



**CITY OF WASHOUGAL  
CITY COUNCIL WORKSHOP AGENDA  
Monday, October 11, 2021  
5:00 PM**

**MEETING INFORMATION**

Please click the link below to join the webinar:  
<https://us02web.zoom.us/j/82531655898>

**I. CALL TO ORDER**

**II. ROLL CALL**

**III. PUBLIC COMMENTS**

**IV. NEW BUSINESS**

- A. City Manager's Office: Fire Capital Facilities Plan**
- B. Public Works: Hartwood Park Bridge Professional Services Agreement with Shell Engineering & Consulting**
- C. Public Works: Pavement Management Program Update**

**V. PUBLIC COMMENTS**

**VI. REPORTS AND COMMUNICATIONS**

- A. CITY MANAGER**
- B. MAYOR**
- C. CITY COUNCIL**

**VII. ADJOURNMENT**

**UPCOMING MEETINGS: Monday, October 25, 2021 - Workshop at 5:00 pm and Council at 7:00 pm**

**BUSINESS OF THE CITY COUNCIL**  
**City of Washougal, Washington**

**FOR AGENDA OF:**

10/11/2021

**SUBJECT:**

**MEETING INFORMATION**

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/82531655898>

**DEPT. OF ORIGIN:**

Administration

**REVIEWED AT:**

**TO BE RETURNED TO COUNCIL:**

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**EXPENDITURE REQUIRED:**

**BUDGETED:**

**APPROPRIATION REQUIRED:**

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**SUMMARY STATEMENT**

**RECOMMENDED ACTION**

**Workshop Coversheet**  
**BUSINESS OF THE CITY COUNCIL**  
**City of Washougal, Washington**

**FOR AGENDA OF:**

10/11/2021

**SUBJECT:**

City Manager's Office: Fire Capital Facilities Plan

**DEPT. OF ORIGIN:**

Administration

**REVIEWED AT:**

**TO BE RETURNED TO COUNCIL:**

Yes

**ATTACHMENTS:**

▯ **Fire Capital Facilities Plan.pdf**

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**EXPENDITURE REQUIRED:**

**BUDGETED:**

**APPROPRIATION REQUIRED:**

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**SUMMARY STATEMENT**

**RECOMMENDED ACTION**

**MACKENZIE.**



**CAMAS-WASHOUGAL FIRE DEPARTMENT  
CITY COUNCIL MEETING**

Camas City Council Meeting | 10.04.2021

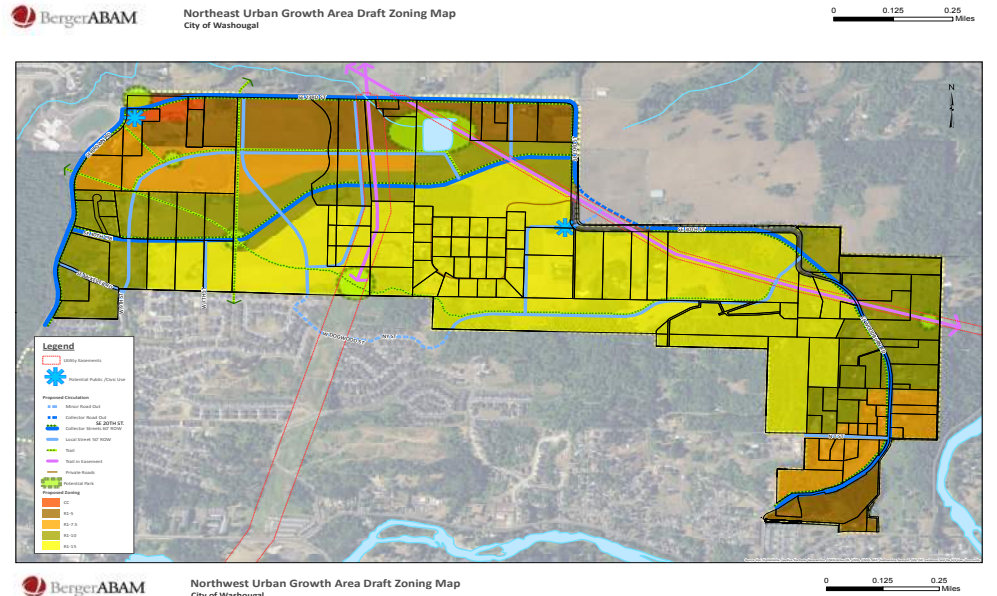
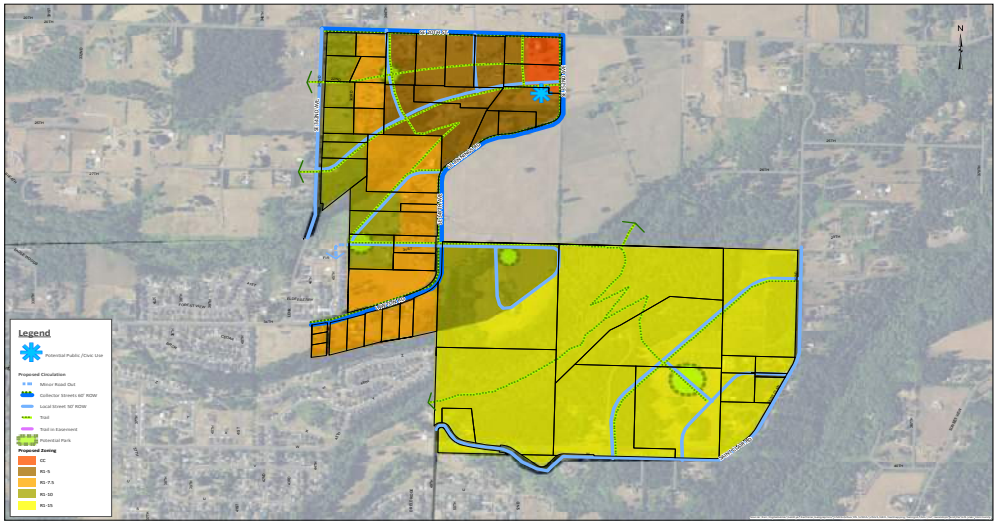
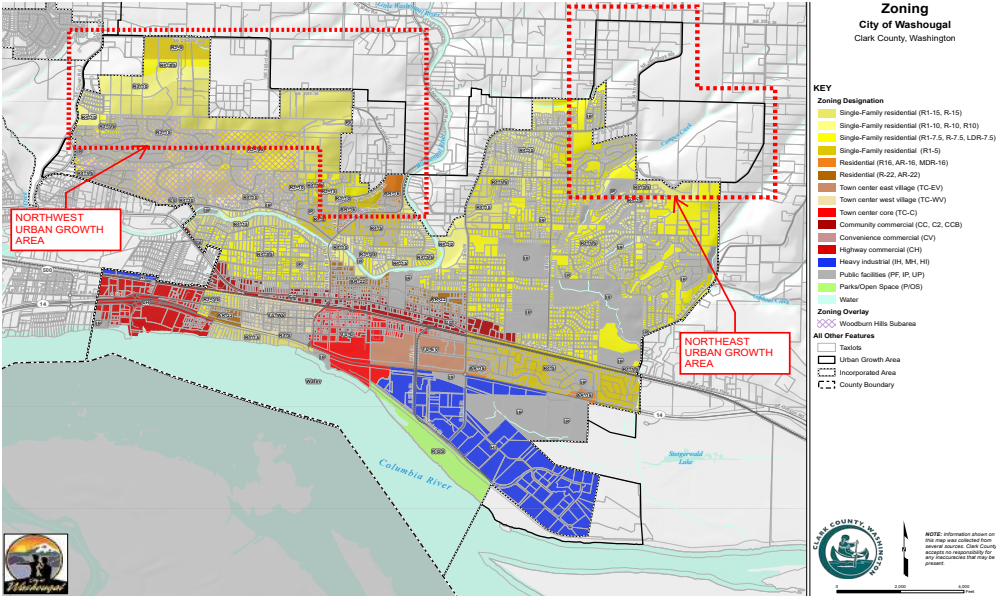
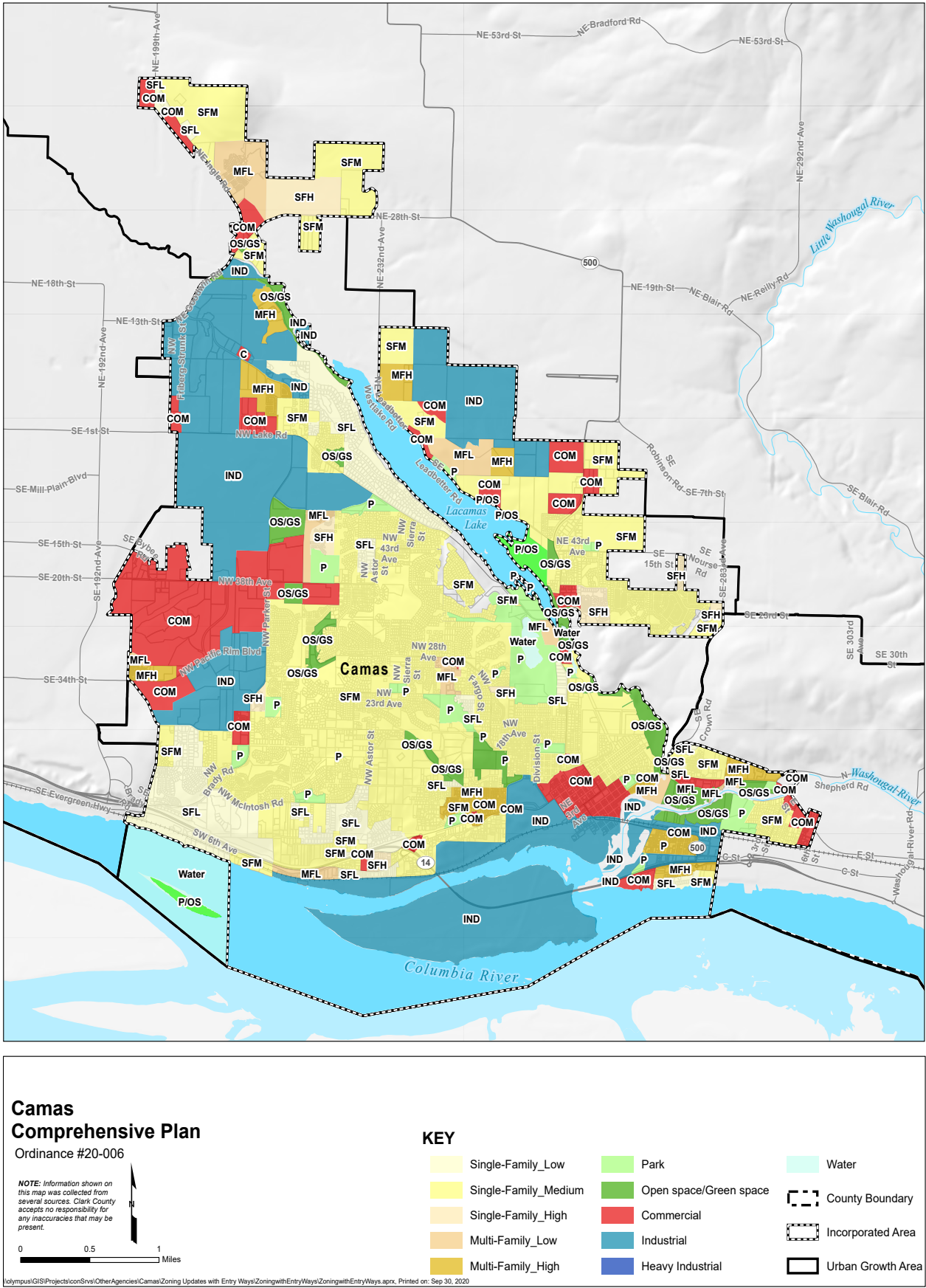
Washougal City Council Meeting | 10.11.2021

