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CITIES OF CAMAS AND WASHOUGAL

Capital Improvement Plan

November 07, 2022

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The information in this document has been obtained from sources believed reliable. Our findings have been based on limited information and on-site observation. Because of the limited scope of our initial review, these preliminary findings should not be used as a principal basis for any decision relating to the site and/or building, and confirmation of the information contained within this document with the applicable government body may be necessary.

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INTRODUCTION

PROJECT TEAM

CAMAS-WASHOUGAL FIRE DEPARTMENT

- Nick Swinhart - Fire Chief
- Ron Schumacher - Fire Marshal



MACKENZIE

- Jeff Humphreys - Project Principal
- Cathy Bowman - Project Manager



ECO NORTHWEST

- Chris Blakney



CITYGATE ASSOCIATES, LLC - FIRE AND EMERGENCY SERVICES

- Stewart Gary



PROJECT INTRODUCTION

The Camas Washougal Fire Department (CWFD) is seeking to identify the future department needs to serve the two cities. The objective is to assess the response time study of the existing stations and identify improvements to implement that better meet their needs and goals; provide a master plan for more efficient operational model and layout; better align with the current space demand for the Fire Department and allow for future prospective staff and facility growth.

To aid the City of Camas and City of Washougal with these efforts, the City selected Mackenzie to assist with an evaluation of the existing station locations and work with Department staff to determine the operations-based needs.

Mackenzie, established in 1960 and based in Portland, Oregon, provides an integrated design approach to projects, including architecture, structural engineering, landscape architecture, civil engineering, land use planning, transportation planning and interior design services. Mackenzie's Public Project team specializes in municipal and emergency response facility design, space needs evaluations, and bond campaign assistance. In the past decade, Mackenzie has worked on publicly funded projects in Oregon and Washington for more than 50 counties and municipalities, providing

design and engineering services for more than 40 fire facilities, 18 police facilities and 6 municipal office buildings.

At the start of the design process, the goal was to develop a master capital improvement plan to meet the 40 years needs of the Department. The validated response time study report includes an updated understanding of the Response Time Study Report by ESCi (completed in 2019) taking into account the projected urban growth boundaries for both Camas and Washougal. A program for a new headquarters and new satellite station was also completed as part of the study to further identify what the potential cost of new and replacement fire stations will be based on the department needs. The information contained within this report provides a detailed overview of Mackenzie's work with the Camas-Washougal Fire Department. All steps involved in this process have been documented and organized based on the associated task and are contained within the pages of this report for the City of Camas and City of Washougal's consideration. Recommendations for next steps have been outlined at the end of the Executive Summary.

EXECUTIVE SUMMARY

Public facility design, specifically fire station projects, are unique in that the building and all its functions are tools required to most effectively and efficiently enhance agency operations and safety. Fire station design focuses on functionality and meeting the stringent requirements associated with protection and security of the building, its staff, and the communities they serve. Jurisdictional, state, and federal criteria for safety, security, and operational procedures drive these requirements and invariably impact design considerations. These criteria ensure that this facility not only is able to improve operational efficiency on a day-to-day basis but is capable of evolving over the life of the building, resisting and responding to emergency events, providing critical services for the citizens of Camas and Washougal, enhancing the built environment of the surrounding area with a strong civic presence, and encouraging investment in the community.

The following report encompasses the primary tasks requested by the Camas Washougal Fire Department to determine the long-term needs of the department including:

- 1) Programming
- 2) Response Time Study
- 3) Project Cost Development
- 4) Financial Funding Forecast

Process and Methodology:

Mackenzie employed programming, communication, consensus-building, and goal setting techniques to ensure that the final report meets the expectations of the stakeholders involved in the process. Using a multi-disciplinary approach, extensive public project experience, and lessons learned on previous fire station and public building projects, the team provided, architectural services to meet the project objectives and deliverables.

Mackenzie worked with the Camas Washougal Fire Department (CWFD), City of Camas and City of Washougal staff to confirm the key stakeholders who needed to be involved throughout the study and to support and strengthen dialogue between the Design Team and the City.

Task #1: Programming

Mackenzie understands from discussions with the Fire Department that there are currently operating out of three different stations. The headquarter station (Station 41) and another existing station (Station 42) are in the City of Camas, and one existing station (Station 43) is located in the City of Washougal. The three existing stations do not meet the current standard structural building requirements, let alone the seismic performance required of an essential facility. Chief Swinhart shared with Mackenzie that they have been unable to purchase needed apparatus for the department as the apparatus bays are not sized appropriately to accommodate the new apparatus. The facilities do not meet ADA requirements which require accessible access to all levels, accessible door hardware, and accessible clearances in kitchen in rest room facilities. The facilities do not meet the current energy code, resulting in inefficiencies in their building systems and thermal performance. The facilities do not meet the minimum sleeping area per NFPA 1581 per discussion with CWFD.

Mackenzie worked closely with the Camas Washougal Fire Department staff to better understand the current space needs and projected those needs out based on a 40-year growth forecast. The facility program was created utilizing the space standards and comments from current Department staff. It includes circulation space, and requirements for utilitarian areas, such as mechanical, electrical, and data room spaces; and a projection of growth with the expectation that the buildings will be in use for 40 plus years. It also includes identified site-related requirements (secure parking, visitor parking, staff patio area, recycling and trash enclosure, emergency generator, etc.). Mackenzie guided the Fire Department through the process of space needs identification and their required space allocations. From that, the Design team developed a program matrix that identified the required spaces, their approximate size, and amenities to be provided within them.

Upon development of this document and prior to gaining Department staff approval, Mackenzie reviewed the findings with the Department to clarify any questions or comments brought up over the course of creating the matrix. During the review, as a comparison tool, Mackenzie also shared project

information of similarly sized headquarters and satellite fire stations. A headquarter station will be inclusive of the Fire Department's Administrative staff, while a satellite station will not require the administrative staff offices. The program yielded a total square footage for the headquarters stations to be 19,456 square feet. A satellite station to be 13,151 square feet. As part of these calculations, the building square footage total includes an average 20% increase for general building circulation and interstitial space (i.e., wall thicknesses), which has been found to be a typical escalation for facilities of this type. Projections for the site indicate a demand of 10 paved parking stalls for the public and 30 spaces for staff vehicles. Mackenzie further validated these identified growth projections and space needs through the use of comparable jurisdictions and newly constructed facilities in the region (see page 02-15 for trending spreadsheet).

Task #2 Response Time Study

Citygate reviewed the ESCi study and technical exhibits, interviewed Department staff and reviewed available data on City growth rates. In addition to these data, Citygate also applied the best practices recommendations for fire crew deployment as published by the National Fire Protection Association in Standard 1710 for career fire crew deployment, the Standards of Response Coverage as published by the Commission on Fire Accreditation International and the regulations of the State of Washington. Citygate interviewed both fire and planning staffs from both cities to understand potential growth patterns and how growth, if any, could be past the desired travel time reach of the existing stations. After discussion with both City Community Development Directors, the land use through zoning is where the community has set its potential land use goals.

Overall, Citygate finds the Department has three service areas—the developed, higher density cores; the outer, currently lighter or undeveloped suburban/rural areas; and locations where in fill development could occur in the future. Citygate is of the opinion that, given the differing service areas in both cities, the Department should consider immediately adopting a split travel time goal. The 4:00-minute travel time is appropriate for the most developed areas. However, Citygate suggests the Cities adopt and measure performance in the outer

suburban areas at 8:00 minutes' travel time.

Station 41 – The current location is sufficient. It is near the riverfront and has good crossroad connections. Ideally, it could be moved a little northwest to close some of the gap between it and Station 42. If moved, its service coverage would need to just touch the water and not overlap as much with Station 43. However, relocating Station 41 would not close the entire travel time coverage gap between Stations 41 and 42.

Station 42 – Station 42 is a newer facility and supports training functions. If the Department were to use a split response time measure, Station 42 could cover the more populated areas toward Station 41 with urban travel times while also providing longer suburban edge to rural response time coverage to the north of Station 42.

Station 43 – Ideally, to minimize coverage time loss “over the water,” the station should be relocated more north by northeast. However, it is also on the other side of the railroad tracks, a positive fact given the large trains that go to the Port of Vancouver. The station has good access to the main overpass across the train tracks on Washougal River Road.

Washougal, however, is too large from east to west to be covered from one fire station. Depending on response time goals and final growth approvals, Washougal will need at least two fire stations at some point in the 2030s. Assuming Station 43 does not move, a second station needs to be built, more likely up into the northwest section of Washougal where there is more zoning for growth and road network development. If intense growth were also to occur in the northeast to eastern areas, the second fire station site could be more central and inland from the river in the middle of Washougal rather than to the northwest, or the City could site a third fire station in the east.

Likewise, due to growth, to deliver better-than-rural response times, Camas will need two additional fire stations at a minimum. For existing developed areas beyond 4:00 minutes' travel time of a first response unit, the partner cities and Fire Department should adopt a split response time measure better reflecting the very different population and risk densities well inland from the Columbia River.

For current capital improvement fee calibration for the next 10 years, CFWD should, at a minimum, plan for a replacement of Station 41, replacement of Station 43, minor renovation of Station 42 and one additional fire station.

Task #3: Project Cost Development

Based on the response time study and the program requirements for future stations, Mackenzie prepared a probable construction cost for the new headquarters and satellite fire station and associated site development improvements for the project. These cost projections were based upon historical data of most recently bid fire station projects in the Pacific Northwest as well as currently cost forecasted fire stations in the area. It comprised of the range of costs related to the anticipated raw construction costs and anticipated general contractor margins based on a publicly funded project requiring prevailing wage rates for construction.

In conjunction with the development of the construction costs, Mackenzie prepared cost forecasts for consultant costs, including architectural/engineering fees, construction management fees, special inspections, geotechnical inspections, etc. Additionally, Mackenzie worked with the Camas Washougal Fire Department to evaluate and compile potential owner costs, including fixtures, furnishings and equipment, lockers and shelving, fitness equipment, moving costs, and applicable permit fees. A final cost matrix was prepared that provides a comprehensive look at all anticipated costs associated with the project summarized to reflect the construction cost, consultant costs, and owner costs.

Task #4: Financial Funding Forecast

To assess how well existing fire impact fees could cover the capital expenses of constructing new facilities, Mackenzie worked with ECONorthwest to

translate adopted forecasts of future household and employment growth into estimates of residential and commercial development in Camas and Washougal over the next 15 years and the resulting fire impact fee revenue. ECONorthwest found that fire impact fees can fund only a portion of eligible costs, and the total funding gap for estimated capital needs is \$32.28 to \$35.59 million.

Next, ECONorthwest researched an array of potential funding alternatives that could help to address the funding shortfall. Mackenzie and ECONorthwest recommend a multi-pronged funding strategy and CWFD consider the following tools for further evaluation:

1. Increased Fire Impact Fees
2. General Obligation Bond
3. Surplus Land Disposition
4. Public Safety Sales Tax
5. EMS Levy

Summary of Recommendations

Examination of the departments needs found that a replacement headquarters station is needed within the next two or three years. A replacement satellite station is required in the next two to three years. A brand-new satellite station is required in the next five to nine years.

Our recommendation is for the Camas Washougal Fire Department to move forward with a replacement of Station 41 Headquarters Station promptly with a new facility that meets their operational and essential facility requirements.

NEXT STEPS

- **City to conduct additional studies on specific fire impact fee adjustments.**
 - Based upon the funding gap identified in this report, each City should determine what the new fire impact fee for each jurisdiction to bridge some of the gap in the funding.
- **Determine Funding Mechanism**
 - Confirm the funding mechanism(s) the Department expects to pursue to complete the project. Once determined, the City and Department should assess the financial impact, if any, to the local community in comparison to previous voter approvals, and the timing for pursuing the selected funding mechanism.
- **Complete a Needs Assessment and Conceptual Design**
 - While this report identifies the deficiencies and programmatic needs of the future replacement and new stations, a conceptual design for a specific site for each of the replacement and new station should be identified. Development of floor plans, site plans, and perspective renderings for each new facility will ensure a more precise cost forecast for each facility project and identify costs associated with the purchase and development of new sites.
- **Establish a desired timeline and budget for the project**
 - Based on the findings of Mackenzie's analysis, it is determined that the overall projected rough order of magnitude cost of the project as described in this report are:
 - Headquarters Station \$12.6 million to \$13.9 million
 - Satellite Station \$8.5 million to \$9.4 million

It is encouraged that the Department agree on an expectation of project costs and schedule development to provide clear direction to those that represent the project.

RESPONSE TIME STUDY

FIRE STATION LOCATION ASSESSMENT

Background

Citygate Associates, LLC (Citygate) was retained by the Camas-Washougal Fire Department via Mackenzie to assist with the development of a Fire Department Capital Improvement Plan. The Department developed a Fire Department Master Plan with a consultant in 2019. That study by Emergency Services Consulting International (ESCi) was published in November 2019. The ESCi study used the analysis of risks to be protected, emergency incident response statistics, and geographic mapping to offer recommendations on existing fire station coverage and possible added fire stations as the communities continue to evolve within their growth plans.

