

City Council Meeting Schedule July 2020

City Council passed Resolution 20-08 on June 23, 2020, which temporarily designates the location for regular, special and study session meetings to the virtual location until Benton County enters into Phase 3 of the Governor's Safe Start Reopening Plan. The City broadcasts City Council meetings on the City's website https://www.go2kennewick.com/CouncilMeetingBroadcasts.

July 7, 2020

Tuesday, 6:30 p.m. REGULAR COUNCIL MEETING

July 14, 2020

Tuesday, 6:30 p.m. WORKSHOP MEETING

Police Department Annual Update
 City of Kennewick Police Power 101

July 21, 2020

Tuesday, 6:30 p.m. REGULAR COUNCIL MEETING

July 28, 2020

Tuesday, 6:30 p.m. WORKSHOP MEETING – (the workshop meeting will be done

via Zoom and broadcast on the City's website

https://www.go2kennewick.com/CouncilMeetingBroadcasts)

- 1. Rock Blasting Ordinance
- 2. Public Works Annual Update
- 3. Management Services Annual Update

Council Workshop	Agenda Item Number	1. Meeting Date 07/28/2020	Info Only	
Coversheet	Agenda Item Type	Presentation	Policy Review	
	Subject	Blasting Ordinance Update	Folicy Review	
	Ordinance/Reso #	5868 Contract #	Policy DevMnt 🗶	
	Project #	Permit #	Other	
KENNEWICK	Department	Fire Department		
Summary				
T WASHINGTON T V				

Through		Attachments:	
Dept Head Approval	Chad Michael Jul 23, 16:42:54 GMT-0700 2020		Agenda
City Mgr Approval	Marie Mosley Jul 24, 11:30:31 GMT-0700 2020		

CHAPTER 15.35

BLASTING PERMITS

SECTION:

15.35.010	Definitions-Adoption by reference.
15.35.020	Permit required.
15.35.030	Application-Contents.
15.35.040	Fee.
15.35.050	Liability insurance required.
15.35.060	No assumption of liability.
15.35.070	Storage of explosives prohibited.
15.35.080	Transportation of explosives -Transportation plan
15.35.090	Use of explosives.
15.35.100	Violations - Penalties.
15.35.110	Revocation.
15.35.120	Appeals

15.35.10 Definitions: Adoption by reference:

- (1) The definitions set forth in WAC <u>296-52-099</u>, and any amendments thereto, are adopted by reference.
- (2) The definitions set forth in the <u>most recently adopted version of the</u> International Fire Code Chapter 56, Explosives and Fireworks, and any amendments thereto, are adopted by reference.
- The definitions set forth in the most recent edition of the NFPA 495, Explosive Materials Code, and any amendments thereto, are adopted by reference.
- (4) The following definitions are added to the definitions provided in the codes above:
 - Air Overpressure (Air blast): A sound pressure wave from a blast traveling through the atmosphere. Air blast is expressed in units of pounds per square inch (psi) or decibels (dBL).
 - Controlled Blasting: Careful blasting methods used to minimize the effects of
 blasting on structures and to minimize damage to surrounding rock. Also see
 Perimeter Controlled Blasting. Controlled Blasting methods involve
 distributing and minimizing the explosive charges to minimize stressing and
 fracturing of the rock behind the neat excavation line.
 - Maximum Charge Weight per Delay: For purposes of vibration control, any charges firing within any 8-millisecond time period are considered to have a cumulative effect on vibration and air blast effects. Therefore, the maximum charge per delay equals the sum of the weight of all charges firing within any 8-millisecond time period.
 - Peak Particle Velocity (PPV): The maximum of the three ground vibration velocities measured in the vertical, longitudinal and transverse directions.
 Velocity units are expressed in inches per second (ins/sec) or millimeters per second (mm/sec) and measured by a blasting seismograph.

- Scaled Distance: The distance from a blast measured in feet, divided by the square root of the charge per delay period measured in pounds. Scaled distance values are used in calculations to predict and evaluate ground vibrations. For air blast calculations, cube root scaling is used and distance is divided by the cube root of the maximum charge per delay.
- Springing: -The blasting practice of detonating a charge in a drill hole to create a cavity in order to place a larger concentrated charge of explosives. Springing will not be permitted in the City of Kennewick.
- U.S. Bureau of Mines (USBM) RI 8507 PPV Frequency Plot: A plot of measured peak particle velocity vs. measured frequency on a logarithmic horizontal and vertical scales, examples of which are shown in Appendix A of "Structure Response and Damage Produced from Surface Mine Blasting", U.S. Bureau of Mines, Report of Investigation 8507, by D. E., Siskind, et. al., dated 1980

(3)

(4)(5) Whenever any conflict exists between the cited definitions or the definitions in the referenced codes, the most restrictive definition shall apply. Whenever any conflict exists between the substantive provision of this chapter and those of the above-referenced codes, the more restrictive provision shall apply.

(Ord. 5868 Sec. 5, 2020)

15.35.20 : Permit required:

- This Statement of Concern is expressly written to alert the CONTRACTOR to the fact that those ordinary practices that are customarily considered as standard for the blasting industry will not be acceptable in the City of Kennewick. The use of Controlled Blasting techniques involving extra caution and skill will be required to complete Blasting Projects in the City in a satisfactory and acceptable manner.
- (1)(2) No person, company or corporation shall be in possession of explosive materials, or conduct an operation or activity requiring the use of explosive materials, or perform, order or supervise the loading and firing of explosive materials without a current and valid blasting permit issued by the city. This chapter shall not apply to those exemptions listed in RCW 70.74.191, as may be amended, and WAC 296-<u>52-401(3)</u> through (4), as maybe amended.
- (2)(3) Explosive materials shall not be transported, sold, given, delivered or transferred to anyone in the city not in possession of a valid blasting permit.
- (3)(4) A blasting permit is required for every individual project requiring blasting.
- (4)(5) A permit issued under this chapter to any person, company or corporation is nontransferable to any other person, company or corporation and shall be issued for a period not to exceed one year (12 months from the date of issuance). Permits are only valid for the physical area noted in the application.
- (5)(6) All federal, state and city laws and regulations applicable to obtaining, owning, transporting, storing, handling and using explosive materials shall be followed and be a condition of all blasting permits issued by the city.
- (6)(7) Blasting permits will be subject to review and approval by the Fire Code Official, or their designees.

(Ord. 5868 Sec. 5, 2020)

15.35.30 : Application - Contents:

The city shall have power and authority to issue a permit for blasting but before doing so shall require the person, company or corporation to whom the permit is to be issued to file an application, which shall include the following:

- A completed application form provided by the city specifying the name and (1) address of the person, company or corporation applying for the permit, and the name and address of the blaster or of the person who will actually supervise the blasting. The legal owner of the property or properties where the activity will be conducted will also be noted, along with contact information.
- Copies of A-current and valid Blaster's License(s) Certificate of Possession for (2) Explosives issued by the Washington State Department of Labor and Industries to one or more individuals that will perform the duties of the Blaster in Charge (BIC) employed in the work for which the blasting permit is sought for the project.
- (3) Copies of current and valid Employee Possesor License(s) issued by the Federal Department of Alcohol, Tobacco and Firearms (ATF) for those individuals who will be responsible for receiving and possessing explosives for the project.
- (3)(4) An explosives transportation plan as hereinafter provided.
- (5) A General Belasting Pelan as hereinafter provided.
- (4)(6) A Blasting Safety Plan as hereinafter provided.
- (5)(7) A traffic control plan as hereinafter provided.
- (8) A pre-blast notification plan as hereinafter provided.
- (6)(9) Pre-blast Property Condition Inspection Reports shall be provided to the Fire Code

Official as a Condition of the Permit as hereinafter provided.

(7)(10) A city of Kennewick business license.

(Ord. 5868 Sec. 5, 2020)

15.35.040: Fee: The fee for blasting permits will be determined based upon actual administrative costs; including review time, consultant costs, and inspection times incurred by staff of the Fire Marshals Office. The fee shall be posted and updated according to existing processes as noted in KAC 8-40-010 Fire Permit Fee Schedule. The fee for blasting permits is \$200.00. (Ord. 5868 Sec. 5, 2020)

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15.35.50 : Insurance Policy:

- (1) Before approval to do blasting is issued, the–applicant -shall deliver a contractor's bond running to the City, in the minimum amount of \$25,000 conditioned upon the indemnification and payment by the permittee -of -all claims for injury and damages to persons or property, public or private, resulting from any blasting activity of the permittee.
- (2) Before approval to do blasting is issued, the applicant shall furnish evidence of insurance covering bodily injury and property damage liability exposures including the "X, C, U" perils (explosion, collapse and underground) on the comprehensive or commercial general liability occurrence form. Limits of liability are to be no less than five hundred thousand dollars combined single limit per occurrence and aggregate. If written on the commercial liability form, the aggregate limits shall be no less than one million dollars. Coverage will include the City being named as an additional insured and thirty days' prior notice of cancellation, nonrenewal or material policy modification to the City. The Fire Official or their designee may require additional coverage or higher limits as circumstances warrant.