TEAM



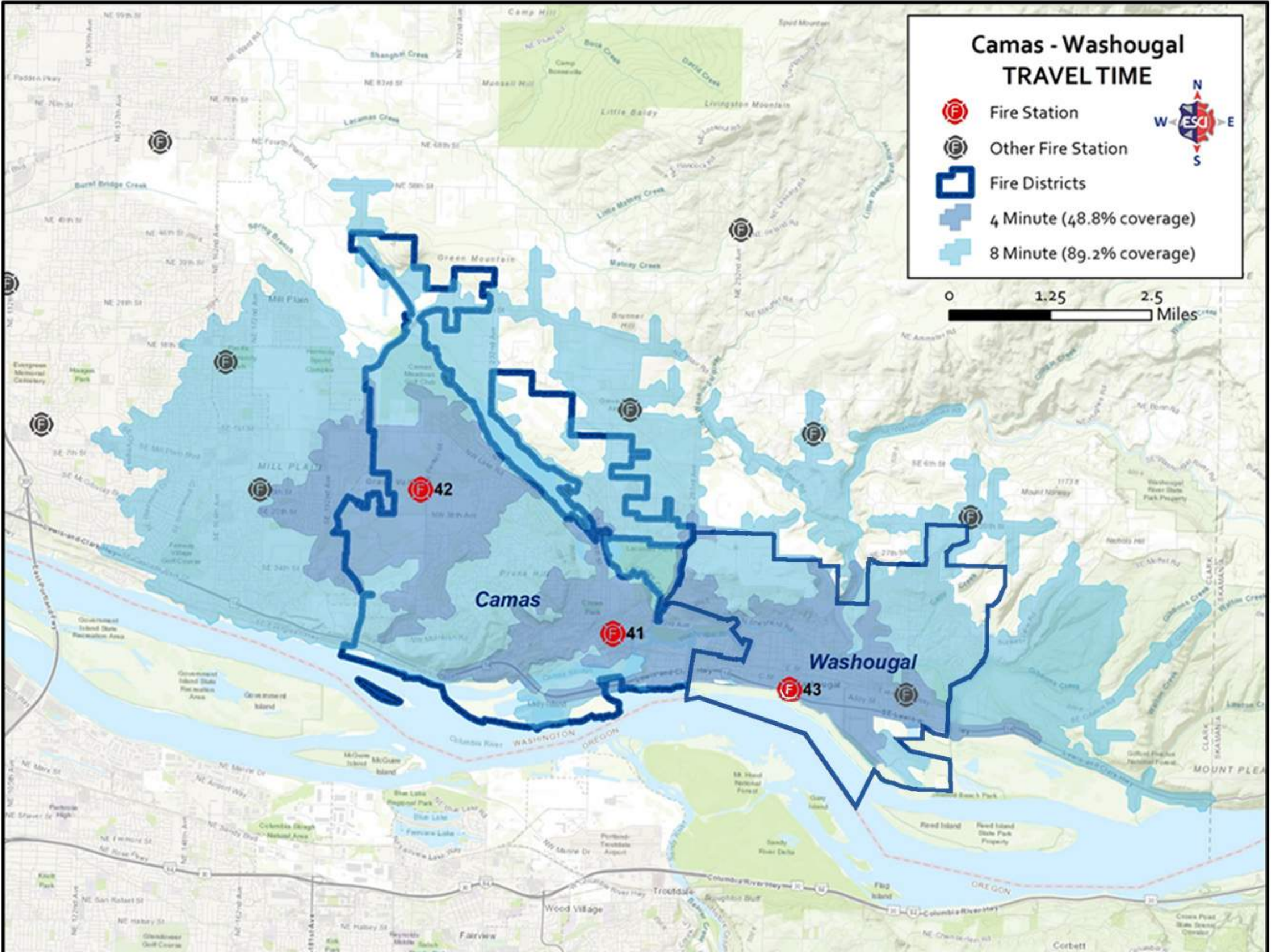
# DEPLOYMENT REVIEW BACKGROUND

- Citygate was tasked to peer review the CWFD recent Master Plan and provide in-depth station location opinions
- The review also included a review of both cities current zoning and planned development
- The current risks to be protected
- The current fire station systems response ability into growth areas