Given the millions of dollars potentially needed to maintain or increase fire station and crew coverage, the Department tasked Mackenzie with obtaining a peer review of the ESCi study from another fire station deployment planning firm. The Department also expressed the need to more deeply consider locally nuanced station location factors and engage more directly with both cities regarding their long-term needs.

Citygate reviewed the ESCi study and technical exhibits, interviewed Department executive staff, and reviewed available data on City growth rates. To this background of risks to be protected in both cities, Citygate also applied the best practices recommendations for fire crew deployment as published by the National Fire Protection Association in Standard 1710 for career fire crew deployment, the Standards of Response Coverage as published by the Commission on Fire Accreditation International, and the regulations of the State of Washington.

There are no mandatory federal or state regulations directing the level of fire service staffing, response times, or outcomes. Thus, the level of fire protection services provided is a matter of local policy decision. Communities have the level of fire services they choose to purchase and can afford, which may not always be the level desired. However, if services are provided at all, local, state, and federal regulations relating to firefighter and citizen safety must be followed.

Analysis

In general, there are two broad theorems to fire station location: (1) find sites that each cover a 360-degree area of a street network and (2) use sites that cover the most population in the least number of drive-time minutes. In other words, try not to locate stations tightly against bodies of water or canyons, as they cannot be traveled across quickly, and do not use locations where large open space zones must be traversed before entering populated areas.

Often a community is bisected by a river, railroad, or protected open spaces where public streets will not ever be built. It is rarely economically feasible to cover every road segment in a city at the distal ends of the road network. At some point, coverage is always limited to the most people and risks within the community's ability to fund.

Station location goals for response time are impacted by local realities, from zoning to topography and road design. A site must be acquired and meet traffic safety criteria for emergency vehicle egress, among other needs, such as utilities and zoning setbacks. All the above constraints exist for the Cities of Camas and Washougal, thereby limiting optimum fire station locations.

Currently, the Department is served from three staffed fire stations: two in Camas—Station 41 and Station 42—and one in Washougal—Station 43. To the west and north of the two-city Department are other fire agencies that provide mutual aid. No mutual aid stations are close enough to provide a response into the Cities faster than the Cities' three fire stations.

ESCi Report Incident Workload Summary

A best practice travel time for a fire unit in an urban or suburban area is 4:00 minutes in any direction from a station. The land-use patterns and road network make achieving this goal from three, and likely four or more, station locations all but impossible. Historical travel time performance from the existing three fire stations to 90 percent of the fire and ems emergencies ranges from 8:10 to 8:29

minutes across the entire department. Fewer-in-quantity incidents outside of the historic town core and riverside areas slows travel times.

The following two maps from the ESCi report show first the population density variance and second the incident location density areas.

Figure 1—Population Density Variance

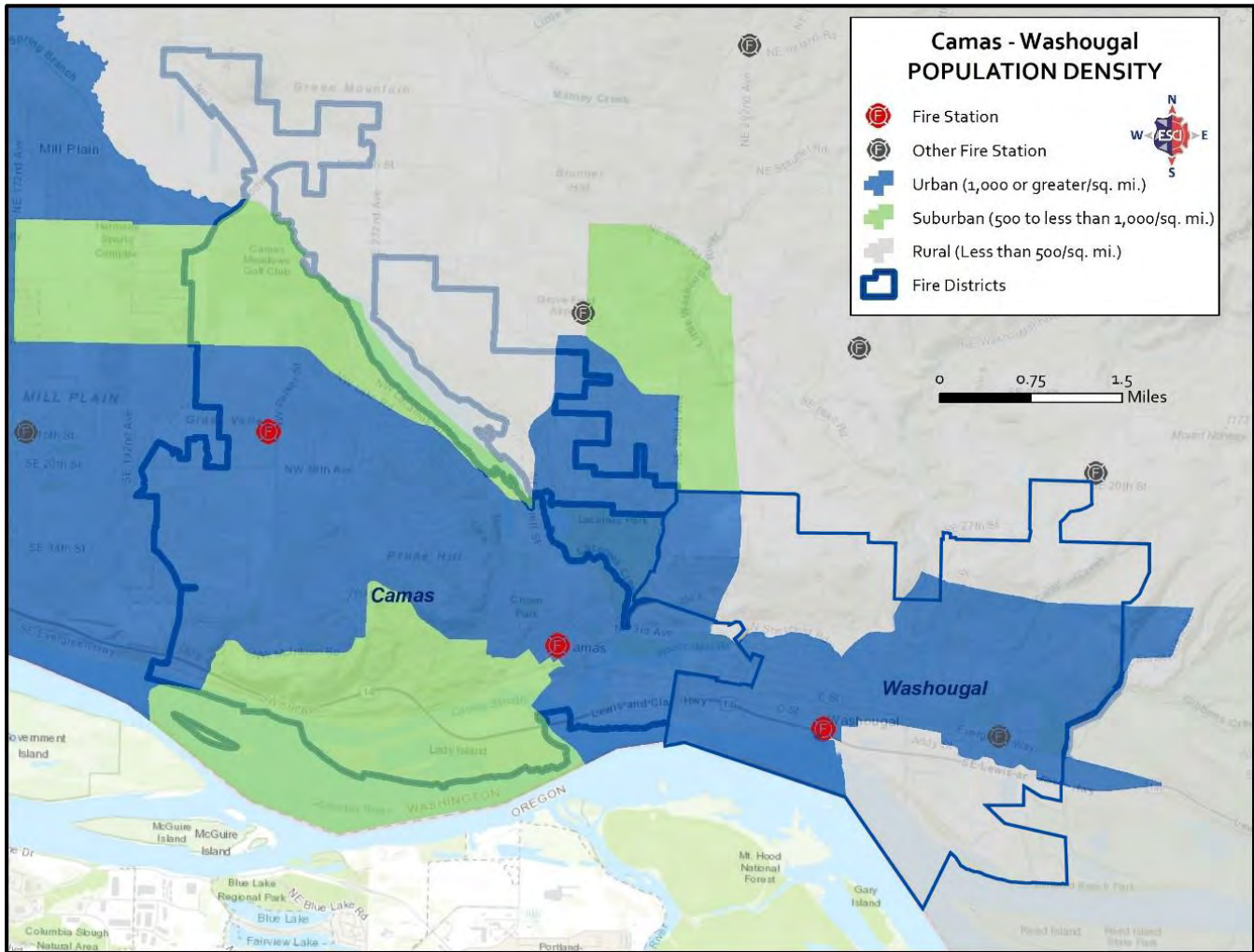
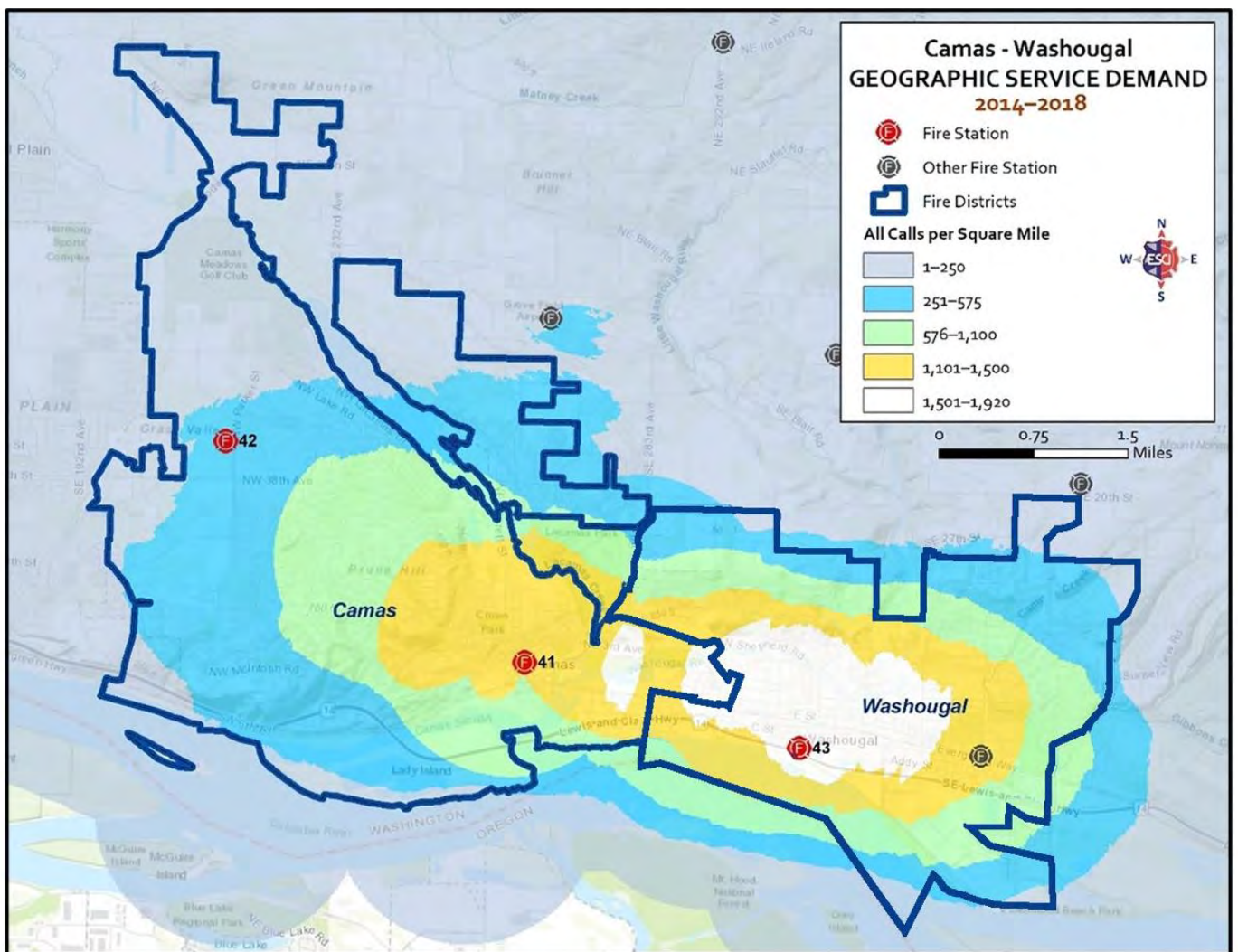
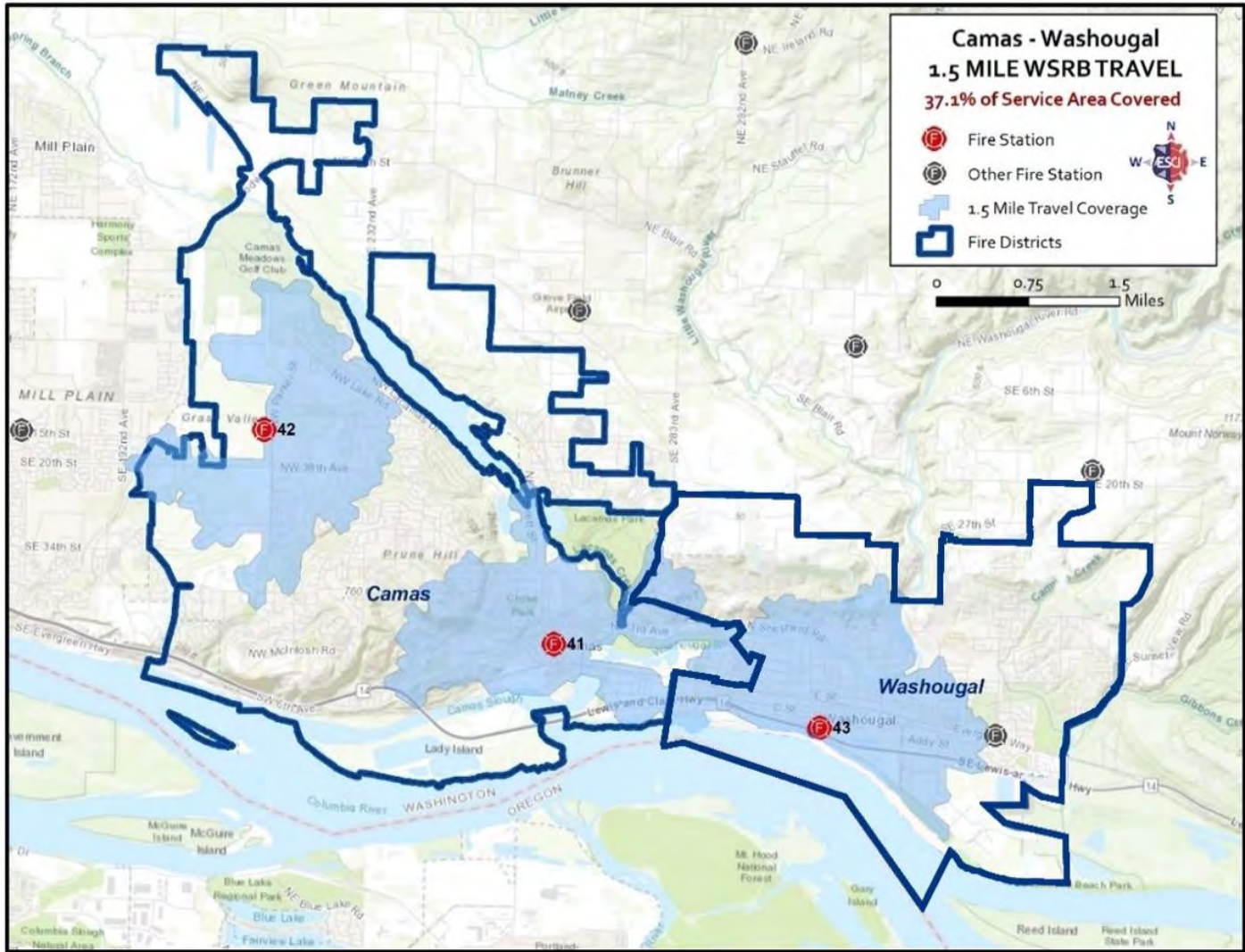


Figure 2—Incident Location Density Areas



Two of the three fire stations, Stations 41 and 43, are well located for travel time to highest density population and incident demand areas. Station 42 serves a large but, at present, far less densely populated area in northwest Camas.