(Ord. 5868 Sec. 5, 2020)

15.35.60 : No assumption of liability:

- (1) By the passage of the ordinance codified in this chapter or the issuance of any permit under this chapter, the city assumes no responsibility for any damage caused by the person, company or corporation blasting within thecity.
- (2) This chapter shall be enforced for the benefit of the health, safety and welfare of the general public, and not for the benefit of any particular person or class of persons.
- (3) It is the intent of this chapter to place the obligation of complying with its requirements upon the applicant for a blasting permit. No provision of or any term used in this chapter is intended to impose any duty upon the city or any of its officers or employees which would subject them to damages in a civil action.

(Ord. 5868 Sec. 5, 2020)

15.35.70 : Storage of explosives prohibited:

- No overnight storage of explosive materials is permitted within the city limits. Blast holes loaded with explosives are to be shot on the day they are loaded.
- (1)(2) If misfires or other unexpected blast delays occur such that a shot cannot be detonated within the time window established for detonation, then the licensed BIC, working for the Permittee, shall guard the shot overnight and detonate it the following day. At no time is it permitted to load a blast if that blast cannot be detonated on the same day.
- (2)(3) The required <u>daily</u> method of handling explosives in the city is as follows:
 - (a) Delivery;
 - (b) Standby during loading; and
 - (c) Return of all unused explosive materials used in blasting.

(Ord. 5868 Sec. 5, 2020)

15.35.80 : Transportation of explosives-Transportation plan:

Transportation vehicles, and the operation of transportation vehicles, must comply with federal and state regulations for motor transport of explosive materials. A plan that addresses the_

transportation of explosive materials within the city must be included with the application for blasting permit. The transportation plan must detail the following information:

- (1) A Route used for deliveries and returns;
- (2) Hours of transportation;
- (3) Maximum quantities of explosives being transported, and the identification of the types of explosives being transported; and
- (4) Types of transportation vehicles being used.
- (5) Contact information of the Carrier and Driver of the vehicle used.

(Ord. 5868 Sec. 5, 2020)

15.35.90 : Use of Explosives:

The use of explosives within the city must comply with federal and state regulations concerning the use of explosives, including, but not limited to, Chapter <u>70.74</u> RCW and <u>the current edition of WAC 296-52-437 and 296-52-493.</u>

- (1) General Blasting Plan. A blasting plan for each discrete project requiring the use of explosives shall be submitted to and approved by the city prior to the issuance of a blasting permit. The plan shall be accompanied by additional documentation (e.g., maps, site plans and excavation drawings) in order to detail the proposed blasting operation. The plan shall include:
 - (a) The location where the blasting is to occur. ;This shall include, at a minimum, a plan showing the proposed blast area, construction site and surrounding structures. Provide a second drawing showing the layout of the blast area accompanied by a minimum of one long section and two cross sections showing the limits of the blasting work to be completed. The City may require resubmittal of plans if the limits of the work and the blast area are not clearly defined;
 - (b) The approximate total volume of material to be blasted;
 - (c) The incremental volumes, per blast, of material to be blasted. Provide a plan and two orthogonal cross sections through the first two planned blasts showing proposed blast hole layouts and depths, proposed hole loads and stemming, estimated powder factor, delay sequencing, planned maximum number of pounds of explosive that will detonate in any 8ms period, and predicted Peak Particle Velocities at the closest adjacent structures (in minimum of 4 different orthogonal directions);
 - (d) The types and packaging of explosive materials to be used along with Manufacturer's product information sheets and Material Safety Data Sheets (MSDS) for all explosives, blasting agents, primers and initiator products, blasting devices, lightning detectors, blasting mats, and all other blasting equipment proposed for use;
 - (e) The drill hole diameters, depths, patterns, sub-drilling depths and drill hole orientations to be used;
 - (f) The initiation system, the incremental delay times and the location of the primers in the explosive column;
 - (g) The stemming depths and stemming material for the various estimated depths of drill holes to be blasted;
 - (h) The approximate powder factors anticipated;
 - (i) The fly-rock control procedures and equipment, if any, to be used;
 - (g) The maximum number of blasts to be made in any one day;

- (k) The blast warning sound system and equipment to be used; and
- (1) The scheduled start date and finish date of blasting operations.
- (2) Blasting Safety Plan
 - (a) A complete description of the warning, clearing and guarding procedures that will be employed to ensure personnel, staff, visitors, and all other persons are at safe locations during blasting. This information will include details regarding visible warning signs or flags, audible warning signals, method of determining blast areas (all areas affected by any potentially harmful blast effects), access blocking methods, guard placement and guard release procedures, primary initiation method, and the system by which the blaster-in-charge will communicate with site security guards;
 - (b) Detailed description of how explosives will be safely stored transported and used at the site. Plans will explain how day storage magazines and explosive transport vehicles will satisfy all applicable BATF, OSHA, DOT, Federal, and State regulations. This plan will also indicate how explosives will be inventoried secured and guarded to prevent theft or unauthorized use of explosives.
 - (c) Equipment that will be used to monitor the approach of lightning storms and in the event of such, evacuation and site security plans.
 - (d) Detailed contingency plans for handling of misfires caused by cutoffs or other causes.
 - (e) Fire prevention plan details, including, smoking policies, procedures and limitations for work involving any open flames or sparks, description and location of all firefighting equipment, and firefighting and evacuation plans. The fire prevention plan will be subject to approval by the Fire Code Official.
 - (f) Description of the personal protective equipment that will be used by the Contractor's personnel, including but not limited to safety glasses, hard-toe footwear, hard hats, and gloves and any special provisions required for complying with Covid 19 requirements.
- (2)(3) Traffic Control Plan. A traffic control plan, acceptable to the city detailing signing, flagging, temporary road closures and detour routes for blasting operations must be provided prior to the issuance of a blasting permit. If any road closures are proposed, the traffic control plan must account for school bus schedules and shall not delay school buses on regularly scheduled routes.
- Pre-Blast Notification Plan. A plan outlining a program of pre-blast public notifications, structural inspections and blast effect monitoring within a specified distance of the blasting is required prior to the issuance of a blasting permit.
 - The distances from the blasting within which the (a) notification, (b) preblast structural inspection, and (c) blast monitoring are required and shall be determined by the scaled distance formulas set forth below. No blasting

will be permitted until the notification and inspection requirements are completed. The Fire Code Official can increase the minimum distances.

- (i) Distance from the blast within which notification of alloccupied structures is required: Da = 90/w.
- (ii) Distance from the blast within which inspection of all occupied structures is required: Db= 75/w.
- (iii) Distance from the blast within which monitoring of selected structures is required: De = 60/w.
- (b) In the scaled distance formulas (noted above), Da, Db, and De are the actual distances in feet from the closest point in the blast. "/w" is the square root of the maximum weight of the explosives in pounds detonated with a minimum eight millisecond separation from another detonation event in a sequentially delayed blast.

Notification Letter. The pre-blast notification shall consist of a letter advising all-residents within a specified distance of the blasts of the character and intent of the blasting program, its anticipated impact on local residents, the proposed duration of blasting activities and providing telephone numbers for public contact. Distribution of this notification shall be made a minimum of seven days prior to the start of blasting.

- (c) Notification Letter. The pre-blast notification shall consist of a letter advising all residents within a specified distance of the blasts of the character and intent of the blasting program, its anticipated impact on local residents, the proposed duration of blasting activities and providing telephone numbers for public contact. Distribution of this notification shall be made a minimum of seven days prior to the start of blasting. Copies of the Notification Letter(s) shall be provided to the Fire Code Official.
- (d) Pre-Blast Inspection. A pre-blast inspection of residents' property shall be offered to all residents within the specified distance of the blasting at the permit holder's expense and done by a qualified third party who is not an employee of the contractor. A copy of the individual inspection reports and a log of all photos taken are to be sent to the Fire Code Official or their designees. Where inspections are disallowed by the resident or not possible for other reasons, a certified letter shall be sent to the occupant/owner at the unsurveyed address advising them of their right to a pre-blast inspection and the possible consequences of denying an inspection.
- (e) The pre-blast inspection program for residences within the specified distance shall be completed no later than two days prior to the start of blasting with notification to the Fire Code Official or their designees.
- (4)(5) Blast Plan Compliance Inspections. During the first scheduled blast operation a representative(s) of the Fire Official's Office shall be present and witness the blast operation. The Fire Code Official, or their designee, shall conduct additional site visits to observe subsequent blasting operations at the discretion of the Fire Code Official.
- Post-Blast Inspection. Building owners may request an inspection of their property if, following a blast, they feel damage has occurred to their property because of the blasting. This request may be made regardless of scaled distance formula criteria given in subsection (C) of this section. This inspection is to be made by an operator's representative within 15 days of the request. If no

agreement is arrived at between the operator and property owner, the city, upon request by the operator or the property owner, shall arrange to have a qualified third party do an inspection and submit a timely report to all parties concerned. The cost of the inspection will be borne equally between the affected party and the blasting contractor. The report will be provided to both <a href="mailto:parties.and-pa

- -(76) Monitoring. All blasts are to be monitored using blast-monitored equipment designed for that purpose and carrying a certificate of calibration dated within the current calendar year. The blast monitors shall record Peak Particle Velocity (PPV) and frequency in three orthogonal directions and air over pressure in dBL. For shots in which the pounds detonated per eight millisecond time increment are less than 10 pounds and the closest structures are more than 200-ft away, one blast monitor is required. When 10 or more pounds are detonated per eight millisecond time interval, two blast monitors are required. All blastingmonitoring records are to be signed and submitted to the city within 24 hours of each blast.
- (8) Maximum Peak Particle Velocity. The maximum peak particle velocity in any seismic trace at the dominant frequency to be allowed on any residential, business or public structure shall conform to WAC 296-52-67065. (See Figure 8a or 8b Table 8A and 8B for Reference), modified as follows:
 - (a) If the estimated/predicted vibration levels at any adjacent structure, for any of the blasts, are greater than 50% of the maximum allowable limits in WAC 296-52-67065, Figure 8a or 8b then the Permittee shall retain a Professional Engineer (PE) licensed in the State of Washington to examine the planned blasting program, adjacent structures and any condition surveys performed and to prepare and stamp a report demonstrating and affirming that the adjacent structures will not be damaged by the proposed or revised blasting program. The City shall review the Professional Report and may increase the allowable limits beyond the 50% maximum allowable limits in WAC 296-52-67065, Figure 8a or 8b at their sole discretion. They may also determine that the 50% maximum allowable limits in WAC 296-52-67065, Figure 8a or 8b be retained to afford mitigation to the potentially affected parties.
 - (7)(b) The methods to be used for blast vibration monitoring shall be provided in the Blast Plan along with the methods used to predict vibration levels and the magnitudes of predicted vibration levels for planned blasts.