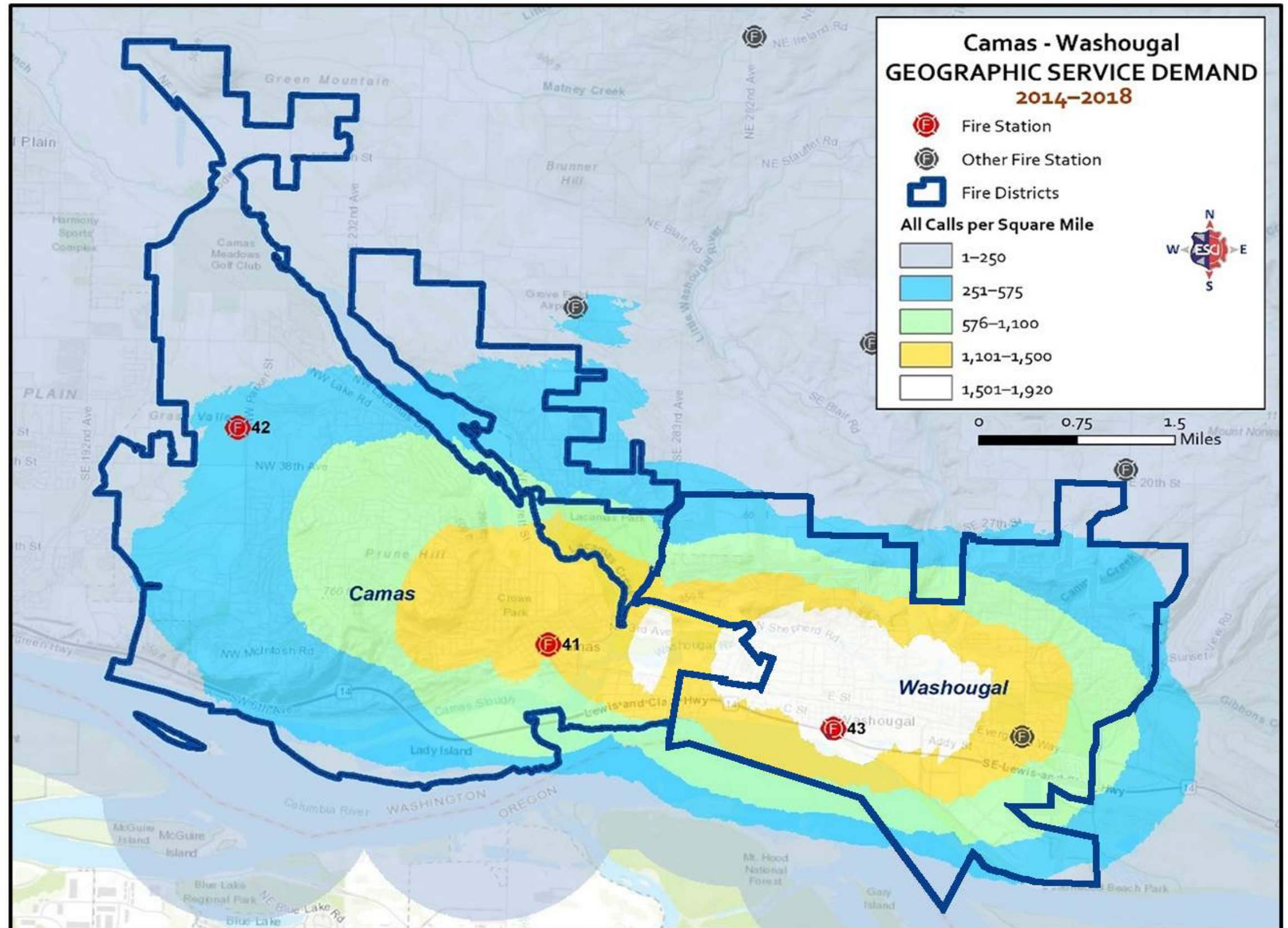


# TRAVEL TIME COVERAGE

- Full page view of the 4-minute and 8-minute travel time map



- Full page view of Figure 2 – the Incident Location Density



# FINDINGS

- Most growth occurs outside the existing fire station urban coverage reach
- The cities and Department should adopt a split coverage measure
  - Faster response in existing built-up areas
  - Longer response times in edge suburban and rural areas
- Added stations occur when the other areas substantially develop

# RECOMMENDATIONS

- Ideally Camas Station 41 could be moved to the west to shorten the coverage gap between it and Station 42
- Camas Station 42, being newer remains as sited
- Camas will need to add at least two more stations, one in the northwest corner and another midway down the north side of Lacamas Lake
- Washougal will need add at least one, if not two more, fire stations at some point in the 2030s

| Space / Room Use                                      | Staffing Requirements |      |      | Space Requirements |      |      | Space Size |   |      | Room Type | Total Required Square Footage |      |       | Comments |      |
|-------------------------------------------------------|-----------------------|------|------|--------------------|------|------|------------|---|------|-----------|-------------------------------|------|-------|----------|------|
|                                                       | Exist                 | 2021 | 2061 | Exist              | 2021 | 2061 | W          | L | Area |           | Exist                         | 2021 | 2061  |          |      |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |      |       |          |      |
| Department: Camas Washougal Fire Headquarters Station |                       |      |      |                    |      |      |            |   |      |           |                               |      |       |          |      |
| Apparatus Bay and Support Rooms                       | 0                     | 0    | 0    |                    |      |      |            |   |      |           | 0                             | 7658 | 7658  |          |      |
| Living Quarters and Administration                    | 14                    | 14   | 14   |                    |      |      |            |   |      |           | 0                             | 6642 | 6642  |          |      |
| Community / Training Rooms                            | 0                     | 0    | 0    |                    |      |      |            |   |      |           | 0                             | 1913 | 1913  |          |      |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |      |       | Acres    |      |
| SUBTOTAL                                              | 14                    | 14   | 14   |                    |      |      |            |   |      |           |                               | 0    | 16213 | 16213    |      |
| GENERAL CIRCULATION (20%)                             |                       |      |      |                    |      |      |            |   |      |           |                               | 0    | 3243  | 3243     |      |
| TOTAL BUILDING SQUARE FOOTAGE                         | 14                    | 14   | 14   |                    |      |      |            |   |      |           |                               | 0    | 19456 | 19456    | 0.45 |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |      |       |          |      |
| TOTAL EXTERIOR REQUIREMENTS                           |                       |      |      |                    |      |      |            |   |      |           |                               |      | 14460 | 14460    | 0.33 |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |      |       |          |      |
| TOTAL SITE REQUIREMENTS                               |                       |      |      |                    |      |      |            |   |      |           |                               | 0    | 33916 | 33916    | 0.78 |

| Space / Room Use                                      | Staffing Requirements |      |      | Space Requirements |      |      | Space Size |   |      | Room Type | Total Required Square Footage |       |       | Comments |
|-------------------------------------------------------|-----------------------|------|------|--------------------|------|------|------------|---|------|-----------|-------------------------------|-------|-------|----------|
|                                                       | Exist                 | 2021 | 2061 | Exist              | 2021 | 2061 | W          | L | Area |           | Exist                         | 2021  | 2061  |          |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |       |       |          |
| Department: Camas Washougal Fire Satellite Station(s) |                       |      |      |                    |      |      |            |   |      |           |                               |       |       |          |
| Apparatus Bay and Support Rooms                       | 0                     | 0    | 0    |                    |      |      |            |   |      |           | 0                             | 5526  | 5526  |          |
| Living Quarters and Administration                    | 8                     | 8    | 8    |                    |      |      |            |   |      |           | 0                             | 4402  | 4402  |          |
| Community / Training Rooms                            | 0                     | 0    | 0    |                    |      |      |            |   |      |           | 0                             | 1031  | 1031  |          |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |       |       | Acres    |
| SUBTOTAL                                              | 8                     | 8    | 8    |                    |      |      |            |   |      |           | 0                             | 10959 | 10959 |          |
| GENERAL CIRCULATION (20%)                             |                       |      |      |                    |      |      |            |   |      |           | 0                             | 2192  | 2192  |          |
| TOTAL BUILDING SQUARE FOOTAGE                         | 8                     | 8    | 8    |                    |      |      |            |   |      |           | 0                             | 13151 | 13151 | 0.30     |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |       |       |          |
| TOTAL EXTERIOR REQUIREMENTS                           |                       |      |      |                    |      |      |            |   |      |           |                               | 7980  | 7980  | 0.18     |
|                                                       |                       |      |      |                    |      |      |            |   |      |           |                               |       |       |          |
| TOTAL SITE REQUIREMENTS                               |                       |      |      |                    |      |      |            |   |      |           | 0                             | 21131 | 21131 | 0.49     |

