

2022 FACILITIES MASTER PLAN

City of Washougal



This report was created by:
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Acknowledgements

City Council Members

Rochelle Ramos
David Stuebe
Janice Killion
Michelle Wagner
Molly Coston
Julie Russell
Ernie Suggs

City Staff

Trevor Evers
Trevor Munsch
Ryan Baker
Mitch Kneipp
David Scott
Pam Chinn
Michelle Wright
Wendi Steinbronn

Public Works Committee

Table of Contents

Summary	5
Project Overview.....	5
Facility Asset Management.....	6
Facilities Master Plan Key Initiatives and Strategic Actions.....	6
Related Plans and Policies.....	6
Master Plans	6
Building Portfolio	8
Aerial Map of Facilities.....	9
Core Service Delivery	10
Recent Accomplishments.....	10
Current Funding Strategy.....	11
Charting a New Course	13
Maintain Well.....	13
Facilities Conditions-Chart	14
CITY HALL	16
POLICE DEPARTMENT	17
LIBRARY	18
COMMUNITY CENTER	19
PUBLIC WORKS EXECUTIVE HOUSE.....	20
PUBLIC WORKS -BUILDING A	21
1.1 General Descriptions Location:	23
Exterior Assessment	23
Interior Assessment	27
Structural	33
PUBLIC WORKS -BUILDING B.....	45
General Descriptions Location:	46
Exterior Assessment	46
Structural	49
PUBLIC WORKS -BUILDING C.....	52
General Descriptions Location:	53
Exterior Assessment	54

Interior Assessment	55
Structural	60
PUBLIC WORKS -BUILDING D	69
General Descriptions Location:	70
Exterior Assessment	71
Interior Assessment	72
Structural	74
PUBLIC WORKS -BUILDING E	78
General Descriptions Location:	79
Exterior Assessment	79
Interior Assessment	82
Structural	83
PUBLIC WORKS -BUILDING F	86
General Descriptions Location:	87
Exterior Assessment	87
Interior Assessment	89
Structural	92
PUBLIC WORKS -BUILDING G	96
General Descriptions Location:	97
Exterior Assessment	97
Interior Assessment	98
Structural	100
Project and Cost Summary	101
Appendices A-Operation Center Charrette Designs	105
Appendices B-HDR report	116
Appendices B-LSW report	117

Summary

The City of Washougal is located a few miles northeast of Portland, Oregon across the Columbia River and approximately 150 miles south of Seattle. The city encompasses 6.33 square miles with the added Urban Growth Area (UGA) totaling 8.58 square miles. Its location has caused the city's population to double since 2000 from 8,595 to over 16,680 in 2021. It has become a desirable and affordable community in Clark County that will only continue to grow.

Staffing is a priority to maintaining this new and old infrastructure as Washougal continues to grow. The need for additional staff is **paramount** to the success and support of Washougal. This growth in staff will continue as Washougal continues to grow over the next 20 years.

Washougal has evolved and grown over time to meet the changing needs of the community and the challenges. In many ways the city has adapted to these changes in a reactive manner, making discrete decisions as specific facility needs and challenges arise. This plan gives the city a strategic investment and implementation plan to meet the challenges in the most fiscally responsible way.

WE'VE NEGLECTED OUR BUILDINGS.

Reactive maintenance costs are skyrocketing, and this approach will do nothing to address deferred renewal needs in buildings, preventative care and proactive measures will keep buildings healthy and working properly.

STATUS QUO IS NOT AN OPTION.

Costs to maintain this portfolio of buildings will soon spiral out of control, status quo would result in reactive maintenance rather than proactive maintenance.

OUR PLAN IS THE MOST FISCALLY CONSTRAINED APPROACH, OVER TIME.

This plan presents an approach to simplifying the city's building portfolio and determining when and where to make investments.

Project Overview

The Facilities Master Plan (FMP) is the guiding policy document for the City of Washougal's facilities.

- It encompasses a holistic view of the city's entire building portfolio and sets the strategic direction for cities Facilities.

- It provides a strategic direction for 19 buildings, with over 63,000 square feet of space and a current replacement value of over \$30,5 Million.

Facility Asset Management

- **Environmental Sustainability** – Build and operate facilities that are consistent with the city’s climate goals.
- **Social Responsibility** – Create spaces that serve the community in an equitable and respectful manner.
- **Financial Stewardship** – Ensure that we operate our facilities in fiscally efficient manner considering our current and future community.

Facilities Master Plan Key Initiatives and Strategic Actions

The Key Initiatives presented in this master plan are aimed at reducing the unfunded liability portfolio-wide, while making the most significant impact towards environmental and social goals.

The Maintain Well Key Initiative is specifically aimed at recommending appropriate service standards for city facilities. It recommends levels of funding and provides a path to gradually implement these service standards as buildings are invested in over time through the annual budget cycle. The Maintain Well Key Initiative is the goal for every city facility. This initiative provides three funding levels and a gradual approach for putting buildings on this path over time through the annual budgeting process. It recommends that after a large capital investment in a building, ongoing annual funding be provided to maintain the building well into the future, plan for future capital renewal needs and building adaptation which will result in savings in operations and maintenance budgets.

Related Plans and Policies

Washougal has used the follow governing documents from which the guiding principles of this master plan are derived.

- January 2022 HDR Operations Report
- September 2016 LSW Report
- City of Washougal Comprehensive Plan
- Strategic Plan

Master Plans

Department master plans link mission, goals, and investment strategies to the annual budgeting process. They demonstrate conformance with and advancement of the goals and policies in all the different Washougal Master Plans. This is a comprehensive Facilities Master Plan (FMP) looks across these plans and builds upon the engagement done by individual departments to look holistically at facility needs.

Washougal Facilities Master Plan (FMP) sets the framework for responsible decision making and will facilitate ongoing stewardship of City of Washougal buildings and property in an efficient and effective manner that best serves the community, maximizes efficient provision of services, minimizes impact on the environment, and manages risk. The FMP provides a data driven investment and implementation strategy for city buildings to ensure financial, environmental, and social sustainability - which are the three pillars of Facility Asset Management.

This plan creates a common vision for city facilities that will guide replacement of aging infrastructure; inform the evolution of spaces that support community and staff in the delivery of essential services, adapt to a changing environment; and operate and maintain efficiently. This plan sets the standard for excellence in facilities operations, capital and operations fiscal transparency, reduction of deferred equipment replacement, and movement toward achieving the facilities goals of each city department.

This plan describes the current state of facilities, identifies needs and challenges related to city facilities and the opportunities to transform city buildings over the next decade.

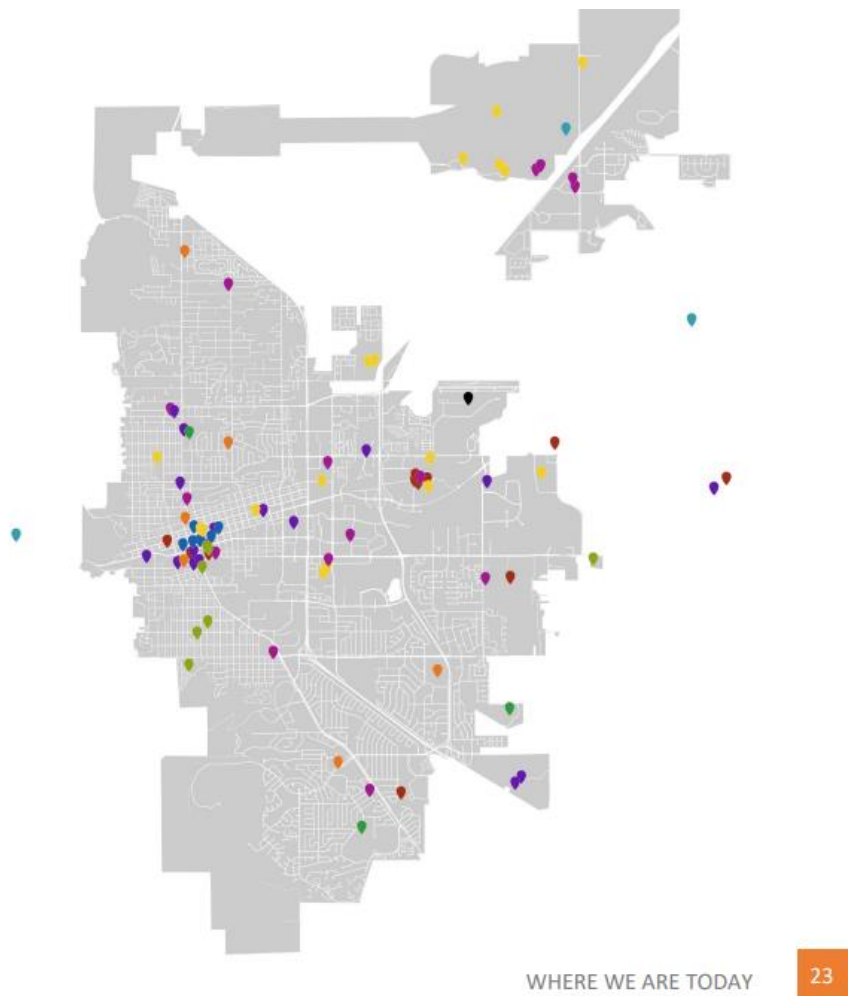
Lastly, the plan describes an implementation approach that redirects forecasted funding to achieve city-wide vision and goals. The city will have a long-term strategy for funding all facilities and evaluate the future projects based off this report.



Building Portfolio

This master plan covers 19 buildings, with over 63,000 square feet of space and a current replacement value of over \$30.5 Million. City buildings include fire station (joint Camas/Washougal), city hall, public works, waste treatment offices, police station, park restroom/barn/concession stand, east county family resource center and community center/senior center. These facilities do show up on the map below and an assessment of those buildings will be conducted in alignment with this master plan. For a complete list of buildings, refer to Appendix B.

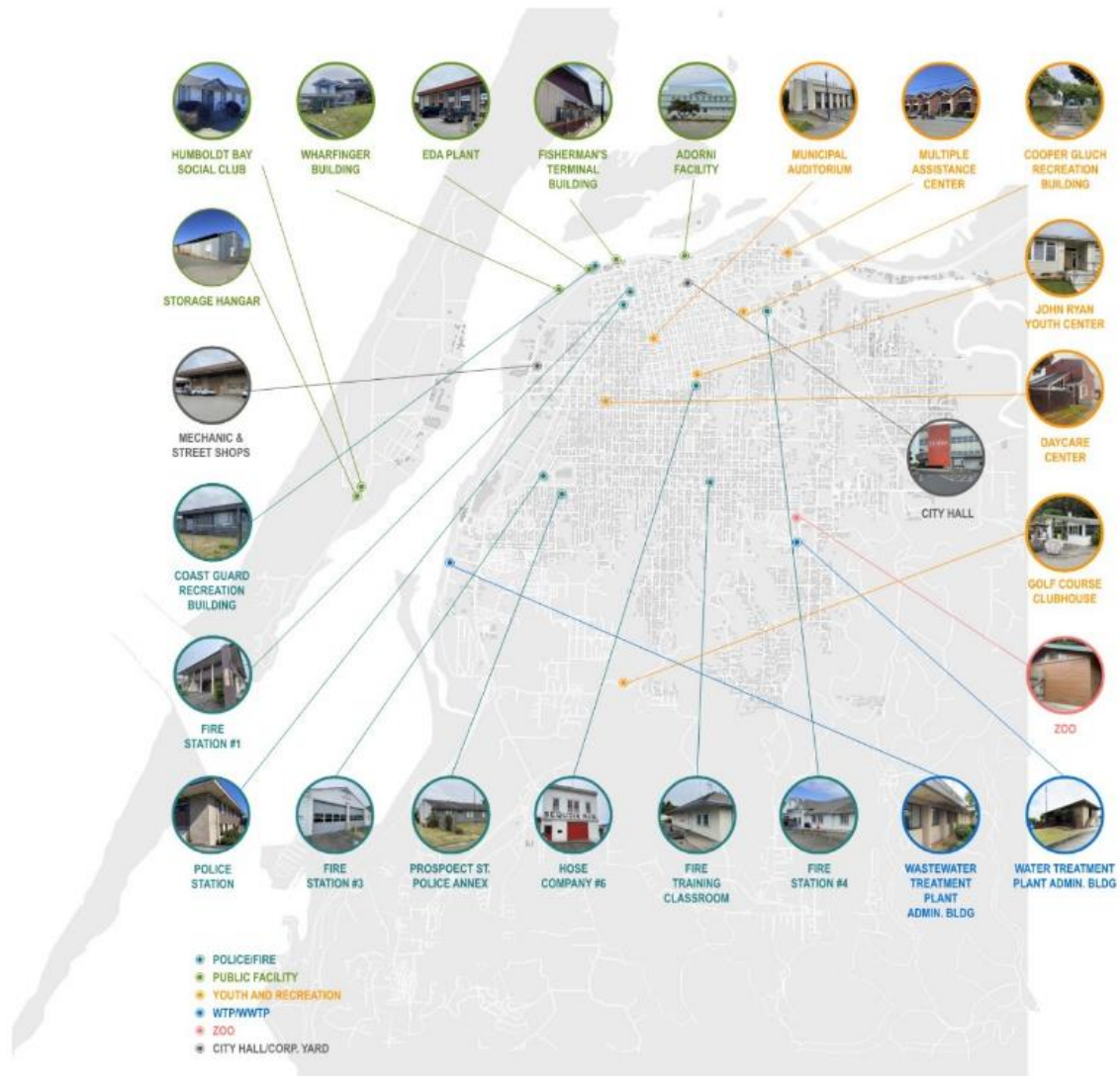
Get map like the below



Aerial Map of Facilities

Like the below:

Facilities Master Plan



Core Service Delivery

The city currently has a small facility department housed in Public Works Department. The Facilities Department is the “steward” of city buildings. Core services provided by the department include:

- Assist in Capital planning, design, and construction services with City Engineer
- Asset management and capital renewal planning
- Preventative and reactive maintenance in buildings and on grounds
- Security access and monitoring of buildings
- Overseeing contract for Custodial services across all city buildings

Facilities staff contend with aging infrastructure in a wide variety of buildings from libraries, community center, to city offices. While a few of these buildings are energy efficient, most are not. The Facilities Department works cross-departmentally to further the goals and vision of other work groups that identify needed service changes, existing facility deficits, new partnerships and expanding community services.

Recent Accomplishments

Even though the city facility is small this group has accomplished many things over the past two years:

- Repainted all park restrooms/barn with ant graffiti paint
- New flooring in the Community Center
- Update Community Center Restrooms
- Small Renovation of Senior’s room
- Repainted most of the city building exterior
- Replaced flooring the library
- Updated Council Side Chambers
- Recarpeted City Hall and added a small addition

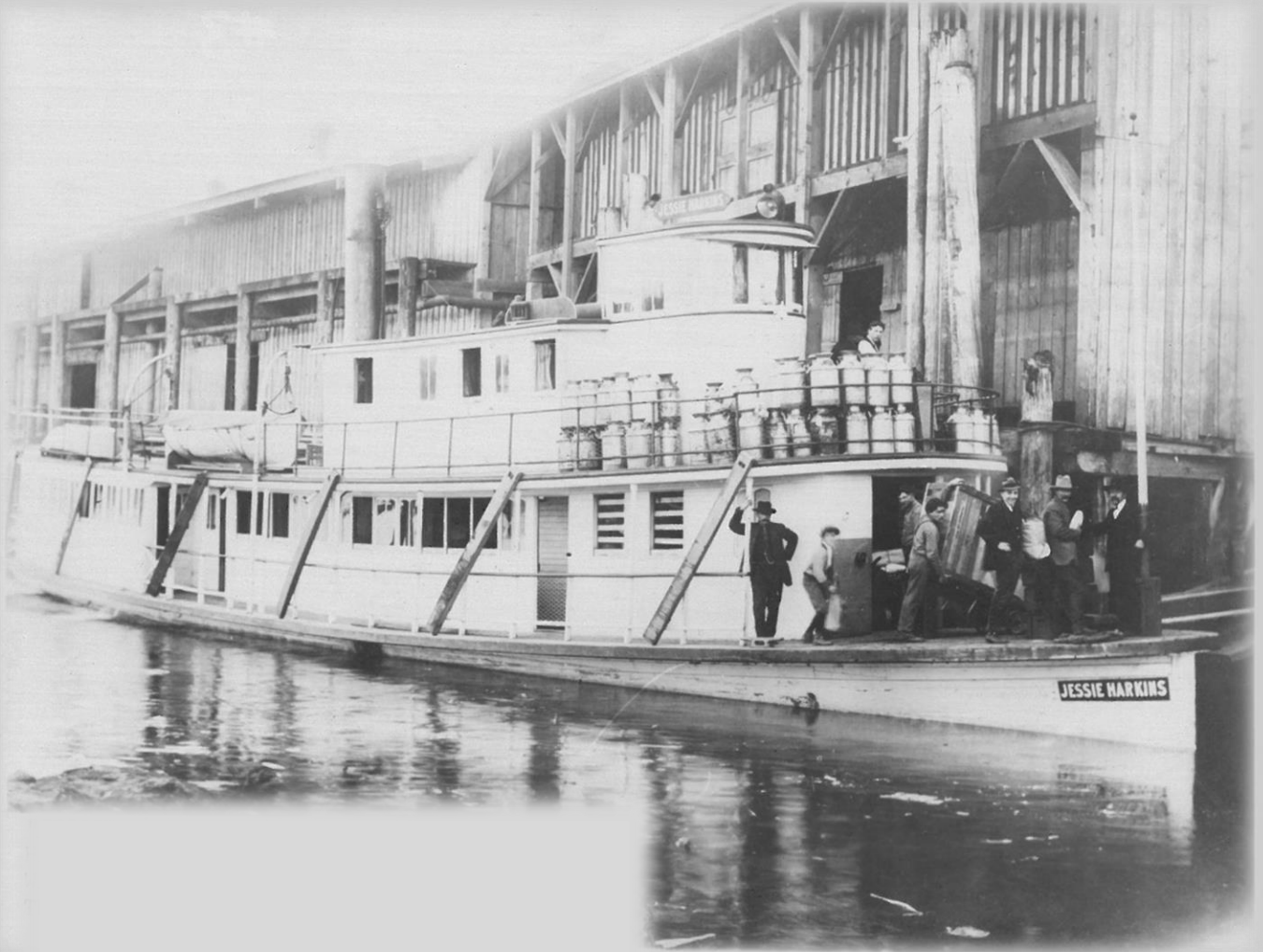
These improvements have helped the overall condition of the buildings, but the city needs to continue to develop a long-term plan to improve the life of the facilities.



Current Funding Strategy

The current funding strategy has resulted in uneven investment across the city’s facilities portfolio. As a result, many city facilities have accumulated sizeable unfunded liabilities and need substantial capital investment soon to merely continue to operate. This Facilities Master Plan provides an understanding of the fiscal needs of the current facilities, methods for the city to use in evaluating whether to maintain or liquidate a facility, and recommendations on future facilities investment strategies to ensure transparency, efficiency, and equity across the city’s facilities portfolio.





CHARTING A NEW COURSE

Charting a New Course

The first key initiative is to maintain city buildings well. This is the primary objective; to put all city buildings on a path towards this end where we are effectively and efficiently maintaining good buildings. Good buildings are those that meet the FMP's guiding principles and climate goals, are resilient, and functional, and serve the staff and community well.

The second key initiative is to consolidate services when and where appropriate.

The Decision Framework starts with a key question focused on the second key initiative, consolidation of services, to guide decision making and ultimately the fate of a building. All paths in the framework end in Maintain Well. There are three strategic towards Maintaining Well. These Strategic Actions are:

1. Targeted Improvements
2. Deep Retrofits
3. Build New

Maintain Well

Maintaining buildings well is the end goal. Good asset management and facilities stewardship requires strategic and tactical plans to ensure buildings are appropriately funded, managed, and maintained. Proactive maintenance techniques, such as preventive and predictive maintenance, have been proven as cost-effective strategies for increasing asset life cycle, improving productivity, and reducing unplanned downtime.

MAINTAINING BUILDINGS WELL IS:

- Taking care of existing buildings
- Ensuring predictability and transparency in funding needs for capital renewal
- Providing flexibility and choice in how and when investment in buildings is needed

Facilities Conditions-Chart

The facility conditions assessment was prepared by City Staff, 2022 HDR, and 2016 LSW. The sites included:

Facility Condition Rating

Year Built	Description	Address/Serial	Facility Size (sqft)	Condition Rating
1975	Cemetery Shop	3329 Q Street		
1974	City Hall	1701 C St	5,292	
1940	East County Family Resource Center	1702 C St	5,000	
2016	Effluent Pump Building	3900 SR 14		
	Hartwood Barn	2251 49th Street		
2010	Headworks Building	3900 SR 14		
1968	Office and Control	3900 SR 14		
1995	Permit Center	211 39th Street	5,215	
2003	Police Station	1300 A St	7,949	
1993	Public Works Building A- Breakroom and offices	2201 C St	n/a	1
1957	Public Works Building A- Mechanics Shop	2201 C Street	n/a	1
1957	Public Works Building A- Pole Building	2201 C Street	8,500	1
1967	Public Works Building B	2201 C Street	1,975	2
1990	Public Works Building C	2201 C Street	1,500	2
1990	Public Works Building C-Garage	2201 C Street	n/a	2
1995	Public Works Building D	2201 C Street	2,800	2
1999	Public Works Building E	2201 C Street	1,500	2
1999	Public Works Building F	2201 C Street	1,000	2
2006	Public Works Building G	2201 C Street	2,500	5
1930	Public Works Exec House	1615 C St	1,350	2

1972	Public Works Water Admin	2247 main St	1,700	2
1999	Pump room and Shop	3900 SR 14		
	Reflection Plaza Tower	1703 Main Street		
1942	Rental House	324 Durgan Street	1,628	
2003	Rental House	1312 SE 352nd Street	3,148	
1972	Silver Star (City's in 2023)	1220 A Street	3,700	
1978	Washougal Community Center and Library	1661 C St	7,800	
2012	Wastewater Storage Building	3900 SR 14		
1999	Water Treatment Facilities	411 3rd street		

	5-Excellent/Compliance
	4-Good
	3-Fair
	2-Poor
	1-Critical/Non-Compliance

FACILITY CONDITION ASSESSMENT

CITY HALL



FACILITY CONDITION ASSESSMENT

POLICE DEPARTMENT



FACILITY CONDITION ASSESSMENT

LIBRARY



FACILITY CONDITION ASSESSMENT

COMMUNITY CENTER



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS EXECUTIVE HOUSE



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING A



Public Works Introduction

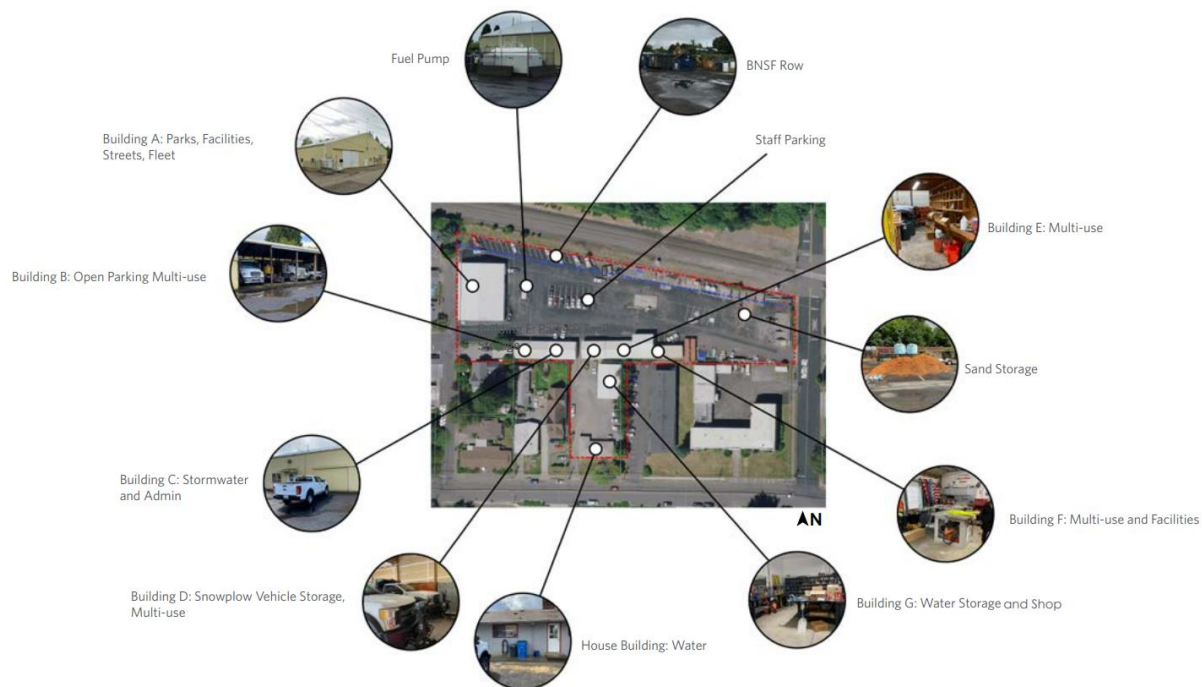
Public Works worked with HDR Design Team created two master plan options for the Public Works Department to meet the 2041 needs of each department as developed in the Space Needs Program. The team participated in an on-site design charrette with the Public Works Department where the team went through many different iterations and ideas for a Public Works Master Plan as discussed in this section. The current site was used in the development of the concepts created for the master plan.

The public works campus currently uses land owned by the City, but a large section is an easement from BNSF.

The Design Team determined it would be best to keep the new facility off of this portion of the site.
Process

- Programming Effort - Basis of each Master Plan Option
- Site Analysis - Existing Sites
- On-site Design Charrette
- Refine Master Plan

Public Works Existing Site Analysis



PUBLIC WORKS -BUILDING A

Overall Rating **CRITICAL/NON-COMPLIANT 1**

1.1 General Descriptions Location:

Building A is located at the west edge of the fully fenced campus. The building's west façade forms the boundary of the Public Works campus.

- Age: 1970
- Program: Public Works Building A houses the Fleet, Parks, Streets, and Facilities Departments. Functional spaces including four offices, conference room, shops, and storage spaces for tires and parts
- Orientation: Building is north-south orientation
- Access: Main pedestrian entrance is located at the south side of the building. Egress doors to shops and storage are provided at south and north sides of the building. Except the north façade of the building, the building has vehicle entrances at the east, south, and west to access the shops and storage spaces.
- Levels: Building A is a single-story building with an open mezzanine that can be accessed from the storage area.
- Size: Approximately 8500 square feet. The longitudinal axis of the building is north south direction.
- Style: Building A is a rectangular barn building

Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for closeup assessment. Observations on the roof:

- Metal roof and roof fascia system are in fair condition o No obvious wear and tear marks on the roof were found o No split, crack, or chipping on the roof panels were found
- No leakage or unsealed openings were found

Wall assembly is uninsulated box ribbed type metal wall panel at shop and storage area. Insulation for wall assembly at offices and shops area cannot be confirmed. The exterior is consistently clad with metal panel and interior with painted gypsum wall board finishes. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:

- Wall exterior condition is below average
- Finish of the wall panels are generally intact o Multiple dents and locally deformed areas on metal panels were found

- Unsealed crack and holes were found at north façade and east façade
- Treated wood wall curbs are exposed without any protection
- Unfinished wall panels were used to patch at east façade

Weather Protections such as awning at doors are not found. The building roof does not provide any eave. Water mitigation is by metal flashing above doors and windows. They are functioning but in bad condition. Leakage may occur at the shops and storage areas. Observations on weather protection details:

- Portion of the roof gutters is slightly deformed above the barn door at storage
- Wood fascia and wood blockings that support gutter systems are exposed and unprotected o
Downspouts are functional even though some of them are deformed
- Downspouts are not tie to the storm drain system and most of them are without splash block
- All metal flashings are either deformed or not tightly flash around the door frames and windows frames. Metal flashings that are partially detached from claddings and exposed to weather are found at the north façade and south façade.

Doors and Windows

- Both double pane and single pane windows are found.
- Double pane vinyl windows appear in fair condition. Single pane window will have condensation issues in cold weather.
- Exterior wood doors and metal doors are used. Door thresholds are not appropriately applied.
- Uninsulated automatic overhead rolling door at shop is in fair condition.
- Manual uninsulated sliding barn door is in below average condition.
- Manual bi-parting uninsulated sliding door at the south façade is in below average condition. The wood framing of the door leaf is rotted.

Security

- Intrusion detection system is not found
- Security Camera is not found at the site

Building A Exterior Photos







Interior Assessment

Zones of Building A are divided into business area, shops, and storage. Business area includes four offices, conference room, and restrooms.

Observations at the business area:

- Main entrance with lockers and electric panels
- Hallway dimensions appear appropriate for egress and ingress compliance
- Restrooms and Shower condition are fair
- Ceiling is composed of acoustic ceiling tile with lay-in ceiling grid at the conference room. Offices' ceilings are composed of gypsum ceiling. Insulation is provided above ceiling based on observation at the mezzanine above. Insulation value cannot be confirmed.
- Partition finishes are limited wall panels and painted gypsum walls. They are in fair condition. Insulation value at perimeter partitions that separate shops and storage areas cannot be confirmed.
- Floor: Walk-off mat is provided at entry concrete floor. Sealed concrete floor is in fair condition. Large floor cold joint is not patched. It can be a tripping hazard. Carpet flooring is provided at offices. Street Office flooring is not level.

Observations at the Mechanic Shops Area:

- Ceilings are composed of painted gypsum ceiling. Approximately 13 to 14 feet tall at Mechanic Shops Room.

- Gypsum walls are generally in fair condition. Interfacing areas between walls and exterior door jambs need to be repaired and covered. Partial gypsum wall board is unfinished.
- Floor: Sealed concrete floor is in fair condition. Cracks around the perimeter of the slab are found.

Observations at Street Shops and Tire Storage and Mezzanine:

- Ceilings are composed of painted gypsum ceiling. Approximately 13 to 14 feet tall at Streets shops. Insulation at the shop room is not confirmed.
- Gypsum walls are generally in fair conditions at the vehicle shop. Tire storage and other vehicle storage area are uninsulated.
- Floor: Sealed concrete floor is in fair condition at Street Shop. Gravel surface are paved at the storage area.
- Mezzanine is mainly for mechanical duct work. It is accessed by a wood staircase from the storage area. Exposed fiberglass insulation at the mezzanine is a hazard.

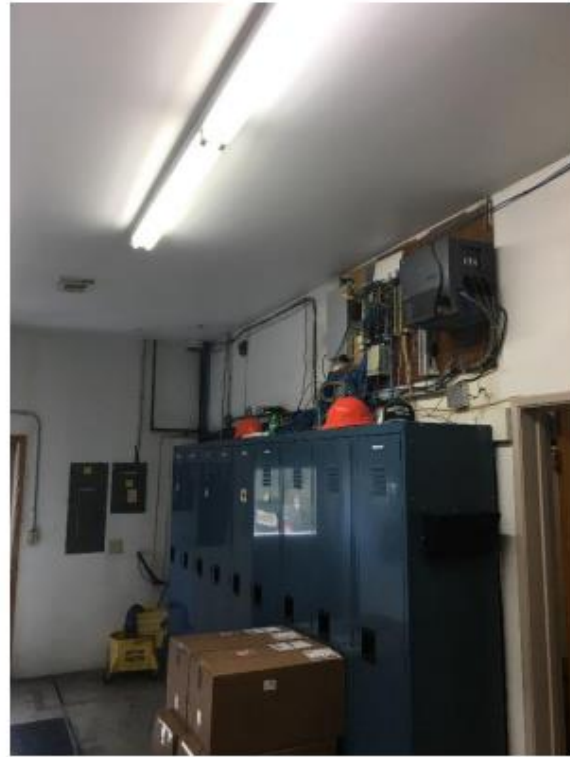
Acoustic may be a concern for conference room and offices since the building is located next to BNSF railroad. Double pane windows do not provide for acoustic barrier.

Access control are through door locks

Building A Interior Photos







Codes Compliance

Per International Building Code definition, Building A is:

- Mixed occupancies of occupancy B, S-1 and F-1
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non-sprinklered o Fire separation between the three occupancies are not required o Numbers of egress are appropriate based on their current locations and sizes

ADA accommodation per ICC/ANSI A117:

Restrooms and Shower are non-ADA compliance

- ADA building access is not provided to the business area o Door, caseworks are non-ADA
- The building is not in compliance with ADA

International Energy Conservation Code (IECC) Compliance:

- The building is partially insulated. Insulation value cannot be verified.
- Building is likely under insulated
- No perimeter insulations at wall curbs
- All the doors including man doors or rolling doors are non-insulated
- The building is not in compliance with IECC Washington Amendment (Washington State Energy code)

Fire Protection and Fire Alarm System:

- It appears that there was no fire alarm system in the building
- Horns and strobes are not provided at shops
- Fire extinguishers are located at various spaces
- Exit Signs and Exit plans that indicate fire extinguishers' locations are provided

Lighting level at office space and shops space meet minimal requirement of safety

Building A Code Photos



Hazardous Materials

- Asbestos-Containing Materials and
- Lead-Based Paint cannot be confirmed at the building without material samples testing
- No significant mold is visually presented inside the building

Summary

HDR conducted a visual assessment of Building A. The overall condition of the building is average grade. The conditions at the exterior doors to walls are concerning. Metal flashings above sliding door and man doors are deformed. Dry rot at the wood framing around doors and jambs are noted. Weather and moisture protection of the building is poor even though significant sources of water intrusion were not noted. With these deteriorated conditions, building security can be easily compromised even though it is located in a fully fenced campus. Timber sill plate for exterior walls with direct ground contact is not recommended for commercial buildings. The building is under insulated and energy inefficient. It may present condensation issue inside the exterior walls at business area during the cold season. There are many building components that need to be upgraded to meet ADA requirement such door thresholds, door hardware and their positions, finish grading at main entry, casework upgrade, restroom upgrade, signs with braille, etc. Besides a potential hazard from the exposed electrical wire and the main hallway at the business area, the concrete floor with unpatched joints also presents a tripping hazard. The current setting of the offices does not provide any privacy for tenants when a meeting needs to be conducted.

Structural

Building A is an 8,500 square foot structure, constructed with wood post frame (pole barn) type construction. The roof is supported by wood trusses, as shown in [Figure 2.1](#). The majority (approximately 2/3) of the building has had partition walls installed to create office and shop space. These areas have had concrete floors installed. In general, these concrete floors are in fair condition, however some cracking and damage is noted in the floor at the roll up door on the south side of the building. This is likely due to the rough transition between the asphalt and the concrete, as shown in [Figure 2.2](#) and [Figure 2.3](#).

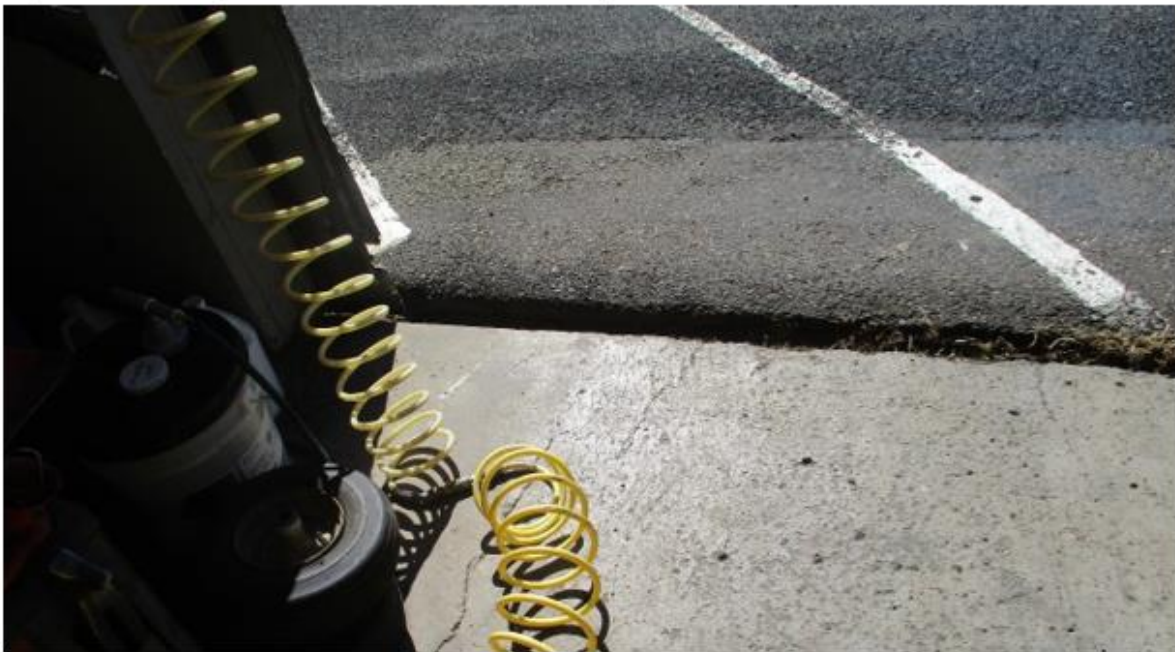
Figure 2.1. Wood Trusses Supporting Roof



Figure 2.2. Example of Transition Between Asphalt and Concrete



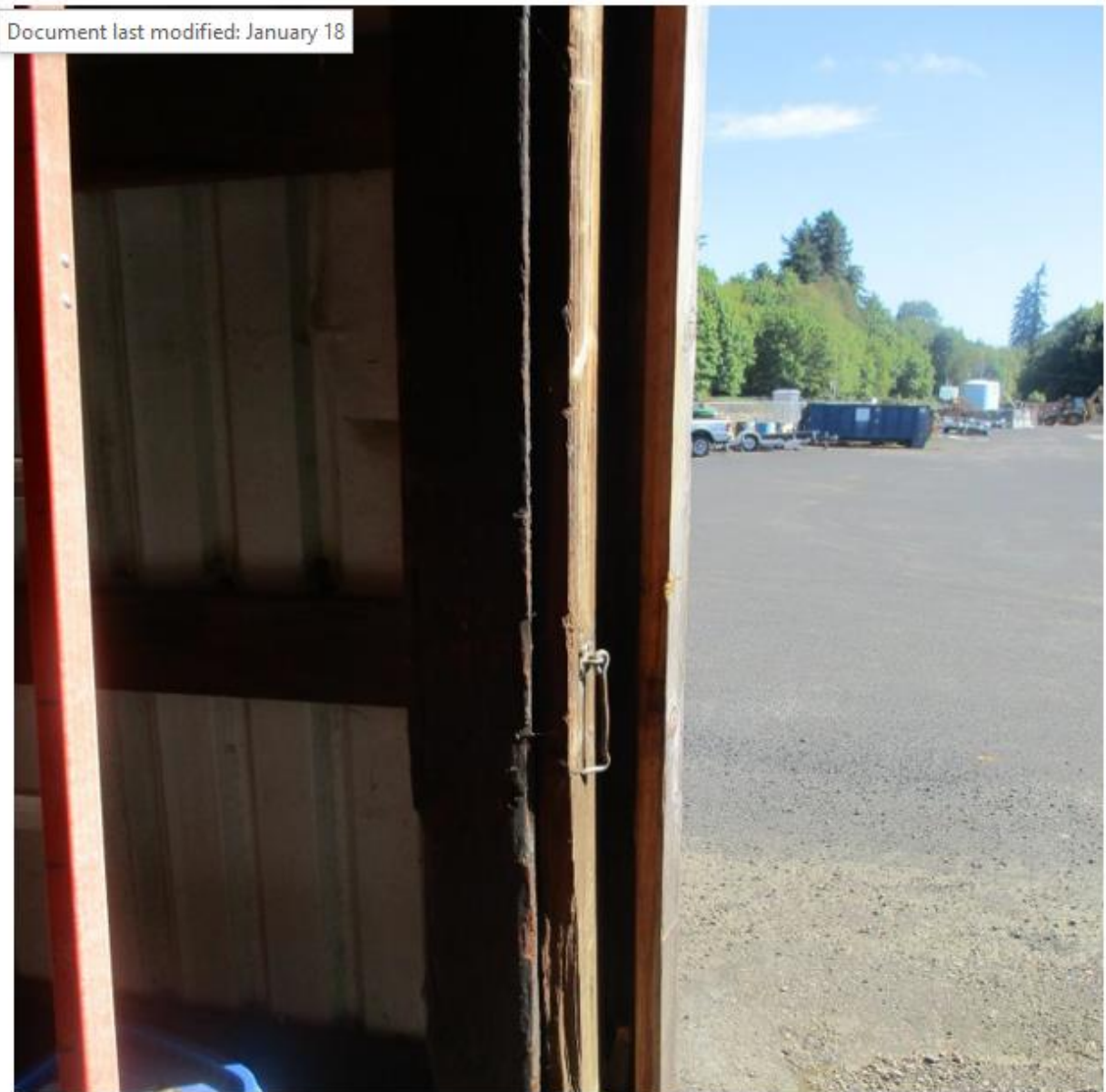
Figure 2.3. Example of Transition Between Asphalt and Concrete



The northeast portion of the building is used for vehicle and equipment storage and has a dirt/gravel floor. This is the only area where the structural framing is visible. In most other areas, the structural framing has been hidden by partition walls and ceilings. Of the structural framing that is visible, it appears to be in good condition. Poles are of treated timber, which will prevent decay of the embedded portions. Some surface damage is

noted at the columns at the main door to the storage area, likely due to vehicle impact(see [Figure 2.4](#)). The roof sheathing shows no evidence of staining and leakage and appears to be in good condition. No sag is noted in the roof trusses that are visible.

Figure 2.4. Example of Surface Damage



The area above the main office space is accessible by a staircase in the gravel floor storage area. It appears this area is used for storage and mechanical equipment (see [Figure 2.5](#) and [Figure 2.6](#)). A sign is posted at the top of the stairs indicating a 20 psf load limit (see [Figure 2.7](#)). This meets the current code requirement for uninhabitable attic spaces with storage. Code defines this as uninhabitable due to the low head clearance. The floor exhibits some softness when walking around. No signs of distress are obvious. The deflection felt in the floor is likely due to the ceiling structure of the attic space not being adequately designed to limit deflection. Care should be taken to limit what is placed in this storage area so as not to exceed the load limitation.

Figure 2.5. Area Used for Storage



Figure 2.6. Area Used for Storage



Figure 2.7. Sign Posted at Top of Stairs



Barns of pole type construction can perform well in a seismic event if properly detailed due to their inherent flexibility and relatively light weight. Due to the age of this building, a more thorough evaluation is required to determine what sort of retrofits would be required to ensure the building will meet life safety standards to allow occupants to safely exit during a seismic event. Buildings constructed in the 1970s generally are not properly detailed for seismic resistance.

Electrical

Building A is provided with a 120/240-volt, 1-phase, 200-amp, electrical service via an overhead line from Clark PUD. The building includes a 200-amp main panelboard with 30 spaces and a 100-amp subpanel with 20 spaces, as shown in [Figure 3.1](#). Every circuit in these panels appears to be in use with no space for future loads. The panels are Square D QO load centers from the original construction. The panels appear to be in fair condition, however, replacement of these panels should be considered as they are beyond the end of the typical lifespan of 40 years. There is no standby power provided to the building.

Figure 3.1. Building A Panelboard



Interior lighting is primarily tube fluorescent with no occupancy sensor controls. The exterior lighting are metal halide wall packs. The emergency egress lighting for the building is inadequate; only one emergency egress fixture was observed, which is in the vehicle service bay.

The men's restroom includes an electrical outlet above the sink that does not appear to be GFCI protected per NEC requirements. The women's restroom does not include an electrical outlet per NEC requirements. The receptacles mounted on the building exterior include weather resistant covers; it is recommended that they be fitted with extra-duty outlet box hoods to provide protection from rain while in use.

The building receives an overhead fiber optic communication line from Verizon Communication equipment. It is installed in the lobby above the lockers and is exposed as shown in [Figure 3.2](#) and [Figure 3.3](#). It is recommended that this equipment be installed in a dedicated space, such as a communication closet, or be installed in an enclosure for protection. The communication cables located in the attic space are loosely installed without adequate structural support as shown in [Figure 3.4](#).

Figure 3.2. Exposed Communication Equipment



Figure 3.3. Exposed Communication Equipment



Figure 3.4. Communication Cables in Attic



The building receives overhead telephone lines that are no longer in service and there are two radio antennas on the south side of the building that appear to be no longer in service.

There are no fire alarm controls provided for the building.

Mechanical

Building A is separated into several independent areas. The north portion of the building is an unheated area with a dirt floor used for parking and storage. The storage in this area includes tires and 8 55-gallon waste oil storage drums sitting on secondary containment pallets. This area has no insulation or ventilation beyond significant infiltration through the rolling doors and other leakage sources.

The southeast portion of this building is a building within a building that has insulated interior partitions separating the administrative, office, and break room areas from the remainder of the building. There is visible insulation over the ceilings in this area but it does not appear to meet the current energy code requirements (R-49 for attics) with only a single ~6-inch layer of fiberglass between steel studs.

This area is served by a residential style Goodman natural gas furnace with a 3.5-ton Lennox air conditioner (see [Figure 4.1](#) and [Figure 4.2](#)). The air conditioner was manufactured in 2015; it is unclear when the furnace was manufactured but assumed that it is the same age as the air conditioner and is in fair condition; although, there is a large air leak between the furnace section and the air conditioner coil (see [Figure 4.3](#)) that should be repaired to reclaim some of the system capacity within the occupied

spaces. Most of the visible ductwork in this area is flexible ductwork and will have higher pressure drop than a well-designed rigid ductwork system.

Figure 4.1. Building A Admin Furnace



Figure 4.2. Building A Admin A/C



Figure 4.3. Building A Air Leak



The west side of the building has a mechanic's shop that is served by a second Goodman furnace that has a 3-ton Goodman heat pump from 2007 (see [Figure 4.4](#) and [Figure 4.5](#)). This heat pump is an R-22 unit and while not visibly failing is near the end of its expected service life (15-20 years per ASHRAE) and planning should include replacing this unit in the near future.

Figure 4.4. Building A Workshop Furnace



Figure 4.5. Building A Workshop Heat Pump



The southwest corner of the building is another shop that also has a small, elevated office and a couple parts storage areas. This shop has a Lennox furnace in the southeast corner. It does not have any cooling capacity (see [Figure 4.6](#)).

Figure 4.6. Building A Shop Furnace



There are several exhaust systems connected into a single roof penetration (see [Figure 4.7](#)). None of these ducts are insulated and may have condensation issues since they are located in the unheated portion of the building.

Figure 4.7. Building A Exhaust Connections



Plumbing is limited to the break room and two restrooms in the administrative area. The restrooms appear to be in good condition and the fixtures were all working. A Bradford White electric domestic water heater from 2005 is in the alcove adjacent to the women's restroom (see [Figure 4.8](#)). This appears to be in working condition but is nearing the end of its expected service life and accommodations for replacement should be considered. There is also an ice maker in this space that appears to be in good working order. There was a large puddle of water on the floor of the alcove but upon asking, it sounds like this is due to ice spillage during transfer, not a failure in the ice maker.

Figure 4.8. Building A Domestic Water Heater



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING B



PUBLIC WORKS -BUILDING B

Overall Rating POOR-2

General Descriptions Location:

Building B is located at the south edge of the fully fenced campus. The building south façade is less than five feet to the fenced of Public Works campus, and its east is attached to Building C.

- Age: 1975
- Program: It houses Fleet Vehicles o Fleet Storage
- Orientation: The building longitudinal direction is east and west
- Access: Open structure with vehicle access from the north of the building
- Levels: Building B is a single-story building
- Size: Approximately 1960 Square feet. The longitudinal axis of the building is north-south direction

Building B General Photos



Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for closeup assessment. Observations on the roof:

- Metal roof and roof fascia system are in fair condition
- No obvious wear and tear marks on the roof were found
- Detached roof panels are noted near interface with Building C roof
- Leakage from the roof is expected

Wall assembly is uninsulated box ribbed type metal wall panel. Observations on the exterior walls:

- Wall exterior condition is below average
- Finish of the wall panels are generally intact
- Multiple dents and locally deformed areas on metal panels are found
- Back wall panels and horizontal wall girts are detached and left opening at the back of the building caused by impact from vehicle
- Aged, corrugated fiberglass wall panels are in fair condition

Floor is paved by gravel

Doors and Windows:

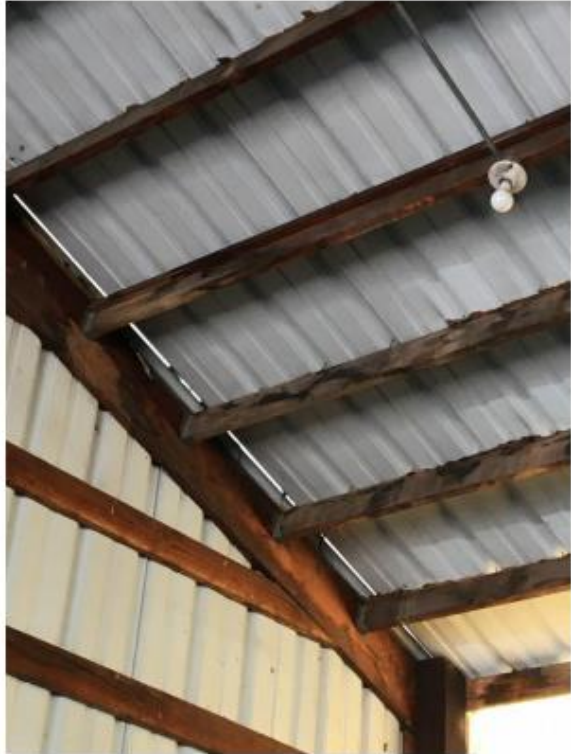
- A single door is located at the south of the building. The condition is fair.

Weather protection observation details:

- Wood fascia and wood blockings that support gutter systems are exposed and unprotected
- Downspouts are functioning
- Water may migrate from the back at the detached wall panels

Building B Exterior Photos





Codes Compliance

Per International Building Code definition, Building B is:

- Single occupancy S-2
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered

ADA accommodation per ICC/ANSI A117:

- Not applicable to this building

International Energy Conservation Code (IECC) Compliance:

- Not applicable to this building

Fire Protection and Fire Alarm System:

- Horns and strobes are not found o Fire extinguisher is not found 1.2.4 Hazardous Materials

Asbestos-Containing Materials and Lead-Based Paint cannot be confirmed at the building without material samples testing.

Old removed roof underlayment remain between roof purlins and the underside of metal roof. Material of the exposed roof underlayment cannot be confirmed.

No mold is visually presented inside the building.

Summary

HDR conducted a visual assessment of Building B. The overall condition of the building is below average. The roof and walls are in poor shape. Given it is an open structure to store fleets, the building walls and columns do not have any impact protections. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings.

Structural

Building B is an open wood post frame building that is used for vehicle storage. The structure is in fair condition. According to City staff on site, the particleboard sheathing was removed due to water damage and decay. Remnants can be seen between the roofjoists and the metal roof decking (see [Figure 2.8](#)). This will significantly hamper the structural performance of the roof system during a windstorm or in a seismic event, as there is no structural diaphragm present. Additionally, this causes the roof deck to sit just proud of the joists and leaves a small gap at the edges (see [Figure 2.9](#)). This could allow rain to be blown into the building, however, in general, it appears that the interior stays reasonably dry. Roof joists and most other structural connections appear to have been made using metal timber connectors.

Figure 2.8. Remnants Between Roof Joints and Metal Roof Decking

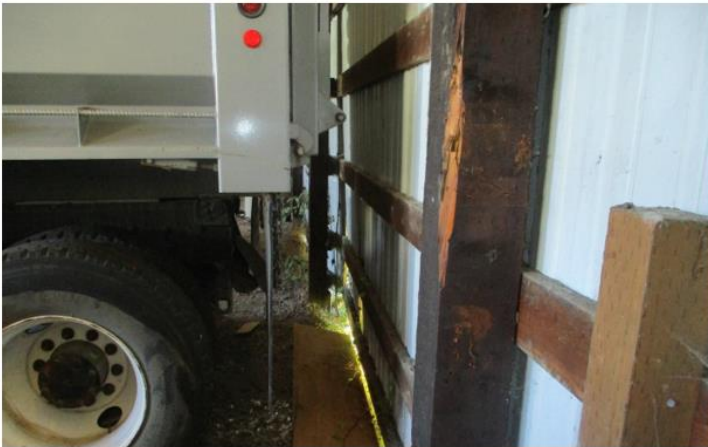


Figure 2.9. Gap at Edge of Roof



The south wall of the third bay appears to have been damaged due to vehicle contact. The siding is bent and the wall purlins have detached from the column, with some purlins broken, as shown in [Figure 2.10](#). The column has also suffered damage, however, this is limited to the surface and appears to be cosmetic in nature. No decay is noted

Figure 2.10. Damage on South Wall



One column between the third and fourth bay shows damage due to vehicle impact, as shown in [Figure 2.11](#). No decay was noted in this, or any other, of the columns. Other than the damaged purlins in the third bay, all other purlins appear to be in good condition. No signs of decay are noted in the roof system, however with only the metal roofing to protect the members, the roof system is at a greater risk of getting wet and decaying over time.

Figure 2.11. Column Damage

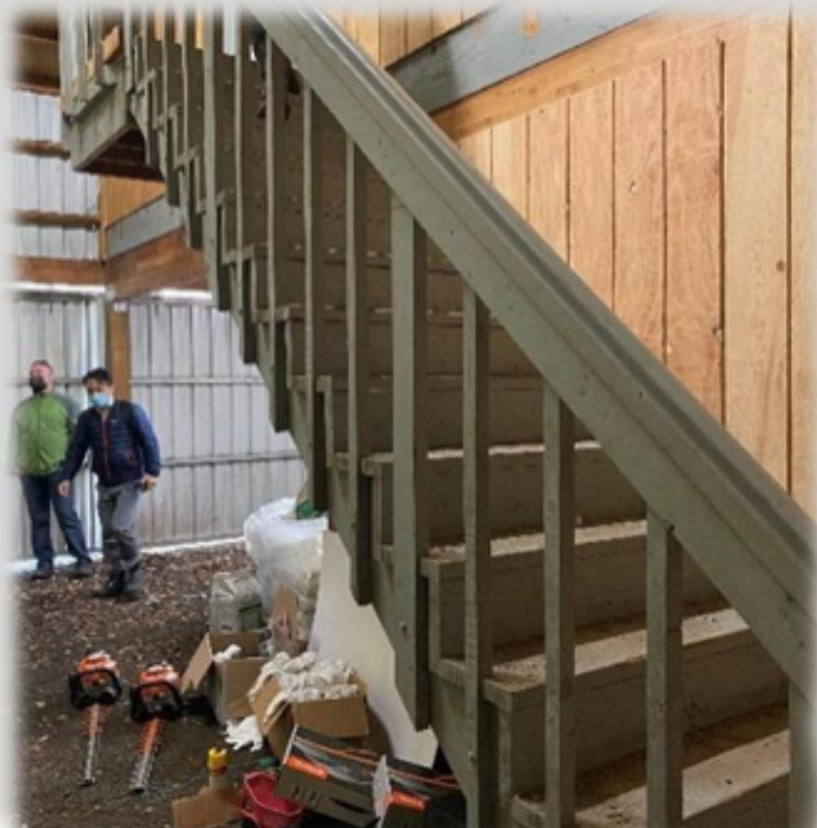


Electrical

There is no electrical panel located in Building B. Lighting circuits in this building are powered from a circuit that comes from Building C. The interior lights are incandescent type lamps controlled by a spring wound timer. The lighting circuits are installed in conduit; some of the conduit supports appear to be missing or inadequate (non UL listed).

FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING C



PUBLIC WORKS -BUILDING C

Overall Rating POOR-2

General Descriptions Location:

Building C is located at the center of the fully fenced campus. The building south façade is less than five feet to the fence of Public Works campus, and its west to Building B.

- Age: 1994
- Program: It houses the Stormwater Department and Administration staff
- Functional spaces including offices with restroom, a nonconformed business area, parking garage, and an attic space for tires and parts
- Orientation: The building longitudinal direction is east and west
- Access: o A single pedestrian entrance is located at the north side of the building
- Vehicle access is located at the north façade of the building with a sliding barn door to access the garage
- Levels: Building C is a single-story building with a storage room above the restroom and nonconformed business area accessed by stairs.
- Size: Approximately 1500 square feet. The longitudinal axis of the building is north-south direction.
- Style: Building C and Building B appear to be a single structure system and were subdivided into two buildings.