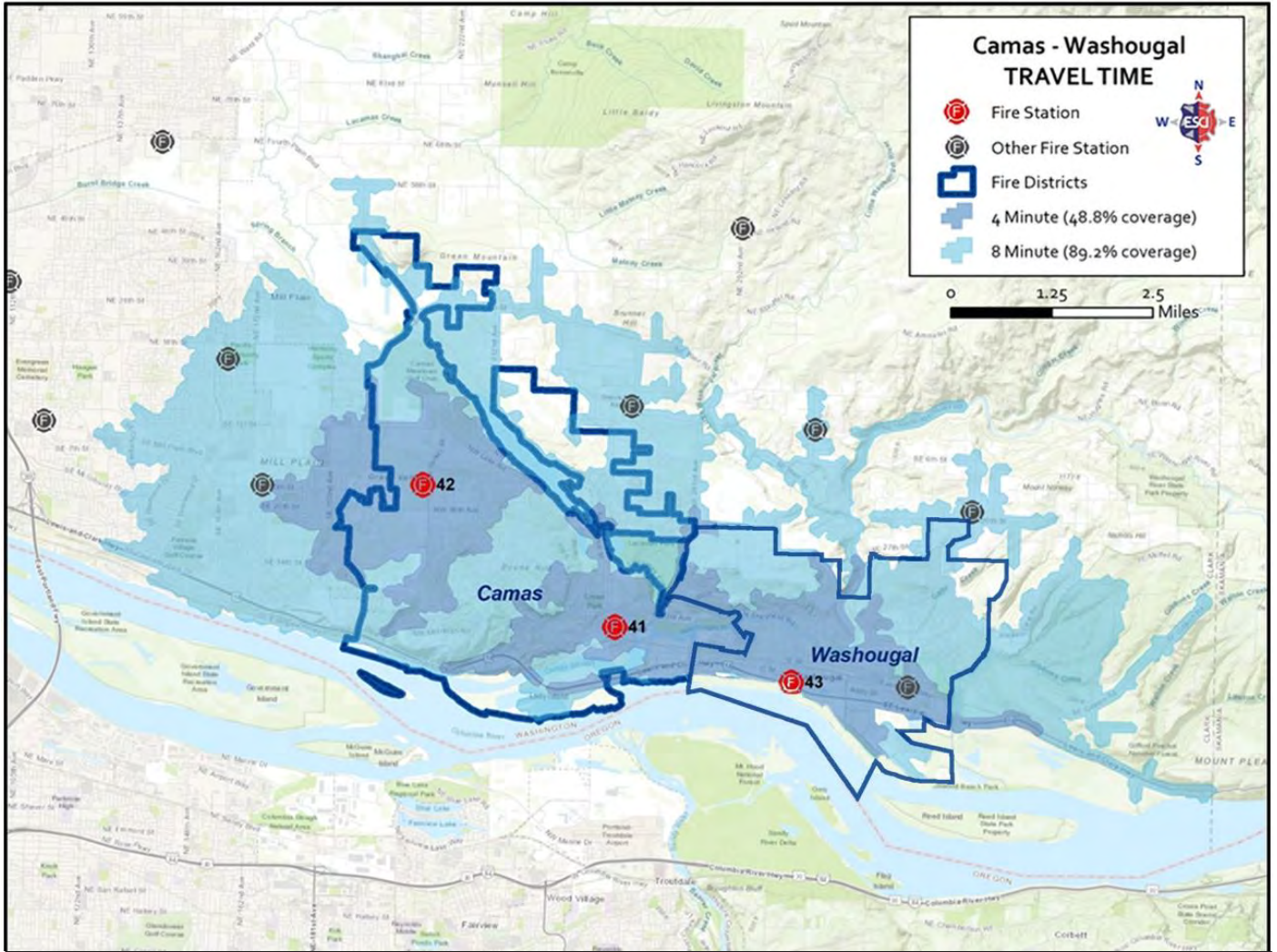
Figure 3—Station Coverage – 1.5 Miles



ESCi Geographic Mapping Coverage Summary

In addition to travel time, the other best practice station spacing measure is the Insurance Service Office (ISO) criteria to locate stations using 1.5-mile distance coverage. The following two maps from the ESCi report show first the ISO coverage and next a computer-modeled 4:00-minute travel time coverage.

Figure 4—Station Coverage – 4:00-Minute Travel Time



Using either coverage measure, the existing stations are located to cover the most populated and highest incident demand areas.

Growth and Possibilities in Both Cities

Citygate interviewed both fire and planning staffs from both cities to understand potential growth patterns and how growth, if any, could be past the desired travel time reach of the existing stations. The best indication of growth is each community's General Plan and approved zoning. While development itself occurs within regional and national economic conditions, land use through zoning is where the community has set its potential land use goals.

Camas

While Camas has approximately 25,000 residents, the Comprehensive Plan envisions the resident population growing to about 34,000. Camas uses a population estimate of 2.91 people per dwelling unit, which, with the addition of 9,000 residents, means adding over 3,000 dwelling units. Appendix 1 is the current Comprehensive Plan map for Camas. Per the map, there is both residential and commercial land use planned in the west side, in the northwest corner, across Lacamas Lake, and in the southeast corner by the Columbia River. In all four areas, land use allows higher density multi-family housing, as well as single family housing, at various units per acre. When compared to the coverage maps in Figures 3 and 4, all these four areas are beyond the reach of desirable urban/suburban first-due fire unit travel times of 4:00 minutes. The areas across Lacamas Lake presently have rural levels of travel time service.

With much of Camas' growth occurring well past the urban/suburban travel time reach of a fire station, Camas has two choices. The first option is to add at least two to three fire stations, and the second option is for the growth areas to adopt more rural levels of fire service delivery and response times. Adding fire stations efficiently will require the completion of the next transportation plan and several sub-area development plans, agreements, or both.

Washougal

While Washougal has approximately 16,000 residents, the Board of County Councilors has adopted a 2035 population projection of 562,207 for all of Clark County and, within that, 22,347 for Washougal. Using a larger population estimate of 2.5 people per dwelling unit, the result could mean the addition of 6,347 residents, resulting in adding over 2,500 dwelling units. Appendices 2-4 are the current zoning maps for Washougal. Both the northwest and northeast areas are zoned for single family residences at four different unit densities. Given the coverage maps in Figures 3 and 4, most of the population additions to Washougal by 2035 will (as in Camas) occur past the desirable urban/suburban first-due fire unit travel times of 4:00 minutes. Washougal will also need to add at least two fire stations to extend first-unit coverage or adopt rural level of service in the outer City.

Joint Two-City Result

Both cities need to have adopted future transportation (roadway) plans and adopt within their shared fire department either urban/suburban 4:00-minute travel time policies for the first responder unit or a more rural level of service for first responder fire units (of 8:00 to 10:00 minutes' travel). When these planning standards are set, then the addition of efficient fire station locations can be specifically determined. As part of this planning, it can be researched if any areas with other agency fire stations will be annexed to either or both cities.

At this point, Camas should consider moving Fire Station 41 west some to balance coverage with Fire Station 42 and add at least two more stations, one in the northwest corner and another midway down the north side of Lacamas Lake. Washougal should consider at least adding one fire station in the northwest area and possibly an additional station in the east if the east-by-northeast areas significantly develop past rural levels of human land use density.

Opinions and Recommendations

Overall, Citygate finds the Department has three service areas—the developed, higher density cores; the outer, currently lighter or undeveloped suburban/rural areas; and locations where in fill development could still occur. Citygate is of the opinion that, given the differing service areas in both cities, the Department should consider immediately adopting a split travel time goal. The 4:00-minute travel time is appropriate for the most developed areas. However, Citygate suggests the Cities adopt and measure performance in the outer suburban areas at 8:00 minutes' travel time. Beyond that, the areas would be open space or mostly farming land uses. For the long term, the Cities can adopt a trigger point for adding fire stations when population densities develop significantly past rural levels.

Given this opinion, Citygate offers the following recommendations:

Station 41 – The current location is sufficient. It is off the riverfront and has good crossroad connections. Ideally, it could be moved a little northwest to close some of the gap between it and Station 42. If moved, its service coverage would need to just touch the water and not overlap as much with Station 43. However, in addition to the cost of relocation, relocating Station 41 would not close the entire travel time coverage gap between Stations 41 and 42.

Station 42 – Station 42 is a newer facility and supports training functions. If the Department were to use a split response time measure, Station 42 could cover the more populated areas toward Station 41 with urban travel times while also providing longer suburban edge to rural response time coverage to the north of Station 42.

Station 43 – Ideally, to minimize coverage time loss “over the water,” the station should be relocated more north by northeast. However, it is also on the other side of the railroad tracks, a positive fact given the large trains that go to the Port of Vancouver. The station has good access to the main overpass across the train tracks on Washougal River Road. Unless a cost-effective site could be found on the other side of the overpass to bring Station 43 off the water but outside of a large residential area, it can remain where it is and be modernized as needed over its remaining life cycle.

Washougal, however, is too large from east to west to be covered from one fire station. Depending on response time goals and final growth approvals, Washougal will need at least two fire stations at some point in the 2030s. Assuming Station 43 does not move, a second station needs to be built, more likely up into the northwest section of Washougal where there is more zoning for growth and road network development. If intense growth were also to occur in the northeast to eastern areas, the second fire station site could be more central and inland from the river in the middle of Washougal rather than to the northwest, or the City could site a third fire station in the east.

Likewise, due to growth, to deliver better-than-rural response times, Camas will need two additional fire stations at a minimum.

For existing developed areas beyond 4:00 minutes' travel time of a first response unit, the partner cities and Fire Department should adopt a split response time measure better reflecting the very different population and risk densities well inland from the Columbia River.

For current capital improvement fee calibration, Camas should, at a minimum, plan for two added fire stations and Washougal should plan for one added fire station.

PROGRAMMING

PROGRAMMING SUMMARY - HEADQUARTERS

Mackenzie began the programming effort by working closely with Camas-Washougal Fire Department staff to identify the appropriate square footage for all future facilities - one for a headquarters stations and one for a satellite station. Using this document and past experiences with fire facilities, all while incorporating current staff feedback, Mackenzie determined current space needs and forecast future needs that will accommodate Department function for the next 20 years, and beyond.

The program totalled 33,916 square feet for a brand new headquarter station and a program total of 21,131 square feet for a brand new satellite station

that would meet the department’s need for the next 40 years. This total square footage includes a 25% increase for general building circulation and interstitial space (i.e. wall thickness), which has been found to be an average escalation for facilities of this type.

Program needs were developed for a satellite station type and a headquarter station type by means of project meetings with Camas-Washougal Fire Department staff. A Facilities Comparison to comparable districts has been provided for you on page 02-16 through page 02-17 to validate the square footage of the headquarters and satellite facilities for Camas Washougal.