Distance from blasting site

Table 8-AWAC 296-52-67065 Maximum allowable beak particle velocity1

0 to 300 ft. (91.4 m) 301 to 5000 ft. (91.5 m to 1524 m) 1.25 in/sec (31.75 mm/sec)
1.00 in/sec (25.4 mm/sec)

1 Peak particle velocity must be measured in three mutually perpendicular directions and the maximum allowable limits

Frequency versus particle velocity graphics. In lieu of Table 8-A, a blasting operation has the option to use the graphs shown in Figure 8a or 8b to limit peak particle velocity based upon the frequency of the blast vibration. If either of the graphs in Figure 8a or 8b is used to limit vibration levels, the methods used for monitoring vibration and calculating frequency must be ORDINANCE 5868 - Page 8

included in the blast plan.

10 (254.0 mm/sec)

21n/see (50.8 mm/sec)

1 (25.4 mm/sec)

(19mmfsee)

Table 8-BFigure 8a WAC 296-52-67065

- (8) (9) Air Blast. The maximum air blast over pressure permitted at the closest residential, business or public structure designed for human occupancy is not to exceed 133 dBL @ 2.0 Hz hi pass system per the USMB RI 8485.
- (9) (10)Utilities. Whenever blasting is being conducted in close proximity to or under existing utilities, the utility owner shall be notified a minimum of 24 hours in advance of blasting, by the applicant. The Fire Code Official shall be notified that this was accomplished prior to blasting.
- (10) (11)Blast (Shot) Report. A signed Blast (Sshot) Report on a form approved by the Fire Code Official, Community Development Director, or their designee, shall be filed with the city within 24 hours of making the blast. The report shall include the following blast information:
- (a) Date, time and location of shot;
- (b) Number of drill holes;
- (c) Maximum, minimum and average drill hole depth;
- (d) Drill hole diameter;
- (e) Sub-drill depth;
- (f) Total pounds of each type of explosive used;
- (g) A drill hole section schematic showing the loading of a typical hole;
- (h) Amount and type of stemming material;
- (i) Schematic showing drill hole pattern;
- G) Initiation delay sequence;
- (k) Maximum pounds of explosives detonated in any eight millisecond time interval;
- (1) Type and size of any fly-rock protection devices used if any;
- (m) Seismic reports;
- (n) Comments regarding the outcomes of the blast.

(11)(8) The city shall be notified: (1) immediately of any blasting accident, and (2) within 24 hours by the permittee of any incident, damage claim or neighbor annoyance report brought to the permittee's attention.

(Ord. 5868 Sec. 5, 2020)

15.35.100 : Violations-Penalties:

- (1) Except for violations of KMC 15.30.240, any person who has violated any provision of this chapter shall have committed a Class 1 civil infraction subject to a maximum fine of \$250.00. Provided, that if the same violator has been found to have committed an infraction violation for the same or similar conduct two separate times, and involving the same or similar sections of the Kennewick Municipal Code, the third or subsequent violation shall constitute a misdemeanor, punishable as provided in KMC 1.12.010.
- (2) For any violation of a continuing nature, each day's violation shall be considered a separate offense and shall subject the offender to the above penalties for each offense.

(Ord. 5868 Sec. 5, 2020)

15.35.110: Revocation:

- (1) The city shall have the power and authority to limit the level of blasting and, after examining all of the pertinent circumstances surrounding the proposed blasting, if it is deemed to be in the public interest, may then refuse to issue such permit, or in the case of a previously issued permit, may suspend or revoke the permit.
- (2) The city shall have the power to revoke any permit issued under this chapter for failure to comply with any of the provisions of this chapter, any of the provisions of Chapter 296-52 WAC, or for any other reasonable cause.

(Ord. 5868 Sec. 5, 2020)

15.35.120: Appeals:

Appeals from decisions of the Fire Official related to blasting permits shall be in accord with Kennewick Municipal Code Chapter 4.04-Administrative Appeals. (Ord. 5868 Sec. 5, 2020)

PRESENTATION ITEMS

- 1. Blasting Engineer: Dr. Chris D. Breeds, PE (Civil), CEng (Mining)
 - a. Thirty plus years of experience in Bast Engineering around the World.
 - b. Member of the DoL committee responsible for developing (2002) and updating WAAC 296-52. Includes the Model Ordinance upon which the City developed its initial Code.
 - c. Trains the State DoL Inspectors with regard to Blasting and Blast Vibrations.
 - d. Currently Blast Consultant for the USACE.
 - e. Many Completed Projects near residential homes and critical infrastructure.
- 2. General Discussion of Ordinance and Items Added.
- 3. General Discussion of Close In Blasting Cases:
 - a. Sewer Trench in Renton within 20-ft of houses.
 - b. Foundation Excavation within 10-ft of a Dentists Practice.
- 4. General Discussion of Blasting for Development Projects.
- 5. General Discussion of Risks Associated with Blasting.

Council Worksho	Agenda Item Number	2. Meeting Date	07/28/2020		
Council Worksho Coversheet	Agenda Item Type	Presentation	01720,2020	Info Only	X
	Subject	Public Works Department A	nnual Update	Policy Review	
	Ordinance/Reso #	Contract #		Policy DevMnt	
	Project #	Permit #			
KENNEWICK	Department	Public Works		Other	
Summary Summary	<u> </u>	<u> </u>			
Staff will be providing Council an update on the Public Works Department.					
Through			Attachments: Presentation		
Dept Head Approval	Cary I Jul 23, 09:29:39 0				
City Mgr Approval	Marie M Jul 24, 11:39:07 (losley GMT-0700 2020			

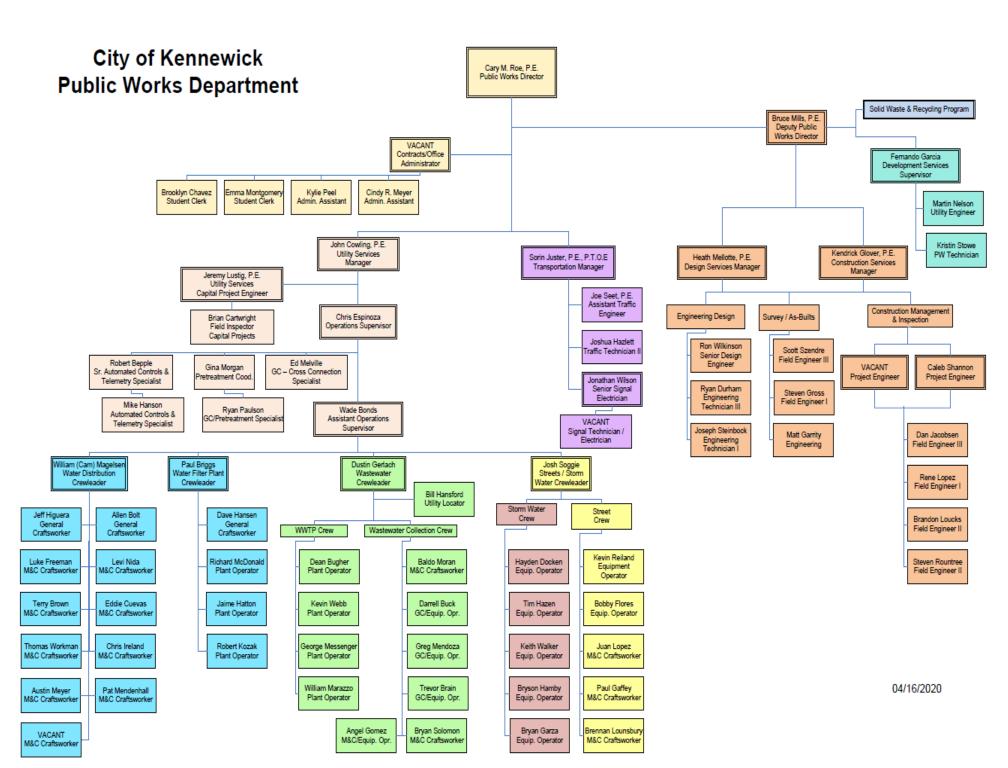


Kennewick Public Works Department People and Programs Making a Difference

Council Workshop - July 28, 2020

Public Works Director Cary M. Roe P.E.