Building C General Photo



Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for closeup assessment. Observations on the roof:

- Metal roof and roof fascia system are in fair condition
- No obvious wear and tear marks on the roof were found
- No split, crack, or chipping on the roof panels were found
- No leakage or unsealed opening is noted

Wall assembly is uninsulated box ribbed type metal wall panel at the garage area. Insulation for wall assembly at offices area is provided. The exterior is consistently cladded with the same metal panel type. Pressured treated timbers are used at the bottom of the exterior walls as wall curbs. Observations on the exterior walls:

- Wall exterior condition is aged and below average
- Finish of the wall panels are generally intact
- Dents and locally deformed areas on metal panels were
- Treated wood wall curbs are exposed without flashing transition or protection

Weather Protections is provided for the main egress door with an awning. Observation on weather protection details:

- Portion of the roof gutters is slightly deformed above the barn door at storage
- Wood fascia and wood blockings that support gutter systems are exposed and unprotected
- Downspouts are functioning
- Downspouts are not tied to the storm drain system and most of them are without splash block
- Oversize metal flashing and trim above vehicle access door to the shop is in fair condition. Metal flashings above windows function but are in poor condition.

Doors and Windows

- Double pane windows are provided at north and east walls and they are in fair condition
- Water migration likely occurs at the windows due to poor flashing details. They function but are in bad condition.
- In-swing exterior egress door is not insulated
- Manual uninsulated sliding rolling door at garage is deformed but functioning. It is in poor condition.

Security o Intrusion detection system is not found

- Security at the garage area is poor

Building C Exterior Photos



Interior Assessment

Zones of Building C are divided into business area, shops, and storage. Business area includes open offices, a nonconformed business area, and a restroom.

Observations at the business area:

- Hallway dimensions appear appropriate for egress and ingress compliance
- Restrooms and Shower condition are fair o Ceiling is composed of acoustic ceiling tile with lay-in ceiling at the office area, hallway, and restroom. Gypsum ceiling is provided at the nonconformed business area.
- Approximately 7'-2" to 7'-4" ceiling height.
- Insulation is used above ceilings. Insulation value cannot be confirmed. No vapor retarder applied at the ceiling.
- Multiple water stains are found at the ceiling likely caused by condensation.
- Partition finishes are painted gypsum walls. They are in fair condition. Insulation value at perimeter partitions cannot be confirmed. Partition insulation at business area stop at the ceiling height based on observation at attic above.
- Floor: Walk-off mat is provided at entry hallway. Vinyl floor is in fair condition at hallway and restroom. Carpet flooring is used at offices and they are aged and in fair condition.

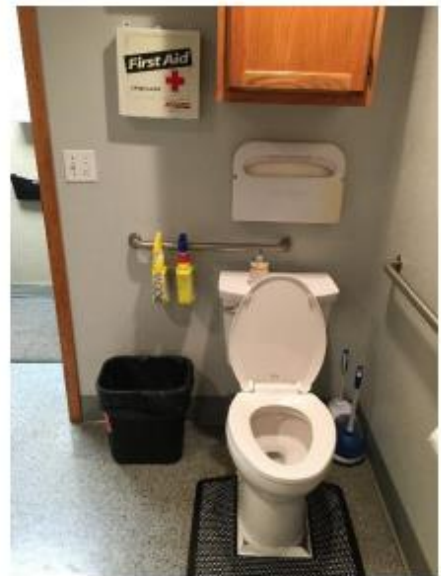
Observations at the Garage Area: o Ceiling is exposed structure with roof underlayment with liner. Approximately 13 to 14 feet at high point.

- Vertical wood plank siding at business area partition is generally in good condition. The rest of the garage area is enclosed by uninsulated wall panel.
- Floor is paved by gravel

Observations at Attic Storage Space:

- Ceiling is exposed structure with roof underlayment with liner. Low clearance at approximately 6 foot height with uninsulated perimeter walls.
- Floor is constructed with painted plywood and is in fair condition.
- Attic space has a maximum allowable load of 15 pounds per square foot.
- Security is a concern for the space because of the poor condition of the sliding door to the garage.
- Access control is through door locks

Building C Interior Photos





Codes Compliance

Per International Building Code definition, Building C is:

- Mixed occupancies of occupancy B, S-2
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered o Fire separation between the three occupancies are not required.
- Numbers of egress are appropriate based on their current locations and sizes

ADA accommodation per ICC/ANSI A117:

- The building is not in compliance with ADA
- Restrooms are non-ADA compliant
- Shower is ADA compliant
- ADA building access is not provided to the business area in terms of entry materials, elevations, or door clearance o Door, caseworks are non-ADA

International Energy Conservation Code (IECC) Compliance:

- The building is not in compliance with IECC Washington Amendment (Washington State Energy code)
- The building is partially insulated. Insulation value cannot be verified.
- Building is likely under insulated
- All the doors, including man doors and sliding door, are non-insulated

Fire Protection and Fire Alarm System:

- It appears that there was no fire alarm system in the building
- Horns and strobes are not provided at shops
- Fire extinguishers are located at various spaces
- Exit Signs and Exit plans that indicate fire extinguishers' locations are provided

Building C Code Photos



Hazardous Materials

Asbestos-Containing Materials and Lead-Based Paint cannot be confirmed at the building without material samples testing.

Mold is not visually presented but is expected inside the Building C by the presence of multiple water stains.

Summary

HDR conducted a visual assessment of Building A. The overall condition of the building is below average.

Key issues are listed below:

- Exterior fire rated walls may be required by the Authorities Having Jurisdiction (AHJs) due to the proximity of the building being closer than 5 feet of the site property line. It is based on fire resistance rating requirements for exterior walls based on fire separation distance in IBC. IBC requires Type VB construction exterior wall to be rated at least 1 hour when the building is closer than 5 feet of the lot line or less than 10 feet to adjacent structure. An opening is not permitted on the wall. That will pose a significant cost impact on interior space upgrade and conversion of the nonconformed business area.
- ADA compliance is challenging at the current setting. The exterior door needs to be replaced to provide sufficient ADA clearance. The hallway is compliant to ADA minimal required 36 inches. It is narrow for practical functioning. Other building components that need to be upgraded to meet ADA requirement include, but are not limited to door thresholds, door hardware, and the finish grading, walking surface at main entry, casework upgrade, restroom upgrade, and signs, etc.
- Ceiling height appears lower than the required 7'-6" per IBC. To raise the ceiling height will be a challenge and trigger extended work for the upgrade. • Due to missing vapor retarder, multiple moisture stain marks caused by condensation is present at acoustic ceiling tile. Mildew may occur in the business area at the ceilings and inside the exterior walls.
- The building is under-insulated and energy inefficient. No perimeter insulation around the wall curb. Timber sill plate for exterior walls with direct ground contact is also not recommended for commercial buildings.
- Even though it is located in a fully fenced campus, Building C security can be easily compromised because of the poor condition of the garage sliding door.

Structural

Building C is attached to Building B and has been mostly converted into office space. The west portion of Building C is used for equipment and seed storage. A staircase leadsto a loft space above the office space. The stairs are in fair condition. Some creakiness and softness are noted in the stairs, however, no obvious signs of distress are noted. The riser height and tread depth of the stairs may not meet current code requirements.

A sign at the top of the stairs indicates a maximum load limitation of 15 psf for the loft space (see [Figure 2.12](#)). The floor in this area does not exhibit unexpected deflections when walking around. However, the code minimum loading requirement for a habitable attic space such as this is 30 psf. As 15 psf is a value that is very easy to exceed, a thorough evaluation of the items stored in this space and its layout is required to ensurethat the design load is not exceeded, particularly where the heavy-duty shelving is located (see [Figure 2.13](#)).

Figure 2.12. Sign at Top of Stairs



Figure 2.13. Heavy-Duty Shelving



Most of the structural elements are hidden from view by interior finishes, however, the portions of the structural framing that are visible from the loft area and in the storage area, appear to be in very good condition. The roof sheathing (if present) is hidden by insulation (see [Figure 2.14](#)). The joists supporting the loft area have had holes drilled in them for electrical wiring and plumbing (see [Figure 2.15](#)). These holes do not appear to be placed in compliance with best practices (away from ends, and away from top and bottom edges).

Figure 2.14. Insulation



Figure 2.15. Holes Drilled in Joists



The slab under the office space section is exposed at grade and does not have a turndown at the edges, which is required to ensure adequate frost depth (see [Figure 1.8. Building C Exterior Photos](#)). Frost depth at this location is 12 inches. It is likely that this slab was poured after the building was erected and does not work to provide structural support to the building. If frost damage to the slab were to occur, such as heaving, it could lead to damage to the floor finishes and partition walls.

Much like Building A, this building requires further evaluation if life safety criteria are met and if any structural retrofits are necessary, as this building contains offices and other regularly occupied space.

Electrical

Building C is provided with a 120/240-volt, 1-phase, 200-amp electrical service from Clark PUD. The building includes a 200-amp main panelboard with 20 spaces, as shown in [Figure 3.5](#). Every circuit in these panels appears to be in use with no space for future

loads. The panel is a Siemens ITE load center and appears to be in good condition. There is no standby power provided to the building.

Interior lighting is primarily tube fluorescent with no occupancy sensor controls. The exterior lighting are metal halide wall packs. There is no emergency egress lighting for the building.

Figure 3.5. Building C Panelboard



Networking hardware is installed in the loft, as shown in [Figure 3.6](#). It is recommended that this equipment be installed in a dedicated space, such as a communication closet, or be installed in an enclosure for protection. Some of the communication cables located in the loft space are loosely installed without adequate structural support, as shown in [Figure 3.7](#).

Figure 3.6. Networking hardware in Loft



Figure 3.7. Communication Cables in Loft Space



An HVAC unit is installed outdoors on the south side of the building, and the electrical disconnect switch for this unit is installed on the east side of the building, as shown in [Figure 3.8](#). Since the switch is not in sight of the HVAC unit, it is in violation of NEC requirements. A service outlet for the HVAC unit is also missing per NEC requirements.

There are no fire alarm controls provided for the building.

Figure 3.8. HVAC Unit and Disconnect Switch



Mechanical

Building C has an HVAC and plumbing system serving the main level with equipment located in the attic (see [Figure 4.9](#)). A horizontal Lennox furnace is installed on the floor of the attic and an Aire-Flo (Lennox subsidiary) air conditioner is installed at the rear of the building (see [Figure 4.10](#)).

An exhaust fan in the attic helps to limit the temperature in this area. A second exhaust fan in the ceiling serves the restroom.

Figure 4.9. Building C Furnace

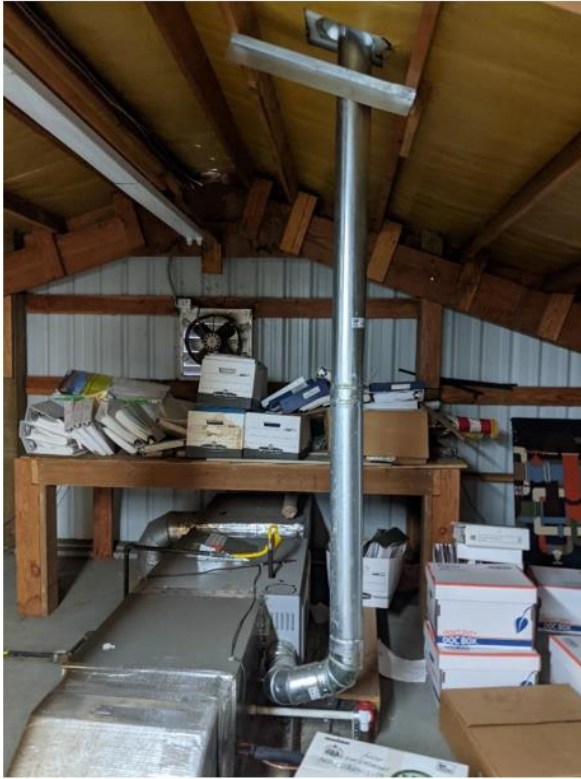


Figure 4.10. Building C A/C



The restroom has a shower, water closet, and service sink which is not ADA accessible, (see [Figure 4.11](#), [Figure 4.12](#), and [Figure 4.13](#)). A Bradford White natural gas water heater is in the attic (see [Figure 4.14](#)). This unit is dated 1993 per the Washington LNI Certificate of Inspection. There are signs of previous leaks in the drain pan below the unit and the unit is well beyond the expected life of 10 to 15 years. The plumbing piping was recently modified to serve a partially constructed new room in the back of the building using PEX piping; this new room is not complete and is not in compliance with the current codes. The natural gas meter is in fair condition showing some surface rust.

Figure 4.11. Building C Water Closet



Figure 4.12. Building C Sink



Figure 4.13. Building C Shower

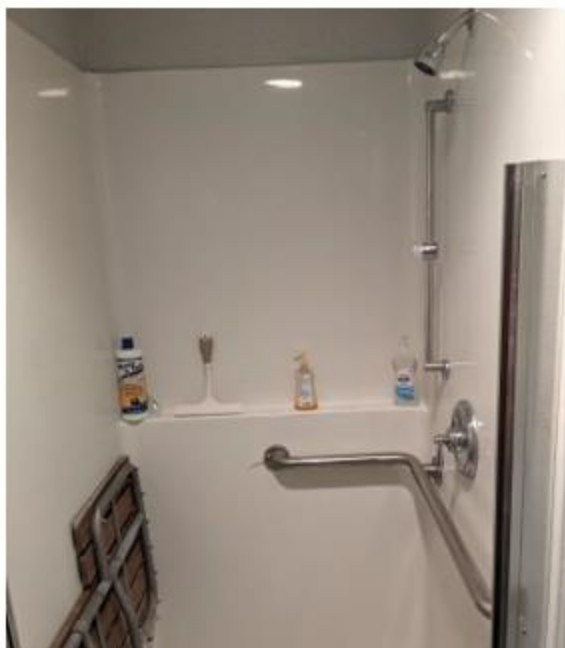


Figure 4.14. Building C Domestic Water Heater



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING D



PUBLIC WORKS -BUILDING D

Overall Rating POOR-2

General Descriptions Location:

Building D is located at the center of the fully fenced T-shaped campus. The building's east façade shares a wall with Building E. Its west is a 12-foot wide alley that separates Buildings C and D.

- Age: 1994
- Program: It houses Storage, Snowplow equipment and vehicles
- Orientation: The building longitudinal direction is east and west
- Access: An egress door to the alley is located at the west side of the building.
- Vehicle access is located at the north façade of the building with three overhead rolling doors and a bi-parting barn door.
- Levels: Building D is a single-story building.
- Size: Approximately 2800 square feet. The longitudinal axis of the building is north-south direction.

Building D General Photo



Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close up assessment. Observations on the roof:

- Metal roof and roof fascia system are in fair condition o No obvious wear and tear marks on the roof panels were found

Wall assembly is uninsulated box ribbed type metal wall panel. Interior gypsum sheathing is provided at Snow Plow equipment and fleet area. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observation of the exterior walls:

- Wall exterior condition is aged and in fair condition
- Finish of the wall panels are generally intact
- Dents and locally deformed areas on metal panels are found o Treated wood wall curbs are exposed without flashing transition or protection.

Observations on weather protection details:

- Rain gutter is overrun in horizontal distance
- Wood fascia and wood blockings that support gutter systems are exposed and unprotected
- Downspouts near Building E are not correctly detailed and installed
- Oversized metal flashing and trim above vehicle access door to the storage is deformed

Doors:

- Manual overhead rolling door in fair condition. They appear to be non-insulated type.
- Metal swing door for egress is in fair condition.

Building D Exterior Photos



Interior Assessment

Building E houses the Snow Plow Equipment and vehicles. An overhead heating unit is provided.

Observations at Snow Plow Area:

- Ceilings is half exposed structure and half gypsum vaulted ceiling. Roof underlayment with liner are exposed, but insulation is not noted. Approximately 13 to 14 feet at high point.
- Walls are covered by gypsum wall boards o Floor is composed of concrete slab
- Unprimed wall boards and gypsum ceilings are taped and mudded o Concrete floor slab is in fair condition

Access control is through door locks

Building D Interior Photos





Codes Compliance

Per International Building Code definition, Building D is:

- Single occupancy S-2
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered

ADA accommodation per ICC/ANSI A117 is not applicable

International Energy Conservation Code (IECC) Compliance:

- The building is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces.

Fire Protection and Fire Alarm System: o Fire extinguishers are provided o Exit Signs are provided 1.4.5 Hazardous Materials

Mold is not visually present

Summary

HDR conducted a visual assessment of Building D. The overall condition of the building is average. The roof and the walls are aged. Reasonable wear and tear are noted. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings.

Structural

Building D is a wood post frame building that is primarily used for vehicle storage on the west end and general purpose storage on the east half. The east and west halves have slightly different roof heights, and it appears that the two portions of the building were built at different times, as the truss designs are similar, but not identical. The east timbertrusses are shown in [Figure 2.16](#), with the west trusses are shown in [Figure 2.17](#). It is likely that the west portion of the building is older. Both portions of the building appear to be in good condition. Building posts are constructed from treated timber. No evidence of decay or structural distress is evident. Some minor checking is noted in the columns of the west half.

Figure 2.16. East Timber Trusses



Figure 2.17. West Timber Trusses



The east portion of the building has a concrete slab floor that is in good condition. It is unknown if the slab meets frost depth requirements, however, as it does not directly support the building, it is not of significant concern from a structural stability standpoint. However, cracking of the slab due to frost damage could cause serviceability issues in the future. The west half of the building has an unfinished dirt floor.

Electrical

Building D is provided with a 120/240-volt, 1-phase, 125-amp electrical sub panel that is fed from a circuit from Building C. The panel is a Challenger load center with 20 spaces, as shown in [Figure 3.9](#), and appears to be in good condition. A large metal shelf is installed in front of the panel, as shown in [Figure 3.10](#), which is in violation of NEC requirements for clear working space in front of electrical equipment. The panelboard circuit directory is missing, which is a violation of NEC requirements.

The interior lights are incandescent type lamps controlled by a spring wound timer.

Figure 3.9. Building D Panel



Figure 3.10. Metal Shelf in Front of Panel



Mechanical

The west half of Building D has a single natural gas unit heater located in the southwest corner (see [Figure 4.15](#)). There is no other heating, air conditioning, or ventilation in this building. The natural gas line in this building is extended to the east to serve Building E.

The natural gas service is located in the narrow access road between buildings C and D but protected by bollards (see [Figure 4.16](#)).

The east half of this building is unheated and has no ventilation.

Figure 4.15. Building D Gas Unit Heater



Figure 4.16. Building D Natural Gas Meter



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING E



PUBLIC WORKS -BUILDING E

Overall Rating POOR-2

General Descriptions Location:

Building E is located at the center of the fully fenced T-shape campus. The building shares walls with Building D and F at its east and west location.

- Age: 2000
- Program: Storage
- Orientation: The building longitudinal direction is east and west
- Access: A man door connects to Building D at the east wall of the building for exiting
- Vehicle access is located at the north façade of the building with bi-parting barn doors.
- Levels: Building E is a single-story building
- Size: Approximately 1500 square feet. The longitudinal axis of the building is north south direction.

Building E General Photos



Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close up assessment. Observations on the roof:

- Metal roof and roof fascia system are in fair
- No obvious wear and tear marks on the roof panels were found o Unsealed opening on the roof panels was found at the area near Building F
- Leakage likely occurs from the roof

Wall assembly is uninsulated box ribbed type metal wall panel. Interior gypsum sheathing is provided at Snow Plow equipment and fleet area. Pressured treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:

- Wall exterior condition is aged and in fair condition
- Finish of the wall panels are generally intact
- Dents and locally deformed areas on metal panels were found
- Treated wood wall curbs are exposed without flashing transition or protection

Observation on weather protection details:

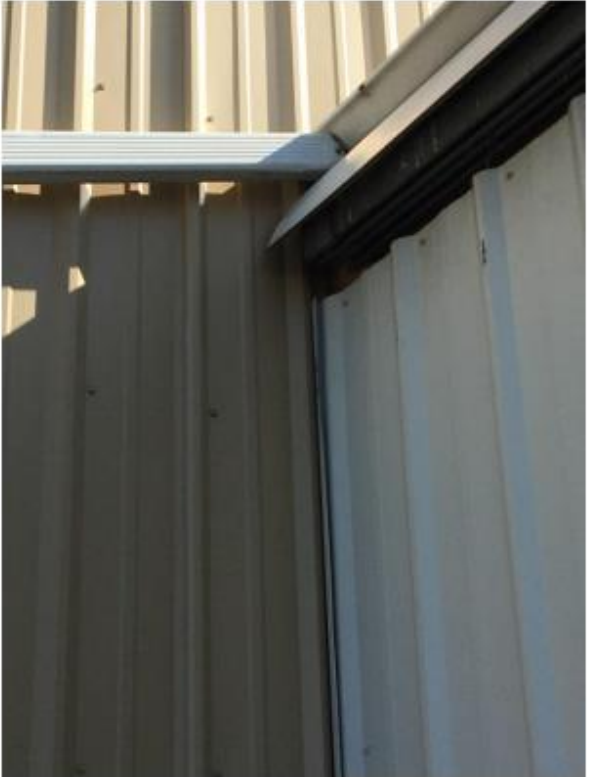
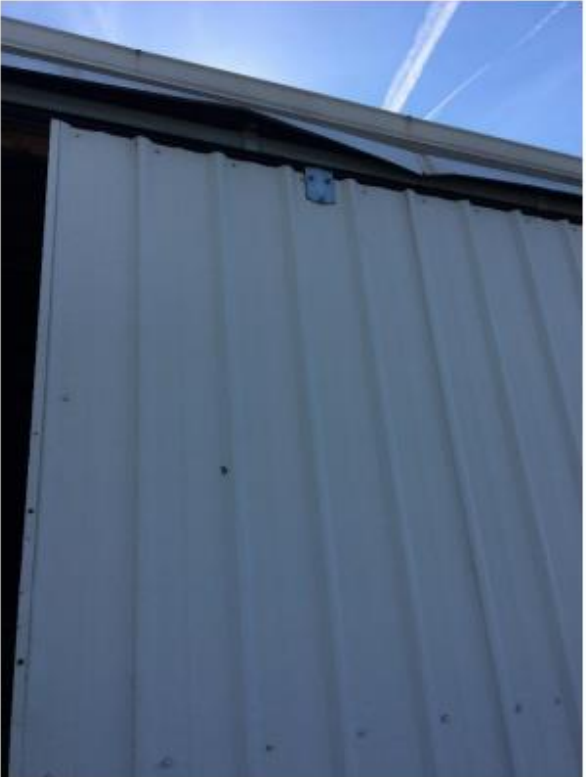
- Rain gutter is overrun in horizontal distance
- Wood fascia and wood blockings that support gutter systems are exposed and unprotected
- Downspouts near Building E are not correctly detailed and installed
- Oversized metal flashing and trim above vehicle access sliding doors to the storage is deformed

Doors: Manual uninsulated sliding doors at Storage are deformed but functioning. They are in poor condition.

Security: With poor condition of the vehicle sliding doors, security of the building is concerning.

Building E Exterior Photos





Interior Assessment

Observations at Record Storage Space:

- Ceiling is exposed structure. Roof underlayment with liner is exposed. Approximately 13 to 14 feet at high point.
- Walls are uninsulated and exposed metal panels and wall girts o Floor is composed of gravel and soil

Building E Interior Photos



Codes Compliance

Per International Building Code definition, Building E is:

- Single occupancy S-2
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered
- Exit access travel distance is over allowable distance by IBC means of egress

ADA accommodation per ICC/ANSI A117 is not applicable

International Energy Conservation Code (IECC) Compliance:

- The building is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces

Fire Protection and Fire Alarm System:

- Fire extinguishers cannot be located 1.5.5 Hazardous Materials

Mold is not visually present

Summary

HDR conducted a visual assessment of Building E. The overall condition of the building is average. The roof and the walls are aged. Reasonable wear and tear is noted. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings. Detached roof panels caused by poor workmanship or detail is noted near interface with Building E roof. Leakage from the roof is expected. Deformed wall panels and sliding doors shall be repaired.

Structural

Building E is a wood post frame building that is primarily used for general purpose storage with a concrete floor. It is unknown if the slab meets frost depth requirements. The roof is supported by wood trusses. The west wall is shared with Building D and the east wall is partially shared with Building F. In general, the exposed structure appears to be in good condition. Based on the construction methods used and the coloration of the treated timber elements, it appears this structure is one of the newer structures on the site. Photos are shown in [Figure 2.18](#) and [Figure 2.19](#).

Figure 2.18. Building E Structure

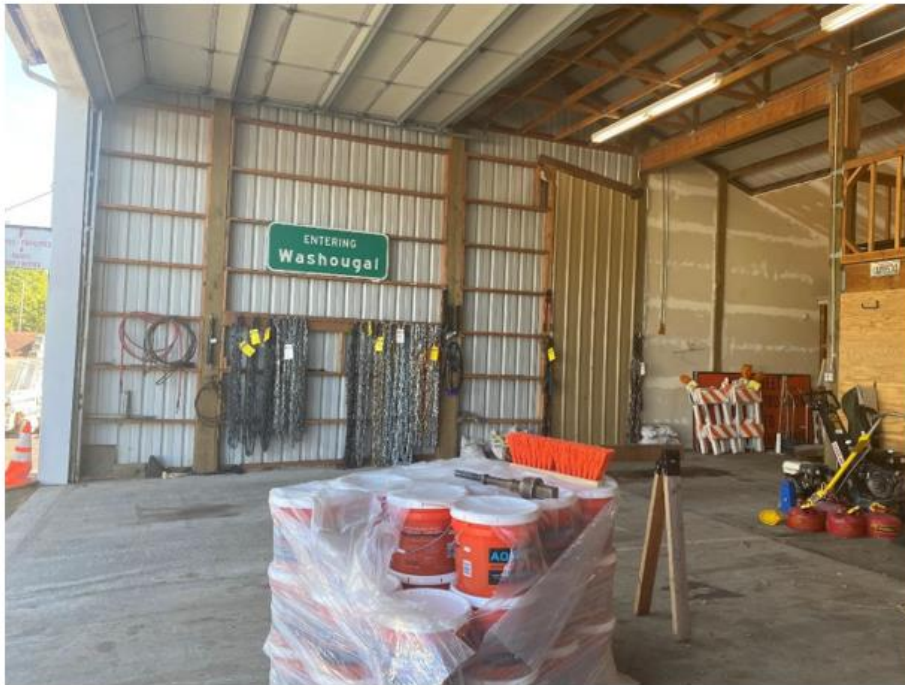


Figure 2.19. Building E Structure



Electrical

There is no electrical panel located in Building E. Lighting circuits in this building are powered from a circuit that comes from Building F. The interior lights are a mix of incandescent, fluorescent, and LED type lamps. The lighting circuits are installed in conduit. The exterior lighting are metal halide wall packs.

Mechanical

Building E has a single unit heater in the southwest corner, fed by natural gas from Building D (see [Figure 4.17](#)). The thermostat for this unit has been disassembled and may not be functioning (see [Figure 4.18](#)). There are visible gaps around the perimeter of this space, most noticeably at the joint between Building D and Building E that allow air and water to infiltrate the building. These gaps should be repaired to maximize heating system efficiency.

Figure 4.17. Building E Unit Heater



Figure 4.18. Building E Thermostat



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING F



PUBLIC WORKS -BUILDING F

Overall Rating POOR-2

General Descriptions Location:

Building F is located at the west part of the fully fenced T-shape campus. The building east façade shares a wall with Building E.

- Age: 1999
- Program: Garage/Park Storage, Shops for Building Maintenance
- Orientation: The building longitudinal direction is east and west
- Access: Vehicle access is located at the north façade of the building with two overhead sectional doors to the garage and the parts storage area. Egress doors are provided at the shops and west wall of the storage.
- Levels: Building F is a single-story building with tall vertical clearance. The building has a centrally located tool shops and storage platform.
- Size: Approximately 1000 square feet. The longitudinal axis of the building is north-south direction.

Building F General Photos



Exterior Assessment

Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for closeup assessment. Observations on the roof:

- Uninsulated metal roof and roof fascia system are in fair condition
- No obvious wear and tear marks on the roof panels were found
- No unsealed openings on the roof were found

Wall assembly is uninsulated box ribbed type metal wall panel. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:

- Wall exterior condition is aged but in fair condition
- Finish of the wall panels are generally intact
- Dents and locally deformed areas on metal panels were found
- Treated wood wall curbs are covered by wall panels and flashing

Observation on weather protection details:

- Metal flashings, fascia, and trims are in good condition.

Doors:

- Manual overhead sectional doors are in good condition. They appear to be non-insulated type at the shop.
- Manual overhead sectional doors are block off at the shop area. Rigid insulations are applied at the sectional doors, but it is partially completed. o Egress single doors are metal doors in fair condition.

Security: The space is secured by door lock

Building F Exterior Photos





Interior Assessment

Building F are divided into two zones, the Storage/Garage and the Shop. Overhead heating units are provided at both spaces.

Observations at Storage/Garage: o Ceiling is half exposed structure and half gypsum vaulted ceiling. Roof underlayment with liner is exposed, but insulation is not noted. Approximately 16 to 18 feet at high point.

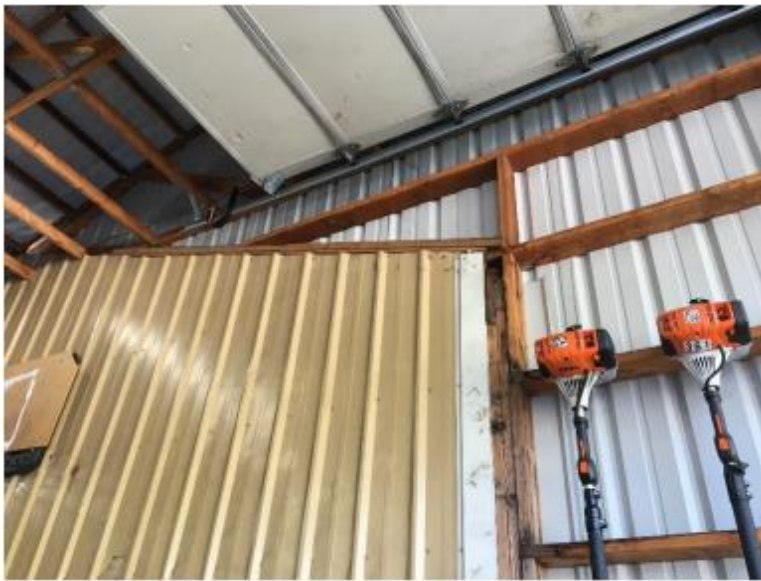
- Walls are covered by unprimed gypsum wall boards
- Floor is composed of concrete slab in good condition

Observations at the Shop:

- Ceiling is covered by finished gypsum boards at approximately 12 feet high o Walls are insulated and covered by gypsum wall board. Batt insulation in the wall is partially exposed above the overhead sectional doors.
- Floor is composed of concrete slab
- Two metal doors are provided for egress

Access control is through door locks

Building F Interior Photos





Codes Compliance

Per International Building Code definition, Building F is:

- Single occupancy S-2 and F-1
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered

ADA accommodation per ICC/ANSI A117 is not applicable

International Energy Conservation Code (IECC) Compliance:

- Building F is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces o Insulation value of the roof and the wall and the Shop cannot be confirmed. Insulation on doors, roof and walls are likely under insulated per current energy code

Fire Protection and Fire Alarm System:

- Fire extinguishers are provided
- Exit map with fire extinguishers' locations are provided in the Shop 1.6.5 Hazardous Materials

Mold is not visually noted

Summary

HDR conducted a visual assessment of Building F. The roof and the walls are aged. Reasonable wear and tear are noted. The interior of the building is in fair condition. The overall condition of Building F is average.

Structural

Building F is a building that is primarily used for storage and workshop space. It is assumed to be of wood post type construction, similar to all of the other buildings on site, however, the structure is hidden by drywall. The roof appears to be supported by timber trusses. The majority of the roof structure has been hidden with drywall, with only small portions of the trusses exposed (see [Figure 2.20](#)). This building has a concrete floor slab that is in good condition. It is unknown if this slab has turndowns to meet frost depth requirements. The condition of the structure cannot be evaluated as the structure is fully hidden, however, no obvious signs of distress, such as cracking in the drywall or out of squareness of doorways is noted.

Figure 2.20. Roof Structure Hidden with Drywall



Electrical

Building F is provided with a 120/240-volt, 1-phase, 100-amp electrical sub panel. This building does not include a separate electrical service from Clark PUD. During the site visit it was undetermined where this panel is being fed from. The panel is a Siemens loadcenter with 12 spaces, as shown in [Figure 3.11](#), and appears to be in good condition. A large amount of scrap materials is being stored in front of the panel, as shown in [Figure 3.12](#), which is in violation of NEC requirements for clear working space in front of electrical equipment.

Figure 3.11. Building F Panel



Figure 3.12. Scrap Materials Stored in Front of Panel



The interior lights are a mix of incandescent, fluorescent, and LED type lamps with nooccupancy sensor controls. The lighting circuits are installed in conduit. There is no emergency egress lighting for the building. The exterior lighting are metal halide wall packs.

Mechanical

Building F, at the far east end of the row of buildings, has several different systems serving it. In the entry, there is an electric unit heater in the entry area shop (see [Figure4.19](#)), and another in the shop and storage area (see [Figure 4.20](#)).

Two wall-mounted air conditioners serve the entry area shop (see [Figure 4.21](#)), and the parks office in the southeast corner (see [Figure 4.22](#)). Neither unit is in use and they are both blocked by stored items on the inside.

A service sink in the shop and storage area has a small electric water heater serving a service sink (see [Figure 4.23](#)).

Figure 4.19. Building F Electric Unit Heater in Entry Area Shop



Figure 4.20. Building F Electric Unit Heater in Shop and Storage Area



Figure 4.21. Building E A/C in Entry Area Shop



Figure 4.22. Building E A/C in Parks Office



Figure 4.23. Building F Sink



FACILITY CONDITION ASSESSMENT

PUBLIC WORKS -BUILDING G



PUBLIC WORKS -BUILDING G

Overall Rating Excellent-5

General Descriptions Location:

Building G is located at the southern part of the fully fenced T-shape campus.

- Age: 2006
- Program: Water Shops and Storage
- Orientation: The building longitudinal direction is north and south
- Access: Vehicle access is located at the west façade of the building with three overhead sectional doors.
- Egress doors are provided at each shop at the west and south walls of the building.
- Levels: Building G is a single-story building with tall vertical clearance
- Size: Approximately 2,500 square feet

Building G General Photo



Exterior Assessment

Roof assembly is a metal roof system with insulated roof liner over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment.

Observations on the roof:

- Uninsulated metal roof and roof fascia system are in good condition
- No obvious wear and tear marks on the roof panels were found
- No unsealed openings on the roof were found

Wall assembly is box ribbed type metal wall panel with insulation that is covered by finished gypsum wall panels. Observations of the exterior walls:

- Wall exterior condition is in good condition o Finish of the wall panels are generally intact
- Minor dents on metal panels were found

Observation on weather protection details:

- Metal flashings, fascia, and trims are in good condition

Doors: Manual overhead sectional doors are in good condition. They appear to be insulated.

- Egress single doors are metal doors in good condition

Security: The space is secured by door locks

Building G Exterior Photos



Interior Assessment

Building G is divided into two shops. Overhead heating units are provided at both spaces.

Observations at Shop:

- Ceiling is exposed wood structure with insulated ceiling liners to form the vaulted ceiling. Approximately 18 feet at the ridge of the high point.
- Partitions are covered by either painted gypsum board or painted plywood
- Floor is composed of sealed concrete slab in good condition
- Access control is through door locks

Building G Interior Photos



Codes Compliance

Per International Building Code definition, Building G is:

- Single occupancy F-1
- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered

ADA accommodation per ICC/ANSI A117:

- The building is in compliance with ADA

International Energy Conservation Code (IECC) Compliance:

- Although insulation value of the roof and the wall and the Shop cannot be confirmed, Building G is likely in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces.

Fire Protection and Fire Alarm System: o Fire extinguishers are provided

- Exit map with fire extinguishers' locations are provided in the Shop.

Hazardous Materials

- Mold is not visually noted
- Based on the age of the building, hazardous materials are assumed not used in this

Summary

HDR conducted a visual assessment of Building G. The roof and the walls are fairly new. Reasonable wear and tear is noted. Interior of the building is in good condition. The overall condition of Building G is good.

Structural

Electrical

Building A is provided with a 120/240-volt, 1-phase, 200-amp, electrical service via an overhead line from Clark PUD. The building includes a 200-amp main panelboard with 40 spaces, as shown in [Figure 3.13](#). The panelboard is in new condition and has many spaces available for expansion. There is no standby power provided to the building.

The interior lights are a mix of incandescent, fluorescent, and LED type lamps with no occupancy sensor controls. The lighting circuits are installed in conduit. There is no emergency egress lighting for the building. The exterior lighting are metal halide wall packs.

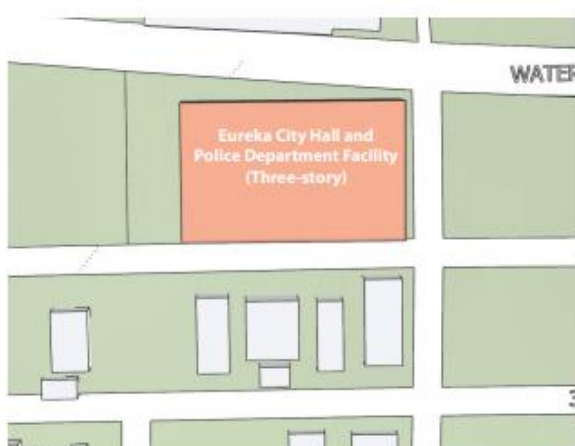
Figure 3.13. Building G Panel



Project and Cost Summary

New Capital Projects

Eureka City Hall and Police Department Facility



Project Description

The new Eureka City Hall and Police Department Facility will allow for more organization and tailored workspaces for city staff currently working in City Hall and Police Department at various locations.

Project Information

Location	Waterfront Dr & L St
Site Size (SF)	50,925
Facility Size (SF)	126,000
Occupancy Capacity	504
Completion Date	Late 2026
Estimated Cost	\$ 40 M

Move-In Departments /Divisions

Department	Staff	Space
City Manager	0	440
Attorney	0	420
Clerk	0	600
HR	6	1,500
Finance		
Accounting/AP/AR	5	900
Utility Billing	3	800
Central Services	1	250
Housing	1	200
Development Services		
Planning	0	1,000
Building	1	1,400
Community Services		
Administration	5	900
Police Department		
Criminal Investigation	11	2000
Communications	10	1800
Field Operations, Administration	53	6800
Records	6	2400
Total	102	21,410

Deferred Maintenance Project Cost - Adorni Facility

Building	Priority	Base Cost	General Contingency (15%)	Escalated Cost w/ General Contingency	Project	CIP	Maintenance	Further Analysis	Additional Project Description
Adorni Facility									
	MR	\$125,000	\$18,750	\$143,750	Parking lot improvements	X		X	Repair cracks in parking lot pavement and repaint striping.
	I	\$50,000	\$7,500	\$57,500	Repaint exterior	X			Clean and repaint eaves. Repaint wood shingles at base of exterior walls.
	I	\$20,000	\$3,000	\$23,000	Replace window blinds		X		Replace bent window blinds.
	I	\$30,000	\$4,500	\$34,500	Ceiling improvements		X		Clean plaster ceilings.
	I	\$50,000	\$7,500	\$57,500	Door replacement		X		Replace worn doors with new and repaint door frames accordingly.
	I	\$25,000	\$3,750	\$28,750	Restroom improvements		X		Repaint restrooms and clean residue in shower compartments.
	ADA	\$100,000	\$15,000	\$115,000	Accessible parking spaces	X		X	Resize accessible spaces and provide compliant signage.
	ADA	\$75,000	\$11,250	\$86,250	Handrail improvement	X			Install compliant handrails at ramps.
	ADA	\$100,000	\$15,000	\$115,000	FF&E and Toilet Accessories		X	X	Rearrange furniture, fixtures & equipment for compliant clearance. Modify mounting heights of toilet accessories.

Summary by Project Type

DEFERRED MAINTENANCE TOTAL	Site	Exterior Envelope	Roofing	Structure	Interior Elements	MEP systems	ADA
\$661,250	\$143,750	\$80,500			\$120,750		\$316,250

Summary by Priority

Major Renovations	Infrastructure Improvements	ADA Compliance	TOTAL
\$143,750	\$201,250	\$316,250	\$661,250

Building List and Replacement Value

Year Built	Description	Address/Serial	Facility Size (sqft)	Total Value	General Fund	Dedicated Fund
1974	City Hall	1701 C St	5,292	\$2,027,138	X	
1940	East County Family Resource Center	1702 C St	5,000	\$1,513,477	X	
1978	Washougal Community Center and Library	1661 C St	7,800	\$1,717,017	X	
1995	Permit Center	211 39th Street	5,215	\$651,450	X	
1972	Silver Star (City's in 2023)	1220 A Street	3,700	\$62,726	X	
	Hartwood Barn	2251 49th Street	2500	\$211,670	X	
	Reflection Plaza Tower	1703 Main Street		\$117,381	X	
2003	Police Station	1300 A St	7,949	\$3,674,760	X	
1975	Cemetery Shop	3329 Q Street		\$332,124		X
1967	Public Works Building B	2201 C Street	1,975	\$26,542		X
1999	Public Works Building F	2201 C Street	1,000	\$27,152		X
1990	Public Works C Garage	2201 C Street	n/a	\$22,276		X
1957	Public Works Building A - Mechanics Shop	2201 C Street	n/a	\$216,257		X
1993	Public Works Building A, Breakroom and offices	2201 C St	n/a	\$325,518		X
1995	Public Works Building D	2201 C Street	2,800	\$70,103		X
1999	Public Works Building E	2201 C Street	1,500	\$41,475		X

2006	Public Works Building G	2201 C Street	2,500	\$62,313		X
1957	Public Works Building A Pole Building	2201 C Street	8,500	\$46,421		X
1990	Public Works Building C	2201 C Street	1,500	\$110,233		X
1930	Public Works Exec House	1615 C St	1,350	\$434,216		X
1972	Public Works Water Admin	2247 main St	1,700	\$182,518		X
1942	Rental House	324 Durgan Street	1,628	\$344,378	X	
2003	Rental House	1312 SE 352nd Street	3,148	\$208,223		X
2016	Effluent Pump Building	3900 SR 14		\$2,437,945		X
2010	Headworks Building	3900 SR 14		\$3,224,955		X
1968	Office and Control	3900 SR 14		\$996,096		X
1999	Pump room and Shop	3900 SR 14		\$8,888,406		X
2012	Wastewater Storage Building	3900 SR 14		\$1,262,900		X
1999	Water Treatment Facilities	411 3rd street		\$1,171,883		X
TOTAL			62,557	\$30,407,553		

Appendices A-Operation Center Charrette Designs

As part of the Master Planning effort, the HDR Design Team used a design charrette to engage City staff and develop options for a master plan. The Charrette was held virtually with the Design Team meeting in the Bellevue HDR office while City Staff joined via web conference on August 3-5, 2021. During each day of the charrette, site plan Options were developed and presented to key City staff for review.

Option A



Option B



Option C



Option D



Option E



Option E.1



Option E.2



Option F



Option F.1



Option G



Concept A

- Concept A proposes a phased construction approach.
- Building A and the house on Main Street being the last buildings replaced
- New Fleet building will replace Buildings D, E, F, and G
- North edge of site was left untouched as it is on BNSF land
- The existing wash pad would be updated or replaced with a new building with enclosed wash bay.
- Fueling will stay where it was and new lanes and tanks added if desired.
- Buildings B and C will be replaced with new covered vehicle storage
- Comments
- Liked the idea of phasing.
- Concerned about losing Building G that was recently renovated.
- Challenging to lose existing shops during construction.



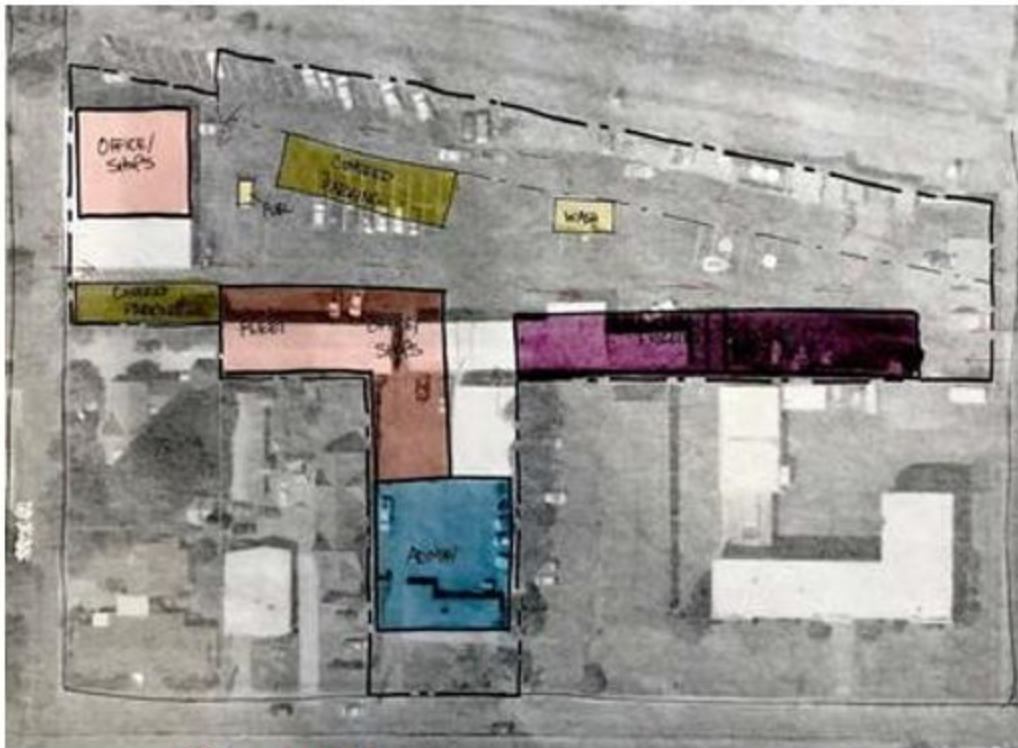
Concept A

Concept B

- Concept B again proposes a phased construction.
- In this concept Buildings B, C, and D are replaced with a new Fleet and Shop Building. This maintains all existing Shops.
- Then a new office shops building can be built in the location of Building A.
- Then existing shops in E, F, and G can be demoed and a new vehicle store building built.
- Finally, the existing Admin building can be replaced with a new building that fits all the groups in one place.
- Like Concept A fueling and wash stay where existing and upgraded.
- New covered parking areas are created adjacent and across the drive of the fleet building.
- North edge again is left untouched.

Comments

- Concern again about losing building G.
- Access to Building G during construction will be difficult
- Circulation through site when getting deliveries will be difficult with the entrances to the site



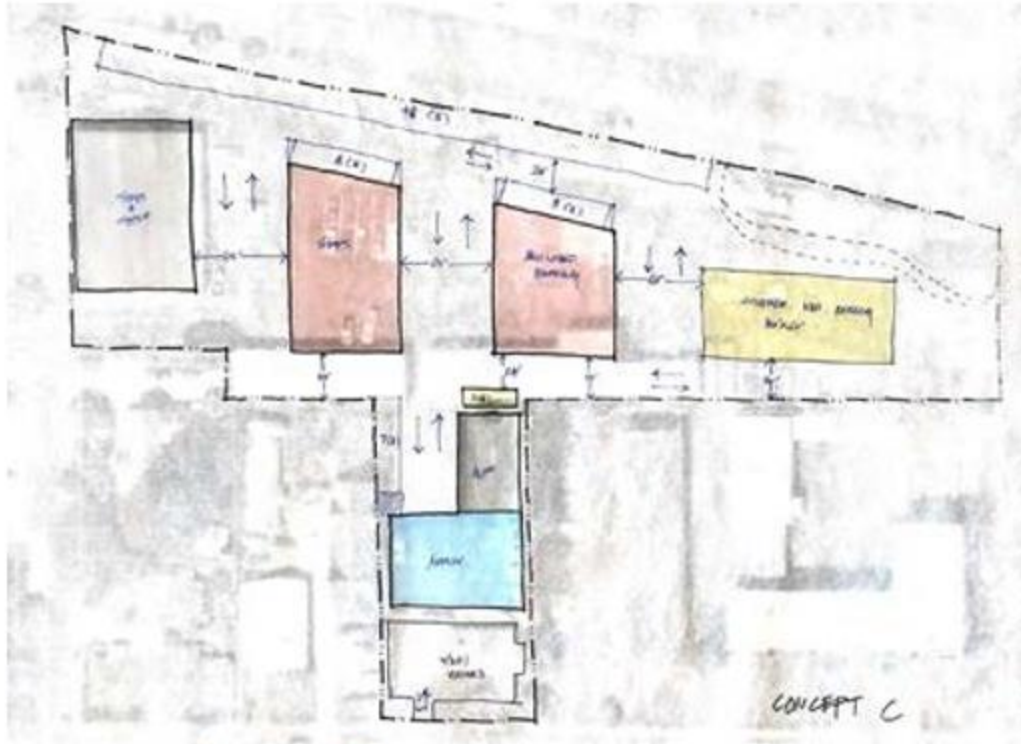
Concept B

Concept C

- Concept C takes the comments from the previous two concepts and looks at keeping Building G intact.
- In this concept again phasing and keeping the facility functioning is considered.
- Buildings B and C will be demoed, and new shop/fleet building built just to north of the demoed buildings.
- Then a new shop building would be built in place of Building A.
- Buildings D, E, F and the old Admin Building would then be demoed and replaced with a new Admin Building and vehicle storage buildings.
- Again, north edge of site is left untouched.
- Fueling is then located along Building G.

Comments

- Like that building G is maintained.
- No wash building is provided.
- Circulation through site is tight.
- How are material bins accessed?



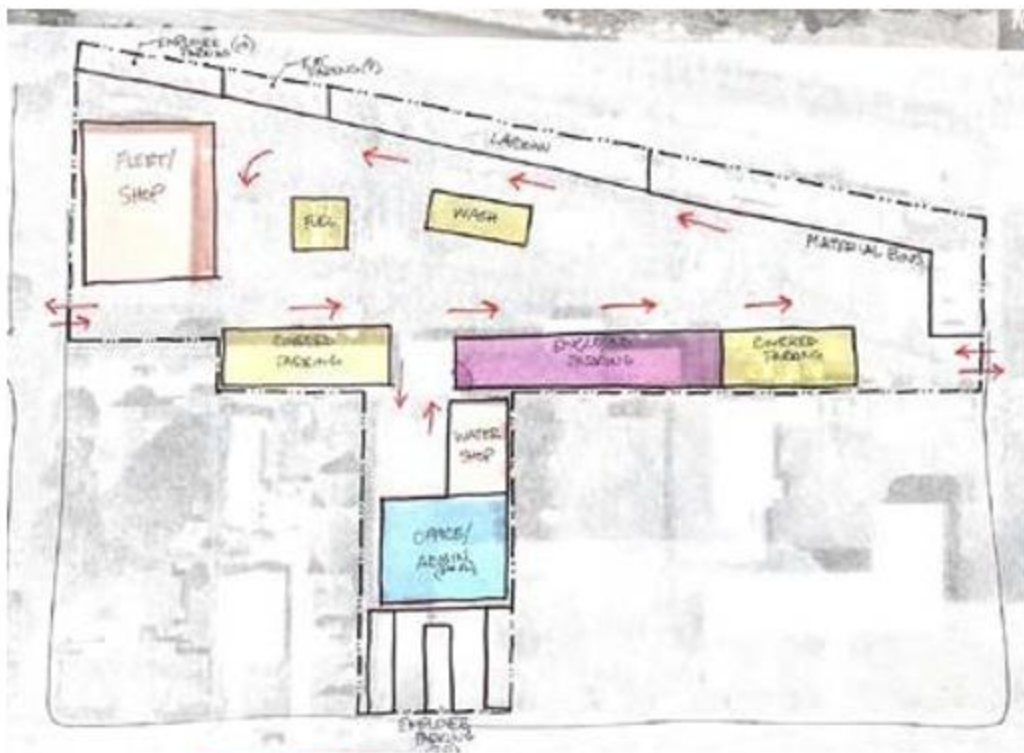
Concept C

Concept D

- Concept D looks at consolidating all the shops into one 2 story building in the location of building A.
- Building G is left untouched with a new 2 story Admin Building attached.
- New vehicle storage buildings then replace Buildings B, C, D, E, and F.
- The north edge is once again left as parking and material storage

Comments

- Like the vertical building approach.
- Like that it keeps the existing circulation.
- Good to have Building A rebuilt.



Concept D

Concept E

- Concept E takes an all new approach.
- In this concept phasing is not considered.
- One large Maintenance building is centered on the site.
- Circulation is maintained around the building with material storage and parking along the north edgelocated on the west side of the building
- These Shops and fleet bays are accessed along the north and south sides.
- Centrally located in the building is Admin and office space.
- The remainder of the building houses covered and enclosed vehicle parking.
- Between the new building and the remaining Building G is the new wash building.
- Attached to Building G are the water offices.
- Visitor and employee parking is located on the south portion of the site just off of Main street.
- The fueling is located where Buildings B and C once sat.

Comments

- Like the flow of the site.
- Seems like a better approach than D.
- Like the idea of one big shop.
- Like the axial access at the site layout.
- Consider separate visitors/employee parking area at the south.

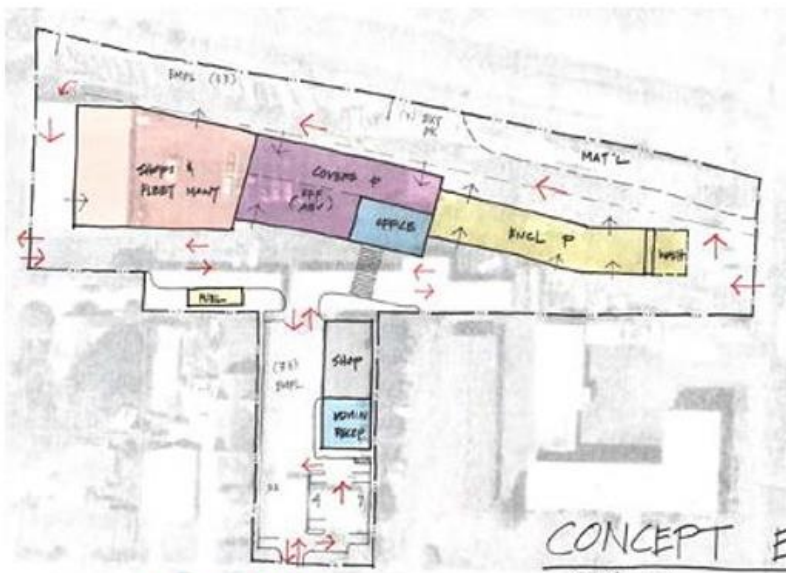
- Like that Building G remains.
- Consider blocking off site access at north west corner. It is hard to access.
- Like the public facing improvements.



Concept E

Concept E.1

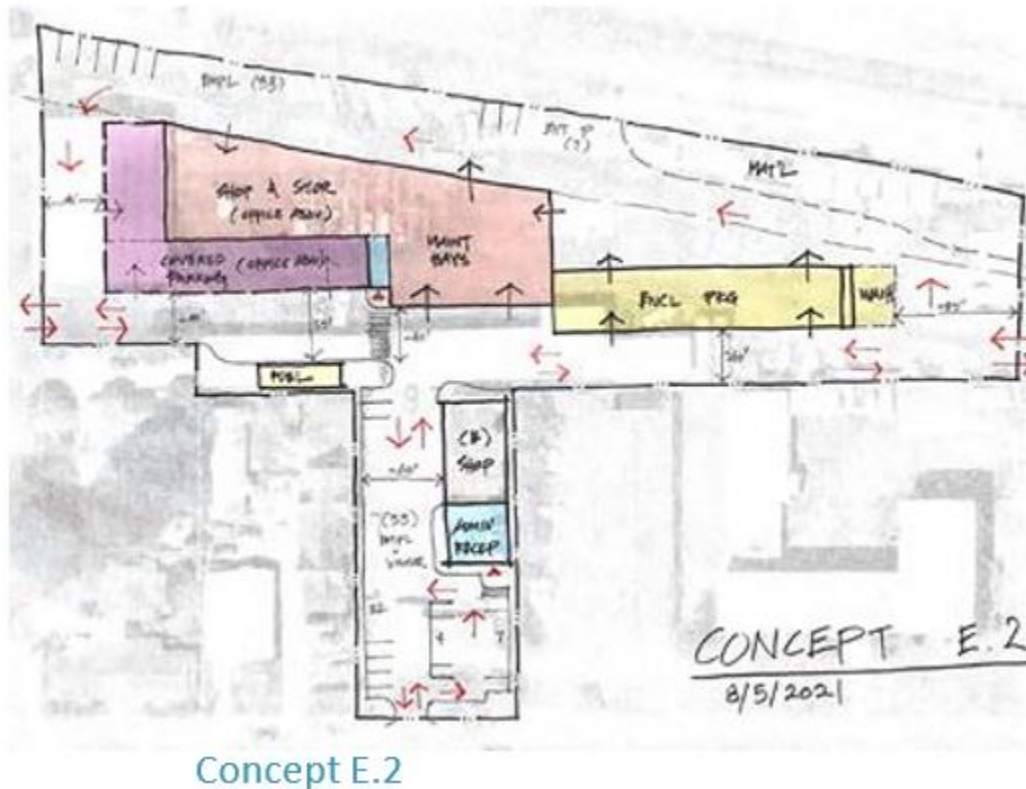
- Concept E.1 addresses comments received on concept E.
- Wash bay is moved to the east end of the building.
- Water offices is modified to include Public facing Admin office space.
- Site access in north west corner was removed.