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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	
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

PREVIOUS SQUAREFOOTAGE ASSUMPTIONS	
Existing Building	Not Applicable
Mackenzie	19456

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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: Apparatus Bay and Support Rooms														
Apparatus Bay														
Apparatus Bay				5	5		15	70	1050		0	5250	5250	5 Bay, Drive-through bays Front Apparatus Bay doors to be four-fold doors Back Apparatus Bay doors to be Overhead
<i>Group Total</i>	0	0	0								0	5250	5250	
Apparatus Support Rooms														
Turnouts				1	1		48	17	816		0	816	816	Turnout Gear located in a dedicated room (36) Turnout Lockers min; Ready Rack type system, Light should not penetrate into room
Decontamination / Equipment Supply Rm				1	1		12	12	144		0	144	144	Floor sink, Decon Shower, Eyewash, Stainless steel counter and sink, Extractor, Commercial grade dryer, Hooks for drying w/ extra ventilation, Detergent Dispenser
Decon Toilet/Shower				1	1		9	12	108		0	108	108	Part of the Decon Room
Decon Vestibules				0	0		0	0	0		0	0	0	Part of the Hallway - between transition zones of App Bay and Living Quarters/Admin
EMS Storage				1	1		8	10	80		0	80	80	Prefer to have island
Report Writing				5	5		10	6	60		0	300	300	(5) Workstations Table, chair and Computer
Work Room/Shop				1	1		6	16	96		0	96	96	Tool Room Bench, computer work area Bottle Rack Storage - SCBA - 6'-0" Grinder and Vice ... off the Apparatus Bay Table, chair and Computer
SCBA Room				1	1		6	16	96		0	96	96	Tool Room Bench, computer work area
Hose Storage				1	1		8	16	128		0	128	128	typical length of rack 10 to 12 feet
Supply Storage				1	1		12	20	240		0	240	240	Cleaning Supplies, shop towels,
Mezzanine				1	1		10	40	400		0	400	400	Above the Apparatus Bay Support Rooms
<i>Group Total</i>	0	0	0								0	2408	2408	
TOTAL SQUARE FOOTAGE (Apparatus Bay and Related Rooms)											0	7658	7658	

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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: Living Quarters and Administration														
Living Quarters														
Bunk Rooms	7	7	7	8	8	10	10	100		0	800	800	(6) Bunk Rooms: Bed and night stand, no lockers or desk	
Toilet/Shower Room				5	5	10	12	120		0	600	600	Single occupancy	
Lockers				36	36	2	2	4		0	144	144	Lockers located in the hallway -36 lockers	
Kitchen/Dining				1	1	16	40	640		0	640	640	(4) Refrigerator, (1) under counter fridge; (5) Pantry 6 burner range, double oven, (1) Dishwasher Dining table for 12	
Day Room				1	1	24	34	816		0	816	816	(9) people - great room concept	
Physical Training				1	1	20	30	600		0	600	600		
Laundry				1	1	8	10	80		0	80	80	(1) washer and (1) Dryer); linen cabinets Open Shelf	
Group Total	7	7	7							0	3680	3680		
Administration														
Battalion Chief Office	1	1	1	1	1	12	14	168	OFFICE	0	168	168	Suite - adjoined with Bunk Room	
Battalion Chief Bunk Room				1	1	10	12	120		0	120	120	BC's suite - adjacent to office	
Captain's Office	1	1	1	1	1	10	14	140	OFFICE	0	140	140	Suite - adjoined with Bunk Room	
Captain's Bunk Room				1	1	10	12	120		0	120	120	Captain's suite - adjacent to office	
Fire Chief's Office	1	1	1	1	1	14	22	308	OFFICE	0	308	308	Table top seating for 4	
Fire Marshal Office	2	2	2	2	2	10	18	180	OFFICE	0	360	360		
Shared Workspace Fire Marshal Office				1	1	10	18	180	OFFICE	0	180	180	Common area between Fire Marshal Offices to layout large format drawings	
Admin Assistant	2	2	2	2	2	10	14	140		0	280	280	One for Fire Chief Admin and One for Fire Marshal Office	
Small Conference Room				1	1	10	15	150		0	150	150	Seating for 6	
Records Storage				1	1	10	12	120		0	120	120	Administration Staff	
Copy/Work Room				1	1	8	10	80		0	80	80		
Radio Charging Station				1	1	4	8	32		0	32	32		
Group Total	7	7	7							0	2058	2058		
Building Support														
Stairs per floor				4	4	8	10	80		0	320	320		
Fire Pole per floor				2	2	5	10	50		0	100	100		
Elevator per floor				2	2	8	10	80		0	160	160		
Electrical / Data				1	1	12	23	276		0	276	276	Tap out system in electrical room	
Janitor Closet per floor				2	2	4	6	24		0	48	48	Toilet paper, paper towels, mops, sink, etc.	
Group Total	0	0	0							0	904	904		
TOTAL SQUARE FOOTAGE (Living Quarters and Administration)											0	6642	6642	

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: Community / Training Rooms														
Training Rooms														
Community/Training Room				1	1		32	36	1152		0	1152	1152	Classroom style for 36 - 40 ppl
1st Aid Station				0	0		0	0	0		0	0	0	Counter and blood pressure to be completed in the lobby
Public Restrooms				2	2		8	8	64		0	128	128	One to be dual public/fire use
Lobby				1	1		5	15	75		0	75	75	
Antique Rig Showcase				1	1		15	30	450		0	450	450	To be located in the lobby
Storage Closet				1	1		3	4	12		0	12	12	
Training Storage				1	1		8	12	96		0	96	96	
Group Total	0	0	0								0	1913	1913	
TOTAL SQUARE FOOTAGE (Training Rooms)											0	1913	1913	

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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: Exterior Requirements														
Parking														
Public Parking - Training				10	10		9	18	162		0	1620	1620	(1) ADA (9) Public
Staff Parking				30	30		9	18	162		0	4860	4860	Included in Public Parking
<i>Group Total</i>					40						0	6480	6480	
Site Elements														
Generator				1	1	1	10	15	150		0	150	150	Screened; Includes 4'-0" clearances, Concrete pad req'd
Trash / Recycling				0	1	1	10	20	200		0	200	200	Verify trash requirements w/ provider
Patio				0	1	1	20	20	400		0	400	400	BBQ Balcony if LQ on the 2nd Floor
<i>Group Total</i>											0	750	750	
SUBTOTAL											7230	7230		
GENERAL CIRCULATION (100%)											7230	7230		
TOTAL SQUARE FOOTAGE (Exterior Requirements)											14460	14460		

PROGRAMMING SUMMARY - SATELLITE STATION

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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	
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

PREVIOUS SQUAREFOOTAGE ASSUMPTIONS	
Existing Building	Not Applicable
Mackenzie	13151

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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: Apparatus Bay and Support Rooms														
Apparatus Bay														
Apparatus Bay				3	3		15	70	1050		0	3150	3150	3 Bay, Drive-through bays Front Apparatus Bay doors to be four-fold doors Back Apparatus Bay doors to be Overhead
Group Total	0	0	0								0	3150	3150	
Apparatus Support Rooms														
Turnouts				1	1		48	17	816		0	816	816	Turnout Gear located in a dedicated room (36) Turnout Lockers min; Ready Rack type system, Light should not penetrate into room
Decontamination / Equipment Supply Rm				1	1		12	12	144		0	144	144	Floor sink, Decon Shower, Eyewash, Stainless steel counter and sink, Extractor, Commercial grade dryer, Hooks for drying w/ extra ventilation, Detergent Dispenser
Decon Toilet/Shower				1	1		9	12	108		0	108	108	Part of the Decon Room
Decon Vestibules				0	0		0	0	0		0	0	0	Part of the Hallway - between transition zones of App Bay and Living Quarters
EMS Storage				1	1		12	12	144		0	144	144	Prefer to have island in center
Report Writing				5	5		10	6	60		0	300	300	(5) Workstations Table, chair and Computer
Work Room/Shop				1	1		6	16	96		0	96	96	Tool Room Bench, computer work area Bottle Rack Storage - SCBA - 6'-0" Grinder and Vice ... off the Apparatus Bay Table, chair and Computer
Hose Storage				1	1		8	16	128		0	128	128	typical length of rack 10 to 12 feet
Supply Storage				1	1		12	20	240		0	240	240	Cleaning Supplies, shop towels,
Mezzanine				1	1		10	40	400		0	400	400	Above the Apparatus Bay Support Rooms
Group Total	0	0	0								0	2376	2376	
TOTAL SQUARE FOOTAGE (Apparatus Bay and Related Rooms)											0	5526	5526	

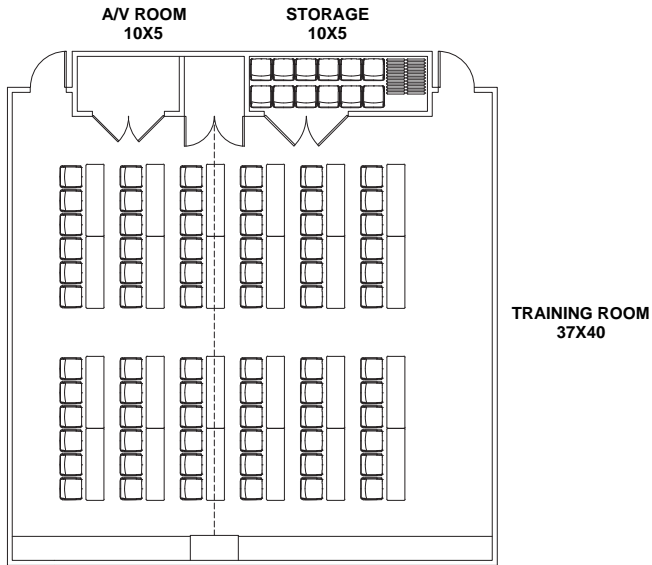
Space / Room Use	Staffing Requirements			Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2021	2061	Exist	2021	2061	W	L	Area		Exist	2021	2061	
Department: Living Quarters and Administration														
Living Quarters														
Bunk Rooms	7	7	7	7	7	10	10	100			0	700	700	(6) Bunk Rooms: Bed and night stand, no lockers or desk
Toilet/Shower Room				5	5	10	12	120			0	600	600	Single occupancy
Lockers				36	36	2	2	4			0	144	144	Lockers located in the hallway -36 lockers
Kitchen/Dining				1	1	16	40	640			0	640	640	(4) Refrigerator, (1) under counter fridge; (5) Pantry 6 burner range, double oven, (1) Dishwasher Dining table for 12
Day Room				1	1	24	34	816			0	816	816	(9) people - great room concept
Physical Training				1	1	20	30	600			0	600	600	
Laundry				1	1	8	10	80			0	80	80	(1) washer and (1 Dryer); linen cabinets Open Shelf
Group Total	7	7	7								0	3580	3580	
Administration														
Captain's Office	1	1	1	1	1	10	14	140	OFFICE		0	140	140	Suite - adjoined with Bunk Room
Captain's Bunk Room				1	1	10	12	120			0	120	120	Captain's suite - adjacent to office
Small Conference Room				1	1	10	15	150			0	150	150	Seating for 6
Copy/Work Room				1	1	8	10	80			0	80	80	
Radio Charging Station				1	1	4	8	32			0	32	32	
Group Total	1	1	1								0	522	522	
Building Support														
Stairs per floor				0	0	8	10	80			0	0	0	
Fire Pole per floor				0	0	5	10	50			0	0	0	
Elevator per floor				0	0	8	10	80			0	0	0	
Electrical / Data				1	1	12	23	276			0	276	276	Tap out system in electrical room
Janitor Closet per floor				1	1	4	6	24			0	24	24	Toilet paper, paper towels, mops, sink, etc.
Group Total	0	0	0								0	300	300	
TOTAL SQUARE FOOTAGE (Living Quarters and Administration)											0	4402	4402	

Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

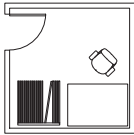
Space / Room Use	Staffing Requirements			Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2021	2061	Exist	2021	2061	W	L	Area		Exist	2021	2061	
Department: Community / Training Rooms														
Training Rooms														
Community/Training Room				1	1		24	30	720		0	720	720	Classroom style for 20 ppl
1st Aid Station				0	0		0	0	0		0	0	0	Counter and blood pressure to be completed in the lobby
Public Restrooms				2	2		8	8	64		0	128	128	One to be dual public/fire use
Lobby				1	1		5	15	75		0	75	75	
Storage Closet				1	1		3	4	12		0	12	12	
Training Storage				1	1		8	12	96		0	96	96	
Group Total	0	0	0								0	1031	1031	
TOTAL SQUARE FOOTAGE (Training Rooms)											0	1031	1031	

SPACE STANDARDS



- Based on existing emergency response facilities, past experience, and general architectural standards, space standards have been developed and depicted to aid in efficiently comparing space sizes for offices, support spaces, and primary functions unique to this particular type of facility.
- These space standards have been utilized in the development and validation of identified program elements.

