Corvallis Parking Program Audit

White Paper #5: Current and New Technologies

October 2020 (v5)

Prepared for:

City of
Corvallis Oregon

Prepared by:

RICK WILLIAMS CONSULTING
Parking & Transportation

City of
Corvallis Oregon

Contents

City of
Corvallis Oregon

1.0 Executive Summary

Corvallis' parking system does not currently rely heavily on new technology. With only four multi-space meters, most paid parking areas are served by coin-operated single-space meters. While residential parking district permits have recently begun to be processed online, other permits are processed at the Public Works Department. Enforcement makes use of handheld devices to record violation information, but payment and time limit violations are checked manually in the field using pen and paper.

This memo first provides a high-level overview of new technologies that are in use around the country that could potentially provide value in Corvallis, outlining some of the benefits, drawbacks, applicability to Corvallis, and potential vendors and costs. Considering the current state of the system to inform where new technology may play a useful role, prioritized recommendations are provided to help guide Corvallis as it navigates these various parking management technology options.

Key recommendations are listed below with a fuller narrative of the recommendations in **Section 5.0**:

Payment Technology

- **Upgrade to Multi-Space Meters.** Multi-space meters provide users with the flexibility to pay using a variety of methods (credit/debit cards, cash/coins, Apple/Google Pay, etc.), are easy to understand, and help to minimize sidewalk space needed to serve vehicles (compared to single-space meters).

- **Implement Pay-By-Phone Payment Option.** Pay-by-phone is best implemented as an *additional* option alongside multi-space meters. It can be a very useful option for regular users of the system, and for anyone who needs to extend their parking session without returning to a kiosk.

Enforcement

- **Upgrade Enforcement Tools to Facilitate Pay-by-Plate.** Pay-by-phone requires that enforcement officers have the ability to quickly and easily use a vehicle's license plate to confirm payment status. Any upgrades to multi-space meters, pay-by-phone, or electronic permitting should be done in close coordination with enforcement to ensure enforcement personnel have the tools they need.

- **Implement Electronic Permitting.** Electronic permits eliminate the need for hangtags or stickers and tie the permit directly to the vehicle's license plate. Applications and renewals can be done electronically, while enforcement operations are made more efficient (with the right tools).

Real-Time Parking Data

- **Install Off-Street Counter Systems.** Installation of off-street counter systems (e.g. loop detectors or other access point sensors) would be a relatively inexpensive investment that would allow users to assess the availability of off-street public parking (through digital signage and online), reducing the time to search for a parking stall.

City of
Corvallis Oregon

New Mobility

- **Reinitiate and Expand a Bikeshare System.** Pedal Corvallis suspended operations in March 2020, and efforts are currently underway (led by the Corvallis Area Metropolitan Planning Organization) to launch a new system. Incremental improvements in the multi-modal transportation system will help to provide users with a variety of transportation options, minimizing the need to drive and park.

- **Engage with Providers of Shared Mobility Services.** Micromobility companies, such as e-scooter and e-bike providers, often enter towns and cities without prior approval, requiring officials to attempt to regulate after a program has been introduced. Corvallis has passed an ordinance to limit motor assisted vehicles until such time as codes and policies can be crafted to allow such services consistent with community codes, policies, and values. This will allow Corvallis to implement shared mobility services in a manner consistent with lessons learned from other communities. By engaging with providers proactively, Corvallis has the option to set benchmarks and requirements of providers, helping to ensure that if they choose to operate in Corvallis, they will do so in a manner that considers and addresses key community concerns.

City of
Corvallis Oregon

2.0 Introduction

This White Paper is the fifth of seven audits and focuses on various technologies emerging within the parking industry and their relevance for Corvallis' system. The review explores how the City may consider expanding parking management tools over time, including a discussion of feasibility, cost to implement, management, and data requirements.

City of
Corvallis Oregon

3.0 Technology and Trends

This section focuses on new and emerging parking technologies and how they may be applicable or cost-effective in assisting with active parking and/or transportation demand management within Corvallis. The technologies presented in this section are most effective when deployed as part of a parking management program with the resources, staffing, and communication infrastructure already in place to support both their deployment and ongoing maintenance. In other words, while many of the technologies presented have the potential to improve the overall efficiency of certain tasks or data collection methods, this potential can only be realized if adequate resources are devoted to their support. Therefore, all costs should be considered when considering investing in new technologies, including upfront costs, ongoing maintenance, staff education, time and resources needed to update support infrastructure, and public education.

Section 5.0 presents specific recommendations that consider the current state of Corvallis' parking management program and the types of investments that are likely to be most beneficial.

3.1. PAYMENT TECHNOLOGY

Multi-Space Meters

Multi-space meters accept multiple payment options at a single kiosk (typically credit cards, bills[1], coins, pass cards, coupons, and, in some cases, mobile payment such as Apple Pay/Samsung Pay/Google Pay). Multi-space systems typically use one of three format options, which each have advantages and disadvantages for both cities and the users of the system:

Pay-and-Display

In a pay-and-display multi-space meter system, users typically pay for their parking session at a nearby kiosk, and a printed receipt must be *displayed* within their vehicle for the duration of the session. Each kiosk typically serves approximately 8-10 stalls and requires the closest spacing of kiosks due to the requirement that users must return to their vehicle after paying. This is the most commonly used format for multi-space meter systems across the country, and a few nearby examples include Portland, OR (Downtown, Lloyd), Vancouver, WA, Hood River, OR, and Salem, OR.

- **Benefits**
  - **Customer**:
    - Use is intuitive; most customers find directions easy to follow (to date, the most common format for on-street multi-space meters);
    - Physical confirmation of payment;
    - Allows customer to relocate their vehicle to a different parking stall within the same district using the leftover time already purchased.

---

[1] Many jurisdictions choose not to include a bill-taker option due to potential maintenance costs (i.e., jamming).

City of
Corvallis Oregon

- **City**:
  - Allows for confirmation of payment with visual check;
  - Can be used with or without space delineators.

- **Drawbacks**
  - **Customer**:
    - Requires customer to return to vehicle to display payment receipt;
    - Specific location on vehicle to display receipt can be confusing;
    - With no electronic confirmation, there is some potential for receiving a ticket from incorrect display or ticket falling on floor of vehicles, etc.;
    - Extending stay requires customer to return to kiosk and re-display receipt in vehicle.

  - **City**:
    - Paper receipts require ongoing maintenance;
    - Some potential for fraudulent receipts;
    - Some potential for dispute due to incorrect payment display (no parking enforcement verification process);
    - Requires visual inspection of vehicle for payment receipt by enforcement personnel and is not fully compatible with license plate recognition (LPR)-based enforcement (see **Section 3.2** for a more detailed discussion of LPR).

Pay-by-Space

In a pay-by-space multi-space meter system, users typically pay for their parking session at a nearby kiosk using a unique *parking space number*, which can be displayed on a sign or painted on the pavement. Because users are paying for a specific parking stall, they do not need to return to their vehicle to display a payment receipt. This format is more commonly used in off-street applications; however, Washington Park in Portland, OR (which serves the Zoo, Children's Museum, Forestry Center, and Japanese Gardens) uses this format, with space numbers painted in each stall.

- **Benefits**
  - **Customer**:
    - Easy to understand system;
    - Does not require customer to return to vehicle to display payment confirmation;
    - Allows for extension of session from any kiosk without returning to vehicle as a receipt displayed within the vehicle is not required (enforcement officers simply check to see which spaces have active paid parking sessions and which do not).

  - **City**:
    - Each station can cover a larger number of spaces compared to pay-and-display as drivers do not need to return to their vehicle;
    - Does not *require* paper receipt, reducing paper costs and maintenance of printers;
    - Allows for efficient enforcement by monitoring which parking spaces are in an unpaid state without checking each individual vehicle.

City of
Corvallis Oregon

- **Drawbacks**
  - **Customer**:
    - Requires customer to remember specific parking stall before using payment kiosk;
    - Some potential for receiving a ticket due to payment for an incorrect space number;
    - No ability to relocate vehicle using leftover paid time.

  - **City**:
    - Significant maintenance costs to mark and maintain individual stalls (through pavement markings and/or signage);
    - Some potential for dispute due to payment for incorrect space.

Pay-by-License Plate

In a pay-by-license plate multi-space meter system, users typically pay for their parking session at a nearby kiosk using their license plate number. Because their license plate is used by enforcement to confirm payment status, they do not need to return to their vehicle to display a payment receipt. Pay-by-license plate is used by most pay-by-phone applications, such as Parking Kitty in Portland, OR, and is becoming more widely used for kiosk applications as well (as is the case in the NW District and Central Eastside in Portland, OR).

- **Benefits**
  - **Customer**:
    - Does not require customer to return to vehicle to display payment confirmation;
    - Allows for extension of session from any kiosk without returning to vehicle.

  - **City**:
    - Each station can cover a larger number of spaces compared to pay-and-display as drivers do not need to return to their vehicle;
    - Does not require paper receipt, reducing maintenance of printers;
    - Fully compatible with LPR enforcement, allowing for efficient enforcement that can communicate with electronic permitting processes.

- **Drawbacks**
  - **Customer**:
    - Requires the customer to remember license plate before using payment kiosk;
    - Some potential for receiving a ticket from paying for incorrect license plate or entering plate incorrectly.

  - **City**:
    - On-meter signage needed to communicate need to record license plate;
    - Requires enforcement system capable of checking payment status through the use of license plates in real-time.

Each of these multi-space meter options can work with pay-by-phone applications as an additional option for repeat customers. Standalone pay-by-phone systems are often less desirable for users who will only park once or for only a few days in a row such as tourists or visitors from out of town (unless the platform is frequently

City of
Corvallis Oregon

used in other cities and adoption levels are high). Signage and integrated communications systems would need to be implemented to ensure that customers are aware that the pay-by-phone is an option and to guide users on how to establish start-up accounts.

A credit-card only system is usually lower cost, while combination cash and credit-card systems are more costly to implement and manage because cash must be collected and processed manually often. The systems can be hard-wired to electrical infrastructure or solar powered, depending upon the existing electrical infrastructure and amount of sun in designated areas. The solar power option has reduced costs and is highly sustainable in the right environment.[2]

There are a number of vendors in the marketplace, including Parkeon which is currently used by Corvallis for its four on-street multi-space parking meters.

- Vendors
  - IPS Group: https://www.ipsgroupinc.com/
  - T2 Systems: http://www.t2systems.com/home
  - Flowbird Group (Cale: http://www.caleamerica.com/
  - Parkeon: https://www.parkeon.us/)
  - Hectronic: https://hectronic.com/en/solutions/parking/pay/citea/
  - MacKay: https://www.mackaymeters.com/index.php/products/multi-space/
  - Amano McGann: https://www.amanomcgann.com/Category/Display/318

Single-Space Meters

Single-space meters have rapidly evolved from traditional coin-operated meters. Now, single-space meters allow for not only coins, but also credit/debit cards, tokens, and pay-by-phone applications. They can be hardwired into a power source or can utilize solar-power technology. Further, data can be wirelessly networked to a database system to provide real-time information. There are several different models with varying price points and can typically be retrofitted on existing poles. Customers often prefer single-space meters for their convenience, particularly when paired with a pay-by-phone option.

- **Benefits**
  - **Customer**:
    - Able to pay at the parking stall, eliminating the need to seek out a kiosk;
    - Clear visual confirmation that parking has been paid.
  - **City**:
    - Enforcement flexibility, through quick visual inspection or through an online portal that helps direct enforcement officers to unpaid stalls;
    - Allows for phasing in of new technology on older systems with coin-operated meters.

---

[2] These systems have proven highly reliable in Pacific Northwest climates (year-round).

City of
Corvallis Oregon

- **Drawbacks**
  - ■ **Customer**:
    - Visual street clutter within the sidewalk pedestrian amenity space;
    - No ability to relocate vehicle using leftover paid time.

  - ■ **City:**
    - Increased maintenance costs, including increased need to collect coins and service batteries;[3]
    - Can lead to additional enforcement burden if a pay-by-phone system is deployed without fully integrating with the smart meters—enforcement would need to first visually check the meter, and if the session shows as expired, they would then need to check the license plate to check for a payment made through a phone app;
    - Potential for reliability issues simply due to the greater number of devices deployed throughout city.

As with multi-space meters, single-space smart meters can also pair well with pay-by-phone applications, either by requiring the user to enter a specific space number (typically using a sticker placed on each meter) or entering their license plate. Example cities with single-space smart meters include Boise, ID, Colorado Springs, CO, Laguna Beach, CA and Olympia, WA.

- Vendors:
  - ■ IPS Group: https://www.ipsgroupinc.com/
  - ■ Civic Smart: https://www.civicsmart.com/
  - ■ MacKay: https://www.mackaymeters.com/index.php/products/single-space-solutions/mkbeacon/

Pay-by-Phone (Mobile Payment)

Pay-by-phone as a means to pay for parking is typically deployed as an additional option within an existing paid parking system. Systems often offer multiple payment options, either via phone app, website, phone call, or text message. Regardless of the specific method used, the driver typically uses the system to enter their meter number or license plate, enter payment information, and receive confirmation. The user can extend a parking session at any point from their phone without returning to their vehicle (provided they are not overstaying the posted time limit). Generally, a fee is added to the cost of the parking stay, which goes to the mobile payment vendor, assuring the city receives full payment for parking. This means most pay-by-phone programs are cost neutral to the affected city.

Users who frequently park in a city often find these systems very convenient, particularly if using an application that stores both their license plate and payment information, allowing for payment in just a few clicks. Due to the time needed to set up an account, enter a license plate (if required), and enter payment information, however, these systems are typically less convenient for one-time use compared to paying at a parking meter or kiosk. As such, they are currently best suited as an additional feature of a system with other payment options

---

[3] A typical multi-space meter (on-street) maintains one battery to service approximately 8 -10 spaces. Each single space meter has a unique battery. Battery costs can be significant.

available. Some cities have explored the feasibility of rolling out entirely mobile payment-based systems (such as Estes Park, CO), but there are few[4] largescale deployments of *exclusively* mobile payment currently in operation in the U.S.

In Corvallis, a payment application could be compatible with both the single-space coin meters as well as the multi-space meters in downtown. For the user, entering their license plate is likely the most convenient method for use in a mixed system, as this would eliminate the need to enter a specific space number. This approach would require enforcement to check both individual license plates as well as the single-space meters to confirm payment. Although signage and a communication strategy would be needed to ensure that customers are aware that the pay-by-phone is an option, this would be a cost-effective method of enabling customers to pay by credit card (via a phone app) when parking at coin meters without requiring immediate hardware upgrades.[5] Additional equipment for enforcement personnel would be required to ensure they have an efficient means to confirm payments made through the application.
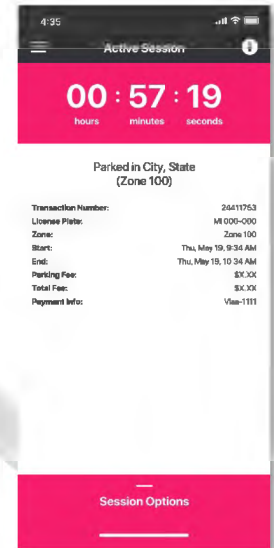
- **Benefits**
  - **Customer**:
    - Able to pay or extend their session from anywhere, eliminating the need to seek out a kiosk;
    - Able to store information to pay efficiently, which is particularly useful for drivers who park in the area frequently.

  - **City**:
    - Able to potentially expand payment options without having to immediately upgrade existing equipment;
    - Potential to pass the system costs on to the user through a use fee;
    - Can work well with other systems that use license plates for payment and/or permitting.

- **Drawbacks**
  - **Customer**:
    - More time consuming to pay if only using the system once or twice;
    - Not all users will have the ability or desire to navigate the system using a smart phone (security concerns, lack of a smart phone, lack of knowledge of apps, etc.);
    - When deployed with coin meters, some users will continue to be unable to pay with credit card.

  - **City:**
    - Potential for reduced enforcement efficiency (depending on existing payment options) if officers must check with the meter/kiosk and the mobile payment application to confirm payment;

---

[4] Buffalo, NY is an example of a municipality with areas of the city with exclusive mobile payment for on-street parking.
[5] The City would need to assess whether a mobile payment option is something users would avail themselves of at a high level. If a low percentage of customers use the mobile option, the limitations of coin-only meters remain.

City of
Corvallis Oregon

- Potential for additional third-party vendor[6] (if not packaged with existing hardware);
- A signage and communication campaign to ensure effective implementation and continued user awareness of program availability will be needed.