Concept E.1

Concept E.2

- Concept E.2 is a refinement of the previous 2 concepts. It looks at putting the Shops and maintenance bays more central in the building.
- It works to make the building more square.
- The office is moved to the west and upstairs above the parking area.
- The relocated office creates a safer and more convenient access from the parking area.

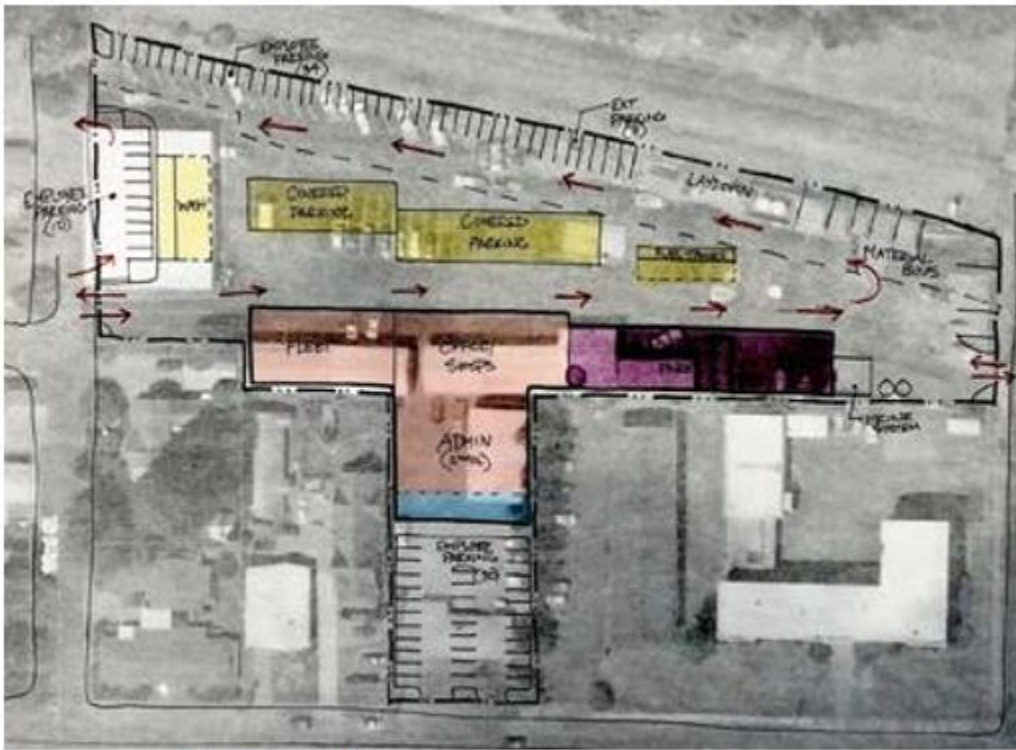


Concept E.2

Concept F

- Concept F took a similar approach to Concept E and consolidated all groups into one building.
- In this concept the building is shifted south to stay out of BNSF owned portion of the site.
- The Shops and fleet bays are located on the left side of the building and accessed from the north side of the building.
- Over the shops is the Admin and office with a lobby and reception on the ground floor facing Mainstreet.
- Enclosed vehicle storage makes up the remainder of the right side of the building.
- The location of the building allows the existing site circulation and material storage to remain.
- Once the new building is complete the existing fleet building A can be demoed and a new wash building built.
- The remaining space in the center of the site has 2 covered vehicle buildings and fuel island.

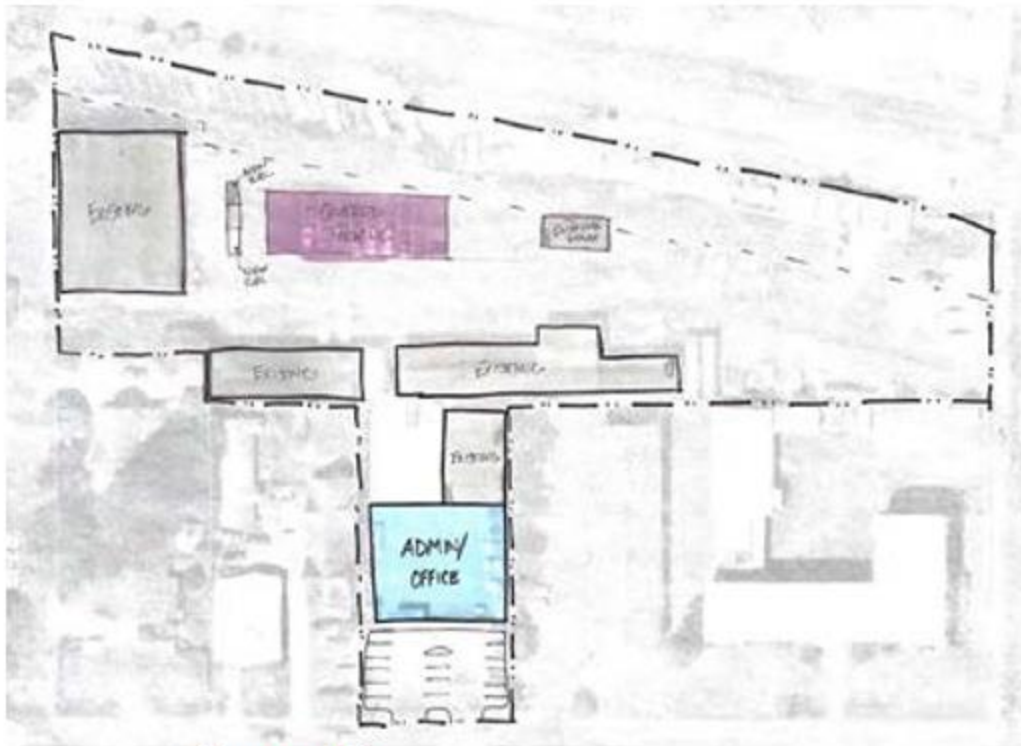
- Employee parking is then created along the perimeter of the site with visitor parking off of Main street.



Concept F

Concept G

- Concept G took all the comments from the 3 day charrette and looked at keeping all the existing buildings intact. It was determined that the existing site was not an adequate size to meet all of publicworks needs. If Washougal loses access to BNSF land then another site may be needed. Purchasing adjacent sites could also help resolve the site size issue. The design team was asked to come do a full facility assessment and help the town prioritize repairs and improvement. The biggest take away was that a new Admin Building is needed and that it should be located off of Main Street.
- In this concept a covered parking area is also centrally located.



Concept G

Appendices B-HDR report

Appendices B-LSW report



Public Works Facilities Master Plan

City of Washougal

Washougal, Washington

January
2022





TABLE OF CONTENTS

Section 1 - Executive Summary	
1.1 Executive Summary	2
Introduction	2
1.2 Executive Summary - Space Needs Program .	3
Staffing Growth	3
Vehicles and Equipment Growth	4
Building & Site Area	5
Section 2 - Project Overview	
2.1 Introduction	7
2.2 Existing Site & Facilities	8
2.3 Current Public Works Staffing Organization .	9
2.4 Methodology	10
2.5 The Planning Team	10
Section 3 - Basis for Design	
3.1 Existing Site Plans	12
3.2 Basis for Design	13
<u>Public Works Administration</u>	
Current Site	14
Function	14
Key Challenges	14
Short-Term and Long-Term Goals	14
Existing Conditions	14
Staffing Metrics	15
Key Findings	15
<u>Engineering</u>	
Current Site	16
Function	16
Key Challenges	16
Short-Term and Long-Term Goals	16
Area Metrics	17

Vehicle Metrics	17
Staffing Metrics	18
Key Findings	18
<u>Stormwater</u>	
Current Site	19
Function	19
Key Challenges	19
Short-Term & Long-Term Goals	19
Existing Conditions	19
Area Metrics	20
Vehicle Metrics	20
Staffing Metrics	21
Key Findings	21
<u>Water</u>	
Current Site	22
Function	22
Key Challenges	22
Short-Term and Long-Term Goals	22
Existing Conditions	22
Area Metrics	23
Vehicle Metrics	23
Staffing Metrics	24
Key Findings	24
<u>Facilities/Parks/Cemetery</u>	
Current Site	25
Function	25
Key Challenges	25
Short-Term and Long-Term Goals	25
Existing Conditions	25
Area Metrics	26

Vehicle Metrics	26
Staffing Metrics	27
Key Findings	27
<u>Streets</u>	
Current Site	28
Function	28
Key Challenges	28
Short-Term & Long-Term Goals	28
Existing Conditions	28
Area Metrics	29
Vehicle Metrics	30
Staffing Metrics	31
Key Findings	31
<u>Fleet</u>	
Current Site	32
Function	32
Key Challenges	32
Short-Term and Long-Term Goals	32
Existing Conditions	32
Area Metrics	33
Vehicle Metrics	34
Staffing Metrics	34
Key Findings	34

Section 4 - Space Needs Program	
4.1 Space Needs Program Summary	36
4.2 Staffing Projections	37
4.3 Vehicle and Equipment Projections	38
4.4 Building and Area Projections	39
4.5 Current & Future Goals	40
4.6 Current & Future Goals	41



TABLE OF CONTENTS

Section 5 - Master Planning

- 5.1 Introduction..... 43
 - Summary 43
 - Process..... 43
- 5.2 Existing Site Analysis 44
- 5.3 On-Site Design Charrette..... 45
 - Introduction..... 45
 - Public Works Concepts A & B..... 46
 - Public Works Concepts C & D 47
 - Public Works Concept E 48
 - Public Works Concepts E.1 & E.2 49
 - Public Works Concepts F & F.1 50
 - Public Works Concept G51

Appendix A - Cost Estimate - Master Plans

Appendix B - Cost Estimate - Recommendations From Assessment

Appendix C - Assessment Report

Section 1 - Executive Summary



1.1 Executive Summary

Introduction

This section presents a summary of the projected needs, planned growth, and facility recommendations for the Public Works Department, including the **Administration, Engineering, Stormwater, Water, Wastewater, Facilities/Parks/Cemetery, Streets**, and **Fleet** departments. This information shared will provide recommendations for immediate, short-term, and long-term facility goals. The Public Works Facilities Master Plan was generated by evaluating the existing property utilized, facility functional condition, staffing projections, vehicles and equipment projections, and the growth trends for the City of Washougal. The Master Plan will provide a concept design and project budget for each of the recommendations identified in the report. The City will be able to utilize this report as a vision and plan to identify and budget for future facility projects within Public Works.

1.2 Executive Summary - Space Needs Program

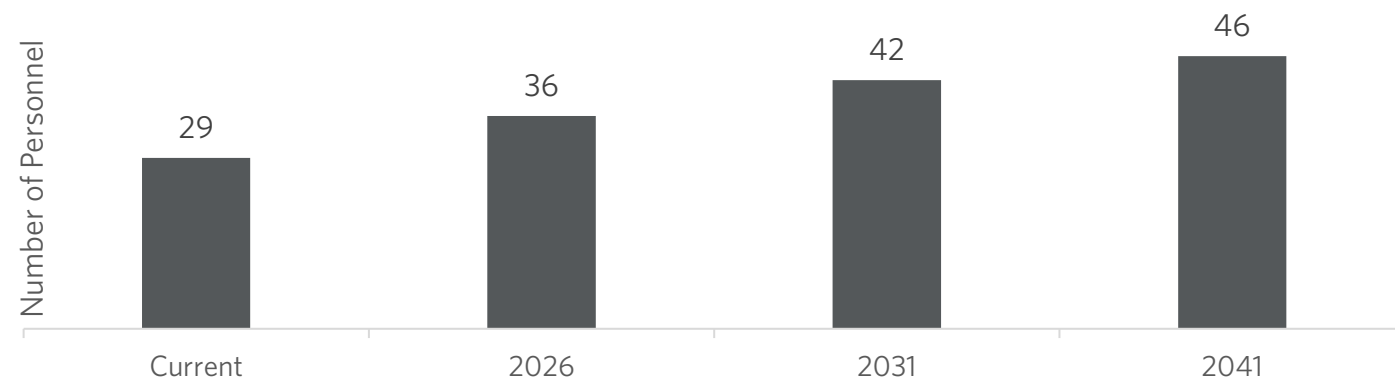
Staffing Growth

The City of Washougal is located a few miles northeast of Portland, Oregon across the Columbia River and approximately 150 miles south of Seattle. The City encompasses 6.33 square miles with the added Urban Growth Area (UGA) it total 8.58 square miles. Its location has caused the city's population to double since 2000 from 8,595 to over 16,680 in 2021. It has become a desirable and affordable community in the Clark County that will only continue to grow. The Public Works Department is responsible for growing the City's infrastructure to accommodate the population increase including roadways, storm lines, and sewer lines. Staffing is a priority to maintaining this new and old infrastructure as Washougal continues to grow.

The need for additional staff all in one place is paramount to the success and support of Washougal. This growth in staff will continue as Washougal continues to grow over the next 20 years.

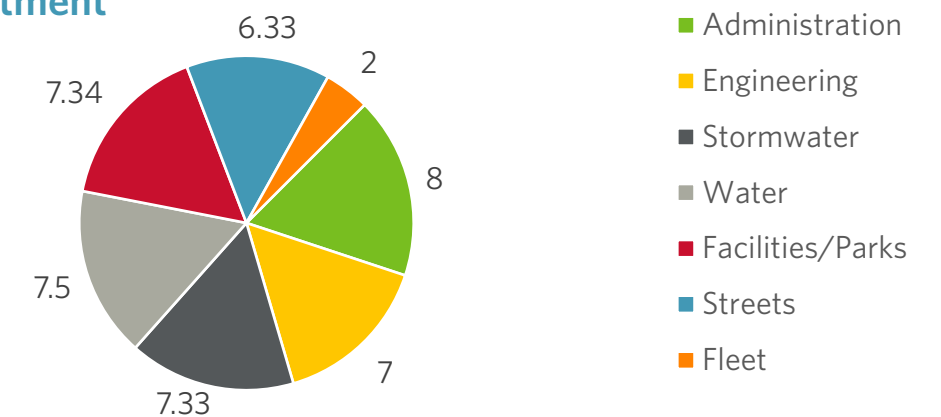
Below is a chart estimating the projected growth in **Staffing** for all of the Departments as well as a chart displaying how the staffing will be distributed among the Departments:

Total Staffing Projections



Public Works currently has a total of 29 funded positions. Given the needs of the Departments, the total staffing is projected to grow to **46 positions**, in the next 20 years.

2041 Staffing by Department



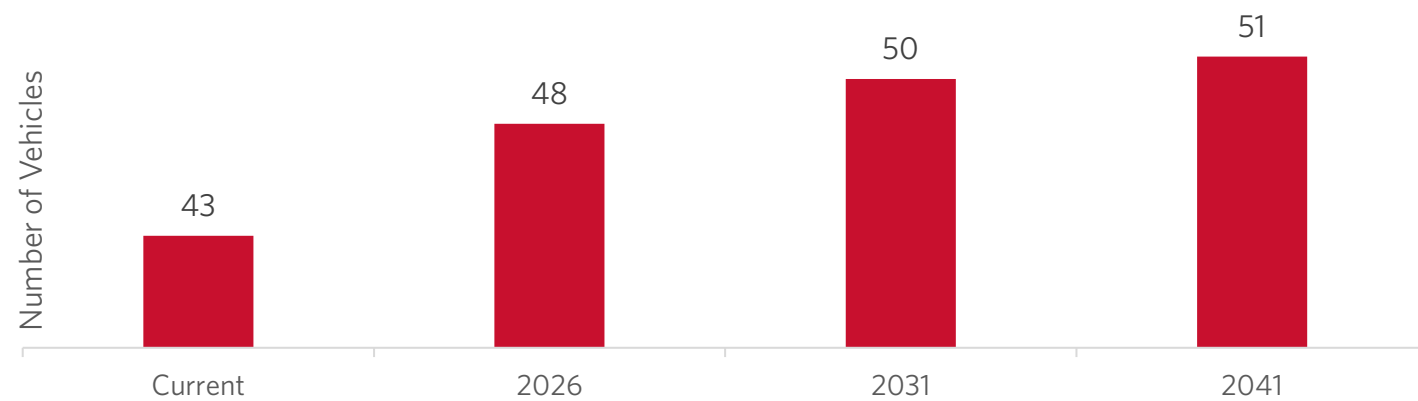
In the next 20 years, Public Works is projected to have **46 positions**.

1.2 Executive Summary - Space Needs Program

Vehicles and Equipment Growth

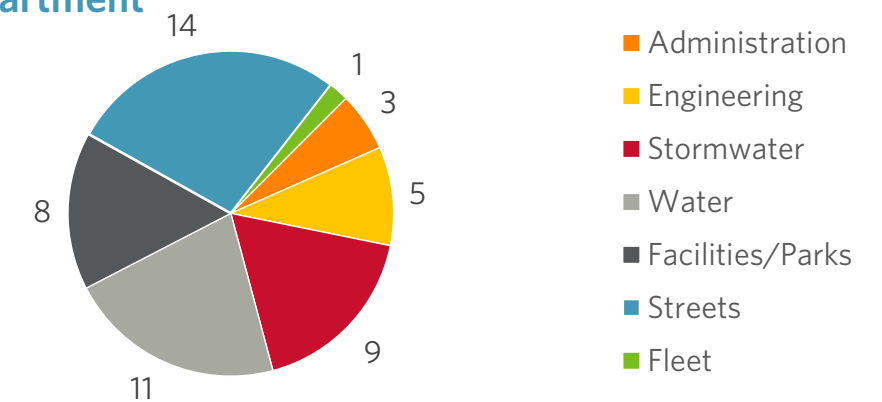
As staff increases so will the quantity of equipment and number of vehicles that each department requires to maintain Washougal's infrastructure. The City has invested significant funds to purchase the equipment operated by Public Works. The type of parking and storage space necessary for this equipment is an important piece of the Master Plan. Below is the chart estimating the projected growth in **Vehicles and Equipment** over the next 20 years as well as a chart displaying how the vehicles will be distributed among the departments:

Total Vehicle Projections



Currently, the Departments have 43 vehicles. Given the needs of the Departments, the total amount of vehicles is projected to grow to **51 vehicles**, in the next 20 years.

2041 Vehicles by Department



In the next 20 years, Public Works is projected to own **51 vehicles**.

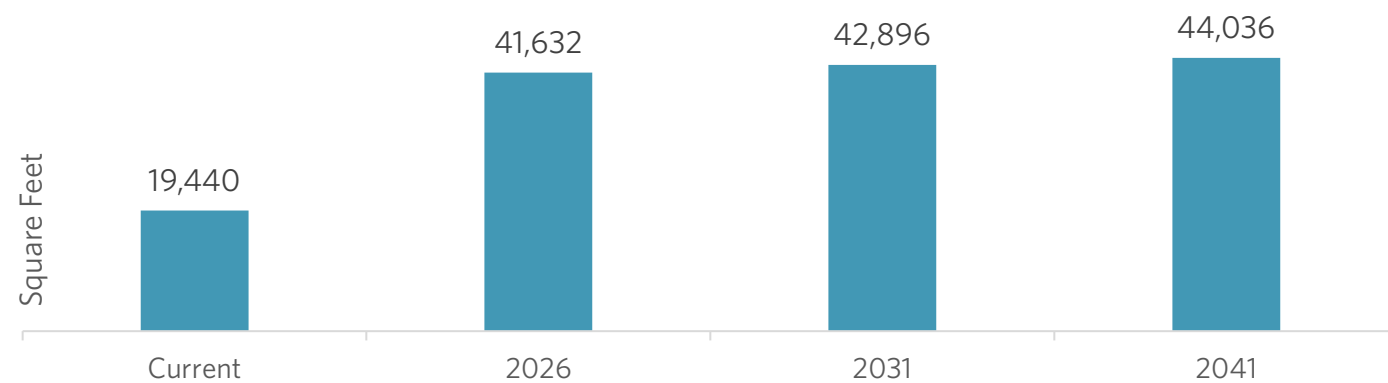
1.2 Executive Summary - Space Needs Program

Building & Site Area

Below are charts showing estimated projected growth in both **Building Area & Total Area**.

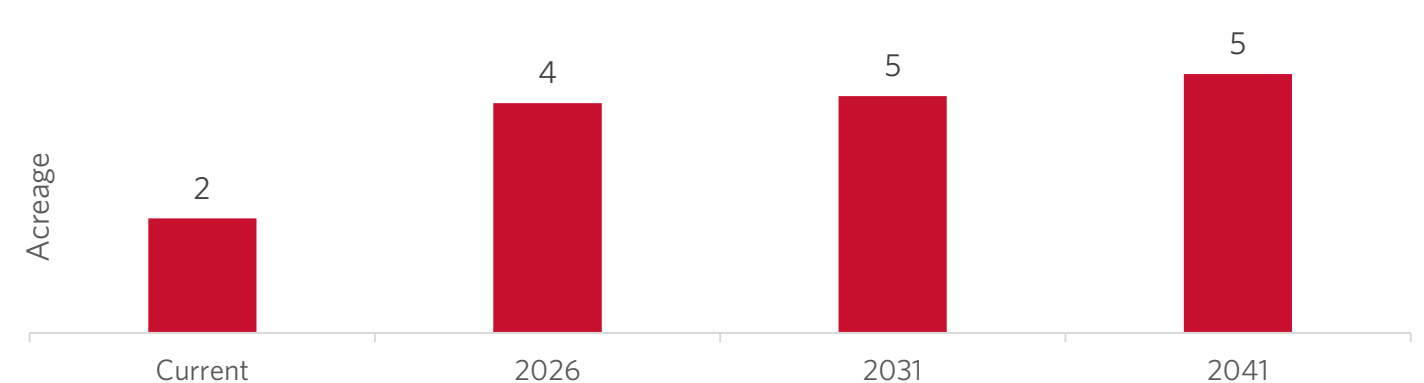
Please note that the graphs below as well as the entire space needs program, does not include the Wastewater Treatment Plant. The Space Needs Program only took into account the space utilized by Public Works at 2201 C Street and 2247 Main Street.

Total Building Area Projections



Currently, the Departments use 19,440 square feet of building area. Given the needs of the Departments, the total square footage for building area is projected to grow to **44,036 square feet**, in the next 20 years.

Total Area Projections



Public Works currently uses 2 acres.

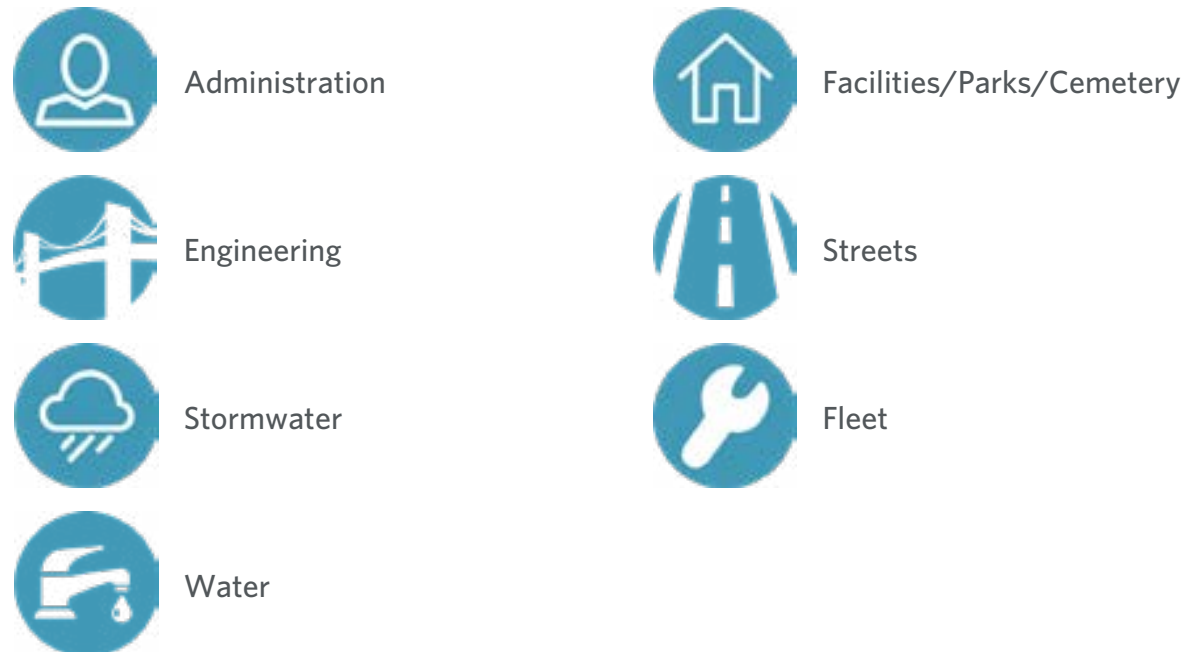
Section 2 - Project Overview



2.1 Introduction

Due to Washougal's geographical location between two major cities, it has experienced a rapid expansion of its populace. Therefore, the City of Washougal has identified a need for a Public Works Master Plan. As part of the Master Plan, the Public Works Department requested an assessment of the existing facilities and identification of the short and long-term goals for a 20-year plan for each Public Works Department. The Departments in the Master Plan include only:

Public Works Departments in Master Plan






































The goal of the Public Works Facilities Master Plan is to address the immediate (short-term) and the long-term facility needs for various Public Works departments and other department's functions. The Master Plan will serve as a "road map" for the future development and operation of the associated facilities. The vision of the Master Plan is for the next 20 years, with special emphasis on the next 5 to 10 years. To this end, the master plan shall:

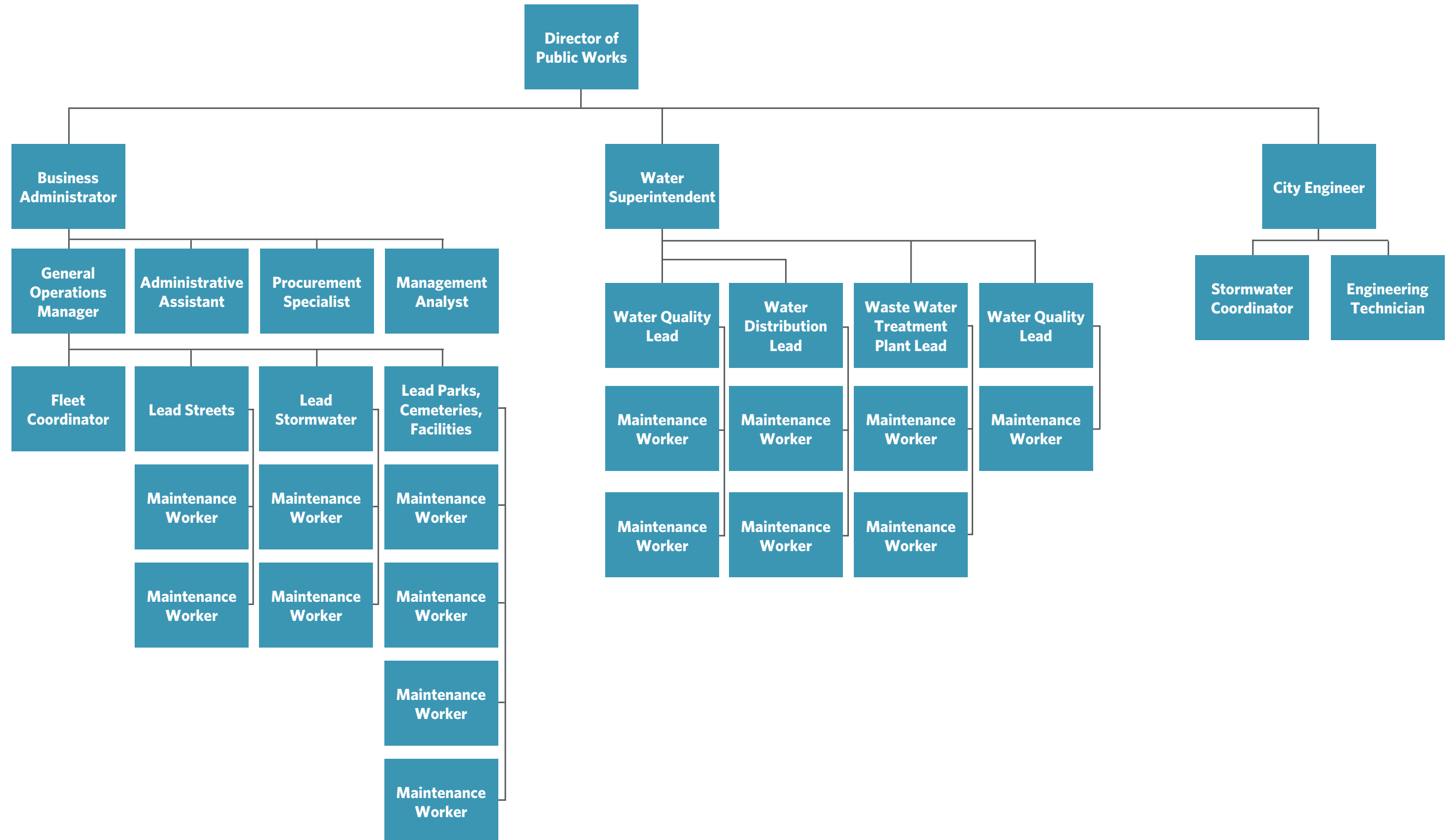
- Provide a comprehensive document that identifies the building, equipment, and employee space needs to aid the City in budgeting, scheduling, and administering all major building renovation and new construction capital projects.
- Evaluate both the departmental and departmental functions, related service requirements, and administration of the same to develop a "best-practices" approach to facility infrastructure that supports those activities.
- Assure that all new near-term and mid-term capital building and major renovation projects are planned in conjunction with, and in support of, a long-term (20-year) strategic vision.
- Develop a funding-level cost-basis estimate for each component of the plan, including engineering and architectural design, real property acquisition, and construction costs associated with each phase of plan implementation.
- Consider a life-cycle approach to sustainability measures including quality, maintainability, and efficiency with associated facility baseline operational costs.

2.2 Existing Site & Facilities

The Master Plan will consider numerous facilities and lands that the City currently owns and operates. The buildings vary in age from 50 years to new. The facilities listed below identify the buildings/sites that currently support the City's departments or provide critical storage functions.

Existing City Owned	Address	Departments	Constructed	Department Usage
Building A	2201 C Street Washougal, WA 98671	  	1970	3.6 Acres
Building B	2201 C Street Washougal, WA 98671	      	1975	0.8 Acres
Building C	2201 C Street Washougal, WA 98671	 	1994	5.0 Acres
Building D	2201 C Street Washougal, WA 98671	      	1994 - 1998	3.0 Acres
Building E	2201 C Street Washougal, WA 98671	      	1994 - 1998	4.3 Acres
Building F	2201 C Street Washougal, WA 98671	      	1999, 2000	0.8 Acres
Building G	2247 Main Street Washougal, WA 98671		2006	1.4 Acres
House Building	2247 Main Street Washougal, WA 98671		—	0.1 Acres

2.3



2.4 Methodology

To address the short-term and long-term needs for the Public Works Department the City of Washougal has engaged HDR Engineering, Inc. to conduct the Public Works Master Planning effort. This effort includes reviewing the conditions at each of the sites and facilities currently occupied by the Public Works Department to develop a comprehensive space needs program that evaluates the existing spaces suitability for the future needs, of each department, over the next 20 years.

2.5 The Planning Team

To kick off the project, the HDR Planning Team developed questionnaires specific to each department. Key City staff reviewed and completed the questionnaires. The questionnaire was filled out by staff and updated on what the City could financially support. The HDR Planning Team met informally with key City staff from each department to review the questionnaires and develop a greater understanding of their operations and how each department interacts with each other. These meetings also included tours of each site and building. The meetings and interviews identified immediate and long-term operational needs, environmental needs, and working relationships for each Public Works site and department interviewed.

Section 3 - Basis for Design



3.1 Existing Site Plans

2201 C Street - 2 Acres used by Public Works Department



NA

3.2 Basis for Design

The Basis for Design section identifies the function, staffing, support vehicles and equipment maintained, key planning issues, deficiencies, and affinities for the Public Works Department.

The information gathered and discussed in this section will provide the basis for how each department may be split and laid out between sites or consolidated based on program needs.

Building Area, **Site Area**, **Vehicle**, and **Staffing** data compares 2021 conditions to 2026, 2031, and 2041 projections.



Public Works Administration

Current Site

The Public Works Administration is currently located in a converted house at the southern edge at 1615 C Street and 1701 C Street.

Function

The Public Works Administration is responsible for the management and administrative support of the entire Public Works Department.

Key Challenges

- The poor condition of the current facilities.
- Not enough space for the projected amount of staff.
- Located far away from all of the Public Works Operations and other Departments on site.
- Not a secure facility.

Short-Term and Long-Term Goals

- Short-Term: Improve the condition of the current facilities and more office space for additional staff.
- Long-Term: Better communication with Operations, collocation of all Departments onto one site and in one building.

Existing Conditions



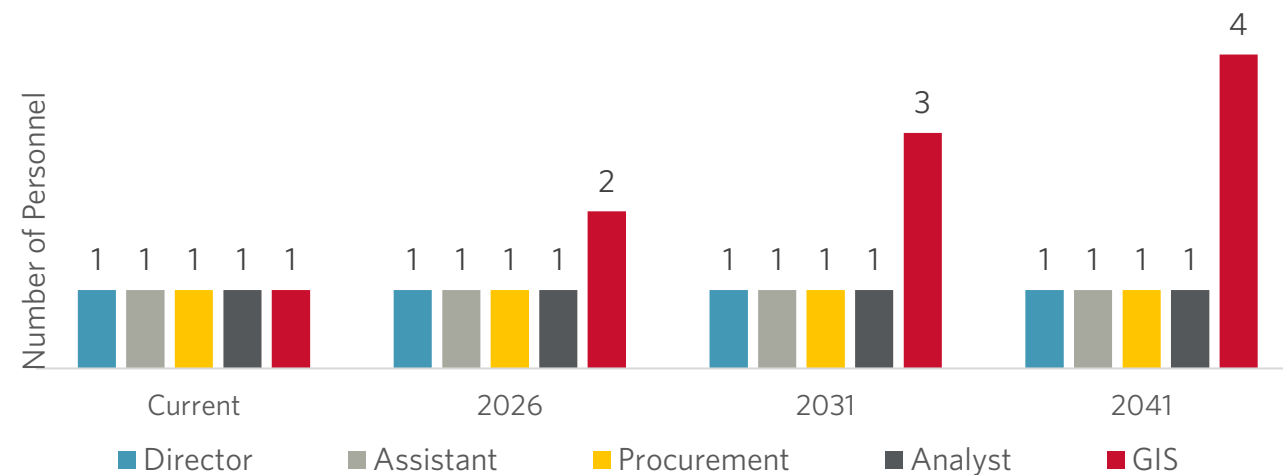


Public Works Administration

Staffing Metrics

- Public Works Administration currently accounts for 17% of the entire Public Works Department staff.
- Total staffing for Public Works Administration is estimated to grow from 5 employees to a total of 8 employees in the next 20 years.

Staffing Projections



Key Findings

- Administration would benefit by being collocated with Public Works Operations.
- Public Works Administration would benefit from being in the same building with other departments.





Engineering Current Site

The Engineering Department is currently located at the Fire Station with the City Engineer, Stormwater Tech, and Engineering Tech.

Function

Engineering manages the design and oversees construction on capital projects as well as quality control to ensure each project meets or exceeds city specifications. Engineering also works closely with the Planning Department on private development projects to ensure that engineers and contractors plan and build infrastructure that meets city standards.

Key Challenges

- Improve communication with Publix Works Staff, if Engineer is at Operations Center.
- Not enough private office space.
- Not a secure facility.

Short-Term and Long-Term Goals

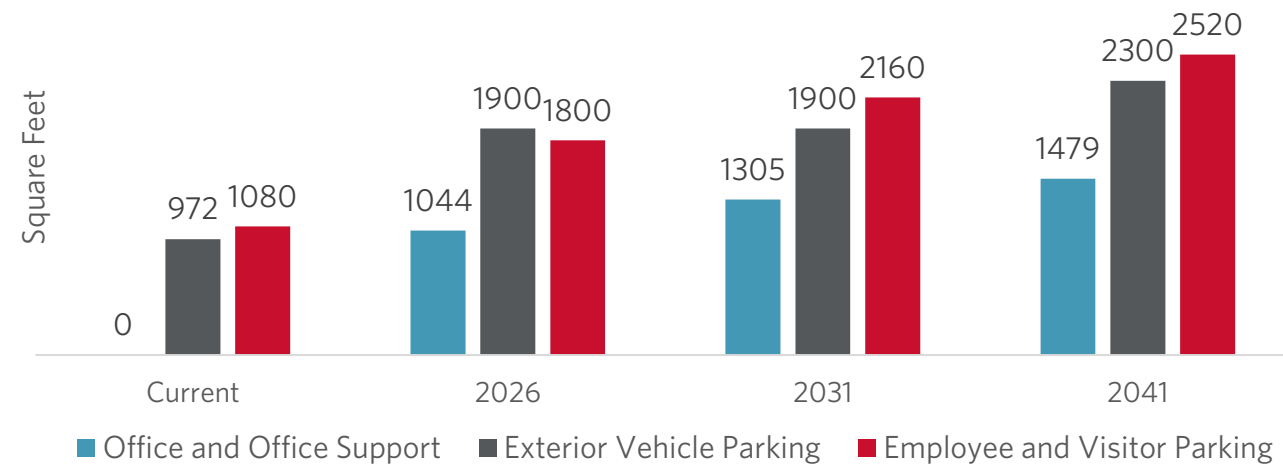
- Short-Term: Located near Procurement Specialist and Operations Staff.
- Long-Term: Collocation with other Public Works departments to improve communication with Operations.



Engineering Area Metrics

- Total area is estimated to increase in the next 20 years to approximately 6,300 square feet.

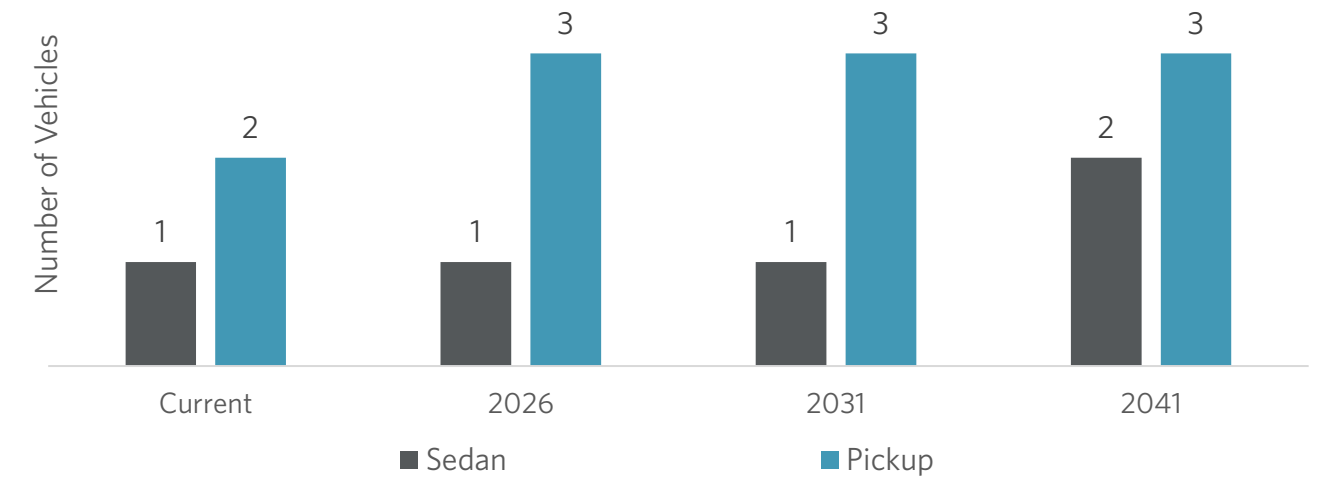
Total Area Projections



Vehicle Metrics

- Total vehicle quantity is estimated to increase by 2 vehicles in 2041 for a total of 5 vehicles.

Vehicles Projections

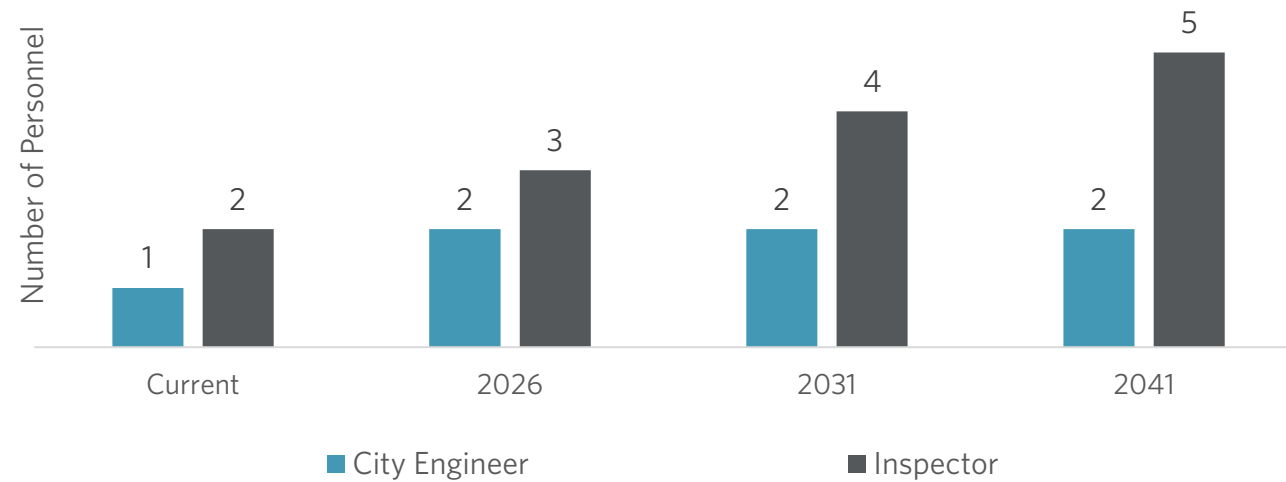




Engineering Staffing Metrics

- Engineering currently accounts for 10% of the entire Public Works Department staff.
- Total staffing for the Engineering Department is estimated to increase in the next 20 years to a total of 7 employees.

Staffing Projections



Key Findings

- Located apart from the rest of the Public Works Department
- Inadequate office space that lacks a proper waiting area
- Works closely with both Public Works and City staff





Stormwater Current Site

The Stormwater Department is currently located in two buildings. The group occupies Building G and has offices in the Administration Building on Main Street.

Function

The Stormwater Department's main function is to manage stormwater assets, mitigate stormwater pollution, and comply with environmental regulations.

Key Challenges

- Located in Building C at Operation Center.
- Not adequate restrooms, locker room space, or lunchroom space.
- Facility is rundown and needs numerous repairs.
- Not a secure facility.

Short-Term & Long-Term Goals

- Short-Term: Improve current facility and find more office space for staff.
- Long-Term: Collocations with other Public Works departments to improve communications with operations departments.

Existing Conditions

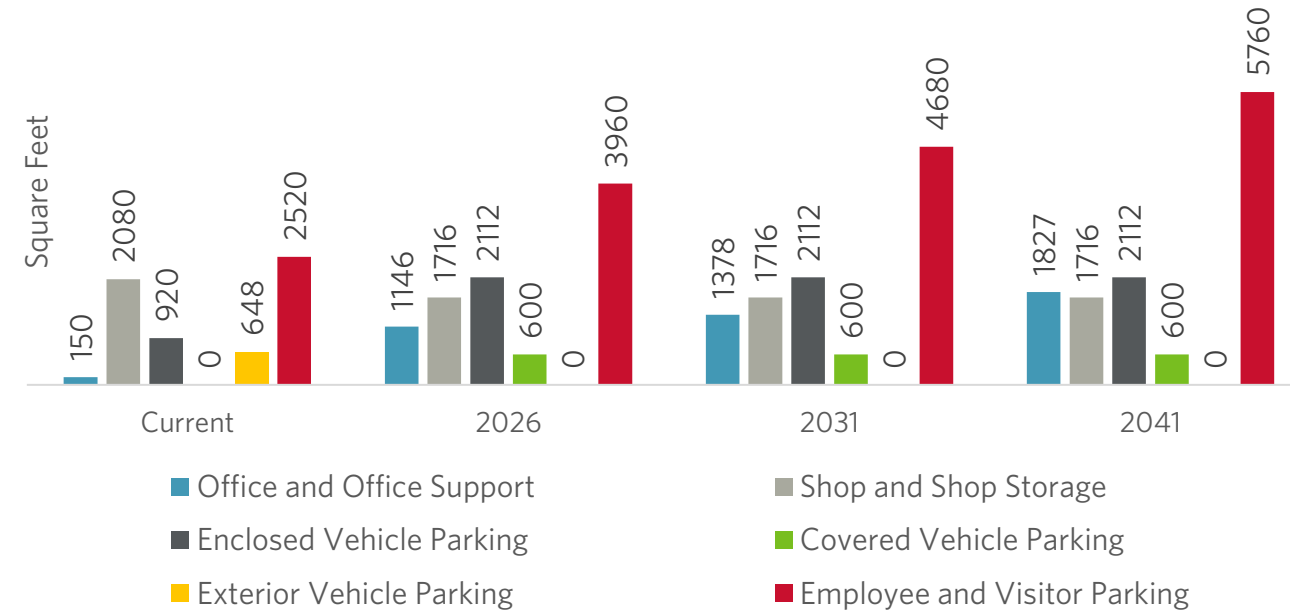




Stormwater Area Metrics

- Total area is estimated to increase in the next 20 years to approximately 12,000 square feet.

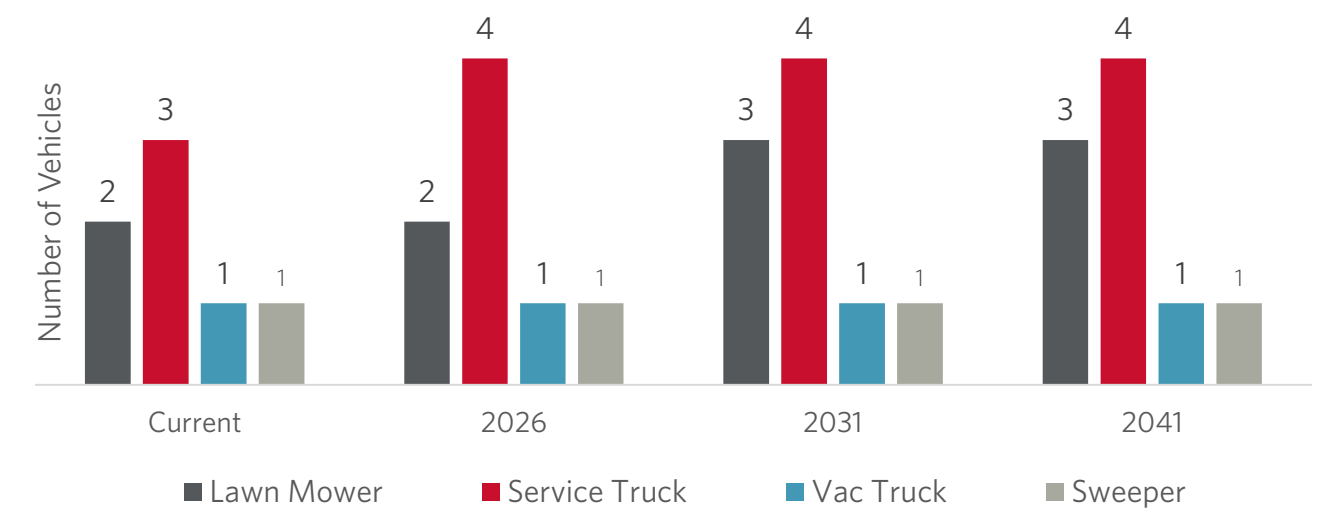
Total Area Projections



Vehicle Metrics

- Total vehicle quantity is estimated to increase from 7 to 9 in the next 20 years..

Vehicle Projections

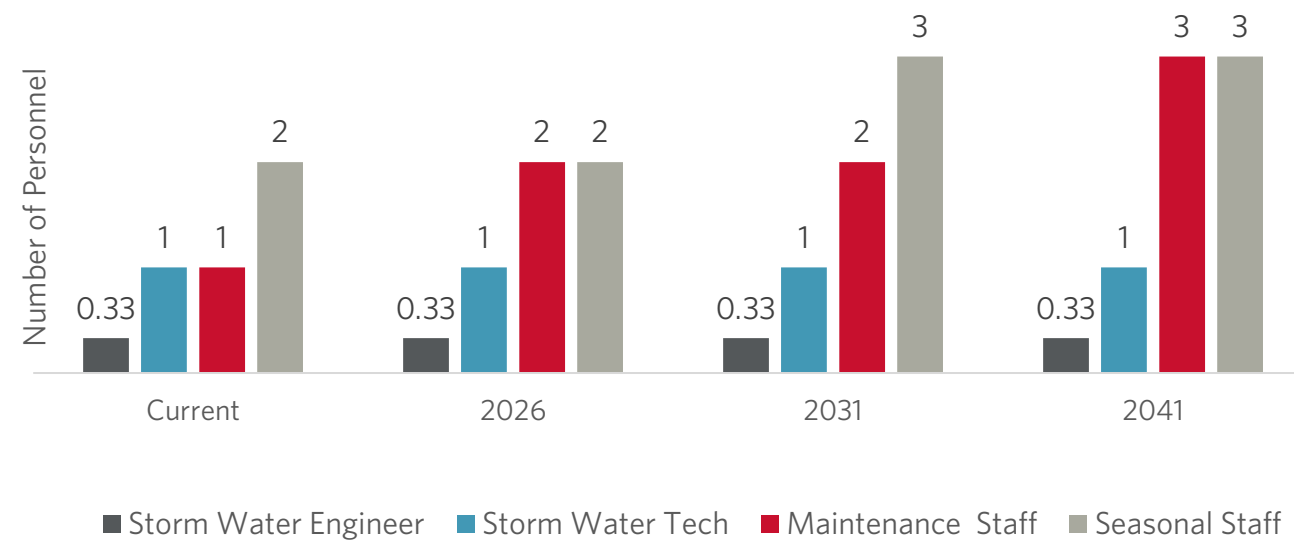




Stormwater Staffing Metrics

- The Stormwater Department currently accounts for 15% of the entire Public Works Department staff.
- Total staffing for the Stormwater Department is estimated to increase by 3 staff in the next 20 years to a total of 7 employees.

Staffing Projections



Key Findings

- Consistent staff growth until 2041.
- Need for new private offices and office support areas.
- The Stormwater Department would benefit from being collocated with the Engineering Department and Public Works Administration.
- Public Works staff utilizes staff from all divisions making collocating important.
- Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates.
- Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.
- Poor storage for chemical materials.





Water Current Site

The Water Department is currently located in Building G on the main campus with an office in the old house located on Main Street.

Function

The Water Department is responsible for tracking and managing water demand in the City of Washougal.

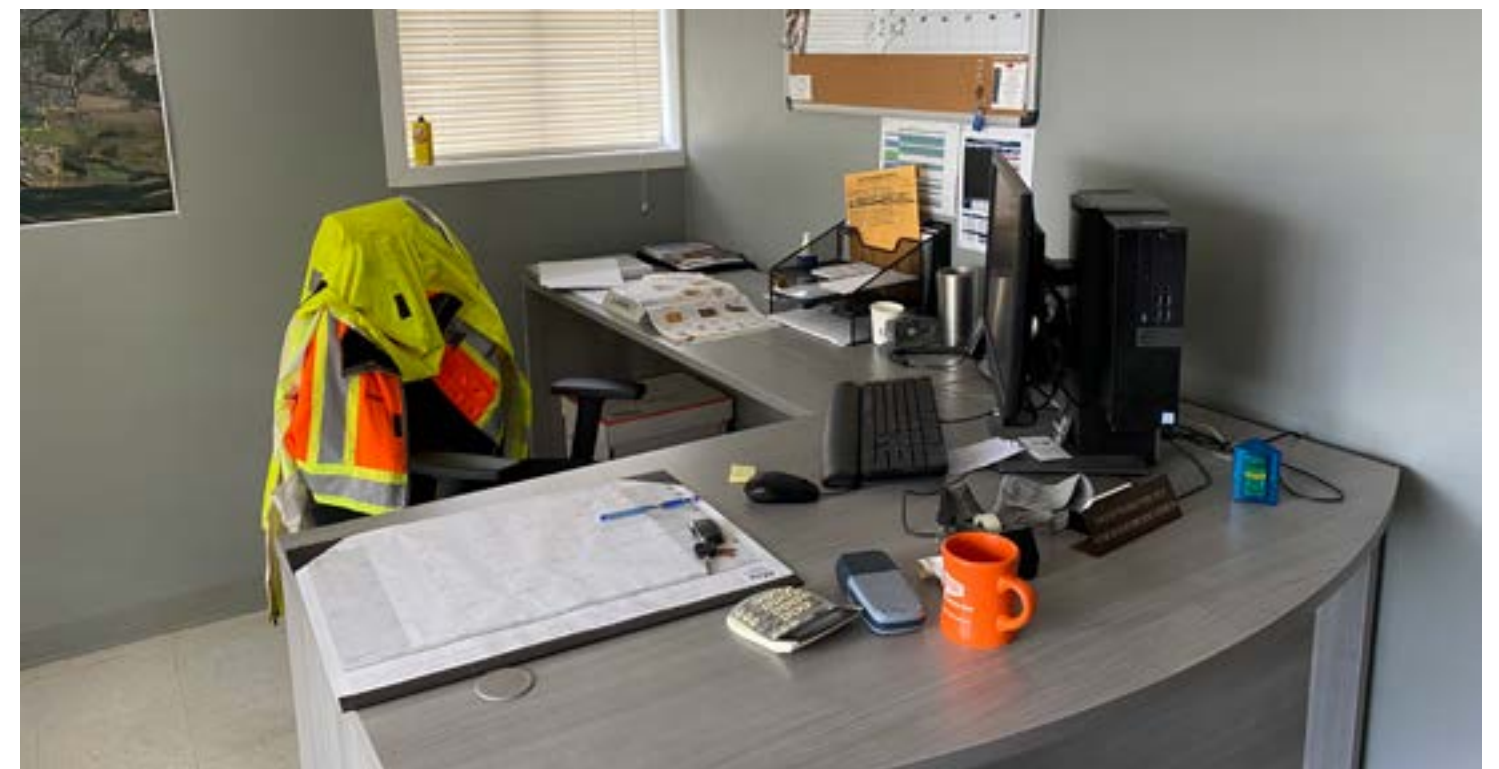
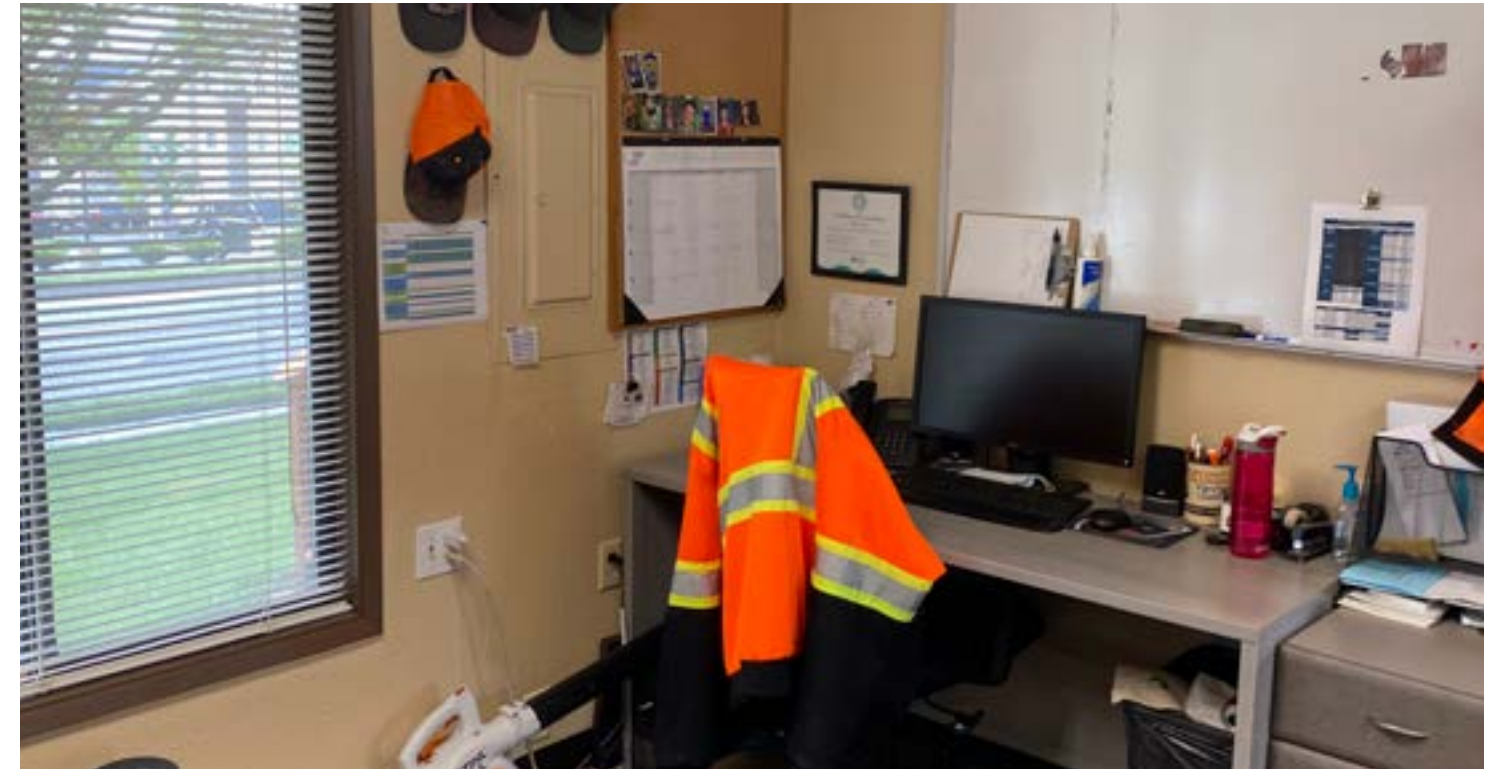
Key Challenges

- Located apart from the rest of the Public Works Department
- Out-of-date operations facilities
- Inadequate storage and shop space
- Lack of space for sampling and testing
- Insufficient office space
- Needs emergency power and security

Short-Term and Long-Term Goals

- Short-Term: Improve current facility and find more office space for staff
- Long-Term: Collocations with other Public Works departments to improve communications with operations departments and to have a laboratory facility with proper sample testing

Existing Conditions

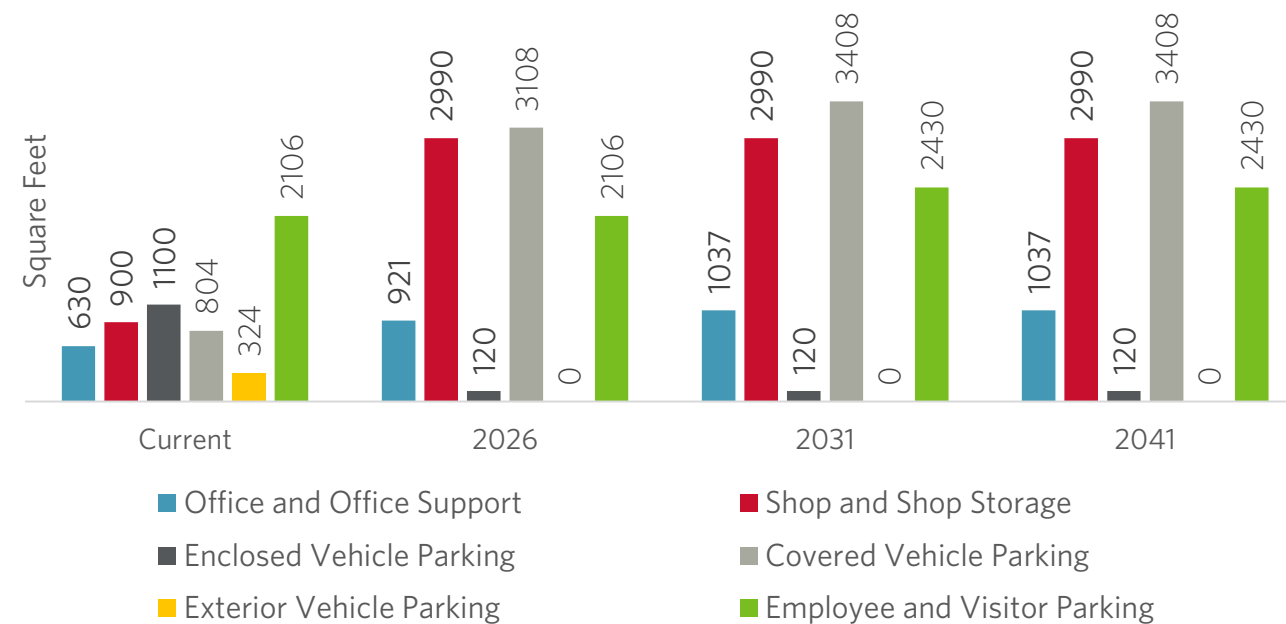




Water Area Metrics

- Total area is estimated to increase by in the next 20 years to approximately 12,000 square feet.