## **Fire stations in the next 8-10 years – when the infrastructure is assumed to be developed:**

- **Replace HQ Station** - in the first two to three years.
- **Replace Washougal Station** - in the next five to seven years.
- **Future Third Station in Camas (NE)** - when the future infrastructure is assumed to be in the 8-10 year period.

|                                | Building SF | Lowest Bid (Without Tax) | Cost Per SF   |
|--------------------------------|-------------|--------------------------|---------------|
| VFD Station 02<br>(July 2016)  | 13,367 SF   | \$5,052,739.17           | \$378.00/SF   |
| VFD Station 11<br>(March 2021) | 14,789 SF   | \$7,120,393.59           | \$481.46/SF   |
| Station 61                     | 20,750 SF   | \$8,051,854              | \$388.04 / SF |
| Station 61 Shop                | 7,425 SF    | \$3,074,759              | \$414.08 / SF |
| Averages                       | 14,083 SF   | \$5,824,936.44           | \$413.61 / SF |

Cost Factors:

- 8.5% Tax (As of April 2021)
- Median Bid - \$504/SF
- 27% Increase (Normally 30-35%)
- Additional Site Work

# Camas-Washougal Capital Improvement Plan - Project Cost Summary

| Rev. 09/22/2021                                                                                                                     |                                                              |                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
|                                                                                                                                     | Headquarters Station                                         | Satellite Station                                           |
| Construction Cost:                                                                                                                  | 19,456 SF x \$500-\$550 / SF =<br>\$9,728,000 - \$10,700,800 | 13,151 SF x \$500 - 550 / SF =<br>\$6,575,500 - \$7,233,050 |
| Consultant (Geotechnical Engineer;<br>Surveyor; Architect and Engineering Fee<br>etc.) & Owner (Furniture & Fixture etc.)<br>Costs: | 30% of Construction Cost: =<br>\$2,918,400 - \$3,210,240     | 30% of Construction Cost: =<br>\$1,972,650 - \$2,169,915    |
|                                                                                                                                     |                                                              |                                                             |
| <b>Total Project Cost:</b>                                                                                                          | <b>\$12,646,400 - \$13,911,040</b>                           | <b>\$8,548,150 - \$9,402,965</b>                            |

## Fire Department's Replacement Vehicles In The Next 10 Years:

- (4) Four Engines - ea @ \$735,000
- (1) A Ladder Truck - one @ \$1,050,000
- (4) Four Rescue Tools - ea @ \$13,650
- (2) Two Brush Rigs - ea @ \$150,000

# Forecast Approach & Findings

## COSTS

Replacement  
HQ (2024):  
\$12.6-13.9 M

Replacement  
(2026)\* :  
\$9.6-10.5 M

New Station  
(2029):  
\$10.8-11.8 M

**\$33-36.5 M**  
total costs

\* Includes 4% annual cost escalation  
Source: Mackenzie

## REVENUES

Estimated new SF and MF  
homes, Camas & Washougal,  
2021-40  
(sources: TAZ forecast, permit data)

X

Fire Impact  
Fees, 2021:  
(\$401-556/unit)

Estimated comm./medical  
space in Camas & Washougal  
(2021-40)  
Source: Costar, ECONorthwest

X

Fire Impact  
Fees, 2021:  
(\$0.40/SF)

**\$5.7 M**  
total FIF revenue,  
2021-40

## GAP

**\$27.5-30.8 M**  
total revenue gap,  
2021-40

1

# Next Step: Possible Gap Funding Tools

## Pros/Cons Review of Possible Tools:

- Increased Fire Impact Fee
- Voter approved bonds
- Surplus Land Disposition
- Public Safety Sales Tax (*max 0.1% for cities*)
- Excess Levy

# Fire Impact Fees in Other Areas

| Jurisdiction    | Single-Family<br>(2,000 SF, per unit) | Multifamily<br>(800 SF, per unit) | Commercial<br>(per sq ft)                                                                    |
|-----------------|---------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------|
| Camas           | \$400                                 | \$160                             | \$0.40                                                                                       |
| Washougal       | \$401.60 - \$502.00                   | \$248                             | \$0.31                                                                                       |
| Shoreline       | \$2,311                               | \$2,002                           | \$1.83, \$2.84, or \$5.73                                                                    |
| Tukwila         | \$1,769                               | \$2,168                           | Office: \$824 (per 1K GFA)<br>Retail: \$2,108 (per 1K GFA)<br>Industrial: \$176 (per 1K GFA) |
| DuPont          | \$940.87                              | \$940.87                          | \$2,696.91 (per acre)                                                                        |
| Thurston County | \$720                                 |                                   |                                                                                              |
| Battle Ground   | \$555                                 | \$248                             | \$0.59                                                                                       |
| Vancouver*      | \$293                                 |                                   |                                                                                              |
| Auburn          | \$290.13                              | \$306.47                          | Office: \$0.23<br>Retail: \$0.50<br>Industrial: \$0.09                                       |

*Note:* Jurisdictions with *per sq ft* (SF) fees have been converted to *per unit* fees using an assumed 2,000 SF for single-family dwellings and 800 SF for multifamily dwellings.

\* Vancouver's impact fee is computed assuming a \$400K valued home.

3

Q&A

# MACKENZIE.

833.317.9051 | [mcknze.com](https://mcknze.com)

Architecture · Interiors · Structural Engineering · Civil Engineering  
Land Use Planning · Transportation Planning · Landscape Architecture

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**Workshop Coversheet**  
**BUSINESS OF THE CITY COUNCIL**  
**City of Washougal, Washington**

**FOR AGENDA OF:**

10/11/2021

**SUBJECT:**

Public Works: Hartwood Park Bridge Professional Services Agreement with Shell Engineering & Consulting

**DEPT. OF ORIGIN:**

Public Works

**REVIEWED AT:**

**TO BE RETURNED TO COUNCIL:**

Yes

**ATTACHMENTS:**

▯ **Hartwood Park Bridge PSA Shell Engineering & Consulting**

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**EXPENDITURE REQUIRED:**

\$97,748.00

**BUDGETED:**

**APPROPRIATION REQUIRED:**

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**SUMMARY STATEMENT**

**RECOMMENDED ACTION**

Staff recommends that the City Council authorize the City Manager to execute the Professional Services Agreement with Shell Engineering & Consulting, LLC in the amount of \$97,748.00 for the Hartwood Park Bridge.



**City of Washougal**  
PUBLIC WORKS PURCHASING

## Contract Information Form *(THIS FORM MUST ACCOMPANY EVERY CONTRACT)*

Contract Title: \_\_\_\_\_ Vault Filing Number: \_\_\_\_\_

Vendor Name: \_\_\_\_\_ Vendor Number: \_\_\_\_\_

Contract Overview: \_\_\_\_\_ Contract Total: \_\_\_\_\_

---

Project Manager: \_\_\_\_\_ Ext: \_\_\_\_\_ Department: Public Works

---

Project Number: \_\_\_\_\_

Budget Code(s): \_\_\_\_\_

Engineer's Project Estimate: \$ \_\_\_\_\_

Contract Price: \$ \_\_\_\_\_

Type of Procurement Method: \_\_\_\_\_

Project specifically identified in approved budget: N/A ☐ YES ☐ NO ☐ \* if NO see below if project cost is greater than **\$50,000** for public works, professional services, and personal services.