Portland, OR deployed Parking Kitty (built on Passport) in 2017 as an additional payment option within a pay-and-display environment (multi-space meters). In this mixed system, enforcement officers must check for pay-and-display receipts in vehicle windows as well as payments made through Parking Kitty by license plate. Over time, they are replacing pay-and-display kiosks with pay-by-plate kiosks to simplify enforcement. Thanks in part to a robust marketing and communications plan, more than 20% of parking transactions were completed using Parking Kitty app within the first year of adoption.

- Vendors
  - Passport: https://www.passportinc.com/product/parking/
  - Flowbird (Parkeon): https://www.parkeon.us/our-solutions/product-catalogue/
  - Pay-by-Phone: https://www.paybyphone.com/

Electronic Permitting

As cities transition to enforcement technology that involves entering license plates to confirm payment (either through handheld devices or mobile LPR technology), it is often cost-effective to also transition to electronic permitting. All permits that were previously issued as stickers or hang tags could instead be linked to a license plate number, allowing officers in the field to quickly scan or enter a plate to confirm a valid permit for the specific zone.

When transitioning from hang tags to electronic permitting, one of the issues to address is the number of license plates that may be served by a single permit. This is one of the key concerns of customers who use a single permit in multiple vehicles. Most electronic permitting systems can be configured to meet the community's needs. As one example, the city could allow users to link several license plates to a single permit but communicate that only one vehicle is valid at a time.

Transitioning away from a paper-based permitting system can save administrative time as well as reduce costs associated with printing, mailing, and/or replacing permits. Initially, adopting electronic permits linked to license plates can take time to establish and communicate effectively to the public, but it is likely to save costs in the long term. A system that makes use of mobile LPR where all payments and permits are linked to license plates should be a long-term goal that can greatly improve efficiency once achieved. Achieving this goal will likely be an incremental process, preceded by other administrative and technological changes within the larger parking program.

---

[6] When system upgrades are made gradually over time with multiple different vendors, it is common to experience compatibility issues between various systems, as each vendor is only responsible for their specific hardware/software package.

City of
Corvallis Oregon

- **Benefits**
  - **Customer**:
    - Able to purchase, pay, renew, modify, cancel, and even dispute tickets in a single online platform;
    - Eliminates the need to come to the Public Works Department in person for permits.

  - **City**:
    - Permits can be processed with reduced staff time and printing costs;
    - Greatly improved enforcement efficiency when paired with mobile LPR (when all other "exceptions" are eliminated that required manual checks);
    - Works best when all other payment systems are linked to vehicle license plates.

- **Drawbacks**
  - **Customer**:
    - There is often some initial resistance when transitioning away from physical permits due to concerns about privacy (how the data will be used), how to transition the permit to a different vehicle, how to handle unique situations with guests, temporary vehicles, etc.;
    - Online permitting systems often shift the burden slightly to the customer to enter information correctly online (license plate, credit card, etc.) and understand all rules and regulation without going to a city office in person.

  - **City:**
    - Potential for additional third-party vendor[7] (if not packaged with existing hardware or software system);
    - Upfront investment of costs and staff time to replace existing permitting processes with all electronic system;
    - May need to provide an initial period of fine forgiveness to smooth the transition while technical issues are addressed.

As an example of this type of system, Oregon State University maintains an online platform for managing permits. In addition to options offered to pay/appeal tickets, track fees, or modify vehicles, when purchasing a new permit or adding a vehicle to an existing permit, the graphic to the right is used to communicate how to properly enter license plate information. This level of clarity is important with license-plate-based permit and payment systems to ensure the user understands how to enter their plate so that they can feel confident they have provided the necessary information.

How to Input Your License Plate:

123 ABC = 123ABC   CL 00000 = CL00000

- Vendors
  - It is highly recommended to add electronic permitting as a service through an existing vendor (LPR enforcement vendor, mobile payment vendor, kiosk vendor, etc.) rather than as a standalone service.

---

[7] When system upgrades are made gradually over time with multiple different vendors, it is common to experience compatibility issues between various systems, as each vendor is only responsible for their specific hardware/software package.

City of
Corvallis Oregon

3.2.   ENFORCEMENT

Mobile License Plate Recognition Systems

Mobile License Plate Recognition (LPR) is an enforcement technology which relies on cameras mounted to enforcement vehicles, allowing the system to automatically scan the license plates of parked vehicles while driving around an enforcement area at roadway speeds. The captured data typically records (at minimum) license plate, timestamp, and GPS location (or block face ID), which allows the system to automatically track how long each vehicle is parked on each block face. When partnered with electronic permitting and license-plate based payment systems, the system can also automatically check for payment status, permit, and other issues such as stolen vehicle, vehicles of interest, outstanding fines, etc.

Mobile LPR can cover a much larger area than a single officer who must either manually enter plates or visually inspect each vehicle, which can greatly increase the efficiency of a single officer in the right context. However, the approach should be considered a "sampling" technique, as field issues will inevitably prevent Mobile LPR from capturing every single vehicle (closely spaced vehicles, blockage from obstructions, erroneous reads, etc.). However, an officer using a mobile LPR system that misses 10% to 20% of vehicles operating in an area with limited traffic is still likely to collect significantly more (perhaps 10x) vehicle observations than a single officer checking each vehicle individually.

In addition to added efficiency, mobile LPR can also increase revenue through improved identification of violations, which, in turn, leads to more efficient parking management. Additionally, it can create a database of observations which can be used to make daily, weekly, monthly, and yearly comparisons (recognizing mobile LPR data represents a sample rather than 100% of vehicle observations).

- **Benefits**
  - Allows each officer to cover a much larger number of parking spaces per shift (increases in efficiency depend on several factors, including levels of traffic congestion);
  - Flexible mounting options allows devices to be configured to smaller vehicles if desired (three-wheel enforcement vehicles, for example);
  - Compared to manual enforcement, capture rate and citation revenue is likely to increase.

- **Drawbacks**
  - Significant error/miss rate means route data should be treated as a "sample" rather than 100% observation set along a route, which means the data is not reliable for turnover studies;

City of
Corvallis Oregon

- May require supplemental officer on foot checks to ensure patterns of missed reads do not lead to systematic abuse by users who take note of the limitations of the system or other enforcement patterns[8];
- Costs to set up system, calibrate and maintain cameras, train officers, troubleshoot issues as they arise, etc.;
- Likely need an ongoing maintenance contract with the vendor.
- May require development of data usage and retention policies to communicate to the public how the license plate data will be used[9]; some additional administrative time to respond to data requests.
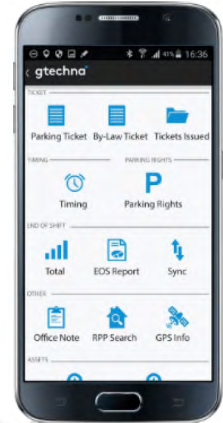
Given both the upfront and ongoing costs of LPR, it is important to consider how the various other parking technologies will work with the LPR system (and vendor) selected. When investing in LPR, the greatest efficiencies can be achieved when all systems are gradually migrated to a license plate-based approach (including payment systems, permit systems, etc.). In other words, LPR should be considered an integral part of the overall parking management structure rather than simply an enforcement tool.

- Vendors
    - Passport: https://www.passportinc.com/lpr-product-details/
    - Gtechna: https://gtechna.com/
    - Schweers: http://www.schweers.com/

Handheld License Plate Recognition System

While mobile LPR requires specialized cameras that are mounted and calibrated according to technical specifications (ensuring effectiveness when traveling at roadway speeds), handheld LPR refers more broadly to using license plates as a unique identifier in all enforcement observations. Fixed cameras (at parking lot/garage entry/exit points), specialized handheld LPR devices, or LPR software loaded onto phones/tablets that make use of the device's built-in camera can all work together on the same platform. When considering a transition to license plate-based enforcement (payments, permits, etc.), selecting a vendor that integrates the entire system is a key consideration.

Handheld LPR can serve either in partnership with mobile LPR, or as an initial step in upgrading specialized handheld enforcement equipment. If license plates are scanned (or entered manually when needed) as part of every vehicle observation, license plate-based payment and permitting systems can be phased in over time.

- **Benefits**
    - Link all observations to a license plate, GPS location, and timestamp, allowing more license plate-based management over time.

---

[8] Frequent users of a parking system, particularly those who park daily, often are able to note enforcement patterns, and observant users may be able to pick out specific parking areas that are systematically missed by enforcement systems.

[9] For example, OSU maintains a "LPR Data Collection and Privacy Policy" on their website, indicating that all records are purged every 30 days, and registered users may request a report detailing what, if any, records exist for their vehicle in the OSU LPR system.

- Flexible software structure that can be applied in a variety of contexts using a variety of hardware (including existing tablets or phones).
- Potential to partner with mobile LPR to focus on vehicles or block faces not easily captured using a vehicle-based system.

- **Drawbacks**
  - Although the scan function saves time entering license plates, the overall time needed to log individual vehicle observations by hand may not change significantly (depending on current approach).
  - May require overhaul of entire enforcement system to adopt new processes.

A Note on "Electronic Chalking"

Some vendors of handheld enforcement devices will promote their ability to electronically chalk tires by having the enforcement officer take a picture of a tire to monitor the valve stem position. While the approach can be somewhat effective in checking to see if a vehicle has moved and returned to the same location since the last observation, it is not error-proof (at least 5-10% error rate). It also adds an extra step in each vehicle observation and is likely to result in at least some percentage increase in challenges to citations.

If tire chalking was a practice previously used to determine if a vehicle moved between observations, it is highly recommended that this process be replaced with simply recording the license plate, timestamp, and blockface ID (which can be done automatically with any handheld LPR device), and update the City's code language if needed to prevent reparking on the same block face (or block, or within a set distance, etc.). Allowing a driver to depart and return to the same parking space (or block face) to extend the parking session is extremely difficult to track from an enforcement perspective and does not promote true turnover as intended by time limits. Clear code language that indicates a vehicle may only park for the time limit specified on the block face (or other area) once per day (or once every 4 hours, etc.) prevents the need to monitor the valve stem position through electronic chalking or other means.

In general, enforcement practices are most effective when they serve key parking management priorities, such as promoting turnover, and valve stem tracking often reduces the efficiency of each enforcement officer without providing much benefit in service of promoting turnover.

- Vendors
  - Passport: https://www.passportinc.com/lpr-product-details/
  - Gtechna: https://gtechna.com/
  - Schweers: http://www.schweers.com/
  - T2: http://www.t2systems.com/solutions/enforcement
  - Flowbird (Cale): http://www.caleamerica.com/

3.3.   REAL-TIME PARKING DATA

Collecting parking occupancy data in real-time and sharing the data publicly can:

City of
Corvallis Oregon

- Improve customer satisfaction,

- Reduce congestion associated with vehicles searching for parking,

- Redistribute demand between higher and lower demand areas,

- Build a robust database of parking data which can be used for more effective parking management practices (e.g., parking pricing adjustments, time limit adjustments, and additional enforcement), and provide a continuous stream of parking duration of stay data; a valuable tool for enforcement.

This section first addresses the current options available for collecting real-time availability, and then discusses the ways in which this data can be shared in real-time with users through dynamic signage, applications/websites, or overhead lighting.

3.3.1.   Parking Data Collection Technologies

Wireless Parking Space Sensors

- **Uses**: On-Street (primarily)

Wireless parking sensors are most commonly applied in on-street environments or, in limited applications, where it is not feasible to track vehicles entering an existing off-street lot or garage.

To collect real-time data using this method, a sensor is installed in each individual parking stall using either an in-ground sensor (requiring drilling into the pavement during installation) or a surface-mounted one. Some vendors also offer a sensor that utilizes directional radar, which can be mounted anywhere near a parking stall (such as on the pole of single space meters, or overhead). In each type of application, data is communicated wirelessly, and the built-in batteries are intended to function continuously for several years. The sensors function by detecting when a vehicle is present and communicating to a central server that the space is occupied and the duration of the parking event.

The most common issues that should be discussed with vendors prior to installation include sensor accuracy, detection and transmission latency (i.e., delays in transmission), interference from other electrical sources, the ability to handle all types of spaces (parallel, diagonal, and perpendicular) and all types of vehicles (motorcycles, oversized trucks, etc.), and perhaps most importantly, reliability. Presently, the single greatest obstacle to wide adoption of sensors is life-cycle cost, as sensors have both substantial upfront and ongoing per-space costs. Additionally, weighing the potential benefits of space detection (customer satisfaction, system efficiencies, additional data, etc.) cannot always clearly and directly offset the installation and maintenance costs in either small or large scale applications. However, that dynamic may become clearer over the next few years as additional case studies emerge.

City of **Corvallis** Oregon

- **Benefits**
  - **Customer**:
    - Data collected at the individual stall level provides the greatest amount of detail regarding parking space availability when shared with mobile apps;
    - Almost invisible to the user with little to no street clutter.

  - **City:**
    - Wireless approach allows for rapid installation (some vendors promote install times of 30 seconds per stall, even for in-ground sensors);
    - Individual stall data can automatically trigger overstay violation alerts to enforcement officers for improved enforcement efficiency;
    - Collects space occupancy and duration at the individual stall level, which can be rolled into reports at the block face or area level with statistics such as average occupancies, average duration of stay, and violation rates.

- **Drawbacks**
  - **Customer:**
    - Potential for confusing and erroneous data when sensors malfunction or do not report stall availability accurately.

  - **City**:
    - Requires striping of each individual stall to ensure vehicles park over only one sensor.
    - Ongoing maintenance and reliability concerns that often need to be addressed rapidly when the data is made publicly available;
    - High cost option when factoring in ongoing maintenance;
    - Large amount of data will only prove valuable with in-house or contracted support to process and interpret the data;
    - No unique vehicle information is collected (license plate, make, or model), so data such as a "repark movements" cannot be tracked using this approach.

Although sensors are often high cost with maintenance and reliability issues[10], there are several case studies around the country about using the technology on-street[11]. It appears the sensors can be deployed rapidly with multiple vendors available. However, there is no clear data or case studies to suggest that such systems have increased on-street customer trip activity, resulting in revenue generation necessary to cover the cost of the technology.

---

[10] San Francisco, CA deployed 8,200 on-street sensors in 2011, and a detailed description of the reliability issues and review of the sensor performance can be found at: http://sfpark.org/wp-content/uploads/2014/06/docs_sensorevaluation.pdf
[11] Los Angeles, CA, Washington, DC, Fort Collins, CO, Columbus, OH, El Paso, TX, Santa Monica, CA and Westerville, OH have on-street sensors, and Colorado Springs, CO and Leavenworth, WA are in the process of installing sensors (as of May 2020).

City of
Corvallis Oregon

- Vendors
  - Nwave: https://www.nwave.io/smart-parking-sensor/
  - CivicSmart: https://www.civicsmart.com/vehicle-detection-sensors
  - Nedap: https://www.nedapidentification.com/products/sensit/
  - Fybr: https://www.fybr.com/smart-city-platform/parking/

Camera-based Parking Space Detection

- **Uses**: On-Street or Off-Street

Camera-based systems are rapidly emerging as an alternative to individual space sensors, as a single camera can cover many parking spaces. A camera-based approach can be used either on-street or within off-street lots. The approach makes use of automated processing techniques built on artificial intelligence to determine when a vehicle has parked, in which stall, and for how long. In this application, the camera does not need to have a view of the license plate, as artificial intelligence is able to identify each vehicle as "unique" without having to rely on a specific unique ID, such as a license plate.

While the approach has the potential to provide an alternative to hardware installed in or above each individual parking stall, the technology is still emerging and primarily deployed in surface lots where the types of parking events (and human behavior) are more limited.[12] Camera obstructions (large vehicles blocking small vehicles, for example), variable vehicle types, and unexpected behavior (such as illegal parking). may limit the reliability of these systems, particularly when applied in complex on-street environments.

- **Benefits**
  - **Customer**:
    - Data collected at the individual stall level, providing the greatest amount of detail regarding parking space availability (when shared with parking apps/signs/guidance systems);
    - Almost invisible to the user with little to no street clutter.
  - **City:**
    - Does not necessarily require each on-street stall to be striped;
    - Potential for lower cost than sensor technology, depending on area covered by each camera;

---

[12] In off-street formats, it may still be more cost effective to use entry/exit lane counters, particularly if occupancy is the key metric a city intends to measure.

City of
Corvallis Oregon

- Individual stall data can automatically trigger overstay violation alerts to enforcement officers for improved enforcement efficiency;
- Collects space occupancy and duration at the individual stall level, which can be rolled into reports at the block face or area level with statistics such as average occupancies, average duration of stay, violation rates, etc.;
- Video feed can be used to confirm overstay violations or check for unexpected reports or inconsistencies when they arise (fewer vehicle counts than expected, etc.).