Public Works Divisions

Traffic

Water

Sewer

Development Services

Administration

Streets

Solid Waste & Recycling

Engineering

Stormwater



Public Works Department

General Fund Divisions

- Administration
- Traffic
- Streets
- Development Services
- Engineering

Enterprise Fund Divisions

- Water
- Sewer
- Stormwater
- Solid Waste and Recycling



Public Works Department

- 75 Full Time Employees
- 10 Part-time/Seasonal Employees

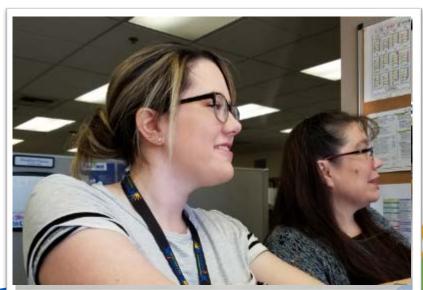
Biennial Budget	2019/2020
General Fund Operating Budget	\$ 9,326,222
Enterprise Fund Operating Budget	\$32,341,771
Capital Improvement Program Budget	\$81,185,388
Total Operating/Capital Budget	\$122,853,381



Division Responsibilities

Administration

- Management and leadership of Department
- Budget preparation, presentation and management
- Office supervision and support primary interface with public
- Purchasing, travel, training support
- Professional Services and Construction Contract management
- Update of Comprehensive Plans
- Participation in Developer forums
- Regional Boards/Committee participation
- Emergency notifications
- Cross Departmental coordination and support





Traffic Division Responsibilities

- Operate and maintain:
 - 64 traffic signals
 - 19 Rectangular Rapid Flashing Beacons
 - 24 School Zones (20 mph)
 - 23 Roundabouts
 - 6,715 Street Lights



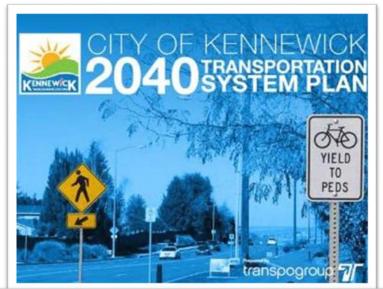
 Administer traffic detours and closures





Traffic Division (cont.)

- Review development applications for traffic impacts, mitigation and safety including street improvements, signage and striping, driveways, and sight distance.
- Administer Traffic Impact Fee program
- Capital Project review and support
- Produce Six-Year Transportation
 Improvement Plan
- Develop and update TransportationSystem Plan





Streets Division

Operate and maintain:

- Streets
 - 342 center lane miles of streets
 - 786 lane miles of streets







Streets Division

- Street Signs
 - 13,000+ street signs
 - 1,654 stop signs
 - 386 yield signs
 - 1,400 warning signs
 - 4,879 street name signs
 - 900 speed limit signs
 - 343 school signs



- Lane Striping and Crosswalk Marking
 - 1.7 million lineal feet of lane striping
 - 10,510 gallons of traffic paint
 - 400+ crosswalks with Thermo Plastic



Streets Division (cont.)

- Pavement crack sealing applied:
 - 67.5 tons

- Pavement repair, wheel path grind and patch
 - 29,700 square feet patched
- Weed control and shoulder grading:
 - 9.5 M square feet sprayed
 - 7 miles of shoulders graded



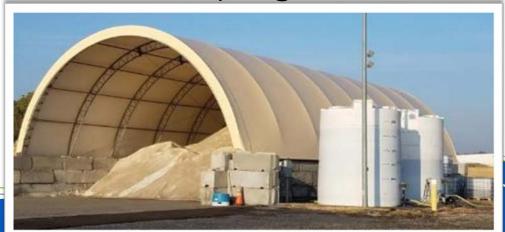
Streets Division (cont.)

Snow and Ice Removal



Streets Division (cont.)

- Snow and Ice Removal Equipment/Materials
 - Two (2) Loaders
 - One (1) Road Grader (Rental of 2nd)
 - Three (3) 10 yard Plow Trucks
 - Four (4) 5 yard Plow Trucks
 - 650 Tons of salt storage
 - 12,000 Gallons of Deicer (Magnesium Chloride) storage





Stormwater Division

 Administer Eastern Washington Phase II Municipal Stormwater Permit

Street Sweeping

 790 lane miles (total of 2,582.5 swept in 2019)

Maintain:

154 miles stormwater pipe

8,012 catch basins

Repair/construct infrastructure improvements





Stormwater Division (cont.)

- Operate 2 Street Waste / Decant Facilities
 - 2018 1,139 tons
 - 2019 1,950 tons



- Operate Landfill facility
 - 2018 1,643 tons
 - 2019 362 tons





Stormwater Division (cont.)

- Zintel Dam
 - Inspect, monitor and maintain Dam



Inspect, monitor and maintain outfall pipes





Flood of 1953 – Rainier St. at left Golf Course at bottom



Water and Sewer Division



18th & Kellogg 10 MG Reservoir



Water Treatment Plant



Wastewater Treatment Plant



Columbia Gardens Pretreatment



Wastewater Treatment Plant

How Many Gallons a Year do we treat?

- 1. 500 Million
- 2. 1.0 Billion
- 3. 2.0 Billion



Answer: **2.0 Billion** Gallons per year treated effluent!

Wastewater Collection System

- 309 Miles of Sewer Main
- 27,638 Feet of Force Main
- 6,763 Sewer Manholes
- 15 Lift Station sites









Water Treatment Plant

How Many Gallons are produced each year?

- 1. 1 Billion Gallons
- 2. 4 Billion Gallons
- 3. 8 Billion Gallons



Answer: **4 Billion** Gallons per year produced!

Water Production

Value for your dollar







One Dollar

4,406 bottles



Water Distribution System

- 430 Miles of Water Main Line
- 25,503 Water Meters
- 4,146 Fire Hydrants
- 11,719 Water Valves
- 13 Booster Pump Stations
- 9 Reservoir Sites
- 31.5 Million Gallons of Storage
- ASR = 233 475 MG of Recovery per year
- 30 Water Quality Sampling Stations





Development Services Division

 Review development applications to meet public works standards



	2018	2019	2020 (1 st Half)
DPW Civil Reviews	81	81	53
Revenue from Civil Reviews	\$517,207	\$846,337	\$431,707
Value of Civil Works	\$10,370,937	\$17,696,855	\$9,216,595
DPW Permits Issued	740	716	359
Pre-Application Reviews	43	44	20
Feasibility Reviews	38	51	21



Development Services Division (cont.)

New Infrastructure Added Due to Private Development

	2018	2019	2020 (1 st Half)
Water Main	23,603 ft	24,520 ft	13,786 ft
Fire Hydrants	54	47	33
Sewer Main	21,987 ft	26,162 ft	11,389 ft
Sewer Manhole	97	69	68
Storm Main	18,673 ft	16,896 ft	10,050 ft
Storm Manholes	109	120	55
Streetlights	123	70	48
Streets/Roads	3.6 miles	1.6 miles	1.9 miles



Solid Waste/Recycling Division

Manage Waste Management Franchise Agreement

Facilitate resolution of citizen/business complaints

Recycling events coordination

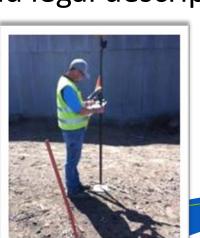
 Solid Waste Advisory Committee (SWAC) participation



Engineering Division

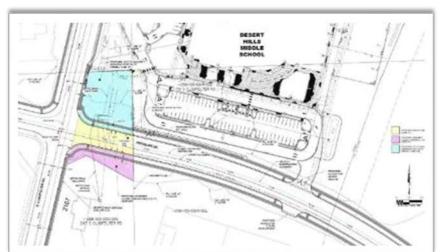
Design Section

- In-house design of capital improvement projects
 - 2018 12 Projects Est. \$8.1M
 - 2019 18 Projects Est. \$7.5M
 - 2020 9 Projects Est. \$11.2M
- As-built record drawings
- ROW/Easement Vacations
- Surveying and legal descriptions









Engineering (cont.)

Construction Section

- Inspection/quality control of City capital improvement and private development projects
- Oversight of permits for work in the right-of-way
- Small works roster projects



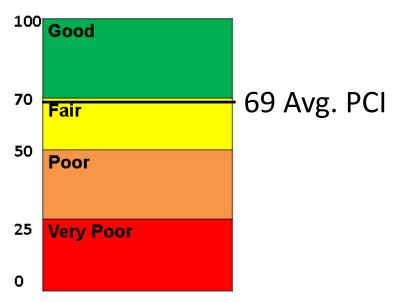




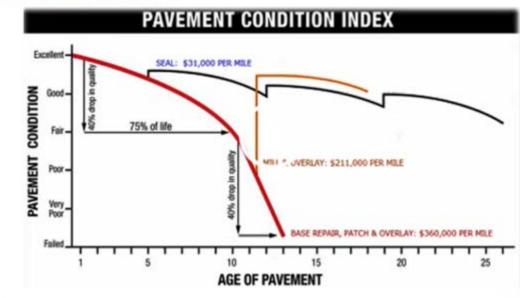




Pavement Preservation Program



A stitch in time...