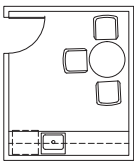
SHARED ROOM LAYOUTS



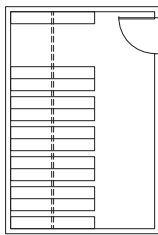
PLAN REVIEW
10X10



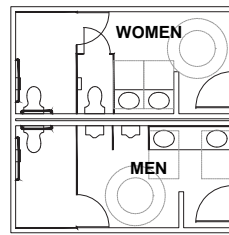
COPY ROOM
18X5



LOUNGE
10X12



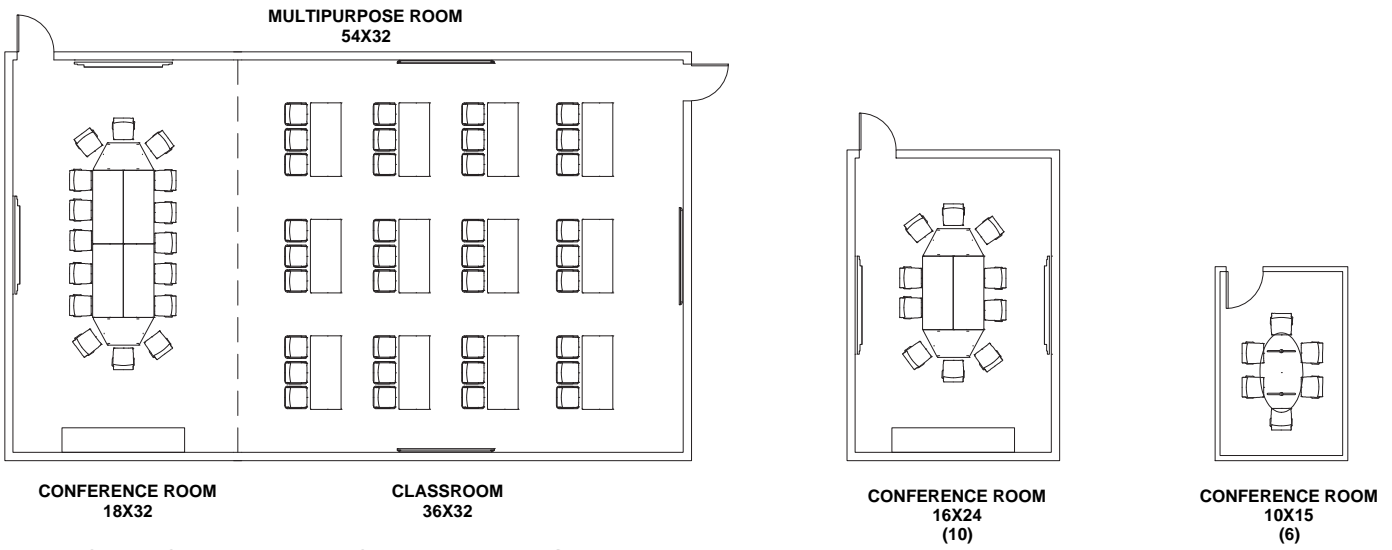
RECORDS ROOM
12X18



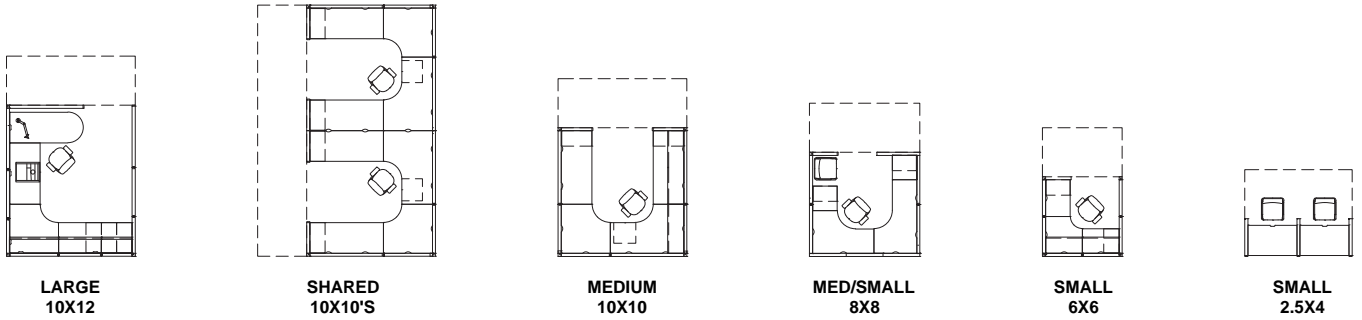
TOILET ROOM
18X18

TYPICAL OFFICE SUPPORT ROOM LAYOUTS

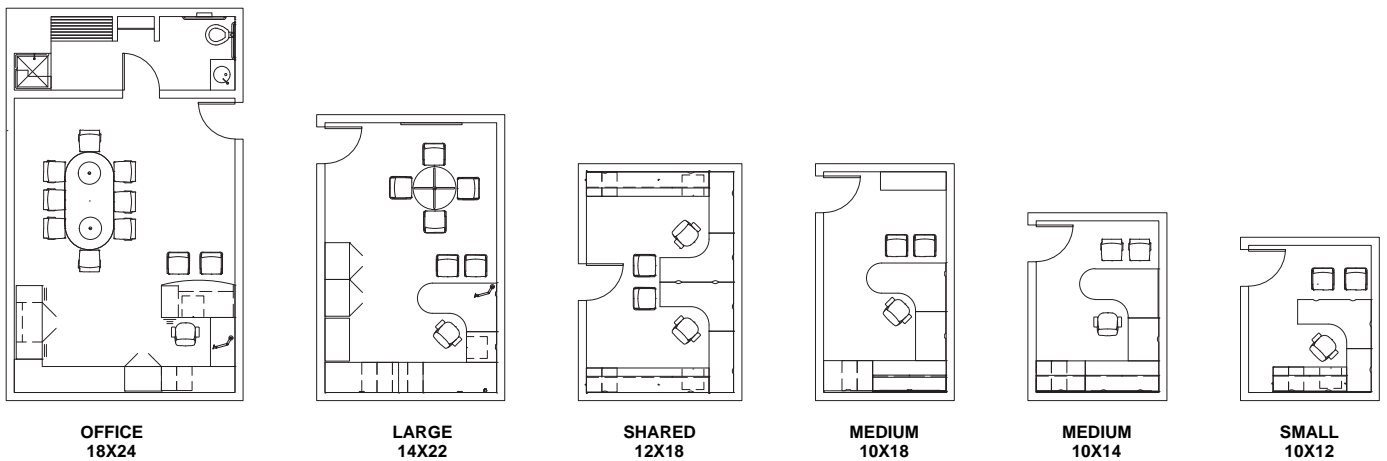
SCALE 1/16" = 1'-0"



TYPICAL CONFERENCE LAYOUTS

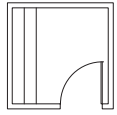


TYPICAL CUBICLE LAYOUTS

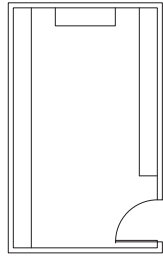


TYPICAL OFFICE LAYOUTS

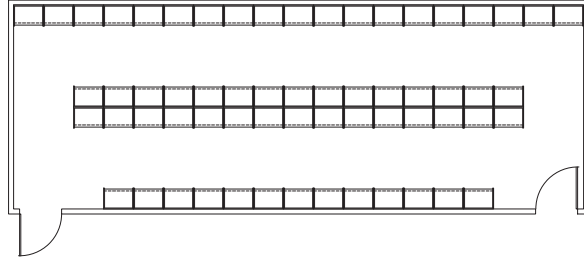
SCALE 1/16" = 1'-0"



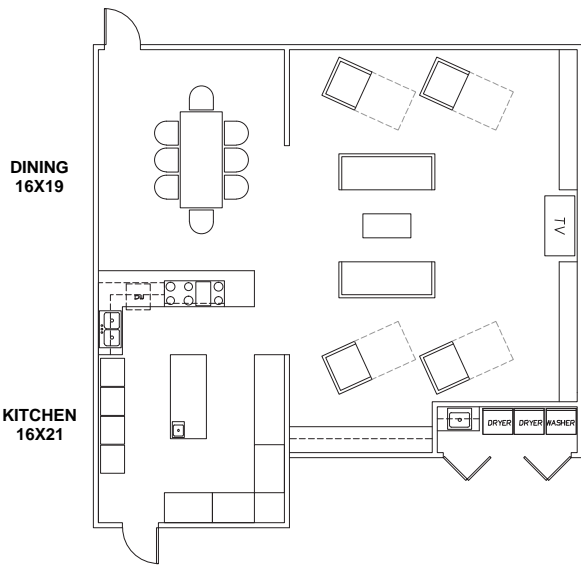
EMS STORAGE
14X29



SUPPLY STORAGE
12X20



TURN OUT
48X17



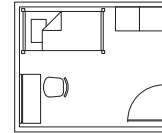
DINING
16X19

KITCHEN
16X21

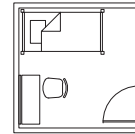


DAYROOM
24X34

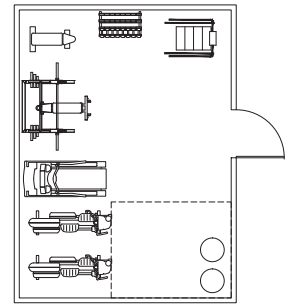
LAUNDRY
4X12



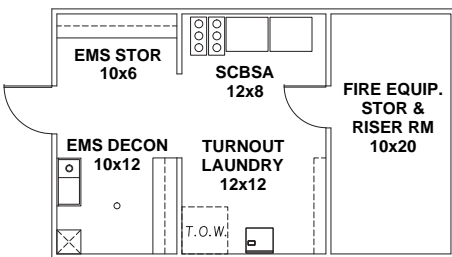
RESIDENT QUARTERS
10X12



ON-SHIFT QUARTERS
10X10



PHYSICAL TRAINING
18X24



EMS STOR
10x6

SCBSA
12x8

FIRE EQUIP.
STOR &
RISER RM
10x20

EMS DECON
10x12

TURNOUT
LAUNDRY
12x12

T.O.W.



SHOP
16x6

TYPICAL APPARATUS BAY SUPPORT ROOM LAYOUTS

SCALE 1/16" = 1'-0"



<u>PROJECT</u>	<u>ALBANY FIRE</u>	<u>DUNDEE FIRE & RESCUE</u>
LOCATION	Albany, OR	Dundee, OR
YEAR COMPLETE	2017	2014
SITE SIZE	1.63 acres	1.5 acres
APPARATUS BAY	8,359 sf	8,184 sf
LIVING QUARTERS	7,221 sf	2,850 sf
ADMINISTRATION	7,643 sf	2,797 sf
PUBLIC	1,042 sf	1,574 sf
TOTAL SQ. FT.	11,900 sf	17,623 sf
RESIDENT PROGRAM	YES	YES
BUNK ROOMS	9	4
RESPONSE AREA	81 sq mi	13 sq mi
POPULATION SERVED	58,073	5,500
QUANTITY OF STATIONS IN DISTRICT	4	1
STAFFING	Career/Volunteer	Career/Volunteer
STATION TYPE	Headquarters	Headquarters

FACILITY COMPARISONS



CLARK COUNTY FIRE DISTRICT 6 STATION 61

CLARK COUNTY FIRE DISTRICT 6 STATION 63

VANCOUVER FIRE STATION 11

Vancouver, WA	Vancouver, WA	Vancouver, WA
2022	2019	2022
4.10 acres	3.32 acres	3.65 acres
6,885 sf	7,252 sf	5,180 sf
5,799 sf	3,449 sf	4,250 sf
8,450 sf	5,277sf	3,250 sf
1,706 sf	1,000 sf	1,447 sf
20,750 sf	17,693 sf	14,789 sf
NO	NO	NO
8	8	10
37 sq mi	37 sq mi	90 sq mi
75,000	75,000	250,000
3	3	11
Career/Volunteer	Career/Volunteer	Career/Volunteer
Headquarters	Satellite	Satellite

PROJECT COST DEVELOPMENT

COST SUMMARY

Following completion of the programs for the headquarter station and the satellite station, Mackenzie developed cost forecasts for the stations that would be developed to meet the Department's needs for the next 20 years. This effort is reflected in the Statement of Probable Costs found in Appendix B.

Development costs of a project are not limited to construction costs alone and require consideration of other variables. These variables differ between new construction and renovation or expansion, and invariably change from one project to the next depending on site conditions, existing building conditions, building codes, seismic zones and the environment of the construction industry. Differences between estimates arise depending on the design approach, construction costs, and design and engineering costs. Owner costs for furniture, fixtures and equipment are often constant, based on a predetermined budget set by the Department. New construction can often differ substantially due to the single variable of land acquisition. This cost, coupled with higher construction costs, often leads to this being a more expensive option. In the case of Station 1, there will not be land acquisition costs lowering the overall costs for a new station.

Construction costs reflect the raw costs incurred by a general contractor for overhead and profit, bonding and insurance, securing of materials, and general construction of the site and building. In addition to the identified construction costs, an owner's contingency is recommended to ensure

dollars are carried through construction for owner changes, design omissions, unforeseen conditions or jurisdictional requirements, among others.

Total project costs are calculated on the following page for the year 2021 as shown on the Camas-Washougal Capital Improvement Plan - Project Cost Summary.

Consultant costs reflect the costs incurred for project management and design of the project from conceptual design through construction administration. Though design fee can vary, costs included in this report reflect standard A/E fee guidelines based on a percentage of construction cost as outlined by the Washington State Department of Enterprise Services. In addition to architectural and engineering services, costs include marketing materials and required services, such as geotechnical inspections and special inspections. A contingency is provided for this category for any unforeseen or additionally requested design services throughout the project.