- **Drawbacks**
  - **Customer:**
    - Potential for confusing and erroneous data when cameras do not report stall availability accurately.

  - **City**:
    - Large amount of data will only prove valuable with in-house (or contracted) support to process and interpret the data;
    - No unique vehicle information is collected (license plate, make, or model), so data such as "repark movements" cannot be tracked using this approach.

In Corvallis, a camera-based approach could be deployed across the Downtown, both on-street and in the off-street lots in Downtown. With a camera-based approach, maximizing the number of stalls visible from a single camera helps to save costs, meaning on-street parking areas with only a few metered stalls (around the University, for example) may come with a higher cost per stall.

- Vendors
  - MiStall: https://mistall.com/
  - Parking Detection: https://www.parkingdetection.com/

Access Point Sensors

- **Uses**: Off-Street Only

Unlike in complex on-street environments, most off-street facilities have very few entry and exit points, making them ideal areas to keep a running tally of occupancy based on vehicle entry and exit counts. Smart sensors (either embedded into speed humps or directly in the roadway surface) can count each individual vehicle as they enter and exit the facility. If there are no other ways to access the lot and the total space count is known, the number of spaces available can be calculated in real-time using this low-cost approach. Alerts can be provided to drivers (either through signage or through a mobile application) when a facility is known to be full or close to full.

City of
Corvallis Oregon

For parking managers, the data can provide accurate reports about entry and exit volumes (and therefore continuous occupancy information for the full facility). However, the approach does not provide data about individual parking sessions (such as duration of stay) or vehicle information (license plate, permit information, etc.). If this type of information is desired, then "sensor" or camera technology formats are better options.

- **Benefits**
  - **Customer**:
    - Data is highly reliable compared to other methods that may falsely show an open parking space;
    - Does not collect any information about each individual vehicle, minimizing privacy concerns.
  - **City:**
    - Most common form of vehicle occupancy information collected in off-street formats, a long-used industry standard;
    - Very cost-effective approach for real-time off-street occupancy information;
    - Data can be programmed to only report in tiers, such as "close to full" or "full," minimizing the need to maintain perfect accuracy at the individual stall level;
    - Provides additional information about how vehicles access facilities (when there are multiple entry points) that is not possible to do with sensors.

- **Drawbacks**
  - **Customer:**
    - Does not provide navigational assistance to individual stalls.
  - **City**:
    - Costs increase when there are multiple entry and exit points;
    - May require installation of a physical barrier between entry and exit lanes to ensure accurate counts;[13]
    - When an off-street facility has several parking stall types (time limited, permit only, etc.), the system cannot provide data about which types of stalls are available[14];
    - Incorrect reads can lead to systematic under or overreporting of occupancy until the system is reset or recalibrated;
    - The data cannot be used to track duration of stay, repark movements, or any unique vehicle information (such as license plate).

As an example, in Corvallis, this type of system could be used to continuously measure occupancy in the 5th and Madison lot by installing detectors at the 5th Street access point and the Madison Avenue access point. Or, as an

---

[13] This is called "slotting" a vehicle. This is usually accomplished by creating separated lanes (e.g., traffic islands) that ensure that entries and exits are valid and certified. A common element of such systems are traffic spikes in exit lanes to discourage wrong way entries. Without such slotting, some vehicles may attempt to enter an exit (or vice versa) contributing to inaccurate counting. Gated entries and exits (with in-lane loop detectors) are also a form of vehicle slotting.

[14] Unless additional access point sensors are added to internal areas that contain specific parking stall types.

City of
Corvallis Oregon

alternative to the Madison Avenue access point, sensors could be installed on Madison Avenue itself (one at 5th Street and one at 6th Street) to also capture occupancy on the metered block of Madison adjacent to the lot.

- Vendors
  - Parking Logix: https://parkinglogix.com/

License Plate Recognition

- **Uses**: Off-Street Only

If duration of stay and user type is also of interest in off-street facilities, fixed LPR can be installed at each access point. The system would function by counting each individual vehicle as it enters and departs the facility, and store the vehicle's license plate in order to measure the duration of stay and any other relevant information linked to the license plate (permit, paid status, etc.). Depending on the size of the facility, this approach also has the potential to be more cost-effective than monitoring each individual stall while still providing duration of stay information. Additionally, when combined with electronic permitting and/or pay-by-plate, manual enforcement patrols could potentially be eliminated and replaced with on-demand enforcement (automatic alerts sent when violators are detected) or 100% automatic enforcement with citations issued and mailed automatically.

LPR is typically most reliable when traffic is funneled through specific travel lanes, ensuring the license plate of each vehicle passes through the field of view of the camera. In surface lots without access control, it may be necessary to install lane dividers to ensure vehicles enter and exit the facility in predictable ways.

- **Benefits**
  - **Customer**:
    - Potential for privacy concerns by continuously recording license plates;
    - When combined with other license plate based data (such as pay-by-plate and electronic permitting), there is some potential to communicate the types of stalls available in real time in a mixed off-street facility (metered stalls, permit stalls, etc.).

  - **City:**
    - Depending on the size of the facility, likely the most cost-effective method to collect continuous occupancy *and* turnover data in a specific off-street area;
    - Data can be programmed to only report in tiers, such as "close to full" or "full," minimizing the need to maintain perfect accuracy at the individual stall level;
    - Potential to reduce enforcement costs by eliminating the need to include some off-street facilities from regular routes;
    - Provides additional information about how vehicles access facilities (when there are multiple entry points) that cannot be measured at each individual stall.

- **Drawbacks**
  - **Customer:**
    - Does not provide navigational assistance to individual stalls.

City of
Corvallis Oregon

- ■ **City**:
  - Costs increase when there are multiple entry and exit points;
  - May require installation of a physical barrier between entry and exit lanes to ensure accurate counts;
  - Incorrect reads can lead to systematic under or overreporting of occupancy until the system is reset or recalibrated;

In reference to the 5th and Madison lot (example above), the installation of LPR cameras at each access point may only be a cost-effective approach if they eliminate the need for enforcement, and all permits and payment options are shifted to an electronic, license plate based system. This would allow the system to pay for itself over many years. These types of systems are generally more cost-effective in large garage applications.

- Vendors
  - ■ Passport: https://www.passportinc.com/product/parking/
  - ■ Flowbird (Parkeon): https://www.parkeon.us/our-solutions/product-catalogue/

3.3.2.   Guidance and Wayfinding Systems

Collecting real-time parking information has several potential benefits for both parking management and enforcement applications. However, for the traveling public, the single greatest benefit of collecting real-time data is the ability to help direct drivers to blocks or parking lots with available parking. This section highlights the various ways real-time data can be shared with the end user in real time.

Dynamic Signage

The most common way real-time data is communicated to users is with dynamic signage (either within the public right of way or within large off-street facilities). Portland, OR, Seattle, WA and San Jose, CA are good examples.

Real-time parking availability information can be displayed on customized digital boards/blade signs at the building entry plazas or at remote locations to downtown (such as along major roadways). The signs provide guidance information (an address or facility name) and information on real-time stall availability.

Such systems have been extremely effective both from a traffic/congestion point of view and in terms of stall management. Customers find the systems to be highly useful and "customer friendly." Not including the real-time data systems discussed in previous sections, digital signage costs can range from $10,000 for on-site signage to $25,000 or more for signage off-site, within the right-of-way.

City of
Corvallis Oregon

Programs that are the most successful tie into a parking "brand." This brand is incorporated into both the on-site signage and the rights-of-way signage. This provides customers a visual cue that translates from their first encounter in the roadway to being able to conveniently identify a parking location. For instance, Portland (SmartPark) and Seattle (e-Park) have rolled out this type of branding link.

Dynamic signage is almost exclusively used to direct drivers to available off-street parking facilities. Although real-time on-street parking data could be displayed on dynamic message signs, this is typically not a practical application due to the number of signs that would be needed.

Mobile Applications / Online Mapping

While dynamic signs are fixed and visible to anyone traveling along the route, the amount of data they can quickly communicate is very limited. For large systems with both on-street and off-street real-time data, a mobile application or online map is likely the only reasonable way to communicate where drivers can expect to find parking across a large area. As an example, real-time parking heat maps can show parking availability by color coding, either by individual space, by block, by facility, or by area. Drivers that can quickly glance at a map to determine where to park are much less likely to spend time circulating, reducing emissions, traffic congestion, and driver frustration.

Vendors of the real-time parking data collection tools discussed above will also have a variety of options available for reporting the data to the public. Data ownership is an important consideration before entering into any license agreement. To ensure the greatest amount of flexibility over time, cities may wish to anonymize the data and provide free public access to a real-time data feed that can be accessed by all types of users and software developers. This helps ensure all users have access to the data (not just users who download a specific app, for example) and can maximize distribution of the information. Parking data that is only available through the vendor's parking app may have less utility than a data source that can be used by a wide variety of technology providers in creative ways.

Below are a few examples of how cities of various sizes display available real-time parking information in a web-based map. Many cities also have a city-specific mobile application, which requires the user to download and install the app.

- Estes Park, CO: https://estes.mpark.io/Map
- Seattle, WA: http://web6.seattle.gov/SDOT/seattleparkingmap/
- Madison, WI: https://www.cityofmadison.com/parking-utility/garages-lots/current-hourly-parking-availability
- Washington Park, Portland, OR: https://www.portlandoregon.gov/transportation/widgets/washington_park.cfm

City of
Corvallis Oregon

- Newark, DE:
  https://www.arcgis.com/apps/webappviewer/index.html?id=2db339cc672a49cf84dfe0d57503f255

3.4. NEW MOBILITY

Parking demand is directly linked to the modes of travel people choose to use when accessing their destination. Advances in mobility technology are rapidly expanding the number of options available to each individual when they decide how to travel, and each of these new mobility technologies has the potential to impact overall parking demands. Although Corvallis does not have the ability to control all aspects of how new mobility companies use the public right-of-way, understanding the potential tradeoffs and implications related to parking demand are important considerations for any parking management program in this emerging landscape.

To help inform these decisions, the following section defines various types of emerging shared mobility tools and how they may impact the demand for curb space moving forward. In many of these examples, the availability of these services will be driven entirely by the private sector, with individual companies making the determination of whether they will be able to operate profitably within the Corvallis market. This list is intended to be a reference for when companies approach Corvallis to discuss operating within the city. However, it is important to note that mobility technologies are rapidly evolving, and this list likely does not reflect a full sample of available options.

It is also important to note that this list focuses on emerging technologies and does not include "traditional" alternative transportation options, such as taxis, carpool matching services, fixed-route local bus service (including service to park-and-rides), or intercity bus/train service. These modes also play an important role in helping to reduce the need for vehicle ownership.

On-Demand Car Rentals

- **Description**: Whether commercial or peer-to-peer[15], these types of car rental companies allow users to easily rent a vehicle when needed. Users are responsible for the vehicle (and paying for parking, etc.) for the entire time they have the car rented, until they return it to its original location.

Examples
- Zipcar
- Getaround

- **Potential Parking Impacts**: _Largely negligible_ in commercial areas as they function as a private vehicle for the entire rental period. There is a potential to reduce residential parking demands for users who would prefer not to own a vehicle but would like to have easy access to a vehicle when needed.

---

[15] Peer-to-peer refers to services that match individuals together; Getaround, for example, is a service that matches individuals looking to rent a car with another individual willing to rent their vehicle to someone for a short-term period.

City of
Corvallis Oregon

Free Floating Car Share[16]

- **Description**: Unlike on-demand car rentals, free-floating car share is primarily intended for *one-way* service, where a user unlocks a vehicle with their phone, drives to their destination, and parks in a public location. Once they end their session, the vehicle is available for another user.

- **Potential Parking Impacts**: *Potential to reduce parking demands in commercial corridors* as the time each vehicle remains parked is reduced when shared among many users.

Examples
- ShareNow (Car2Go / ReachNow)
- GIG Car Share
- Evo Car Share

Transportation Network Companies (TNCs)

- **Description**: TNCs, or ridehailing services, connect drivers and passengers on-demand through mobile applications. They function very similar to taxi service, with additional benefits such as lower barriers to come a driver and surge pricing to incentivize additional drivers during peak times. The ease of use of the applications have led to widespread adoption.

- **Potential Parking Impacts**: *Potential to reduce parking demands in commercial corridors* if the individual opts to not drive when departing home, feeling they will have a reliable ride home through ridehailing service or other mode.

Examples
- Uber
- Lyft
- Curb

Station-Based Bike Share

- **Description**: Docked bikeshare systems provide users with on-demand access to bicycles at specific stations installed around a metropolitan area, facilitating one-way usage of bikes and enabling users to combine bike share with other modes (transit, ridehailing, free-floating car share, etc.).

- **Potential Parking Impacts**: *Potential to reduce parking demands* when provided in locations with multiple other mobility options, such as a robust public transit system. The availability of other modes mitigates concerns about using bikeshare to get home if there are, for instance, changes in weather, lack of an available bike, or other unforeseen factors.

Examples
- Zagster
- B-Cycle

---

[16] Current free-floating car share companies focus exclusively on very large metropolitan areas to ensure adequate usage. In the examples given, only GIG currently operates within the U.S. (ShareNow has ceased operations in North America).

City of
Corvallis Oregon

Free Floating Personal Micromobility

- **Description**: Micromobility refers to small, lightweight, electric mobility devices such as e-bikes and e-scooters that operate as part of a shared fleet. Micromobility devices allow for point-to-point travel, but unlike station-based bike share systems, do not require users to start or end sessions at specific locations.

- **Potential Parking Impacts**: *Potential to reduce parking demands* when provided in locations with multiple other mobility options.

Examples
- Lime
- Bird
- Razor
- Jump

City of
Corvallis Oregon

4.0 Existing Conditions

Corvallis' current parking technology falls in line with many similar-sized Pacific Northwest municipalities. The City has done a good job of maintaining a multifaceted parking system (meters, time stays, free parking, off-street permit, residential permits). Multi-stall payment kiosks are some of the most recent technology within Corvallis, though at a very small scale. Below is a review of the different components of the current parking system in the city.

4.1. PARKING PAYMENT

Single-Space Meters

There are 719 metered (pay-to-park) stalls in Corvallis—in downtown, along NW Monroe Street, and on portions of NW and SW 15th, and NW 16th Streets. Most meters in the downtown are dated coin-operated meters manufactured by POM and were installed in 2010.

Payment Kiosks

There are four pay stations; two located on First Street between Van Buren and Monroe, one on Washington Avenue, and one at the Corvallis Benton County Public Library. Each station serves between 30 and 48 stalls.

The payment kiosks are manufactured by Parkeon. The payment kiosks accept credit cards, thus making it more convenient for users. These stations are either 2-hour or 10-hour time limited stalls. Meter rates vary, with a maximum rate of $1.50 for the 10-hour stalls.

The payment kiosks initially cost $6,717 per station. Ongoing costs associated with these machines include $57 per machine per year for software management, as well as $0.35 per credit card transaction. There is no maintenance agreement in place.

4.2. PARKING PERMITS

The City of Corvallis issues parking permits for different uses within the City. All permits listed below require some form of printed sticker or hangtag, and are not currently set up for electronic permitting and enforcement.

The following is a high-level overview of the permits, however, previous white papers provide a more detailed assessment of these programs. For more information about each permit, refer to the white paper listed in the section.

City of
Corvallis Oregon
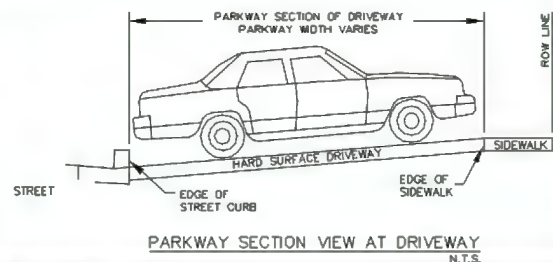
Residential Parking District Permits

Corvallis' Residential Parking Permit District (RPD) program was started in 1982. There are currently three Residential Parking Permit Districts. Each residence address is allowed a maximum of three permits, which are valid for one year (Sept. 1st – August 31st) at a cost of $25 each.

The permits are stickers that '*must be attached to the left rear bumper or the lower left corner of the back window of the vehicle. Parking enforcement will issue a citation if it is not displayed in one of these two locations.*' The process of obtaining a permit sticker is done in-person at the Public Works Department or online via the City's website.

For more information, refer to **White Paper #1: Residential Parking Districts**.

Parkway Parking Permits

Parkway permits allow property owners or residents the ability to legally park in the parkway (the driveway section between the street and the sidewalk). The cost for a parkway permit is a one-time $25 fee and the permit is non-refundable and non-transferable. The City inspects the area first to ensure that a vehicle can completely fit within the parkway.

