. There will be a border around the papers, which contain alpha and numeric characters for indexing coordinate reference. There will be an indexing or part reference document for quick location of items shown on the schematics.

Yes

WIRING DIAGRAMS, APPARATUS BODY

There will be a complete set of generic electrical schematics provided at the time of delivery. These schematics will have each circuit properly numbered and in color. The schematic will show each connector in the circuitry and the position in which each circuit enters, exits, or terminates. The schematic will be drawn in such a manner as to allow individual circuitry to be followed throughout the apparatus. These schematics will not have the circuitry condensed into a single line or sets of lines. Multiple sheets will be acceptable so long as each of the harnesses is properly identified to the connecting sheet and harness. There will be a border around the paper(s), which contain alpha and numeric characters for indexing coordinate reference. There will be an indexing or part reference document for quick location of items shown on the schematics. This document will refer the user to the appropriate drawing and page number and to

Yes

sections of the drawing(s) by the means of letter and number coordinates. The schematic will show all harnesses used in the apparatus cab, chassis and body that is supplied by the chassis and body manufacturer. Modifications to the manufactured standard harnesses are to be documented and properly indexed for quick identification. A complete wire number, color, and function listing will accompany the schematics.

NFPA REQUIRED EQUIPMENT, FD SUPPLIED

The loose equipment as outlined in NFPA 1901, 2016 edition, section 8.8.1 and 8.8.1 shall be provided by the fire department unless it is listed in this proposal. All loose equipment shall be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.

YES

NFPA AERIAL GROUND LADDERS

The aerial apparatus shall be supplied with a full complement of NFPA approved ground ladders.

YES

LADDER, 10' FOLDING

There shall be one Alco-Lite Model FL-10, 10' folding ladder provided with the apparatus. The ladder shall be aluminum, single-section with rubber feet. The ladder shall meet or exceed the latest NFPA standards.

YES

LADDERS, 16' ROOF

There shall be two Alco-Lite model PRL-16, 16' roof ladders supplied with the apparatus. The ladders shall be aluminum, single-section with folding steel roof hooks on one end and steel spikes at the other. The ladders shall meet or exceed the latest NFPA standards.

YES

LADDER, 14' COMBINATION

There shall be one Alco-Lite Model CJL-14, 14' combination ladders supplied with the apparatus. The ladders shall be aluminum with slip resistant safety shoes. The ladders shall meet or exceed the latest NFPA standards.

YES

LADDER, 24' 2-SECTION EXTENSION

There shall be one Alco-Lite model PEL-24, 24' two-section ladders supplied with the apparatus. The extension ladder shall be aluminum with steel spurs on one end. The ladder shall meet or exceed the latest NFPA standards.

YES

LADDER, 35' 3-SECTION EXTENSION

There shall be one Alco-Lite model PEL3-35, 35' three-section ladder supplied with the apparatus. The extension ladder shall be aluminum with steel spurs on one end. The ladder shall meet or exceed the latest NFPA standards.

YES

6' FIBERGLASS PIKE POLES

There shall be two Akron model UL-6, 6' fiberglass pike poles supplied with the apparatus. They shall consist of a 6' hollow fiberglass pole, 1 1/4" OD with standard steel pike.

YES

8' FIBERGLASS PIKE POLES

There shall be two Akron model UL-8, 8' fiberglass pike poles supplied with the apparatus. They shall consist of an 8' hollow fiberglass pole, 1 1/4" OD with standard steel pike.

YES

12' FIBERGLASS PIKE POLES

There shall be two Akron model UL-12, 12' fiberglass pike pole(s) supplied with the apparatus. It shall consist of a 12' hollow fiberglass pole, 1 1/4" OD with standard steel pike.

YES

ROOF HOOKS, NEW YORK

There shall be two Fire Hooks Unlimited model RH-6, 6' New York Roof Hooks supplied with the apparatus. The tools shall be mounted in a location to be determined by the fire department using the appropriate brackets. There shall be two Fire Hooks Unlimited model RH-8, 8' New York Roof Hooks supplied with the apparatus. The tools shall be mounted in a location to be determined by the fire department using the appropriate brackets. There shall be two Fire Hooks Unlimited model W-RH, 10' New York Roof Hook(s) supplied with the apparatus. The tools shall be mounted in a location to be determined by the fire department using the appropriate brackets. The all-purpose head, aircraft steel shaft, chisel end, and Celtex grips makes up this unit. The chisel end is used as a prying tool for scuttle hatches and roof doors.

YES

30° ELBOW - 4" FNST X 5" STORZ

There shall be one Kochek model SKE45R, 4" FNST rocker lug x 5" Storz, adapter supplied with the apparatus. The elbow shall have a 30° turn down.

YES

CAP, 5" STORZ

There shall be one Kochek model CC507, 5" Storz cap with chain provided with the apparatus.

YES

REDUCERS, 2½" FNST X 1½" MNST

There shall be three Kochek model 37RC2515, 2½" FNST x 1½" MNST chrome reducers supplied with the apparatus.

YES

WHEEL CHOCKS WITH BRACKETS

There shall be one pair of Ziamatic model SAC-44 folding wheel chocks with SQCH-44-H horizontal chock holders mounted on the apparatus body as directed by the fire department.

YES

POMPIER BELTS

There shall be four standard life belts, with pompier hook, supplied with the apparatus.

YES

TOOL MOUNTING BRACKET(S), PAC TRAC 1004

Twelve Pac Trac model 1004 tool mounting bracket(s) shall be provided and installed on the apparatus as directed by the Fire Department. The Handlelok brackets provides an adjustable positive locking method to secure axes, hammers, bars and many other tools and equipment. The STRETCHLOK strap allows instant release and is rated at 5,400 PSI tensile strength. The Handlelok grip range shall be 1/8" to 1¼". The Handlelok features includes soft textured pad for extra grip, weather/UV resistant and non-conductive.