Pavement Preservation Toolbox

Crack Sealing



Pavement Overlays



Pavement Patching



BST (Chip Seal)



Street CIP Projects - 2019

- P1607 Street Waste Facility
- P1706 Sherman & Ridgeline Dr Waterline Looping
- P1817 UGA Southridge Regional Stormwater
- P1820 Kennewick Ave & Yelm Intersection Improvements
- P1823 Kennewick Ave Pavement Preservation
- P1825 W 27th & S Olson Signal



Street CIP Projects – 2019 (cont.)

- P1903 CDBG Fruitland Sidewalk
- P1904 CDBG Juniper Half Street
- P1906 W 36th Ave Sidewalk
- P1911 2019 City-Wide Overlays
 - S. Kellogg (W. 10th Ave. to KID Canal)
 - W 10th Ave. (Quincy to Garfield)
 - S. Union (Clearwater to W. 10th Ave.)
- P1914 2019 BST
- P1917 Curb Repair Project
- P1931 W 14th Outfall & Misc. Stormwater



Street CIP Projects - 2020

- P1714 W. 10th Ave. Widening Project (Joliet to Columbia Center Blvd.)
- P2001 City-Wide Asphalt Overlay
 - N Edison St. (SR-240 to W Hood Ave.)
 - W 10th Ave. (S Union St. to S Kellogg St.)
 - W Hildebrand Blvd. (Canyon Lakes Dr. to S Volland St.)
 - N Ledbetter St. and Canyon Lakes Dr.
 - S Olson St (W 28th Ave to Canyon Lakes Dr.)
- P2002 Pedestrian Pathway (Union to Edison)
- P2006 Zintel Dam Repairs
- P2007 2020 Crack Seal Contract
- P2013 Auburn Street Access Restoration
- 2020 Sidewalk Rehabilitation Project





Street CIP Projects - Future

- US 395/Ridgeline Interchange
 - Project is 100% Designed
 - Anticipate solicitation for bids this Fall.







US395/RIDGELINE DRIVE INTERCHANGE - COST SUMMARY				
Revenue		Expenses		
Source	Amount	Item	Amount	
Connecting Washington	15,000,000	Construction	13,727,001	
NHFP	1,944,259	4% Change Order Contingency	549,080	
STP	641,358	Sales Tax 8.6%	1,180,522	
PWTF Loan	6,000,000	Construction Engineering	1,372,700	
50% BPUD Partnership	333,000	Construction Subtotal	16,829,303	
City Water 12"	362,951			
City Sewer (dry line)	111,651	PE	2,337,038	
Misc. Utilities (their cost)	199,839	ROW	4,529,172	
		WSDOT Review	198,442	
		KID Agreement	20,000	
		BPUD Relocation	753,700	
TOTAL	24,593,058	TOTAL	24,667,655	



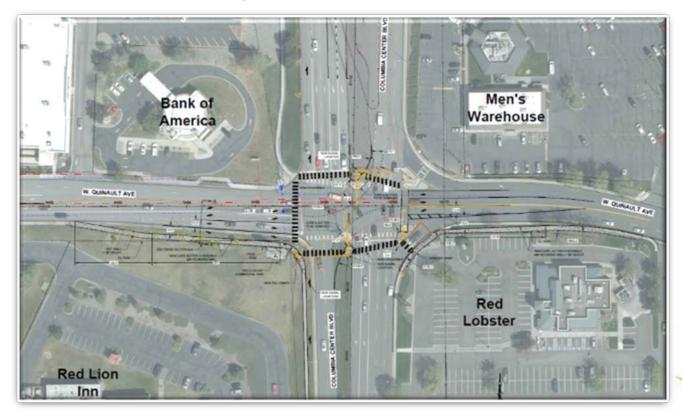


Steptoe/Gage Intersection

- Additional turn lanes for all four intersection legs
- Joint project with City of Richland
- Successful in obtaining \$3.2 M for PE, ROW and Construction
- Significant impacts to Benton
 PUD and CNG infrastructure
- Anticipate construction in 2022



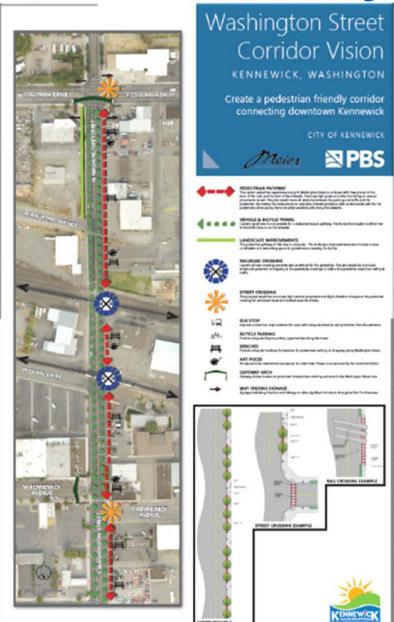
- Quinault Ave./Columbia Center Blvd. Intersection
 - Successful in obtaining \$260K for PE and ROW
 - Improve east-west turning movements



- Deschutes/Columbia
 Center Blvd. Intersection
 - Improve east-west turning movements as well as addressing carwash traffic
 - Design will also accommodate for future 3-lanes NB and SB on Columbia Center Blvd.
 - Successful in obtaining \$260K for PF and ROW







- Washington St. Corridor Project
 - \$500K Complete Streets Grant to provide street scape improvements for a bikes & pedestrian link to Clover Island and the new wine venues.
 - Spring 2021 for estimated construction



2020 Stormwater Comprehensive Plan

Section 1 – Introduction

Section 2 – City Stormwater Drainage System

Section 3 – Regulatory Requirements

Section 4 – City Stormwater Management Program

Section 5 – Capital Improvements Program

Section 6 – Future Stormwater Program Recommendations



Water/Sewer CIP Projects - 2019

- Lining of an existing 24-inch concrete pipe using Cured-In-Place Pipe Lining process. The existing 24-inch concrete pipe is showing signs of deterioration and has collapsed several times in the past few years.
- Phase 1 (2,800'), Relining Completed Spring 2019
- Phase 2 (2,400' of lining & 600' of FM), Relining Completed May 2020



Water/Sewer CIP Projects - 2020

24" Sanitary Sewer Transmission Main



- Lining of an existing 24-inch concrete pipe using Cured-In-Place Pipe Lining process. The existing 24-inch concrete pipe is showing signs of deterioration and has collapsed several times in the past few years.
- Phase 3 (3,200'), Relining Scheduled August 2020



Water/Sewer CIP Projects – 2020 (cont.)

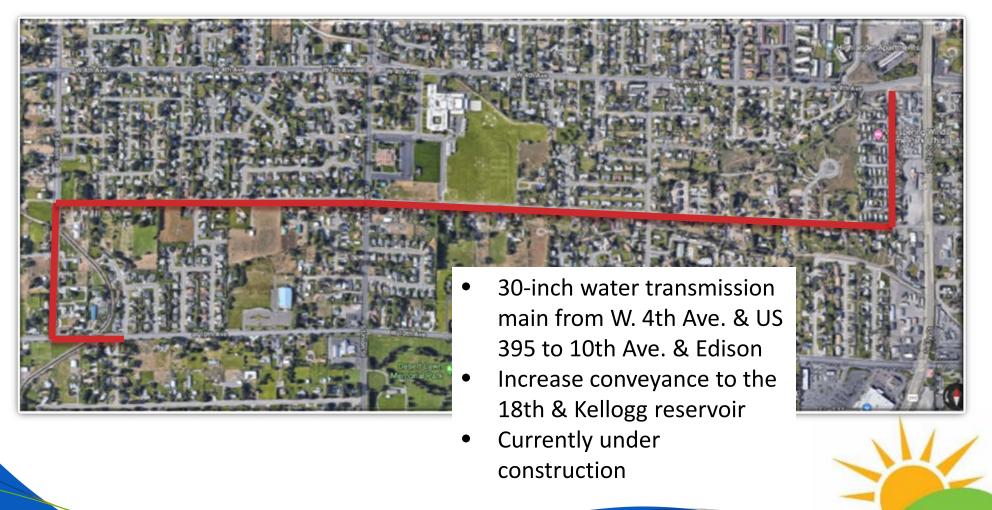
18th & Kellogg Reservoir Replacement

- Replace structurally deficient 10 MG reservoir with new 6 MG reservoir and booster pump station with provisions for a second future twin reservoir for capacity and redundancy.
- Construction occurring while existing reservoir is in service followed by demolition of the existing reservoir
- Construction 2020-2022
 - (18-24 months)



Water/Sewer CIP Projects - 2020 (cont.)

Zone 2 West 7th Ave. Water Transmission Main



Water/Sewer CIP Projects – Future

Canal Drive Sewer Replacement

- Installation of a new 12-inch dia. sewer line down Canal Drive from the US 395 bridge 600 LF eastward to replace failing concrete line on the south side of roadway.
- Emergency repairs were completed last December 2019, enabling this project to be de-escalated in priority.
- Currently in design phase.
- Estimated construction is in 2021 depending on available funding.





Water/Sewer CIP Projects – Future (cont.)