Does project change exceed administrative discretion threshold? N/A ☐ YES ☐ NO ☐

If project exceeds administrative threshold, was it approved by Council? YES ☐ NO ☐ [Click here to enter a date.](#)



*Gateway to the Gorge* **PROCUREMENT JUSTIFICATION Qualifications-Based Selection (QBS) CONTRACTS FOR ARCHITECTURAL AND ENGINEERING SERVICES RCW 39.80**

Date: \_\_\_\_\_ From: \_\_\_\_\_ Department: \_\_\_\_\_ Account # \_\_\_\_\_

Project: \_\_\_\_\_ Project # \_\_\_\_\_

|              | Consultant #1 | Consultant #2 | Consultant #3 |
|--------------|---------------|---------------|---------------|
| Vendor Name: |               |               |               |
| Address:     |               |               |               |
| City, State  |               |               |               |
| Phone        |               |               |               |
| Email        |               |               |               |

| DESCRIPTION                        | RANKING |   |   |   |   | RANKING |   |   |   |   | RANKING |   |   |   |   |
|------------------------------------|---------|---|---|---|---|---------|---|---|---|---|---------|---|---|---|---|
|                                    | 1       | 2 | 3 | 4 | 5 | 1       | 2 | 3 | 4 | 5 | 1       | 2 | 3 | 4 | 5 |
| Experience with type of project    |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Quality of previous                |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Ability to meet contract deadlines |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Responsiveness to solicitation     |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Compliance with statutes and rules |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| References                         |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Staff availability for project     |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Financial capacity                 |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| Other:                             |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |
| TOTAL POINTS                       |         |   |   |   |   |         |   |   |   |   |         |   |   |   |   |

Notes: \_\_\_\_\_

Most Qualified Vendor: \_\_\_\_\_ Date: \_\_\_\_\_ PO # Assigned: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

# City of Washougal, Washington

## PROFESSIONAL SERVICES AGREEMENT

Project Name \_\_\_\_\_

This Agreement made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 2021, by and between the City of Washougal, a municipal corporation, under the laws of the State of Washington, hereinafter referred to as "City," and \_\_\_\_\_ hereinafter referred to as "Contractor," whose address is: \_\_\_\_\_.

**WHEREAS**, the City desires to engage the Contractor to provide \_\_\_\_\_ Services and other related professional services for \_\_\_\_\_, and Contractor has agreed to offer its professional services to perform said work, and

**WHEREAS**, the Contractor has represented by entering into this Agreement that it is fully qualified to perform the work to which it will be assigned in a competent and professional manner, to the standards required by City,

**NOW, THEREFORE, IT IS MUTUALLY AGREED BETWEEN THE PARTIES:** The City hereby agrees to engage the Contractor and the Contractor hereby agrees to perform, in a satisfactory and proper manner, as determined by City, the services hereafter set forth in connection with this Agreement.

1. **Scope of Services:** Contractor agrees to:
  - a) See attached Scope and Rates in **SCOPE AND RATES CITED**
  - b) Notwithstanding the provisions of section 14, "Amendments," the City may add other related professional services at its discretion.

This Agreement is a purchase of professional services at the hourly rates set forth in EXHIBIT B. Payment for these services are for time and materials not to exceed \$ \_\_\_\_\_ unless authorized in writing by the City. If additional time is needed, please refer to Section 4 of this agreement. A written amendment must be attached.

2. **Relation of Parties:** The Contractor, its sub-consultants, agents and employees are independent contractors performing professional services for City and are not employees of the City. The Contractor, its sub-consultants, agents and employees, shall not, as a result of this Agreement, accrue leave, retirement, insurance, bonding or any other benefits afforded to City employees. The Contractor, sub-consultants, agents and employees shall not have the authority to bind City in any way except as may be

specifically provided herein.

3. **Time of Performance:** The service of the Contractor is to commence as soon as practicable after the execution of this Agreement. It is agreed, services hereunder shall begin as of:

Begin date of \_\_\_\_\_, and be completed as of:

End Date \_\_\_\_\_.

4. **Delays and Extensions of Time:** If the Contractor is delayed at any time in the progress of providing service covered by the Agreement, by any causes beyond Contractor's control, the time for performance may be extended by such time as shall be mutually agreed upon by Contractor and City and shall be incorporated in a written amendment to this Agreement. Any request for an extension of time shall be made in writing to City.

5. **Compensation and Schedule of Payments:** City shall pay the Contractor at the rates indicated in Section 1 for work performed under the terms of this Agreement. This is the maximum amount to be paid under this Agreement and it shall not be exceeded without City's prior written authorization in the form of a negotiated and executed supplemental agreement. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment and incidentals necessary to complete the project as set forth herein. The Contractor shall submit monthly invoices to City covering both professional fees and project expenses, if any. Payments will be submitted by mail or courier to City Hall located at 1701 C Street, Washougal, WA 98671. No faxed copies for payment will be accepted. Payments to Contractor shall be made within thirty (30) days from submission of each invoice.

The City reserves the right to correct any invoices paid in error according to the rates set forth in this Agreement. City and Contractor agree that any amount paid in error by City does not constitute a rate change in the amount of the contract. The City's project name annotated on the executed copy of the contract **must** be referenced on any invoice submitted for payment.

6. **Ownership of Records and Documents:** All materials, writings and products produced by Contractor in the course of performing this Contract shall immediately become the joint property of the City and Contractor. In consideration of the compensation provided for by this Agreement, the Contractor hereby further assigns all copyright interests in such materials, writing and products to the City. A copy may be retained by the Contractor.
7. **Termination:** This Agreement may be terminated by either party upon not less than fifteen (15) days written notice. Additionally, this Agreement may be suspended in accordance with Section I of City of Washougal Resolution 1051.
8. **Evaluation and Compliance with the Law:** The Contractor shall have the authority to

control and direct the performance and details of the work described herein. The Contractor agrees to comply with all relevant, federal, state and municipal laws, rules and regulations.

9. **City Business and Occupation License & E-Verify Program:** Prior to performing work under this Agreement, Contractor shall secure a City of Washougal Business and Occupation License under W.M.C. 5.04.020.

The Contractor shall be registered with the Department of Homeland Security E-Verify Program. The Contractor shall provide a fully executed Declaration of Participation in E-Verify Program Form to the City. If the Contractor described herein uses a subcontractor in connection with the performance of the Contract, the subcontractor shall, as a condition of the Contract, certify their participation in the E-Verify program by submitting a Declaration of Participation Form. The Contractor and any subcontractors will not knowingly employ or contract with an unauthorized alien.

10. **Liability and Hold Harmless:** Contractor shall take all precautions necessary and shall be responsible for the safety of its employees, agents, and subcontractors in the performance of the work hereunder. All work shall be done at Contractor's risk.

The Contractor shall defend indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, to the extent caused by the negligent acts, omissions or misconduct of the Consultant, in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and the City, its officers, officials, employees, and volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence or misconduct. It is further specifically and expressly understood that the indemnification provided herein constitutes the Contractor's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

11. **Debarment, Suspension Or Ineligibility:** The Contractor, defined as the primary participant and its principals, certifies that to the best of its knowledge and belief that they:
- a) Are not presently debarred, suspended, proposed for debarment, declared

- ineligible, or voluntarily excluded from covered transactions with the City;
- b) Have not within a three (3) year period preceding this contract, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction, violation of antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
  - c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated above;
  - d) Have not, within a three (3) year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause of default;
  - e) Where the Contractor is unable to certify to any of the statements in this document, Contractor shall attach an explanation.

The Contractor agrees by submitting this contract that it shall not knowingly enter into any lower tier covered transaction with a person or business that is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this contract.

12. **Insurance:** The Contractor shall procure and maintain insurance, as required in this Section, without interruption from commencement of the Contractor's work through the term of the contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated herein.

**No Limitations:** Contractor's maintenance of insurance, its scope of coverage and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

**Minimum Scope of Insurance:** Contractors required insurance shall be of the types and coverage as stated below:

- a) **Automobile Liability:** insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be at least as broad as Insurance Services Office (ISO) form CA 00 01.
- b) **Commercial General Liability:** insurance shall be as least at broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors, products-completed operations, stop gap liability, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit using ISO form CG 25 03 0509 or an

equivalent endorsement. There shall be no exclusion for liability arising from explosion, collapse or underground property damage. The City shall be named as an additional insured under the Contractor's Commercial General Liability insurance policy with respect to the work performed for the City using ISO Additional Insured endorsement CG 20 10 10 01 and Additional Insured-Completed Operations endorsement CG 20 37 10 01 or substitute endorsements providing at least as broad coverage.

- c) Workers' Compensation: coverage as required by the Industrial Insurance laws of the State of Washington.

**Minimum Amounts of Insurance:** Contractor shall maintain the following insurance limits:

- a) Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident.
- b) Commercial General Liability insurance shall be written with limits no less than \$1,000,000 each occurrence, \$2,000,000 general aggregate and \$2,000,000 products-completed operations aggregate limit.

**City Full Availability of Contractor Limits:** If the Contractor maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this contract or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by the Contractor.

**Other Insurance Provision:** The Contractor's Automobile Liability and Commercial General Liability insurance policies are to contain or be endorsed to contain that they shall be primary insurance as respect the City. Any insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Contractor's insurance and shall not contribute with it.