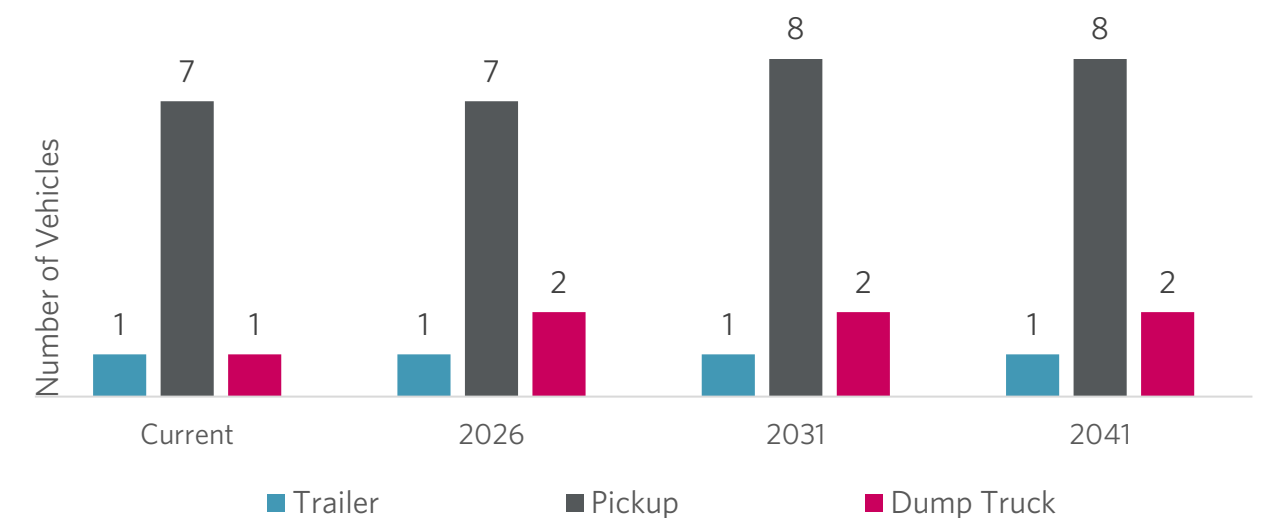
Total Area Projections



Vehicle Metrics

- Total vehicle quantity estimated to increase in the next 20 years to a total of 11 vehicles for the Department.

Vehicles Projections



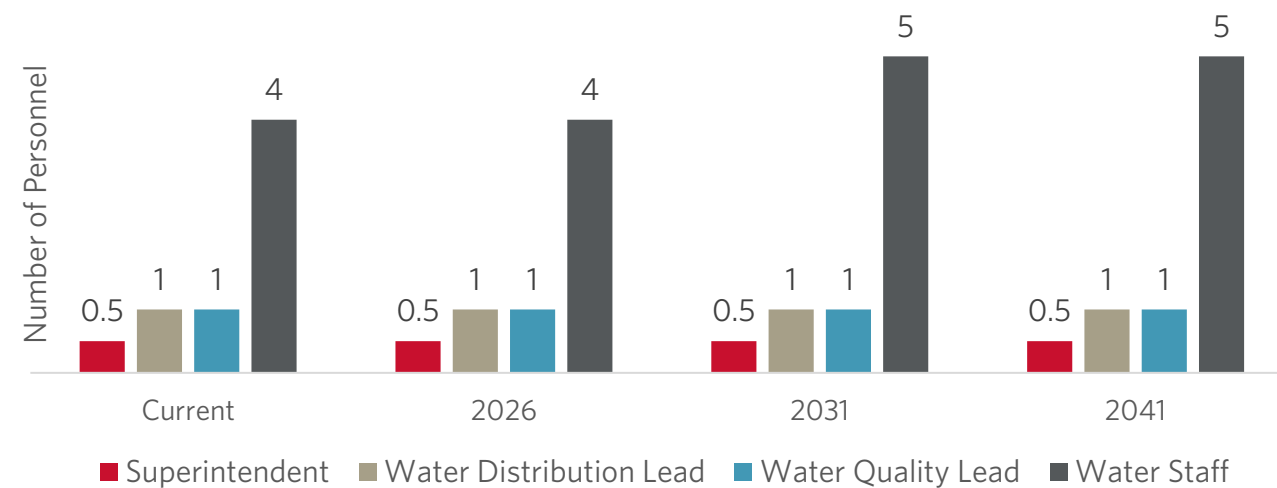


Water

Staffing Metrics

- The Water Department currently accounts for 22% of the entire Public Works Department staff.
- Total staffing for the Water Department is estimated to increase from 6 to 7 in the next 20 years.

Staffing Projections



Key Findings

- Department needs more storage, lab, and staging.
- The Water Department would benefit from being in the same building with other departments.
- Public Works staff utilizes staff from all divisions making collocating important.
- Poor lighting, lack of security, leading roofs, gravel bay doors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates.
- Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.





Facilities/Parks/Cemetery

Current Site

The Facilities/Parks/Cemetery Departments are currently located in two buildings. The group occupies Building A and Facilities has a small shop in Building F.

Function

The Facilities/Parks/Cemetery Departments are responsible for all the maintenance at City Facilities, Parks, and Cemetery.

Key Challenges

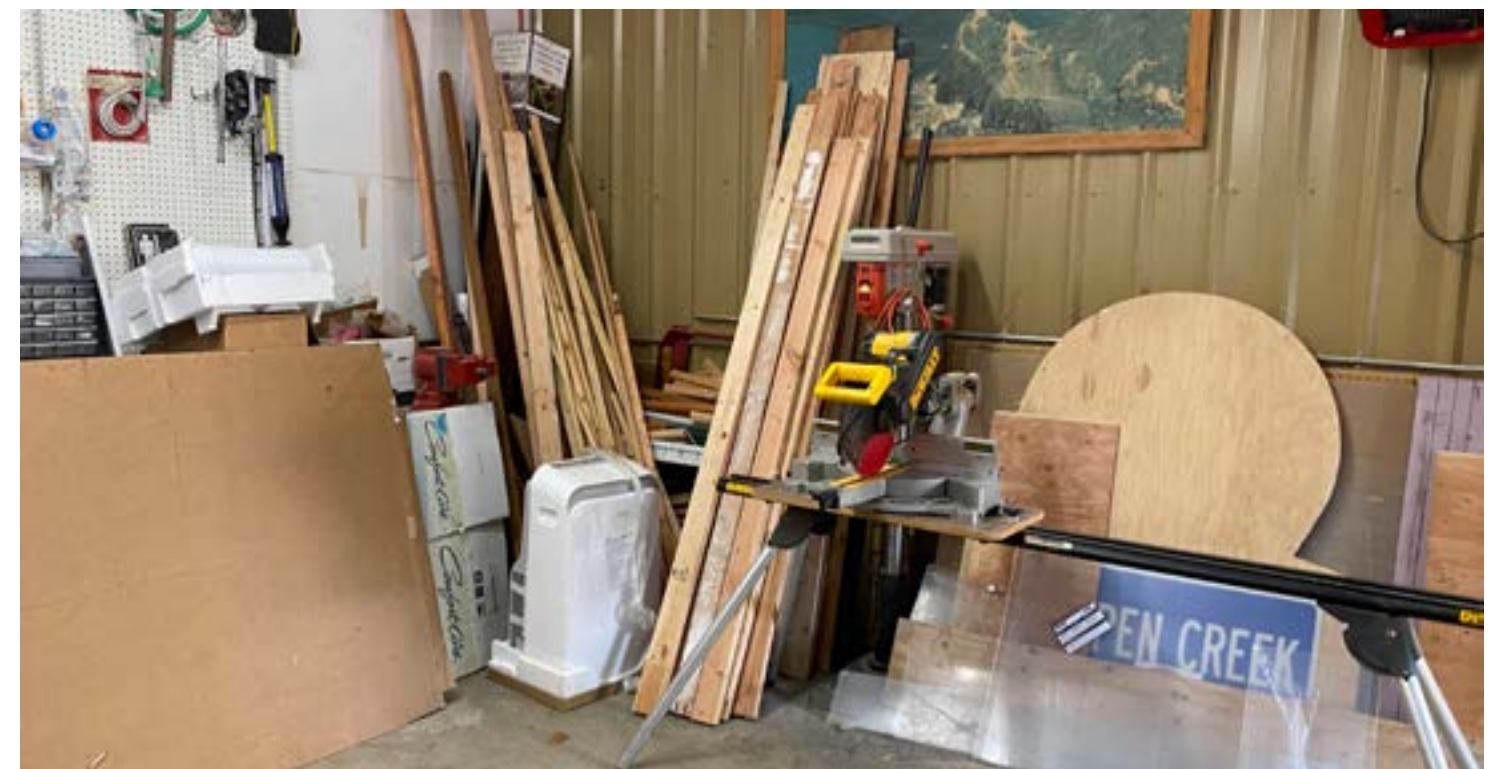
- Inadequate storage and shop space
- Insufficient office space
- Not adequate restrooms, locker room space, or lunchroom space
- Facility is rundown and needs numerous repairs
- Not a secure facility

Short-Term and Long-Term Goals

Short-Term: Improve current facility and find more office space for staff. Also, update Shop space for Parks and Facilities.

Long-Term: Collocations with other Public Works departments to improve communications with operations departments.

Existing Conditions



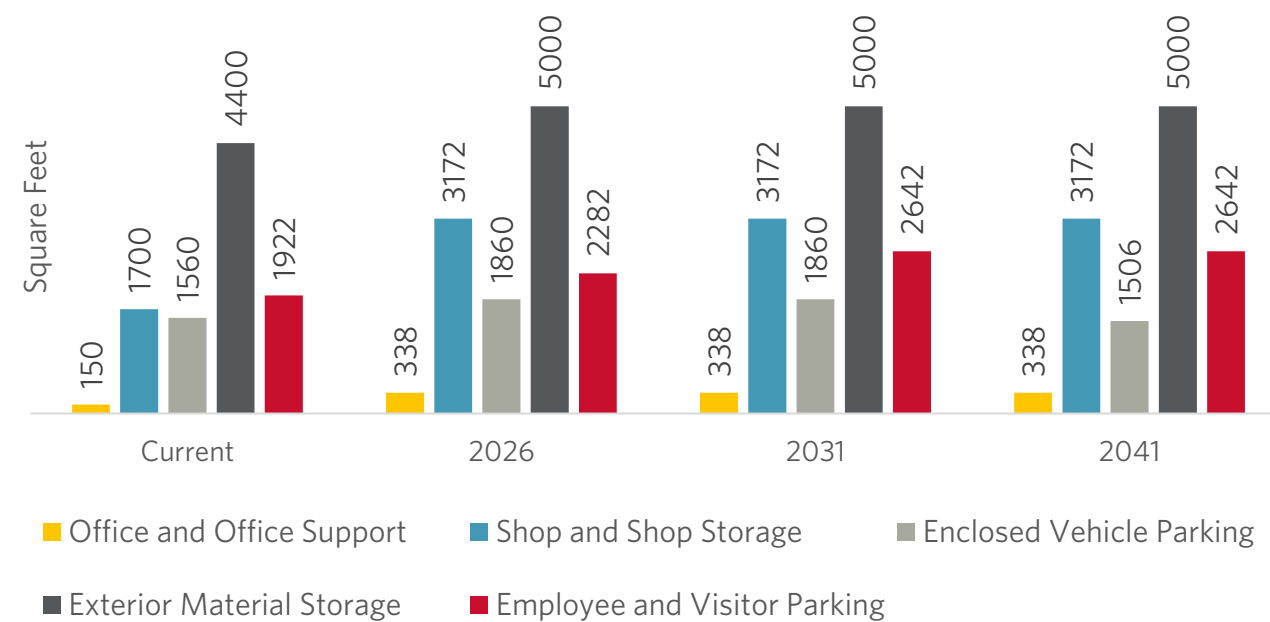


Facilities/Parks/Cemetery

Area Metrics

- Total area is estimated to increase in the next 20 years to approximately 12,500 square feet.

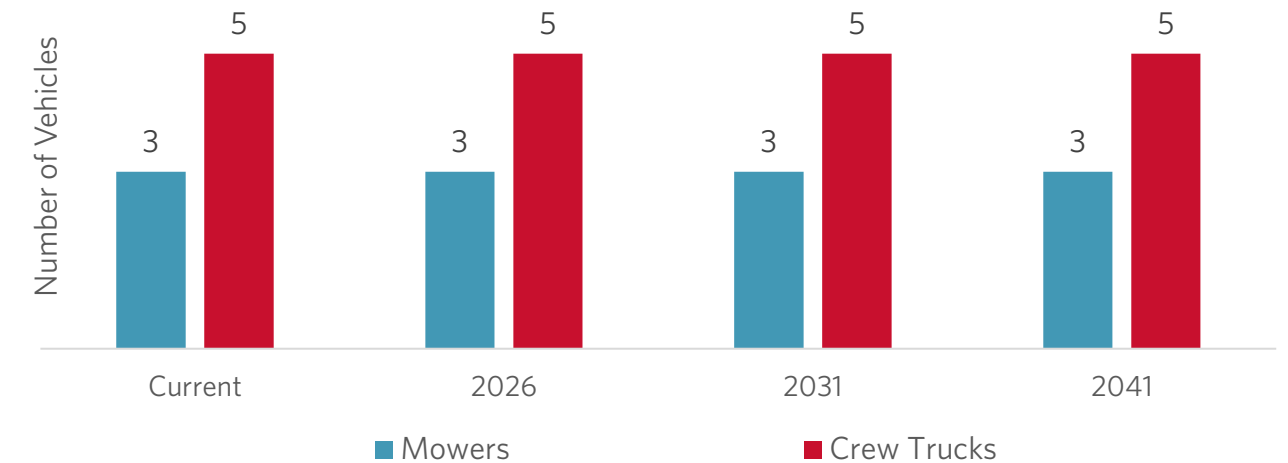
Total Area Projections



Vehicle Metrics

- Total vehicle quantity estimated to remain the same in 20 years..

Vehicle Projections

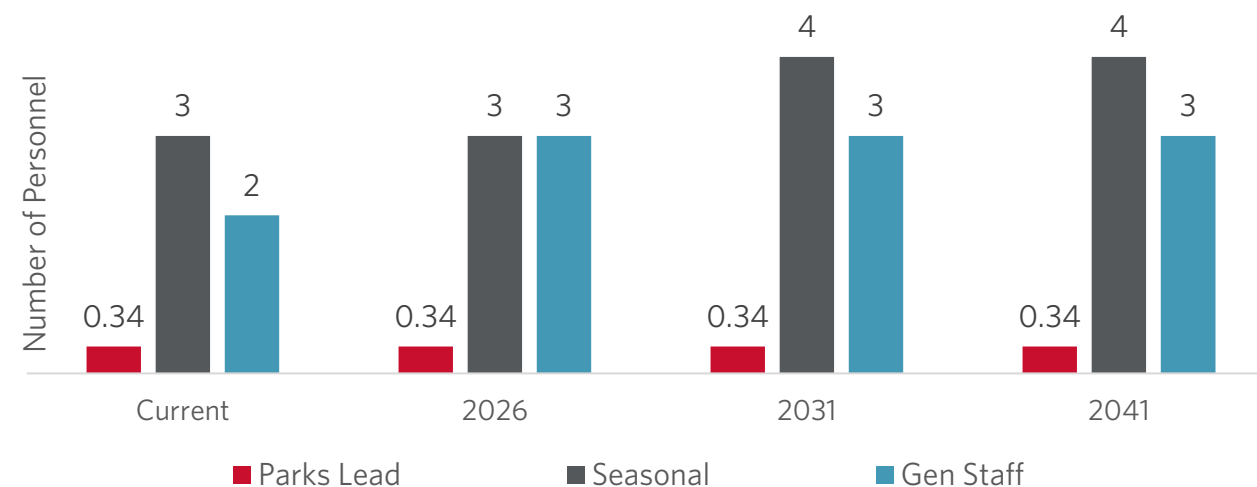




Facilities/Parks/Cemetery Staffing Metrics

- There are currently 5 employees in the Facilities/Parks/Cemetery Department. The Facilities/Parks/Cemetery Department accounts for 17% of the staff that will be moved with Public Works.
- Total staffing for the Facilities/Parks/Cemetery Department is estimated to increase from 5 to 7 staff in 20 years. Seasonal employees can be anywhere from 5-10.

Staffing Projections



Key Findings

- The Facilities/Parks/Cemetery Department would benefit from being colocated with Public Works Administration.
- Public Works staff utilizes staff from other Public Works divisions making collocating important.
- Shop space is critical especially for Facilities.
- Poor lighting, lack of security, leading roofs, gravel bay doors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates.
- Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.
- Poor storage for chemical materials.





Streets Current Site

The Streets Department currently occupies Building A in the northwest corner of the campus.

Function

The Streets Department is responsible for maintaining and cleaning the streets system throughout the City year-round.

Key Challenges

- Inefficient storage and lack of shop space
- Inefficient office space
- Not adequate restrooms, locker room space, or lunchroom space
- Facility is rundown and needs numerous repairs
- Not a secure facility

Short-Term & Long-Term Goals

Short-Term: Improve current facility and find more office space for staff. Also, update Shop space.

Long-Term: Collocations with other Public Works departments to improve communications with operations departments.

Long-Term: A new facility that fits all of the department's staff and vehicles and accommodates the future growth to support the City's infrastructure.

Existing Conditions

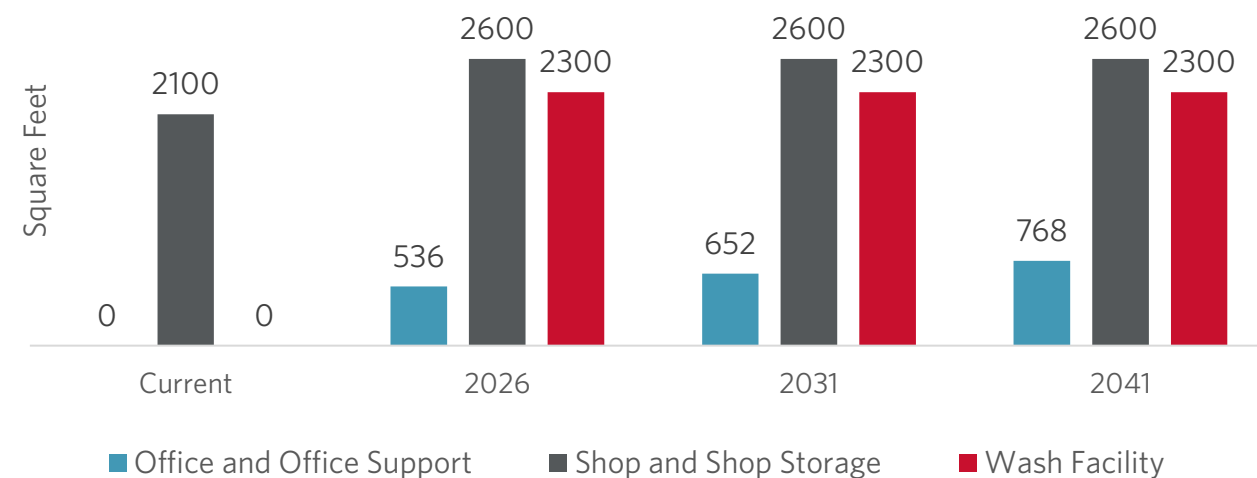




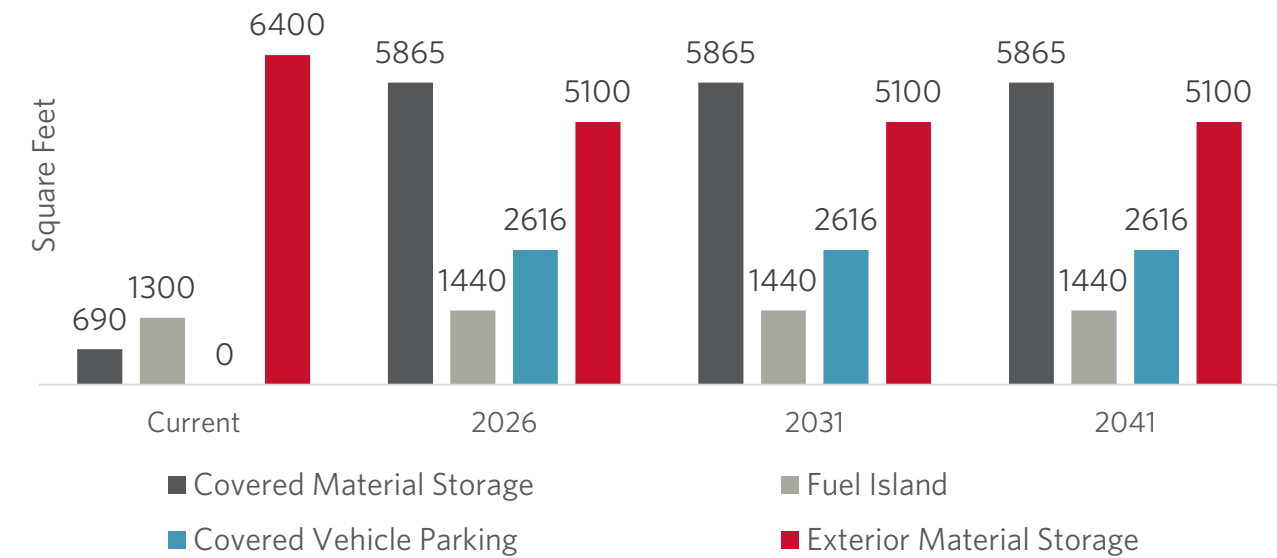
Streets Area Metrics

- Total building area is estimated to increase in the next 20 years to approximately 5,500 square feet.
- Total site area is estimated to increase in the next 20 years to approximately 15,000 square feet.
- Total parking area is estimated to increase in the next 20 years to approximately 9,000 square feet.

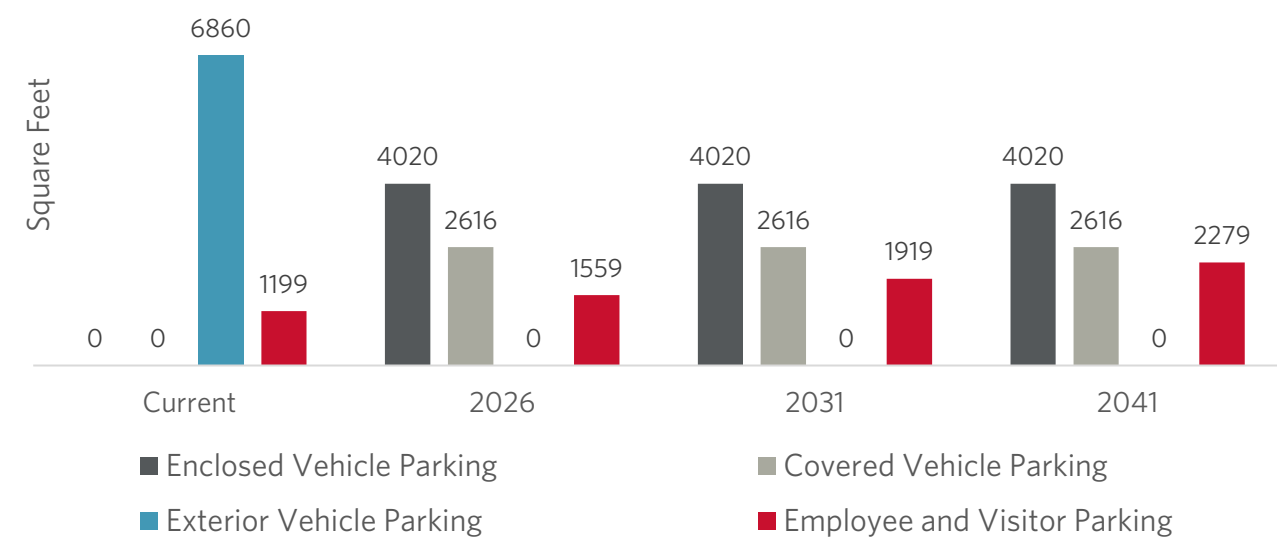
Total Building Area Projections



Total Site Area Projections



Total Parking Area Projections



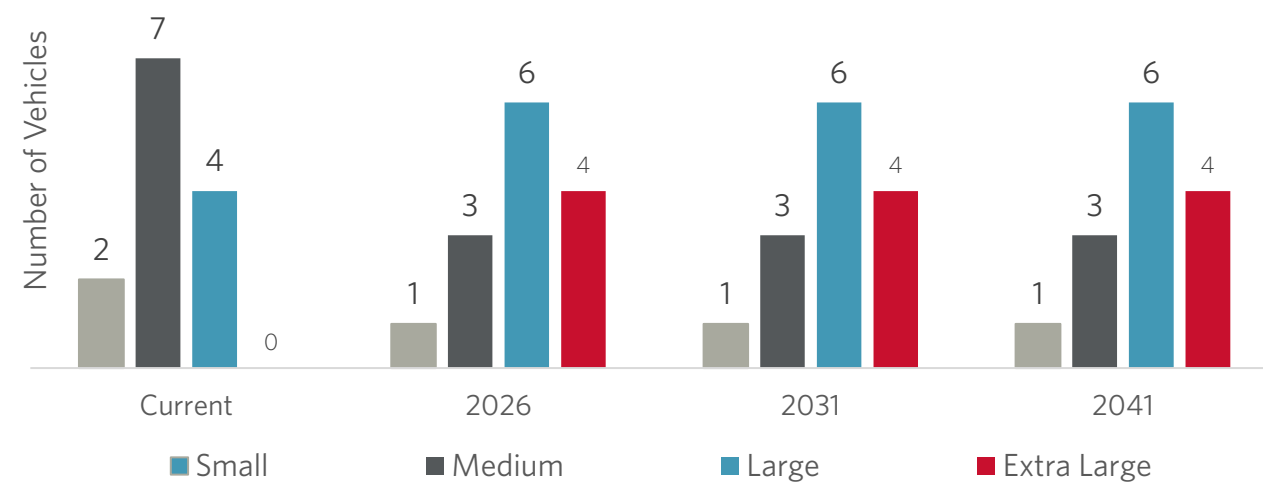


Streets

Vehicle Metrics

- Total vehicle quantity is estimated to go from 13 to 14 in the next 20 years.

Vehicle Projections



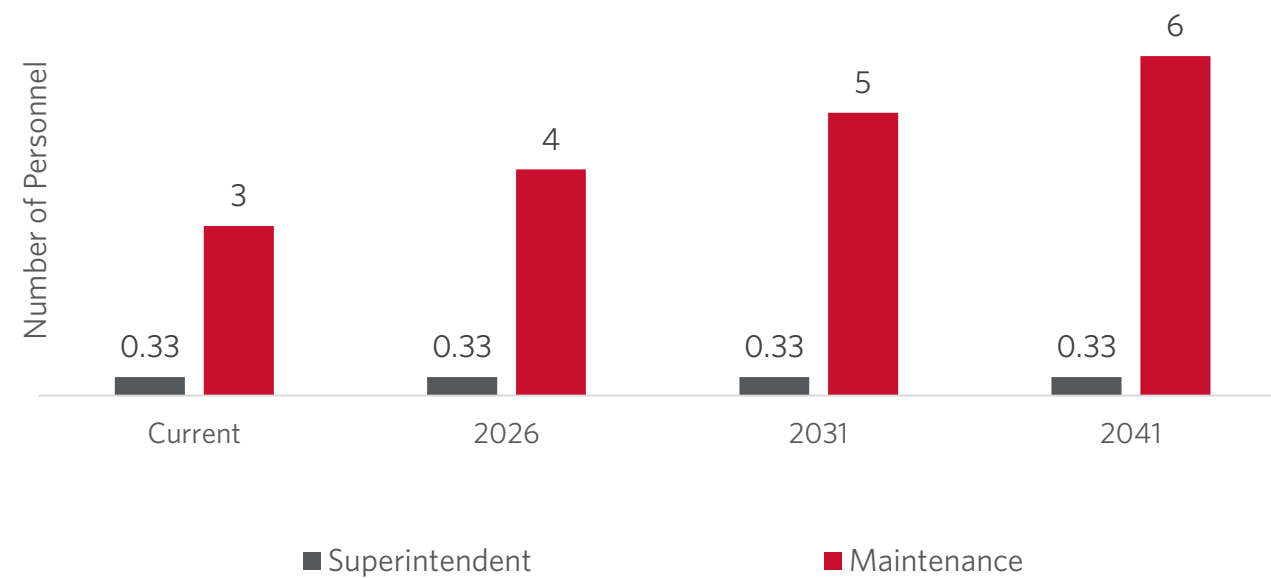


Streets

Staffing Metrics

- The Streets Department currently accounts for 11% of the entire Public Works Department.
- Total staffing for the Streets Department estimated to go from 3 to 6 in the next 20 years. Seasonal employees can be anywhere from 5-10.

Staffing Projections



Key Findings

- Consistent staff growth until 2041.
- Consolidated site for all Streets Department staff, equipment, vehicles, and materials.
- Additional on-site spaces needed including private offices, shared offices, file storage, uniform storage, conference room, mud room, a brine making system room, an additional fuel lane, fuel island, and another above ground fuel tank.
- The Streets Department would benefit from being colocated with Public Works Administration.
- Public Works staff utilizes staff from other Public Works divisions making collocating important.
- Shop space is critical especially for sign shop.
- Poor lighting, lack of security, leading roofs, gravel bay doors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates.
- Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.
- Poor storage for chemical materials.





Fleet Current Site

The Fleet Department currently occupies Building A in the northwest corner of the campus.

Function

The Fleet Maintenance Department is responsible for repairing and maintaining city owned vehicles. They also recycle waste oil and antifreeze from the community and manage fleet parts and supplies and sales supplies. Fleet also stores all the snow tires, which takes up considerable space.

Key Challenges

- Lack of office and shop space.
- Not enough parking on site.
- Not a secure facility.
- Not enough storage space.

Short-Term and Long-Term Goals

- Short-Term: Additional parking.
- Long-Term: A new facility that fits all of the department's staff and vehicles and accommodates the future growth to support the City's infrastructure.

Existing Conditions



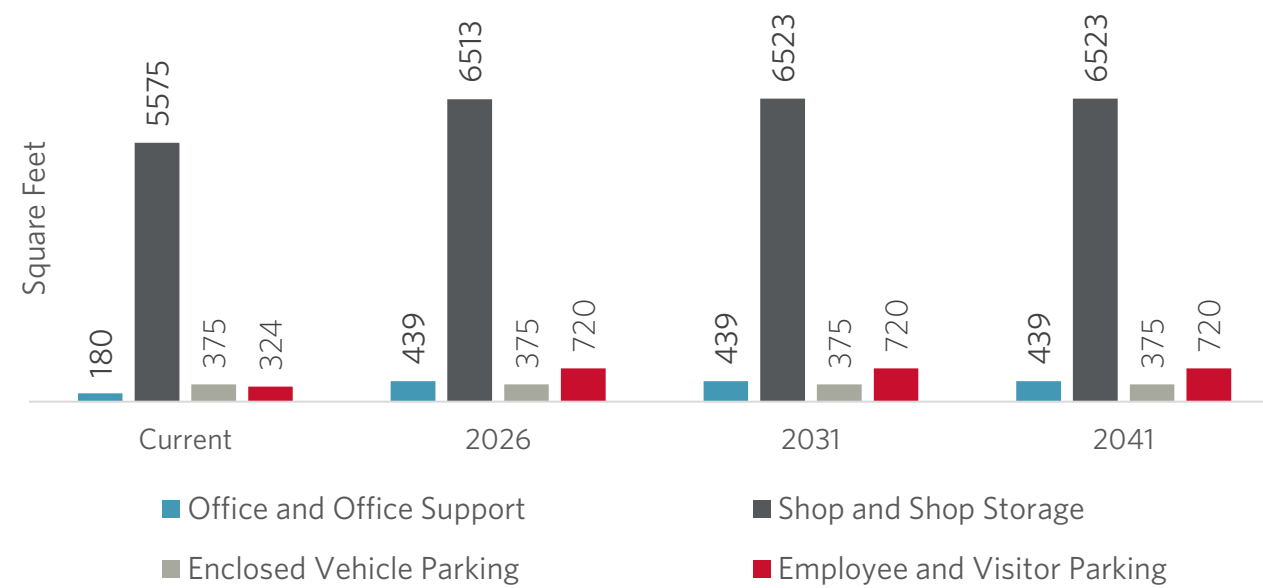


Fleet

Area Metrics

- Total area is estimated to increase in the next 20 years to approximately 8,000 square feet.

Total Area Projections

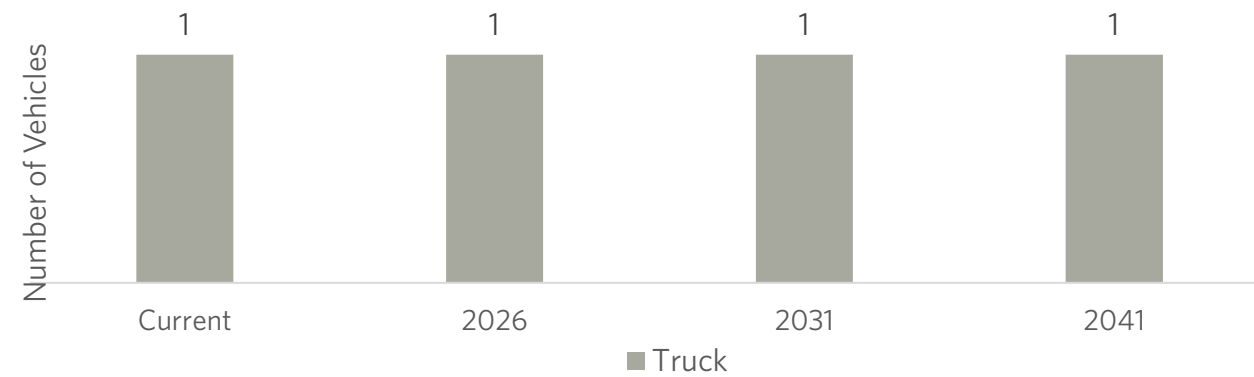




Fleet Vehicle Metrics

- Total vehicle quantity is estimated to remain the same for the next 20 years at a total of 1 vehicle.

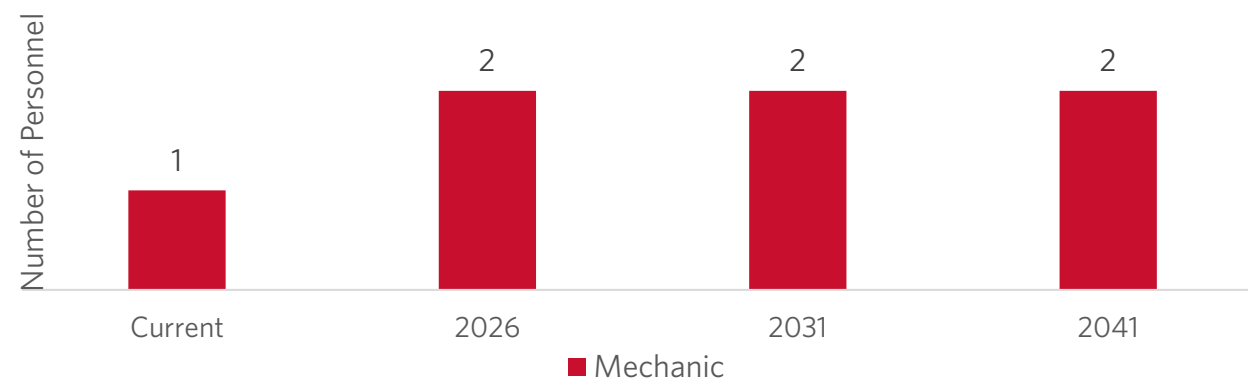
Vehicle Projections



Staffing Metrics

- The Fleet Maintenance Department currently accounts for 7% of the entire Public Works Department.
- Total staffing for Fleet Maintenance estimated to go from 1 to 2 employees in the next 20 years.

Staffing Projections



Key Findings

- Department would benefit from additional shop spaces and repair bays.
- The recently built maintenance facility is already functioning beyond its designed capacity.
- Equipment is outdated and continues to breakdown.
- Poor lighting, lack of security, leading roofs, gravel bay doors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates.
- Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.
- Poor storage for chemical materials.



Section 4 - Space Needs Program



4.1 Space Needs Program Summary

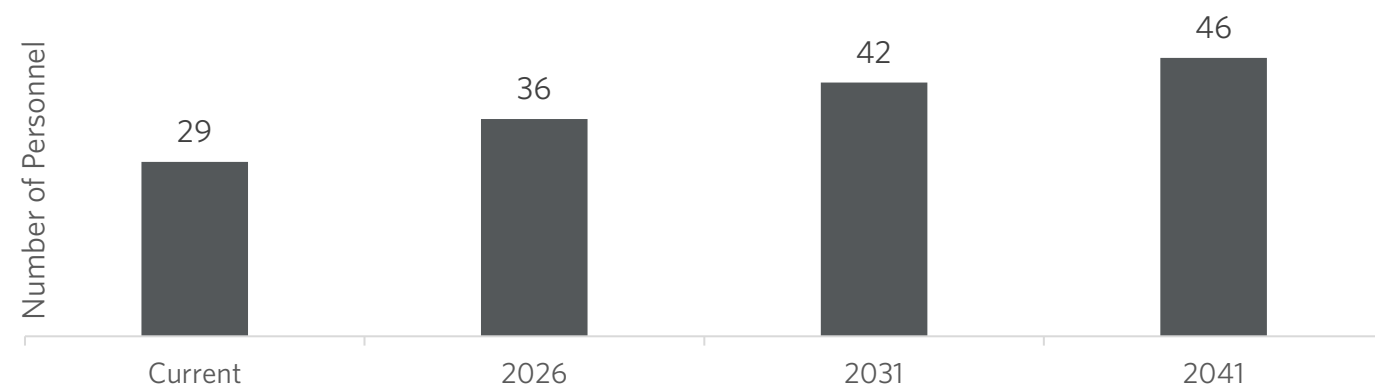
The Space Needs Program Summary below identifies the projected building and site areas for the entire Public Works Department. The summary shows the space needed for each department and department to reach their immediate (2026), short-term (2031), and long-term (2041) goals. Please note that the table below as well, as the entire space needs program, does not include the Water Treatment Plant and the Water Reclamation Facility. The Space Needs Program only took into account the space utilized by Public Works.

Department	Facility Program Projections				Site Program Projections				Total Areas		Site and Building Projections			
	2021	2026	2031	2041	2021	2026	2031	2041			2021	2026	2031	2041
Administration	1,300	10,131	10,655	11,743	1,920	4,284	4,608	4,932	Total Square Feet – Building Areas		19,440	41,632	42,896	44,036
Engineering	0	1,044	1,305	1,479	2,052	3,700	4,060	4,820	Total Square Feet – Site Areas		31,860	40,299	42,687	44,491
Stormwater	3,870	4,274	4,510	4,626	1,559	2,519	2,879	3,239	Site Circulation, Landscaping, Setbacks	70%	44,260	57,352	59,908	61,969
Water	2,630	4,031	4,147	4,147	3,234	5,214	5,838	5,838	Total Square Feet (Low)		95,560	139,283	145,490	150,496
Facilities/Parks/Cemetery	3,410	5,370	5,370	5,016	6,322	7,282	7,642	7,642	Total Acreage (Low)		2.19	3.20	3.34	3.45
Streets	2,100	9,456	9,572	9,688	16,449	16,580	16,940	17,300	Site Circulation, Landscaping, Setbacks	100%	44,260	82,011	85,593	88,527
Fleet	6,130	7,327	7,338	7,338	324	720	720	720	Total Square Feet (High)		95,560	164,022	171,185	177,054
									Total Acreage (High)		2.19	3.77	3.93	4.06
Subtotal	19,440	41,632	42,896	44,036	31,860	40,299	42,687	44,491						

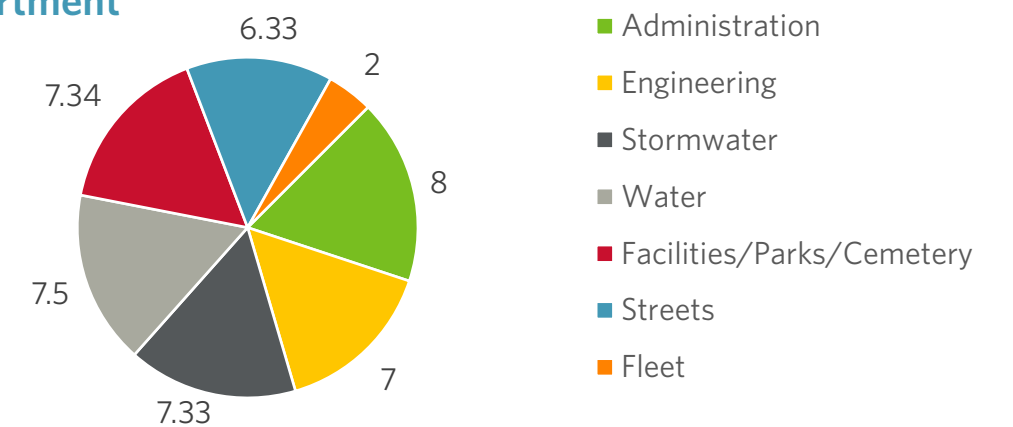
4.2 Staffing Projections

Currently, Public Works (excluding the Water Treatment Plant) has 29 funded positions. In the next 5 years the Departments are projected to increase their staffing to a total of 36 positions, by 2031 the Departments staff will grow to 42 positions, and in 2041 the Departments will grow to a total of 46 positions.

Total Staffing Projections



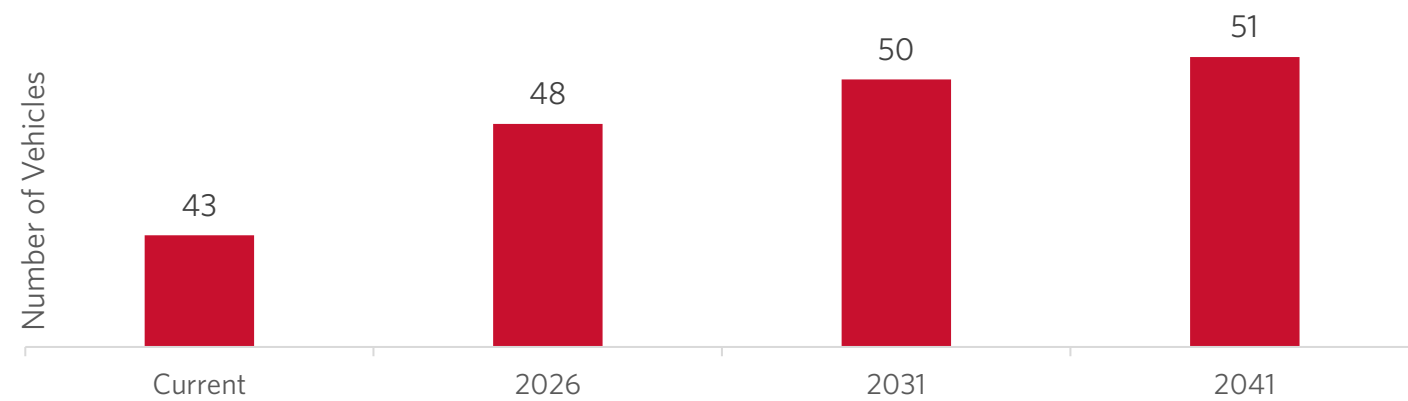
2041 Staffing by Department



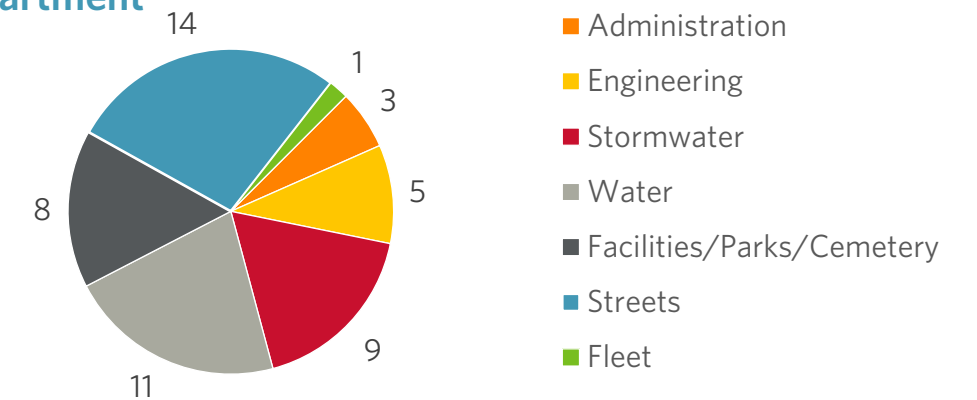
4.3 Vehicle and Equipment Projections

Currently, Public Works has 43 vehicles. In the next 5 years the Departments are projected to increase their vehicles to 48 vehicles. In the next 10 years the number of vehicles is projected to increase to a total of 50 vehicles, and finally in 20 years the total amount of vehicles is projected to increase to 51 vehicles.

Total Vehicle Projections



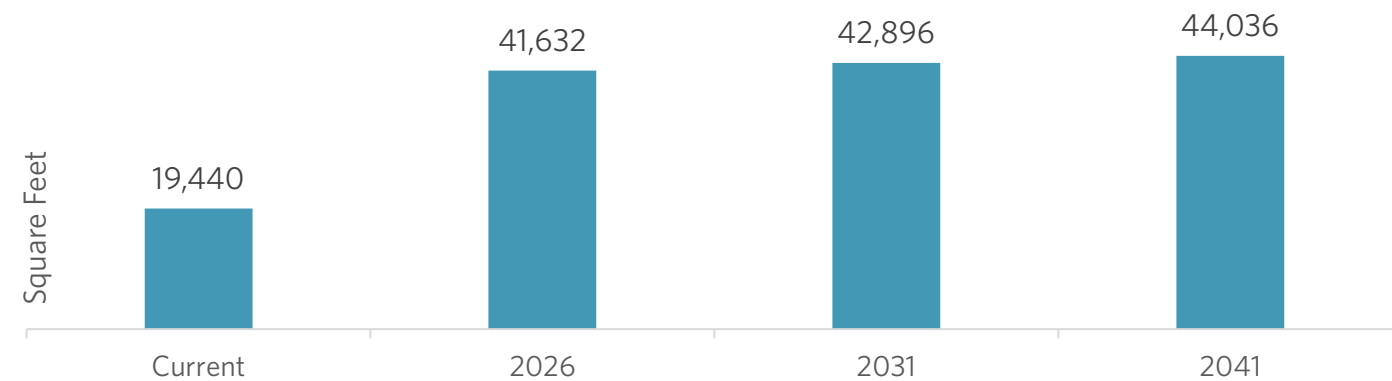
2041 Vehicles by Department



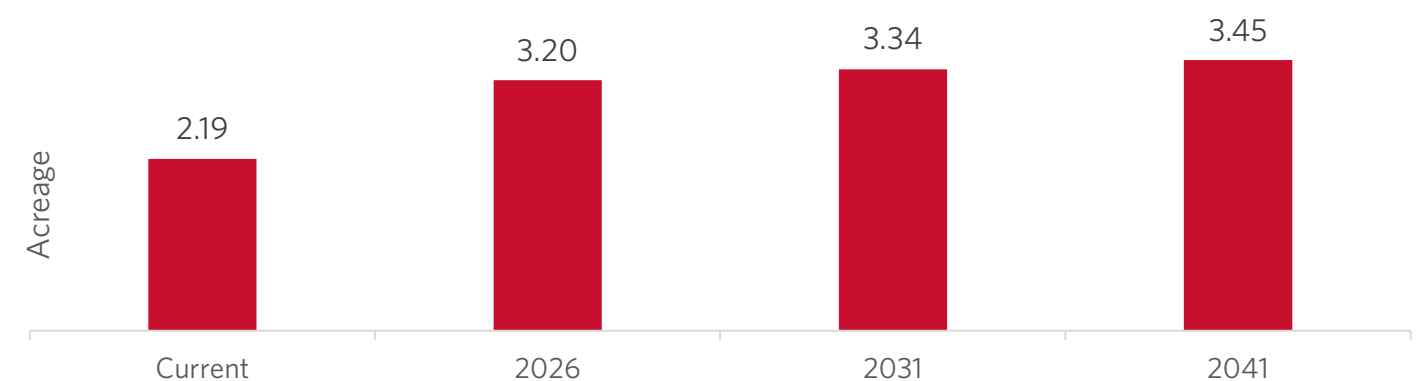
4.4 Building and Area Projections

The Washougal Public Works Departments currently use 2.19 acres of land to hold their vehicles, equipment, buildings, and storage. In order to accommodate the projected staff, vehicle, and building growths, the total area for building and site that Public Works will need is projected to grow over the next 20 years. Assuming site circulation, landscaping, and setbacks at 70% of the gross utilized area, the amount of land all the Departments are projected to need will increase to 3.2 acres in the next 5 years. In the next 10 years the area needed is projected to increase to 3.34 acres, and finally in 20 years the total area is projected to increase to 3.45 acres.

Total Building Area Projections



Total Area Projections



4.5 Current & Future Goals

Department	Goals & Needs	Short-Term	Long-Term
Public Works Administration	Improve the condition of the current facilities and more office space for additional staff	●	
	Collocation of all Departments onto one site and in one building		●
Engineering	More office space for staff	●	
	Collocation with other Public Works Departments		●
Stormwater	Improve current facility and more office space for staff. (Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates. Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center. Poor storage for chemical materials.)	●	
	Collocation with other Public Works Departments		●
Water	Improve current facility and more office space for staff. (Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates. Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center.)	●	
	Collocation with other Public Works Departments		●
	Laboratory facility with proper sample testing		●
Facilities/Parks/Cemetery	Improve current facility and more office space for staff. Also update Shop space. (Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates. Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center. Poor storage for chemical materials.)	●	

4.6 Current & Future Goals

Department	Goals & Needs	Short-Term	Long-Term
Streets	Improve current facility and more office space for staff. Also update Shop space. (Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates. Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center. Poor storage for chemical materials.)	●	
	New facility that fits all the department's staff, shops, storage, and vehicles		●
	Accommodate the future growth to support the City's infrastructure		●
Fleet	Improve current facility (Poor lighting, lack of security, leading roofs, gravel bay floors, no insulation, no security lighting, repaint inside/outside, and inadequate fence and gates. Lack of restrooms, locker rooms, decontamination space, and inadequate lunchroom for the staff currently at Operations Center. Poor storage for chemical materials.)	●	
	Additional parking	●	
	New facility that fits all the department's staff and vehicles		●
	Acoommodate the future growth to support the City's infrastructure		●

Section 5 - Master Planning

5.1 Introduction

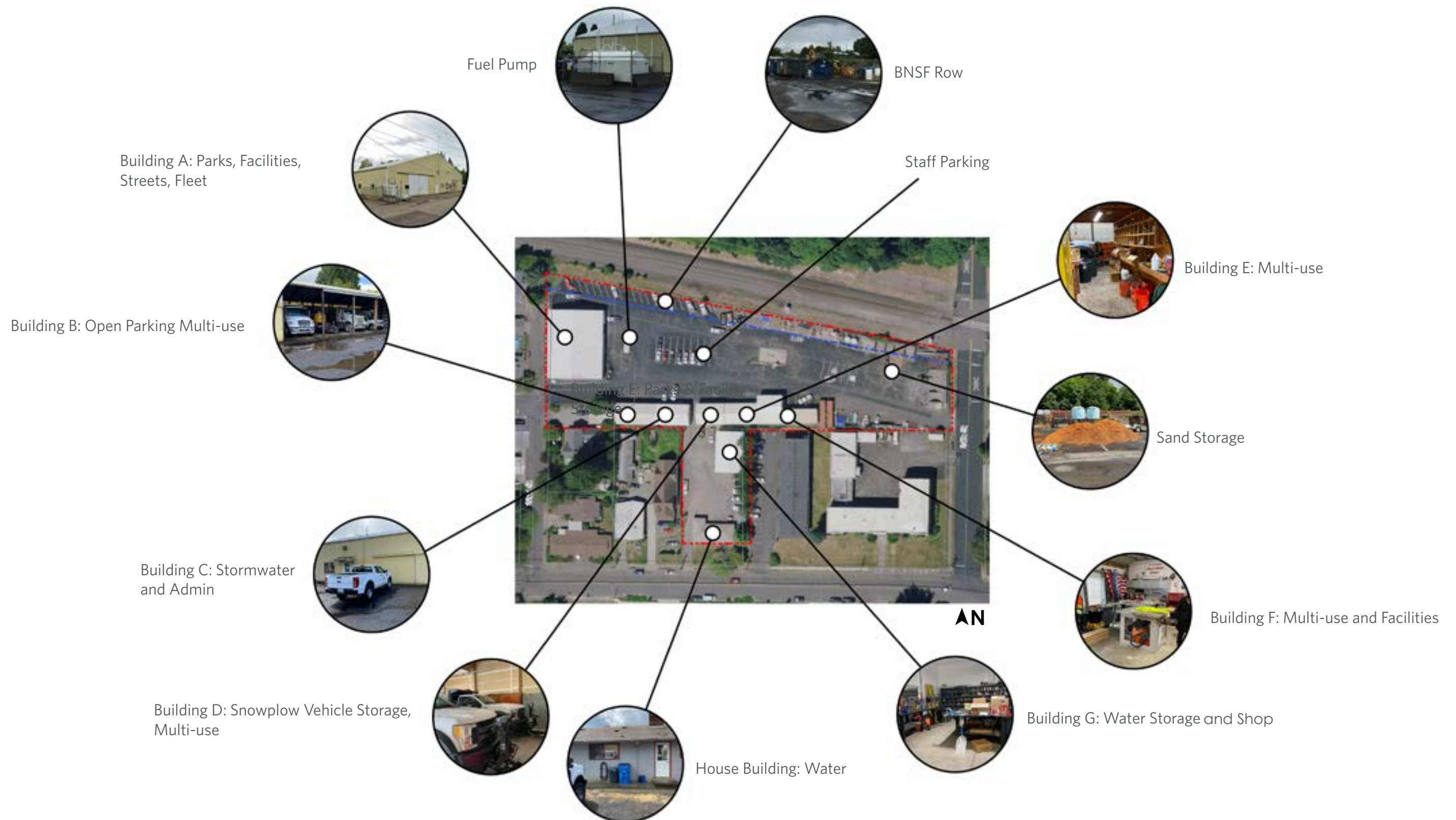
Summary

The HDR Design Team created two master plan options for the Public Works Department to meet the 2041 needs of each department as developed in the Space Needs Program. The team participated in an on-site design charrette with the Public Works Department where the team went through many different iterations and ideas for a Public Works Master Plan as discussed in this section. The current site was used in the development of the concepts created for the master plan. The public works campus currently uses land owned by BNSF. The Design Team determined it would be best to keep the new facility off of this portion of the site.