Zone 3 West Transmission Main

- The Zone 3 West Transmission Main project will construct a dedicated 20" water main between the new booster pump station at 18th and Kellogg to the Kansas Reservoir.
- The City hired HDR to perform an alignment study to assess the best route between the new pump station and the existing Kansas reservoir. Below is the preferred alignment.
- Design planned for 2020/2021 with Construction in 2022



Waste Water Treatment Plant Phase 2

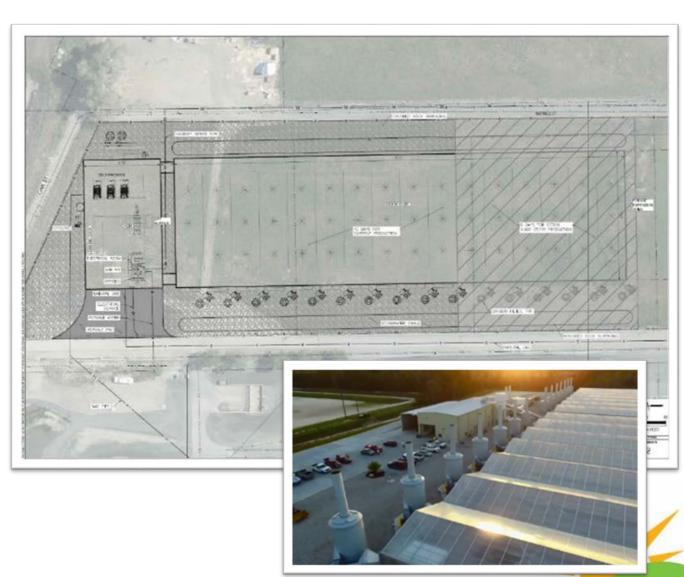
- Phase 2 Biosolids Processing
 - The City has been investigating a new treatment option using existing and proven processes in a treatment train.
 - With a Pilot Project now complete the City and our consultant JUB Engineers performed an evaluation of Capital and Operational costs of this process.
 - This process has the potential of significant cost savings while producing Class A Biosolids (fertilizer).





Waste Water Treatment Plant Phase 2

- Proposed facility would be constructed on City property east of the existing lagoons with adequate room for future expansion.
- Potential Design in 2021 with Construction in 2022/23
- Project update and Operational/Capital analysis to be presented at a future council workshop



Cross Departmental Coordination and Support

- Accident investigations, traffic control for incidents, new specialized signs, opened Keewaydin Drive (Police)
- Traffic control and assistance during events (Fire)



- Assist with issuance of permits, water meter turn off and turn on requests, installation of new water meters (Customer Service)
- Collaboration on private developments from pre-app to permit to completion (Planning and Building)

Cross Departmental Coordination and Support (cont.)

- Incentivized traffic impact fees, capital projects to promote growth and open up new areas (e.g. Southridge), partner on wayfinding signs (Economic Development)
- Provide as-built records (IT/GIS)
- Small cell applications, collaboration on ordinances and resolutions, contract/document templates (City Attorney)
- Traffic control and community events participation, capital project assistance (e.g. Inspiration Park frontage) (Parks)



Questions?

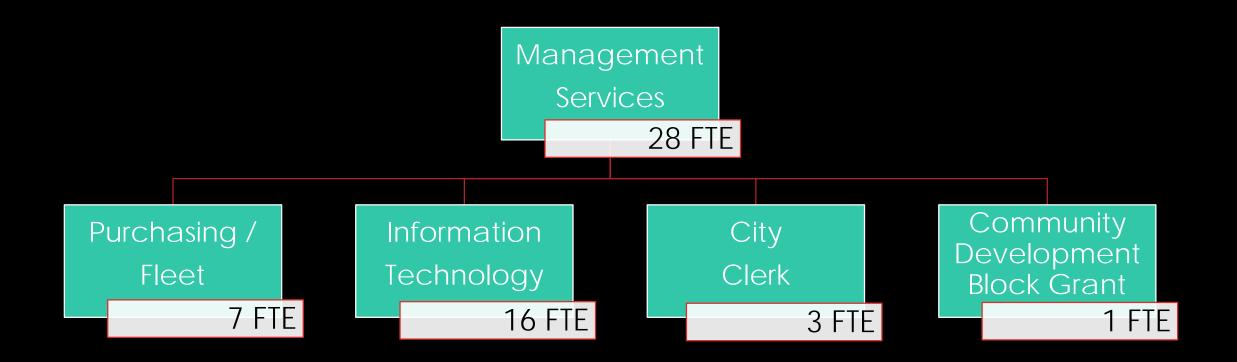


Council Workshop	Agenda Item Number		07/28/2020	Info Only	X
Coversheet	Agenda Item Type	Presentation	Policy Review		
	Subject	Management Services Dep	artment Annual Update		
	Ordinance/Reso #	Contract		Policy DevMnt	
	Project #	Permit :	#	Other	
KENNEWICK	Department	Management Services			
Summary The Management Service and opportunities as we p		e an overview on the department biennial budget.	nent's structure, services	provided, challen	ges
			1		
Through			Attachments: Presentation		
Dept Head Approval	Christina Jul 23, 11:19:41 (GMT-0700 2020			
City Mgr Approval	Marie M Jul 24, 11:42:10 (

MANAGEMENT SERVICES DEPARTMENT UPDATE

Presented to City Council July 28, 2020

DEPARTMENT OVERVIEW



PURCHASING / FLEET DIVISION

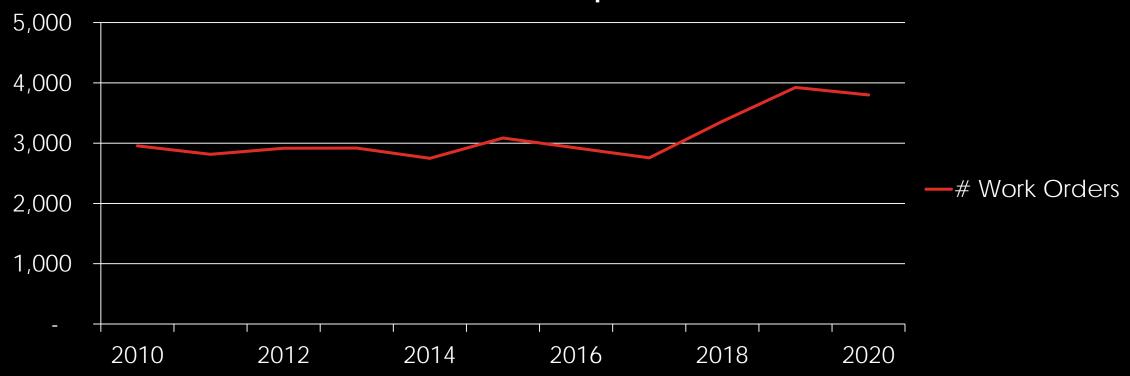
- Purchasing:
 - Centralized Procurement
 - Bid Processing
 - Contract Administration
 - Cell Phone program
 - Copier Maintenance & Replacement
 - Surplus Disposal
 - Fleet Admin Support

- Warehouse:
 - Inventory Stocking & Issuance
 - Receiving & Delivery
 - Surplus and Fleet Support

- Fleet:
 - Maintenance & Repairs
 - Vehicle & Equipment Replacement
 - Warehouse Support

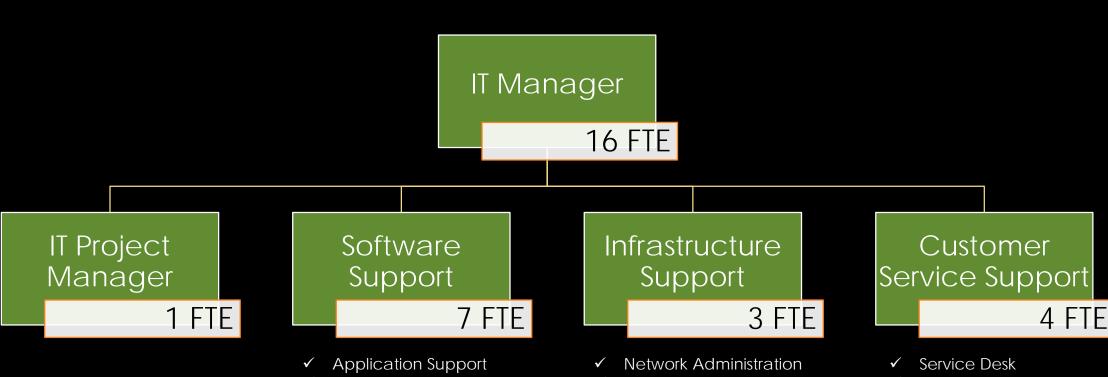
- Staffing Levels:
 - Purchasing Manager
 - 2 Buyers
 - 3 Mechanics
 - 1 Warehouse Worker
- Statistical Overview:
 - 900+ Purchase Orders Processed annually
 - Average of 150+ Auctions posted on-line annually (\$90,000 annually)
 - 942 Unique Items in Stock Average value of Inventory \$326,819 (2018-current)
 - Supports repair and maintenance of 569 vehicles and pieces of equipment
 - Average fleet age of 7.65 years (not including small equipment/trailers)
 - Current Fleet replacement value \$26,346,889
 - 3,000 Average Fleet work orders annually

Fleet Work Orders Completed



- 2019/20 Accomplishments
 - Purchasing Policy Updated allowing for electronic signatures and providing efficiencies for Departments.
 - Process review, testing and data validation for Implementation of the Purchasing & Inventory modules of the new ERP Financial software.
 - Provided operator training on use of equipment to improve for safe and efficient use and decrease repairs.
 - Through communication and scheduling have eliminated repair backlog along with increased technician productivity to reduce vehicle/equipment downtime for Police, Fire and field crews.