**Acceptability of Insurers:** Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

**Verification of Coverage:** Contractor shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsements, evidencing the insurance requirements of the Contractor before commencement of the work. Upon request by the City, the Contractor shall furnish certified copies of all required insurance policies, including endorsements, required in this contract and evidence of all subcontractors' coverage.

**Subcontractors' Insurance:** The Contractor shall cause each and every Subcontractor to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors. The Contractor shall ensure that the City is an additional insured on each and every Subcontractor's Commercial General liability insurance policy using an endorsement at least as broad as ISO Additional Insured endorsement CG 20 38 04 13.

**Notice of Cancellation:** The Contractor shall provide the City and all Additional Insureds for this work with written notice of any policy cancellation within two business days of their receipt of such notice.

**Failure to Maintain Insurance:** Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Contractor from the City.

13. **Notices:** All notices which are given or required to be given pursuant to this Agreement shall be hand delivered or mailed, postage paid, as follows:

**City:**  
City of Washougal  
1701 "C" Street  
Washougal, WA. 98671

**Contractor:**  
**NAME:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_  
**CITY STATE ZIP:** \_\_\_\_\_

14. **Amendments:** This Agreement shall not be altered, changed, or amended, except by an instrument in writing executed by the parties hereto. Any changes in the scope of work or compensation shall be mutually agreed upon between City and the Contractor and shall be incorporated in written amendments to this Agreement.
15. **Scope of Agreement:** This Agreement incorporates all the agreements, covenants and understanding between the parties hereto and are merged into this written Agreement. No prior agreement or prior understanding, verbal or otherwise, of the parties or their agents, shall be valid or enforceable unless set forth in this Agreement.
16. **Ratification:** Acts taken pursuant to this Agreement but prior to its effective date are hereby ratified and confirmed.

17. **Governing Law/Venue:** This Agreement shall be deemed to have been executed and delivered within the State of Washington and the rights and obligations of the parties hereunder shall be construed and enforced in accordance with, and governed by, the laws of the State of Washington without regard to the principles of conflict of laws. The Contractor shall have legal authority to enter into this Agreement and be at least 18 years of age. Any action or suit brought in connection with this Agreement shall be brought in the Superior Court of Clark County, Washington.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

**CITY OF WASHOUGAL, a Municipal Corporation**

**BY:**

City Manager

**ATTEST:**

**Approved as to Form:**

Finance Director

City Attorney

**CONSULTANT, *Shell Engineering and Consulting***  
**LLC**

**BY:**

**Title:**

**EXHIBIT A: SCOPE OF WORK**  
**CITY OF WASHOUGAL**  
**HARTWOOD PARK PEDESTRIAN BRIDGE REPLACEMENT**

September 2021

**PROJECT DESCRIPTION**

This project is for design, permitting and construction assistance for the replacement of the Hartwood Park pedestrian bridge. The existing pedestrian bridge, being approximately 6-feet wide by 33-feet long, is a timber structure that crosses a tributary to Campen Creek, is in a deteriorated condition and must be replaced. This project also includes construction of an ADA-compliant sidewalk ramp on 42<sup>nd</sup> Court and replacement of existing railroad tie steps on the west side of the pedestrian bridge. Step replacements may be bid as an add-alternate bid item.

***Project Assumptions:***

- The existing bridge will be replaced with a prefabricated, custom-designed timber bridge. Bridge design and permitting is not included in this scope of work and will be provided by the timber bridge manufacturer.
- The new bridge will be approximately the same as the existing bridge in length and width and will span the tributary to avoid construction within the Ordinary High Water Mark (OHWM).
- Work within the OHWM will include the removal of the existing mid-span bridge support.

***Contract Duration:***

Contract term shall be from the date contract is fully executed until December 31, 2022.

**PROJECT TEAM**

| <b><i>Consultant</i></b>                     | <b><i>Role</i></b>                    |
|----------------------------------------------|---------------------------------------|
| Shell Engineering and Consulting LLC (Shell) | Prime Consultant, Civil Engineering   |
| Archeological Services, LLC (AS)             | Cultural Resource Studies/Permitting  |
| Ecological Land Services (ELS)               | Environmental Studies/Permitting      |
| Geotechnical Resources, Inc. (GRI)           | Geotechnical Evaluations              |
| KC Development, LLC (KCD)                    | Surveying                             |
| MD Structural Engineering, Inc. (MDS)        | Foundation Engineering                |
| Rivero Design (RD)                           | Civil Engineering Design and Drafting |

## **SCOPE OF WORK**

### **TASK 1 PROJECT MANAGEMENT**

#### ***Administration***

- Development and management of overall project scope, schedule and budget.
- Preparation of monthly progress reports and invoices.

#### ***Coordination and Meetings***

- A project kick-off meeting.
- Design review meetings.
- Consultations with the City's Project Manager.

#### ***Grant Assistance (Contingency Task, If Needed)***

- Provide assistance with development of grant applications

#### ***Task 1 Assumptions:***

- Project will span a 12-month period (October 2021 – September 2022) with approximately 7 months of active work: the design/permitting phase will span 4 months, bid phase will span one month, and the construction phase will span 2 months.
- Shell and ELS will attend the kick-off meeting.
- Design review meetings will occur following 75% and 95% submittals.
- 56 hours is allocated for consultations with the City's project manager (8 hours per month average during active work periods).
- Grant assistance is included as a contingency task. Prior authorization from the City is required for this task.
- 10 hours is allocated for grant assistance

#### ***Task 1 Deliverables:***

- Project scope and fee.
- Project Schedule.
- Monthly invoices with progress reports.
- Information for grant applications including project description, preliminary drawings, and cost estimates

### **TASK 2 RESOURCE STUDIES**

#### ***Environmental Studies***

ELS will provide the following services:

- Delineate study area and prepare memo, including:
  - Site visit to flag the OHWM of the stream within the study area
  - Meet with WDFW onsite
- Prepare documents for Washington Department of Fish and Wildlife's (WDFW) Hydraulic Project Approval (HPA) and coordinate with WDFW

- Prepare SEPA Checklist for agency review

### ***Cultural Resource Studies***

Archeological Services will provide the following services:

- On-going discussions with appropriate parties as needed, including the applicant, RCO, DAHP, the City of Washougal, and consulting Tribes.
- Background research consisting of a review of records, documentation, maps, and other pertinent literature.
- A cultural resource survey of the approx. 2.0-acre project area, consisting of a pedestrian survey and subsurface investigation. The latter work will entail the excavation of no more than thirty-six (36) shovel test probes, at the discretion of the field director. All excavated site matrix will be screened through nested 1/4" and 1/8" mesh.
- Preparation of a professional cultural resource survey report intended to meet the state guidelines for cultural resource reporting.

### ***Task 2 Deliverables:***

- Delineation memo and figure set following the City of Washougal's code
- Online JARPA form and figure set for HPA
- Completed SEPA Checklist
- A Cultural Resource Survey Report detailing the methods and results of the survey with project maps and geospatial data showing project area, excavation locations, any archaeological resources located during this survey, and recommendations concerning further archaeological work, if necessary.

### ***Task 2 Assumptions:***

- The project may receive funding through Washington State Recreation and Conservation Office (RCO). This use of state capital funds will trigger project compliance with the Governor's Executive Order 21-02, requiring a review of the project's potential effects upon cultural resources and will entail a cultural resources investigation carried out per Washington Department of Archaeology and Historic Preservation (DAHP) guidelines.

## **TASK 3 SURVEY AND MAPPING**

This task includes providing a topographic survey of the project area including:

- Research lot, easement and right of way boundaries.
- Locate existing and controlling lot, centerline and right of way monumentation
- Locate pathway and existing bridge with project limits.
- Locate existing utilities based upon one call locates, structures and as-built maps
- Contours at 1-foot intervals

### ***Task 3 Deliverables:***

- Topographic base map in Civil 3d 2019 and .pdf format.

### ***Task 3 Assumptions:***

- Existing conditions plan will show construction access from the pathway southwest of the bridge.
- Survey area around the bridge includes approximately 50-feet upstream of bridge and the confluence with Campen Creek downstream of the bridge.

#### **TASK 4      GEOTECHNICAL STUDIES**

GRI will provide the following services. Due to access restrictions, we have scoped the use of hand-augered borings and test probes to classify the soil conditions.