Process

- Programming Effort - Basis of each Master Plan Option
- Site Analysis - Existing Sites
- On-site Design Charrette
- Refine Master Plan

5.2 Existing Site Analysis



5.3 On-Site Design Charrette

Introduction

As part of the Master Planning effort, the HDR Design Team used a design charrette to engage City staff and develop options for a master plan. The Charrette was held virtually with the Design Team meeting in the Bellevue HDR office while City Staff joined via web conference on August 3-5, 2021. During each day of the charrette, site plan Options were developed and presented to key City staff for review.



Option A



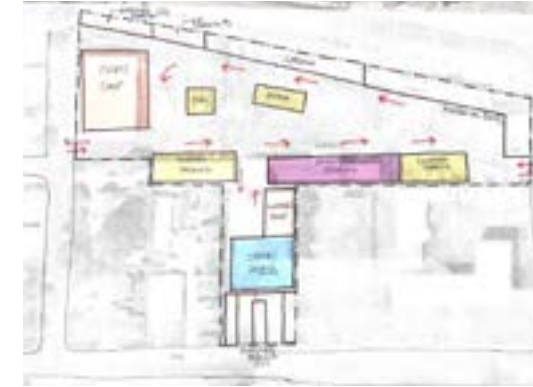
Option B



Option C



Option D



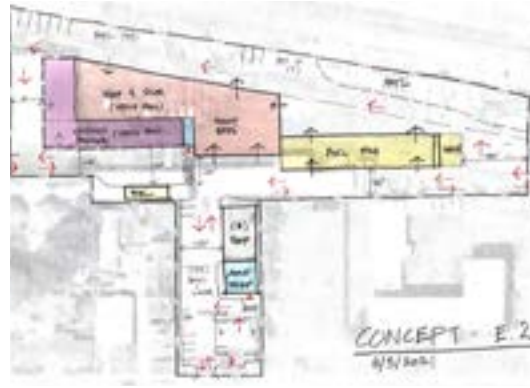
Option E



Option E.1



Option E.2



Option F



Option F.1



Option G



5.3 On-Site Design Charrette

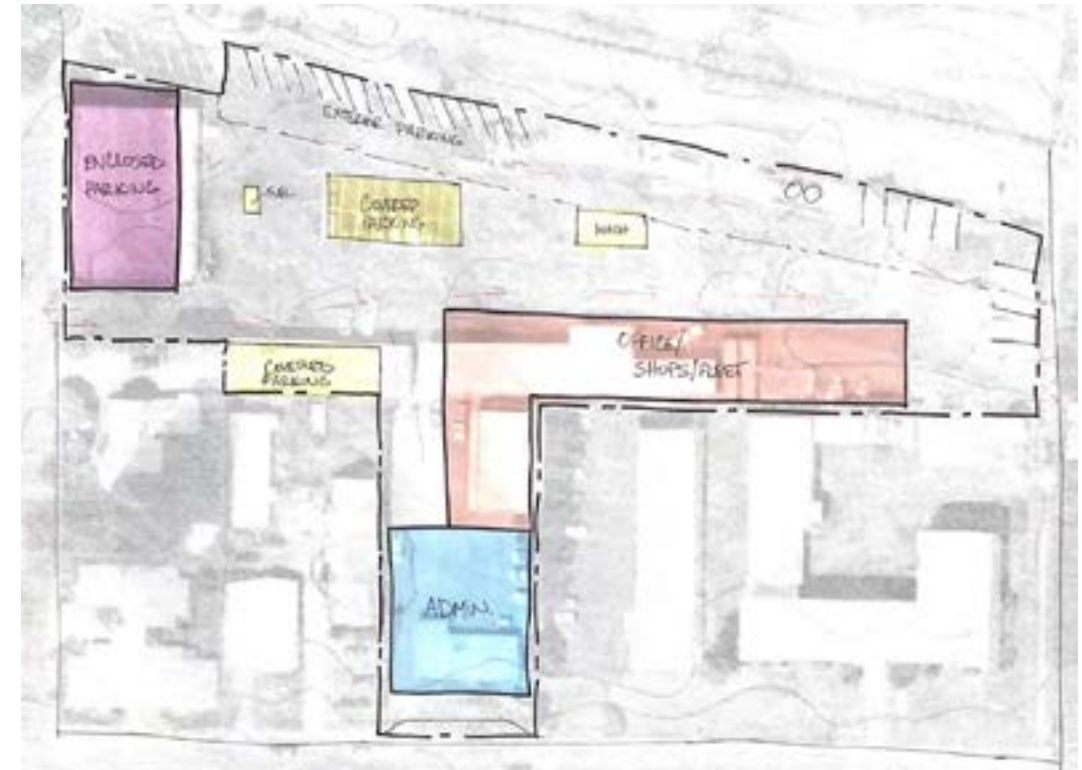
Public Works Concepts A & B

Concept A

- Concept A proposes a phased construction approach.
- Building A and the house on Main Street being the last buildings replaced
- New Fleet building will replace Buildings D, E, F, and G
- North edge of site was left untouched as it is on BNSF land
- The existing wash pad would be updated or replaced with a new building with enclosed wash bay.
- Fueling will stay where it was and new lanes and tanks added if desired.
- Buildings B and C will be replaced with new covered vehicle storage

Comments

- Liked the idea of phasing.
- Concerned about losing Building G that was recently renovated.
- Challenging to lose existing shops during construction.



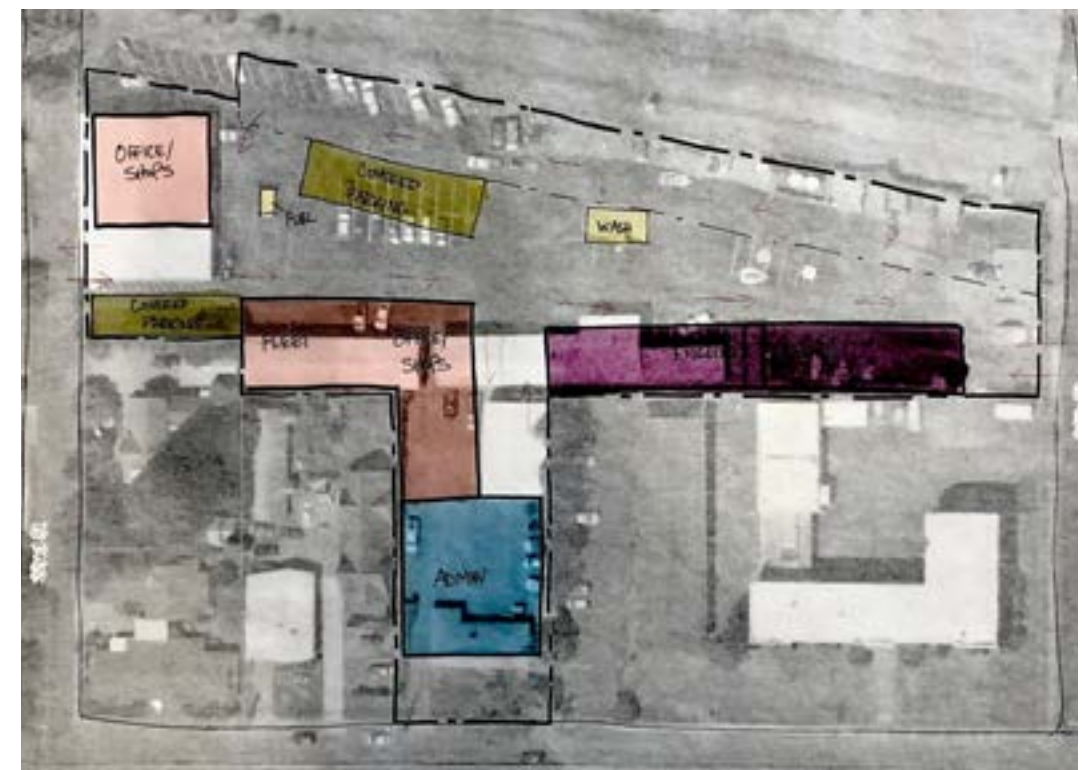
Concept A

Concept B

- Concept B again proposes a phased construction.
- In this concept Buildings B, C, and D are replaced with a new Fleet and Shop Building. This maintains all existing Shops.
- Then a new office shops building can be built in the location of Building A.
- Then existing shops in E, F, and G can be demoed and a new vehicle store building built.
- Finally, the existing Admin building can be replaced with a new building that fits all the groups in one place.
- Like Concept A fueling and wash stay where existing and upgraded.
- New covered parking areas are created adjacent and across the drive of the fleet building.
- North edge again is left untouched.

Comments

- Concern again about losing building G.
- Access to Building G during construction will be difficult
- Circulation through site when getting deliveries will be difficult with the entrances to the site



Concept B

5.3 On-Site Design Charrette

Public Works Concepts C & D

Concept C

- Concept C takes the comments from the previous two concepts and looks at keeping Building G intact.
- In this concept again phasing and keeping the facility functioning is considered.
- Buildings B and C will be demoed, and new shop/fleet building built just to north of the demoed buildings.
- Then a new shop building would be built in place of Building A.
- Buildings D, E, F and the old Admin Building would then be demoed and replaced with a new Admin Building and vehicle storage buildings.
- Again, north edge of site is left untouched.
- Fueling is then located along Building G.

Comments

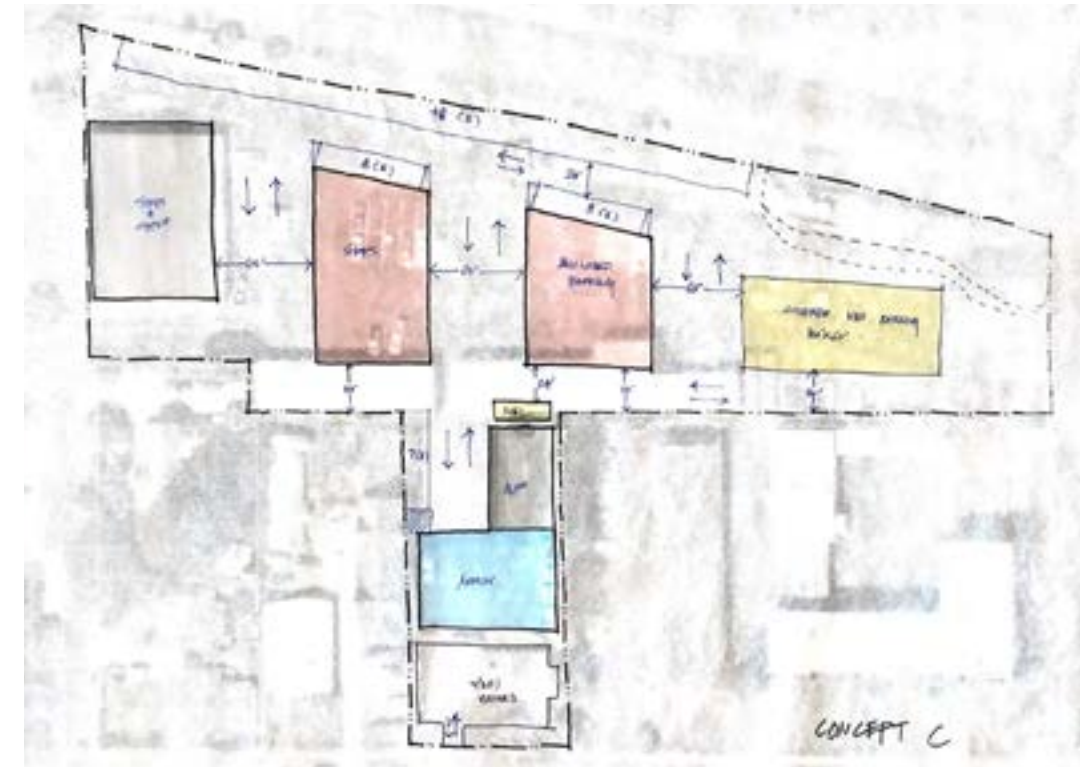
- Like that building G is maintained.
- No wash building is provided.
- Circulation through site is tight.
- How are material bins accessed?

Concept D

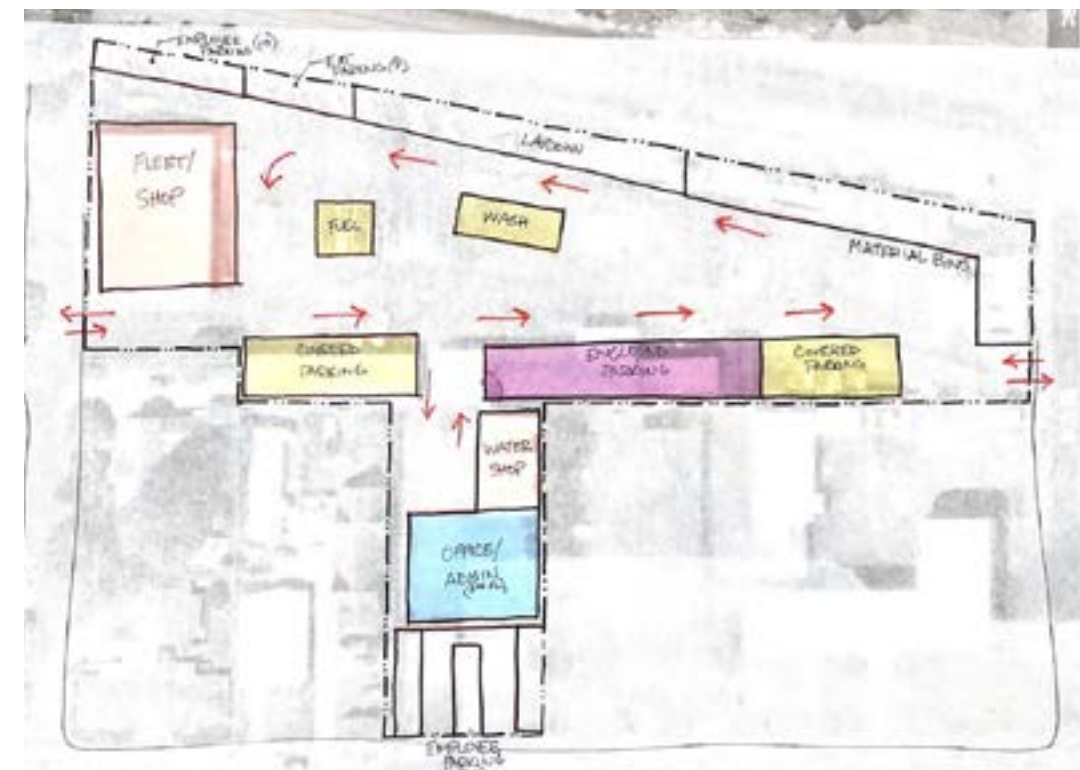
- Concept D looks at consolidating all the shops into one 2 story building in the location of building A.
- Building G is left untouched with a new 2 story Admin Building attached.
- New vehicle storage buildings then replace Buildings B, C, D, E, and F.
- The north edge is once again left as parking and material storage

Comments

- Like the vertical building approach.
- Like that it keeps the existing circulation.
- Good to have Building A rebuilt.



Concept C



Concept D

5.3 On-Site Design Charrette

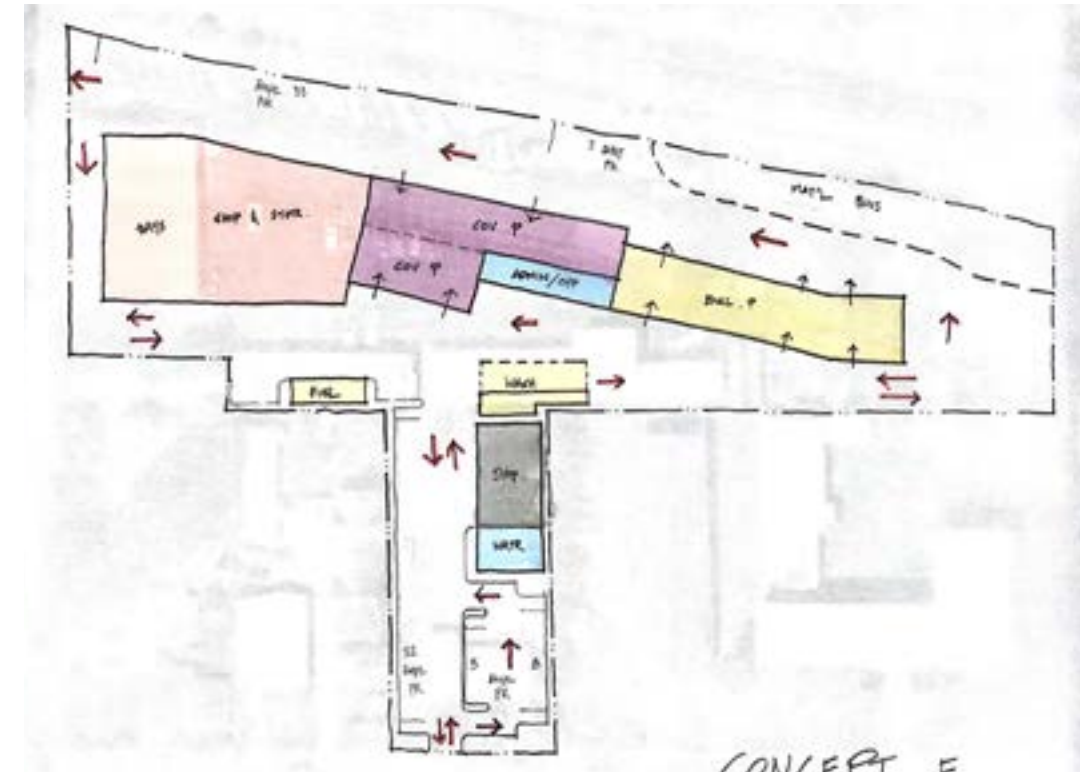
Public Works Concept E

Concept E

- Concept E takes an all new approach.
- In this concept phasing is not considered.
- One large Maintenance building is centered on the site.
- Circulation is maintained around the building with material storage and parking along the north edge located on the west side of the building
- These Shops and fleet bays are accessed along the north and south sides.
- Centrally located in the building is Admin and office space.
- The remainder of the building houses covered and enclosed vehicle parking.
- Between the new building and the remaining Building G is the new wash building.
- Attached to Building G are the water offices.
- Visitor and employee parking is located on the south portion of the site just off of Main street.
- The fueling is located where Buildings B and C once sat.

Comments

- Like the flow of the site.
- Seems like a better approach than D.
- Like the idea of one big shop.
- Like the axial access at the site layout.
- Consider separate visitors/employee parking area at the south.
- Like that Building G remains.
- Consider blocking off site access at north west corner. It is hard to access.
- Like the public facing improvements.



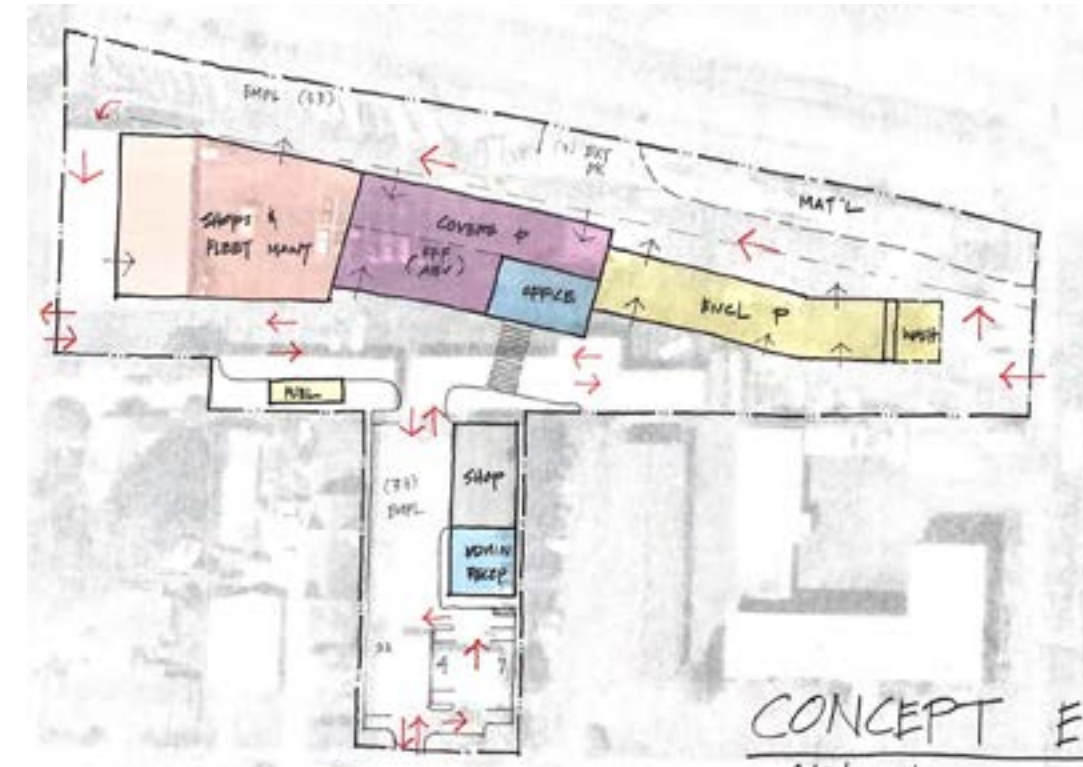
Concept E

5.3 On-Site Design Charrette

Public Works Concepts E.1 & E.2

Concept E.1

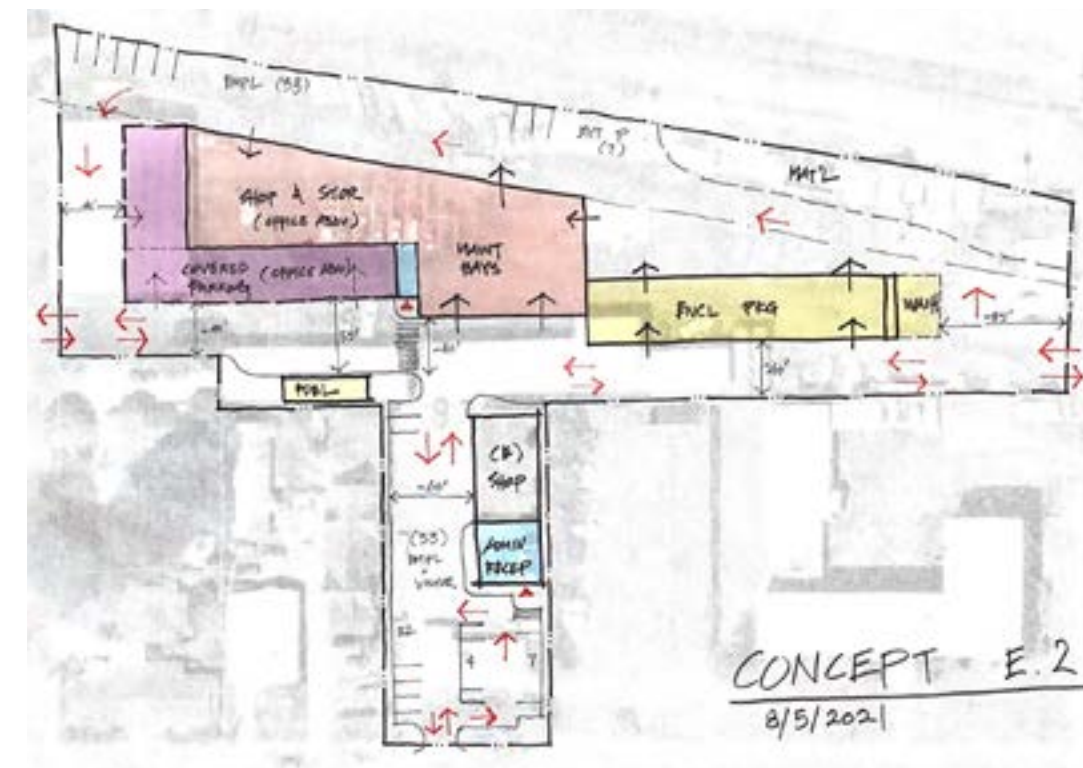
- Concept E.1 addresses comments received on concept E.
- Wash bay is moved to the east end of the building.
- Water offices is modified to include Public facing Admin office space.
- Site access in north west corner was removed.



Concept E.1

Concept E.2

- Concept E.2 is a refinement of the previous 2 concepts. It looks at putting the Shops and maintenance bays more central in the building.
- It works to make the building more square.
- The office is moved to the west and upstairs above the parking area.
- The relocated office creates a safer and more convenient access from the parking area.



Concept E.2

5.3 On-Site Design Charrette

Public Works Concepts F & F.1

Concept F

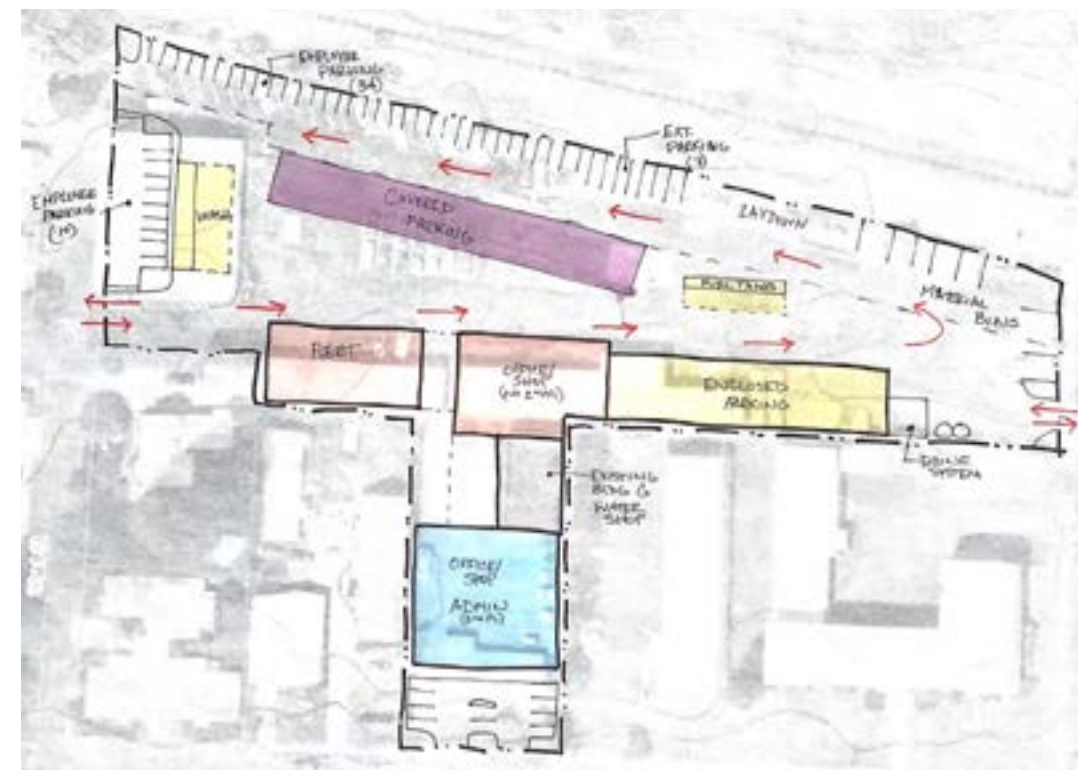
- Concept F took a similar approach to Concept E and consolidated all groups into one building.
- In this concept the building is shifted south to stay out of BNSF owned portion of the site.
- The Shops and fleet bays are located on the left side of the building and accessed from the north side of the building.
- Over the shops is the Admin and office with a lobby and reception on the ground floor facing Main street.
- Enclosed vehicle storage makes up the remainder of the right side of the building.
- The location of the building allows the existing site circulation and material storage to remain.
- Once the new building is complete the existing fleet building A can be demoed and a new wash building built.
- The remaining space in the center of the site has 2 covered vehicle buildings and fuel island.
- Employee parking is then created along the perimeter of the site with visitor parking off of Main street.

Concept F.1

- Concept F.1 address comments received on concept F.
- Hearing Building G needed to be retained the building was divided into two.
- In doing so Fleet got its own building.
- The second building is separated by Building G.
- The office/admin space is located just off of Main Street.
- To incorporate all the needed shop space some of the shops were placed on the first floor of the admin area of the building.
- The remaining Shop space is located on the north side of Building G.
- The enclosed vehicle storage remained on the east portion of the building.
- The covered vehicle parking was also angled to be parallel with the north property line.



Concept F



Concept F.1

5.3 On-Site Design Charrette

Public Works Concept G

Concept G

- Concept G took all the comments from the 3 day charrette and looked at keeping all the existing buildings intact. It was determined that the existing site was not an adequate size to meet all of public works needs. If Washougal loses access to BNSF land then another site may be needed. Purchasing adjacent sites could also help resolve the site size issue. The design team was asked to come do a full facility assessment and help the town prioritize repairs and improvement. The biggest take away was that a new Admin Building is needed and that it should be located off of Main Street.
- In this concept a covered parking area is also centrally located.



Concept G

Appendix A - Cost Estimate - Master Plans



Concept Cost Summary					
Area / Structure		\$	GSF		COST/SF
	East C Street	\$	20,105,444	52,789	\$ 380.86
Administrative Bldg.		\$	9,781,840.78	18,561	\$ 527.01
Shops		\$	5,366,537.77	17,027	\$ 315.18
Heated Vehicle Storage		\$	3,819,233.57	14,901	\$ 256.31
Wash Building		\$	1,137,831.41	2,300	\$ 494.71
	Site	\$	5,821,392	63,181	\$ 92.14
Covered Material Storage		\$	952,556.70	5,865	\$ 162.41
Fuel Island		\$	632,281.17	1,440	\$ 439.08
Covered Vehicle Parking		\$	1,365,068.39	12,480	\$ 109.38
Sitework		\$	2,871,485.62	-	-
Exterior Material Storage (Sitework)	w. above			10,100	-
Exterior Vehicle Parking (Sitework)	w. above			1,400	-
Employee - Visitor Parking (Sitework)	w. above			31,896	-
Grand Total		\$	25,926,835	115,970	\$ 223.57

HDR		Administrative Bldg.			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDRESS: DBE:			HDRC
NO: v1					Estimate
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Administrative Bldg.	18,561	sf	\$ 316.08	\$ 5,866,803.98
	A - SUBSTRUCTURE	18,561	sf	\$ 22.00	\$ 408,342.00
	A10 - FOUNDATIONS	18,561	sf	\$ 22.00	\$ 408,342.00
	A20 - BASEMENT CONSTRUCTION	18,561	-	\$ -	\$ -
	B - SHELL	18,561	sf	\$ 106.00	\$ 1,967,466.00
	B10 - SUPERSTRUCTURE	18,561	sf	\$ 42.00	\$ 779,562.00
	B20 - EXTERIOR CLOSURE	18,561	sf	\$ 39.00	\$ 723,879.00
	B30 - ROOFING	18,561	sf	\$ 25.00	\$ 464,025.00
	C - INTERIORS	18,561	sf	\$ 56.00	\$ 1,039,416.00
	C10 - INTERIOR CONSTRUCTION	18,561	sf	\$ 22.00	\$ 408,342.00
	C20 - STAIRCASES	18,561	sf	\$ 3.00	\$ 55,683.00
	C30 - INTERIOR FINISHES	18,561	sf	\$ 31.00	\$ 575,391.00
	D - SERVICES	18,561	sf	\$ 102.47	\$ 1,901,929.00
	D10 - CONVEYING SYSTEMS	1	ls	\$ 250,000.00	\$ 250,000.00
	D20 - PLUMBING	18,561	sf	\$ 14.00	\$ 259,854.00
	D30 - HVAC	18,561	sf	\$ 34.50	\$ 640,354.50
	D40 - FIRE PROTECTION	18,561	sf	\$ 5.50	\$ 102,085.50
	D50 - ELECTRICAL	18,561	sf	\$ 35.00	\$ 649,635.00
	E - EQUIPMENT & FURNISHINGS	18,561	sf	\$ 10.02	\$ 185,906.98
	E10 - EQUIPMENT	18,561	sf	\$ 2.02	\$ 37,418.98
	E20 - FURNISHINGS	18,561	sf	\$ 8.00	\$ 148,488.00
	F - SPECIAL CONSTRUCITON & DEMO	18,561	sf	\$ -	\$ -
	F10 - SPECIAL CONSTRUCTION (PEMB)	18,561	sf	\$ -	\$ -
	F20 - SELECTIVE BUILDING DEMOLITION	-	ls	\$ -	\$ -
	G - BUILDING SITE WORK	18,561	sf	\$ 19.60	\$ 363,744
	G10 - SITE PREPARATION	-		\$ -	\$ 37,122.00
	G1010 - SITE CLEARING	-		\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS	-		\$ -	\$ -
	G1030 - SITE EARTHWORK	18,561		\$ 2.00	\$ 37,122.00
	G1040 - HAZARDOUS WASTE REMEDIATION	-		\$ -	\$ -
	G20 - SITE IMPROVEMENTS	-		\$ -	\$ 75,000.00
	G2010 - ROADWAYS	-		\$ -	\$ -
	G2020 - PARKING LOTS	-		\$ -	\$ -
	G3030 - PEDESTRIAN PAVING	-		\$ -	\$ -
	G2040 - SITE DEVELOPMENT (Trash Cans, Trash Enclosure)	1		\$ 25,000.00	\$ 25,000.00
	G2050 - LANDSCAPING - SWPPP (Storm Retention)	1		\$ 50,000.00	\$ 50,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES	-		\$ -	\$ 69,750.00
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	250		\$ 75.00	\$ 18,750.00
	G3020 - SANITARY SEWER SYSTEMS	250		\$ 85.00	\$ 21,250.00
	G3030 - STORM SEWER SYSTEMS	100		\$ 85.00	\$ 8,500.00
	G3040 - HEATING DISTRIBUTION	250		\$ 85.00	\$ 21,250.00
	G3050 - COOLING DISTRIBUTION	-		\$ -	\$ -
	G3060 - FUEL DISTRIBUTION	-		\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES	-		\$ -	\$ -
	G40 - ELECTRICAL UTILITIES	-		\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION	-		\$ -	\$ -
	G4020 - EXTERIOR LIGHTING	-		\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY	-		\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES	-		\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION	-		\$ -	\$ -
	G9010 - SERVICE TUNNELS	-		\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT	-		\$ -	\$ -
	WBS Total	18,561	sf	\$ 316.08	\$ 5,866,803.98
	Mobilization			3.00%	\$ 176,004.12
	Field Overhead			10.00%	\$ 586,680.40
	General Conditions			4.00%	\$ 234,672.16
	SUBTOTAL - w. GC's				\$ 6,864,160.65
	Fee			8.00%	\$ 549,132.85
	SUBTOTAL - w. FEE				\$ 7,413,293.50
	Contingency			30.00%	\$ 2,223,988.05
	SUBTOTAL - w. Contingency				\$ 9,637,281.56
	Bonds & Insurance			1.50%	\$ 144,559.22
	SUBTOTAL - w. Bonds & Insurance				\$ 9,781,840.78
	Escalation			0.00%	\$ -
	TOTAL COST	18,561	sf	\$ 527.01	\$ 9,781,840.78

HDR		Shops			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:		HDRC Estimate	
NO: v1					
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Shops	17,027	sf	\$ 189.03	\$ 3,218,660.56
	A - SUBSTRUCTURE	17,027	sf	\$ 17.00	\$ 289,459.00
	A10 - FOUNDATIONS	17,027	sf	\$ 17.00	\$ 289,459.00
	A20 - BASEMENT CONSTRUCTION	17,027	-	\$ -	\$ -
	B - SHELL	17,027	sf	\$ 10.00	\$ 170,270.00
	B10 - SUPERSTRUCTURE	17,027	sf	\$ -	\$ -
	B20 - EXTERIOR CLOSURE	17,027	sf	\$ 10.00	\$ 170,270.00
	B30 - ROOFING	17,027	sf	\$ -	\$ -
	C - INTERIORS	17,027	sf	\$ 20.00	\$ 340,540.00
	C10 - INTERIOR CONSTRUCTION	17,027	-	\$ 5.00	\$ 85,135.00
	C20 - STAIRCASES	17,027	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	17,027	-	\$ 15.00	\$ 255,405.00
	D - SERVICES	17,027	sf	\$ 61.19	\$ 1,041,839.56
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	17,027	sf	\$ 6.00	\$ 102,162.00
	D30 - HVAC	17,027	sf	\$ 20.00	\$ 340,540.00
	D40 - FIRE PROTECTION	17,027	sf	\$ 3.94	\$ 67,043.81
	D50 - ELECTRICAL	17,027	sf	\$ 31.25	\$ 532,093.75
	E - EQUIPMENT & FURNISHINGS	17,027	sf	\$ 31.00	\$ 527,837.00
	E10 - EQUIPMENT	17,027	sf	\$ 30.00	\$ 510,810.00
	E20 - FURNISHINGS	17,027	sf	\$ 1.00	\$ 17,027.00
	F - SPECIAL CONSTRUCITON & DEMO	17,027	sf	\$ 35.00	\$ 595,945.00
	F10 - SPECIAL CONSTRUCTION (PEMB)	17,027	sf	\$ 35.00	\$ 595,945.00
	F20 - SELECTIVE BUILDING DEMOLITION	1	ls	\$ -	\$ -
	G - BUILDING SITE WORK	17,027	sf	\$ 14.85	\$ 252,770
	G10 - SITE PREPARATION			\$ -	\$ 85,135.00
	G1010 - SITE CLEARING			\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS			\$ -	\$ -
	G1030 - SITE EARTHWORK	17,027		\$ 5.00	\$ 85,135.00
	G1040 - HAZARDOUS WASTE REMEDIATION	-		\$ -	\$ -
	G20 - SITE IMPROVEMENTS	17,027	sf	\$ 1.76	\$ 30,000.00
	G2010 - ROADWAYS	-		\$ -	\$ -
	G2020 - PARKING LOTS	-		\$ -	\$ -
	G3030 - PEDESTRIAN PAVING	-		\$ -	\$ -
	G2040 - SITE DEVELOPMENT	1		\$ 15,000.00	\$ 15,000.00
	G2050 - LANDSCAPING - SWPPP	1		\$ 15,000.00	\$ 15,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES	17,027	sf	\$ 0.66	\$ 11,250.00
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	-		\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS	-		\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS	250		\$ 10.00	\$ 2,500.00
	G3040 - HEATING DISTRIBUTION	250		\$ 35.00	\$ 8,750.00
	G3050 - COOLING DISTRIBUTION	-		\$ -	\$ -
	G3060 - FUEL DISTRIBUTION			\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES			\$ -	\$ -
	G40 - ELECTRICAL UTILITIES			\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION			\$ -	\$ -
	G4020 - EXTERIOR LIGHTING			\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY			\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES			\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION			\$ -	\$ -
	G9010 - SERVICE TUNNELS			\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT			\$ -	\$ -
	WBS Total	17,027	sf	\$ 189.03	\$ 3,218,660.56
	Mobilization			3.00%	\$ 96,559.82
	Field Overhead			10.00%	\$ 321,866.06
	General Conditions			4.00%	\$ 128,746.42
	SUBTOTAL - w. GC's				\$ 3,765,832.86
	Fee			8.00%	\$ 301,266.63
	SUBTOTAL - w. FEE				\$ 4,067,099.49
	Contingency			30.00%	\$ 1,220,129.85
	SUBTOTAL - w. Contingency				\$ 5,287,229.33
	Bonds & Insurance			1.50%	\$ 79,308.44
	SUBTOTAL - w. Bonds & Insurance				\$ 5,366,537.77
	Escalation			0.00%	\$ -

HDR		Heated Vehicle Storage			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:			HDRC
NO: v1					Estimate
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Heated Vehicle Storage	14,901	sf	\$ 153.72	\$ 2,290,641.94
	A - SUBSTRUCTURE	14,901	sf	\$ 17.00	\$ 253,317.00
	A10 - FOUNDATIONS	14,901	sf	\$ 17.00	\$ 253,317.00
	A20 - BASEMENT CONSTRUCTION	14,901	-	\$ -	\$ -
	B - SHELL	14,901	sf	\$ 10.00	\$ 149,010.00
	B10 - SUPERSTRUCTURE	14,901	sf	\$ -	\$ -
	B20 - EXTERIOR CLOSURE	14,901	sf	\$ 10.00	\$ 149,010.00
	B30 - ROOFING	14,901	sf	\$ -	\$ -
	C - INTERIORS	14,901	sf	\$ 20.00	\$ 298,020.00
	C10 - INTERIOR CONSTRUCTION	14,901	-	\$ 5.00	\$ 74,505.00
	C20 - STAIRCASES	0	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	14,901	-	\$ 15.00	\$ 223,515.00
	D - SERVICES	14,901	sf	\$ 61.19	\$ 911,754.94
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	14,901	sf	\$ 6.00	\$ 89,406.00
	D30 - HVAC	14,901	sf	\$ 20.00	\$ 298,020.00
	D40 - FIRE PROTECTION	14,901	sf	\$ 3.94	\$ 58,672.69
	D50 - ELECTRICAL	14,901	sf	\$ 31.25	\$ 465,656.25
	E - EQUIPMENT & FURNISHINGS	14,901	sf	\$ -	\$ -
	E10 - EQUIPMENT	14,901	sf	\$ -	\$ -
	E20 - FURNISHINGS	14,901	sf	\$ -	\$ -
	F - SPECIAL CONSTRUCITON & DEMO	14,901	sf	\$ 35.00	\$ 521,535.00
	F10 - SPECIAL CONSTRUCTION (PEMB)	14,901	sf	\$ 35.00	\$ 521,535.00
	F20 - SELECTIVE BUILDING DEMOLITION	-	-	\$ -	\$ -
	G - BUILDING SITE WORK	14,901	sf	\$ 10.54	\$ 157,005
	G10 - SITE PREPARATION	14,901	sf	\$ 5.00	\$ 74,505.00
	G1010 - SITE CLEARING	-	-	\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS	-	-	\$ -	\$ -
	G1030 - SITE EARTHWORK	14,901	sf	\$ 5.00	\$ 74,505.00
	G1040 - HAZARDOUS WASTE REMEDIATION	-	-	\$ -	\$ -
	G20 - SITE IMPROVEMENTS	14,901	sf	\$ 2.01	\$ 30,000.00
	G2010 - ROADWAYS	-	-	\$ -	\$ -
	G2020 - PARKING LOTS	-	-	\$ -	\$ -
	G3030 - PEDESTRIAN PAVING	-	-	\$ -	\$ -
	G2040 - SITE DEVELOPMENT	1	ls	\$ 15,000.00	\$ 15,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 15,000.00	\$ 15,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES	14,901	sf	\$ 0.75	\$ 11,250.00
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	-	-	\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS	-	-	\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS	250	lf	\$ 10.00	\$ 2,500.00
	G3040 - HEATING DISTRIBUTION	250	lf	\$ 35.00	\$ 8,750.00
	G3050 - COOLING DISTRIBUTION	-	-	\$ -	\$ -
	G3060 - FUEL DISTRIBUTION	-	-	\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES	-	-	\$ -	\$ -
	G40 - ELECTRICAL UTILITIES	-	-	\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION	-	-	\$ -	\$ -
	G4020 - EXTERIOR LIGHTING	-	-	\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY	-	-	\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES	-	-	\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION	-	-	\$ -	\$ -
	G9010 - SERVICE TUNNELS	-	-	\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT	-	-	\$ -	\$ -
	WBS Total	14,901	sf	\$ 153.72	\$ 2,290,641.94
	Mobilization			3.00%	\$ 68,719.26
	Field Overhead			10.00%	\$ 229,064.19
	General Conditions			4.00%	\$ 91,625.68
	SUBTOTAL - w. GC's				\$ 2,680,051.07
	Fee			8.00%	\$ 214,404.09
	SUBTOTAL - w. FEE				\$ 2,894,455.15
	Contingency			30.00%	\$ 868,336.55
	SUBTOTAL - w. Contingency				\$ 3,762,791.70
	Bonds & Insurance			1.50%	\$ 56,441.88
	SUBTOTAL - w. Bonds & Insurance				\$ 3,819,233.57
	Escalation			0.00%	\$ -

HDR		Wash Building			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:		HDCR Estimate	
NO: v1					
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Wash Building	2,300	sf	\$ 296.71	\$ 682,431.25
	A - SUBSTRUCTURE	2,300	sf	\$ 17.00	\$ 39,100.00
	A10 - FOUNDATIONS	2,300	sf	\$ 17.00	\$ 39,100.00
	A20 - BASEMENT CONSTRUCTION	2,300	-	\$ -	\$ -
	B - SHELL	2,300	sf	\$ 45.00	\$ 103,500.00
	B10 - SUPERSTRUCTURE	2,300	sf	\$ 15.00	\$ 34,500.00
	B20 - EXTERIOR CLOSURE	2,300	sf	\$ 20.00	\$ 46,000.00
	B30 - ROOFING	2,300	sf	\$ 10.00	\$ 23,000.00
	C - INTERIORS	2,300	sf	\$ 20.00	\$ 46,000.00
	C10 - INTERIOR CONSTRUCTION	2,300	-	\$ 5.00	\$ 11,500.00
	C20 - STAIRCASES	2,300	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	2,300	-	\$ 15.00	\$ 34,500.00
	D - SERVICES	2,300	sf	\$ 61.19	\$ 140,731.25
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	2,300	sf	\$ 6.00	\$ 13,800.00
	D30 - HVAC	2,300	sf	\$ 20.00	\$ 46,000.00
	D40 - FIRE PROTECTION	2,300	sf	\$ 3.94	\$ 9,056.25
	D50 - ELECTRICAL	2,300	sf	\$ 31.25	\$ 71,875.00
	E - EQUIPMENT & FURNISHINGS	2,300	sf	\$ 110.70	\$ 254,600.00
	E10 - EQUIPMENT	1	ls	\$ 250,000.00	\$ 250,000.00
	E20 - FURNISHINGS	2,300	sf	\$ 2.00	\$ 4,600.00
	F - SPECIAL CONSTRUCITON & DEMO	-	sf	\$ -	\$ -
	F10 - SPECIAL CONSTRUCTION (PEMB)	-	sf	\$ -	\$ -
	F20 - SELECTIVE BUILDING DEMOLITION	-	ls	\$ -	\$ -
	G - BUILDING SITE WORK	2,300	sf	\$ 42.83	\$ 98,500.00
	G10 - SITE PREPARATION	-		\$ -	\$ 23,000.00
	G1010 - SITE CLEARING	-		\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS	-		\$ -	\$ -
	G1030 - SITE EARTHWORK	2,300	sf	\$ 10.00	\$ 23,000.00
	G1040 - HAZARDOUS WASTE REMEDIATION	-		\$ -	\$ -
	G20 - SITE IMPROVEMENTS	2,300	sf	\$ 6.52	\$ 15,000.00
	G2010 - ROADWAYS	-		\$ -	\$ -
	G2020 - PARKING LOTS	-		\$ -	\$ -
	G3030 - PEDESTRIAN PAVING	-		\$ -	\$ -
	G2040 - SITE DEVELOPMENT	1	ls	\$ 10,000.00	\$ 10,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 5,000.00	\$ 5,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES	2,300	sf	\$ 4.89	\$ 11,250.00
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	-		\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS	-		\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS	250	lf	\$ 10.00	\$ 2,500.00
	G3040 - HEATING DISTRIBUTION	250	lf	\$ 35.00	\$ 8,750.00
	G3050 - COOLING DISTRIBUTION			\$ -	\$ -
	G3060 - FUEL DISTRIBUTION			\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES			\$ -	\$ -
	G40 - ELECTRICAL UTILITIES			\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION			\$ -	\$ -
	G4020 - EXTERIOR LIGHTING			\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY			\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES			\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION			\$ -	\$ -
	G9010 - SERVICE TUNNELS			\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT			\$ -	\$ -
	WBS Total	2,300	sf	\$ 296.71	\$ 682,431.25
	Mobilization			3.00%	\$ 20,472.94
	Field Overhead			10.00%	\$ 68,243.13
	General Conditions			4.00%	\$ 27,297.25
	SUBTOTAL - w. GC's				\$ 798,444.56
	Fee			8.00%	\$ 63,875.57
	SUBTOTAL - w. FEE				\$ 862,320.13
	Contingency			30.00%	\$ 258,696.04
	SUBTOTAL - w. Contingency				\$ 1,121,016.17
	Bonds & Insurance			1.50%	\$ 16,815.24
	SUBTOTAL - w. Bonds & Insurance				\$ 1,137,831.41
	Escalation			0.00%	\$ -
	TOTAL COST	2,300	sf	\$ 494.71	\$ 1,137,831.41

HDR		Site			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:		HDCRC Estimate	
NO: v1					
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Site	4.5	ac		
	G - BUILDING SITE WORK	150,000	sf	\$ 11.47	\$ 1,721,090.88
	G10 - SITE PREPARATION				
	G1010 - SITE CLEARING	63,181	sf	\$ 0.10	\$ 6,318.10
	G1020 - SITE DEMOLITION & RELOCATIONS	-	sf	\$ -	\$ -
	Demo Existing Bldg.	2,000	sf	\$ 5.00	\$ 10,000.00
	Demo Covered Material Storage	-	sf	\$ -	\$ -
	Demo Site Fence / Parks / Police & Fire	1,000	lf	\$ 3.00	\$ 3,000.00
	Relocated Mag Chloride Tank	-	ls	\$ -	\$ -
	G1030 - SITE EARTHWORK		ls	\$ -	\$ -
	G1040 - HAZARDOUS WASTE REMEDIATION				
	G20 - SITE IMPROVEMENTS				
	G2010 - ROADWAYS	9,020	sy	\$ 95.00	\$ 856,889.44
	Curb & Gutter	750	lf	\$ 15.00	\$ 11,250.00
	G2020 - PARKING LOTS	7,020	sy	\$ 75.00	\$ 526,508.33
	G3030 - PEDESTRIAN PAVING	-	sf	\$ -	\$ -
	G2040 - SITE DEVELOPMENT	-	ls	\$ -	\$ -
	Fencing 6' CL	1,500	lf	\$ 30.00	\$ 45,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 25,000.00	\$ 25,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES				
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	-	lf	\$ 100.00	\$ -
	G3020 - SANITARY SEWER SYSTEMS	-	lf	\$ 150.00	\$ -
	G3030 - STORM SEWER SYSTEMS	-	lf	\$ 150.00	\$ -
	G3040 - HEATING DISTRIBUTION	-	lf	\$ 95.00	\$ -
	G3050 - COOLING DISTRIBUTION				
	G3060 - FUEL DISTRIBUTION				
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES				
	G40 - ELECTRICAL UTILITIES	1	ls	\$ 237,125.00	\$ 237,125.00
	G4010 - ELECTRICAL DISTRIBUTION				
	G4020 - EXTERIOR LIGHTING				
	G4030 - EXTERIOR COMMUNICATION & SECURITY				
	G4090 - OTHER SITE ELECTRICAL UTILITIES				
	G90 - OTHER SITE CONSTRUCTION				
	G9010 - SERVICE TUNNELS				
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT				
	WBS Total	1	ls	\$ 1,722,216.06	\$ 1,722,216.06
	Mobilization			3.00%	\$ 51,666.48
	Field Overhead			10.00%	\$ 172,221.61
	General Conditions			4.00%	\$ 68,888.64
	SUBTOTAL - w. GC's				\$ 2,014,992.79
	Fee			8.00%	\$ 161,199.42
	SUBTOTAL - w. FEE				\$ 2,176,192.21
	Contingency			30.00%	\$ 652,857.66
	SUBTOTAL - w. Contingency				\$ 2,829,049.87
	Bonds & Insurance			1.50%	\$ 42,435.75
	SUBTOTAL - w. Bonds & Insurance				\$ 2,871,485.62
	Escalation			0.00%	\$ -
	TOTAL COST				\$ 2,871,485.62

HDR		Covered Vehicle Parking			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:			HDRC
NO: v1					Estimate
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Covered Vehicle Parking	12,480	sf	\$ 65.60	\$ 818,720.00
	A - SUBSTRUCTURE	12,480	sf	\$ 17.00	\$ 212,160.00
	A10 - FOUNDATIONS	12,480	sf	\$ 17.00	\$ 212,160.00
	A20 - BASEMENT CONSTRUCTION	12,480	-	\$ -	\$ -
	B - SHELL	12,480	sf	\$ -	\$ -
	B10 - SUPERSTRUCTURE	12,480	sf	\$ -	\$ -
	B20 - EXTERIOR CLOSURE	12,480	sf	\$ -	\$ -
	B30 - ROOFING	12,480	sf	\$ -	\$ -
	C - INTERIORS	12,480	sf	\$ -	\$ -
	C10 - INTERIOR CONSTRUCTION	12,480	-	\$ -	\$ -
	C20 - STAIRCASES	12,480	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	12,480	-	\$ -	\$ -
	D - SERVICES	12,480	sf	\$ 10.00	\$ 124,800.00
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	12,480	sf	\$ -	\$ -
	D30 - HVAC	12,480	sf	\$ -	\$ -
	D40 - FIRE PROTECTION	12,480	sf	\$ -	\$ -
	D50 - ELECTRICAL	12,480	sf	\$ 10.00	\$ 124,800.00
	E - EQUIPMENT & FURNISHINGS	12,480	sf	\$ -	\$ -
	E10 - EQUIPMENT	12,480	sf	\$ -	\$ -
	E20 - FURNISHINGS	12,480	sf	\$ -	\$ -
	F - SPECIAL CONSTRUCITON & DEMO	12,480	sf	\$ 35.00	\$ 436,800.00
	F10 - SPECIAL CONSTRUCTION (PEMB)	12,480	sf	\$ 35.00	\$ 436,800.00
	F20 - SELECTIVE BUILDING DEMOLITION	1	ls	\$ -	\$ -
	G - BUILDING SITE WORK	12,480	sf	\$ 3.60	\$ 44,960.00
	G10 - SITE PREPARATION			\$ -	\$ 12,480.00
	G1010 - SITE CLEARING			\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS			\$ -	\$ -
	G1030 - SITE EARTHWORK	12,480	sf	\$ 1.00	\$ 12,480.00
	G1040 - HAZARDOUS WASTE REMEDIATION			\$ -	\$ -
	G20 - SITE IMPROVEMENTS	12,480	sf	\$ 0.80	\$ 10,000.00
	G2010 - ROADWAYS (w. Sitework)			\$ -	\$ -
	G2020 - PARKING LOTS (w. Sitework)			\$ -	\$ -
	G3030 - PEDESTRIAN PAVING (w. Sitework)			\$ -	\$ -
	G2040 - SITE DEVELOPMENT (w Sitework)	1	ls	\$ 5,000.00	\$ 5,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 5,000.00	\$ 5,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES			\$ -	\$ -
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS			\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS			\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS			\$ -	\$ -
	G3040 - HEATING DISTRIBUTION			\$ -	\$ -
	G3050 - COOLING DISTRIBUTION			\$ -	\$ -
	G3060 - FUEL DISTRIBUTION			\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES			\$ -	\$ -
	G40 - ELECTRICAL UTILITIES			\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION			\$ -	\$ -
	G4020 - EXTERIOR LIGHTING			\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY			\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES			\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION			\$ -	\$ -
	G9010 - SERVICE TUNNELS			\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT			\$ -	\$ -
	WBS Total	12,480	sf	\$ 65.60	\$ 818,720.00
	Mobilization			3.00%	\$ 24,561.60
	Field Overhead			10.00%	\$ 81,872.00
	General Conditions			4.00%	\$ 32,748.80
	SUBTOTAL - w. GC's				\$ 957,902.40
	Fee			8.00%	\$ 76,632.19
	SUBTOTAL - w. FEE				\$ 1,034,534.59
	Contingency			30.00%	\$ 310,360.38
	SUBTOTAL - w. Contingency				\$ 1,344,894.97
	Bonds & Insurance			1.50%	\$ 20,173.42
	SUBTOTAL - w. Bonds & Insurance				\$ 1,365,068.39
	Escalation			0.00%	\$ -
	TOTAL COST	12,480	sf	\$ 109.38	\$ 1,365,068.39