Owner costs reflect the costs generally incurred directly by the owner throughout the project. This includes all items the owner may wish to contract separately from the general construction of the project. Some additional owner-related costs include relocation into the new facility, jurisdictional fees and furniture and equipment. A contingency is provided in this category for any unforeseen or undefined costs not currently represented.

PROJECT COST ESTIMATE - HEADQUARTER STATION

The following project development cost estimate projects the construction values of the programmed sizes of a headquarter station and satellite station. The major categories for the project include construction cost (classified as a hard

cost), consultant costs and owner costs (classified as soft costs) as described on the previous page. The costs are arranged in the following table by station and grouped by hard or soft cost to denote the forecasted total project costs.

Camas-Washougal Capital Improvement Plan - Project Cost Summary

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

The matrix on the following pages is a comparison of similar recently completed facilities to illustrate average cost per square foot and establish a current or expected construction costs per square foot for the new facilities.

FACILITY COST COMPARISON



<u>PROJECT</u>	<u>VANCOUVER FIRE STATION 2</u>	<u>CLARK COUNTY FIRE DISTRICT STATION 63</u>
LOCATION	Vancouver, WA	Vancouver, WA
YEAR COMPLETE	2018	2019
CONSTRUCTION TYPE	Wood Framing and Structural Masonry w/ Brick Veneer	Wood Framing w/ Fiber Cementous Boards And Structural Masonry
BUILDING SIZE	13,350 SF*	17,963 SF*
SITE SIZE	93,860 SF	144,744 SF+
STORIES	SINGLE	TWO
BUILDING COST PER SF	\$253.64 PER SF	\$322.22 PER SF
SITE COST PER SF OF SITE	\$40.49 PER SF OF SITE	\$16.78 PER SF OF SITE
OFF-SITE COST PER SF OF SITE	N/A	N/A
TOTAL CONSTRUCTION (BID) COST PER SF OF BUILDING	\$376.86** PER SF OF BUILDING	\$485.23 PER SF OF BUILDING
FINAL CONSTRUCTION COST ESTIMATE PER SF OF BUILDING	\$421.48** PER SF OF BUILDING	\$560.60 PER SF OF BUILDING
LOW BID (AVERAGE BID) PER SF OF BUILDING	\$199.58 (\$234.08) PER SF OF BUILDING	\$485.23 PER SF OF BUILDING

* - Mezzanine not included

** - Includes FF&E and tapout equipment (provided by contractor)

+ - includes Training Tower / Training Grounds / Aggregate Piers / Wetland Mitigation

Camas-Washougal Fire Department

November 2022



<u>VANCOUVER FIRE STATION 11</u>	<u>CLARK COUNTY FIRE DISTRICT STATION 61, REMODEL AND ADDITION</u>	<u>AVERAGE BUILT COST</u>	<u>CAMAS-WASHOUGAL HEADQUARTER STATION, NEW CONSTRUCTION</u>
Vancouver, WA	Vancouver, WA		Washougal, WA
2022	TBD		2024
Wood Framing and Structural Masonry w/ Brick Veneer	Wood Framing w/ Fiber Cementous Boards And Structural Masonry		Wood Framing and Structural Masonry w/ Brick Veneer
14,789 SF*	20,750 SF		19,456 SF
221,537 SF	178,763 SF		87,120 SF
SINGLE	TWO		SINGLE
\$354.26 PER SF	\$388.04 PER SF	\$329.54 PER SF	\$540.00 PER SF
\$10.67 PER SF OF SITE	\$3.79 PER SF OF SITE	\$17.93 PER SF OF SITE	\$10.00 PER SF
N/A	N/A	N/A	N/A
\$481.46 PER SF OF BUILDING	N/A Construction To Start in Q3 of 2022	\$447.85 PER SF OF BUILDING	N/A
\$556.67** PER SF OF BUILDING	\$421.48** PER SF OF BUILDING	\$490.06 PER SF OF BUILDING	N/A
\$443.89 (\$481.46) PER SF OF BUILDING	N/A Construction To Start in Q3 of 2022		N/A

FINANCIAL FUNDING FORECAST

FIRE IMPACT FEE AND FUNDING ALTERNATIVES ASSESSMENT

The Camas-Washougal Fire Department is working with Mackenzie to develop an assessment of future service and capital needs. The analysis has identified the need for one new headquarter fire station and two satellite fire stations to replace aging existing facilities that cannot physically accommodate new larger apparatus needs. To assess how well existing fire impact fees could cover the capital expenses of constructing new facilities, Mackenzie asked ECONorthwest to translate adopted forecasts of future household and employment growth into estimates of residential and commercial development in Camas and Washougal over the next 15 years and the resulting fire impact fee revenue. ECONorthwest found that fire impact fees can fund only a portion of eligible costs, and the total funding gap for estimated capital needs is \$32.28 to \$35.59 million. Next, ECONorthwest researched an array of potential funding alternatives that could help to address the funding shortfall.

The purpose of this memorandum is to outline the funding gap that the Fire Department faces in trying to fund its three new and replacement facilities as well as identify potential alternative funding mechanisms.

This memorandum is organized into two parts. In Part I, we dive into the results of the growth forecast, showing the assumptions that we made and the resulting funding gap. In Part II, we outline a set of potential funding tools that the Fire Department could explore in more depth.

PART I: FIRE IMPACT FEE REVENUE GROWTH FORECAST

This section describes the methodology and assumptions we used to generate our estimates for the fire impact fee funding gap

Cost Assumptions

The Camas-Washougal Fire Department plans to build a replacement headquarters, a replacement satellite station, and construct a new satellite fire station. The first replacement will be a new headquarters fire station and is tentatively planned to begin construction sometime in 2024. It has not been determined if this facility will be on the

same site as the existing headquarters. Based on the construction cost analysis from Mackenzie, they estimate the new station to cost between \$12.65 million (low scenario) and \$13.91 million (high scenario). One replacement satellite station is planned to begin construction in 2026 and the other is planned to begin in 2029. The first satellite station is estimated to cost between \$9.62 million and \$10.58 million, and the second is estimated to cost \$10.82 million to \$11.90 million. In total, the cost for all three stations is estimated to be between \$33.08 million and \$36.39 million. New and replacement equipment costs are estimated to account for an extra \$4.74 million in addition to the facilities costs.

Revenues

We assumed constant 2021 fire impact fee rates for Camas and Washougal over the analysis period (see Exhibit 1 for rates). The dollar amounts were increased by 1.7 percent per year as an inflationary adjustment. Over the 2021 to 2040 period, we calculated that the current fire impact fee would bring in a total of about \$5.54 million. The methodology we used to arrive at the total estimated fire impact fee dollars is detailed below.

Building Type	Cam as
Single-Family Detached	\$0.20 psf
Apartment/Duplex/Townhome	\$0.20 psf
ADU (Interior)	\$0.00 psf
ADU (Exterior)	\$0.20 psf
Commercial	\$0.40 psf

Building Type	Washougal
Single-Family Home (w/ fire suppression)	\$401.60 per unit
Single-Family Home (w/o fire suppression)	\$502.00 per unit
Multifamily unit (3+) and Cottage Homes	\$0.31 psf
ADU (w/ fire suppression)	\$140.56 per unit
ADU (w/o fire suppression)	\$175.70 per unit
Commercial	\$0.31 psf

Exhibit 1. Fire Impact Fee Rates in Camas and Washougal, 2021

Source: City of Camas and City of Washougal.

1. Cost estimates for the two satellite stations reflect a 4% year-over-year annual cost escalation as reported by Mackenzie.

Funding Gap

This leaves the Camas-Washougal Fire Department with a funding gap ranging between \$32.28 million and \$35.59 million (see Exhibit 2).

Costs	Replacement HQ Station (2024)	Replacement Satellite Station (2026)	New Satellite Station (2029)	Total Costs
Low Cost Scenario (Nominal)	\$12,646,400	\$8,548,150	\$8,548,150	--
3-Year Construction Cost Increase	--	\$9,615,506	--	--
6-Year Construction Cost Increase	--	--	\$10,816,137	--
Low Cost Scenario Total	\$12,646,400	\$9,615,506	\$10,816,137	\$33,078,043
High Cost Scenario (Nominal)	\$13,911,040	\$9,402,965	\$9,402,965	--
3-Year Construction Cost Increase	--	\$10,577,057	--	--
6-Year Construction Cost Increase	--	--	\$11,897,750	--
High Cost Scenario Total	\$13,911,040	\$10,577,057	\$11,897,750	\$36,385,847

Equipment Costs	Replacement HQ Station (2024) ¹	Replacement Satellite Station (2026) ²	New Satellite Station (2029) ³	Total Equipment Costs
Cost (Nominal)	\$2,633,000	\$1,050,000	\$735,000	--
3-Year Cost Increase	--	\$1,181,107	--	--
6-Year Cost Increase	--	--	\$930,009	--
Equipment Cost Total	\$2,633,000	\$1,181,107	\$930,009	\$4,744,117

FIF Revenue by Source	Camas	Washougal	Total Revenue by Source
Single-Family	\$2,325,808	\$841,431	\$3,167,240
ADUs	\$10,646	\$5,002	\$15,648
Multifamily	\$142,420	\$139,177	\$281,597
Commercial	\$1,448,326	\$570,931	\$2,019,256
Medical	\$33,314	\$21,070	\$54,384
Total	\$3,960,514	\$1,577,611	\$5,538,125

	Low Estimate	High Estimate
Funding Gap, 2021 - 2040	\$32,284,034	\$35,591,839

Equipment Cost Notes:

1. Equipment costs include 3 replacement engines, 4 rescues, and 2 brushes.
2. Equipment costs include 1 ladder truck.
3. Equipment costs include 1 engine for the satellite expansion.

Exhibit 2. Summary of Fire Impact Fee Funding Gap, 2021 - 2040

Source: Mackenzie and ECONorthwest.

Note: This funding gap analysis does not account for land acquisition costs.

2. Only the share of capital costs attributable to growth can be paid through fire impact fee revenue.

Exhibit 3 in below breaks out the same data in Exhibit 2, allocating cost and revenue data to each jurisdiction respectively. This analysis assumes a 60 percent allocation of equipment cost for the first two stations to Camas and a 40 percent split to Washougal. Costs for each station are allocated 100 percent to the jurisdictions they are located in. We

find that the total funding gap in Camas amounts to \$22.7 to \$25.0 million dollars and \$9.5 to \$10.5 million in Washougal. Despite having a measurably higher revenue outlook from fire impact fee revenue, Camas' gap is higher because it must accommodate two new stations to provide targeted service levels.

Exhibit 3. Summary of Total Fire Impact Fee Funding Gap by Jurisdiction, 2021 – 2040

Source: Mackenzie and ECONorthwest

LOW COST SCENRARIO			
Station	Replacement HQ Station	Replacement Satellite Station	New Satellite Station
Year	2024	2026	2029
Development Cost	\$12,646,400	\$9,615,506	\$10,816,137
City Allocation	Camas	Washougal	Camas
Equipment Costs	\$2,633,000	\$1,181,107	\$930,009
City Allocation	60-40 Split	60-40 Split	Camas
Funding Summary	Costs	Revenues	Gap
Camas	\$26,681,010	\$3,960,514	\$22,720,496
Washougal	\$11,141,149	\$1,577,611	\$9,563,538
Total	\$37,822,159	\$5,538,125	\$32,284,034
HIGH COST SCENARIO			
Station	Replacement HQ Station	Replacement Satellite Station	New Satellite Station
Year	2024	2026	2029
Development Cost	\$13,911,040	\$10,577,057	\$11,897,750
City Allocation	Camas	Washougal	Camas
Equipment Costs	\$2,633,000	\$1,181,107	\$930,009
City Allocation	60-40 Split	60-40 Split	Camas
Funding Summary	Costs	Revenues	Gap
Camas	\$29,027,263	\$3,960,514	\$25,066,749
Washougal	\$12,102,700	\$1,577,611	\$10,525,089
Total	\$41,129,963	\$5,538,125	\$35,591,838

RESIDENTIAL IMPACT FEE ESTIMATE METHODOLOGY

- **Household Growth:** Household growth in Camas and Washougal are based on Transportation Analysis Zone (TAZ) forecasts produced by the Southwest Washington Regional Transportation Council (RTC). Per their most recent forecast, 4,165 households are anticipated to be built in Camas at an average annual growth rate of 2.05% over the 2020 to 2040 period. In Washougal, 2,108 households are anticipated to be built at an average annual growth rate of 1.44%.
- **Housing Type:**
 - To estimate the growth in single-family detached housing and multifamily housing, we used data from the U.S. Census Bureau's American Community Survey (ACS) to estimate the percentage share of housing stock that is single-family detached and multifamily. About 85% of Camas's housing stock is single-family detached housing and about 82% of Washougal's housing stock is single-family detached housing. We applied these percent shares to the annual household growth in each city to estimate the approximate quantity of new housing type added per year.
 - Additionally, we accounted for ADU developments in both Camas and Washougal. Using ADU permit data provided by City of Camas staff, we calculated that approximately 3 ADU permits per year were issued over the 2016 to 2020 period. Dividing this average annual permit count by the number of new single-family households added to Camas per year (about 177 units), we received a percent of approximately 1.7%. Applying this percent to the annual growth in single-family households in both Camas and Washougal, we estimate 3 ADUs will be added to Camas each year and 1 ADU will be added to Washougal each year.