GRI's scope of work will include the following items:

- Review of available geologic information with regard to project plans.
- Two hand-augered borings will be completed, one at the approximate location of each planned abutment. The hand-augered borings will be advanced to depths of about 5 feet to 10 feet. Disturbed samples will be obtained at about 2.5-foot intervals of depth. The soil samples will be placed in jars or bags and returned to our laboratory for further testing.

One Dynamic Cone Penetrometer test (DCPT) soundings will also be completed adjacent to each hand-augered boring. The DCPT soundings will be advanced to depths of about 10 feet to 15 feet. The DCPT sounding consists of driving a 1.4-inch-diameter cone into the soil using a hand-operated, 35-pound weight falling 15 inches. The number of blows required to drive the cone 10 centimeters (approximately 4 inches) is recorded and can be correlated to soil density or stiffness.

The field investigation will be completed by experienced engineering staff from GRI, who will locate the borings and maintain a log of the materials and conditions uncovered during the course of the work.

Prior to completing the explorations, a surface reconnaissance will be completed to mark the proposed exploration locations. A request to the Utility Notification Center will be made at least 48 hours prior to the start of the field exploration program.

- Laboratory tests will be conducted to provide data on the important physical characteristics of the subsoils, essential for engineering studies and analyses. The laboratory tests will include standard classification tests, such as natural water content and grain size analysis.
- Engineering studies and analyses will be accomplished that will lead to the preparation of conclusions and recommendations concerning (1) earthwork, including excavation, cut and fill slopes, wet-weather construction, and placement and compaction of structural fill; (2) bridge foundation design criteria including allowable bearing pressures, estimated settlements (total and differential); and (3) seismic design criteria and site classification in accordance with current AASHTO requirements.
- A memorandum will be prepared that will discuss the work accomplished and presents the results of the various tests and office studies.

**Task 4 Deliverables:**

- Geotechnical memorandum in electronic format for your use and distribution.

**Task 4 Assumptions**

- Hand equipment will provide suitable geotechnical information for design of lightly loaded bridge foundations. If it is determined that the hand equipment does not provide adequate information due to shallow refusal or presence of geologic conditions that are different than anticipated, it may be necessary to re-evaluate the field exploration approach and modify the scope of work.

**TASK 5 ENGINEERING DESIGN**

Preparation of plans, specifications, estimates and calculations for the following items:

**5.1 Civil Engineering**

- Cover sheet and general notes
- Temporary sedimentation and erosion control.
- Existing conditions and demolition.
- Bridge area site design.
- Replacement of existing pathway steps southwest of the bridge.
- ADA compliant ramp to the pathway from 42<sup>nd</sup> Court.

**5.2 Structural Engineering**

- Plans and calculations for bridge abutments.
- Responses to comments received by building department.

| <b>Running Total</b> | <b>Sheets</b> | <b>Description</b>                                               |
|----------------------|---------------|------------------------------------------------------------------|
| 1                    | 1             | Cover Sheet: Vicinity Map, Sheet Index                           |
| 2                    | 1             | General Notes, Legend and Abbreviations                          |
| 3                    | 1             | Existing Conditions, Demolition, General Site Plan               |
| 4                    | 1             | Bridge Area Plan                                                 |
| 5                    | 1             | Grading, Erosion Control Plan                                    |
| 7                    | 1             | Bridge Foundations/Abutments Plan                                |
| 10                   | 3             | Civil Details (Street, Erosion Control, Special Project Details) |
| 12                   | 2             | Structural Details                                               |

**Task 5 Deliverables:**

- 75% PS&E.
- 95% PS&E.
- Final PS&E for bidding and construction.

**Task 5 Assumptions:**

- Site restoration plans are not required.

- Specification format will be WSDOT.
- City will provide review comments on 75% and 95% submittals.
- Stormwater TIR is not required.

## **TASK 6 BID PHASE SERVICES**

- Provide responses to questions that come up during bidding.
- Prepare addenda and submit to City for distribution to bidders.
- Review the bid tab and provide comments to the City regarding the bid prices.

### ***Task 6 Deliverables:***

- Notes of any communications with prospective bidders.
- Addenda in electronic format.
- Comments from review of bids.

### ***Task 6 Assumptions:***

- City will advertise the project and distribute bid packages.
- Includes up to two bid addenda.
- City will process bids, prepare the bid tab, and forward it for review.
- There will not be a pre-bid meeting.

## **TASK 7 CONSTRUCTION PHASE SERVICES**

### ***Meetings and Site Visits***

- Pre-Construction Conference.
- Meetings with the City's construction manager, inspector, and contractor.
- Punch-list walk-through

### ***Submittal Reviews and Construction Assistance***

- Review Contractor submittals.
- Respond to Contractor-generated RFI's.
- Develop design revisions to address site and construction conditions.

### ***Record Drawings***

- Upon completion of construction, prepare record drawings based on redlined plans provided by others.

### ***Task 7 Deliverables:***

- Punchlist items for correction
- Submittal reviews
- Responses to RFI's.
- Design revisions.
- Record drawings.

### ***Task 7 Assumptions:***

- Construction surveying will be provided by the contractor.

- City will provide all materials testing and special inspections.
- Includes up to 5 site meetings
- 20 hours is included for review of submittals, responding to RFI's, and preparing design revisions.

Fee Estimate  
**City of Washougal**  
**Hartwood Park Pedestrian Bridge**  
September 2021

|                                      |                                     | Shell            | Subconsultants  |                 |                |                |                |                 | Total Cost      |
|--------------------------------------|-------------------------------------|------------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|
|                                      |                                     |                  | AS              | ELS             | GRI            | KCD            | MDS            | RD              |                 |
| <b>Task 1</b>                        | <b>Project Management</b>           |                  |                 |                 |                |                |                |                 |                 |
|                                      | Administration                      | \$ 3,900         |                 |                 |                |                |                |                 | \$3,900         |
|                                      | Coordination and Meetings           | \$ 9,450         |                 | \$1,650         |                |                |                |                 | \$11,100        |
|                                      | Grant Assistance (Contingency Task) | \$ 1,500         |                 |                 |                |                |                |                 | \$1,500         |
|                                      | <b>Task 1 Subtotal</b>              | <b>\$ 14,850</b> |                 | <b>\$1,650</b>  |                |                |                |                 | <b>\$16,500</b> |
| <b>Task 2</b>                        | <b>RESOURCE STUDIES</b>             |                  |                 |                 |                |                |                |                 |                 |
| 2.1                                  | Environmental Studies               | \$ 1,200         |                 | \$9,350         |                |                |                |                 | \$10,550        |
| 2.2                                  | Cultural Resource Studies           | \$ 300           | \$12,540        |                 |                |                |                |                 | \$12,840        |
|                                      | <b>Task 2 Subtotal</b>              | <b>\$ 1,500</b>  | <b>\$12,540</b> | <b>\$9,350</b>  |                |                |                |                 | <b>\$23,390</b> |
| <b>Task 3</b>                        | <b>SURVEY AND MAPPING</b>           |                  |                 |                 |                |                |                |                 |                 |
|                                      | Topographic Survey                  | \$ 300           |                 |                 |                | \$2,750        |                |                 | \$3,050         |
|                                      | <b>TASK 3 Subtotal</b>              | <b>\$ 300</b>    |                 |                 |                | <b>\$2,750</b> |                |                 | <b>\$3,050</b>  |
| <b>Task 4</b>                        | <b>GEOTECHNICAL STUDIES</b>         |                  |                 |                 |                |                |                |                 |                 |
|                                      | Geotechnical Report                 | \$ 300           |                 |                 | \$9,900        |                |                |                 | \$10,200        |
|                                      | <b>Task 4 Subtotal</b>              | <b>\$ 300</b>    |                 |                 | <b>\$9,900</b> |                |                |                 | <b>\$10,200</b> |
| <b>Task 5</b>                        | <b>ENGINEERING DESIGN</b>           |                  |                 |                 |                |                |                |                 |                 |
| 5.1                                  | Civil Engineering                   | \$ 4,000         |                 |                 |                |                |                | \$19,250        | \$23,250        |
| 5.2                                  | Structural Engineering              | \$ 300           |                 |                 |                |                | \$6,050        |                 | \$6,350         |
|                                      | Special Provisions                  | \$ 3,000         |                 |                 |                |                |                |                 | \$3,000         |
|                                      | Estimates                           | \$ 1,200         |                 |                 |                |                |                |                 | \$1,200         |
|                                      | <b>Task 5 Subtotal</b>              | <b>\$ 8,500</b>  |                 |                 |                |                | <b>\$6,050</b> | <b>\$19,250</b> | <b>\$33,800</b> |
| <b>Task 6</b>                        | <b>BID PHASE SERVICES</b>           |                  |                 |                 |                |                |                |                 |                 |
|                                      | Bidder Questions                    | \$ 600           |                 |                 |                |                |                |                 | \$600           |
|                                      | Addenda                             | \$ 1,200         |                 |                 |                |                |                | \$616           | \$1,816         |
|                                      | Bid Review                          | \$ 150           |                 |                 |                |                |                |                 | \$150           |
|                                      | <b>Task 6 Subtotal</b>              | <b>\$ 1,950</b>  |                 |                 |                |                |                | <b>\$616</b>    | <b>\$2,566</b>  |
| <b>Task 7</b>                        | <b>CONSTRUCTION Phase Services</b>  |                  |                 |                 |                |                |                |                 |                 |
|                                      | Pre-Con                             | \$ 300           |                 |                 |                |                |                |                 | \$300           |
|                                      | Site Meetings                       | \$ 1,750         |                 |                 |                |                |                |                 | \$1,750         |
|                                      | Punchlist                           | \$ 500           |                 |                 |                |                |                |                 | \$500           |
|                                      | Submittals, RFI's Design Revisions  | \$ 2,400         |                 |                 |                |                | \$1,760        | \$616           | \$4,776         |
|                                      | Record Drawings                     | \$ 300           |                 |                 |                |                |                | \$616           | \$916           |
|                                      | <b>Task 7 Subtotal</b>              | <b>\$ 5,250</b>  |                 |                 |                |                | <b>\$1,760</b> | <b>\$1,232</b>  | <b>\$8,242</b>  |
| <b>NON-CONTINGENCY PROJECT TOTAL</b> |                                     | <b>\$ 32,650</b> | <b>\$12,540</b> | <b>\$11,000</b> | <b>\$9,900</b> | <b>\$2,750</b> | <b>\$7,810</b> | <b>\$21,098</b> | <b>\$96,248</b> |
| <b>CONTINGENCY TASK TOTAL</b>        |                                     |                  |                 |                 |                |                |                |                 | <b>\$1,500</b>  |
| <b>PROJECT TOTAL</b>                 |                                     |                  |                 |                 |                |                |                |                 | <b>\$97,748</b> |