PARKWAY SECTION OF DRIVEWAY
PARKWAY WIDTH VARIES
ROW LINE
HARD SURFACE DRIVEWAY
SIDEWALK
STREET
EDGE OF STREET CURB
EDGE OF SIDEWALK
PARKWAY SECTION VIEW AT DRIVEWAY
N.T.S.

The process to obtain a permit requires an individual to bring the permit application and the $25 fee to Public Works. The City's inspection of the space occurs within 14 days of the application submission. Once issued, the property owner or resident displays a hanging permit from the vehicle's rearview mirror. The permit can be transferred between multiple vehicles owned by the permit holder. Therefore, enforcement is not linked to a particular vehicle, but rather if the permit is present and the vehicle fits fully within the parkway.

10-Hour Meter Permits

Approximately 20% (255) of the on-street downtown parking stalls are metered 10-hour stalls which can also be used by permit holders. Anyone, including employees, can purchase a permit. The cost is $28 for one month, $83 for three months and $303 for one year. The process to obtain a 10-hour permit requires an individual to physically go to Public Works. The permit is issued as a hangtag with a date valid until it becomes expired (see image to the right).

For more information, refer to **White Paper #3: Parking Format & Management of the Downtown Parking System**.

City of
Corvallis Oregon

Yellow and Purple Parking Lot Permits

The permits for the Yellow and Purple Parking lots are also issued at Public Works. Individuals must apply in-person for their initial permit. Subsequently, renewal notices are sent to home addresses and permit holders can mail in the permit fee. Permit fee must be paid quarterly. Public Works offers a 10% discount to those who pay for a full year in advance. If permit holders drive a different car on occasion, a duplicate permit can be purchased for $5 per quarter. Permit fees for the Yellow Lot are $75/quarter or $270/year, while the Purple Lot is $60/quarter or $216/year.

For more information, refer to **White Paper #3: Parking Format & Management of the Downtown Parking System**.

4.3.   ENFORCEMENT TECHNOLOGY

The section below outlines the current enforcement technologies utilized by the City of Corvallis. A more in-depth review of the enforcement operations and protocols will be presented in White Paper #6: Enforcement.

Permit Confirmation

Currently, permit enforcement is either part of routine patrol or prompted by a user contacting the City. In both instances, a Parking Enforcement Officer issues the appropriate citation (invalid/missing permit, incorrect permit location on vehicle, incorrect permit in district, etc.) manually, using a handheld device and GTechna software. This manual effort is also for all time-limited areas outside of the metered stalls.

A database of all Residential Permit District permit holders is also maintained by Public Works. As vehicles are checked for violations, the GTechna software communicates with the database to validate permit holders.

Payment Confirmation

The City collects daily vehicle transaction data on the four pay stations. Vehicle stall information and the time of day is recorded. Enforcement can determine payment confirmation of these stalls. However, for the single-head meters, the enforcement process is manual, visually checking if the payment has expired.

Time Limit Enforcement

Like enforcement of the Residential Parking District permits, time limit enforcement is tracked manually using pen and paper to track the duration of stay of each vehicle. Officers issue citations electronically using handheld Android powered phones through GTechna software. The citations are printed via a portable Bluetooth printer and electronically transmitted to the Municipal Court through the GTechna software.

Citation Payments and Challenges

A user can pay for parking citations online by simply typing in the citation number on the Municipal Court's website (https://www.municipalonlinepayments.com/corvallisor/court/search). The system is straightforward

City of
Corvallis Oregon

and does not require in-person interaction, so this online application is convenient for users and is integrated with the software program.

If a person wishes to contest a ticket, then that person must contact the Corvallis Municipal Court.

4.4. DATA COLLECTION AND REAL-TIME PARKING DATA

The last parking data collection effort completed for the City of Corvallis was conducted in 2015. Prior to that effort, the last robust parking data collection effort was completed in 2001.

With significant changes to parking options, land use, population, and transportation services, refreshing parking inventory and actual use dynamics is a central recommendation and critical to determine strategic recommendations and applicable technology updates.

Moving to bi-annual data collection of the on- and off-street systems will allow for objective data from which decisions can be made to improve parking conditions, support the adjacent land uses, and mitigate user conflicts. As stated in preceding white papers, routine data collection is paramount to ensuring the parking system is consistently managed to its highest and best use. It is a foundational element of a parking management program.

Corvallis does not currently have the ability to use real-time parking data as most paid parking stalls are served by individual coin-operated meters. Transactional data from the multi-space payment kiosks is collected daily and can be used to estimate occupancy rates for the stalls served by the kiosks. However, with only four payment kiosks, this data is a small sub-set of a larger parking system. As the City investigates and implements new technologies, real-time parking data can be harnessed, including user data (payment kiosks transactions, sensor technology, camera technology) or enforcement data (license plate recognition software). Using real-time data can create a larger, more robust data set from which rates can be refined (by area, block, blockface) and marketing/communication can be streamlined. However, implementing real-time data collection tools should only be considered if staff time is dedicated to processing, analyzing, and communicating the data to the public. Further, real-time data is not a necessary component of a data-driven parking management program as performing periodic parking surveys (annually or bi-annually) is considered an industry-best practice approach to obtaining parking data.

City of
Corvallis Oregon

4.5. SHARED MOBILITY

Tools and technologies that facilitate shared mobility are rapidly evolving, progressively expanding the number of transportation options available to each individual when they decide how to travel when they leave home. Each new mobility technology has the potential to impact overall parking demand and change the demand for curb space moving forward. The platforms and mobility tools discussed in the following section provide Corvallis residents with alternative transportation options, reducing the perceived need to own and drive a car. While the list on the following page focuses exclusively on *shared mobility technologies*, it is important to note that these tools work in partnership with more traditional alternative transportation options, such as fixed-route local bus service (including service to park-and-rides), taxis, vanpools, carpool matching services, or intercity bus/train service. Additionally, infrastructure for active transportation also plays a key role in facilitating mode shift, which can include multimodal trails, bike lanes, bicycle parking facilities, and general streetscape investments to make walking and biking a safe and attractive option. Collectively, shared mobility tools, traditional alternative transportation services, and active transportation infrastructure all work together and play an important role in helping to reduce the need to drive or own a vehicle, in turn reducing the demand for parking.

For context, below is a list of helpful resources regarding existing alternative transportation options in an around Corvallis. These service providers, active transportation programs, and commuter resources will continue to play a critical and expanding role as shared mobility options emerge and expand.

- Benton Area Transit: https://www.co.benton.or.us/publicworks/page/county-public-transportation-services
- Corvallis Transit System: https://www.corvallistransit.com
- Boltbus: https://www.boltbus.com/
- Flixbus: https://www.flixbus.com/
- Amtrak (Albany, OR): https://www.amtrak.com/
- Valley VanPool: http://www.cwride.org/sectionindex.asp?sectionid=7
- Get There Oregon: https://getthereoregon.org/
- Cascade West Transportation Options: http://www.ocwcog.org/transportation/cascades-west-transportation-options/
- List of Regional Park and Ride Lots: http://www.ocwcog.org/transportation/park-and-ride/
- Safe Routes to School Information: http://www.ocwcog.org/transportation/safe-routes-to-school/
- Visit Corvallis Biking Information: https://www.visitcorvallis.com/articles/hiking-and-biking-in-corvallis-oregon

City of
Corvallis Oregon

On-Demand Car Rentals

Zipcar operates 3 vehicles in Corvallis, providing on-demand car rental service for anyone 18 years old or older with a valid driver license. Once a member of Zipcar, cars can be reserved for the hour or by the day. The hourly rate is $7.50 which includes insurance, gas and up to 180 miles of driving per day.

Annual membership rates for community members are $70. Oregon State University students, staff or faculty are eligible for annual memberships for $15.

Zipcar locations include:
- ❖ 220 SW Jefferson Way
- ❖ 1600 SW A Ave
- ❖ 1220 SW Jefferson Way

Zipcar's agreement is with Oregon State University and began in 2016 with four (4) vehicles. The number of vehicles can increase or decrease by mutual agreement; there have been as many as six (6) vehicles. The vehicles are parked in highly visible on-street stalls on the Oregon State University Campus and are leased at an annual market rate (in 2016, the annual rate was $278 per stall). Zipcar is responsible for all maintenance and customer service in exchange for Oregon State's marketing/promotion to incoming students who are likely to use a carsharing service.

Transportation Network Companies (TNCs)

Ridehailing companies, such as Uber and Lyft, were allowed to begin operating in the City of Corvallis in 2017. Municipal Code Chapter 8.07 – Rideshare and Taxicab Services – outlines the license and insurance requirements, operational procedures, applications, fees, etc. Now in their fourth year of operation, ridehailing companies offer another convenient means to get around Corvallis, particularly for students and those without easy access to a vehicle.

Station-Based Bike Share

Oregon Cascade West Council of Governments (OCWCOG) in partnership with the InterCommunity Health Network Coordinated Care Organization, initiated a contract with Pedal Corvallis which began in June 2016. The bikeshare program was managed by Zagster and grew from eight to twelve bike stations in Corvallis. The program was initially implemented to help Medicaid members with personal trips and to access medical appointments, but was open to all community members 18 and older. In 2020, Zagster terminated its contract and there is no current bikeshare program in Corvallis. OCWCOG and City staff have initiated discussions and are developing a survey to inform a path forward on a bikeshare system in Corvallis.

City of
Corvallis Oregon

5.0 Recommendations

The following technology recommendations are based on the initial finding that Corvallis needs to first provide a basic level of parking technology that supports fundamental best management practices and services. These fundamental elements would be customer convenience, objective performance data, and clear and easy-to-access information. This is important in that many of the new technologies described in the document assume that certain parking management platforms are in place (e.g., smart meters, basic data collection and integrated systems for management and communications). Without those basic management platforms in place, many new technologies will be costly and administratively burdensome.

5.1.   PAYMENT TECHNOLOGY

5.1.1.   Upgrade Coin Meters to Multi-Space Smart Meters

Multi-space meters provide users with the flexibility to pay using a variety of methods (credit/debit cards, cash/coins, Apple/Google Pay, etc.), are easy to understand, and help to minimize sidewalk space needed to serve vehicles (compared to single-space meters). Although multi-space meters require upfront installation costs when replacing existing coin-operated meters, many users simply do not carry coins and are hesitant to park at coin-only meters. In many cities, the conversion from coin meters to smart meters (multi-space or single space) results in increased revenue as customers' time stays are not limited by the change in their pocket. Allowing the customer to choose the time stay appropriate to their need (and pay by credit card) has been shown to increase their length of stay. Funding available to the parking program will also be enhanced by reduced maintenance costs. These outcomes have been demonstrated in applications in Oregon cities like Eugene, Hood River, Portland and Salem, and numerous other cities across the US.

Additionally, the ability to track transaction data electronically will provide a valuable data set that can be used to inform rate changes, facilitate enforcement reviews, and more. Although pay-by-phone is an emerging payment option, many users will still need the ability to pay in-person for the foreseeable future, necessitating the transition to smart meters.

While the multi-space meter option offers urban form benefits, Corvallis could elect to replace existing single-space coin meters with single-space smart meters as the general functionalities are very similar to the multi-space option.

5.1.2.   Implement Pay-By-Phone Payment Option

Pay-by-phone is best implemented as an *additional* option alongside multi-space meters. It can be a particularly useful option for regular users of the system, and for anyone who needs to extend their parking session without returning to a kiosk. However, even a very popular pay-by-phone option is not likely to account for a majority of transactions, meaning most users will still have a need to pay in person. For these reasons, the pay-by-phone option should be implemented either concurrent with or after upgrading coin meters to multi-space meters to ensure a smooth rollout.

City of
Corvallis Oregon

The timing of pay-by-phone should also be coordinated with any necessary enforcement improvements (such as handheld LPR) to ensure enforcement personnel have the resources they need to confirm payment status using license plates effectively and efficiently. Similarly, strategies and programs (with resources) should also be evaluated and determined for rolling out this option to the public and communicating its availability on an ongoing basis.

5.2. ENFORCEMENT

5.2.1. Upgrade Enforcement Tools to Facilitate Pay-by-Plate

Pay-by-phone requires that enforcement officers have the ability to quickly and easily use a vehicle's license plate to confirm payment status. Any upgrades to multi-space meters, pay-by-phone, or electronic permitting should be done in close coordination with enforcement to ensure enforcement personnel have the tools they need to cover the same route (or with improved efficiency).

If pay-by-phone is implemented concurrent with multi-space meter upgrades, consideration should be given to pay-by-plate at the kiosks as well, as this will allow enforcement personnel to confirm payment status using license plate only, without needing to also check for a pay-and-display receipt.

5.2.2. Implement Electronic Permitting

Electronic permits eliminate the need for hangtags or stickers and tie the permit directly to the vehicle's license plate. Applications and renewals can be done electronically, while enforcement operations can be more efficient (with the right tools). Electronic permitting may need to delay pay-by-plate upgrades as permits are applicable in a much larger area than just paid parking areas. As such, it may take more time to transition to electronic permitting in residential and time-limited areas where officers would need to check each vehicle for a permit using the vehicle's license plate. The goal should be to ensure the enforcement officer has the ability to scan the license plate of each vehicle as quickly and easily as they can currently search the vehicle for a valid permit.

5.3. REAL-TIME PARKING DATA

5.3.1. Install Off-Street Counter Systems

Installation of off-street counter systems (e.g. loop detectors or other access point sensors) would be a relatively inexpensive investment that would allow users to assess their off-street parking options (through digital signage and online), reducing the time to search for a parking stall. The investment is minimized with only a limited number of public parking lots, and the real-time data would be useful to both users searching for parking as well as parking management.

City of
Corvallis Oregon

5.4.   NEW MOBILITY

5.4.1.   Reinitiate and Expand a Bikeshare System

OCWCOG and City staff have initiated discussions and are developing a survey to inform a path forward on a bikeshare system in Corvallis. Once reinitiated[17], additional bikeshare stations will increase the utility of the system, providing expanded access for all users. Incremental improvements in the multi-modal transportation system will help to provide users with a variety of transportation options, minimizing the need to drive and park. Point-to-point transportation systems (bike share, ridehailing, transit, micromobility, etc.) work best as a system, providing users with multiple options so that they never feel they must drive to have a reliable transportation option.

5.4.2.   Engage with Providers of Shared Mobility Services

Micromobility companies, such as e-scooter and e-bike providers, often enter towns and cities without prior approval, requiring officials to attempt to regulate after a program has been introduced. Discussing these micromobility services with providers in advance will allow Corvallis to assess the feasibility, benefits, and drawbacks prior to moving forward with implementation. While the services typically provide an additional mobility option for those considering alternatives to driving, community members may express concerns with safety or the impacts to sidewalks and bike lanes, and early dialogue can help to address these concerns early on in the process. Portland allowed e-scooters during a trial period in 2018 and published observations and findings from the pilot program that can serve as a resource for other municipalities[18].

By engaging with providers proactively, Corvallis has the option to set benchmarks and requirements of providers, helping to ensure that if they choose to operate in Corvallis, they will do so in a manner that considers and addresses key community concerns.

---

[17] OCWCOG and the City should consider the ongoing effects of COVID-19 when determining the timing of rolling out a new bikeshare system. Temporarily delaying bikeshare until universities, schools, and businesses are fully operational will help to ensure the greatest chance of success.
[18] https://www.portlandoregon.gov/transportation/article/709719

City of
Corvallis Oregon

6.0 Summary

This white paper provides guidelines on the types of new technologies available within the parking and mobility industry, and how they may be applicable within Corvallis. Building on a summary of existing uses of technologies, the series of recommendations contained in this paper are intended to identify the most cost-effective and feasible system upgrades that will help to improve the customer experience, improve operational efficiency, and facilitate multi-modal travel. Each investment will require both upfront and ongoing staff time to ensure the tool serves the intended purpose, and responsibilities should be clearly identified prior to implementation of each of these recommendations.

TO: City Council for November 19, 2020 Work Session

FROM: Andrew Struthers, Ward 9 City Councilor

DATE: November 5, 2020

SUBJECT: Advisory Board Restructuring Feedback & Timeline

STRATEGIC OPERATIONAL PLAN PRIORITY: E-1G. Conduct a review of all City advisory boards,
                                      commissions, committees and task forces.

Action Requested:

The Advisory Board Restructuring Ad-Hoc Committee (comprised of four Councilors and four City staff
members) requests that Council consider feedback received on the proposal to restructure City advisory
boards, commissions, committees, and task forces, and discuss a timeline for implementing the new
structure in early 2021.