- **Calculation:** We multiplied the 2021 fire impact fee rates to the new housing added each year in Camas and Washougal. This resulted in \$2.33 million of fire impact funds for single-family households in Camas and about \$142,400 for multifamily households. In Washougal, \$840,400 of fire impact funds are estimated to come from single-family households and an additional \$138,200 from multifamily households.

COMMERCIAL IMPACT FEE ESTIMATE METHODOLOGY

- **Existing Commercial Mix:** For commercial development, we relied on CoStar's database to estimate the existing square footage of industrial, office, retail, and flex space in Camas and Washougal. As of 2020, CoStar estimated that about 2.97 million square feet of commercial space exists in Camas and about 1.71 million square feet exists in Washougal.
- **Employment Growth:**
 - Using RTC's TAZ employment forecasts over the 2015 to 2040 period, we interpolated an approximate employment count for commercial and industrial jobs in 2020. Then we used that estimate to approximate the average annual growth rate in commercial and industrial jobs out to 2040. Camas's growth rate is about 4.06% per year and Washougal's is 3.72% per year.
 - Lastly, we accounted for medical space. According to CoStar, Camas approximately has 63,360 square feet of medical space and Washougal has about 63,100 square feet. Using the same methodology for commercial space, we estimate Camas will bring in about \$33,300 and Washougal will bring in about \$21,000.
- **Calculation:** We used the employment growth rates to assume a linear growth pattern in commercial square footage over the 2021 to 2040 analysis period. Applying the fire impact fees, we estimate Camas will bring in approximately \$1.45 million and Washougal will bring in about \$570,900.

3. U.S. Census Bureau, American Community Survey 5-Year Estimates, 2006-2010 and 2015-2019. Table B25024: Units in Structure.

Part II: Capital Improvement Funding Alternatives

Based on our analysis, the fire impact fee revenue over the next 20 years is insufficient to cover eligible capital investments required to accommodate growth in addition to replacement capital needs. This section provides an evaluation of alternative funding tools that the Fire Department could consider in funding the three new facilities.

For our analysis, we have used seven criteria based on experience with similar projects in other jurisdictions, and the specific needs of the Fire Department: (1) capacity, (2) timing, (3) administrative ease, (4) stability/predictability, (5) flexibility, (6) legality, and (7) political acceptability. Note that the first five criteria included in this list can be grouped together under the banner of “efficiency.” Criteria are further defined below.

In this analysis, ECONorthwest began by identifying “fatal flaws,” or constraints on the tool’s revenue generating capacity or political acceptability that make it a very unlikely candidate for the site. After setting aside all the tools with fatal flaws, we are left with a much shorter list of potential sources that can more easily be compared against each other, evaluating their relative merits to identify the top four as the “preferred” tools for further evaluation.

Funding Alternative Findings

This section summarizes the findings from our funding alternative analysis.

Recommended Funding Tool Options for Further Discussion

We recommend a multi-pronged funding strategy that considers who will benefit from facility investments. We recommend that the District consider the following tools for further evaluation:

- **Increased Fire Impact Fees.** The current impact fees may be too low to account for the facility needs in new growth areas. The cities could consider setting a base impact fee alongside a set of distinct service areas with higher fees where more intensive investments are needed. Increasing these fees alone will not pay for all of the fire district’s proposed investments but they could be increased to cover a larger share of eligible costs attributable to growth.

- **General Obligation Bond.** Issuing an unlimited tax general obligation bond would provide the cities a stable revenue stream to repay the debt of building new fire protection capital. It would require the fire district to make the case to property owners that aging facilities are inadequate and that new facilities are required to protect their home investments.
- **Surplus Land Disposition.** At least one of the replacements may be constructed in a new location. Sale of the existing facility could help to generate revenue for either acquisition of the replacement site or for the facility itself.
- **Public Safety Sales Tax.** Adding a sales tax could be a viable funding option that also requires voter approval. The cities of Washougal and Camas could pursue this on their own (which requires more work but also generate more revenue) or in conjunction with the County (which would decrease revenues available to the cities). There may also be a County wide public safety sales tax being proposed to help pay for police body cameras and other investments. However, based on our projections, a new public safety sales tax and current fire impact fee combined will not yield sufficient funding to fill the funding gap over the 2021 to 2040 period. If this option is pursued, an additional funding tool would need to be used in tandem.

Other Funding Tools Considered (Not Recommended Options)

- **Excess Levy.** Excess levies (also known as Operations & Maintenance levies) are single-year property tax levies with no restrictions on the levy rate or levy amount. Fire protection districts, however, are allowed multi-year excess levies in accordance with RCW 84.52.130. This statute allows for fire protection districts in Washington to authorize, by public vote on a ballot measure, a two-year through six-year levy “to support the construction, modernization, or remodeling of fire district facilities.” In our evaluation, we didn’t see any benefit to this approach over a more traditional general obligation bond.

Tools Not Evaluated in Depth

- **Current city EMS levies are at capacity.** Both

Camas and Washougal currently have EMS levies in place. In 2018, Camas renewed its EMS levy rate at \$0.46 per \$1,000 assessed property value to carry forward for six additional years (2019 through 2025). Washougal currently has an EMS levy rate of \$0.50 approved for six years (2018 through 2023).

- The maximum allowable EMS levy rate under Washington law is \$0.50 per \$1,000 assessed value. According to Camas’s Emergency Medical Services Agreement, the City of Camas “shall furnish Emergency Medical Services including Advanced Life Support (ALS) and Emergency Medical Transport Services.” Given this agreement and the allocation of levy funds toward providing the community medical services, it seems unlikely that there would be any excess EMS levy funds to support the new fire station construction.
- **A county wide EMS levy is not a viable option, given that there are current citywide levies.** Given that Camas, Washougal, and East County Fire and Rescue (\$0.35 per \$1,000 AV) have EMS levies in place, there is insufficient funding capacity given the rate limitations stipulated in Washington law.
- **A Service Benefit Charge can fund operations, but not capital facilities.** Some fire departments in Washington structure their operations to be funded from a combination of service benefit charges and levies. A service benefit charge allows fire departments to charge users more if their structure is at greater risk of fire, and is not a share of a property’s assessed value. Shifting to a benefit charge from a levy structure could free up funding from the levy, but this strategy would require input from a variety of stakeholders.

Efficiency

This category covers everything related to creating and maintaining net revenues (net of collection costs). We break efficiency into five subcategories:

- **Capacity.** Revenue-generating capacity

considers how much money the tool can generate. The amount any funding tool can raise is directly tied to the rate imposed, and the rate imposed is always at least partially determined by legal authority and political acceptability (both described below). For example, the revenue capacity of a local gas tax depends on whether a community is legally allowed to impose the tax and up to what rate, and what rate its policy makers and constituents are willing to adopt. Nonetheless, we evaluate revenue-generating capacity based on our informed assumptions on the maximum rate that can be legally charged, and the rates that are likely to be in the range of political acceptability.

- **Timing.** For the funding of new fire stations, it will be important for revenues to be available sooner rather than later. Private development and infrastructure investments will likely need to occur concurrently. Revenue sources that don’t provide revenue until after development occurs may be ill suited for the fire stations. Additionally, it is likely that the City will want to borrow money to fund infrastructure projects up front and repay the debt over time with revenue a dedicated funding tool. Some tools are better suited than others for borrowing money or issuing bonds.
- **Administrative ease.** The easier it is to administer a tool, the lower the costs of administration should be, and the more of the gross revenue that will be available as net revenue for infrastructure projects. For example, it is relatively easy and inexpensive to increase the rate of an existing fee or tax. At the other extreme, creating a new fee with a new collection system can be expensive and use a sizable percentage of the gross revenue. Some of the questions to consider when evaluating administrative ease, include: Would new staff have to be hired? Would a new organizational structure or a new budget procedure have to be put in place? Would collection of the funds be an arduous task? Are new technologies required? The answers to these questions depend in part on what administrative mechanisms are already

4. Clark County Today. “County seeks volunteer to write for and against statements for sales tax propositions.” July 29, 2021. Information retrieved from: <https://www.clarkcountytoday.com/news/county-seeks-volunteers-to-write-for-and-against-statements-for-sales-tax-propositions/>

5. Emergency Medical Services Agreement. Information retrieved from: <https://mccmeetingspublic.blob.core.usgovcloudapi.net/camaswa-meet-cf9a46adf504483fb010ccf9ea82cbcd/ITEM-Attachment-001-31e129d1dc7c46faa5e7b85ed56e0d93.pdf>

in place that could be used at little marginal cost.

- **Stability/predictability.** Revenue stability considers whether the tool is likely to avoid large fluctuations each year. The more stable a tool, the more it can be assumed to contribute constant revenues over time. Stability is more than a mental comfort: demonstrating stability may be required, for example, for a funding stream that is being pledged to repay a revenue bond.
- **Flexibility.** A funding tool may be less useful if its use is limited to certain types of projects. In general, flexibility is a positive attribute. If the revenue can be used for any infrastructure project (e.g., transportation, water, sewer, parks, etc.), there is a greater ability to channel funds to the use with the greatest net benefit at any point in time. The flip side is that if a revenue tool is too flexible it can be difficult to “protect” it from being redirected to other uses. However, local jurisdictions can move funding around so that they can do what they want to do. For example, even though systems development charges can only be used for projects required by growth, if such projects are not now being covered 100% by systems development charges (e.g., if gas tax revenues are paying for some of those projects), increasing systems development charges may free up other sources of funding that are more fungible (capable of being used for other things).

LEGALITY

An essential part of an assessment of a funding tool is determining if the Fire Department can legally use the tool for new capital facilities. If this application of the tool is currently prohibited by state statute, then there is a large administrative hurdle to be surmounted up front. Even for tools that are legal, the real issue is whether the tool has detailed and complicated legal requirements that would (1) require a lot of work and cost to implement the tool; (2) raise the likelihood of legal challenge; (3) raise the likelihood that any legal challenge would actually be successful; or (4) reduce political acceptability by adding uncertainty and cost to the implementation process.

POLITICAL ACCEPTABILITY

Our evaluation looks at not only which tools score well on our technical criteria, but also whether or not the tool has proven to be politically acceptable when other jurisdictions in Washington have attempted to use it. One would think that if a tool is efficient, fair, and legal that it would be politically acceptable. While this is true in some situations, it is not always true. Many times, jurisdictions have pursued the adoption of a funding tool that seemingly scores well on those criteria, only to have their efforts fail because the tool was politically unpopular.

Exhibit 4. Funding Tools Evaluation

Funding Tool	Efficiency	Legality	Political Acceptability	Suitability
<p>Increased Fire Impact Fee</p> <p>(City-mandated one-time charge on new development to fund “fire protection facilities: addressed by a capital facilities plan)</p>	<ul style="list-style-type: none"> ▪ Capacity: FIFs across Washington vary widely. Based on additional analysis, an increase in FIFs could be warranted, especially in areas with insufficient response times. ▪ Timing: Instability makes this tool difficult to bond against, best used in tandem with other tools that are more predictable. ▪ Administrative ease: Developers are familiar with this tool, and the city administers it. ▪ Stability: Development-driven; can be unpredictable. ▪ Revenue flexibility: Contingent on development; can be unpredictable. 	<p>Impact fees should be used for system improvements that benefit that new development and relate to the demand from new development. Requires a nexus to new growth.</p>	<p>Combined with other impact fees, raising these fees too high may impede development.</p> <p>Camas and Washougal could consider creating multiple service areas and associated fee schedules to align specific capital improvements with development activities. [RCW 82.02.060(1)]</p>	<p>Increasing impact fees can help to pay for the capital improvements that are required to serve new growth.</p> <p>The cities could consider recalibrating the fee to create a base fee charged citywide with a service area addition specific to the locations for new developments that lack sufficient service.</p>
<p>Voter-Approved Bonds</p> <p>(Also known as Unlimited Tax General Obligation Bonds. May only be used for capital purposes; does <i>not</i> include replacement of equipment)</p>	<ul style="list-style-type: none"> ▪ Capacity: Will generate the dollars needed to pay for new capital facilities. ▪ Timing: Will require more time from city staff to plan and requires 60% supermajority approval. ▪ Administrative ease: Ballot measure should be drafted by city’s bond counsel. Requirements are peculiar. It must also authorize both the issuance of the bonds <i>and</i> the excess property tax levies. ▪ Stability: Stable revenue stream to repay debt. They are automatically sized to pay the principal and interest on the bonds due each year (differs from levy lid lifts or sales taxes). ▪ Revenue Flexibility: Must be in accordance with purpose(s) specified in ballot measure. 	<p>Authorized via RCW 84.52.056 and Article VII, Section 2(b) of Washington’s Constitution.</p>	<p>Requires voter approval.</p>	<p>Issuing an unlimited tax general obligation bond would provide the cities a stable revenue stream to repay the debt of building new fire protection capital. The Department will need to consider its potential funding ask from voters and how that aligns with other voter-approved bonds or levies currently in place or under consideration.</p>