HDR		Fuel Island			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:		HDCR Estimate	
NO: v1					
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Fuel Island	1,440	sf	\$ 263.35	\$ 379,220.00
		1,440	sf	\$ 17.00	\$ 24,480.00
	A10 - FOUNDATIONS	1,440	sf	\$ 17.00	\$ 24,480.00
	A20 - BASEMENT CONSTRUCTION	1,440	-	\$ -	\$ -
	B - SHELL	1,440	sf	\$ -	\$ -
	B10 - SUPERSTRUCTURE	1,440	sf	\$ -	\$ -
	B20 - EXTERIOR CLOSURE	1,440	sf	\$ -	\$ -
	B30 - ROOFING	1,440	sf	\$ -	\$ -
	C - INTERIORS	1,440	sf	\$ -	\$ -
	C10 - INTERIOR CONSTRUCTION	1,440	-	\$ -	\$ -
	C20 - STAIRCASES	1,440	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	1,440	-	\$ -	\$ -
	D - SERVICES	1,440	sf	\$ 47.25	\$ 68,040.00
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	1,440	sf	\$ 6.00	\$ 8,640.00
	D30 - HVAC	-	sf	\$ -	\$ -
	D40 - FIRE PROTECTION	1,440	sf	\$ 10.00	\$ 14,400.00
	D50 - ELECTRICAL	1,440	sf	\$ 31.25	\$ 45,000.00
	E - EQUIPMENT & FURNISHINGS	1,440	sf	\$ 121.53	\$ 175,000.00
	E10 - EQUIPMENT (Tanks, Pumps, Secondary Containment)	1	ls	\$ 175,000.00	\$ 175,000.00
	E20 - FURNISHINGS	1,440	sf	\$ -	\$ -
	F - SPECIAL CONSTRUCITON & DEMO	1,440	sf	\$ 45.00	\$ 64,800.00
	F10 - SPECIAL CONSTRUCTION (PEMB - Canopy)	1,440	sf	\$ 45.00	\$ 64,800.00
	F20 - SELECTIVE BUILDING DEMOLITION	1	ls	\$ -	\$ -
	G - BUILDING SITE WORK	1,440	sf	\$ 32.57	\$ 46,900.00
	G10 - SITE PREPARATION			\$ -	\$ 7,200.00
	G1010 - SITE CLEARING			\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS			\$ -	\$ -
	G1030 - SITE EARTHWORK	1,440	sf	\$ 5.00	\$ 7,200.00
	G1040 - HAZARDOUS WASTE REMEDIATION			\$ -	\$ -
	G20 - SITE IMPROVEMENTS			\$ -	\$ -
	G2010 - ROADWAYS			\$ -	\$ -
	G2020 - PARKING LOTS			\$ -	\$ -
	G3030 - PEDESTRIAN PAVING			\$ -	\$ -
	G2040 - SITE DEVELOPMENT	1	ls	\$ 5,000.00	\$ 5,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 5,000.00	\$ 5,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES			\$ -	\$ 11,250.00
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS			\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS			\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS	250	lf	\$ 10.00	\$ 2,500.00
	G3040 - HEATING DISTRIBUTION	250	lf	\$ 35.00	\$ 8,750.00
	G3050 - COOLING DISTRIBUTION			\$ -	\$ -
	G3060 - FUEL DISTRIBUTION			\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES			\$ -	\$ -
	G40 - ELECTRICAL UTILITIES			\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION			\$ -	\$ -
	G4020 - EXTERIOR LIGHTING			\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY			\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES			\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION			\$ -	\$ -
	G9010 - SERVICE TUNNELS			\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT			\$ -	\$ -
	WBS Total	1,440	sf	\$ 263.35	\$ 379,220.00
	Mobilization			3.00%	\$ 11,376.60
	Field Overhead			10.00%	\$ 37,922.00
	General Conditions			4.00%	\$ 15,168.80
	SUBTOTAL - w. GC's				\$ 443,687.40
	Fee			8.00%	\$ 35,494.99
	SUBTOTAL - w. FEE				\$ 479,182.39
	Contingency			30.00%	\$ 143,754.72
	SUBTOTAL - w. Contingency				\$ 622,937.11
	Bonds & Insurance			1.50%	\$ 9,344.06
	SUBTOTAL - w. Bonds & Insurance				\$ 632,281.17
	Escalation			0.00%	\$ -
	TOTAL COST	1,440	sf	\$ 439.08	\$ 632,281.17

HDR		Covered Material Storage			
PROJECT: Washougal Master Plan		CO. NAME: CONTACT: PHONE: ADDENDA: DBE:			HDRC
NO: v1					Estimate
LOCATION: Washougal, WA					
ITEM #	DESCRIPTION	BID QUANTITY	UNIT	UNIT COST	TOTAL
WBS 100	Covered Material Storage	5,865	sf	\$ 97.41	\$ 571,310.00
	A - SUBSTRUCTURE	5,865	sf	\$ 17.00	\$ 99,705.00
	A10 - FOUNDATIONS	5,865	sf	\$ 17.00	\$ 99,705.00
	A20 - BASEMENT CONSTRUCTION	5,865	-	\$ -	\$ -
	B - SHELL	5,865	sf	\$ -	\$ -
	B10 - SUPERSTRUCTURE	5,865	sf	\$ -	\$ -
	B20 - EXTERIOR CLOSURE	5,865	sf	\$ -	\$ -
	B30 - ROOFING	5,865	sf	\$ -	\$ -
	C - INTERIORS	5,865	sf	\$ -	\$ -
	C10 - INTERIOR CONSTRUCTION	5,865	-	\$ -	\$ -
	C20 - STAIRCASES	5,865	-	\$ -	\$ -
	C30 - INTERIOR FINISHES	5,865	-	\$ -	\$ -
	D - SERVICES	5,865	sf	\$ 10.00	\$ 58,650.00
	D10 - CONVEYING SYSTEMS	-	-	\$ -	\$ -
	D20 - PLUMBING	1,700	-	\$ -	\$ -
	D30 - HVAC	1,700	-	\$ -	\$ -
	D40 - FIRE PROTECTION	5,865	sf	\$ -	\$ -
	D50 - ELECTRICAL	5,865	sf	\$ 10.00	\$ 58,650.00
	E - EQUIPMENT & FURNISHINGS	5,865	sf	\$ -	\$ -
	E10 - EQUIPMENT	1	ls	\$ -	\$ -
	E20 - FURNISHINGS	5,865	sf	\$ -	\$ -
	F - SPECIAL CONSTRUCITON & DEMO	5,865	sf	\$ 65.00	\$ 381,225.00
	F10 - SPECIAL CONSTRUCTION (PEMB)	5,865	sf	\$ 65.00	\$ 381,225.00
	F20 - SELECTIVE BUILDING DEMOLITION	1	-	\$ -	\$ -
	G - BUILDING SITE WORK	5,865	sf	\$ 5.41	\$ 31,730.00
	G10 - SITE PREPARATION			\$ -	\$ 5,865.00
	G1010 - SITE CLEARING	-		\$ -	\$ -
	G1020 - SITE DEMOLITION & RELOCATIONS	-		\$ -	\$ -
	G1030 - SITE EARTHWORK	5,865	sf	\$ 1.00	\$ 5,865.00
	G1040 - HAZARDOUS WASTE REMEDIATION	-		\$ -	\$ -
	G20 - SITE IMPROVEMENTS	-		\$ -	\$ 10,000.00
	G2010 - ROADWAYS	-		\$ -	\$ -
	G2020 - PARKING LOTS	-		\$ -	\$ -
	G3030 - PEDESTRIAN PAVING	-		\$ -	\$ -
	G2040 - SITE DEVELOPMENT	1	ls	\$ 5,000.00	\$ 5,000.00
	G2050 - LANDSCAPING - SWPPP	1	ls	\$ 5,000.00	\$ 5,000.00
	G30 - SITE CIVIL / MECHANICAL UTILITIES	-		\$ -	\$ -
	G3010 - WATER SUPPLY & DISTRIBUTION SYSTEMS	-		\$ -	\$ -
	G3020 - SANITARY SEWER SYSTEMS	-		\$ -	\$ -
	G3030 - STORM SEWER SYSTEMS	-		\$ -	\$ -
	G3040 - HEATING DISTRIBUTION	-		\$ -	\$ -
	G3050 - COOLING DISTRIBUTION	-		\$ -	\$ -
	G3060 - FUEL DISTRIBUTION	-		\$ -	\$ -
	G3090 - OTHER CIVIL / MECHANICAL UTILITIES	-		\$ -	\$ -
	G40 - ELECTRICAL UTILITIES	-		\$ -	\$ -
	G4010 - ELECTRICAL DISTRIBUTION	-		\$ -	\$ -
	G4020 - EXTERIOR LIGHTING	-		\$ -	\$ -
	G4030 - EXTERIOR COMMUNICATION & SECURITY	-		\$ -	\$ -
	G4090 - OTHER SITE ELECTRICAL UTILITIES	-		\$ -	\$ -
	G90 - OTHER SITE CONSTRUCTION	-		\$ -	\$ -
	G9010 - SERVICE TUNNELS	-		\$ -	\$ -
	G9090 - OTHER SITE SYSTEMS & EQUIPMENT	-		\$ -	\$ -
	WBS Total	5,865	sf	\$ 97.41	\$ 571,310.00
	Mobilization			3.00%	\$ 17,139.30
	Field Overhead			10.00%	\$ 57,131.00
	General Conditions			4.00%	\$ 22,852.40
	SUBTOTAL - w. GC's				\$ 668,432.70
	Fee			8.00%	\$ 53,474.62
	SUBTOTAL - w. FEE				\$ 721,907.32
	Contingency			30.00%	\$ 216,572.19
	SUBTOTAL - w. Contingency				\$ 938,479.51
	Bonds & Insurance			1.50%	\$ 14,077.19
	SUBTOTAL - w. Bonds & Insurance				\$ 952,556.70
	Escalation			0.00%	\$ -
</					

AACE - Class 5 Estimate - Based on Programming Only

Cost Range expectations

L: -20% to -50%

H: +30% to +100%

Clarifications & Assumptions

Assumptions

Assumes local labor and contractors are available to perform work (no traveling subsistence was included)
Overtime hours were not included, Assumes a std. 5 day work week from 8-5
No offsite improvements and or infrasture was included such as adjacent roadway improvements and utility main extensions
Expansive soils and associated mitigation procedures are not contemplated in this estimate
A slight premium for snowloading and siesmic was included for the pre-engineered metal building components (PEMB)
Assumes a publicly bid contract with 3 or more bidders in the bidding pool
Phasing options that start and stop construction over a period of years will increase the general conditions over that which is shown
General conditions costs are primarily the general contractors management staff
Given the programmatic level of design parametric estimating was employed (man hour/production based details were not utilized)
Permitting costs to be born by the Owner
Local wage rates were not evaluated

Exclusions

Exclude a fire water tank
Exclude a fire water pressure booster pump
Excludes any safeguards and prevention of EMF (electromagnetic fields)
Excludes an antenna mast for the communications system
Excludes Window Treatments
Excluded any hazardous waste abatement
COVID-19 production impacts are not contemplated
No contractor quotes were procured to support this estimate
Excludes any rockwork, rock removal etc..
Project Labor Agreements (Union Agreements) are not anticipated
Third party material testing and special inspections are not included
American Iron and Steel requirements were not anticipated

Any opinions of probable construction cost or cost estimates provided by HDR are made on the basis of information available to HDR and on the basis of the cost estimator's experience and qualifications. However, since HDR has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s) methods of determining prices, or over competitive bidding or market conditions, HDR does not guarantee that proposals, bids, or actual project or construction cost will not vary from opinions of probable cost or cost estimates presented in this report.

Appendix B - Cost Estimate - Recommendations From Assessment



Disciplines	Items	Technical Challenge	Urgency	Cost	Building	Total Direct Cost of Work Only	Building Area GSF	Unit Rate \$
Building A								
Architectural	Security upgrade for entries by replacing all the wood sliding barn doors with rolling doors with door frames reinforcement and hardware.	Straight forward	High	\$\$	A	\$ 48,000	8,000	6
Architectural	Provide ADA access and compliant spaces required by code including entry points egress doors, hardware, restroom upgrade, casework, walk surface hazard, access grading etc.	Medium	High	\$\$	A	More Information Required	8,000	
Architectural	Building envelope weather protection upgrade including flashing, divert rain water away from walk path to minimize risk on slippery surface condition during rainy or icy condition.	Medium	Medium	\$	A	More Information Required	8,000	
Architectural	Building layout and functions	Difficult	Low	\$\$\$	A	More Information Required	8,000	
Architectural	Fire alarm system and detection system	Medium	High	\$\$	A	\$ 80,000	8,000	10
Architectural	Building Energy Efficiency upgrade to energy code by meeting insulation value requirement on wall, ceiling and floor assembly. Minimize potential issues such as mildew developed by condensation and high energy bill.	Difficult	Medium	\$\$\$	A	\$ 40,000	8,000	5
Structural	Perform seismic analysis and consider retrofits for life safety, since occupied space. Depending on results of the analysis, this could get very costly.	Medium	High	\$\$\$	A	More Information Required	8,000	
Structural	Where a floor slab has been poured and converted to occupied space, it is unlikely the new slab meets the requirements for frost depth, etc. Chipping out the existing slab and pouring a new slab that meets code requirements for frost depth would be prohibitively expensive.	Difficult	High	\$\$\$	A	More Information Required	8,000	
Structural	Mezzanine storage area should be analyzed for load capacity. Depending on the results of that analysis, may need to relocate some equipment or reinforce the floor. Refinforcing the area would be difficult, but not unreasonably expensive.	Difficult	Medium	\$\$	A	More Information Required	8,000	
Mechanical	Repair Building A administration area furnace / air conditioner leak as identified in the Assessment Report.	Low	High	\$	A	\$ 480	8,000	0.06
Mechanical	Provide new vehicle exhaust system for automobile repair garages in accordance with IMC section 502.1.4	Medium	Medium	\$\$	A	\$ 8,000	8,000	1
Mechanical	Provide new exhaust system for the repair garages and the parking garage in accordance with IMC table 403.3.1.1 (0.75 CFM/SF, no recirculation of air)	Medium	High	\$\$	A	\$ 8,000	8,000	1
Electrical	Panelboard Replacement: Replace panelboards due to age and to provide additional circuits for future use.	Straight forward	Low	\$	A	\$ 5,600	8,000	0.7
Electrical	Networking Hardware : Install networking hardware in a dedicated room that is secured from unauthorized access. Install networking cable in cable trays, wire ways, or conduits. Add wi-fi access points.	Straight forward	Medium	\$\$	A	\$ 4,000	8,000	0.5
Electrical	Outlet and Light Switch Improvements: Retrofit outlets to include GFCI protection where required by code and provide weatherproof while-in-use covers for exterior outlets. Add occupancy sensors for automatic light reduction in office spaces. Replace outlets that are worn out and provide additional outlets as needed to improve usability of the building.	Straight forward	Low	\$	A	\$ 4,000	8,000	0.5
Electrical	Fire Alarm: Install a fire alarm system for the building.	Straight forward	High	\$	A	With item #7	8,000	
Electrical	Emergency Egress Lighting: Install emergency egress lighting for the building interior and exterior to allow safe evacuation of the building upon loss of power.	Straight forward	High	\$	A	\$ 2,400	8,000	0.3
Building B								
Architectural	Repair Building wall and roof panels	Straight-forward	Medium	\$	B	\$ 40,000	2,000	20
Structural	Repair damaged columns and back wall. These would be relatively low cost and could likely be carried out by city forces. Very low cost.	Straight-forward	High	\$	B	\$ 1,500	2,000	0.75
Structural	Consider adding some protection for columns and back wall from vehicles. This could simply consist of some precast concrete barriers and steel armoring. Low cost.	Straight-forward	Medium	\$	B	\$ 3,000	2,000	1.5
Structural	Replace the roof sheathing that has been removed. Medium cost, as will require removing the metal roofing as well, but would get better performance out of the roof.	Medium	Medium	\$\$	B			
						\$ 12,000	2,000	6
Electrical	Miscellaneous Electrical: Add UL listed conduit supports to existing raceways. Provide signage indicating source of power for the building and instructions on how to disconnect it.	Straight forward	Low	\$	B	\$ 2,000	2,000	1

Disciplines	Items	Technical Challenge	Urgency	Cost	Building	Total Direct Cost of Work Only	Building Area GSF	Unit Rate \$
	<u>Building C</u>							
Architectural	Security upgrade for entries by replacing all the wood sliding barn doors to storage spaces and provide security systems	Straight forward	High	\$\$	C	\$ 8,000	1600	5
Architectural	Provide ADA access and accommodation required by code including entry points doors, hardware, restroom upgrade, casework, walk surface hazard, corridor dimension	Difficult	High	\$\$	C	More Information Required	1600	
Architectural	Building expansion to be conformed by building fire rated exterior wall and accessories along the south façade.	Difficult	High	\$\$\$	C	More Information Required	1600	
Architectural	Raise ceiling to standard office requirement	Medium	Medium	\$\$\$	C	\$ 8,000	1600	5
Architectural	Eliminate condensation issues and water stain at Ceiling	Straight forward	High	\$\$	C	\$ 6,400	1600	4
Architectural	Building Energy Efficiency upgrade to energy code by meeting insulation value requirement on wall, ceiling and floor assembly.	Difficult	Medium	\$\$\$	C			
	Minimize potential issues such as mildew developed by condensation and high energy bill.					\$ 16,000	1600	10
Structural	Perform seismic analysis and consider retrofits for life safety since occupied space (offices). Depending on the results of the analysis, this could get very costly.	Medium	Medium	\$\$\$	C	More Information Required	1600	
Structural	Where a concrete floor has been installed and converted to occupied space, it appears the new slab does not meet requirements for frost depth. Chipping out the existing slab and pouring a new slab that meets code requirements would be prohibitively expensive.	Difficult	High	\$\$\$	C			
Structural	Upper mezzanine floor should be analyzed for load capacity. Likely they will need to remove some of the stuff that is up there, or reinforce the floor. This could get difficult, but would likely not be unreasonably expensive.	Difficult	High	\$\$\$	C	\$ 19,200	1600	12
Electrical		Straight forward	Low	\$	C	\$ 8,000	1600	5
Electrical	Panelboard Replacement: Replace panelboard to provide additional circuits for future use.					\$ 4,000	1600	2.5
Electrical	Networking Hardware: Install networking hardware in a dedicated room or lockable enclosure to secure from unauthorized access. Install networking cable in cable trays, wire ways, or conduits. Add wi-fi access points.	Straight forward	Medium	\$	C	\$ 1,600	1600	1
Electrical	Outlet and Light Switch Improvements: Retrofit outlets to include GFCI protection where required by code and provide weatherproof while-in-use covers for exterior outlets. Add occupancy sensors for automatic light reduction in office spaces. Replace outlets that are worn out and provide additional outlets as needed to improve usability of the building.	Straight forward	Low	\$	C			
Electrical	Emergency Egress Lighting: Install emergency egress lighting for the building interior and exterior to allow safe evacuation of the building upon loss of power.	Straight forward	High	\$	C	\$ 1,600	1600	1
Electrical	HVAC Disconnect Switch and Service Outlet: Install a disconnect switch and service outlet for the HVAC unit installed outdoors.	Straight forward	Medium	\$	C	\$ 480	1600	0.3
						\$ 640	1600	0.4
	<u>Building D</u>							
Architectural	Complete Roof sheathing and seal gypsum walls with paint	Straight forward	Low	\$	D	\$ 6,000	1200	5
Structural	The concrete floors in these buildings could be susceptible to frost damage. However, since it is primarily storage/utility space, less of a concern. Putting in a floor slab that would meet frost depth requirements would be prohibitively expensive.	Difficult	Low	\$\$\$	D			
Electrical	Panelboard: Remove the existing storage shelf in front of the panelboard as needed to provide clear working space in front of the panelboard per NEC requirements. Provide a panelboard directory.	Straight forward	Medium	\$	D	\$ 14,400	1200	12
						\$ 480	1200	0.4
	<u>Building E</u>							
Architectural	Security upgrade for entries by replacing or repair sliding barn doors to storage spaces, and provide security systems	Straight forward	High	\$\$	E	\$ 9,600	1600	6
Architectural	Repair roof panels to avoid leaking	Straight forward	High	\$	E	\$ 800	1600	0.5
Architectural	Repair Wall panel	Straight forward	Medium	\$	E	\$ 3,200	1600	2
Architectural	Repair roof gutter and downleader that is adjacent to Building F	Straight forward	High	\$	E	\$ 400	1600	0.25
Architectural	Need to provide direct egress door to outside as current means of egress through building D seems beyond code allowable distance	Medium	High	\$\$	E	\$ 1,600	1600	1
Structural	The concrete floors in these buildings could be susceptible to frost damage. However, since it is primarily storage/utility space, less of a concern. Putting in a floor slab that would meet frost depth requirements would be prohibitively expensive.	Difficult	Low	\$\$\$	E			
Electrical	Miscellaneous Electrical: Provide signage indicating source of power for the building and instructions on how to disconnect it.	Straight forward	Low	\$	E	\$ 19,200	1600	12
						\$ 1,600	1600	1

Disciplines	Items	Technical Challenge	Urgency	Cost	Building	Total Direct Cost of Work Only	Building Area GSF	Unit Rate \$
Building F								
Architectural	Repair crack between wall and Building E interface to eliminate leaking and water damage	Medium	High	\$	F	\$ 700	2800	0.25
Structural	The concrete floors in these buildings could be susceptible to frost damage. However, since it is primarily storage/utility space, less of a concern. Putting in a floor slab that would meet frost depth requirements would be prohibitively expensive.	Difficult	Low	\$\$\$	F			
Electrical	Panelboard Replacement: Replace panelboard to provide additional circuits for future use. Remove the scrap materials stored in front of the panelboard as needed to provide clear working space in front of the panelboard per NEC requirements. Provide signage indicating source of power for the building and instructions on how to disconnect it.	Straight forward	Low	\$	F	\$ 33,600	2800	12
						\$ 1,120	2800	0.4
Building G								
	None				G			
Public Work Office								
	Not in assessment							
Site								
Electrical	Security Improvements: Improve site lighting, add a video surveillance system, and add access control to deter break-ins, vandalism, and theft.	straight forward	Medium	\$\$	Site	\$ 50,000		
						\$ 475,600	Sub-Total Direct Cost of Work Only	
						\$ 9,512.00	Mobilization	
						\$ 38,048.00	GC Field Overhead	
						\$ 9,512.00	General Conditions	
						w. Cost of Work Sales Tax		
						\$ 42,614	Contractor's Fee	
						\$ 201,350	Contingency (35%)	
						\$ 46,598	Escalation 6% (assumes 1 year to package and bid)	
						\$ 20,581	Bonds & Insurance	
						\$ 843,815	Grand Total	

Appendix C - Assessment Report





Assessment Report

City of Washougal

Washougal, Washington
October 14, 2021



Contents

1	Architecture	1
1.1	Building A	1
1.1.1	General Descriptions	1
1.1.2	Exterior Assessment	3
1.1.3	Interior	6
1.1.4	Codes Compliance	9
1.1.5	Hazardous Materials	12
1.1.6	Summary	12
1.2	Building B	12
1.2.1	General Descriptions	12
1.2.2	Exterior Assessment	13
1.2.3	Codes Compliance	15
1.2.4	Hazardous Materials	15
1.2.5	Summary	15
1.3	Building C	16
1.3.1	General Descriptions	16
1.3.2	Exterior Assessment	17
1.3.3	Interior	19
1.3.4	Codes Compliance	21
1.3.5	Hazardous Materials	23
1.3.6	Summary	23
1.4	Building D	24
1.4.1	General Descriptions	24
1.4.2	Exterior Assessment	25
1.4.3	Interior	27
1.4.4	Codes Compliance	28
1.4.5	Hazardous Materials	28
1.4.6	Summary	29
1.5	Building E	29
1.5.1	General Descriptions	29
1.5.2	Exterior Assessment	29
1.5.3	Interior	32
1.5.4	Codes Compliance	33
1.5.5	Hazardous Materials	33
1.5.6	Summary	34
1.6	Building F	34
1.6.1	General Descriptions	34
1.6.2	Exterior Assessment	35
1.6.3	Interior	36
1.6.4	Codes Compliance	38
1.6.5	Hazardous Materials	39
1.6.6	Summary	39
1.7	Building G	39
1.7.1	General Descriptions	39
1.7.2	Exterior Assessment	40
1.7.3	Interior	41
1.7.4	Codes Compliance	42
1.7.5	Hazardous Materials	42
1.7.6	Summary	43

2	Structural	43
2.1	Building A	43
2.2	Building B	47
2.3	Building C	50
2.4	Building D	53
2.5	Building E	54
2.6	Building F	56
3	Electrical	57
3.1	Building A	57
3.2	Building B	60
3.3	Building C	60
3.4	Building D	63
3.5	Building E	65
3.6	Building F	65
3.7	Building G	66
4	Mechanical	68
4.1	Building A	68
4.2	Building C	76
4.3	Building D	80
4.4	Building E	81
4.5	Building F	82

Figures

Figure 1.1. Building A General Photos.....	1
Figure 1.2. Building A Exterior Photos	4
Figure 1.3. Building A Interior Photos	7
Figure 1.4. Building A Code Photos	11
Figure 1.5. Building B General Photos.....	13
Figure 1.6. Building B Exterior Photos	14
Figure 1.7. Building C General Photos	17
Figure 1.8. Building C Exterior Photos	19
Figure 1.9. Building C Interior Photos	20
Figure 1.10. Building C Code Photos.....	23
Figure 1.11. Building D General Photos	25
Figure 1.12. Building D Exterior Photos.....	26
Figure 1.13. Building D Interior Photos	27
Figure 1.14. Building E General Photos.....	29
Figure 1.15. Building E Exterior Photos	31
Figure 1.16. Building E Interior Photos	33
Figure 1.17. Building F General Photos.....	34
Figure 1.18. Building F Exterior Photos	35
Figure 1.19. Building F Interior Photos	37

Figure 1.20. Building G General Photos	40
Figure 1.21. Building G Exterior Photos.....	41
Figure 1.22. Building G Interior Photos.....	42
Figure 2.1. Wood Trusses Supporting Roof.....	43
Figure 2.2. Example of Transition Between Asphalt and Concrete	44
Figure 2.3. Example of Transition Between Asphalt and Concrete	44
Figure 2.4. Example of Surface Damage	45
Figure 2.5. Area Used for Storage	46
Figure 2.6. Area Used for Storage	46
Figure 2.7. Sign Posted at Top of Stairs	47
Figure 2.8. Remnants Between Roof Joints and Metal Roof Decking.....	48
Figure 2.9. Gap at Edge of Roof	48
Figure 2.10. Damage on South Wall.....	49
Figure 2.11. Column Damage.....	50
Figure 2.12. Sign at Top of Stairs	51
Figure 2.13. Heavy-Duty Shelving	51
Figure 2.14. Insulation.....	52
Figure 2.15. Holes Drilled in Joists	52
Figure 2.16. East Timber Trusses.....	53
Figure 2.17. West Timber Trusses.....	54
Figure 2.18. Building E Structure	55
Figure 2.19. Building E Structure	56
Figure 2.20. Roof Structure Hidden with Drywall.....	57
Figure 3.1. Building A Panelboard	58
Figure 3.2. Exposed Communication Equipment	59
Figure 3.3. Exposed Communication Equipment	59
Figure 3.4. Communication Cables in Attic.....	60
Figure 3.5. Building C Panelboard	61
Figure 3.6. Networking hardware in Loft	62
Figure 3.7. Communication Cables in Loft Space	62
Figure 3.8. HVAC Unit and Disconnect Switch	63
Figure 3.9. Building D Panel	64
Figure 3.10. Metal Shelf in Front of Panel	64
Figure 3.11. Building F Panel.....	65
Figure 3.12. Scrap Materials Stored in Front of Panel.....	66
Figure 3.13. Building G Panel	67
Figure 4.1. Building A Admin Furnace	69
Figure 4.2. Building A Admin A/C	70
Figure 4.3. Building A Air Leak	71
Figure 4.4. Building A Workshop Furnace	72
Figure 4.5. Building A Workshop Heat Pump	72
Figure 4.6. Building A Shop Furnace	73
Figure 4.7. Building A Exhaust Connections.....	74
Figure 4.8. Building A Domestic Water Heater	75
Figure 4.9. Building C Furnace	76
Figure 4.10. Building C A/C.....	77

Figure 4.11. Building C Water Closet.....	78
Figure 4.12. Building C Sink.....	78
Figure 4.13. Building C Shower	79
Figure 4.14. Building C Domestic Water Heater	79
Figure 4.15. Building D Gas Unit Heater.....	80
Figure 4.16. Building D Natural Gas Meter	81
Figure 4.17. Building E Unit Heater	81
Figure 4.18. Building E Thermostat	82
Figure 4.19. Building F Electric Unit Heater in Entry Area Shop	82
Figure 4.20. Building F Electric Unit Heater in Shop and Storage Area	83
Figure 4.21. Building F A/C in Entry Area Shop	83
Figure 4.22. Building F A/C in Parks Office	84
Figure 4.23. Building F Sink.....	84

1 Architecture

This is a visual assessment report of Buildings A, B, C, D, E, F, and G on the Washougal Public Works campus. The Public Work Office building that is located at 2247 Main Street is excluded.

1.1 Building A

1.1.1 General Descriptions

- Location: Building A is located at the west edge of the fully fenced campus. The building's west façade forms the boundary of the Public Works campus.
- Program:
 - It houses the Fleet, Parks, Streets, and Facilities Departments
 - Functional spaces including four offices, conference room, shops, and storage spaces for tires and parts
- Orientation: Building is north-south orientation
- Access:
 - Main pedestrian entrance is located at the south side of the building. Egress doors to shops and storage are provided at south and north sides of the building.
 - Except the north façade of the building, the building has vehicle entrances at the east, south, and west to access the shops and storage spaces.
- Levels: Building A is a single-story building with an open mezzanine that can be accessed from the storage area.
- Size: Approximately 50 feet by 100 feet. The longitudinal axis of the building is north-south direction.
- Style: Building A is a rectangular barn building

Figure 1.1. Building A General Photos





1.1.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Metal roof and roof fascia system are in fair condition
 - No obvious wear and tear marks on the roof were found
 - No split, crack, or chipping on the roof panels were found
 - No leakage or unsealed openings were found
- Wall assembly is uninsulated box ribbed type metal wall panel at shop and storage area. Insulation for wall assembly at offices and shops area cannot be confirmed. The exterior is consistently clad with metal panel and interior with painted gypsum wall board finishes. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:
 - Wall exterior condition is below average
 - Finish of the wall panels are generally intact
 - Multiple dents and locally deformed areas on metal panels were found
 - Unsealed crack and holes were found at north façade and east façade
 - Treated wood wall curbs are exposed without any protection
 - Unfinished wall panels were used to patch at east façade
- Weather Protections such as awning at doors are not found. The building roof does not provide any eave. Water mitigation is by metal flashing above doors and windows. They are functioning but in bad condition. Leakage may occur at the shops and storage areas. Observations on weather protection details:
 - Portion of the roof gutters is slightly deformed above the barn door at storage
 - Wood fascia and wood blockings that support gutter systems are exposed and unprotected
 - Downspouts are functional even though some of them are deformed
 - Downspouts are not tie to the storm drain system and most of them are without splash block
 - All metal flashings are either deformed or not tightly flash around the door frames and windows frames. Metal flashings that are partially detached from claddings and exposed to weather are found at the north façade and south façade.
- Doors and Windows
 - Both double pane and single pane windows are found.
 - Double pane vinyl windows appear in fair condition. Single pane window will have condensation issues in cold weather.
 - Exterior wood doors and metal doors are used. Door thresholds are not appropriately applied.

- Uninsulated automatic overhead rolling door at shop is in fair condition.
- Manual uninsulated sliding barn door is in below average condition.
- Manual bi-parting uninsulated sliding door at the south façade is in below average condition. The wood framing of the door leaf is rotted.
- Security
 - Intrusion detection system is not found
 - Security Camera is not found at the site

Figure 1.2. Building A Exterior Photos







1.1.3 Interior

- Zones of Building A are divided into business area, shops, and storage. Business area includes four offices, conference room, and restrooms.
- Observations at the business area:
 - Main entrance with lockers and electric panels
 - Hallway dimensions appear appropriate for egress and ingress compliance
 - Restrooms and Shower condition are fair
 - Ceiling is composed of acoustic ceiling tile with lay-in ceiling grid at the conference room. Offices' ceilings are composed of gypsum ceiling. Insulation is provided above ceiling based on observation at the mezzanine above. Insulation value cannot be confirmed.
 - Partition finishes are limited wall panels and painted gypsum walls. They are in fair condition. Insulation value at perimeter partitions that separate shops and storage areas cannot be confirmed.
 - Floor: Walk-off mat is provided at entry concrete floor. Sealed concrete floor is in fair condition. Large floor cold joint is not patched. It can be a tripping hazard. Carpet flooring is provided at offices. Street Office flooring is not level.
- Observations at the Mechanic Shops Area:
 - Ceilings are composed of painted gypsum ceiling. Approximately 13 to 14 feet tall at Mechanic Shops Room.

- Gypsum walls are generally in fair condition. Interfacing areas between walls and exterior door jambs need to be repaired and covered. Partial gypsum wall board is unfinished.
- Floor: Sealed concrete floor is in fair condition. Cracks around the perimeter of the slab are found.
- Observations at Street Shops and Tire Storage and Mezzanine:
 - Ceilings are composed of painted gypsum ceiling. Approximately 13 to 14 feet tall at Streets shops. Insulation at the shop room is not confirmed.
 - Gypsum walls are generally in fair conditions at the vehicle shop. Tire storage and other vehicle storage area are uninsulated.
 - Floor: Sealed concrete floor is in fair condition at Street Shop. Gravel surface are paved at the storage area.
 - Mezzanine is mainly for mechanical duct work. It is accessed by a wood staircase from the storage area. Exposed fiberglass insulation at the mezzanine is a hazard.
- Acoustic may be a concern for conference room and offices since the building is located next to BNSF railroad. Double pane windows do not provide for acoustic barrier.
- Access control are through door locks

Figure 1.3. Building A Interior Photos







1.1.4 Codes Compliance

- Per International Building Code definition, Building A is:
 - Mixed occupancies of occupancy B, S-1 and F-1
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non-sprinklered

- Fire separation between the three occupancies are not required
- Numbers of egress are appropriate based on their current locations and sizes
- ADA accommodation per ICC/ANSI A117:
 - Restrooms and Shower are non-ADA compliance
 - ADA building access is not provided to the business area
 - Door, caseworks are non-ADA
 - The building is not in compliance with ADA
- International Energy Conservation Code (IECC) Compliance:
 - The building is partially insulated. Insulation value cannot be verified.
 - Building is likely under insulated
 - No perimeter insulations at wall curbs
 - All the doors including man doors or rolling doors are non-insulated
 - The building is not in compliance with IECC Washington Amendment (Washington State Energy code)
- Fire Protection and Fire Alarm System:
 - It appears that there was no fire alarm system in the building
 - Horns and strobes are not provided at shops
 - Fire extinguishers are located at various spaces
 - Exit Signs and Exit plans that indicate fire extinguishers' locations are provided
- Lighting level at office space and shops space meet minimal requirement of safety

Figure 1.4. Building A Code Photos



1.1.5 Hazardous Materials

- Asbestos-Containing Materials and Lead-Based Paint cannot be confirmed at the building without material samples testing
- No significant mold is visually presented inside the building

1.1.6 Summary

HDR conducted a visual assessment of Building A. The overall condition of the building is average grade. The conditions at the exterior doors to walls are concerning. Metal flashings above sling door and man doors are deformed. Dry rot at the wood framing around doors and jambs are noted. Weather and moisture protection of the building is poor even though significant sources of water intrusion were not noted. With these deteriorated conditions, building security can be easily compromised even though it is located in a fully fenced campus.

Timber sill plate for exterior walls with direct ground contact is not recommended for commercial buildings. The building is under insulated and energy inefficient. It may present condensation issue inside the exterior walls at business area during the cold season.

There are many building components that need to be upgraded to meet ADA requirement such door thresholds, door hardware and their positions, finish grading at main entry, casework upgrade, restroom upgrade, signs with braille, etc.

Besides a potential hazard from the exposed electrical wire and the main hallway at the business area, the concrete floor with unpatched joints also presents a tripping hazard. The current setting of the offices does not provide any privacy for tenants when a meeting needs to be conducted.

1.2 Building B

1.2.1 General Descriptions

- Location: Building B is located at the south edge of the fully fenced campus. The building south façade is less than five feet to the fenced of Public Works campus, and its east is attached to Building C.
- Program:
 - It houses Fleet Vehicles
 - Fleet Storage
- Orientation: The building longitudinal direction is east and west
- Access: Open structure with vehicle access from the north of the building
- Levels: Building B is a single-story building
- Size: Approximately 30 by 50 feet. The longitudinal axis of the building is north-south direction.

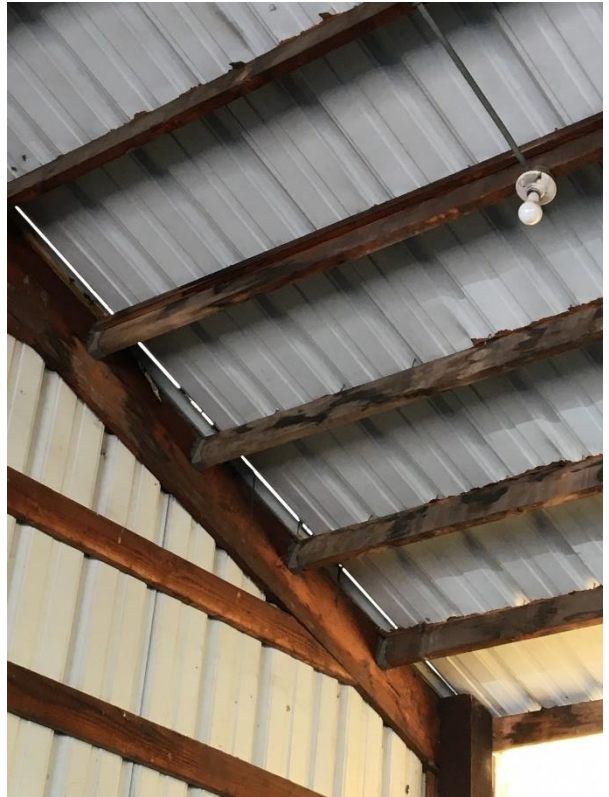
Figure 1.5. Building B General Photos



1.2.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Metal roof and roof fascia system are in fair condition
 - No obvious wear and tear marks on the roof were found
 - Detached roof panels are noted near interface with Building C roof
 - Leakage from the roof is expected
- Wall assembly is uninsulated box ribbed type metal wall panel. Observations on the exterior walls:
 - Wall exterior condition is below average
 - Finish of the wall panels are generally intact
 - Multiple dents and locally deformed areas on metal panels are found
 - Back wall panels and horizontal wall girts are detached and left opening at the back of the building caused by impact from vehicle
 - Aged, corrugated fiberglass wall panels are in fair condition
- Floor is paved by gravel
- Doors and Windows:
 - A single door is located at the south of the building. The condition is fair.
- Weather protection observation details:
 - Wood fascia and wood blockings that support gutter systems are exposed and unprotected
 - Downspouts are functioning
 - Water may migrate from the back at the detached wall panels

Figure 1.6. Building B Exterior Photos





1.2.3 Codes Compliance

- Per International Building Code definition, Building B is:
 - Single occupancy S-2
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non sprinklered
- ADA accommodation per ICC/ANSI A117:
 - Not applicable to this building
- International Energy Conservation Code (IECC) Compliance:
 - Not applicable to this building
- Fire Protection and Fire Alarm System:
 - Horns and strobes are not found
 - Fire extinguisher is not found

1.2.4 Hazardous Materials

- Asbestos-Containing Materials and Lead-Based Paint cannot be confirmed at the building without material samples testing.
- Old removed roof underlayment remain between roof purlins and the underside of metal roof. Material of the exposed roof underlayment cannot be confirmed.
- No mold is visually presented inside the building.

1.2.5 Summary

HDR conducted a visual assessment of Building B. The overall condition of the building is below average. The roof and walls are in poor shape. Given it is an open structure to store fleets, the building walls and columns do not have any impact protections. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings.

1.3 Building C

1.3.1 General Descriptions

- Location: Building C is located at the center of the fully fenced campus. The building south façade is less than five feet to the fence of Public Works campus, and its west to Building B.
- Program:
 - It houses the Stormwater Department and Administration staff
 - Functional spaces including offices with restroom, a nonconformed business area, parking garage, and an attic space for tires and parts
- Orientation: The building longitudinal direction is east and west
- Access:
 - A single pedestrian entrance is located at the north side of the building
 - Vehicle access is located at the north façade of the building with a sliding barn door to access the garage
- Levels: Building C is a single-story building with a storage room above the restroom and nonconformed business area accessed by stairs.
- Size: Approximately 45 by 50 feet. The longitudinal axis of the building is north-south direction.
- Style: Building C and Building B appear to be a single structure system and were subdivided into two buildings.

Figure 1.7. Building C General Photos



1.3.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Metal roof and roof fascia system are in fair condition
 - No obvious wear and tear marks on the roof were found
 - No split, crack, or chipping on the roof panels were found
 - No leakage or unsealed opening is noted
- Wall assembly is uninsulated box ribbed type metal wall panel at the garage area. Insulation for wall assembly at offices area is provided. The exterior is consistently clad with the same metal panel type. Pressured treated timbers are used at the bottom of the exterior walls as wall curbs. Observations on the exterior walls:
 - Wall exterior condition is aged and below average
 - Finish of the wall panels are generally intact
 - Dents and locally deformed areas on metal panels were found

- Treated wood wall curbs are exposed without flashing transition or protection
- Weather Protections is provided for the main egress door with an awning.
Observation on weather protection details:
 - Portion of the roof gutters is slightly deformed above the barn door at storage
 - Wood fascia and wood blockings that support gutter systems are exposed and unprotected
 - Downspouts are functioning
 - Downspouts are not tied to the storm drain system and most of them are without splash block
 - Oversize metal flashing and trim above vehicle access door to the shop is in fair condition. Metal flashings above windows function but are in poor condition.
- Doors and Windows
 - Double pane windows are provided at north and east walls and they are in fair condition
 - Water migration likely occurs at the windows due to poor flashing details. They function but are in bad condition.
 - In-swing exterior egress door is not insulated
 - Manual uninsulated sliding rolling door at garage is deformed but functioning. It is in poor condition.
- Security
 - Intrusion detection system is not found
 - Security at the garage area is poor

Figure 1.8. Building C Exterior Photos

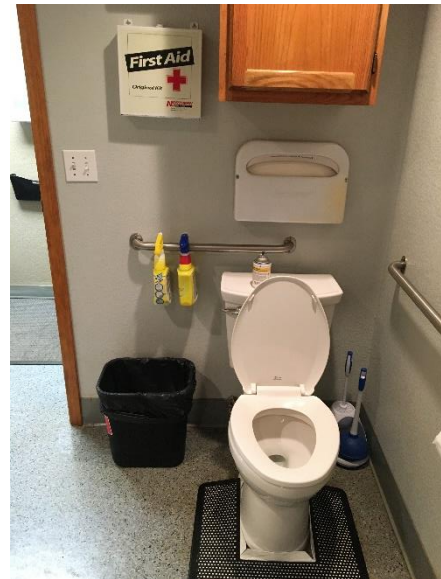
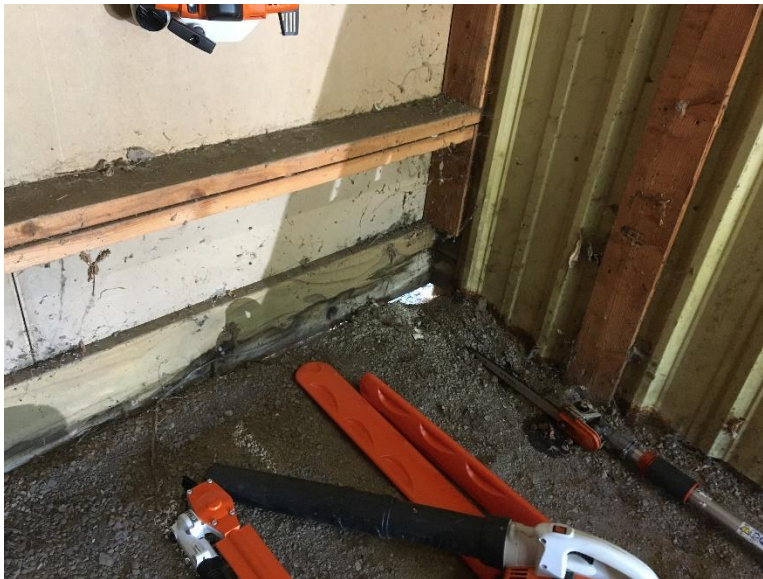


1.3.3 Interior

- Zones of Building C are divided into business area, shops, and storage. Business area includes open offices, a nonconformed business area, and a restroom.
- Observations at the business area:
 - Hallway dimensions appear appropriate for egress and ingress compliance
 - Restrooms and Shower condition are fair
 - Ceiling is composed of acoustic ceiling tile with lay-in ceiling at the office area, hallway, and restroom. Gypsum ceiling is provided at the nonconformed business area.
 - Approximately 7'-2" to 7'-4" ceiling height.
 - Insulation is used above ceilings. Insulation value cannot be confirmed. No vapor retarder applied at the ceiling.
 - Multiple water stains are found at the ceiling likely caused by condensation.
 - Partition finishes are painted gypsum walls. They are in fair condition. Insulation value at perimeter partitions cannot be confirmed. Partition insulation at business area stop at the ceiling height based on observation at attic above.
 - Floor: Walk-off mat is provided at entry hallway. Vinyl floor is in fair condition at hallway and restroom. Carpet flooring is used at offices and they are aged and in fair condition.

- Observations at the Garage Area:
 - Ceiling is exposed structure with roof underlayment with liner. Approximately 13 to 14 feet at high point.
 - Vertical wood plank siding at business area partition is generally in good condition. The rest of the garage area is enclosed by uninsulated wall panel.
 - Floor is paved by gravel
- Observations at Attic Storage Space:
 - Ceiling is exposed structure with roof underlayment with liner. Low clearance at approximately 6 foot height with uninsulated perimeter walls.
 - Floor is constructed with painted plywood and is in fair condition.
 - Attic space has a maximum allowable load of 15 pounds per square foot.
 - Security is a concern for the space because of the poor condition of the sliding door to the garage.
- Access control is through door locks

Figure 1.9. Building C Interior Photos



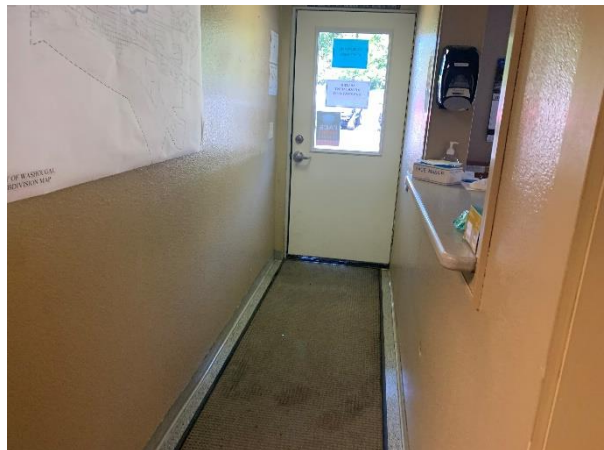


1.3.4 Codes Compliance

- Per International Building Code definition, Building C is:
 - Mixed occupancies of occupancy B, S-2

- The building is under construction Type VB
- Non fire rated at building structures, roof, and wall assemblies
- Non sprinklered
- Fire separation between the three occupancies are not required.
- Numbers of egress are appropriate based on their current locations and sizes
- ADA accommodation per ICC/ANSI A117:
 - The building is not in compliance with ADA
 - Restrooms are non-ADA compliant
 - Shower is ADA compliant
 - ADA building access is not provided to the business area in terms of entry materials, elevations, or door clearance
 - Door, caseworks are non-ADA
- International Energy Conservation Code (IECC) Compliance:
 - The building is not in compliance with IECC Washington Amendment (Washington State Energy code)
 - The building is partially insulated. Insulation value cannot be verified.
 - Building is likely under insulated
 - All the doors, including man doors and sliding door, are non-insulated
- Fire Protection and Fire Alarm System:
 - It appears that there was no fire alarm system in the building
 - Horns and strobes are not provided at shops
 - Fire extinguishers are located at various spaces
 - Exit Signs and Exit plans that indicate fire extinguishers' locations are provided

Figure 1.10. Building C Code Photos



1.3.5 Hazardous Materials

- Asbestos-Containing Materials and Lead-Based Paint cannot be confirmed at the building without material samples testing.
- Mold is not visually presented but is expected inside the Building C by the presence of multiple water stains.

1.3.6 Summary

HDR conducted a visual assessment of Building A. The overall condition of the building is below average. Key issues are listed below:

- Exterior fire rated walls may be required by the Authorities Having Jurisdiction (AHJs) due to the proximity of the building being closer than 5 feet of the site property line. It is based on fire resistance rating requirements for exterior walls based on fire separation distance in IBC. IBC requires Type VB construction exterior wall to be rated at least 1 hour when the building is closer than 5 feet of the lot line or less than 10 feet to adjacent structure. An opening is not permitted on the wall. That will pose a significant cost impact on interior space upgrade and conversion of the non-conformed business area.
- ADA compliance is challenging at the current setting. The exterior door needs to be replaced to provide sufficient ADA clearance. The hallway is compliant to ADA minimal required 36 inches. It is narrow for practical functioning. Other building components that need to be upgraded to meet ADA requirement include, but are not limited to door thresholds, door hardware, and the finish grading, walking surface at main entry, casework upgrade, restroom upgrade, and signs, etc.
- Ceiling height appears lower than the required 7'-6" per IBC. To raise the ceiling height will be a challenge and trigger extended work for the upgrade.
- Due to missing vapor retarder, multiple moisture stain marks caused by condensation is present at acoustic ceiling tile. Mildew may occur in the business area at the ceilings and inside the exterior walls.
- The building is under-insulated and energy inefficient. No perimeter insulation around the wall curb. Timber sill plate for exterior walls with direct ground contact is also not recommended for commercial buildings.
- Even though it is located in a fully fenced campus, Building C security can be easily compromised because of the poor condition of the garage sliding door.

1.4 Building D

1.4.1 General Descriptions

- Location: Building D is located at the center of the fully fenced T-shaped campus. The building's east façade shares a wall with Building E. Its west is a 12-foot wide alley that separates Buildings C and D.
- Program: It houses Storage, Snowplow equipment and vehicles
- Orientation: The building longitudinal direction is east and west
- Access:
 - An egress door to the alley is located at the west side of the building.
 - Vehicle access is located at the north façade of the building with three overhead rolling doors and a bi-parting barn door.
- Levels: Building D is a single-story building.
- Size: Approximately 25 by 40 feet. The longitudinal axis of the building is north-south direction.

Figure 1.11. Building D General Photos



1.4.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Metal roof and roof fascia system are in fair condition
 - No obvious wear and tear marks on the roof panels were found
- Wall assembly is uninsulated box ribbed type metal wall panel. Interior gypsum sheathing is provided at Snow Plow equipment and fleet area. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observation of the exterior walls:

- Wall exterior condition is aged and in fair condition
- Finish of the wall panels are generally intact
- Dents and locally deformed areas on metal panels are found
- Treated wood wall curbs are exposed without flashing transition or protection.
- Observations on weather protection details:
 - Rain gutter is overrun in horizontal distance
 - Wood fascia and wood blockings that support gutter systems are exposed and unprotected
 - Downspouts near Building E are not correctly detailed and installed
 - Oversized metal flashing and trim above vehicle access door to the storage is deformed
- Doors:
 - Manual overhead rolling door in fair condition. They appear to be non-insulated type.
 - Metal swing door for egress is in fair condition.

Figure 1.12. Building D Exterior Photos



1.4.3 Interior

- Building E houses the Snow Plow Equipment and vehicles. An overhead heating unit is provided.
- Observations at Snow Plow Area:
 - Ceilings is half exposed structure and half gypsum vaulted ceiling. Roof underlayment with liner are exposed, but insulation is not noted. Approximately 13 to 14 feet at high point.
 - Walls are covered by gypsum wall boards
 - Floor is composed of concrete slab
 - Unprimed wall boards and gypsum ceilings are taped and mudded
 - Concrete floor slab is in fair condition
- Access control is through door locks

Figure 1.13. Building D Interior Photos





1.4.4 Codes Compliance

- Per International Building Code definition, Building D is:
 - Single occupancy S-2
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non sprinklered
- ADA accommodation per ICC/ANSI A117 is not applicable
- International Energy Conservation Code (IECC) Compliance:
 - The building is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces.
- Fire Protection and Fire Alarm System:
 - Fire extinguishers are provided
 - Exit Signs are provided

1.4.5 Hazardous Materials

- Mold is not visually present

1.4.6 Summary

HDR conducted a visual assessment of Building D. The overall condition of the building is average. The roof and the walls are aged. Reasonable wear and tear are noted. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings.

1.5 Building E

1.5.1 General Descriptions

- Location:
 - Building E is located at the center of the fully fenced T-shape campus. The building shares walls with Building D and F at its east and west location.
- Program: Storage
- Orientation: The building longitudinal direction is east and west
- Access:
 - A man door connects to Building D at the east wall of the building for exiting
 - Vehicle access is located at the north façade of the building with bi-parting barn doors.
- Levels: Building E is a single-story building
- Size: Approximately 25 by 40 feet. The longitudinal axis of the building is north south direction.