Discussion:

The Advisory Board Restructuring Ad Hoc Committee presented its final recommendations on September
10 regarding a proposal to reimagine the City's array of advisory boards, commissions, committees, and
task forces. This long-running work item benefited from a great deal of thoughtful work and feedback over
the last year.

At the September 10 work session, the Council directed the committee to conduct outreach about the
proposal to the broader Corvallis community. Feedback was received to not only outline the proposal but
attempt to explain how it fits into the broader community engagement process.

This outreach was focused four main tools:

1. A short video focused on the community's commitment to public involvement.
2. A community survey that asked the community how it would like to be engaged,
3. A more information-dense overview of the details of the committee's proposal to the community
    including key stakeholders, such as current advisory board members.
4. A community survey that asked how the community felt about the proposed policy and operational
    advisory groups.

The short video was released on October 8 along with the accompanying general engagement survey. This
video has been viewed over 900 times across several digital platforms. It is available online at
https://vimeo.com/466286490. Results from the general engagement survey, which examined broad topics
related to public engagement, is available as **Attachment C**.

The general engagement survey results seem to align with the community engagement philosophy that has
been discussed frequently throughout this process that comes from the International Association for Public
Participation (IAP2). The IAP2 framework calls for community engagement to be integrated into an
organization's DNA and customizing that engagement program for each project, program or other need by
choosing the most appropriate method(s) from the full range of community engagement tools. Some of the
survey results that seem to point to this need to rethink engagement include:

- Although the City generally received positive overall scores for engagement (Q1), those scores were concentrated in the neutral or agree. The scores in the "strongly agree" category were relatively low for a community that has a goal for strong community engagement. This points to possible room for improvement.
- When asked how community members like to share and receive information (Q4), only 15.71% indicated they wanted to use advisory boards for that function. This was tied for 17th of the 21 engagement methods listed.
- When asked what barriers community members faced with engagement (Q5), the barriers listed most frequently were the types of barriers that are challenging for a traditional meeting structure, like "schedule conflicts," "don't have time." "prefer local engagement," "child/family care duties," and "don't like public speaking."

The detailed overview presentation took place on September 23 as a virtual webinar led by Community Development Director Paul Bilotta, Public Information Officer Patrick Rollens, and me, with more than 50 people in attendance. This session included an overview of the results of the prior general engagement survey as well as an outline of the proposed policy and operational advisory groups. The session was recorded and made available online, where it has been accessed about 300 times across several digital platforms. The video is available to view online here: https://vimeo.com/469013838
A copy of the presentation is attached as **Attachment A.**

The ad hoc committee circulated a short survey intended to complement the virtual presentation which gathered feedback on the restructuring proposal details. The survey asked respondents whether, in their opinion, the proposed structure met the policy or operational goals of the City. Feedback from the survey is included here as **Attachment B**.

In general, community members gave supportive survey answers to the proposed groups. The survey included a section for comments, where community members generally expressed interest in trying something new, and expressed support for various topics and subject areas that are included in the new framework. Some comments were also received about the new structure vs. the old structure, particularly around the ways the Vision Zero Task Force and Multimodal Transportation Committee will operate, so there will likely be interest in those details in the implementation stage of this project if the Council chooses to move forward.

One other topic that was raised several times was interest in how advisory group membership will be solicited. If the Council moves forward with this structure, staff will bring back some alternative approaches for consideration in the implementation phase of this project. During the work session, Councilors can help this process by sharing any thoughts or input they have on how to handle recruitment of volunteers.

Feedback gathered through the virtual presentation and survey was intended to complement any feedback received by the Council through other avenues. The Council received plenty of correspondence from those in the community who had questions or comments on this topic. For those in the community who didn't have particularly strong opinions on this topic, the outreach effort kept them informed about potential changes on the horizon.

Moving Forward & Next Steps

Council has expressed a goal of concluding this work effort before the end of 2020. If the Council desires to move forward to implement these changes, staff will begin the process of bringing forward some administrative changes to the Municipal Code, modifying operational procedures, updating references in

the Land Development Code, as well as other codes/policy documents. There will also be structural changes necessary for the website, notification lists, and to our online archives to reflect the new structure.

Due to the time left in the year, much of this implementation work will spill over into the next Council term, but the Municipal Code administrative changes should be able to be presented to the Council for approval at its December 7, 2020 meeting which will set the implementation process in motion.

Attachments:
CC-A: Presentation Slideshow
CC-B: Restructuring Proposal Survey Feedback
CC-C: General Engagement Survey Feedback

Public Involvement in Corvallis
Reimagined • Renewed

RECOMMENDATIONS FROM THE ADVISORY BOARD RESTRUCTURING
AD HOC COMMITTEE

OCTOBER 15, 2020

Welcome!

- **Goal for today**: Discuss the recommendations of the *Advisory Board Restructuring Ad Hoc Committee* to reimagine the City's current advisory board setup.

- **We want to hear from you!** After this short presentation, there will be a survey to gather specific feedback and input from you about this proposal.

The View from Marys Peak

- **City Council** needs input from the community on important <u>policy issues</u>.

- **City staff** needs input from the community on important <u>operational issues</u>.

- The **community** needs to find the best way to get involved and make a difference.

We Asked – You Answered
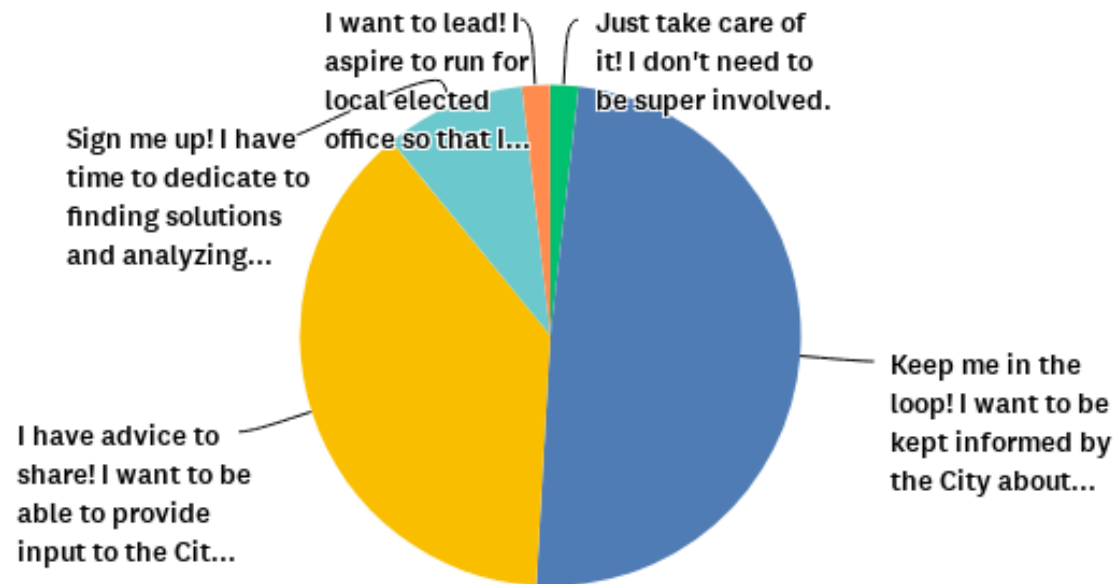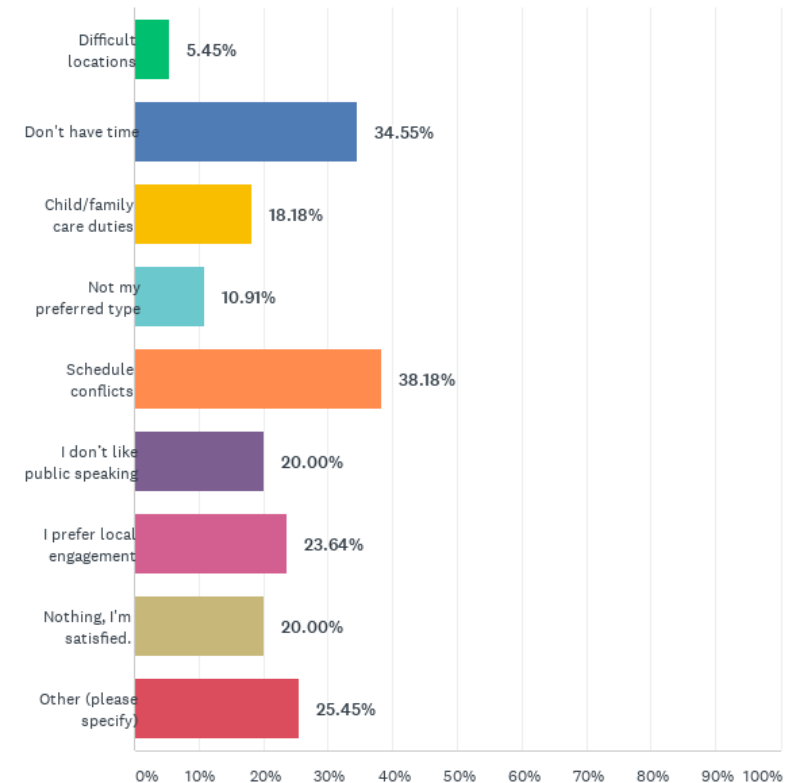
Why Are We Doing This?

- The City has many different advisory boards, committees, and task forces.

- The current structure has grown organically over the years.

- This traditional framework doesn't always align with the Council's dynamic policy needs.

How Did We Get Here?

- City Council identified a review & potential restructuring of ABCs in its most recent Strategic Operational Plan. (Item E1-G.)

- Target completion date: July 2020
  - (The pandemic threw a wrench in those plans.)

- *Advisory Board Restructuring Ad Hoc Committee* met during the summer of 2020 to work on this topic.

- Committee's work is available online: https://www.corvallisoregon.gov/bc/page/advisory-board-restructuring-ad-hoc-committee

How Did We Get Here?

- This project looked to the internationally renowned public engagement principles developed by the **Institute for Public Participation (IAP2)**.

- IAP2 compiles more than 50 different engagement methods that can help drive discussion and make decisions.

- Public meetings are one tool in a big toolbox.

INCREASING IMPACT ON THE DECISION

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will work together with you to formulate solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

© IAP2 International Federation 2014. All rights reserved.

Key Conclusions – Policy & Operational

POLICY NEEDS

- City Council needs input on high-level policy decisions.

- This is a good fit for community members who have time to devote to policy topics, like land use, diversity, city finances, or climate change.

- Policy advice is directed to the City Council to help it make strategic decisions and "steer the ship" at the highest levels.

OPERATIONAL NEEDS

- City staff needs input on operational issues, such as projects and ongoing work efforts.

- This is a good fit for community members who are interested in a particular area of City operations, like park maintenance, infrastructure, housing, or policing.

- Operational advice is directed to City staff to help it move forward on projects, initiatives, and other work efforts.

Key Conclusions – More Opportunities

- Match the policy or operational need with the right type of public engagement.
  - Policy or operational? Short-term or long-term? And what's the goal or outcome?

- More & varied opportunities for community members to participate at a variety of levels.
  - Opportunities for short-term involvement, alongside long-term commitments.
  - More opportunity to engage for people who don't normally follow City issues.
  - We'll come to you! More ways to engage where <u>you</u> are most comfortable.
  - New faces around the table!

- Overall: A sense of understanding & accomplishment for the Community, Council, and staff.

A New Framework

- **Committee recommendations**: a new framework of advisory groups based around the policy needs of the City Council and the operational needs of the City departments.

- Committee looked at two years of Council decisions to help organize policy and operational needs.

- Topic areas identified here were identified by Council as areas needing the most advice and input.

Definitions

- **Agency** - Fully independent bodies with legal decision-making authority.

- **Commission** – Make some decisions and provide policy advice to Council.

- **Multi-jurisdictional Group** - Formed through a formal or informal Intergovernmental Agreement (IGA) between government entities.

Definitions

- **Policy Advisory Board** - Ongoing bodies that provide advice to Council on specific policy areas. Policy Advisory Boards focus primarily on policy areas only; however, sometimes they may be asked to look at an operational topic to assist City staff.

- **Policy Task Force** - Policy Task Forces are short-term advisory bodies that provide advice to Council on a specific policy-related project. A Policy Task Force sunsets when the project is complete.

Definitions

- **Operational Advisory Committee** - Ongoing bodies that advise staff on operational matters. Operational Advisory Committees focus primarily on operational areas, but sometimes they may be asked to look at a policy topic by the City Council. The structure and operations of OACs are more flexible and customized to the needs of the topic or issue.

- **Operational Advisory Work Group** - Short-term advisory bodies that provide advice to staff on a specific operational topic or project. An Operational Work Group sunsets when the project is complete.

Agencies

- South Corvallis Urban Renewal Agency

Commissions

- Planning Commission

- Budget Commission

- Historic Resources Commission

- Urban Renewal Budget Commission

Multi-Jurisdictional Group

- 9-1-1 Service District

- HOPE Board

- Imagine Corvallis Action Network

- Willamette Criminal Justice Council

- Economic Development Office

- Corvallis-Benton County Library Service District

- Public Art and Culture

Policy Advisory Board

- Fees Review

- Climate Action

- King Legacy

- Community Involvement & Diversity

Policy Advisory Task Forces

- Equity, Diversity, Inclusion, and Social Justice

- Vision Zero

- Council Governance

Operational Advisory Committee

- Housing

- Multi-Modal Transportation

- Parks, Recreation, and Natural Areas

- Police Review Board

- Watershed

Operational Advisory Work Group

- Major Airport Projects

- Major Downtown Projects

- Empowerment Grants and City Grants

- Major Infrastructure Projects

Community Groups & Organizations

- You are already doing the work! We'll come to you.

- Formal & informal liaison roles with area groups & organizations.
  - These relationships already exist!
  - Examples: Sustainability Coalition, Chamber of Commerce, Corvallis Area Metropolitan Planning Organization, and many more!

- Goal is to not setup parallel City structure, but to meet these groups where they are.

Next Steps & Timeline

- **October & November**: Feedback from you, proposal goes to Council for approval.

- **December 2020**: Outreach and recruitment under new framework.

- **January 2021**: New Council takes office, and advisory groups get to work.

Fill out the feedback survey:

www.corvallisoregon.gov/corvallisABC

QUESTIONS OR MORE INFO?

- PIO@CORVALLISOREGON.GOV

Q1 Operational Advisory Committees are ongoing bodies that advise staff on operational matters. Operational Advisory Committees focus primarily on operational areas within City departments, but sometimes they may be asked to look at a policy topic by the City Council. The structure and operations of OACs are more flexible and customized to the needs of the topic or issue. For each proposed Operational Advisory Committee in the list below, please indicate whether you think a group like this would help meet the operational goals of the City.

