

# PUBLIC SAFETY GENERAL OBLIGATION BOND PROPOSAL

## *Summary of Key Project Elements*

### **APPARATUS REPLACEMENT**

- Addresses replacement backlog that has been growing due to constrained General Fund resources
- Maintains replacement schedule of 15 years or 120,000 miles for front-line equipment
- \$19.8 million funding package includes:
  - 11 Fire Engines
  - 2 Air Refill Units
  - 2 Fire Boats
  - Dive Apparatus
  - 4 Ladder Trucks
  - 3 Brush Vehicles
  - 1 Water Tender
  - Heavy Rescue Squad

### **FIRE STATION CONSTRUCTION**

- \$7.9 million project will result in an active central Willamette River waterfront fire station
- Addresses increasing water-related rescue needs with the Central City of Portland
- Enhances central eastside response times and coordination with existing Fire Station 23

### **EMERGENCY RESPONSE CENTER**

- Completes funding plan for the construction of an integrated facility that will house the emergency response needs for the Water Bureau and the Portland Office of Emergency Management
- \$4 million project cost is combined with General Fund and Water Bureau resources to fund construction of the \$17.6 million project at the site of the City's emergency communications center

### **PUBLIC SAFETY EMERGENCY RADIO SYSTEM REPLACEMENT**

- This \$38.94 million project ensures timely replacement of the City's aging analog radio system to full digital capability to meet the voice and data communication needs of police, fire, and other City emergency service providers
- Completes the funding needs for the City's PSSRP initiative, which until now has relied on General Fund resources and City replacement reserves
- Recent voter-approved changes to the Oregon Constitution expanded the ability to fund projects such as the public safety emergency radio system replacement with voter-approved G.O. bonds
- Provides for interoperability within the region as other jurisdictions upgrade to digital technology over the next decade

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## Financing Plan and Estimated Impacts

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### DEBT CAPACITY AND CREDIT RATING IMPACTS

- The City historically has issued very little unlimited tax General Obligation (ULTGO) bonds
  - Currently, only \$58.89 million ULTGO bonds are outstanding
  - City debt policies indicate that remaining ULTGO debt capacity exceeds \$600 million
- ULTGO debt carries the highest City credit rating—Aaa
- Issuance of the proposed \$72.4 million of ULTGO bonds is expected to have no negative credit rating impact