Funding Tool	Efficiency	Legality	Political Acceptability	Suitability
Surplus Land Disposition	<ul style="list-style-type: none"> ▪ Capacity: Limited to land where existing facilities if the new facility will be in a new location. ▪ Timing: Depends on when the new facility can be occupied. Could be used to repay bonds. ▪ Administrative ease: Flexible, depending on regulations for land disposition. ▪ Stability: One-time sale or ground lease options. ▪ Revenue flexibility: Flexible, revenue can be used to pay for new facilities. 	The Fire District can legally sell land at market value.	Fire district can pursue market rate for land.	The viability of this strategy will depend on whether the District already controls the land on which it wants to locate new facilities.
Public Safety Sales Tax (Sales tax up to 0.1% for cities)	<ul style="list-style-type: none"> ▪ Capacity: Revenues must be shared between city and county. If city imposes tax, they retain 85% of revenues and must share 15% with county. If county imposes tax, they retain 60% of revenues and the remaining 40% is distributed to cities on a per capita basis ▪ Timing: The cities could bond against this revenue to help pay for capital facilities. ▪ Administrative ease: Time needed to draft ballot measure. ▪ Stability: Subject to fluctuations in taxable retail sales earned each year. ▪ Flexibility: 1/3 must be used for criminal justice and/or fire protection. Fire protection purposes are not specifically defined in Washington's Revised Code. The remaining 2/3 are unrestricted, but must be spent in accordance with purpose(s) specified in ballot measure. May be used for debt repayment or operations. 	Authorized via RCW 82.14.450. Fire protection facilities are a legal use of these funds.	Requires voter approval (50%+1). According to MRSC's Local Ballot Measure Database, voters have approved the majority of these measures. A ballot measure may only be submitted at a primary or general election (no special elections).	If Camas imposed a public safety sales tax, the City could potentially receive \$420,800 per year based on its total taxable retail sales estimate from 2020 (\$495.06 million). Accounting for inflation, this tax could result in \$9.96 million over 2021 to 2040. For Washougal, the City could potentially receive \$189,500 per year (based on total retail sales of \$222.94 in 2020). This could result in \$4.48 million over 2021 to 2040. Combined, both cities could potentially receive \$14.44 million over 2021 to 2040.

Funding Tool	Efficiency	Legality	Political Acceptability	Suitability
Excess Levy (Levy of additional taxes by any type of taxing district; amount is over and above the total tax allowed by statute)	<ul style="list-style-type: none"> ▪ Capacity: Can only be levied for one year. There is no restriction on the levy rate or the levy amount. Fire protection districts have separate statutes that allow for multi-year excess levies. ▪ Timing: Funding from an excess levy is available in the year the levy goes into effect. ▪ Administrative Ease: Relatively simple; work needed for penning ballot initiative. ▪ Stability: Stable, as the levy will only last for one year. ▪ Revenue Flexibility: Must be in accordance with purpose(s) specified in ballot measure. 	Excess levies are authorized via RCW 84.52.052 and RCW 84.52.054, in addition to Article VII, Section 2(a) of Washington's Constitution.	According to MRSC's Local Ballot Measure Database, about 80% of excess levies have passed in recent years. The cities will need to be sensitive to the amount since it will impact all property owners for that year.	An excess levy, while unconstrained in its levy rate and levy amount, could be difficult to pass with voter approval given the size of the current funding gap. Given that fire protection districts are allowed multi-year excess levies, this could reduce the annual levy amount and allow property owners to spread the costs over multiple years.

APPENDIX A: CITY COUNCIL PRESENTATION

MACKENZIE.



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

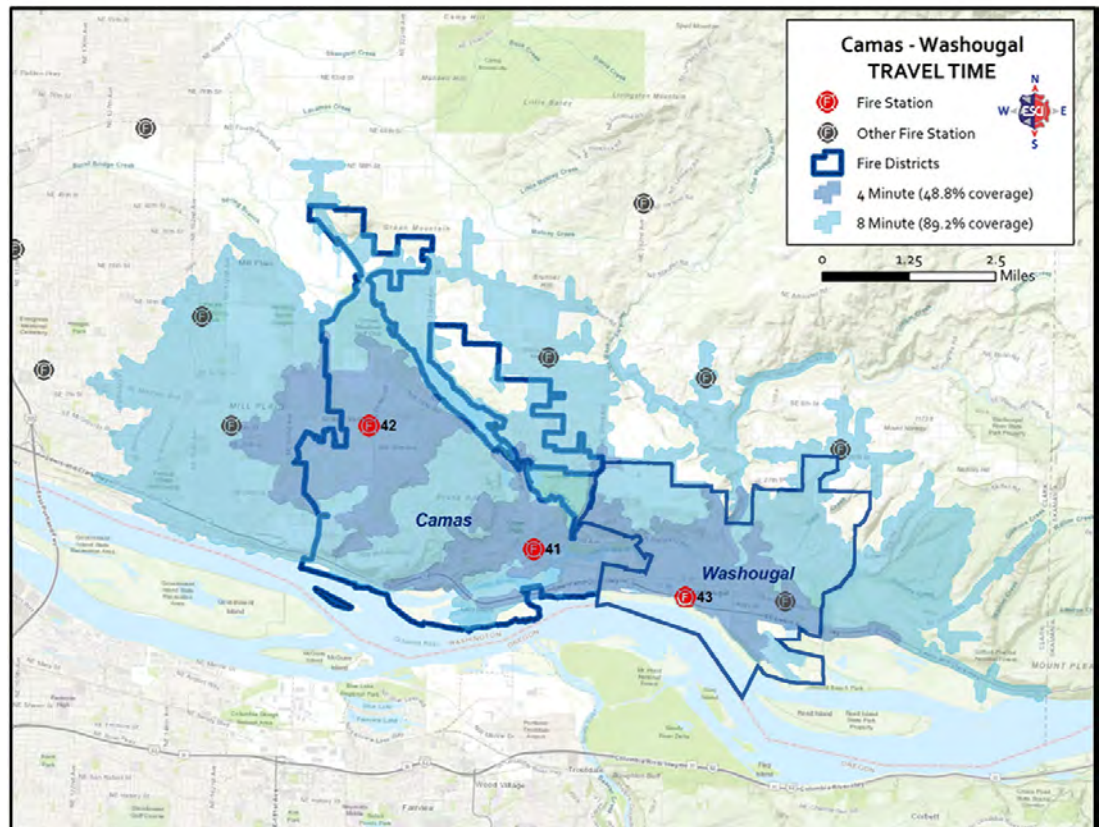
Camas and Washougal City Council Meeting | 11.07.2022

TEAM



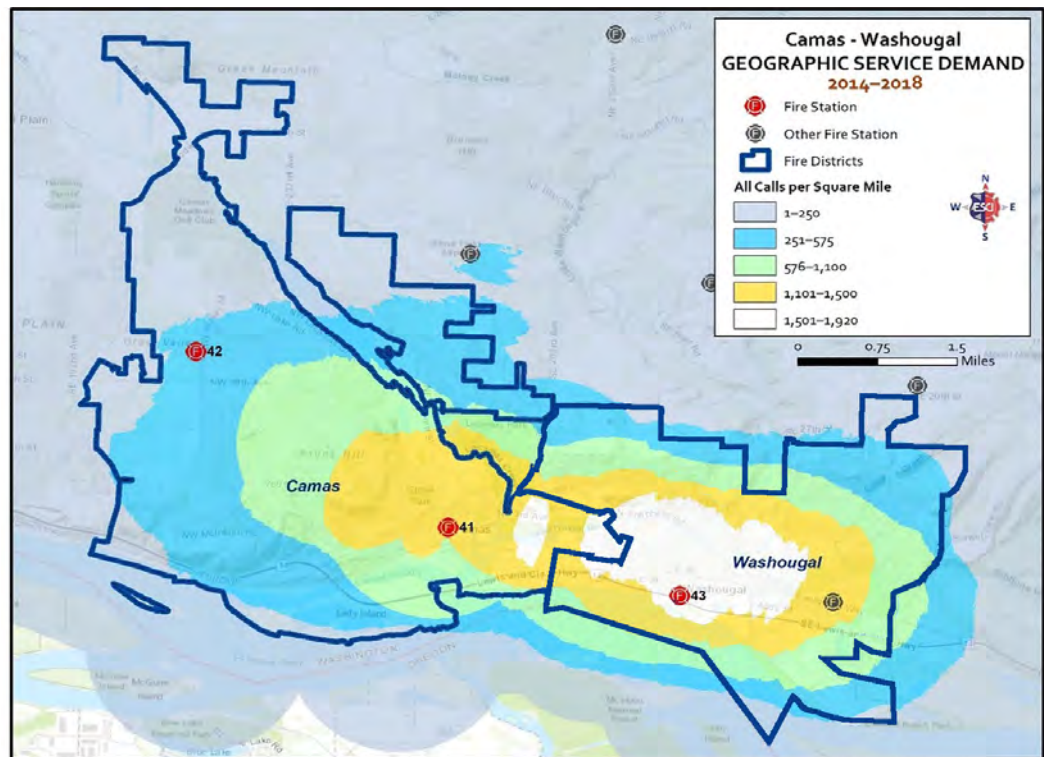
TRAVEL TIME COVERAGE

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



INCIDENT LOCATION DENSITY

- 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

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

EXISTING STATIONS



Address: 616 NE 4th Avenue
Camas, WA 98607

Built in: 1960's; subsequent remodels

Deficiencies:

- No future growth opportunities
- No dedicated training room
- Does not meet seismic code for an essential facility
- Does not meet current ADA code requirements

NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS

NFPA SECTION	DESCRIPTION	COMPLIANCE
NFPA 1	Fire Suppression Sprinklers	Yes
NFPA 1221	Station Alerting Communication System	No
NFPA 1500	Smoke Detectors Carbon Monoxide Detectors	Yes
NFPA 1581	Minimum Sleeping Area PPE Clearing Area EMS Decontamination Area	No
NFPA 1851	Turnout Gear Storage UV Exposure Thermal Exposure	No
NFPA 1962	Fire Hose Storage and Maintenance	No

WASHINGTON ADMINISTRATIVE CODE

WAC SECTION	DESCRIPTION	COMPLIANCE
296-305-06507	1 hour separation between Apparatus Bay and Living Quarters	No
296-305-06509	Apparatus Bay Configuration and Clearance	No
296-305-06515	Hose Tower Configuration	No
296-305-06511	Indoor Air Quality	No



Address: 4321 NW Parker Street
Camas, WA 98607

Built in: 2001

Deficiencies:

- No PPE Extractor on site
- No direct exhaust capture system

NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS

NFPA SECTION	DESCRIPTION	COMPLIANCE
NFPA 1	Fire Suppression Sprinklers	Yes
NFPA 1221	Station Alerting Communication System	Yes
NFPA 1500	Smoke Detectors Carbon Monoxide Detectors	Yes
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296-305-06515	Hose Tower Configuration	Yes
296-305-06511	Indoor Air Quality	No



Address: 1400 A Street
Washougal, WA 98671

Built in: 1974

Deficiencies:

- No future growth opportunities
- Does not meet seismic code for an essential facility
- Does not meet current ADA code requirements

NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS

NFPA SECTION	DESCRIPTION	COMPLIANCE
NFPA 1	Fire Suppression Sprinklers	No
NFPA 1221	Station Alerting Communication System	No
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Camas Washougal Fire Department

Prepared by Mackenzie
1/20/2022

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

Camas Washougal Fire Department

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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	
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 Washougal Station 43** - in the next two to three years.
- **Replace HQ Station (Station 41)** - in the next two to three years.
- **Future Brand New Satellite Station in Camas (NE)** - when the future infrastructure is assumed to be in the 5-9 year period.

	Building SF	Lowest Bid (Without Tax)	Cost Per SF
VFD Station 02 (July 2016)	13,367 SF	\$5,052,739.17	\$378.00/SF
VFD Station 11 (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

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

Existing Apparatus Assessment (Based on Master Plan):

- Well maintained, but aging
- Three out of the four front line engines are at the end of their normal lifespan of a fire engine and are typically recommended to be put in a reserve status
- Accumulation of high mileage
- Updated technology with integration with tap out system

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

- **New Engines (4)** - \$3.1 Million
- **Ladder Truck (1)** - \$1.1 Million
- **Rescue Tools (4)** - \$168,000
- **Brush Rigs (2)** - \$315,000

Q&A

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