Answered: 40   Skipped: 1

Advisory Board Restructuring Proposal

Legend: Yes (green), No (blue), Unsure (yellow)

Categories: Housing, Multi-Modal Transportation, Parks, Recreation, …, Police Review Board, Watershed Resources
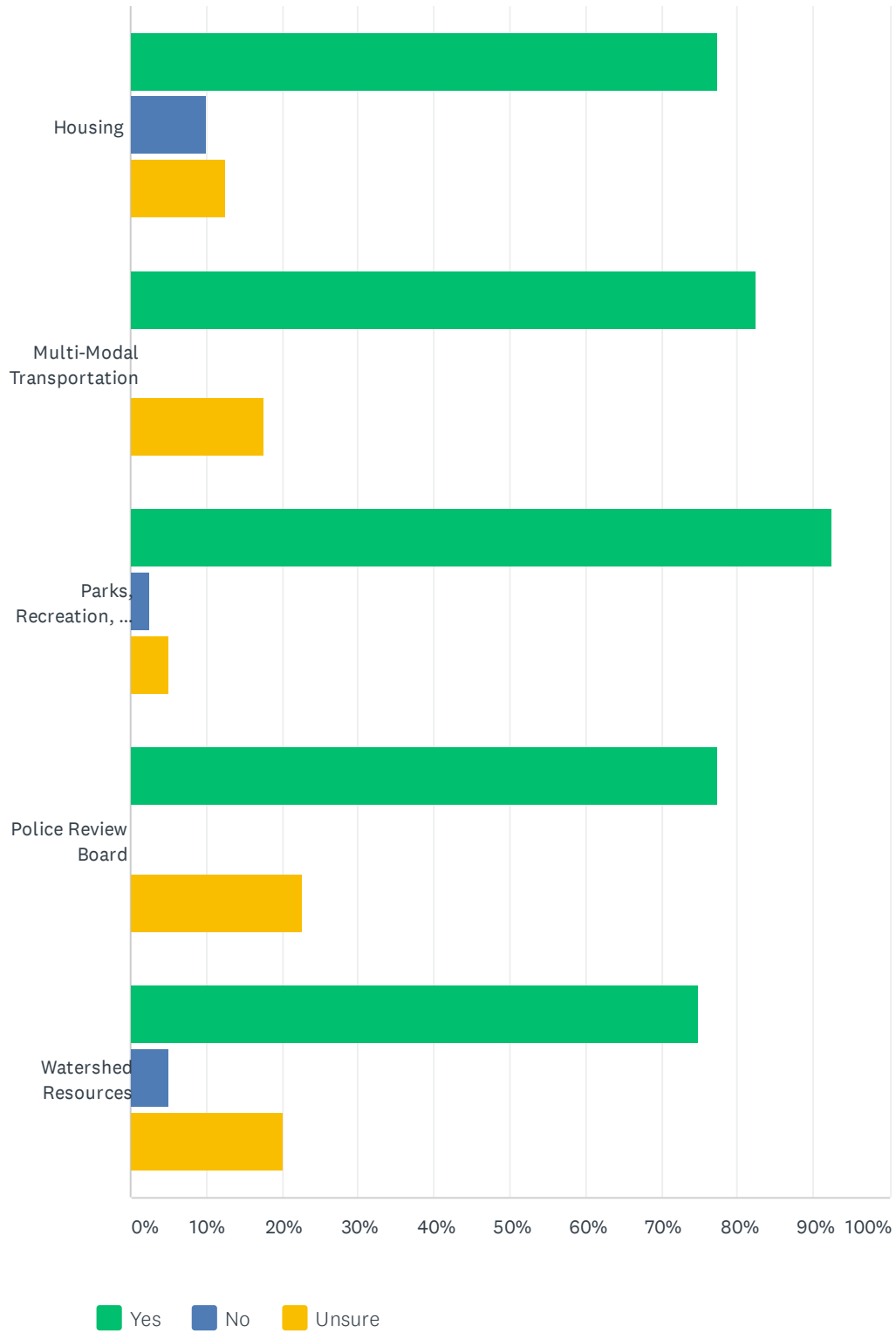
	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE
Housing	77.50% 31	10.00% 4	12.50% 5	40	1.35
Multi-Modal Transportation	82.50% 33	0.00% 0	17.50% 7	40	1.35
Parks, Recreation, and Natural Areas	92.50% 37	2.50% 1	5.00% 2	40	1.13
Police Review Board	77.50% 31	0.00% 0	22.50% 9	40	1.45
Watershed Resources	75.00% 30	5.00% 2	20.00% 8	40	1.45

Q2 Operational Advisory Work Groups are short-term advisory bodies that provide advice to staff on a specific operational topic or project. An Operational Work Group sunsets when the project is complete. For each proposed Operational Advisory Work Group in the list below, please indicate whether you think a group like this would help meet the operational goals of the City.

Answered: 40   Skipped: 1
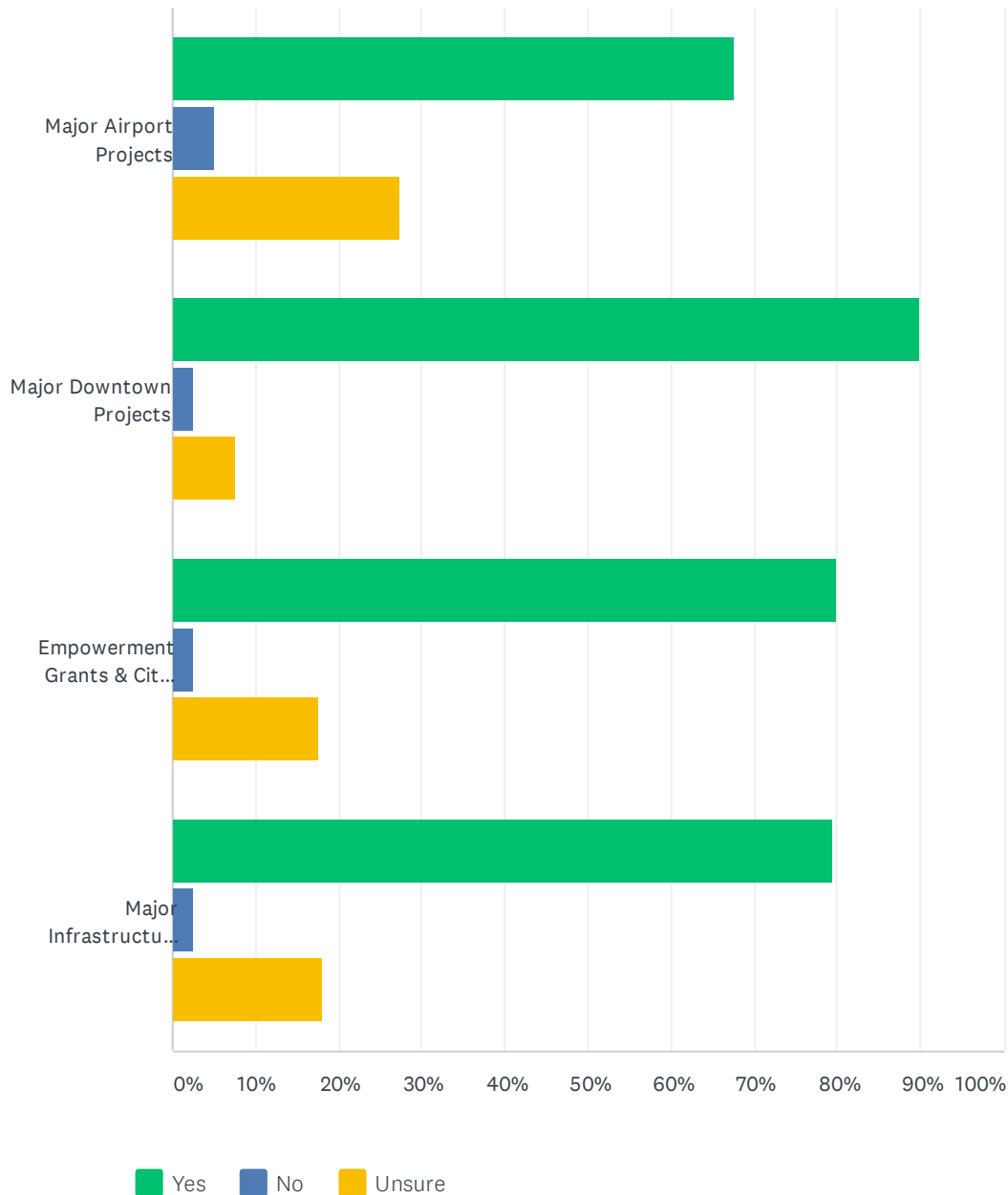
	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE
Major Airport Projects	67.50% 27	5.00% 2	27.50% 11	40	1.60
Major Downtown Projects	90.00% 36	2.50% 1	7.50% 3	40	1.18
Empowerment Grants & City Grants	80.00% 32	2.50% 1	17.50% 7	40	1.38
Major Infrastructure Projects	79.49% 31	2.56% 1	17.95% 7	39	1.38

	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE

Q3 Policy Advisory Boards are ongoing bodies that provide advice to Council on specific policy areas. Policy Advisory Boards focus primarily on "big picture" policy areas; however, sometimes they may be asked to look at an operational topic to assist City staff.For each proposed Policy Advisory Board in the list below, please indicate whether you think a group like this would help meet the policy goals of the City.

Answered: 40   Skipped: 1

Yes   No   Unsure

	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE
Fees Review	66.67% 26	12.82% 5	20.51% 8	39	1.54
Climate Action	75.00% 30	12.50% 5	12.50% 5	40	1.38
King Legacy	52.50% 21	17.50% 7	30.00% 12	40	1.77
Community Involvement & Diversity	75.00% 30	7.50% 3	17.50% 7	40	1.43

Q4 Policy Task Forces are short-term advisory bodies that provide advice to Council on a specific policy-related project. A Policy Task Force sunsets when the project is complete.For each proposed Policy Task Force in the list below, please indicate whether you think a group like this would help meet the policy goals of the City.

Answered: 40　Skipped: 1
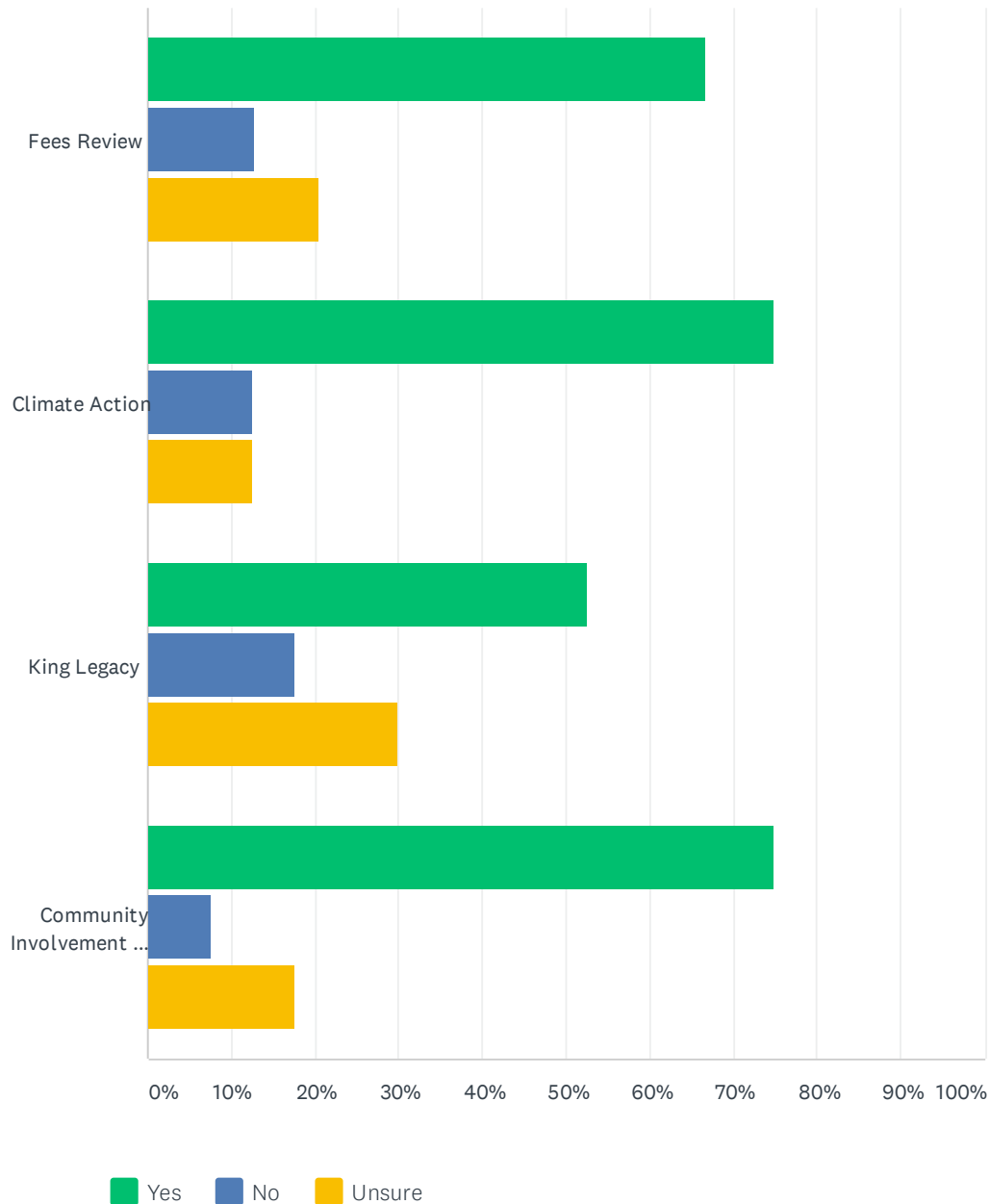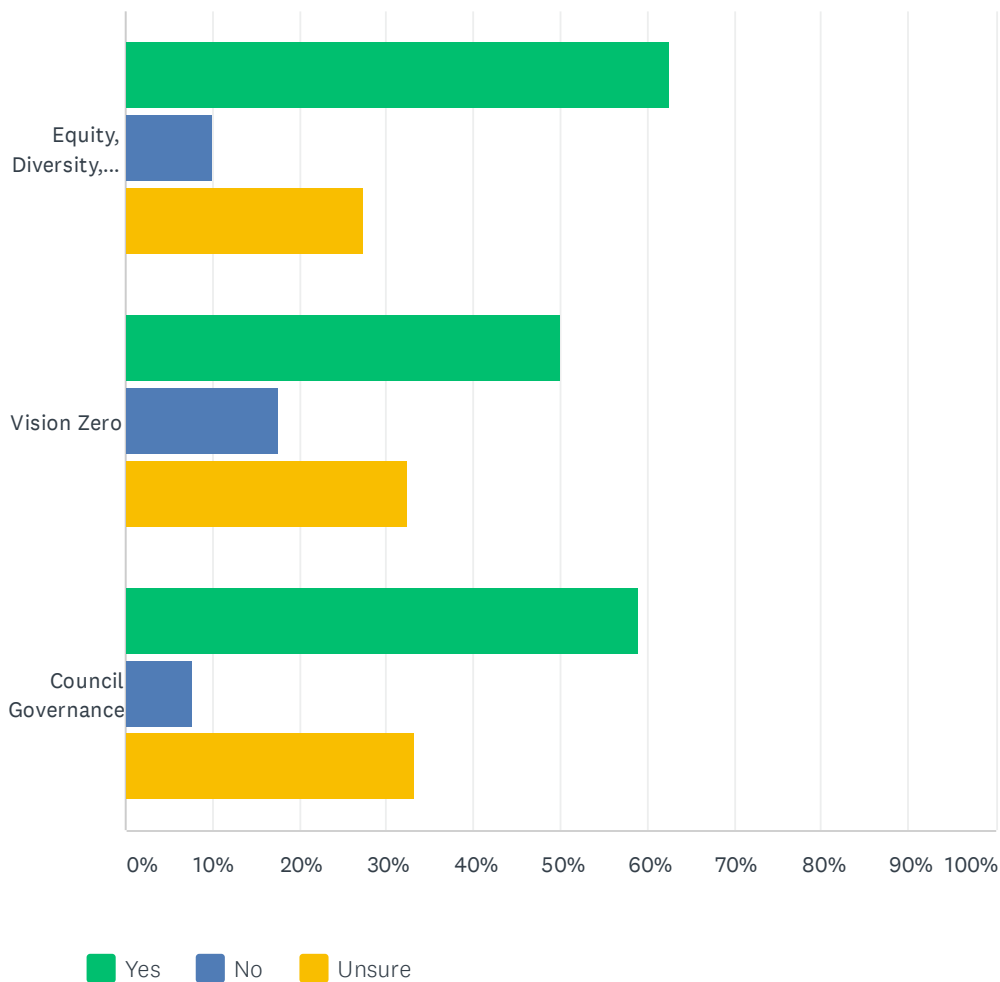

	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE
Equity, Diversity, Inclusion, and Social Justice	62.50% 25	10.00% 4	27.50% 11	40	1.65
Vision Zero	50.00% 20	17.50% 7	32.50% 13	40	1.82
Council Governance	58.97% 23	7.69% 3	33.33% 13	39	1.74

Q5 Please use this space to share any additional feedback or input about the proposed framework.