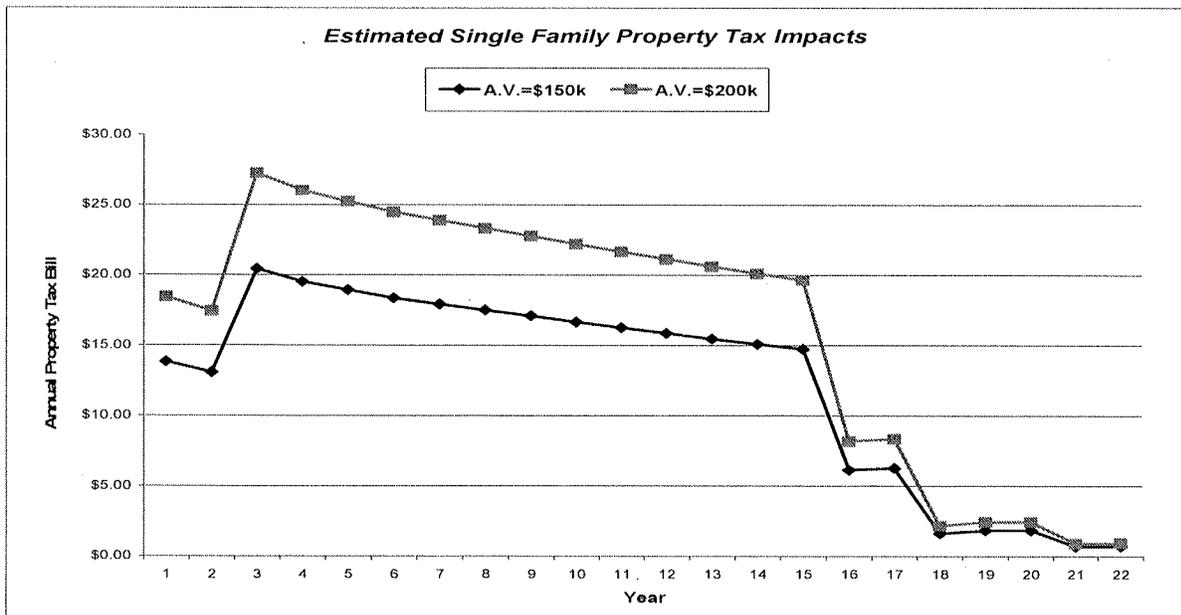
### FINANCING PLAN

- If approved by the voters, bonds would likely be issued in two separate series:
  - Issue 1: \$45.65 million issued in FY2010-11
  - Issue 2: \$26.75 million issued in FY2012-13
- Bonds are structured to take into account the useful life of projects:
  - 20 years for structures
  - 15 years for apparatus and radio system elements

### ESTIMATED TAXPAYER IMPACTS

- Estimated tax rates required to repay the bonds ranges from \$0.0923-0.1365 per \$1,000 of Assessed Valuation
- Estimated annual tax bill impacts on single-family residential properties range as follows:

Assessed Value=\$150,000	Assessed Value=\$200,000
Initial Amount: \$13.84	Initial Amount: \$18.46
Max. Amount: \$20.47	Max. Amount: \$27.29



## Station 21 Overview

In 1991, Portland Fire & Rescue (PF&R) closed Station 21 (located at the east end of the Hawthorne Bridge directly on the East Bank Esplanade) due to the passage of Ballot Measure #5, along with a commensurate reduction in on-duty firefighter staffing. After it was closed as an active fire station, it was used as an office for the City's fire inspectors, fire investigators, and EMS headquarters. This closure ended PF&R's emergency response fire station presence on the Willamette River in the downtown core area and inner east side of the Willamette River.

In 1998, voters approved a General Obligation Bond to seismically improve and construct fire stations. Since Station 21 was not occupied as an active fire suppression station, it was not slated for seismic upgrade and a new station was not pursued. In 2008, the Central Fire Station was closed to seismically upgrade that facility and the fire engine and ladder truck were relocated at Station 21. This was the first time in almost two decades that fire fighters once again occupied Station 21. Operationally, this move strategically met the ever-increasing water-related service demands for PF&R on the Willamette River in the downtown core area. This demand, highlighted by a woman forcing her two children off the Sellwood Bridge in May, 2009, prompted Council to purchase a new rescue boat and PF&R to press a reserve rescue boat into service at Station 21. Since January 2010, that rescue boat has been available to respond to 15 incidents and as summer approaches and as the waterfront continues to be used for large public events, it is virtually certain that there will be the usual increase in water-related emergencies.

As the seismic upgrade of Central Fire Station 1 neared completion with the accompanying return of the fire engine and ladder truck back to Station 1, PF&R carefully and deliberately evaluated the strategic and operational value of a fire suppression station that could cover the Willamette River in the downtown core area as well as the inner east side of the Willamette River. As part of that evaluation, Station 23, located at SE 13<sup>th</sup> Place and Gideon, was identified as fast approaching a point in time where its location will significantly hamper its ability to respond to emergencies due to the construction of the new Milwaukie Light Rail. When completed, trains on the Milwaukie Light Rail tracks are scheduled to run every eight minutes and will stop traffic on a regular, frequent schedule. This will cause gridlock during peak traffic periods, delaying and virtually denying Station 23 access to much of its response area. The Milwaukie Light Rail project heightened PF&R's growing concerns of Station 23's current location arising out of response delays caused by trains on the existing railroad tracks directly north of the station.

PF&R carefully considered the operational problems of the current Station 23 location, the future adverse impact of the Milwaukie Light Rail, the increasing demand for emergency service on the Willamette River in the downtown core area, and the ability for a fire engine housed on the Willamette River on the inner east side to cover Station 23's response area with the remaining portions covered by Stations 9, 20, and 25. As a result, PF&R decided to relocate the staff of Station 23 to the current Station 21. This will allow PF&R to respond to land-based emergencies as well as provide critical cross-staffing of the rescue boat. It is also in keeping with the promise made to the Council last summer that PF&R would not incur new, ongoing personnel expenses to staff a much-needed rescue boat.