Figure 1.14. Building E General Photos

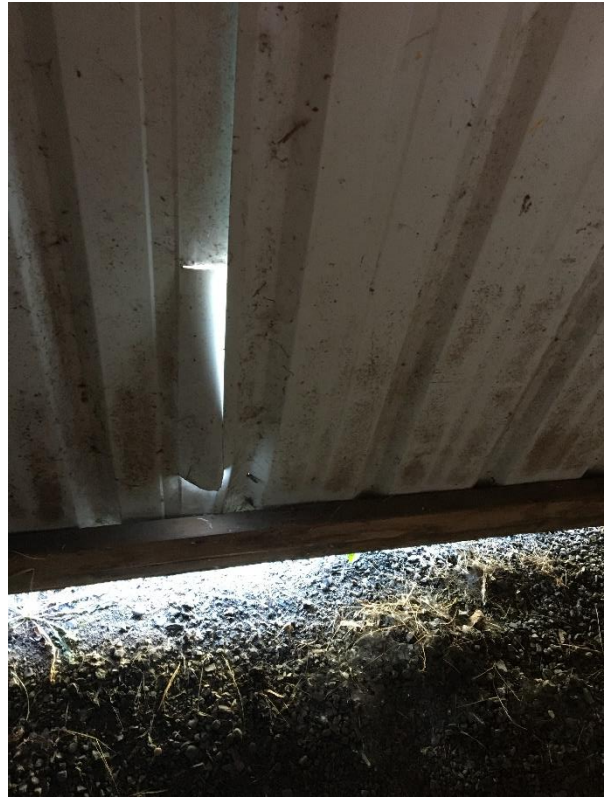


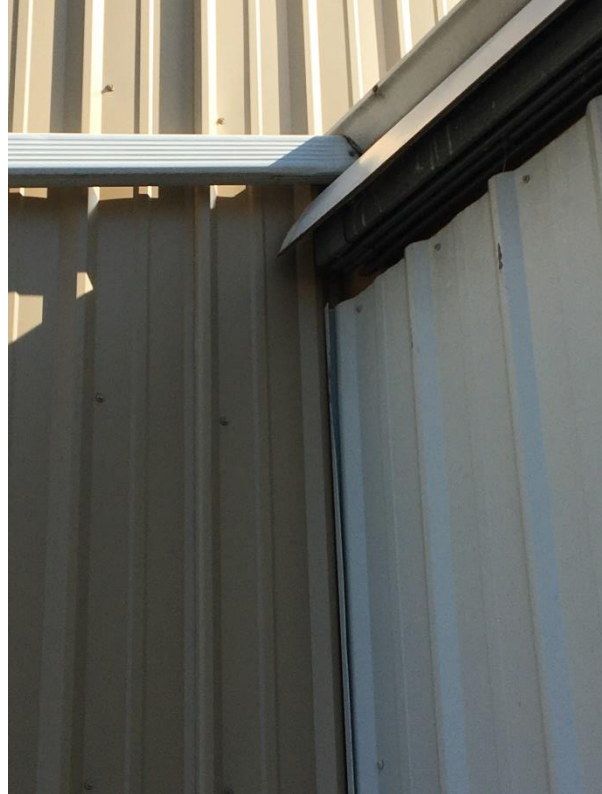
1.5.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Metal roof and roof fascia system are in fair condition

- No obvious wear and tear marks on the roof panels were found
- Unsealed opening on the roof panels was found at the area near Building F
- Leakage likely occurs from the roof
- Wall assembly is uninsulated box ribbed type metal wall panel. Interior gypsum sheathing is provided at Snow Plow equipment and fleet area. Pressured treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:
 - Wall exterior condition is aged and in fair condition
 - Finish of the wall panels are generally intact
 - Dents and locally deformed areas on metal panels were found
 - Treated wood wall curbs are exposed without flashing transition or protection
- Observation on weather protection details:
 - Rain gutter is overrun in horizontal distance
 - Wood fascia and wood blockings that support gutter systems are exposed and unprotected
 - Downspouts near Building E are not correctly detailed and installed
 - Oversized metal flashing and trim above vehicle access sliding doors to the storage is deformed
- Doors: Manual uninsulated sliding doors at Storage are deformed but functioning. They are in poor condition.
- Security: With poor condition of the vehicle sliding doors, security of the building is concerning.

Figure 1.15. Building E Exterior Photos





1.5.3 Interior

- Observations at Record Storage Space:
 - Ceiling is exposed structure. Roof underlayment with liner is exposed. Approximately 13 to 14 feet at high point.
 - Walls are uninsulated and exposed metal panels and wall girts
 - Floor is composed of gravel and soil

Figure 1.16. Building E Interior Photos



1.5.4 Codes Compliance

- Per International Building Code definition, Building E is:
 - Single occupancy S-2
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non sprinklered
 - Exit access travel distance is over allowable distance by IBC means of egress
- ADA accommodation per ICC/ANSI A117 is not applicable
- International Energy Conservation Code (IECC) Compliance:
 - The building is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces
- Fire Protection and Fire Alarm System:
 - Fire extinguishers cannot be located

1.5.5 Hazardous Materials

- Mold is not visually present

1.5.6 Summary

HDR conducted a visual assessment of Building E. The overall condition of the building is average. The roof and the walls are aged. Reasonable wear and tear is noted. Timber sill plates for exterior walls with direct ground contact are not recommended for industrial buildings.

Detached roof panels caused by poor workmanship or detail is noted near interface with Building E roof. Leakage from the roof is expected.

Deformed wall panels and sliding doors shall be repaired.

1.6 Building F

1.6.1 General Descriptions

- Location: Building F is located at the west part of the fully fenced T-shape campus. The building east façade shares a wall with Building E.
- Program: Garage/Park Storage, Shops for Building Maintenance
- Orientation: The building longitudinal direction is east and west
- Access: Vehicle access is located at the north façade of the building with two overhead sectional doors to the garage and the parts storage area. Egress doors are provided at the shops and west wall of the storage.
- Levels: Building F is a single-story building with tall vertical clearance. The building has a centrally located tool shops and storage platform.
- Size: Approximately 36 by 42 feet. The longitudinal axis of the building is north-south direction.

Figure 1.17. Building F General Photos



1.6.2 Exterior Assessment

- Roof assembly is uninsulated metal roof system over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Uninsulated metal roof and roof fascia system are in fair condition
 - No obvious wear and tear marks on the roof panels were found
 - No unsealed openings on the roof were found
- Wall assembly is uninsulated box ribbed type metal wall panel. Pressure treated timbers are used at the bottom of the exterior walls as wall curbs. Observations of the exterior walls:
 - Wall exterior condition is aged but in fair condition
 - Finish of the wall panels are generally intact
 - Dents and locally deformed areas on metal panels were found
 - Treated wood wall curbs are covered by wall panels and flashing
- Observation on weather protection details:
 - Metal flashings, fascia, and trims are in good condition.
- Doors:
 - Manual overhead sectional doors are in good condition. They appear to be non-insulated type at the shop.
 - Manual overhead sectional doors are block off at the shop area. Rigid insulations are applied at the sectional doors, but it is partially completed.
 - Egress single doors are metal doors in fair condition.
- Security: The space is secured by door locks

Figure 1.18. Building F Exterior Photos





1.6.3 Interior

- Building F are divided into two zones, the Storage/Garage and the Shop. Overhead heating units are provided at both spaces.
- Observations at Storage/Garage:
 - Ceiling is half exposed structure and half gypsum vaulted ceiling. Roof underlayment with liner is exposed, but insulation is not noted. Approximately 16 to 18 feet at high point.
 - Walls are covered by unprimed gypsum wall boards
 - Floor is composed of concrete slab in good condition
- Observations at the Shop:
 - Ceiling is covered by finished gypsum boards at approximately 12 feet high
 - Walls are insulated and covered by gypsum wall board. Batt insulation in the wall is partially exposed above the overhead sectional doors.
 - Floor is composed of concrete slab
 - Two metal doors are provided for egress
- Access control is through door locks

Figure 1.19. Building F Interior Photos





1.6.4 Codes Compliance

- Per International Building Code definition, Building F is:
 - Single occupancy S-2 and F-1
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non sprinklered

- ADA accommodation per ICC/ANSI A117 is not applicable
- International Energy Conservation Code (IECC) Compliance:
 - Building F is not in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces
 - Insulation value of the roof and the wall and the Shop cannot be confirmed. Insulation on doors, roof and walls are likely under insulated per current energy code
- Fire Protection and Fire Alarm System:
 - Fire extinguishers are provided
 - Exit map with fire extinguishers' locations are provided in the Shop

1.6.5 Hazardous Materials

- Mold is not visually noted

1.6.6 Summary

HDR conducted a visual assessment of Building F. The roof and the walls are aged. Reasonable wear and tear are noted. The interior of the building is in fair condition. The overall condition of Building F is average.

1.7 Building G

1.7.1 General Descriptions

- Location: Building G is located at the southern part of the fully fenced T-shape campus.
- Program: Water Shops and Storage
- Orientation: The building longitudinal direction is north and south
- Access: Vehicle access is located at the west façade of the building with three overhead sectional doors. Egress doors are provided at each shop at the west and south walls of the building.
- Levels: Building G is a single-story building with tall vertical clearance
- Size: Approximately 40 by 60 feet

Figure 1.20. Building G General Photos



1.7.2 Exterior Assessment

- Roof assembly is a metal roof system with insulated roof liner over wood frame structures. Metal roof is observed from ground level. HDR did not access the top of the roof for close-up assessment. Observations on the roof:
 - Uninsulated metal roof and roof fascia system are in good condition
 - No obvious wear and tear marks on the roof panels were found
 - No unsealed openings on the roof were found
- Wall assembly is box ribbed type metal wall panel with insulation that is covered by finished gypsum wall panels. Observations of the exterior walls:
 - Wall exterior condition is in good condition
 - Finish of the wall panels are generally intact
 - Minor dents on metal panels were found
- Observation on weather protection details:
 - Metal flashings, fascia, and trims are in good condition
- Doors:

- Manual overhead sectional doors are in good condition. They appear to be insulated.
- Egress single doors are metal doors in good condition
- Security: The space is secured by door locks

Figure 1.21. Building G Exterior Photos



1.7.3 Interior

- Building G is divided into two shops. Overhead heating units are provided at both spaces.
- Observations at Shop:
 - Ceiling is exposed wood structure with insulated ceiling liners to form the vaulted ceiling. Approximately 18 feet at the ridge of the high point.
 - Partitions are covered by either painted gypsum board or painted plywood
 - Floor is composed of sealed concrete slab in good condition
- Access control is through door locks

Figure 1.22. Building G Interior Photos



1.7.4 Codes Compliance

- Per International Building Code definition, Building G is:
 - Single occupancy F-1
 - The building is under construction Type VB
 - Non fire rated at building structures, roof, and wall assemblies
 - Non sprinklered
- ADA accommodation per ICC/ANSI A117:
 - The building is in compliance with ADA
- International Energy Conservation Code (IECC) Compliance:
 - Although insulation value of the roof and the wall and the Shop cannot be confirmed, Building G is likely in compliance with IECC Washington Amendment (Washington State Energy code) for heated spaces.
- Fire Protection and Fire Alarm System:
 - Fire extinguishers are provided
 - Exit map with fire extinguishers' locations are provided in the Shop.

1.7.5 Hazardous Materials

- Mold is not visually noted
- Based on the age of the building, hazardous materials are assumed not used in this building

1.7.6 Summary

HDR conducted a visual assessment of Building G. The roof and the walls are fairly new. Reasonable wear and tear is noted. Interior of the building is in good condition. The overall condition of Building G is good.

2 Structural

2.1 Building A

Building A is an 8,500 square foot structure, constructed with wood post frame (pole barn) type construction. The roof is supported by wood trusses, as shown in Figure 2.1. The majority (approximately 2/3) of the building has had partition walls installed to create office and shop space. These areas have had concrete floors installed. In general, these concrete floors are in fair condition, however some cracking and damage is noted in the floor at the roll up door on the south side of the building. This is likely due to the rough transition between the asphalt and the concrete, as shown in Figure 2.2 and Figure 2.3.

Figure 2.1. Wood Trusses Supporting Roof



Figure 2.2. Example of Transition Between Asphalt and Concrete



Figure 2.3. Example of Transition Between Asphalt and Concrete



The northeast portion of the building is used for vehicle and equipment storage and has a dirt/gravel floor. This is the only area where the structural framing is visible. In most other areas, the structural framing has been hidden by partition walls and ceilings. Of the structural framing that is visible, it appears to be in good condition. Poles are of treated timber, which will prevent decay of the embedded portions. Some surface damage is

noted at the columns at the main door to the storage area, likely due to vehicle impact (see Figure 2.4). The roof sheathing shows no evidence of staining and leakage and appears to be in good condition. No sag is noted in the roof trusses that are visible.

Figure 2.4. Example of Surface Damage



The area above the main office space is accessible by a staircase in the gravel floor storage area. It appears this area is used for storage and mechanical equipment (see Figure 2.5 and Figure 2.6). A sign is posted at the top of the stairs indicating a 20 psf load limit (see Figure 2.7). This meets the current code requirement for uninhabitable attic spaces with storage. Code defines this as uninhabitable due to the low head clearance. The floor exhibits some softness when walking around. No signs of distress are obvious. The deflection felt in the floor is likely due to the ceiling structure of the attic space not being adequately designed to limit deflection. Care should be taken to limit what is placed in this storage area so as not to exceed the load limitation.

Figure 2.5. Area Used for Storage



Figure 2.6. Area Used for Storage



Figure 2.7. Sign Posted at Top of Stairs



Barns of pole type construction can perform well in a seismic event if properly detailed due to their inherent flexibility and relatively light weight. Due to the age of this building, a more thorough evaluation is required to determine what sort of retrofits would be required to ensure the building will meet life safety standards to allow occupants to safely exit during a seismic event. Buildings constructed in the 1970s generally are not properly detailed for seismic resistance.

2.2 Building B

Building B is an open wood post frame building that is used for vehicle storage. The structure is in fair condition. According to City staff on site, the particleboard sheathing was removed due to water damage and decay. Remnants can be seen between the roof joists and the metal roof decking (see Figure 2.8). This will significantly hamper the structural performance of the roof system during a windstorm or in a seismic event, as there is no structural diaphragm present. Additionally, this causes the roof deck to sit just proud of the joists and leaves a small gap at the edges (see Figure 2.9). This could allow rain to be blown into the building, however, in general, it appears that the interior stays reasonably dry. Roof joists and most other structural connections appear to have been made using metal timber connectors.

Figure 2.8. Remnants Between Roof Joints and Metal Roof Decking



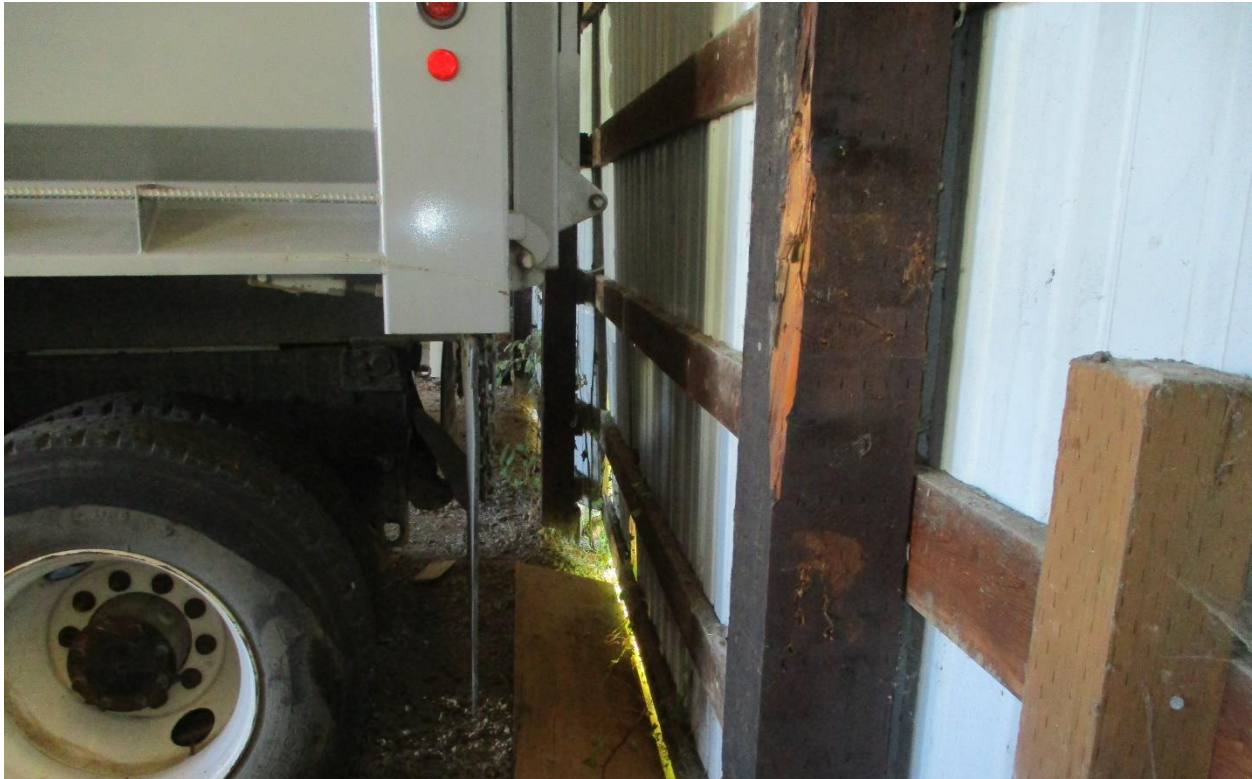
Figure 2.9. Gap at Edge of Roof



The south wall of the third bay appears to have been damaged due to vehicle contact. The siding is bent and the wall purlins have detached from the column, with some purlins

broken, as shown in Figure 2.10. The column has also suffered damage, however, this is limited to the surface and appears to be cosmetic in nature. No decay is noted.

Figure 2.10. Damage on South Wall



One column between the third and fourth bay shows damage due to vehicle impact, as shown in Figure 2.11. No decay was noted in this, or any other, of the columns. Other than the damaged purlins in the third bay, all other purlins appear to be in good condition. No signs of decay are noted in the roof system, however with only the metal roofing to protect the members, the roof system is at a greater risk of getting wet and decaying over time.

Figure 2.11. Column Damage



2.3 Building C

Building C is attached to Building B and has been mostly converted into office space. The west portion of Building C is used for equipment and seed storage. A staircase leads to a loft space above the office space. The stairs are in fair condition. Some creakiness and softness are noted in the stairs, however, no obvious signs of distress are noted. The riser height and tread depth of the stairs may not meet current code requirements.

A sign at the top of the stairs indicates a maximum load limitation of 15 psf for the loft space (see Figure 2.12). The floor in this area does not exhibit unexpected deflections when walking around. However, the code minimum loading requirement for a habitable attic space such as this is 30 psf. As 15 psf is a value that is very easy to exceed, a thorough evaluation of the items stored in this space and its layout is required to ensure that the design load is not exceeded, particularly where the heavy-duty shelving is located (see Figure 2.13).

Figure 2.12. Sign at Top of Stairs



Figure 2.13. Heavy-Duty Shelving



Most of the structural elements are hidden from view by interior finishes, however, the portions of the structural framing that are visible from the loft area and in the storage area, appear to be in very good condition. The roof sheathing (if present) is hidden by insulation (see Figure 2.14). The joists supporting the loft area have had holes drilled in them for electrical wiring and plumbing (see Figure 2.15). These holes do not appear to be placed in compliance with best practices (away from ends, and away from top and bottom edges).

Figure 2.14. Insulation



Figure 2.15. Holes Drilled in Joists



The slab under the office space section is exposed at grade and does not have a turndown at the edges, which is required to ensure adequate frost depth (see Figure 1.8. Building C Exterior Photos). Frost depth at this location is 12 inches. It is likely that this slab was poured after the building was erected and does not work to provide structural support to the building. If frost damage to the slab were to occur, such as heaving, it could lead to damage to the floor finishes and partition walls.

Much like Building A, this building requires further evaluation if life safety criteria are met and if any structural retrofits are necessary, as this building contains offices and other regularly occupied space.

2.4 Building D

Building D is a wood post frame building that is primarily used for vehicle storage on the west end and general purpose storage on the east half. The east and west halves have slightly different roof heights, and it appears that the two portions of the building were built at different times, as the truss designs are similar, but not identical. The east timber trusses are shown in Figure 2.16, with the west trusses are shown in Figure 2.17. It is likely that the west portion of the building is older. Both portions of the building appear to be in good condition. Building posts are constructed from treated timber. No evidence of decay or structural distress is evident. Some minor checking is noted in the columns of the west half.

Figure 2.16. East Timber Trusses



Figure 2.17. West Timber Trusses



The east portion of the building has a concrete slab floor that is in good condition. It is unknown if the slab meets frost depth requirements, however, as it does not directly support the building, it is not of significant concern from a structural stability standpoint. However, cracking of the slab due to frost damage could cause serviceability issues in the future. The west half of the building has an unfinished dirt floor.

2.5 Building E

Building E is a wood post frame building that is primarily used for general purpose storage with a concrete floor. It is unknown if the slab meets frost depth requirements. The roof is supported by wood trusses. The west wall is shared with Building D and the east wall is partially shared with Building F. In general, the exposed structure appears to be in good condition. Based on the construction methods used and the coloration of the treated timber elements, it appears this structure is one of the newer structures on the site. Photos are shown in Figure 2.18 and Figure 2.19.

Figure 2.18. Building E Structure



Figure 2.19. Building E Structure



2.6 Building F

Building F is a building that is primarily used for storage and workshop space. It is assumed to be of wood post type construction, similar to all of the other buildings on site, however, the structure is hidden by drywall. The roof appears to be supported by timber trusses. The majority of the roof structure has been hidden with drywall, with only small portions of the trusses exposed (see Figure 2.20). This building has a concrete floor slab that is in good condition. It is unknown if this slab has turndowns to meet frost depth requirements. The condition of the structure cannot be evaluated as the structure is fully hidden, however, no obvious signs of distress, such as cracking in the drywall or out of squareness of doorways is noted.

Figure 2.20. Roof Structure Hidden with Drywall



3 Electrical

3.1 Building A

Building A is provided with a 120/240-volt, 1-phase, 200-amp, electrical service via an overhead line from Clark PUD. The building includes a 200-amp main panelboard with 30 spaces and a 100-amp subpanel with 20 spaces, as shown in Figure 3.1. Every circuit in these panels appears to be in use with no space for future loads. The panels are Square D QO load centers from the original construction. The panels appear to be in fair condition, however, replacement of these panels should be considered as they are beyond the end of the typical lifespan of 40 years. There is no standby power provided to the building.

Figure 3.1. Building A Panelboard



Interior lighting is primarily tube fluorescent with no occupancy sensor controls. The exterior lighting are metal halide wall packs. The emergency egress lighting for the building is inadequate; only one emergency egress fixture was observed, which is in the vehicle service bay.

The men's restroom includes an electrical outlet above the sink that does not appear to be GFCI protected per NEC requirements. The women's restroom does not include an electrical outlet per NEC requirements. The receptacles mounted on the building exterior include weather resistant covers; it is recommended that they be fitted with extra-duty outlet box hoods to provide protection from rain while in use.

The building receives an overhead fiber optic communication line from Verizon Communication equipment. It is installed in the lobby above the lockers and is exposed as shown in Figure 3.2 and Figure 3.3. It is recommended that this equipment be installed in a dedicated space, such as a communication closet, or be installed in an enclosure for protection. The communication cables located in the attic space are loosely installed without adequate structural support as shown in Figure 3.4.

Figure 3.2. Exposed Communication Equipment



Figure 3.3. Exposed Communication Equipment

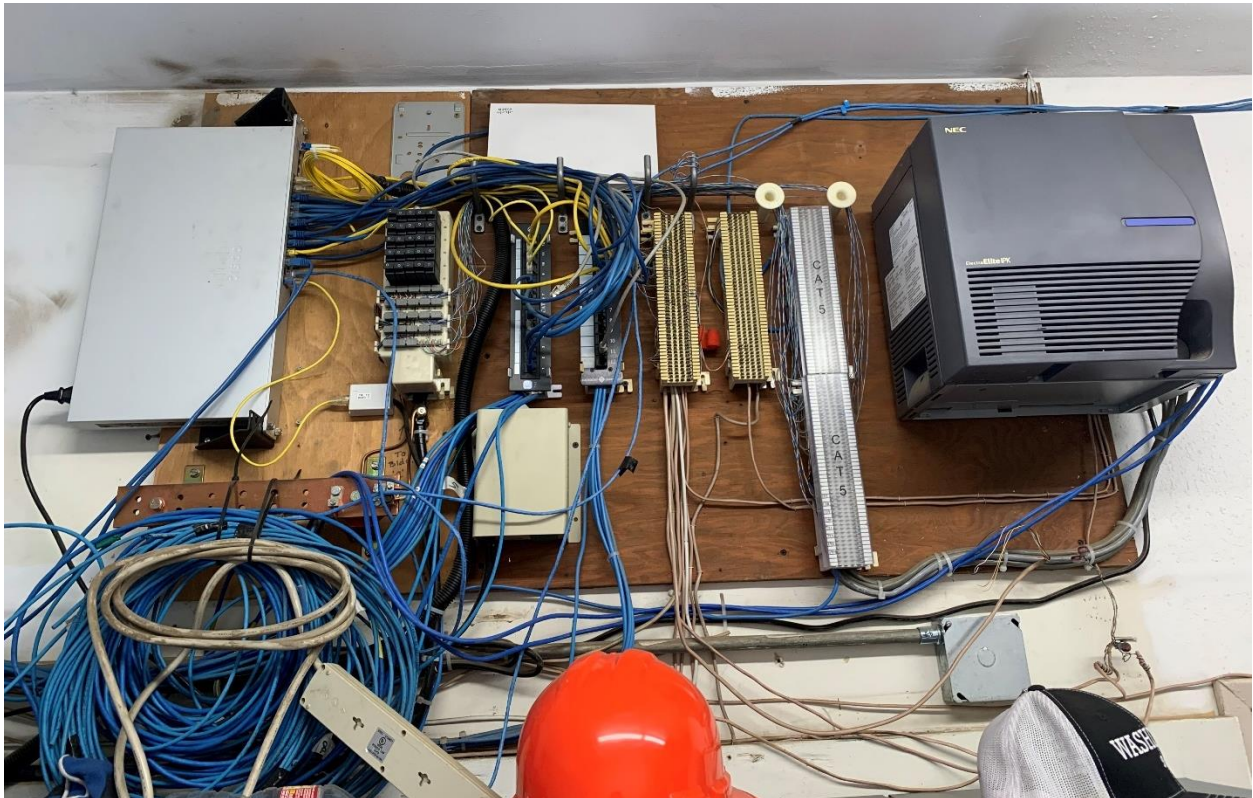


Figure 3.4. Communication Cables in Attic



The building receives overhead telephone lines that are no longer in service and there are two radio antennas on the south side of the building that appear to be no longer in service.

There are no fire alarm controls provided for the building.

3.2 Building B

There is no electrical panel located in Building B. Lighting circuits in this building are powered from a circuit that comes from Building C. The interior lights are incandescent type lamps controlled by a spring wound timer. The lighting circuits are installed in conduit; some of the conduit supports appear to be missing or inadequate (non UL listed).

3.3 Building C

Building C is provided with a 120/240-volt, 1-phase, 200-amp electrical service from Clark PUD. The building includes a 200-amp main panelboard with 20 spaces, as shown in Figure 3.5. Every circuit in these panels appears to be in use with no space for future

loads. The panel is a Siemens ITE load center and appears to be in good condition. There is no standby power provided to the building.

Interior lighting is primarily tube fluorescent with no occupancy sensor controls. The exterior lighting are metal halide wall packs. There is no emergency egress lighting for the building.

Figure 3.5. Building C Panelboard



Networking hardware is installed in the loft, as shown in Figure 3.6. It is recommended that this equipment be installed in a dedicated space, such as a communication closet, or be installed in an enclosure for protection. Some of the communication cables located in the loft space are loosely installed without adequate structural support, as shown in Figure 3.7.

Figure 3.6. Networking hardware in Loft



Figure 3.7. Communication Cables in Loft Space



An HVAC unit is installed outdoors on the south side of the building, and the electrical disconnect switch for this unit is installed on the east side of the building, as shown in Figure 3.8. Since the switch is not in sight of the HVAC unit, it is in violation of NEC requirements. A service outlet for the HVAC unit is also missing per NEC requirements.

There are no fire alarm controls provided for the building.

Figure 3.8. HVAC Unit and Disconnect Switch



3.4 Building D

Building D is provided with a 120/240-volt, 1-phase, 125-amp electrical sub panel that is fed from a circuit from Building C. The panel is a Challenger load center with 20 spaces, as shown in Figure 3.9, and appears to be in good condition. A large metal shelf is installed in front of the panel, as shown in Figure 3.10, which is in violation of NEC requirements for clear working space in front of electrical equipment. The panelboard circuit directory is missing, which is a violation of NEC requirements.

The interior lights are incandescent type lamps controlled by a spring wound timer.

Figure 3.9. Building D Panel



Figure 3.10. Metal Shelf in Front of Panel



3.5 Building E

There is no electrical panel located in Building E. Lighting circuits in this building are powered from a circuit that comes from Building F. The interior lights are a mix of incandescent, fluorescent, and LED type lamps. The lighting circuits are installed in conduit. The exterior lighting are metal halide wall packs.

3.6 Building F

Building F is provided with a 120/240-volt, 1-phase, 100-amp electrical sub panel. This building does not include a separate electrical service from Clark PUD. During the site visit it was undetermined where this panel is being fed from. The panel is a Siemens load center with 12 spaces, as shown in Figure 3.11, and appears to be in good condition. A large amount of scrap materials is being stored in front of the panel, as shown in Figure 3.12, which is in violation of NEC requirements for clear working space in front of electrical equipment.

Figure 3.11. Building F Panel



Figure 3.12. Scrap Materials Stored in Front of Panel



The interior lights are a mix of incandescent, fluorescent, and LED type lamps with no occupancy sensor controls. The lighting circuits are installed in conduit. There is no emergency egress lighting for the building. The exterior lighting are metal halide wall packs.

3.7 Building G

Building A is provided with a 120/240-volt, 1-phase, 200-amp, electrical service via an overhead line from Clark PUD. The building includes a 200-amp main panelboard with 40 spaces, as shown in Figure 3.13. The panelboard is in new condition and has many spaces available for expansion. There is no standby power provided to the building.

The interior lights are a mix of incandescent, fluorescent, and LED type lamps with no occupancy sensor controls. The lighting circuits are installed in conduit. There is no emergency egress lighting for the building. The exterior lighting are metal halide wall packs.

Figure 3.13. Building G Panel



4 Mechanical

4.1 Building A

Building A is separated into several independent areas. The north portion of the building is an unheated area with a dirt floor used for parking and storage. The storage in this area includes tires and 8 55-gallon waste oil storage drums sitting on secondary containment pallets. This area has no insulation or ventilation beyond significant infiltration through the rolling doors and other leakage sources.

The southeast portion of this building is a building within a building that has insulated interior partitions separating the administrative, office, and break room areas from the remainder of the building. There is visible insulation over the ceilings in this area but it does not appear to meet the current energy code requirements (R-49 for attics) with only a single ~6-inch layer of fiberglass between steel studs.

This area is served by a residential style Goodman natural gas furnace with a 3.5-ton Lennox air conditioner (see Figure 4.1 and Figure 4.2). The air conditioner was manufactured in 2015; it is unclear when the furnace was manufactured but assumed that it is the same age as the air conditioner and is in fair condition; although, there is a large air leak between the furnace section and the air conditioner coil (see Figure 4.3) that should be repaired to reclaim some of the system capacity within the occupied spaces. Most of the visible ductwork in this area is flexible ductwork and will have higher pressure drop than a well-designed rigid ductwork system.

Figure 4.1. Building A Admin Furnace



Figure 4.2. Building A Admin A/C



Figure 4.3. Building A Air Leak



The west side of the building has a mechanic's shop that is served by a second Goodman furnace that has a 3-ton Goodman heat pump from 2007 (see Figure 4.4 and Figure 4.5). This heat pump is an R-22 unit and while not visibly failing is near the end of its expected service life (15-20 years per ASHRAE) and planning should include replacing this unit in the near future.

Figure 4.4. Building A Workshop Furnace



Figure 4.5. Building A Workshop Heat Pump



The southwest corner of the building is another shop that also has a small, elevated office and a couple parts storage areas. This shop has a Lennox furnace in the southeast corner. It does not have any cooling capacity (see Figure 4.6).

Figure 4.6. Building A Shop Furnace



There are several exhaust systems connected into a single roof penetration (see Figure 4.7). None of these ducts are insulated and may have condensation issues since they are located in the unheated portion of the building.

Figure 4.7. Building A Exhaust Connections



Plumbing is limited to the break room and two restrooms in the administrative area. The restrooms appear to be in good condition and the fixtures were all working. A Bradford White electric domestic water heater from 2005 is in the alcove adjacent to the women's restroom (see Figure 4.8). This appears to be in working condition but is nearing the end of its expected service life and accommodations for replacement should be considered. There is also an ice maker in this space that appears to be in good working order. There was a large puddle of water on the floor of the alcove but upon asking, it sounds like this is due to ice spillage during transfer, not a failure in the ice maker.

Figure 4.8. Building A Domestic Water Heater



4.2 Building C

Building C has an HVAC and plumbing system serving the main level with equipment located in the attic (see Figure 4.9). A horizontal Lennox furnace is installed on the floor of the attic and an Aire-Flo (Lennox subsidiary) air conditioner is installed at the rear of the building (see Figure 4.10).

An exhaust fan in the attic helps to limit the temperature in this area. A second exhaust fan in the ceiling serves the restroom.

Figure 4.9. Building C Furnace



Figure 4.10. Building C A/C



The restroom has a shower, water closet, and service sink which is not ADA accessible, (see Figure 4.11, Figure 4.12, and Figure 4.13). A Bradford White natural gas water heater is in the attic (see Figure 4.14). This unit is dated 1993 per the Washington LNI Certificate of Inspection. There are signs of previous leaks in the drain pan below the unit and the unit is well beyond the expected life of 10 to 15 years. The plumbing piping was recently modified to serve a partially constructed new room in the back of the building using PEX piping; this new room is not complete and is not in compliance with the current codes. The natural gas meter is in fair condition showing some surface rust.

Figure 4.11. Building C Water Closet



Figure 4.12. Building C Sink



Figure 4.13. Building C Shower

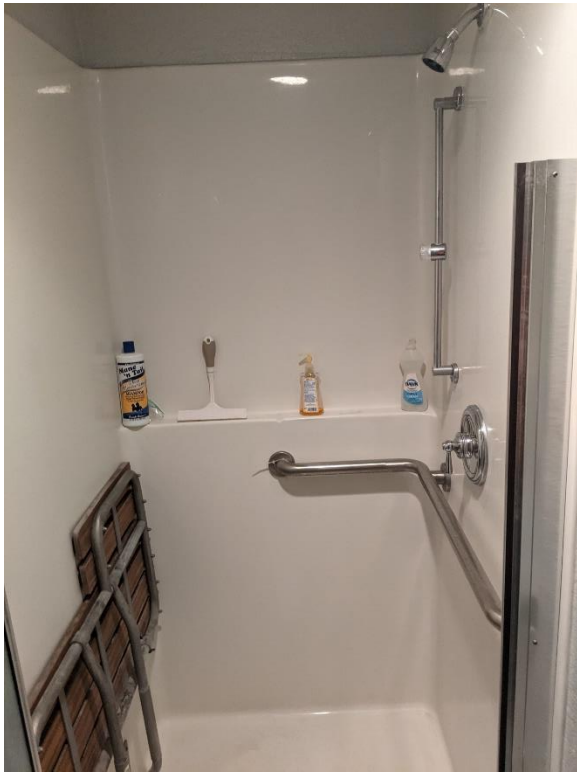
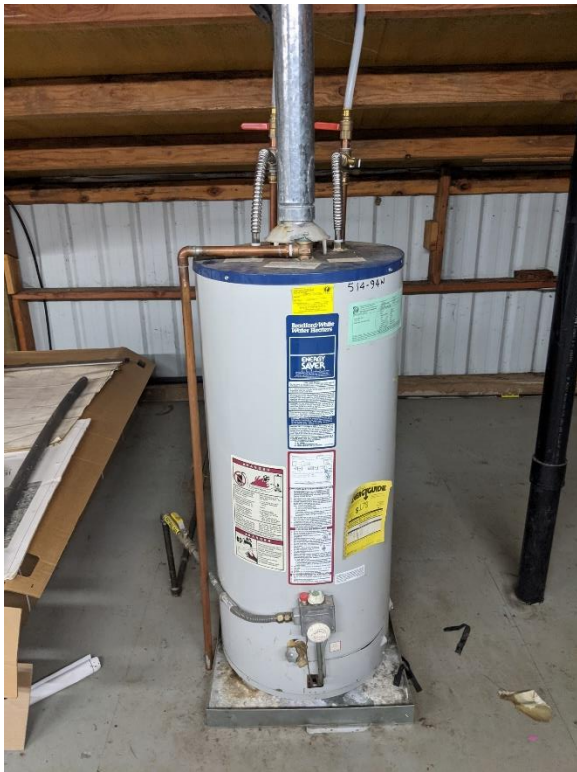


Figure 4.14. Building C Domestic Water Heater



4.3 Building D

The west half of Building D has a single natural gas unit heater located in the southwest corner (see Figure 4.15). There is no other heating, air conditioning, or ventilation in this building. The natural gas line in this building is extended to the east to serve Building E.

The natural gas service is located in the narrow access road between buildings C and D but protected by bollards (see Figure 4.16).

The east half of this building is unheated and has no ventilation.

Figure 4.15. Building D Gas Unit Heater



Figure 4.16. Building D Natural Gas Meter



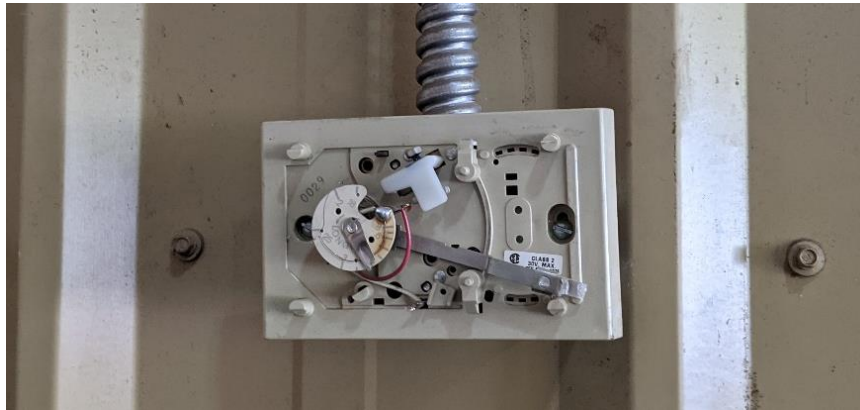
4.4 Building E

Building E has a single unit heater in the southwest corner, fed by natural gas from Building D (see Figure 4.17). The thermostat for this unit has been disassembled and may not be functioning (see Figure 4.18). There are visible gaps around the perimeter of this space, most noticeably at the joint between Building D and Building E that allow air and water to infiltrate the building. These gaps should be repaired to maximize heating system efficiency.

Figure 4.17. Building E Unit Heater



Figure 4.18. Building E Thermostat



4.5 Building F

Building F, at the far east end of the row of buildings, has several different systems serving it. In the entry, there is an electric unit heater in the entry area shop (see Figure 4.19), and another in the shop and storage area (see Figure 4.20).

Two wall-mounted air conditioners serve the entry area shop (see Figure 4.21), and the parks office in the southeast corner (see Figure 4.22). Neither unit is in use and they are both blocked by stored items on the inside.

A service sink in the shop and storage area has a small electric water heater serving a service sink (see Figure 4.23).

Figure 4.19. Building F Electric Unit Heater in Entry Area Shop



Figure 4.20. Building F Electric Unit Heater in Shop and Storage Area



Figure 4.21. Building F A/C in Entry Area Shop



Figure 4.22. Building F A/C in Parks Office



Figure 4.23. Building F Sink





Facilities Assessment Report for CITY OF WASHOUGAL

September 2016
(Amended in 2019)
Prepared by:
LSW Architects, PC



TABLE OF CONTENTS

Assessment Summary	0.0
Aerial Map of Facilities	0.1
 Part 1: Facility Conditions	
Facility Conditions Summary	1.0
City Hall Complex	1.1 – 1.8
Police Station	1.9 – 1.12
Public Works	
Annex (Executive Offices)	1.13 – 1.15
Administrative Office	1.16 – 1.19
Building A	1.20 – 1.22
Building B	1.23 – 1.25
Building C	1.26 – 1.27
Building D	1.28 – 1.29
Building E	1.30 – 1.31
Building F	1.32 – 1.33
Building G	1.34 – 1.35
Wastewater Building	1.36 – 1.38
Silver Star Building	1.39 – 1.42
Fire Station 95	1.43-1.43
Social Service Building	1.44-1.44
 Part 2: Functional Assessments	
Functional Assessment Summary	2.0
City Hall Complex	2.1–2.4
Police Department	2.5 – 2.6
Public Works	
Annex (Executive Offices)	2.7
Wastewater	2.8 – 2.9
Parks/Cemetery/Facilities	2.10 – 2.11
Streets/Stormwater/Fleet	2.12 – 2.14
Water	2.15
 Part 3: Conceptual Options	
Conceptual Options Summary	3.0
City Hall Complex	3.1–3.4
Police Department	3.5 – 3.8
Public Works	3.9 – 3.11
 Part 4: Conclusion	
Conclusion	4.0
 Part 5: Future	
	4.1

ASSESSMENT SUMMARY

This project was undertaken to provide the City of Washougal with a general assessment of their existing facilities and options to improve or replace buildings that were reaching the end of their operational life. The assessment is made up of three sections.

The first section is a Facilities Condition Assessment. This is a general review of the physical condition of various buildings, their estimated life expectancy, maintenance demand and overall ability to provide infrastructure for their intended purpose.

The second section is a Functional Assessment. This is an evaluation of the buildings ability to house, grow, adapt, and otherwise provide an effective environment for the optimal performance of City services to the public. This includes provisions for future growth and anticipated programs.

The third section gives conceptual options to correct deficiencies found in the Facilities Condition and Functions Assessments.

The goal of these assessments is to provide the City with information they can use to develop a long-term plan for replacement and revitalization of these core facilities. With improved infrastructure and functionality, the City will be better able to continue providing essential services to the community.



FACILITY CONDITIONS SUMMARY

The facility conditions assessment was prepared by Dave Halme. Dave visited each facility to evaluate their general condition. The sites included:

- City Hall Building
- Washougal Police Department Station
- Public Works
 - Annex Building
 - Service Yard and Buildings
 - Library and Community Center Buildings
 - Wastewater Operations
 - Administration Building
- Silver Star Building
- Fire Station 95
- Social Service Building

His review included evaluation of the exterior building cladding and finishes, roof and foundation condition, mechanical and electrical services, building envelope integrity and energy demand efficiency. He reviewed building plans, specifications, and operations manuals, if they were available, and talked with facility managers and staff for more insight into each buildings condition.

Each review was documented with pictures and marked up to point out elements that he'd found. He also provided, when able to, recommendations for ways to correct or alleviate problem areas. That information has been consolidated and is provided in this section.

WASHOUGAL CITY HALL

General Information

Address	1701 C Street, Washougal, WA 98671
Construction Date	1974, North Wing Addition in 1990
Building Area	5,292 s.f. plus basement
Building Type	Wood frame, concrete foundation with partial basement



Site Conditions

Asphalt Paving	Fair condition – need for crack sealing and possible re-paving
Concrete Surfaces	Good condition
Parking	Parking on East and North sides of building
Stormwater	None.
Lighting	One decorative pole light at South parking entry Wall mounted lights on East and North facades of building
Landscape	Minimal landscaping at South parking entry





Wood siding decay

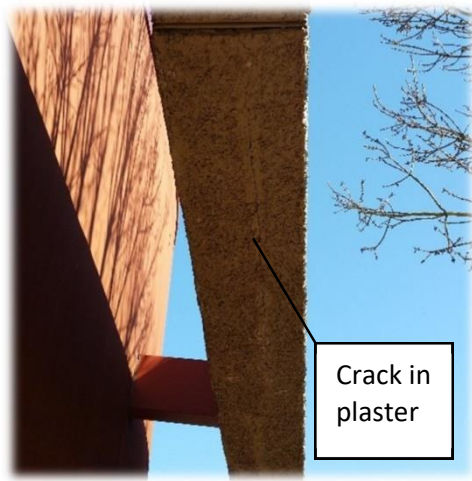
Building Exterior

Roof

Gutter & Downspouts

Windows

Flat roof with new single-ply membrane over plywood deck
Thru-wall scuppers with metal downspouts in good condition
Aluminum frames with thermal pane - windows typically sweat inside causing damp conditions.



Crack in plaster



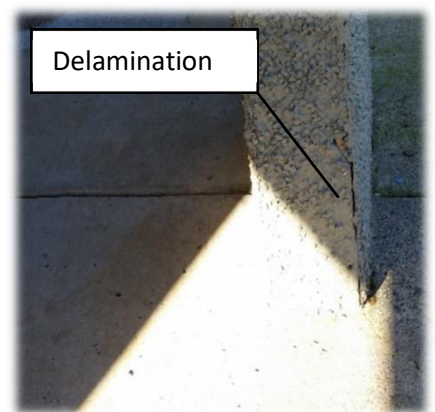
Wood siding deterioration

Exterior Cladding

Horizontal cedar lap siding in poor condition where exposed to weather. Vertical cedar siding at Council Chambers in good condition. Stone-embedded stucco at facade in poor condition with many areas showing cracks and decay.



Wood siding in direct contact with ground



Delamination

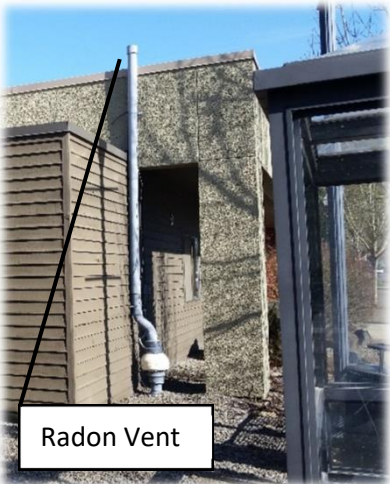
Building Interior

Floors	Concrete with vinyl and carpet in occupied areas – in good condition.
Walls	Wood frame with painted gypsum board – in good condition.
Ceilings	Suspended acoustical ceiling tile – in good condition.
Doors/Hardware	Wood doors in metal and wood frames.
Casework	Good condition.



Structural Systems

Roof	Wood trussed roof with plywood roof deck
Walls	CMU at West elevation, remainder is wood frame construction
Foundation	Concrete slab on grade with partial concrete basement



General Code Requirements

Building Code	Non-compliant vertical clearance at stairway.
Accessible Code	No elevator access to basement and non-compliant stair handrails.

Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	Original piping
Fire Sprinkler	None and none required

HVAC System

Four air handlers in basement area with electric resistance heat strips and air-conditioning coils. Air-conditioning condenser was recently replaced and is housed in an exterior enclosure. Air distribution and temperature control is poor. Air duct appears to be unsealed and leaking with old balancing dampers.

Energy Controls Air handlers and air-conditioning condenser were replaced in 2013. No outside air provisions at air handlers. A heat recovery ventilator has been installed, however its size is likely inadequate to provide sufficient outdoor ventilation to maintain acceptable indoor air quality standards. Electrical consumption is 14.5 kWh/sf/year.

Radon Control A radon mitigation system and fan are provided from the basement.

Electrical Systems

Switchgear/	Three 200 amp and one 60-amp panel and disconnect – all appear in
Panel Boards	good condition.
Elec. System	Original
Lighting	T-8 fluorescent
Fire Alarm	Yes



Safety and Security

Security System	Sonitrol
Ext. Access Control	None
Site Fencing	None

Technology Infrastructure

Networks	Yes – network mainframe is located off-site
Telecom.	Yes

Findings

City Hall is in overall good condition for its age. Notable facility deficiencies include: Cracking & spalling of stone embedded stucco façade and decay of wood structure. There is decay of horizontal cedar lap siding where exposed to weather or in contact with ground.

Operations and Maintenance Recommendations

- Repair the cracking and spalling of embedded stucco and decayed wood structure.
- Repair lap siding at damaged, exposed or ground contact locations.
- Contract with a commercial HVAC contractor to install outside air ducting to air handlers and provide balance dampers on air distribution ducts to balance air flow and improve indoor air quality. Install additional thermostats or temperature sensors to improve temperature control throughout office spaces.

WASHOUGAL LIBRARY & COMMUNITY CENTER

General Information

Address	1701 C Street, Washougal, WA 98671
Construction Date	Assumed 1980
Building Area	Estimated 7,800s.f.
Building Type	Concrete slab on grade, wood frame, flat roof



Site Conditions

Asphalt Paving	Fair condition
Concrete Surfaces	Good condition
Parking	Shared parking lot with City Hall
Stormwater	None
Lighting	Recessed soffit lighting
Landscape	Very large redwood tree in close proximity to NW building corner. Roots from tree have lifted concrete sidewalk and may damage concrete foundation over time. Large limbs falling from this tree will damage roof and create a life safety hazard.



Roots from redwood tree causing concrete sidewalk to lift

Building Exterior

Roof

Flat roof with single-ply membrane – replaced in 2016

Gutter & Downspouts

Thru-wall scuppers with sheet metal downspouts in good condition

Windows

Aluminum frames, thermal pane. Large single glazing units at East elevation.



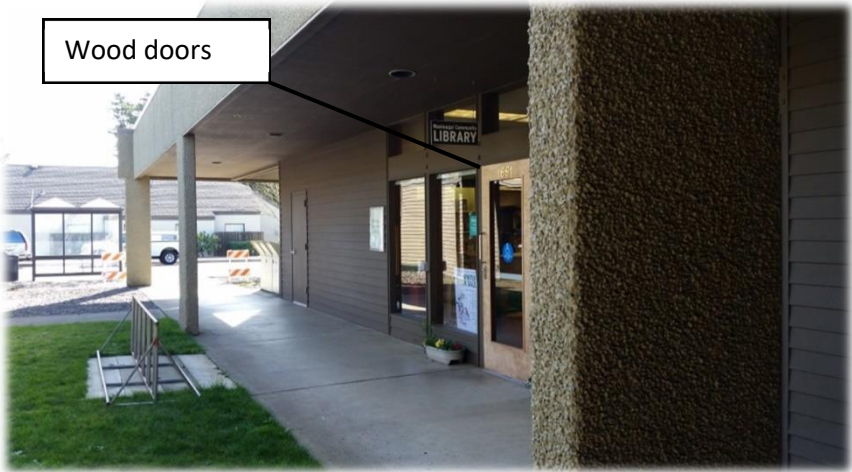
Exterior Cladding

Horizontal cedar lap siding at North, South, and East elevations. CMU at West elevation. Cedar siding has areas of decay where exposed to weather. The stone embedded stucco façade is in poor condition with evidence of cracking and decay of the wood substrate.



Building Interior

Floors	Concrete slab on grade with carpet and vinyl floor coverings – all in good condition.
Walls	Wood frame with painted gypsum board – in good condition.
Ceilings	Suspended acoustical ceiling tile – in good condition.
Doors/Hardware	Wood doors in metal and wood frames – in good condition.
Casework	Good condition



Structural Systems

Roof	Wood framed
Walls	Wood framed. CMU exterior wall at West elevation.
Foundation	Concrete slab on grade – good condition.



General Code Requirements

Accessible Code	Building appears to be substantially in compliance with ADA guidelines.
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Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	Original piping

Fire Sprinkler	None
HVAC System	New rooftop air handlers in 2016
Energy Controls	Unknown. Average electrical consumption is 13 kWh/sf/year.

Electrical Systems

Switchgear/ Panel Boards	Original panel boards
Elec. System	Original
Lighting	T-8 fluorescent
Fire Alarm	None

Safety and Security

Security System	None
Ext. Access Control	None
Site Fencing	None

Technology Infrastructure

Networks	Unknown
Telecom.	Yes

Findings

Library and Community Center is in good condition with a new roof, new rooftop air handlers and a remodel of the Community Center kitchen underway. Notable facility deficiencies include: cracks in the stone embedded stucco façade and decay of the underlying wood structure and areas of decay where the horizontal cedar lap siding is exposed to the weather.

The Library was recently had property donated to them across the street from City Hall. Please note that the library does the maintenance for this facility, but if the City takes on this facility once the new library is built the maintenance will become the city responsibility.

Operations and Maintenance Recommendations

- Repair the cracking of embedded stucco and decayed wood structure.
- Repair lap siding at damaged, exposed or ground contact locations.
- Replace all doors, currently they have ¼" gap around all outer doors
- Contract with a qualified arborist to explore options regarding the large redwood tree growing near the building. The tree roots are lifting the concrete sidewalk and could damage the concrete foundation and electrical service. Falling limbs would damage the new roof membrane and air handlers and present a life safety hazard.

Capital Recommendations

- When the new Library is built the city will need to remodel Library space to address the lack of space for staff in the City Hall Complex. The Library site will need to be remodeled to accommodate new office and conference room space.

POLICE STATION

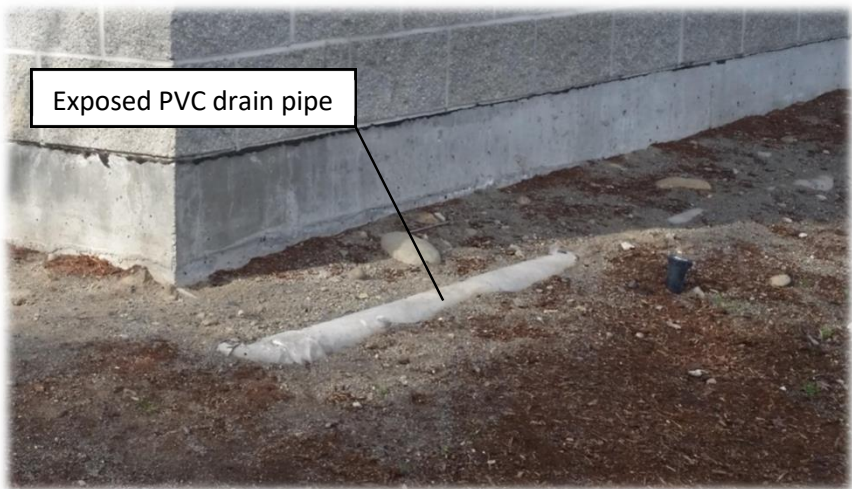
General Information

Address	1320 A Street, Washougal, WA 98671
Construction Date	2004
Building Area	7,949 s.f.
Building Type	Single story, concrete slab on grade, CMU with manufactured wood trusses



Site Conditions

Asphalt Paving	Crack and slurry sealed – good condition
Concrete Surfaces	Good condition
Parking	Asphalt parking on East and West
Stormwater	Bioswales at West
Lighting	Decorative pole lights at North with soffit lighting at other elevations
Landscape	Landscape plantings are well maintained



Building Exterior

Roof	Asphalt architectural shingles in good condition
Gutter & Downspouts	Continuous metal gutters and downspouts in good condition
Windows	Aluminum thermal pane windows in good condition
Exterior Cladding	CMU in good condition with no signs of cracking or mortar deterioration



Building Interior

Floors	Carpet in office areas, vinyl in restrooms with remainder sealed concrete – all in good condition
Walls	Wood frame with painted gypsum board in good condition. Painted CMU in public restrooms, Evidence, and Holding Cells – all in good condition.
Ceilings	Suspended acoustical ceiling tile in office and conference areas – all in good condition. Painted gypsum board ceilings in storage.
Doors/Hardware	Combination of wood and steel doors – all in good condition
Casework	Located in main reception area – in good condition

Structural Systems

Roof	Manufactured wood trusses
Walls	CMU – no evidence of cracks or spalling
Foundation	Concrete footings, stem walls and concrete slab on grade

General Code Requirements

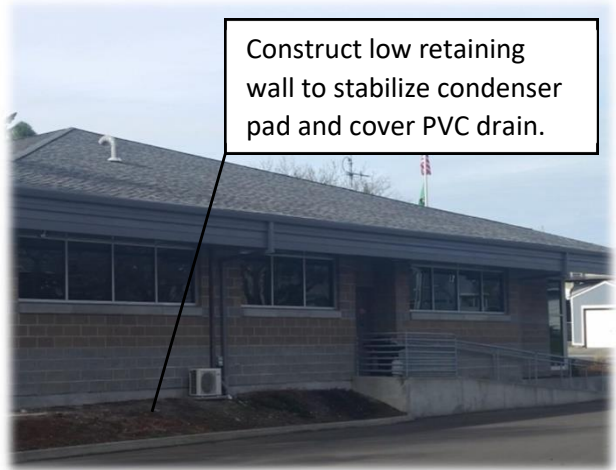
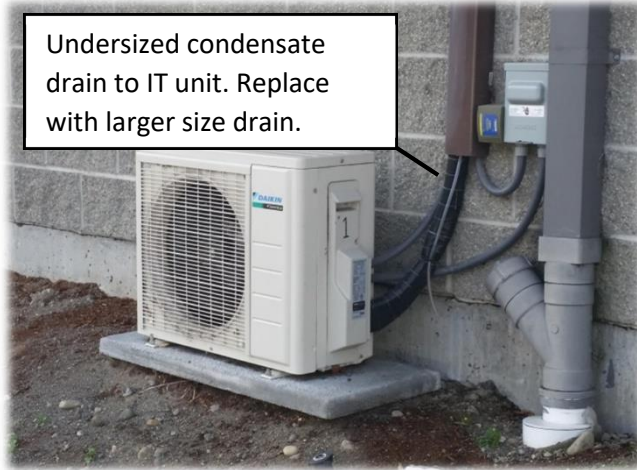
Fire System	Compliant
Accessible Code	Compliant with current ADA guidelines

Mechanical Systems

Water Supply	2-1/2" service - City of Washougal
Sewer	City of Washougal
Plumbing	Good condition
Fire Sprinkler	Fully-sprinklered building

HVAC System 4-each gas furnaces with DX cooling and OSA – all in good condition. Test, adjust and balancing needed to resolve air distribution and temperature control issues. Condensate leaking down wall in IT room.