Answered: 26   Skipped: 15

| #	RESPONSES	DATE
1	Character limit is very low here so can't say much. Overall, a good framework.	11/1/2020 10:07 AM
2	"Imagining' without any mention of support/inclusion for the Corvallis Creative Community? As a member of the present ACAB, I need an answer regarding this omission. K.Feldman, katymedia@yahoo.com	10/30/2020 3:09 PM
3	I did not see info regarding ACAB? I'm curious where the areas that ACAB are responsible for are repreented in this study and the recommendations? Reach me: adrienne@remarkablearts.biz ~ Thank you.	10/30/2020 12:10 PM
4	Very frustrating! You ask a big question and don't SAY we are limited on characters we can type, so we type a lot, and then it's repeatedly refused as too long! Ironic for a survey on public input! Please think more.	10/30/2020 11:12 AM
5	Bldg and plnng fees shouldn't be reduced; private devlprs make profits or someone makes their house fancier. The "landlord" form should cost extra, for bad landlord enforcement. Charge huge houses more for stormwater.	10/30/2020 11:05 AM
6	Am concerned that the Arts and Culture--An economic and community-building driver is not mentioned in this questionaire.	10/30/2020 10:47 AM
7	I like the proposed framework and am particularly interested in the advancement of Vision Zero and Multi-Modal Transportation.	10/25/2020 5:36 PM
8	Focus on effectiveness of participation, ability to set and meet goals. This requires a great deal of leadership but results are what counts and those results need to be quantified and qualified.	10/24/2020 5:25 PM
9	Consider reframing social justice/equity as a core value driving desired outcomes (greater engagement, sustainability, economic parity etc), vs short-term project.	10/22/2020 9:41 AM
10	I have frequently attended BPAB meetings. I feel like when it's just me complaining, nothing changes, but when the board would agree with me, eventually hazards would be dealt with.	10/19/2020 8:41 PM
11	Community Involvement & Diversity feels more operational than policy. I'm curious what kinds of projects a Major Downtown Projects work group would do. Overall, great work!	10/19/2020 8:16 AM
12	Too many boards/commissions seem to serve entrenched interests or delay/prevent any change. Let's try some new things.	10/18/2020 10:04 PM
13	sent in email to Patrick Rollens	10/16/2020 10:08 PM
14	I'm concerned that the multi-modal committee (with potentially an emphasis on driving) will dilute the voice of walking, biking, and other climate-smart approaches to transportation.	10/16/2020 9:27 PM
15	Most boards deal with both policy and operational issues. Survey is flawed. Proposed framework appears to limit action of boards and send more people directly to the city council	10/16/2020 12:14 PM
16	As a member of the Civic Beautification and Urban Forestry Advisory Committee, I would like to know what is happening to this group. It is not mentioned.	10/16/2020 10:30 AM
17	Also, will the Land Development Hearings Board still be in place? How about Board of Appeals?	10/16/2020 10:06 AM
18	I am wondering which group will fill the roll required by goal one of the state's land use law which specifies a Committee for Citizen Involvement? Also, will there be task forces formed when large public works projects dealing with water issues.	10/16/2020 10:03 AM
19	I would like to see more of an emphasis on "active" transportation operational advisory group rather than multi-modal. I hate to see the BPAC go away.	10/16/2020 10:01 AM
20	While I was a big fan of the Bicycle and Pedestrian Advisory Board, I'm very happy Climate Action Task Force, Vision Zero Task Force, and Multi-Modal Transportation Advisory Committee. Thanks for the informative webinar.	10/16/2020 9:08 AM
21	I have been thwarted several times in entering a response here. First, due to someone changing the survey when I was taking it. Second, by an unpublished character limit. I'll just email my feedback to Patrick I suppose.	10/15/2020 5:12 PM

22	I'd like to know how short-term groups are selected or potentially redrafted for similar topics in the future? Do short term work groups risk becoming ongoing advisory groups?	10/15/2020 5:02 PM
23	OAWGs and PTFs cover subjects that require longer term structures for public involvement. Subjects outlined for these are not short term based. And there should be plans in place to review efficacy and progress for all branches of restructure.	10/15/2020 4:57 PM
24	The way in which participants are selected to participate was not clear enough in the materials. How do we ensure that participants are diverse in opinion and not selected to ensure an outcome.	10/15/2020 4:41 PM
25	Combine King Legacy with Diversity, combine vision zero with multi-modal	10/15/2020 4:41 PM
26	I think the framework is fantastic. The shift in paradigm and reaching out to citizens rather than waiting for them to come to the city I think will make local government much less intimidating and more approachable.	10/15/2020 4:39 PM

Community engagement covers a lot.

Q1 Please rate your agreement with the following statements about community engagement in Corvallis.

Answered: 69   Skipped: 1
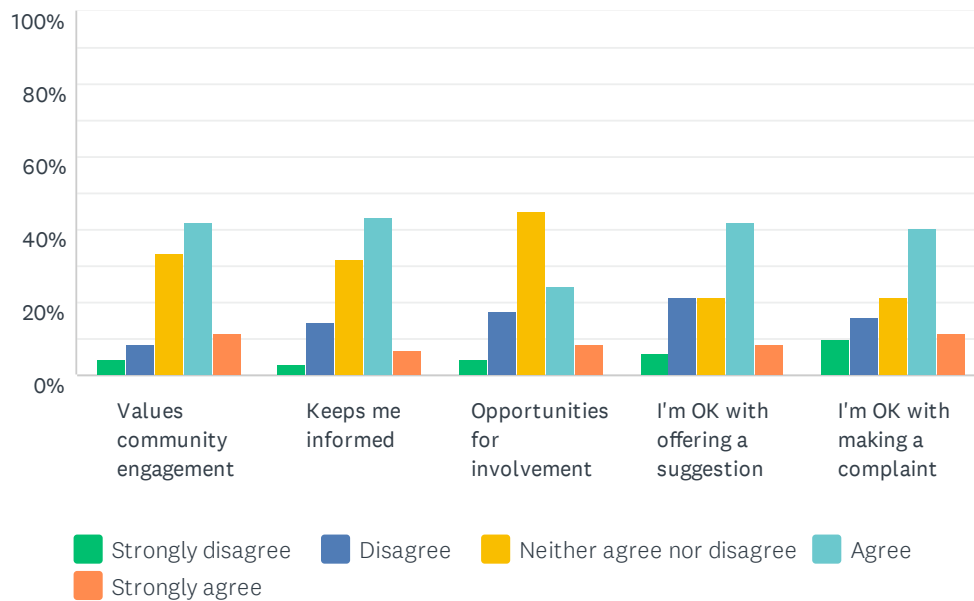
	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
Values community engagement	4.35% 3	8.70% 6	33.33% 23	42.03% 29	11.59% 8	69	3.48
Keeps me informed	2.90% 2	14.49% 10	31.88% 22	43.48% 30	7.25% 5	69	3.38
Opportunities for involvement	4.35% 3	17.39% 12	44.93% 31	24.64% 17	8.70% 6	69	3.16
I'm OK with offering a suggestion	5.80% 4	21.74% 15	21.74% 15	42.03% 29	8.70% 6	69	3.26
I'm OK with making a complaint	10.14% 7	15.94% 11	21.74% 15	40.58% 28	11.59% 8	69	3.28

CC 11-19-2020 Work Session   Community engagement covers a lot.   Electronic Packet Page 79

Attachment CC-C - Page 2 of 11

#	PLEASE USE THIS SPACE TO SHARE FEEDBACK ON ANY OF THE TOPICS ABOVE.	DATE
1	Generally speaking this video corvallis does a minimal job in communicating with neighborhoods in regards to what their plans are and very little actual community input is used to make decisions	10/15/2020 7:37 PM
2	I've only lived in Corvallis for just over two years. I am disappointed that it seems all community involvement in South Corvallis has come to a halt since the pandemic began. I was previously involved in Living Southtown. I feel like it's a mistake to stop opportunities to connect and to continue work on emergency preparedness.	10/12/2020 10:31 PM
3	As a disabled Corvallis resident, I would like to see accessibility become the standard, not the exception, of volunteer opportunities and public engagement. The city is ride with services ministering TO people with developmental disabilities in particular, but all others seem left out of consideration. Mobility challenged people, Deaf and hard-of-hearing folks, and people living with disabling mental illnesses all have brilliant talents to contribute to public life and diversity of thought in this city, and we are the ones with the critical thinking skills to make sure the most vulnerable make it through this unprecedented year / decade / century.	10/12/2020 9:31 AM
4	If the city more proactively sought input, I would not need to complain, rather we could troubleshoot and research together. I am not one to complain about something that the city has no interest in changing anyway.	10/11/2020 9:12 PM
5	I think there are probably many ways for people to get involved but I don't know all the ways. Maybe a list could come out in the Parks and Rec catalog? Thank you for all you do for our community!	10/11/2020 1:52 PM
6	I look forward to additional surveys!	10/11/2020 7:02 AM
7	If you are in the inner circle of the city, sure, but if you are just one of the 75% of other citizens then you aren't a part of the deal.	10/9/2020 11:26 AM
8	Civic engagement in Corvallis is a joke. Actually Councilors with selfish personal agendas use the process to engage the special interests they serve and hide behind the claim it's "civic engagement". One just has to compare how City officials, both hired and elected, thumb their nose at the recommendations of the mandated budget commission to most of the other boards and ad hoc citizen groups to understand the scam.	10/9/2020 10:29 AM
9	How does the city inform residents of happenings and volunteer opportunities? I can't recall how I know about things - but I suspect I'm not as informed as I could be.	10/9/2020 7:46 AM
10	Advocacy boards have ruined this process allowing only a small number of people to run the city. Nobody else is listened to.	10/9/2020 7:02 AM
11	I'm not sure what you mean by these questions. I get most of my information about the city from the G-T, not directly from the local govt, so if I didn't get the newspaper, I wouldn't know much of what goes on.	10/9/2020 3:50 AM
12	I am mostly not sure how to give concerns or feedback, and assume it would fall on deaf ears more often then not	10/8/2020 11:33 PM
13	The homeless situation is out of control, and unless you're wealthy, you have no say about anything. It's ridiculous and I feel more and more unsafe living in the city that I grew up in. Start holding people accountable NOW.	10/8/2020 8:36 PM
14	I wish that everyone would donate time to a non-profit charitable or simply stop to pickup roadside litter.	10/8/2020 8:23 PM
15	I've had nothing but positive experiences with the Cory of Corvallis. I am probably not aware of all the ways I could be more involved, but that's more on me, not on the city.	10/8/2020 8:19 PM
16	I own five rentals in town. Each year the problems with the homeless increase and impact my tenants. From pilfered mail, garbage strewn about, homeless encroaching on the property...	10/8/2020 7:55 PM
17	I think the work that the boards and commissions do is by and large ignored by the city manager and the city council.	10/8/2020 7:39 PM
18	There are a lot of subjects on which people are told that they need to submit a letter (which more often than not seem to be ignored- or the department would have reported what action or change was made as a result of x number of letters, right?). Or you're asked to appear in front	10/8/2020 7:21 PM

Community engagement covers a lot.

of elected officials which is intimidating for 95% of constituents, I'd guess. Why not host simulcast in person and online sessions?

19	I get frustrated when I reach out to my city councilor and all I hear in response is crickets (meaning no reply).	10/8/2020 3:13 PM
20	More short-term and one-day volunteer opportunities. Clearinghouse for community volunteer opportunities with other organizations. More publicly disseminated updates about what boards are doing (i.e. newsletter.)	10/8/2020 3:00 PM
21	Volunteer opportunities seem like they are only available for those who have lots of free time, ie. retirees.	10/8/2020 2:45 PM

CC 11-19-2020 Work Session   Community engagement covers a lot.   Electronic Packet Page 81

Attachment CC-C - Page 4 of 11

Q2 On what topics or issues would you most like to engage with the City of Corvallis? (Choose your top three.)

Answered: 70   Skipped: 0
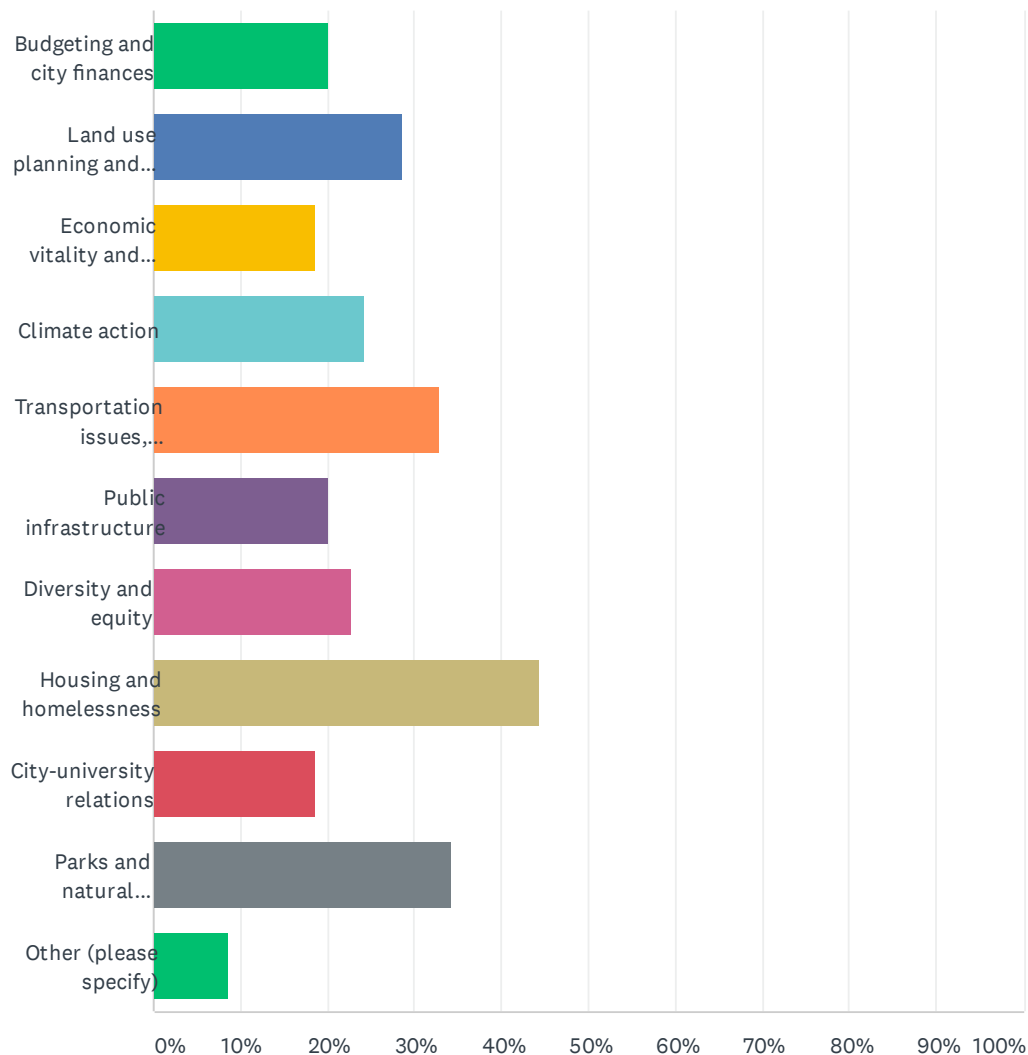
ANSWER CHOICES	RESPONSES	
Budgeting and city finances	20.00%	14
Land use planning and zoning	28.57%	20
Economic vitality and business development	18.57%	13
Climate action	24.29%	17
Transportation issues, including bike and pedestrian topics	32.86%	23
Public infrastructure	20.00%	14
Diversity and equity	22.86%	16
Housing and homelessness	44.29%	31
City-university relations	18.57%	13
Parks and natural resources	34.29%	24
Other (please specify)	8.57%	6
Total Respondents: 70		

#	OTHER (PLEASE SPECIFY)	DATE
1	emergency preparedness and planning	10/12/2020 10:31 PM
2	Review of City staff, City Manger, Mayor, and Council performance	10/9/2020 10:29 AM
3	Philomath Blvd	10/8/2020 11:33 PM
4	Helping low income families	10/8/2020 8:19 PM
5	Livability	10/8/2020 3:55 PM
6	Police	10/8/2020 2:48 PM

Q3 What level of community engagement do you prefer?

Answered: 70   Skipped: 0

I want to lead! I aspire to run for elected office.

1.43% (1)

Just take care of it! I don't need to be involved.

1.43% (1)

Sign me up! I want to volunteer for a board.

10.00% (7)

Keep me in the loop! I want to be kept informed.