- Current Challenges:
 - Fleet Management System
 - Current system does not support critical management and reporting needs of a modern fleet operation – 2021 we will begin implementation process for new asset management modules integrated with the ERP financial software.
 - Facility
 - Facility adequate but not ideal for latest technologies and proximity to customer base
 - Equipment Replacement Funding
 - Average age of fleet has decreased by 3.5 years over the last three years.
 - Critical in near term of 3-4 years to maintain replacement schedule where possible.
 - Improvements in proactive preventative maintenance will help to buffer current financial challenges.

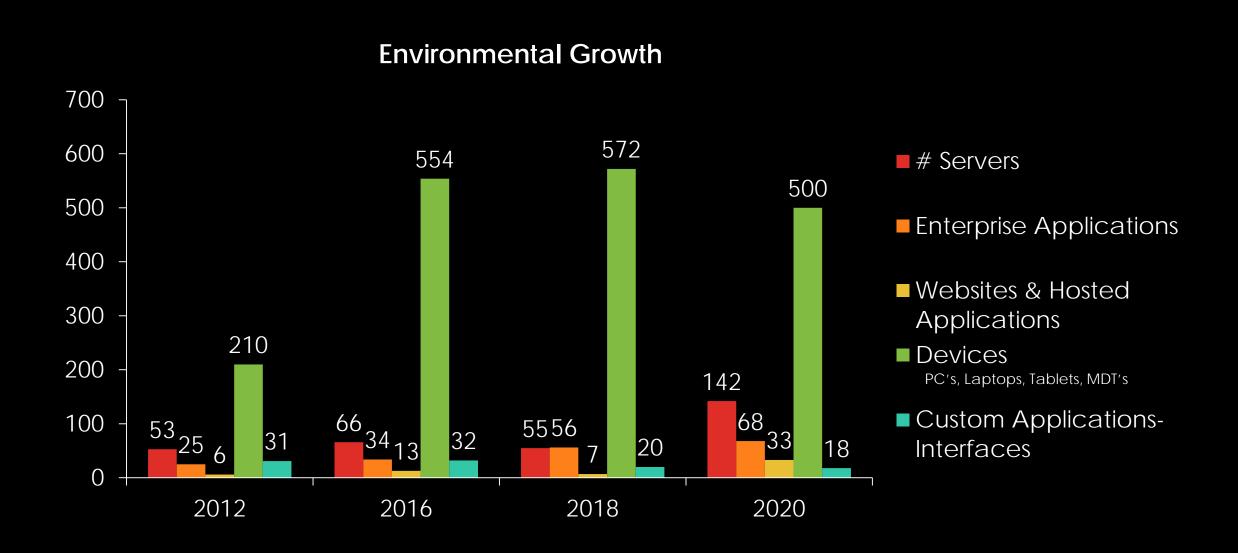


- GIS Technicians (2 FTE):
- Assigned to Planning
- Assigned to Public Works

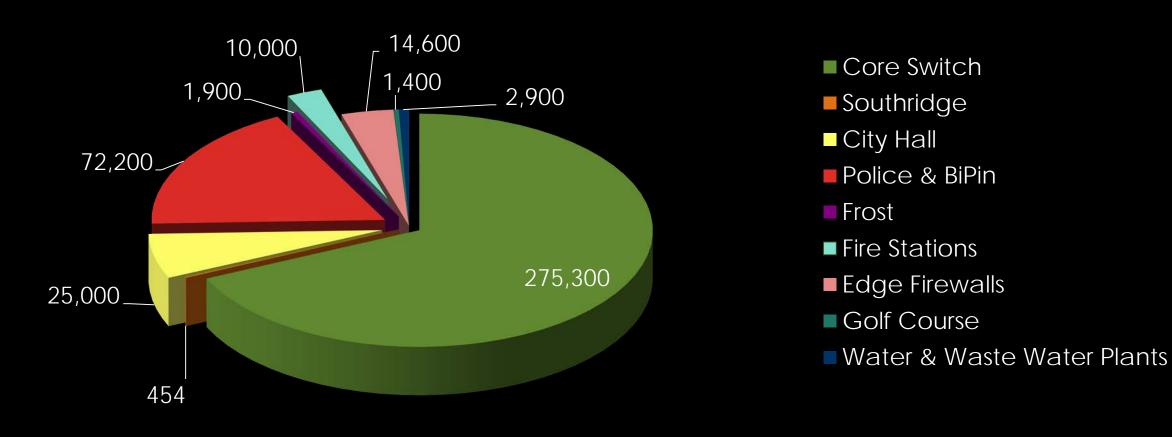
- **Application Development**
- Phone System
- Database Administration
- BiPin

- Security
- Server Maintenance
- Exchange (email)
- **Active Directory**
- Backup
- UCS & SAN (storage)
- Web

- Equipment Setup/ Deployment
- **Equipment Maintenance**
- After-hours Support

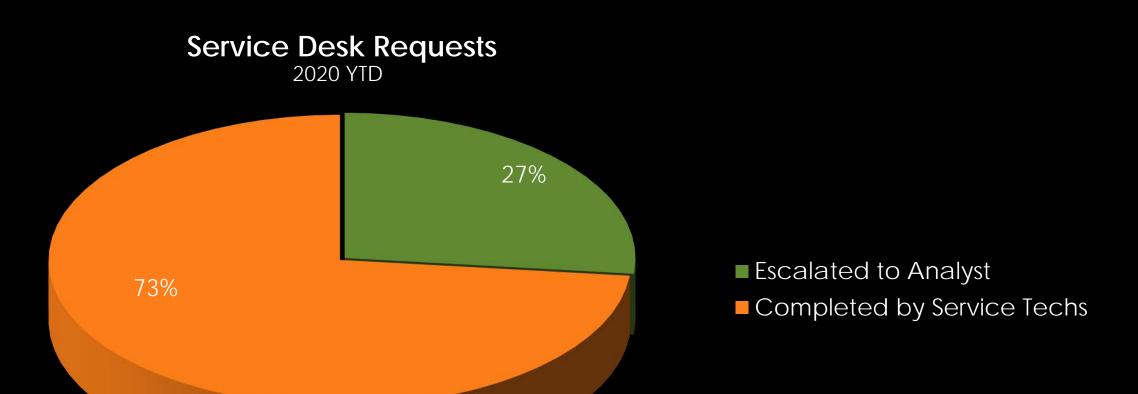


Avg Monthly Network Traffic Activity (in GB)



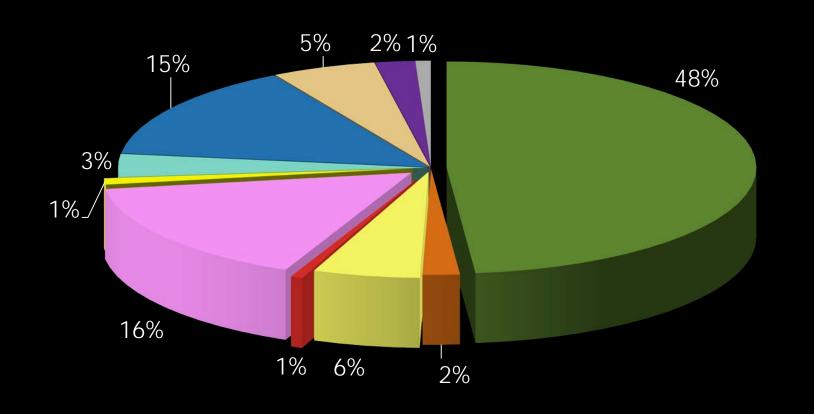
- Statistical Overview
 - Of the 248,000 monthly inbound emails, roughly 60% are filtered as spam or infected with viruses.
 - The new firewalls have significantly reduced this % with pre-scans of network traffic.
 - Exchange Server (email) handles an average of 8,000 messages per day.
 - Currently managing 638 mailboxes
 - On average, we block over 1 million network attacks/probes each month
 - We currently support 2 storage systems consisting of 40TB with a compression ratio of 10.4 to 1
 - User data increased from 800GB in 2006 to 11,260GB (10.9TB) in 2020
 - 2019/2020 Network Up time 99.99%

- IT Service Desk
 - Provides multiple communication channels for staff to request service from a centralized Service Desk.
 - Phone
 - Walk-in Service Desk
 - Email
 - Online Service Request ticket
 - Service desk receives an average of 400 phone calls per month; roughly 2,700 work orders per year



Types of Service Desk Requests

2019-2020 Biennium as of June 30, 2020



- Workstation
- Web
- Phones
- Conference Rooms
- Software Applications
- Procurement
- Printers
- Network
- Genetec Security
- GIS Data
- Administrative

2019 Project Assignments

- Televising Council Meetings
- Wireless Network Upgrades
- Workstation Replacements
- Golf Course Network Connectivity & Security
- Infrastructure Environment Replacement (City & BIPIN)
- ERP System Replacement IN PROCESS
- BIPIN RMS/JMS System Replacement IN PROCESS