YES

FIRE EXTINGUISHERS

One Ansul 20# ABC Dry-Chemical, One Ansul 15# CO2, and One Ansul 2.5 Gallon Water Extinguisher

YES

IDENTIFICATION TAGS/LABELS

All labels and tags mounted to the apparatus must be done in a manner that will ensure their permanent attachment. No automotive-style tape shall be used.

YES

LOOSE EQUIPMENT AND MOUNTING

The fire department will furnish the fire-band radio and mounting location. Loose tool mounting (flashlights, chargers, etc) locations shall be determined at the pre-construction conference.

YES

CAB ROLLOVER PROTECTION SYSTEM

An occupant protection system shall be provided to protect the driver, officer, and crew areas from bodily injury due to a rollover.

YES

VEHICLE STABILITY

The height of the fully loaded vehicle's center of gravity will not exceed the chassis manufacturer maximum. The front to rear weight distribution of the fully loaded vehicle will be within the limits set by the chassis manufacturer. The front axle loads will not be less than the minimum axle loads specified by the chassis manufacturer, under full load and all other loading conditions. The difference in weight on the end of each axle, from side to side, when the vehicle is fully loaded and equipped shall not exceed 7%.

YES

PERFORMANCE TEST AND REQUIREMENTS

The apparatus will meet the performance requirements at elevations of 2,000 feet above sea level. The apparatus will meet the performance requirements while stationary on any grade of up to and including 6% in any direction. From a standing start, the vehicle will attain a true speed of 35 MPH, within 25 seconds on a level road. The apparatus will obtain a minimum top speed of 50 MPH on a level road. The apparatus will be able to maintain a speed of at least 20 MPH, on any grade up to and including 6%. The apparatus will be tested and approved by Underwriters Laboratories Incorporated in accordance with the standard practices for pumping engines.

YES

ROAD TEST

Each manufacturer will conduct road test to verify that the complete apparatus is capable of compliance. The test will be conducted on a dry, level, paved road that is in good condition. The engine will not operate in excess of the maximum no load governed speed. Acceleration test will consist of two runs in opposite direction over the same route. The vehicle will attain a true speed of 35 MPH from a standing start within 25 seconds. The vehicle will attain a minimum top speed of not less than 50 MPH. If the apparatus is equipped with an auxiliary braking system, the apparatus manufacturers will road test the system to confirm that the system is functioning as intended by the auxiliary braking system manufacturer. The service brakes will bring the fully laden apparatus to a complete stop from an initial speed of 20 MPH in a distance not exceeding 35 feet by actual measurement, on a substantially hard, level surface road that is free of loose material, oil, or grease.

YES

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within 30 days from the date of the first trials. Such trials will be final and conclusive and failure to comply with changes, as the purchaser may consider necessary to conform to any clause of the specifications within 30 days after notice is given to the manufacturer of such changes will also because of rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use with the permission of the manufacturer will not constitute acceptance.

YES

- End of Section -

MUNICIPAL ORDER _____

MUNICIPAL ORDER AWARDING BID FOR THE PURCHASE OF ONE (1) AERIAL APPARATUS (LADDER TRUCK) FOR THE CITY OF HENDERSON FIRE DEPARTMENT TO MID AMERICA FIRE & SAFETY, LLC, EVANSVILLE, INDIANA IN THE AMOUNT OF \$1,045,880.00

WHEREAS, the City of Henderson has issued invitations to bid for the purchase of one (1) aerial apparatus (ladder truck) to be used by the Henderson Fire Department; and

WHEREAS, one (1) bid was submitted to the City pursuant to said invitations, and was publicly opened on December 5, 2016, with Mid America Fire & Safety, LLC, Evansville, Indiana submitting the best bid, which bid the City Manager recommends be accepted.

NOW, THEREFORE, BE IT ORDERED by the City of Henderson, Kentucky, that the recommendation of the City Manager is approved, and award is hereby made to Mid America Fire & Safety, LLC 4001 North St. Joseph Avenue, Evansville, Indiana 47720, for the purchase of one (1) aerial apparatus (ladder truck) for the City of Henderson Fire Department in amount of \$1,045,880.00, in strict accordance with its bid as submitted pursuant to Bid Reference 16-31.

On motion of Commissioner _____, seconded by Commissioner _____, that the foregoing Municipal Order be adopted, the vote was called. On roll call the vote stood:

Commissioner Johnston: _____ Commissioner Mills: _____
Commissioner Hite: _____ Mayor Austin: _____
Commissioner Royster: _____

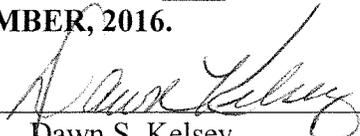
INTRODUCED, PUBLICLY READ AND FINALLY APPROVED ON ONE READING and Mayor Austin, affixed his signature and the date thereto and ordered that the same be recorded.

Steve Austin, Mayor
Date: _____

ATTEST:

Maree Collins, City Clerk

APPROVED AS TO FORM AND LEGALITY THIS 8 DAY OF DECEMBER, 2016.

By: 
Dawn S. Kelsey
City Attorney

UPCOMING
BOARD APPOINTMENTS

<u>BOARD</u>	<u>EXPIRATION DATE</u>	<u>TERM</u>
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(UTILITY COMMISSION)

	<u>Current Term Expires</u>	<u>Term</u>
Gregory Risch (resigned effective 11/30/16)	04/25/2019	3-Year

BOARD OF APPEALS (Housing & Building)

	<u>Current Term Expires</u>	<u>Term</u>
Gray Hodge	06/22/2016	4-Year