## Apparatus Replacement Overview

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Portland Fire & Rescue (PF&R) strives to maintain high quality fire response apparatus, dedicated to protecting life, property and the environment. PF&R's apparatus replacement plan calls for replacement for all front-line fire engines and trucks at 15 years or 120,000 miles. However, due to lack of funding, PF&R has not been able to implement its replacement plan for many years and currently had a backlog of four fire engines, three ladder trucks, and numerous special apparatus including two fire boats, two air units, one water tender, and three brush apparatus. In addition, the replacement backlog will continue to grow given the current funding level.

Aging fire apparatus pose a substantial safety risk to the public and firefighters. Over-extending the useful life of apparatus has led to increased maintenance costs and even hindered PF&R's ability to provide life-saving emergency services since older apparatus have a higher chance of breaking down during an emergency response than newer apparatus. In 2009, the average number of breakdowns during an emergency response was 1.55 per frontline engine or ladder truck aged eight years or older, while the average was only 0.79 per frontline engine or ladder truck aged seven years or younger. In other words, older apparatus had twice the number of breakdowns as newer apparatus. The growing backlog of apparatus needing replacement and the increasing overall age of the fleet undoubtedly contribute to this problem.

The results of a recent survey among like-size fire departments along the west coast indicate that PF&R keeps frontline fire apparatus for a longer period than the majority of fire departments who responded to the survey. PF&R's current replacement criteria are 15 years or 120,000 miles for apparatus on the frontline, while other fire departments responded to the survey indicate that their apparatus replacement cycles are approximately 10 years.

The bond proceeds will be used for replacing fire apparatus that are scheduled for replacement over a five-year period from FY 2010-11 through FY 2014-15. The GO Bond proceeds totaling about \$19.8 million will pay for the purchases of 11 fire engines, four ladder trucks, two air units, two fire boats, three brush vehicles, one water tender, a dive apparatus, and a heavy rescue squad.

## 800 MHz Radio System Overview PF&R Perspective

Portland Fire & Rescue is the largest fire and emergency response department in the State. It is an all-hazards organization that provides both traditional fire and rescue services, as well as a full array of specialized operations. These services are provided using highly trained personnel and specialized apparatus and equipment. Two-way communications are key to each of these operations.

PF&R is a major user of the City's 800 MHz radio system. It operates approximately 130 mobile and 400 portable radios on the system. An additional 80 radio modems are used to provide connectivity between the mobile data computers in the field and the computer aided dispatch (CAD) system at BOEC. Approximately fifty percent of the portable radios currently in use for emergency operations are original issue radios dating back to the early 1990's. PF&R relies solely on this equipment for all emergency voice and data communications in the field.

Voice and data communications are essential to emergency and non-emergency operations. Administration, training and investigation duties also require these same resources. Maintaining an uninterrupted and reliable radio system that keeps emergency responders, command staff and BOEC interconnected 24/7 is the backbone of emergency response operations. There is no effective way to conduct emergency operations without the radio system.

PF&R employs modern equipment and tactics, comprehensive training and a paramilitary command structure to manage operations. However, when firefighters are deployed into hazardous or inhospitable environments, it is the radio system alone that allows these individuals to maintain contact and communication with the outside world. The radio is a lifeline in these conditions and the primary means of requesting assistance or rescue.

The Motorola Smartzone radio system currently in use by the City of Portland is early 1990's technology. It is an analog system that doesn't take advantage of digital technologies currently available for voice and data transmission. The system is also challenged by a limited number of primary simulcast sites (citywide repeaters). To make up for this, small IntelliRepeaters (localized repeaters) are located around the City to enhance coverage in areas of poor radio signal coverage. Even with this combination of radio sites, PF&R still experiences areas of weak or limited signal coverage. Coverage is especially challenging in steel frame buildings (high rise), below grade (garages and basements) and shipboard operations. Fire crews must use their radios in a non-trunked mode in these environments, which causes the radios to operate off the system backbone. This eliminates the ability to communicate with BOEC, does not produce a recording of the channel, severely limits the effective operating range of the radio, does not allow the emergency alert feature on the radios to function and prevents BOEC from tracking response personnel by the radio they are assigned. While the 700-800 MHz spectrum is limited in building coverage, a new radio system will be able to take advantage of newer technologies to mitigate this limitation.

A new, modern public safety radio system with an enhanced coverage area will assure efficient dispatch and emergency scene communications, as well as improve firefighter and public safety. It will also allow the City to exploit the most current technologies. As stated earlier, the present

800 MHz system is early 1990's technology, making it one of the oldest components in our public safety system.

## **800 MHz Radio System Overview Public Safety Systems Revitalization Program (PSSRP) Perspective**

The City of Portland operates and maintains a public safety emergency radio system for the Portland and regional public safety communities. The existing analog radio system was originally put into use in the early 1990's and has served the public safety community for many years.