45.71% (32)

I have advice & input to share!
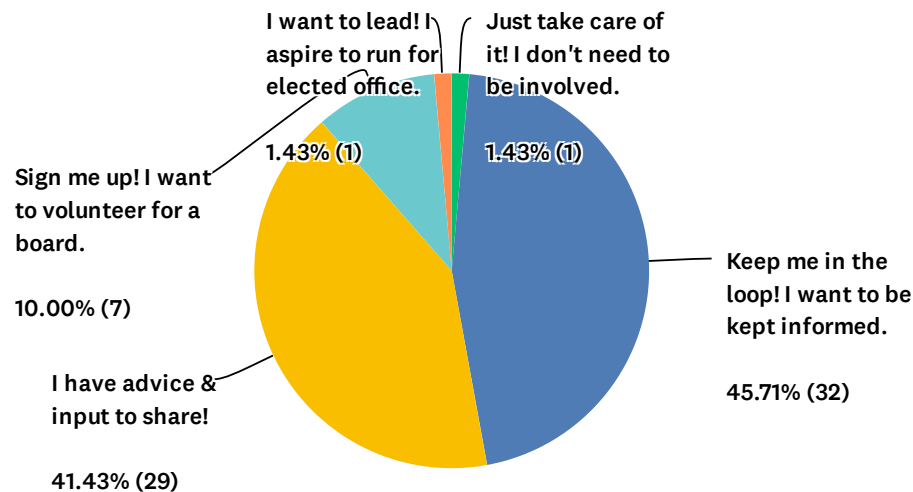
41.43% (29)

ANSWER CHOICES	RESPONSES	
Just take care of it! I don't need to be involved.	1.43%	1
Keep me in the loop! I want to be kept informed.	45.71%	32
I have advice & input to share!	41.43%	29
Sign me up! I want to volunteer for a board.	10.00%	7
I want to lead! I aspire to run for elected office.	1.43%	1
TOTAL		70

CC 11-19-2020 Work Session   Community engagement covers a lot.   Electronic Packet Page 84

Attachment CC-C - Page 7 of 11

Q4 How do you like to share and receive information? (Check all that apply)

Answered: 70   Skipped: 0

Community engagement covers a lot.
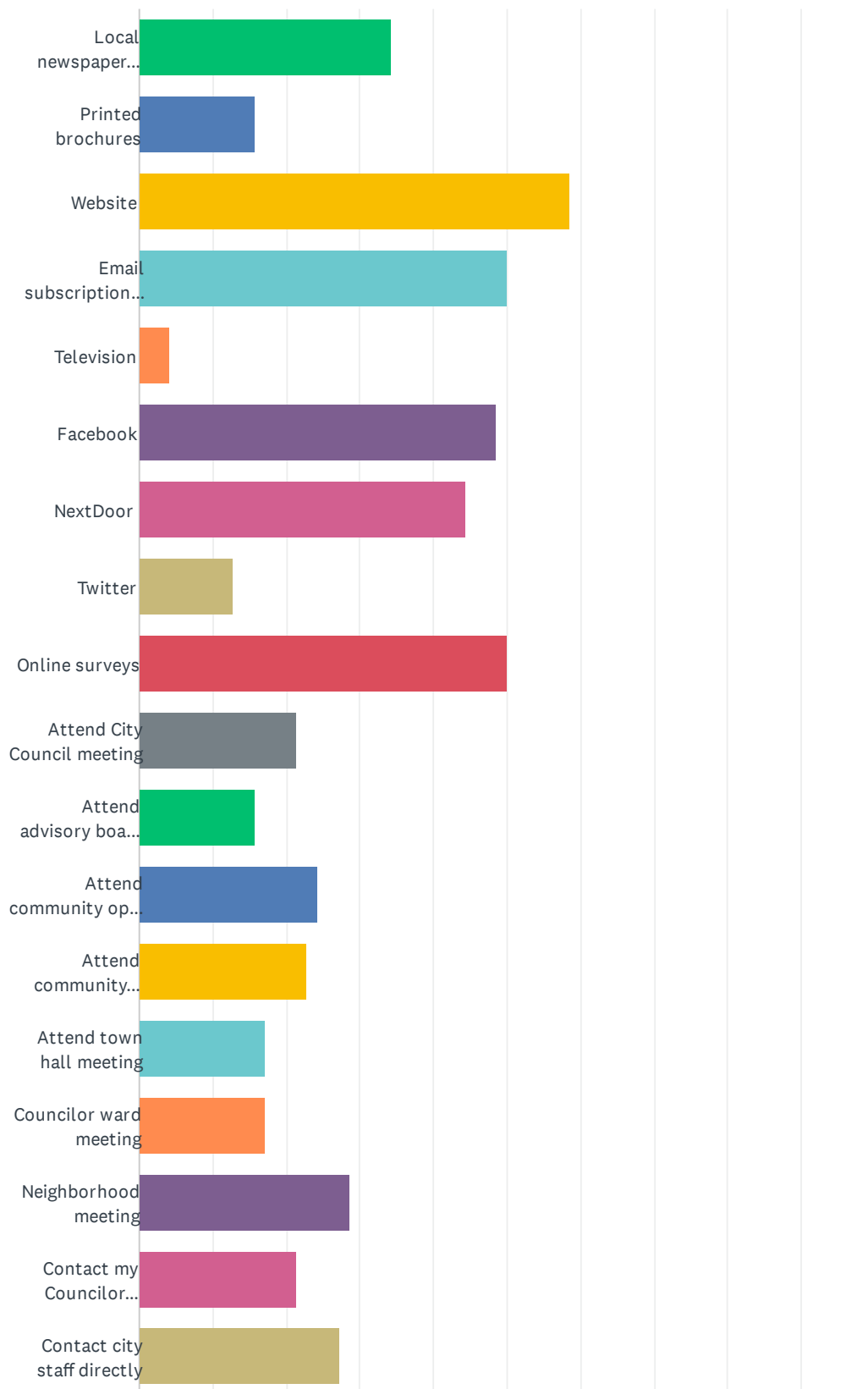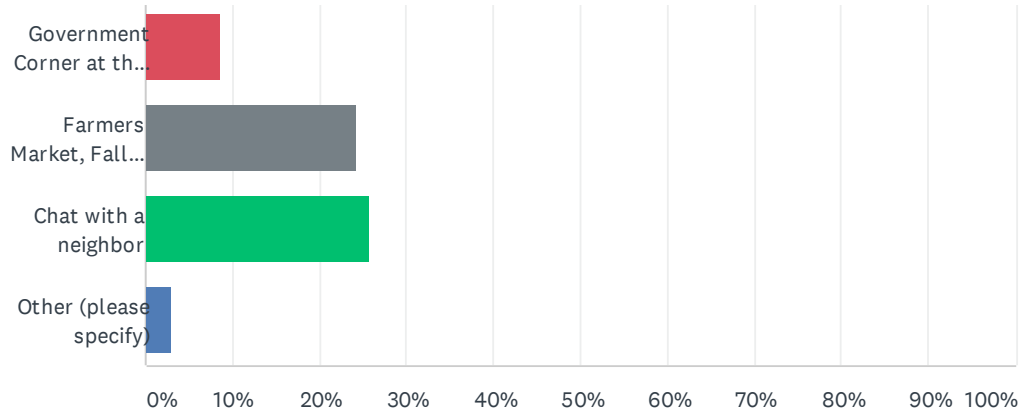
ANSWER CHOICES	RESPONSES	
Local newspaper stories	34.29%	24
Printed brochures	15.71%	11
Website	58.57%	41
Email subscription lists	50.00%	35
Television	4.29%	3
Facebook	48.57%	34
NextDoor	44.29%	31
Twitter	12.86%	9
Online surveys	50.00%	35
Attend City Council meeting	21.43%	15
Attend advisory board meeting	15.71%	11
Attend community open house	24.29%	17
Attend community workshop	22.86%	16
Attend town hall meeting	17.14%	12
Councilor ward meeting	17.14%	12
Neighborhood meeting	28.57%	20
Contact my Councilor directly	21.43%	15
Contact city staff directly	27.14%	19
Government Corner at the Library	8.57%	6
Farmers Market, Fall Festival, Open Streets or other events	24.29%	17
Chat with a neighbor	25.71%	18
Other (please specify)	2.86%	2
Total Respondents: 70		

#	OTHER (PLEASE SPECIFY)	DATE
1	I have not found a preferred method.	10/12/2020 10:31 AM
2	Virtual meetings	10/8/2020 10:38 PM

#	OTHER (PLEASE SPECIFY)	DATE
	I have not found a preferred method.	

Community engagement covers a lot.

Q5 Barriers to engagement

Answered: 69   Skipped: 1

Category	Percentage
Difficult locations	5.80%
Don't have time	34.78%
Child/family care duties	21.74%
Not my preferred type	10.14%
Schedule conflicts	37.68%
I don't like public speaking	20.29%
I prefer local engagement	26.09%
Nothing, I'm satisfied.	18.84%
Other (please specify)	26.09%

Community engagement covers a lot.
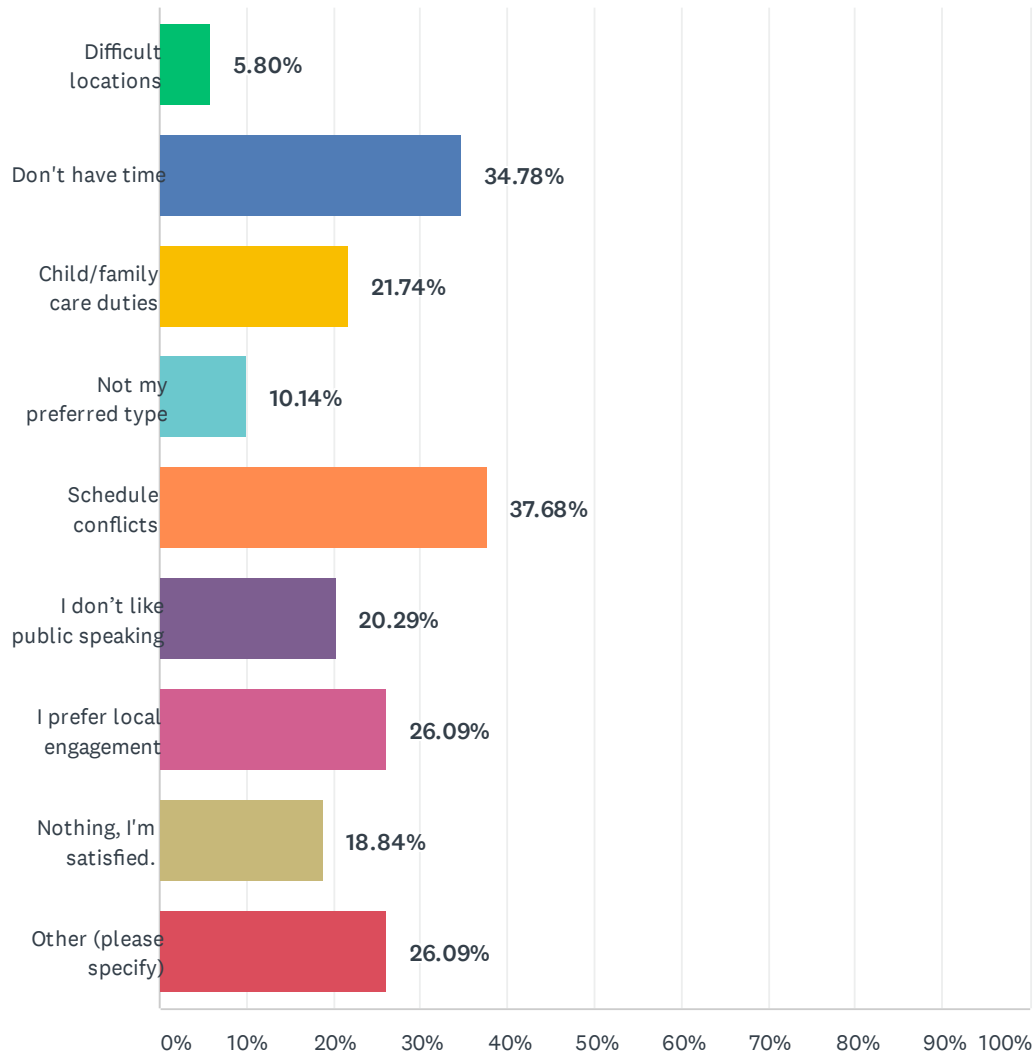
ANSWER CHOICES	RESPONSES	
Difficult locations	5.80%	4
Don't have time	34.78%	24
Child/family care duties	21.74%	15
Not my preferred type	10.14%	7
Schedule conflicts	37.68%	26
I don't like public speaking	20.29%	14
I prefer local engagement	26.09%	18
Nothing, I'm satisfied.	18.84%	13
Other (please specify)	26.09%	18
Total Respondents: 69		

#	OTHER (PLEASE SPECIFY)	DATE
1	Lack of "backgrounding" on pending city actions (e.g., explanating ramifications of decisions on zoning changes and annexation decisions; providing summaries of public hearings and discussions that have lead up to a city decision point)	10/15/2020 2:22 PM
2	Covid	10/13/2020 9:35 AM
3	I don't feel very represented by Living Southtown or my city councillor	10/12/2020 10:31 PM
4	zoom meeting are most effective given our current situation with COVID	10/12/2020 1:59 PM
5	Not having a job and my health concerns.	10/12/2020 10:31 AM
6	City decision making processes are not usefully transparent	10/12/2020 9:31 AM
7	I don't always know what help is needed. Also, I like to help by doing active volunteer work- not another committee or board.	10/11/2020 1:52 PM
8	Covid-19	10/9/2020 8:20 PM
9	City Staff, City Manager, Mayor, and City Councilors (save for a few) are arrogant and don't know what they don't know.	10/9/2020 10:29 AM
10	I don't know when or where to go	10/9/2020 9:14 AM
11	I don't know how? When/how do people engage with the city? And how do they know when/what?	10/9/2020 7:46 AM
12	I have a job.	10/9/2020 7:02 AM
13	I prefer to be a fly on the wall. For now I prefer to hear others' suggestions.	10/9/2020 3:50 AM
14	My voice does not matter, so why bother?	10/8/2020 8:36 PM
15	I live in Albany	10/8/2020 8:23 PM
16	Work 8-5	10/8/2020 6:40 PM
17	COVID	10/8/2020 2:48 PM
18	I feel like I am inching into conflict of interest because of my role at OSU	10/8/2020 2:45 PM

CITY COUNCIL THREE-MONTH SCHEDULE
11/10/20

> ### *Agenda items and dates are only proposed and likely to change*

Yellow = regular meeting   **Red = work session**   **Blue = Other**

❖ <u>Bias Response Training for Mayor, Council, Department Directors, Thursday, November 12, 4:00 pm</u>
  ➢ *Identity and Race*

❖ **Regular Meeting, Monday, November 16, 6:00 pm**
  * Fire Department Year in Review Update (Fire Department)
  * Findings: Appeal of a Director's Decision to Deny a Minor Planned Development Modification for Brooklane Heights – Multi-Use Path (PLD-2020-01)
  * Adoption of Integrated Emergency Operations Plan (Fire)
  * Criteria Utilized for Prioritizing Illegal Camp Cleanups (City Manager)
  * Republic Services Annual Rate Increase and Proposed Rate Schedule Amendment Review (Public Works)
  * RESOLUTION: Annual Utility Rate Adjustment (Public Works)
  * First Quarterly Operating Report (Finance)

❖ *Work Session, Thursday, November 19, 4:00 pm*
  ➢ *Parking Audit - Parking Technologies (Public Works)*
  ➢ *Advisory Board Restructuring*

November 2020

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

* Nov 11 = Veterans Day holiday

* Nov 26, 27 = Thanksgiving holiday

❖ **Regular Meeting, Monday, December 7, 6:00 pm**
  * Executive Session: ORS 192.660(2)(i)(status of employment-related performance) City Manager Evaluation, continued
  * HOPE Advisory Board Update by Julie Arena
  * Advisory Board Restructuring
  * Acceptance of City Manager Evaluation
  * City Services Bill Low Income Assistance (Finance)

❖ <u>Bias Response Training for Mayor, Council, Department Directors, December 8, 4:00 pm</u>
  ➢ *Implicit Bias*

❖ *Work Session, Thursday, December 10, 4:00 pm*
  ➢ *Parking Audit – Parking Enforcement (Public Works)*
  ➢ *Strategic Operational Plan Update (City Manager)*

❖ **Regular Meeting, Monday, December 14, 6:00 pm** (Moved from December 21)
  *
❖ *Work Session, Thursday, December 24 – CANCELED*

December 2020

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

* Dec 25 = Christmas Day holiday

❖ **Regular Meeting, Monday, January 4, 6:00 pm**
  * Swearing in of 2021-2022 Council
  * Council Leadership Election
  * Comprehensive Annual Financial Report (Finance)
  * Resolution: Annual Purchasing Update Municipal Code Chapter 1.04

❖ <u>Bias Response Training for Mayor, Council, Department Directors, January 5, 4:00 pm</u>
  ➢ *Representation Matters*

❖ *Work Session, Thursday, January 7, 4:00 pm*
  ➢ *Strategic Operational Plan Update (City Manager)*

❖ **Regular Meeting, Tuesday, January 19, 6:00 pm**
  * Strategic Operational Plan Update (City Manager)

❖ *Work Session, Thursday, January 21*
  ➢ *Parking Audit – Eugene Residential Parking District Program (Public Works)*

January 2021

31						2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

* Jan 1 = New Year's Day holiday

* Jan 18 = Dr. Martin Luther King, Jr. holiday

PENDING ITEMS:
* Charter Amendment Next Steps – gender neutral language and City Manager recruitment timeline   * Council Policy Review
* Parks System Development Charge Related to Credits   * Budget Commission discussion about Councilor stipends
* Interpretation Plan for Dr. Martin Luther King, Jr. Park

At this time, all Council meetings are held online only