

Purchasing Apparatus in the Stillwater Fire District

With the prices of today's fire apparatus, quick decisions are no longer acceptable as to the mission, function or type of fire apparatus needed to serve the community.

The types of apparatus today include mini-pumpers which are built on light weight truck chassis, midi-pumpers built on medium duty commercial truck chassis, commercial pumpers built on heavy commercial chassis such as International, Peterbilt, or Freightliner. At the top of the spectrum are the custom pumpers built on heavy duty chassis specifically designed for use by the fire service. These custom fire chassis are either built by vocational chassis manufacturers or by fire apparatus manufacturers. There is an advantage to having a sole source manufacturer who assembles a piece of apparatus from the wheels up. Where the commercial chassis don't always hold up to the rigors of the fire service, especially in fire companies with high call volumes. Custom chassis are built specifically for the fire service, will withstand the punishment doled out by fire fighters and will see a normal service life from 15 to twenty years. The current price range of fire pumpers runs from just under \$100,000 for a mini-pumper up to \$600,000 for a combination rescue pumper.

Another class of apparatus is the rescue truck. This is essentially a large tool box on wheels and can run from a rescue type body on a dual wheel pick up chassis up to a 40' behemoth with all types of rescue equipment. Again the prices range from the low \$100,000's to the \$600,000 depending on the size and equipment.

There are tankers or water tenders who's main mission is transporting water to the scene of a fire. These trucks can be commercial or custom and carry up to 4000 gallons of water. These trucks also run the price gamut from \$200,000 and up.

The largest and most expensive class of fire apparatus is the ladder truck. There are straight aerials anywhere from 70' to 100+ feet, and platforms from 70' up to 100+ feet. The configuration is based on where the aerial is anchored to the chassis. The ladder truck can be a rear mount with the tip of the ladder extending over the cab, or a mid mount with the aerial anchored to more toward the center of the chassis with the tip toward the rear of the apparatus or the aerial can be front mounted with the tip of the ladder toward the back of the apparatus. The most expensive type of aerial is a tractor drawn ladder with a tiller/driver in the rear that makes it easier to navigate narrow urban and suburban streets. Aerial ladders are priced from the low \$600,000 to well over 1 million dollars.

With the variation of types and cost, the choice of apparatus to serve the community should not be done with the flip of a coin. The best way to obtain the best value is to perform an extensive needs assessment. The needs assessment is a planning tool for the purchase of apparatus. The needs assessment requires a facilitator and an experienced planning team to determine which apparatus is best for the fire fighters and the community. What ever is purchased must perform the desired mission or multiple missions. The last needs assessment performed by the Stillwater Fire District was attended by members of the Board, fire officers, members and chief officers, a total of approximately 15 people and lasted about 14 hours over three weekends. Keep in mind that the piece of fire apparatus to be purchased has to perform the required mission for 17 to 20 years into the future. It should be noted that although fire apparatus has the potential to remain in service past 20 years it becomes more maintenance intensive and the cost of parts escalates and very often become scarce.

An apparatus needs assessment includes subjects such as, local demographics, building trends, construction types and sizes, building access, zoning laws, highway infrastructure, grades to be climbed, water availability, driveway size, mutual aid availability and staffing, staffing within the department, station location, size of the apparatus, water carrying ability, primary and secondary mission, national standard requirements, equipment to be carried, water to be carried, fire department tactics, standardization with other units within the department, training challenges, weather operating conditions, ergonomics, type of material and several other topics.

Once the needs assessment is complete a summary will be presented to the fire officers and the Board of Fire Commissioners for their concurrence. Upon approval of the concept apparatus the Chief will appoint liaisons to represent the officers and the Board will appoint a liaison to represent the Board. The apparatus committee should normally be no more than 5 to 7 people, within the span of control.