2020 Project Assignments

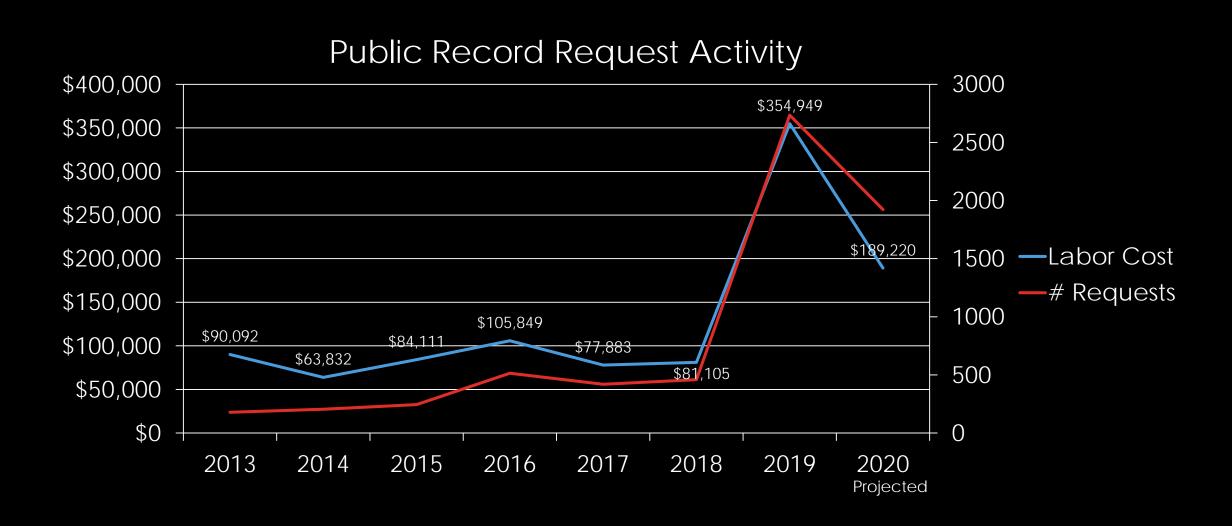
- UPS Server Room Upgrades IN PROCESS
- Physical Security Upgrades Ph.3 Deferred

- Email System Replacement
- Phone Line Expansion & Other Telecommuting Technologies

- Current Challenges
 - Security Threats
 - Ransomware
 - Ongoing Probing Attacks
 - Regulatory Compliance
 - Preventative Maintenance
 - Outages from 3rd party providers /partners
 - Resolution of outages results in reprioritization of staff assignments
 - Succession Planning
- Future
 - Upgrade/replace outdated equipment & software
 - Implementation of staffing recommendations included in the Strategic Plan
 - Ongoing compliance updates to reflect current best practices for cyber security

- Core Functions:
 - Agenda Management
 - Legislative Support
 - Regulatory Compliance
 - Records Management
 - Public Records Unit

- 2019/2020 Accomplishments:
 - Processed 342 City Council Agenda Items in 2019 and 144 to date in 2020
 - Indexed 1,432 documents into OnBase in 2019 and 585 to date in 2020
 - Completed transition to a city-wide, centralized public records unit under the City Clerk's office.
 - Received 2,735 public record requests in 2019 and 1,019 to date in 2020
 - Staff spent 5,932 hours processing public record requests in 2019
 - This does not include the hours staff spent attending public records training, training other city staff, or managing city records.



- Current Challenges:
 - Public Records Act
 - Complexity of Act
 - New legislation & reporting requirements
 - Ongoing variations in Court interpretations on complying with the Act
 - Resource requirements in processing requests
 - Records Management Regulations
 - Applying WA State Archives regulations & best practice recommendations for records management and retention city-wide
 - Ongoing coordination with departments to migrate to centralized records system

- CDBG Program
 - Funded by HUD
 - Primary objective is improving our community by providing decent housing, a suitable living environment and expanding economic opportunities for persons of low and moderate income.
 - Funding requests are reviewed annually by the CDBG Advisory Board, who then provide recommendations to City Council for funding.

- HOME Program
 - HOME is the largest Federal block grant available to communities to create affordable housing.
 - Primary goal is to increase the supply of decent, safe, sanitary and affordable housing to lowand very low-income households.

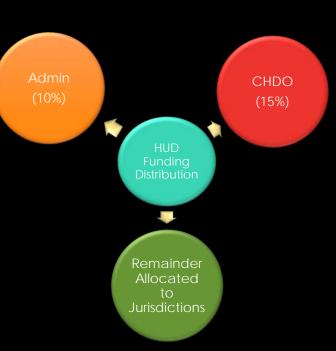
• 2020 Funding Allocations:

 Pedestrian Pathway- Edison St. to Union St. 	\$299,000
 KHA Microhomes- Infrastructure portion 	\$161,000
 Monopoly Park Upgrades 	\$104,000
 Underwood Park Upgrades 	\$ 66,000
 Youth Recreation Scholarships 	\$ 34,000
 ARC Therapeutic Recreation Scholarships 	\$ 23,000
 Senior Life Resources Meals on Wheels 	\$ 23,000
 CDBG Administration 	\$136,000

- Community Impacts:
 - \$114,000 for Community/Senior Center Entrance Upgrade
 - \$250,000 for Columbia Drive Pedestrian Crossing near the Wine Village
 - \$1,400,000 for pedestrian ramp and audible crossing upgrades since 2010
 - \$968,000 for street reconstruction and sidewalk installations since 2016
 - \$290,000 for Microenterprise grants in response to COVID-19
 - Public Service projects over past 10 yrs (capped at 15% of each years CDBG allocation)
 - Over 8,000 Youth Scholarships provided
 - Nearly 8,000 Seniors were provided meals (Meals on Wheels program)
 - Over 500 Developmentally Disabled persons received assistance through Arc of Tri-Cities

HOME PROGRAM

- Program administered jointly with Cities of Richland & Pasco (Tri-Cities HOME Consortium). Richland is the Lead Entity.
- Of the annual funding allocation, Richland first sets aside 25% (10% for administration plus 15% for Community Housing Development Organizations (CHDO) eligible projects).
- Remaining funds are then allocated to each agency.
- Kennewick has historically used their allocation for the Homebuyer Downpayment Assistance Program.
- The rapid rise in home valuation and the scarcity of affordable houses has slowed the number of loans since 2017. Given this, the Consortium will be adding a Tenant Based Rental Assistance Program. The program is in the development stages and will be available in the next few months.

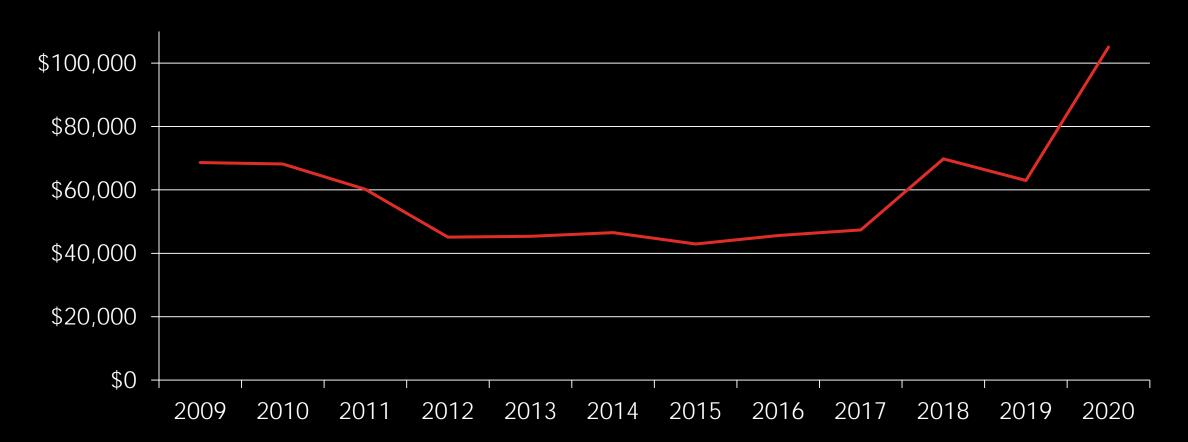


HOME PROGRAM

- Community Impacts since program started in 1999:
 - 572 families assisted with loans
 - Average loan amount is \$8,000
 - \$4,342,800 in assistance provided

HOME PROGRAM

HOME Admin Funds



- Current Challenges:
 - Regulatory compliance with HUD regulations
 - Staff turn-over at HUD, resulting in inconsistency in reviews/approvals
 - Unpredictable entitlement funding amounts and release dates
 - New CDBG Coordinator
 - CARES Act Funding (CDBG-CV) with no additional staff to implement
 - No extensions for 2020 projects even with COVID implications



City Council Meeting Schedule August 2020

City Council passed Resolution 20-08 on June 23, 2020, which temporarily designates the location for regular, special and study session meetings to the virtual location until Benton County enters into Phase Three of the Governor's Safe Start Reopening Plan. The City broadcasts City Council meetings on the City's website https://www.go2kennewick.com/CouncilMeetingBroadcasts.

August 4, 2020

Tuesday, 6:30 p.m. REGULAR COUNCIL MEETING

August 11, 2020

Tuesday, 5:30 p.m. EXECUTIVE SESSION RCW 42.30.110(1)(ii) Pending

Litigation (40 minutes)

Tuesday, 6:30 p.m. WORKSHOP MEETING

1. Parks & Recreation Update

2. Finance Update

3. City Attorney's Office Annual Update

August 18, 2020

Tuesday, 6:30 p.m. REGULAR COUNCIL MEETING

August 25, 2020

Tuesday, 6:30 p.m. WORKSHOP MEETING

1. Ethics Officer Update

2. Fire Department Annual Update