**Workshop Coversheet**  
**BUSINESS OF THE CITY COUNCIL**  
**City of Washougal, Washington**

**FOR AGENDA OF:**

10/11/2021

**SUBJECT:**

Pavement Management Program Update

**DEPT. OF ORIGIN:**

Public Works

**REVIEWED AT:**

**TO BE RETURNED TO COUNCIL:**

No

**ATTACHMENTS:**

▢ **Pavement Management Program Update 2021**

---

**EXPENDITURE REQUIRED:**

**BUDGETED:**

**APPROPRIATION REQUIRED:**

---

**SUMMARY STATEMENT**

**RECOMMENDED ACTION**

# Washougal Pavement Management Program

Trevor Evers



**City of Washougal**

*Our mission is to provide leadership and effective, fiscally responsible services that achieve our community's vision.*

# Pavement Management

- Pavement management is the process of planning the reconstruction, rehabilitation, maintenance and repair of streets to efficiently optimize the pavement conditions over the entire network of roadways. It is vital to the community because proper pavement management allows cities to avoid costly replacements in the long run.
- Studies have shown that scheduled maintenance extends the life of city streets by up to 50% and that it costs less than the expensive repairs needed without scheduled maintenance. The cost of replacing unmaintained roads is much more expensive than the cost of regular maintenance.
- The pavement management is funded by Real Estate Excise Tax (REET), general fund, and vehicle license fee.



# Pavement Treatments

- **Asphalt Grind/Inlay**-Asphalt grind/inlay is a key part of the City of Washougal's preventative maintenance program to maximize the service life of our roads. Grind/Inlay involves grinding areas of pavement failure to a depth of 2-3" and pouring new asphalt in place.





# Pavement Treatments

- **Slurry seal**-Slurry seal is a cold mix paving system that can remedy a broad range of problems on streets, airfields, parking lots, and driveways. Think of Slurry Seal as an Industrial Grade Asphalt classed as a pitch. Emulsified oil and finely crushed aggregate are premixed on a truck and then applied to the road surface.





# Pavement Treatments

- **Chip seal**-Chip seal is a pavement surface treatment constructed by evenly distributing a thin base of hot bitumen and then embedding finely graded aggregate into it. The aggregate is evenly distributed over the seal spray and then rolled into a smooth pavement surface. This treatment seals out water and provides a good wear surface with skid resistance.



# Pavement Treatments

- **Micro seal**-Micro-seal is a polymer-modified asphalt and aggregate mixture. It is applied to existing pavements by a specialized machine which carries all components, mixes them on site and spreads the mixture onto the road surface. It is designed to protect the pavement and provide a skid-resistant wearing surface.

# Pavement Management Budget Versus Actual

Please note the vehicle license fee first year was 2019, which brought in \$119,334 and in 2020, \$263,161

| Pavement Management Budget Versus Actual |              |              |              |              |     |
|------------------------------------------|--------------|--------------|--------------|--------------|-----|
| Expenditure                              | 2018         | 2019         | 2020         | 2021         |     |
| Budget                                   | \$750,000.00 | \$863,000.00 | \$907,000.00 | \$907,000.00 |     |
| Actual                                   | \$651,072.00 | \$852,223.00 | \$426,260.00 | \$775,467.00 | YTD |
|                                          | \$98,928.00  | \$10,777.00  | \$480,740.00 | \$131,533.00 |     |



# Pavement Condition Index

Pavement Condition Index (PCI) PCI is a numerical rating of the pavement condition based on the type and severity of distresses observed on the pavement surface. The PCI value of the pavement condition is represented by a numerical index between 0 and 100, where 0 is the worst possible condition and 100 is the best possible condition:

- 2016-78 PCI
- 2019-80 PCI
- 2021-79 PCI

# Grind/Inlay for E Street





## 39<sup>th</sup> Street Before

39<sup>th</sup> Street before the 3.5" grind/inlay. The asphalt was severely cracked and potholes were abundant. The wheel wells where vehicles drive are sunken. Asphalt has failed beyond repair.

This aerial map shows a residential neighborhood with several streets labeled, including L St, K St, J St, I St, H St, G St, F St, E St, D St, C St, B St, and A St. A large green field is visible in the center-right. Red lines highlight specific areas: 'Both Lanes Between Fog Lines' at the top right, 'South Bound Lane' on the left, and 'East Bound Lane' at the bottom. A large green field is visible in the center-right.

- 39<sup>th</sup> Street: J to M = 62
- Evergreen to J = 67

## After 100 PCI

# 41<sup>st</sup>, 42<sup>nd</sup>, and 43<sup>rd</sup> Street Prior to Chip/Fog Seal

41<sup>st</sup> street prior to chip/fog seal. Heavy alligator cracking, surface is worn out and needs rejuvenated.

Before Pavement Condition Index (PCI):

- 42<sup>nd</sup>: U to W = 67
- 41<sup>st</sup> : Q to U = 58
- 43<sup>rd</sup>: U to V = 62

**After high 80's to low 90's PCI**



# Chip/Fog Seal Finished Product



This was 41<sup>st</sup> Street after the chip/fog seal. This preventative surface treatment provides a new wear surface, exceptional skid resistance and uniform finish. This should prolong this street by 7-10 years



# Grind/Inlay Addy Street 2021

# Grind/Inlay on C Street

These are pictures of “C” Street which gets a 3.5” grind/inlay patch this August 12<sup>th</sup>, 2021. The asphalt has completely failed in areas and starting to pothole. The white paint marks are for the areas of failure that will be removed.



# Grind/Inlay C Street 2021

Before Pavement Condition Index (PCI):

- C Street 67

After high 80's PCI



# Next Steps:

- Hire Capitol Assets to complete our Pavement Condition Report by 1<sup>st</sup> quarter of 2022. Completion by 3<sup>rd</sup> quarter of 2022.



# Thank you and any questions!!



City of Washougal