The City of Portland recognized that the existing analog radio system was in need of a major upgrade, and ultimately replacement, as the system neared the end of its lifespan of approximately 15 years. Beginning in 2001, a series of meetings were held to address equipment failures with the main controller equipment, and to resolve ongoing maintenance issues. Since 2002, in order to ensure continued viability of the radio system, the City has performed a series of minor upgrades and part replacements. The City now finds itself in a position that requires a total replacement of controller equipment due to the age and availability of parts, as well as the discontinued support of the current system.

The existing analog radio system is early 1990's technology that became unsupported by the vendor as of December 2009. "Unsupported" means that replacement parts will be increasingly difficult to find due to the manufacturer no longer supporting the product line and the diminished availability of refurbished parts. Further, the radio vendor no longer can guarantee that the existing analog radio system could be repaired should it develop a component failure. This situation has required the City to search on-line auction sites and third-party vendors in efforts to obtain replacement parts. The City has already experienced a number of smaller failures and was forced to either cannibalize other system parts or borrow parts from neighboring public safety jurisdictions. In addition, many of the engineers and system technology experts in the radio industry are either focused on newer digital technology or have retired. The ability to find knowledgeable individuals to support the existing analog radio system is becoming increasingly difficult.

A failure in one of the major components, such as the controller, is likely to severely impact the overall operation of the public safety emergency radio system, limit system usage in terms of availability of air time, and reduce coverage in much of the geographical area now served. This would also jeopardize the ability of emergency responders to communicate efficiently, effectively, and - ultimately - field unit safety. A failure during a major disaster would severely limit the City's interoperability with surrounding agencies.

Technology is providing new and better ways to use the voice radio spectrum. The analog radio technology currently being employed by the City of Portland has been surpassed by the newer digital radio technologies in the marketplace, offering enhanced features that provide better access to information, better radio coverage, and more consistent information flow between dispatch and officer or firefighter.

The public safety radio industry is now devoting all of its manufacturing to the newer digital technologies. The City will need a digital radio system to meet Federal Communications Commission (FCC) guidelines, and to ensure interoperability with other state and local jurisdictions for emergency

operations. The State of Oregon is preparing a new radio system, using the newer digital technologies now available.

For these reasons, it is time for the City of Portland to implement a new digital Public Safety Emergency Radio System that:

- Provides a stable, supportable infrastructure environment
- Provides improved functionality with minimal disruption of service to the emergency responders
- Provides a platform to allow the current radio system to continue to operate during system upgrade
- Provides the ability to adopt the newer digital standards now mandated to the public safety community, known as APCO 25 (P25)
- Provides a platform for regional and state interoperability
- Allows for expansion of the City's radio system for regional cooperative efforts

## Emergency Response Center Overview

The City Emergency Response Center (ERC) serves as the multi-agency coordination center to centralize the city's leadership and coordination responsibilities during an emergency. Concern has grown in recent years that the current ERC is inadequate because of its small size, split-level design, and lack of modern equipment. In addition, concern has been raised about the vulnerability of the existing Water Bureau Emergency Operations Center. The current facilities, which house both emergency management and water bureau security staff, are unreinforced modular structures located in a potential landslide hazard area.

In response to these issues, Council authorized \$6 million in the FY 2008-09 budget to construct a facility adjacent to the Portland Communications Center (BOEC) that would co-locate a new City ERC, a new Water Bureau EOC, and administrative offices for POEM, Water Bureau Emergency Management and Water Bureau Security personnel.

Ensuring a viable and robust multiagency coordination center that is appropriately sited away from known hazard areas, provides interoperable and redundant communications, and improves information sharing and informed decision making will significantly enhance the city's emergency management capabilities.

GO BOND AMOUNT

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<b>Component</b>	<b>Amount</b>
Replacement Apparatus	\$19,800,000
Emergency Response Center	\$4,000,000
Fire Station Construction	\$7,900,000
Radio System Project	\$38,940,000
Bond Issuance Costs	\$560,000
PF&R Project Management Costs	\$575,000
City Overhead Cost	\$625,000
<b>Total</b>	<b>\$72,400,000</b>