The newly formed apparatus committee will develop a set of specifications for the proposed apparatus based on the concepts developed during the needs assessment. A set of draft specifications will be developed and presented to the Board and to the officers for concurrence. Once the details are ironed out, the fire district may go out to the apparatus manufactures with a request for proposal, RFP. The committee needs to know if their proposed apparatus design is feasible and can it be built in compliance with good engineering principals and National Fire Protection Association (NFPA) Standards. Upon review of the RFP and any modifications, the specifications are made available to the fire apparatus manufacturers for competitive bidding according to rules promulgated by the State Comptroller's Office and Town Law. The Board sets a date to open the bids from the various manufacturers. Upon opening the bids, the work is just beginning. The first task is to evaluate the bid specifications to determine which of the manufactures has bid a piece of apparatus that is the closest to the specifications written by the fire department. It should be noted that the Stillwater Fire District has normally developed a set of specifications that are performance based and are "blue sky", in other words any manufacturer can build the apparatus as long as it meets the performance standards approved by the Board and Fire Company.

Once the apparatus bid specs are received they are reviewed by the committee against a matrix consisting of all of the items required in the department specifications. It is then determined which manufacturer has proposed to build a piece of apparatus in conformance with the department specifications. Out of those manufacturers who are compliant with the specifications other things that must be considered is price, delivery time, service and warranty capabilities, and the overall financial strength of the company bidding. No one wants to purchase a piece of fire apparatus for 20 years and have the company go bankrupt one year after the purchase date.

Once the most responsible bidder is determined, they are awarded the bid and a contract is signed. No money exchanges hands yet. Some manufactures offer discounts if the chassis is paid for at the time of receipt at their facility. The remainder of the purchase price is paid upon delivery of the apparatus. While the apparatus is being built there are normally three inspection trips to the manufacture's facility. The first trip by the apparatus committee is a pre construction meeting with the engineer to make sure everything in the specification will work when completed and involves a complete review of the specifications which will average 85 pages for a normal pumper. The second trip will require a review of the specifications to insure that the chassis is correct and to make sure the upcoming body module and pump module will be built according to the specifications. The final trip is another review of the specifications and is normally the final inspection before delivery. At the final inspection the committee works with the engineer to check each item in the specification to make sure it is in front of them on the completed apparatus. The trips are normally full day working sessions to review the specifications in detail, not the glamorous trips some think they are. The reviews insure that the fire department is obtaining the apparatus they ordered.

Upon completion of the apparatus which normally takes 8 to 9 months, the vehicle is delivered for final service prior to delivery to the fire department. Upon delivery there is normally a training period by the manufacturer to familiarize the members with the new unit. Upon approval the fire district will then pay any outstanding owed on the apparatus. Most apparatus carries a one year bumper to bumper warranty with other warranty periods depending on the system. For instance paint warranties run between 7 and 10 years.

There has been very little criticism of the new apparatus purchased since 1995 because the members have been made part of the purchasing process from the needs assessment and have been kept informed through delivery. The Board and the Officers have been well represented on the apparatus committees. The last apparatus committee was represented by three line officers, one fire fighter and one member of the board of fire commissioners.

Several years ago the Board of Fire Commissioners adopted a master plan for the replacement of apparatus. Normally when a piece of apparatus needs to be replaced a needs assessment is performed in the 19th year, specifications are developed, the new apparatus is purchased in the 20th year and is received and placed in service in the 21st year. The next major replacement is the Heavy Rescue unit designated R10-3 which was placed in service in 1990. It is unknown what type of unit will replace the current unit until an extensive needs assessment is

performed. Replaced apparatus must be declared surplus and placed up for sale. If the value of the apparatus exceeds \$50,000 a public referendum is required to sell the apparatus. The last piece of apparatus sold in 2007 was a 1985 pumper which brought back approximately \$30,000 to the apparatus reserve fund. The original cost of the truck in 1985 was approximately \$80,000. The fire district currently has a 1988 pumper which has been retained as a reserve pumper and is worth approximately \$16,000 due to its age and configuration. Questions on apparatus replacement should be directed to the Board of Fire Commissioners who will be glad to discuss the process.