Energy Controls Single Honeywell programmable thermostat for each air handler. Thermostats are inappropriately located resulting in poor temperature control of occupied spaces. Electrical consumption is 15.5 kWh/sf/year.



Electrical Systems

Switchgear/	800-amp main switch with 400 amps for emergency backup diesel generator
– Panel Boards	in good condition
Lighting	Predominantly T-8 fluorescent
Fire Alarm	Silent Knight – in good condition

Safety and Security

Security System	Yes
Exterior Access Control	Yes
Site Fencing	None

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Findings

Police Department building is well maintained and in very good condition.

The most significant facilities deficiency noted was comfort issues related to temperature control and air distribution. Recommend that the City have a competent commercial HVAC technician, rebalance the system; relocate and upgrade programmable thermostats; and revise zoning to better accommodate current room use.

Condensate from mini split unit on wall of IT room is dripping down wall in close proximity to electronics. The condensate drain line is likely plugged with algae. Suggest that a larger 1/2" diameter condensate line be installed parallel to existing.

Operations and Maintenance Recommendations

- Small areas of rust are beginning to form on west exterior hand rail and at steel support structure at NE corner of building. Suggest that rust be removed, primed and repainted.
- Cracks are forming in ceramic tile at corners of visitor restrooms. Suggest sealant be installed in corners.
- Insects may be getting into building via large gooseneck vents on roof. Suggest insect screens be installed on gooseneck vents.
- Solvents are used for cleaning weapons in the Armory Room. Suggest that larger ventilation fan be installed to vent fumes to building roof.
- Insulation on refrigerant lines to AC units is deteriorating. Suggest that insulation be replaced.
- Install sealant around electrical conduit penetrating CMU wall at south elevation.
- Suggest flammable storage/hazmat cabinet be installed in Sally Port.
- Suggest retaining wall at east elevation to stabilize mini split condensing unit and cover exposed PVC drain piping.
- The easterly Conex box used for storage is in poor condition.



Findings

Recommendation is to replace the Connex boxes with a secure building.

PUBLIC WORKS: ANNEX (EXECUTIVE OFFICES)

General Information

Address	1615 C Street, Washougal, WA 98671
Construction Date	Unknown – perhaps circa 1940's
Building Area	Approximately 1,350 s.f.
Building Type	1-1/2 story wood framed single family residence with detached two-car garage

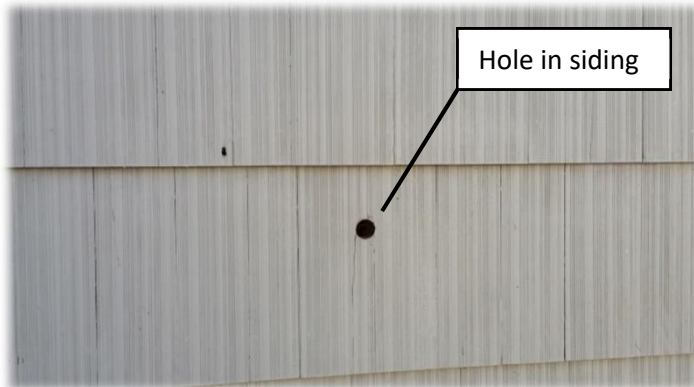


Site Conditions

Asphalt Paving	None
Concrete Surfaces	Fair condition
Parking	Limited to area in front of detached garage
Stormwater	None
Lighting	None
Landscape	Attractive trees, shrubs, and lawn area

Building Exterior

Roof	8:12 pitch, wood frame with asphalt shingles – in good condition
Gutter & Downspouts	Seamless metal gutters and downspouts – in good condition
Windows	Wood frame, single pane
Exterior Cladding	Cedar shingle siding – fair condition with some repair needed. Due for paint.
Chimney	Fireplace with masonry chimney

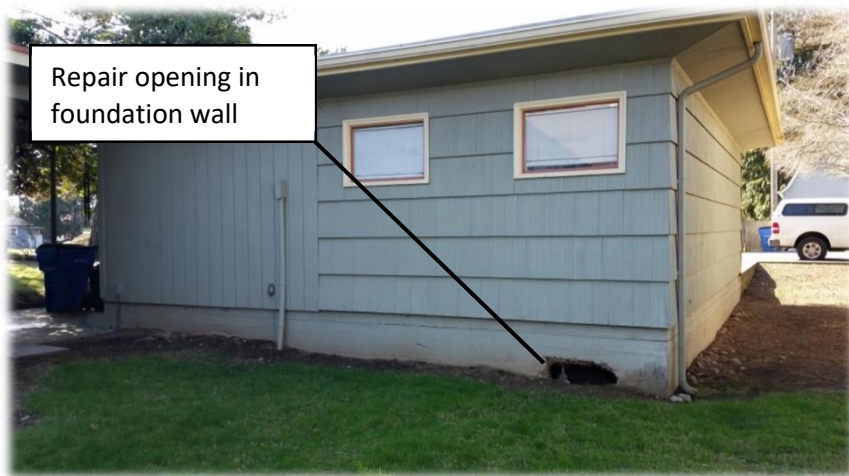


Building Interior

Floors	Wood floors, vinyl, and carpet in fair condition
Walls	Drywall & plaster, painted – in fair condition
Ceilings	Painted drywall – in fair condition
Doors/Hardware	Wood doors with original hardware
Casework	Appears to be original cabinetry

Structural Systems

Roof	Wood framed
Walls	Wood framed
Foundation	Concrete footings and stem wall with crawl space – in good condition
Upper Floors	Narrow stairway leading to upstairs bedroom spaces



General Code Requirements

Building Code	Not in conformance with IBC. Deficiencies in structural, seismic, energy and indoor air quality systems.
Accessible Code	Not ADA compliant

Mechanical Systems

Water Supply	City of Washougal
Sewer	Drainfield or connect to City sewer – need to verify
Plumbing	Likely original steel pipe
Fire Sprinkler	None
HVAC System	Furnace with electric heat and AC
Energy Controls	Residential thermostat. Electrical consumption is 6.5 kWh/sf/year

Electrical Systems

Switchgear/	Unknown
Panel Boards	
Elec. System	Likely original wiring
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	None

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Special Systems

Elevator	None
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Findings

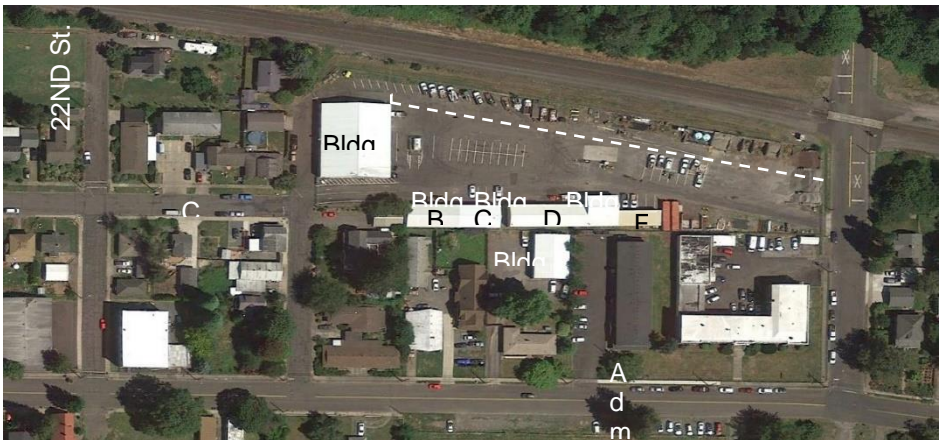
The Public Works Annex is an old single family residence in fair condition that certainly has some architectural character and charm. Its location is excellent, however, its value as City office space is marginal at best. The building does not meet code requirements for seismic and ADA-accessibility. Single pane windows along with crack in the glass and marginal insulation result in high energy costs.

The lack of outside air ventilation will result in poor indoor air quality. The continued use of this building will result in high energy costs and increasing maintenance expenses.

The City of Washougal should either sell the property to a person interested in restoring and preserving a charming home or demolish the residence and replace it with a two or more story office structure.

Operations and Maintenance Recommendations

- Repair and repaint cedar shingle siding.
- Repair hole in concrete foundation wall on east side of garage.
- Repaint the inside and outside
- Replace all windows, doors, and lighting
- Suggest sealing fireplace chimney to reduce energy loss.
- Replace HVAC System
- Convert the Engineering Tech garage into Engineering office space, bathroom, and conference room. (This conversion will need to be ADA Compliant)



PUBLIC WORKS: ADMINISTRATIVE OFFICE

General Information

Address	2247 Main Street, Washougal, WA 98671
Construction Date	Unknown—circa 1950's?
Building Area	1,700 s.f.
Building Type	Residential wood frame, single story



Site Conditions

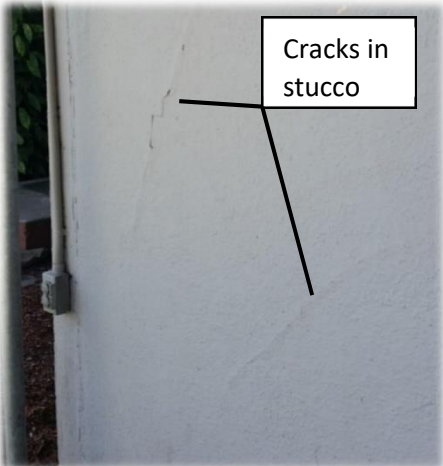
Asphalt Paving	--
Concrete Surfaces	--
Parking	Limited driveway, street parking, and gravel parking lot on South side of CStreet
Stormwater	None
Lighting	--
Landscape	--



Cracked masonry at South elevation planter

Building Exterior

Roof	Asphalt shingles showing curling and cupping – need replaced
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition
Windows	Aluminum frames, double pane
Exterior Cladding	Stucco in poor condition, showing numerous cracks
Chimney	Fireplace with chimney – in fair condition but needs chimney tuck pointed due to failing mortar joints



Building Interior

Floors	Carpet and vinyl floor surfaces – in fair condition
Walls	Painted drywall – in fair condition
Ceilings	Painted drywall – in fair condition
Doors/Hardware	Wood doors with no lever handle

Structural Systems

Roof	Wood framed pitched roof
Walls	Wood framed with stucco cladding
Foundation	Concrete foundation in fair condition with crawl space



General Code Requirements

Building Code	Not in conformance with IBC
Accessible Code	Not ADA compliant

Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	Likely original steel pipe
Fire Sprinkler	None
HVAC System	Electric baseboard and wall heaters with 6-each, window AC units. No outside air provisions
Energy Controls	Unitary controls. Average electrical consumption for past three years is 69,641 resulting in 41 kWh/sf/year – very high consumption, needs verification.



Electrical Systems

Switchgear/ Panel Boards	200-amp electrical panel installed in 1985 – in good condition
Elec. System	Original electrical wiring
Lighting	T-8 fluorescent
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	None

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Special Systems

Other	Backup diesel generator for SCADA
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Findings

The Public Works Administrative Office is an aging single family residential building in poor condition. Operation and maintenance costs will increase. Indoor air quality and temperature control is marginal. Inadequate insulation, electric heat, and window AC units result in high energy costs. Building is not ADA compliant.

Operations and Maintenance Recommendations

- Wood trim at crawl space access and around window is decaying.
- Soffit at South elevation is sagging; could be a structural issue and needs further investigation.
- Chimney about roof line shows deteriorating mortar joints and should be tuck pointed.
- Stucco exterior cladding is cracked in numerous locations.
- Masonry planter at South elevation is cracked.
- Suggest sealing fireplace chimney to reduce energy loss.
- Add insulation
- Replace roof
- Make it ADA compliant
- Repaint the inside and outside
- Replace HVAC System
- Replace all windows, doors, and lighting

PUBLIC WORKS: BUILDING A

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	1970
Building Area	8,500 s.f.
Building Type	Wood post frame with metal roof and siding



Site Conditions

Asphalt Paving	Fair condition
Concrete Surfaces	
Parking	East side of building
Stormwater	None
Lighting	Wall mounted exterior HPS at East elevation
Landscape	None

Building Exterior

Roof	Metal roofing panels in fair condition except for East section that is showing deterioration
Gutter & Downspouts	Continuous metal gutters and downspouts – in good condition
Windows	Aluminum frames, thermal pane
Exterior Cladding	Sheet metal



Building Interior

Floors	Concrete floors in shop and office areas. Carpet in poor condition. Gravel floor in equipment storage area
Walls	Wood framing with painted gypsum board
Ceilings	Painted drywall and suspended acoustical ceiling tile
Doors/Hardware	Steel doors in wood frames



Structural Systems

Roof	Fabricated wood trusses – in good condition
Walls	Wood girts
Foundation	Pressure-treated posts and band boards
Upper Floors	Storage mezzanine and office mezzanine

General Code Requirements

Accessible Code	Restroom may be ADA compliant but remainder of space is deficient
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Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Fire Sprinkler	None
HVAC System	New gas furnace in shop. Two gas furnaces with DX cooling to serve offices and breakroom area. Units located in mezzanine. Units draw OSA from attic space.
Energy Controls	Standard residential thermostats



Electrical Systems

Switchgear/ Elec. System	200-amp main panelboard with 100-amp sub panel – in fair condition Original
Lighting	Fluorescent in office space, HID in shop
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Special Systems

Elevator	None
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Findings

Public Works Building A is beginning to show its age, but is generally in fair condition. Portions of the metal roof will need to be replaced. Building can be cost effectively maintained for shop and storage space for another 10-15 years, however, continued use of this building for general office space is not recommended due to the cost of bringing the building up to standards including ADA, fire and life safety, hazardous material storage and indoor air quality.

Operations and Maintenance Recommendations

- Remove or seal old unused vent/exhaust stacks.
- Rebuild office mezzanine for storage.
- Suggest extending OSA grille from attic space to above roof line.
- Suggest adding insulation and door weather-stripping to reduce energy costs.
- Replace carpeting in office and update lunch room
- Replace metal roof and downspouts
- Repaint the inside and outside
- Replace all windows, doors, bay doors and lighting
- Bathroom Expansion-Building A, Operations Center
- Public Works has outgrown the yard area and needs another 2-3 acres of property for storage, wash rack, and equipment.

PUBLIC WORKS: BUILDING B

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	1975
Building Area	1,960 s.f.
Building Type	Used for vehicle storage. Pressure treated wood posts, wood wall girts and roof purlins, metal roof, and siding. Open at North elevation.



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	None
Stormwater	None
Lighting	None
Landscape	None

Building Exterior

Roof	Metal roof in good condition. Vapor barrier under metal roof is in poor condition.
Gutter & Downspouts	Continuous metal gutters and downspouts – in good condition
Windows	None
Exterior Cladding	Metal siding



Building Interior

Floors	Gravel
Walls	Open to structure
Ceilings	Open to structure
Doors/Hardware	None

Structural Systems

Roof	2x8 wood purlins
Walls	2x8 wood wall girts
Foundation	Pressure-treated wood posts



General Code Requirements

Accessible Code	Not applicable
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Mechanical Systems

Water Supply	None
Sewer	None
Plumbing	None
Fire Sprinkler	None
HVAC System	None
Energy Controls	None

Electrical Systems

Switchgear/ Panel Boards	Electrical circuit from Building C
Elec. System	Exposed EMT conduit
Lighting	Keyless incandescent light fixtures
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	None
Telecommunications	None

Findings

Public Works Building B is in good condition. Minor repairs will extend life of building for an additional 15 years.

Operations and Maintenance Recommendations

- Replace RT post at NW corner for possible decay.
- Remove deteriorating vapor barrier below metal roof panels and replace if condensation becomes a problem.
- Repaint the inside and outside
- Replace metal roof and downspouts
- Replace all windows, doors, bay doors and lighting
- Public Works has outgrown the yard area and needs another 2-3 acres of property for storage, wash rack, and equipment.

PUBLIC WORKS: BUILDING C

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	1994
Building Area	1,500 s.f.
Building Type	Used for office and equipment storage. Pressure treated wood posts, wood wall girt and roof purlins, metal roof and wall panels



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	None
Stormwater	None
Lighting	Wall-mount HID light fixtures at North elevation
Landscape	None

Building Exterior

Roof	Wood purlins with metal roofing – in fair condition
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition
Windows	None
Exterior Cladding	Metal wall panels

Building Interior

Floors	Concrete floor in East office/storage space; gravel floor in West vehicle bays; carpet in office, vinyl in corridors and restrooms – all in fair condition
Walls	Wood frame with painted drywall in office
Ceilings	Suspended acoustical ceiling tile in office; painted gypsum board in corridor and restroom. Open to structure in shop and storage area.
Doors/Hardware	Metal and wood doors in wood frames. Sliding door in shop area.



Structural Systems

Roof	Wood purlins
Walls	Wood girts
Foundation	Pressure-treated wood posts
Upper Floors	Partial mezzanine storage

General Code Requirements

Accessible Code Office and restroom spaces are not ADA compliant

Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	
Fire Sprinkler	None
HVAC System	Gas furnace with DX air conditioning above office ceiling space. Electric wall heater in shop area.
Energy Controls	Single residential thermostat

Electrical Systems

Switchgear/ Panel Boards	200-amp electrical panel board
Elec. System	
Lighting	Fluorescent with T8 lamps in office
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Special Systems

Elevator	None
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Findings

Public Works Building C is generally in fair condition and service life can be extended another 10-15 years. Provisions for outside air ventilation should be installed to improve indoor air quality. Suggest investigating cost of installing additional insulation above office ceiling to reduce energy costs.

Operations and Maintenance Recommendations

- Water stained ceiling tile from leaking air handler condensate located above ceiling. Verify that condensate is piped to building exterior and that drain pan is adequate.

- Repaint the inside and outside
- Replace metal roof and downspouts
- Replace all windows, doors, bay doors and lighting
- Public Works has outgrown the yard area and needs another 2-3 acres of property for storage, wash rack, and equipment.

PUBLIC WORKS: BUILDING D

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	1994-1998
Building Area	2,800 s.f.
Building Type	Used for equipment storage. Pressure treated wood posts, wood wall girts, metal roof and siding. Three overhead and two sliding doors at North elevation.



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	None
Stormwater	None
Lighting	Wall-mount HID light fixtures at North elevation
Landscape	None

Building Exterior

Roof	Metal panels
Gutter & Downspouts	None
Windows	None
Exterior Cladding	Metal panel siding

Building Interior

Floors	Westerly 1998 building has concrete floors; Easterly 1994 building has gravel floors
Walls	Open to structure
Ceilings	Open to structure
Doors/Hardware	Three overhead doors and two sliding doors at North elevation

Structural Systems

Roof	Wood purlins
Walls	Wood girts
Foundation	Pressure-treated wood posts

General Code Requirements Accessible Code Not applicable

Mechanical Systems

Water Supply	None
Sewer	None
Plumbing	None
Fire Sprinkler	None
HVAC System	Gas wall heater in 1998 West addition; no heat in 1994 East building
Energy Controls	



Electrical Systems

Switchgear/ Panel Boards	Unknown
Elec. System	
Lighting	Unknown
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	None
Telecommunications	None

Findings

Public Works Building D is in good condition and service life can be extended for 10-15 years.

Operations and Maintenance Recommendations

- o Install additional insulation if shop and storage space will be heated.
- o Repaint the outside
- o Replace metal roof and downspouts
- o Replace all windows, doors, bay doors, and lighting
- o Seal pipe penetrations

PUBLIC WORKS: BUILDING E

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	2000
Building Area	1,500 s.f.
Building Type	Used for equipment storage. Pressure treated wood posts, wood wall girts and roof purlins, metal roof, and siding.



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	None
Stormwater	None
Lighting	None
Landscape	None

Building Exterior

Roof	Metal roof—in good fair
Gutter & Downspouts	Continuous metal gutter and downspouts—in fair condition
Windows	None
Exterior Cladding	Metal panels—in fair

Building Interior

Floors	Concrete
Walls	Unpainted drywall at South elevation—remainder open to structure
Ceilings	Open to structure
Doors/Hardware	Two large overhead doors at North elevation

Structural Systems

Roof	Combination of manufactured wood trusses and wood purlins
Walls	Pressure-treated wood posts with wood wall girts
Foundation	Pressure-treated wood posts
Upper Floors	Small storage mezzanine

General Code Requirements

Accessible Code	Not applicable
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Mechanical Systems

Water Supply	None
Sewer	None
Plumbing	None
Fire Sprinkler	None
HVAC System	None
Energy Controls	None

Electrical Systems

Switchgear/ Panel Boards	Unknown
Elec. System	
Lighting	T-8fluorescents
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	None
Telecommunications	None

Findings

Public Works Building E is in very good condition and appears to function efficiently for its current use.

Operations and Maintenance Recommendations

- o Install additional insulation if shop and storage space will be heated.
- o Repaint the outside
- o Replace all windows, doors, bay doors, and lighting

PUBLIC WORKS: BUILDING F

General Information

Address	2201 C Street, Washougal, WA 98671
Construction Date	1999
Building Area	1,000 s.f.
Building Type	Used for shop/storage and temporary office use. Pressure-treated wood posts, wood wall girts and roof purlins, metal roof, and siding.



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	None
Stormwater	None
Lighting	Wall-mounted HID light fixture at North elevation.
Landscape	None

Building Exterior

Roof	Shed roof with metal panels
Gutter & Downspouts	None
Windows	None
Exterior Cladding	Metal panels

Building Interior

Floors	Concrete
Walls	Wood girts with painted drywall
Ceilings	Open to structure
Doors/Hardware	Steel man door in wood frame at East and North elevations. Four overhead doors at North elevation – all in good condition

Structural Systems

Roof	Wood purlins
Walls	Wood girts
Foundation	Pressure-treated wood posts

General Code Requirements

Accessible Code	Not applicable
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Mechanical Systems

Water Supply	None
Sewer	None
Plumbing	None
Fire Sprinkler	None
HVAC System	Electric wall heaters and window air conditioner
Energy Controls	

Electrical Systems

Switchgear/ Panel Boards	100-amp electrical panel
Elec. System	
Lighting	T-8 fluorescents
Fire Alarm	None

Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	Unknown
Telecommunications	Yes

Findings

Public Works Building F is in good condition service life can be extended for 10-15 years. Temporary office use is being discontinued and space will be restored to shop and equipment storage functions.

Operations and Maintenance Recommendations

- o Install additional insulation if shop and storage space will be heated.
- o Replace Lighting
- o Repaint the outside
- o Replace metal roof and downspouts
- o Replace all windows, doors, bay doors, and lighting

PUBLIC WORKS: BUILDING G

General Information

Address	2247 Main St, Washougal, WA 98671
Construction Date	2006
Building Area	2,500 s.f.
Building Type	Used for shop/storage. Pressure-treated wood posts, wood wall girts and roof purlins, metal roof, and wall panels.



Site Conditions

Asphalt Paving	None
Concrete Surfaces	None
Parking	Limited to South elevation.
Stormwater	None
Lighting	Wall-mounted HID light fixture at West elevation.
Landscape	None

Building Exterior

Roof	Metal roof panels
Gutter & Downspouts	Continuous metal gutters and downspouts
Windows	None
Exterior Cladding	Metal panels

Building Interior

Floors	Concrete
Walls	
Ceilings	
Doors/Hardware	Metal door in wood frame and three overhead doors at West elevation – all in good condition

Structural Systems

Roof	Wood purlins
Walls	Wood girts
Foundation	Pressure-treated wood posts

General Code Requirements
Accessible Code Not applicable

Mechanical Systems
Water Supply None
Sewer None
Plumbing None
Fire Sprinkler None
HVAC System Electric wall heaters
Energy Controls

Electrical Systems
Switchgear/ Unknown
Panel Boards
Elec. System
Lighting Unknown
Fire Alarm None

Safety and Security
Security System None
Exterior Access Control None
Site Fencing None

Technology Infrastructure
Networks
Telecommunications

Findings
Public Works Building G is in very good condition.

Operations and Maintenance Recommendations
○ None noted

PUBLIC WORKS: WASTEWATER

General Information

Address	SR-14, Washougal, WA 98671
Construction Date	Assumed late 1970s
Building Area	1,020 s.f.
Building Type	Concrete slab on grade, CMU walls, wood-framed flat roof



Site Conditions

Asphalt Paving	Fair
Concrete Surfaces	Fair
Parking	
Stormwater	None
Lighting	Wall lights at South elevation
Landscape	None

Building Exterior

Roof	Single ply membrane roof with asphalt shingle on mansard roof – in good condition
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition
Windows	Thermopane windows
Exterior Cladding	CMU single wall construction. Wood fascia at South elevation is deteriorating and needs replacement.



Building Interior

Floors	Sealed concrete
Walls	CMU-painted
Ceilings	Painted gypsum board
Doors/Hardware	Steel doors and jambs

Structural Systems

Roof	Wood framed flat and mansard roof
Walls	CMU wall in good condition – no sign of cracking or spalling
Foundation	Concrete slab on grade in fair condition

General Code Requirements

Building Code	Not compliant with IBC
Accessible Code	Not compliant

Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	
Fire Sprinkler	None
HVAC System	Electric wall heaters and window air conditioners
Energy Controls	Unit controls

Electrical Systems

Switchgear/ Panel Boards	Unknown
Elec. System	
Lighting	T-8 fluorescent
Fire Alarm	None

Safety and Security

Security System	Unknown
Exterior Access Control	None
Site Fencing	Yes

Technology Infrastructure

Networks	Yes
Telecommunications	Yes

Findings

The Public Works Wastewater building is a small, concrete block building that houses electrical switch gear, a wastewater lab, and office space for the wastewater department. The building is in good condition with a newer single ply membrane roof.

However, the lack of insulation and outside air ventilation will result in high energy costs and poor indoor air quality.

Suggest that consideration be given to constructing a code compliant office addition to the East and converting the existing office space to unheated storage. Also, it would be beneficial to insulate and furr-out the exterior walls in the heated lab space.

Operations and Maintenance Recommendations

- Replace HVAC system
- Lack of wall insulation results in high energy cost per square foot. Suggest that consideration be given to furring out walls and installing insulation foam board covered by painted sheetrock.
- Wood fascia at South elevation is decaying and needs replacement.

SILVER STAR

General Information

Address	1220 A St, Washougal, WA 98671
Construction Date	1972
Building Area	3,700 s.f.
Building Type	Concrete slab on grade, wood frame, pitched roof

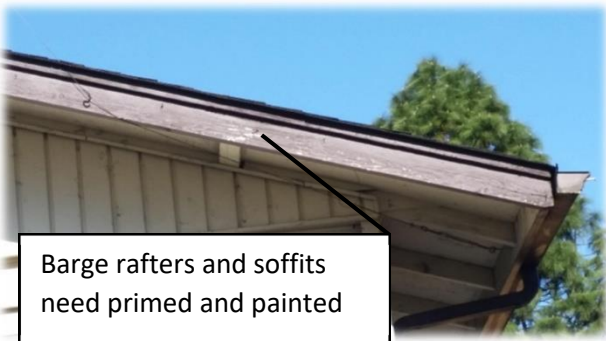


Site Conditions

Asphalt Paving	Crack and slurry sealing – in fair condition
Concrete Surfaces	Good condition
Parking	Parking available on South and West side of structure – in fair condition
Stormwater	None
Lighting	Mercury vapor light above shop door; incandescent wall light at main entry door
Landscape	Limited to turf and shrubs on North building elevation

Building Exterior

Roof	Asphalt shingles in deteriorating condition – needs replacement within 5 years
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition; missing downspout at SW corner
Windows	Aluminum frame, dual pane
Exterior Cladding	Vinyl siding in poor condition due to age and UV





Building Interior

Floors condition	Vinyl floor in commons area, concrete in shop – in poor
Walls	Painted gypsum board – in poor condition
Ceilings	Painted gypsum board – in poor condition
Doors/Hardware	Steel man doors in wood frames – rot in wood frame and trim at South elevation. Three large overhead doors in shop area – in poor condition. One large overhead door to shop area at South elevation – in poor condition.
Casework	Kitchen in commons area



Structural Systems

Roof	Manufactured wood trusses
Walls	Wood frame
Foundation	Concrete slab on grade

General Code Requirements

Building Code	Code deficiencies in ADA, energy, fire, and life safety systems
Accessible Code	Not compliant

Mechanical Systems

Water Supply	City of Washougal
Sewer	City of Washougal
Plumbing	Likely original plumbing
Fire Sprinkler	None
HVAC System	Forced air furnace with electric heat. No air conditioning. Did not have access to shop area.
Energy Controls	Single thermostat. Electrical energy consumption is 2.7 kWh/sf/year



Electrical Systems

Switchgear/ Panel Boards	Original 200-amp panel board
Elec. System	Original electrical wiring
Lighting	Fluorescent fixture in common area
Fire Alarm	None



Safety and Security

Security System	None
Exterior Access Control	None
Site Fencing	None

Technology Infrastructure

Networks
Telecommunications

Findings

The Silver Star building is 45 years old and beginning to show its age, however, the “bones” are in poor condition and it would be a good candidate for renovation that would restore its useful life for 20 years. The open commons area could readily be reconfigured for alternative uses.

Building systems in need of replacement/upgrading include: roof shingles, vinyl siding, electrical, HVAC, interior finishes, attic insulation, door hardware, new windows, removal of antenna tower, new gutters and siding, ADA compliant, new carpeting, remodel kitchen/new appliances, new bay doors, parking lot repaving, and fire/safety.

Operations and Maintenance Recommendations

- Replace outside faucet at north elevation with frost proof hydrant.
- Replace rotting wood door frame at South elevation.
- Replace exterior wood including soffits, fascia, and barge.
- Remove electrical wire protruding from South wall at South elevation, seal opening in wall.
- Replace gutters, siding, windows, doors, and new bay doors
- Make ADA compliant
- Replace HVAC and electrical
- Replace roofing
- Remodel kitchen/new appliances
- Replace flooring and paint interior and exterior
- Repave and stripe parking lot
- Remove antenna tower
- Repaint the inside and outside
- Replace metal roof and downspouts
- Replace all windows, doors, bay doors, and lighting
- Add insulation
- Combine police yard and silver star yard with new secure fencing

FIRE STATION 95

General Information

Address	211 39 th Street, Washougal, WA98671
Construction Date	
Building Area	5,215 s.f.
Building Type	Concrete slab on grade, wood frame, pitched roof

Site Condition

Asphalt Paving	Crack and slurry sealing good
Concrete Surfaces	Good condition
Parking	Parking available in good condition
Stormwater	unknown
Lighting	unknown
Landscape	Good

Building Exterior

Roof	Good
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition
Windows	Double paned windows
Exterior Cladding	Hardy Plank siding in good condition

Safety and Security

Security System	good
Exterior Access Control	good
Site Fencing	None

Operations and Maintenance Recommendations

- Replace hardy plank siding that is missing
- Make ADA automated compliant doors
- Remodel kitchen/new appliances
- Possibly replace flooring and paint interior and exterior
- Repaint the inside and outside
- Potentially update lighting

SOCIAL SERVICE BUILDING

1.44

FACILITY CONDITIONS

General Information

Address	1702 C Street, Washougal, WA98671
Construction Date	Estimate October 26, 2007
Building Area	5,000 s.f.
Building Type	Concrete slab on grade, wood frame, pitched roof



Site Condition

Asphalt Paving	Crack and slurry sealing good condition
Concrete Surfaces	Good condition
Parking	Parking available in good condition
Stormwater	unknown
Lighting	unknown
Landscape	Good

Building Exterior

Roof	Good
Gutter & Downspouts	Continuous metal gutters and downspouts – in fair condition
Windows	Double paned windows
Exterior Cladding	Hardy Plank siding in good condition

Safety and Security

Security System	good
Exterior Access Control	good
Site Fencing	None

Operations and Maintenance Recommendations

- Replace siding
- Repaint the inside
- Potentially update lighting and windows

SOCIAL SERVICE BUILDING

FUNCTIONAL ASSESSMENT SUMMARY

Functional Assessments were carried out over a two-month period. During this period, Terry Werdel met with leadership members from each department. These included:

- City Hall
 - Human Resources, Finance and IT, and Community Development
- Washougal Police Department
- Public Works
 - Annex Staff
 - Parks/Cemetery/Facilities
 - Streets/Stormwater/Fleet
 - Wastewater Operations

Many items were discussed in these meetings. We recorded what typical daily operations were done, how workflows generally occurred and what common staff interactions needed to happen. We asked what didn't work well in the facility; functionally, spatially, relationships to other spaces, etc., and what did work well? Were there tasks that needed to happen but couldn't? Was there enough room for tasks? Did the rooms have the right amenities to complete those tasks? What was their current staff and projected future need? Did they have room to expand?

After the meetings we toured the facilities. We recorded functionality and accessibility conflicts and/or opportunities. We interviewed staff to get their input and thoughts. We noted storage availability, open office and private office spaces, what groups worked in teams, or individually, who interacted with the public, what group or individual needed to interact with another individual, was there enough natural light and ventilation, and how the facility was functionally organized or divided up.

After each meeting, the information was used to create the functional assessments that are included in this section.

CITY HALL, LIBRARY AND COMMUNITY CENTER

Human Resources Department

- Jeanette Cefalo – Director
- Terence Werdel – LSW

Current staffing:

- (1) Human Resources Director - Jeanette

Needed Staff:

- (1) Future Resource Tech
- Rose Jewell helps with administrative duties and work associated with this role

General Office Duties:

- City Recruitment
- Benefit Allocation
- Training Coordination
- Payroll Compensation
- Risk Management
- Contract Negotiation
- Attends department head meetings
- Supports City Directors
- Collaborates with Payroll Department
- Drafts Personnel Policy Decisions and labor contracts

Typical Department Needs:

- Secure confidential file storage within HR office
- A large office to accommodate HR files, (1) staff and 1-2 person conferences/interviews
- proximity to Mayor and City Administrator

Department Deficiencies:

Deficiencies are problematic but don't generally compromise department operation or safety.

- Sound attenuation is problematic for confidential meetings.
- See below for overall City Hall deficiencies.

Finance and IT

- Jennifer Forsberg – Finance Director
- Terence Werdel – LSW

Current staffing:

- (1) Finance & IT Director – Jennifer
- (1) Account Supervisor
- (3) Accounting Specialists
- (1) Accounting Clerk
- (1) IT Manager
- (7) IT Tech's
- (1) Temporary Social Media Coordinator

Needed Staff:

- (1-2) Tech's
- (1) Social Media Coordinator

- (1) IT Director (needed in 3-5 years)

Typical Department Needs:

- Open office space for specialists and managers
- Private office space for supervisor, manager, and computer technician close to open office
- On site file storage for two years of records
- Clerk's space that is directly accessible by the public
- IT should eventually become a stand-alone department in 3-5 years
 - IT is currently administered by Jennifer

Department Deficiencies:

Deficiencies are problematic but don't generally compromise department operation or safety

- The City Server Room is located off-site at the Police Station
- Sound attenuation in the bull pen – specifically for the payroll specialist
- See below for overall City Hall deficiencies

Community Development Department

- Mitch Kneipp - Director
- Terence Werdel – LSW

Current staffing:

- (1) Director - Mitch
- (1) Commercial Inspectors/Plans Examiner
- (1) Permit Technician
- (1) Building Official/Plans Examiner
- (1) Planner

Needed Staff:

- (1) Plans Examiner
- (1) Planning Manager
- (1) Administrative Assistant
- (1) Community Development Tech

Typical Department Needs:

- Permit services counter with space to review large plans.
- Ample office area to review large plans.
- Combination of private and open offices.

Department Deficiencies:

Deficiencies limit or prevent department operations or safety with potential to grow worse over time.

- The department is understaffed and lacks office space to accommodate new FTE's. New hires will require more private and open offices than are currently available.
- The Engineering Inspector is currently housed in the City Annex building due to lack of space in City Hall.
- See below for overall City Hall deficiencies.

City Administration

- Rose Jewell – Assistant to the Mayor
- Terence Werdel – LSW

Current staffing:

- 1 Mayor – Sean

- 1 City Administrator – David
- 1 Human Resources Director – Jeanette
- 1 Public Works Director – Trevor (Executive Office Annex)
- 1 Assistant to the Mayor - Rose

Needed Staff:

- (1) Events Coordinator (Currently filled by Rose Jewell)
- (1) Deputy City Clerk
- Rose currently fills this additional role

Department Needs:

- Close office proximity between Mayor, City Administrator, Human Resources Director, and Assistant to the Mayor.
- Mayor, City Administrator, and HR all require large office space.

Department Deficiencies:

- None - See below for overall City Hall deficiencies.

Washougal Community Library and Community Center

- This building is directly adjacent to City Hall and owned by the City of Washougal.
- One-third of the building is leased by the Fort Vancouver Regional Library (FVRL)
- Two-thirds of the building functions as a Community Center, preparation and distribution center for Meals-On-Wheels, Senior Association meeting space and homeless support center. Scheduling is done through City Hall.
- FVRL Contact: Racheal Riese
- Meals-On-Wheels Contact: Janice Butzke – 360.210.5666

Facility Opportunities:

- The library space is inadequate to meet community needs.
- Relocating the library to a new location allows this space to be repurposed for City Hall use.

Facility Deficiencies:

- Insufficient public meeting space.
- Off-site homeless materials storage.
- Insufficient homeless drop-off and dispensary area.

General City Hall Deficiencies:

These deficiencies are problematic but don't generally compromise operations or safety.

- Ineffective sound attenuation – particularly in confidential office spaces.
- Inadequate breakroom area.
- Insufficient meeting and conference spaces.
- Inadequate HVAC – particularly ventilation of the work room.
- Functionally scattered work and storage areas.
- Insufficient areas to perform staff and community service training.
- Insufficient space to act as an emergency operations center.
- Insufficient public restroom facilities.
- Insufficient staff restroom facilities.
- Insufficient general office storage.
- Sound of the printer disrupts the entire office.
- Metal windows condensate moisture.
- Exterior siding needs replacement.
- Presence of mold is in some areas.
- The roof leaks.
- Insufficient electrical to meet operational demands even after remodel.

Operational City Hall Deficiencies:

These deficiencies limit or prevent department operations or safety with a high potential to worsen over time.

- Insufficient file and record storage. Current areas lack space, security, protection from fire or water damage and ability to clearly organize. Storage will run out soon.
- No ADA access to basement.

Arguments for a new building:

- Showcase Washougal's commitment to a "green lifestyle".
- High energy consumption of existing systems.
- Inability to accommodate future staff and service growth.
- Inadequate functionality of existing building.
- IT is housed in the basement with no natural light.

Opportunities:

- Relocate the library and repurpose the space for Public Works Executive offices and Community Development services. Remodel the City Hall building for Executive Administration, Human Resources, Finance, and IT services.
- Purchase the vacant Black Pearl Building and repurpose it for City Hall.

Police Department

- Ron Mitchell – Police Chief
- Allen Cook – Police Commander
- Dave Halme – LSW
- Terence Werdel - LSW

Facility:

- Built in 2004

Current staffing:

- (20) Officers
- (2) Animal Control
- (1) Code Enforcement (moving to Public Works Admin building)
- (2) Administrative Staff
- (1) K-9

Needed Staff:

- (3) Officers

General Deficiencies:

These deficiencies are problematic but don't generally compromise department operation or safety.

- Insufficient armory, general storage, ready storage, and large evidence storage spaces.
- Insufficient administrative office and break room areas.
- Insufficient women's restroom facilities.
- There is no weapon cleaning station.
- There is no bunk room to accommodate staff in overtime or emergency events.
- There is no work out room.
- The number of men's lockers are at capacity. There is no availability for future needs.
- HVAC distribution and control is problematic as temperatures vary throughout the building.
- The sally port is compromised with equipment and vehicle storage in the same area.
- Building security is compromised by performing routine fingerprinting and interviews inside the secure area of the building.

Operational Deficiencies:

These deficiencies limit or prevent department operations or safety with a high potential to worsen over time.

- Staff and patrol vehicle parking, egress and maneuvering areas are inadequate, the lots are unsecured and access is split between the east and west sides of the building.
- The entire site is unsecured and has numerous areas that are not easily observable.
- The training room is not large enough to accommodate full staff meetings or host training classes.
- There is insufficient office space for patrol staff and no ability to grow over time. Every added person reduces the usable area of current staff.
- Vehicle impound is inadequate and unsecured.
- Property impound is inadequate, unheated, and minimally secured outside.

Case Study Facility:

- Battle Ground Police Station

Opportunities:

- Move into the Silver Star building to add needed space.
- Enlarge the police station and parking at their current location.

Advantages of Silver Star building:

- The building is located directly adjacent to the current police station.
- This building is an under-utilized City property and is in good condition.
- The building has enough office space to solve many, if not all current space requirements for the foreseeable future. By relocating Animal Control, Code Enforcement and detectives into the Silver Star building, space would be freed up to relieve congestion and increase efficiencies.
- In addition to office space, this is enough area to further provide training for staff and host training.
- The garage offers enough area to secure vehicle impounds.
- The additional Silver Star parking area could be reconfigured to provide secured parking for police and employees and create additional parking for the public.

Disadvantages of Silver Star building:

- Displacing Silver Star Search and Rescue.

Public Works – Annex

- Rob Charles – City Engineer/Deputy Director
- Terence Werdel – LSW

Current staffing of Executive Office (See additional staffing under Public Works Administrative Office):

- (1) Director
- (1) City Engineer/Deputy Director
- (1) Administrative Assistant
- (1) Senior Analyst
- (1) Engineering Inspector

Needed Staff:

- (1) Engineering Tech
- (1) Development Engineer

General Needs:

- Co-location with City Hall
- Private offices with space to review large plans
- Meeting or conference room

General Deficiencies:

These deficiencies are problematic but don't generally compromise department operation or safety.

- Public Works locations are split between Executive Office Annex at 1615 C Street, Administrative Office at 2247 Main Street and Shop at 2201 C Street.
- No sewer line maintenance services.
- Out of date ADA accessibility.

Operational Deficiencies:

These deficiencies limit or prevent department operations or safety with a high potential to grow worse over time.

- None.

Opportunities:

- Relocate Public Works Administration, service staff, shop, and yard to a location on the South side of Hwy 14. Look at available parcels in this area.
 - Disadvantage of separation by railroad track from north portion of city.
 - No City owned land other than Wastewater Treatment facility.
- Incorporate Executive Offices into City Hall by remodeling City Hall and Community Center into a comprehensive City Hall Service Center. Could even add an addition.
 - Disadvantage of displacing the library, community center, senior association meetings, meals-on-wheels, and homeless support
 - Advantages: Plenty of developable land for an addition and more parking.
- Demolish City Hall and Community Center and build a new facility at the C Street location.
 - Disadvantages: Funding and temporary relocation of services are problematic.
 - Advantages: Plenty of developable land and parking.
- Relocate Public Works Shop and Yard to Wastewater Treatment site.
 - May need to purchase a portion of the surrounding land to provide enough area.

Public Works – Wastewater

- Ryan Baker – Manager
- Terence Werdel – LSW

Current staffing:

- (1) Ryan – Manager
- (4) FTE

Needed Staff:

- (3) Sewer Line FTE

Division Responsibilities:

- Treatment of wastewater at the treatment facility to ensure it meets the City's National Pollutant Discharge Elimination System (NPDES) permit
- Repair, replacement, and maintenance of City sewer system
- 62 miles of sewer main, 1500 manholes, 14 lift stations and 5,000 points of connection

On-site Wastewater Facility includes:

- An Operations Building and Laboratory
 - CMU Construction
- Multipurpose Building (1999)
 - Sludge Pumps
 - Electrical Service
 - Tool and Supply Storage
- Headworks Building (2009)
 - Fine Screen
 - Grit Removal
- Storage Building (2011)
 - Vehicle Storage
 - Operator Locker Room
 - Washer and Dryer
- UV/Effluent Pump Station Building (2016)
 - (2) UV Channels
 - (5) Effluent Pumps
 - (2) Non-potable Water Pumps (on-site maintenance water supply)
 - Electrical Service
- (2) Influent Pump Stations
- (2) Oxidation Ditches
- (2) Clarifiers
- (1) Scum Pump Station
- (4) Waste / Solid Ponds
 - (1) Partially filling currently with bio solids.

General Deficiencies:

- There are no significant deficiencies at this location that can't be resolved fairly easily. The Operations Building is small, but 750 s.f. are being added on to it to increase office area. The only remaining issues are poor HVAC of the Operations Building and Lab and the windows of both these buildings should be replaced with more efficient windows.
- Functionally, the facility seems to operate well and space issues will be resolved with the office addition.

Opportunities:

This site offers potential for Public Works Shop and Yard relocation.

- Advantages:
 - ☐ A bridge to the East offers access to the Northern portion of the City if a railroad incident should block traffic access.
 - ☐ There appears to be a lot of area to build on here but a closer study should be done to verify if it is adequate for both Public Works and Wastewater Treatment to operate efficiently.
 - ☐ The filled waste/solids pond is underutilized land and potentially able to be built upon.
 - ☐ Potential road access to the southwest corner of the property but may be difficult to develop as it goes through a wildlife refuge.
- Disadvantages:
 - ☐ WASHDOT may be resistant to the added entry/exit traffic onto Hwy 14 by Public Works vehicles.

Public Works – Parks/Cemetery/Facilities

- Suzanne Grover – Manager
- Terence Werdel – LSW

Current staffing:

- (1) Suzanne – Manager
- (1) Cemetery Maintenance
- (1) Building Maintenance
- (1) Park Maintenance
- (1) Overseer
- (5) Seasonal FTE
- (1) Administrative Assistant (for Parks, Water, Streets & Wastewater).

Needed Staff:

- (1) FTE

Division Responsibilities:

- Maintenance and upkeep of City parks and facilities which include:
 - 100 acres of land (90 acres of parks and 10 acres of open spaces)
- Cemetery
 - 11 Buildings

General Functionality

- Parks line staff are moving into the Administration Building
- Code Enforcement officer is moving into Administration Building from Police Station.

Operational Deficiencies:

Administration Building:

- The building is a repurposed residential building and not generally suited for office use.
- An accessible restroom is available.
- No vehicle connection to the Shop/Yard area.
- The separation of the Administration Building and Shop/Yard make collaboration between managers and their line staff difficult.
- The SCADA is located in an exposed and unsecure area.
- No large staff meeting room for division briefings, line staff breaks or training.
- No dedicated flat file storage or map room for parks.
- Kitchen is small.
- Losing the parking across the street on Main Street to development.

Line Staff Building at the Shop/Yard site:

- The building condition is substandard and insufficient to support effective operations.
 - Building insulation is minimal.
 - HVAC is inadequate - gas fumes from equipment storage enter occupied spaces.
- At 1,100 s.f., the facility is too small to support staff needs.
- The (1) restroom is substandard.
- The restroom and building are not ADA accessible.
- There are no staff lockers or showers.
- There is no wet weather gear storage or area for drying.
- Office storage is insufficient.
- Equipment and materials storage is insufficient.
- Office space is insufficient.

- ❑ Offices are converted closets and storage rooms.

Event Material Storage at the Shop/Yard site:

- Stored in a separate Conex container.

Vehicle, Equipment, and Material Storage:

Storage is scattered between the Shop/Yard site, Hathaway Park, and the Cemetery.

- The Shop/Yard Area:
 - ❑ This area is not currently large enough to accommodate all building and shop needs, vehicles, equipment, and materials used by Public Works. Additionally, one-half of the site is owned by the railroad, who has historically granted use to the City, but could revoke use at-will.
 - ❑ Limited outside storage area for materials like rock and gravel.
 - ❑ Limited indoor storage for bark, soils, fertilizers, chemicals, etc. in the parks/facilities building.
 - ❑ There is no covered or indoor parking for Parks vehicles.
 - ❑ Exposed parking includes.
 - (1) Van
 - (3) Trailers
 - (6) Vehicles
 - (1) Dump Truck
 - (1) Truck with Lift

Cemetery Site:

- Primarily indoor storage with limited exterior materials storage.
- Cemetery Maintenance Building:
 - ❑ An operations office appears adequate.
 - Storage consists of miscellaneous equipment and tools (blowers, weed-eaters, push and driving mowers, edger's, hedgers, wheel barrows, shovels, rakes, hoes, concrete mixer, trailer, brooms, spreaders, sprayers, snow shovels, tarps, and memorial flags).
 - ❑ Storage is orderly and well maintained.
 - There is room for misc. storage on a mezzanine but it's not easily accessible.
 - ❑ Head stone fabrication is done here.

Hathaway Park (satellite and overflow storage):

- Limited vehicle access.
- Limited storage capacity.

Opportunities:

- Consider best practice for manager location:
 - ❑ Option 1 - Locate Parks, Streets, Water and Wastewater Managers with Director and City Engineer.
 - Locate line staff at a Shop/Yard location in a single building with separate division spaces or multiple buildings by division.
 - Wastewater treatment facility remains in existing location.
 - ❑ Option 2 - Locate Parks, Streets, and Water managers with Line Staff.
 - Locate Shop/Yard location in a single building with separate division spaces or multiple buildings by division.
 - ❑ General sense is to prefer being located with line staff.
 - ❑ Close Hathaway Park for satellite storage and store bulk materials at the Yard and divide equipment storage between the Yard and Cemetery.
 - ❑ Add Parks/Facilities and Streets/Stormwater map room needs to the Water map room space and unify them into a comprehensive Public Works map room.

Public Works – Streets/Stormwater/Fleet

- Will Noonan – Manager
- Terence Werdel – LSW

Current staffing:

- (1) Will – Manager (Admin Building)
- (1) Mechanic (Building A)
- (8) Seasonal (Building A)
- (3) Street (Building A)
- (4) Storm (Building A)

Needed Staff:

- (1) Storm Tech
- (1) Street Tech
- (1) Mechanic

Division Responsibilities:

- Maintenance and upkeep of City streets, stormwater systems and fleet which include:
 - ☐ Signage storage, and repair
 - ☐ Sidewalk repair.
 - ☐ Right-of-way tree pruning.
 - ☐ Right-of-way vegetation management.
 - ☐ Soft shoulder repair and maintenance.
 - ☐ Crack sealing.
 - ☐ Streetsweeping.
 - ☐ Painting.
 - ☐ Fleet maintenance and repair.
 - ☐ Fleet replacement, purchasing and surplus.
 - ☐ Stormwater system clearing, repairing, and maintaining.
- There is crossover of vehicle use and right-of-way management with Parks/Facilities.
- Stormwater and Street crew operations are integrated.
- October through March, the Division has an on-call list for emergency crews.

General Functionality:

Streets/Stormwater/Fleet Operations Building, Shop/Yard site:

- Mechanic's office is adjacent to the maintenance bays.
- Two maintenance bays.
- Tire storage.
- Oil waste storage.
- Temporary vehicle and mower parking.
- Miscellaneous safety gear and office storage.
- Open office for (4) Stormwater Techs
- Open office for (3) Street Techs
- Office for Will – moving from Administration Building to make room for Parks/Facilities staff.
- Miscellaneous storage on a mezzanine that is not easily accessible.

Water Division Operations Building, Shop/Yard site:

- Open office for (6) Water Techs
 - ☐ Monitor water supply, reservoirs, and water pressure.
 - ☐ Set, repair and read water meters.
 - ☐ Answer complaints.

- Lock-out or turn off water supplies.
 - Office for (1) Operations Manager.
- Water Division Storage Building, Shop/Yard site:
 - Indoor parking for (3) vehicles.
 - Map Room.
 - General parts storage.
 - Concrete floor.
- Building D Storage Building, Shop/Yard site:
 - Indoor parking for (3) vehicles.
 - Indoor materials storage.
 - Concrete floor.
- Building D-Annex Storage Building, Shop/Yard site:
 - Indoor Roller parking.
 - Indoor materials storage.
- Building E Building, Shop/Yard site:
 - Indoor parking for plow and flat-bed truck.
 - Sign shop.
 - Inventory storage.
 - Secure tools storage.
- Sign Storage at the Shop/Yard site:
 - Stored in a separate Conex container.
- Yard Area
 - Exposed storage areas for materials.
 - Exposed storage areas for sand, gravel, lava rock, etc.
 - Exposed parking includes:
 - Vector – stored at the Wastewater Treatment Facility.
 - See fleet list for additional vehicles.
 - De-icing System.
 - Wash-down rack with deep sump and oil/water separator.
 - Fuel storage and pump.
- Operational Deficiencies:
- Administration Building:
 - See Parks/Cemetery/Facilities assessment notes.
- Streets/Stormwater/Fleet Operations Building, Shop/Yard site:
 - Insufficient break, conference, operations room and training area.
 - Insufficient ready room for seasonal staff.
 - No locker room.
 - Shower is not in an optimal location.
 - The building is generally ADA compliant.
 - No wet gear storage or drying areas.
 - Unenclosed compressor is noisy under the stairs.
 - Insufficient parts and materials storage area for fleet maintenance.
 - Insufficient restroom and shower facilities.
- Water Division Operations Building, Shop/Yard site:
 - Interlink to the SCADA is mounted high up on the exterior south wall.
 - This location is unacceptable for maintenance and servicing.

Vehicle, Equipment and Material Storage, Shop/Yard site:

- The Shop/Yard Area
 - ▢ This area is not currently large enough to accommodate all building and shop needs, vehicles, equipment, and materials used by Public Works. Additionally, one-half of the site is owned by the railroad, who has historically granted use to the City, but could revoke use at-will.
 - ▢ No area to dump spoils.
 - ▢ Insufficient outside covered vehicle and equipment parking.

Building D-Annex, Shop/Yard site:

- Gravel floor.

Opportunities:

- Move Stormwater operations to Silver Star Location.
 - ▢ Relocating (4) Stormwater Techs, (8) service vehicles to the Silver Star site would greatly reduce the load on the entire Shop/Yard site.

Public Works – Water

- Manager position is vacant
- Terence Werdel – LSW

Current staffing:

- (1) Manager - Vacant
- (6) FTE

Needed Staff:

- (1) Manager

General Needs:

- Water Building D: Indoor vehicle parking, parts storage and map room.

General Deficiencies:

- See comments under Streets/Stormwater/fleet

Operational Deficiencies:

- See comments under Streets/Stormwater/fleet

CONCEPTUAL OPTIONS SUMMARY

The Facility Conditions and Functional Assessment reports both show significant deficiencies in all City of Washougal facilities analyzed except for the Wastewater Treatment Facility. Some deficiencies can be addressed within their existing structures, some within (or nearby) their existing sites and some unfortunately cannot be solved by either.

Both reports indicate that these deficiencies will continue to worsen and planning for their correction must be done before it's forced upon them. This section uses the previous reports findings to suggests options the City might consider in planning for their inevitable remodel, expansion, or new construction. Planning now will allow you to make changes at a measured pace and coordinated with opportunities like elections, budget allocations, state and federal incentives and/or staff growth.

CONCEPT 1: Relocate the Washougal Community Library

Relocate the Washougal Community Library and remodel the City Hall Complex (City Hall, Community Center, and Library). The City benefits from relocating the Library to another location, by freeing up building area to relieve spatial constraints on City Hall. Additionally, the Public Works staff housed next door in the Annex could also be reincorporated into City Hall and the property better utilized. The Library benefits from relocation by finding a location that better serves its needs and is more accessible to the public. Concept 1 proposes a limited remodel to better house staff and allow capacity for growth, more effectively provide services, and correct building maintenance and environmental issues. The Library space can be repurposed to house Commercial Development and Public Works annex staff. This will allow opportunity for Finance to expand into the existing Community Development area, pull staff out of the basement, create more record storage, and a larger workroom. Continued use of the basement as office space is problematic because of issues related to accessibility, exit access, radon, and lack of natural light. Due to difficult and costly work needed to correct these for office use, we propose remodeling the basement for secure and protected record storage only. The Annex, on the other, hand can be repurposed in several ways. It could become the new home of the Library by remodeling the existing building or demolishing it and building new. It could also temporarily house staff displaced by a City Hall remodel or further be leased out until the land or building are needed again in the future. Timing of any City Hall remodel would need to be coordinated with the Library's relocation.



Estimated Cost: Based on \$150/sf construction cost, the building remodel would cost \$2,000,000 (not including the basement). Soft costs of 20% would make the project costs total approximately \$2,400,000. There would also be the cost for leasing a temporary space during construction. Another consideration is potential income received from the lease or sale of the Public Works Annex.

Estimated Timeline: Funding and property search for Library locations – 1 year / City Hall Project funding – 1 to 2 years (concurrent to Library) / Design & permitting of City Hall – 9 months (concurrent City Hall funding) / City Hall construction (could not begin until the Library space is vacant) – 9 months

Estimated Project Duration: 2 years, 9 months.

CONCEPT 2: Relocate the Washougal Community Library; Build a New City Hall Complex

Relocate the Washougal Community Library and build a new City Hall complex on the existing site. The Community Center portion of the existing building would remain but, the Library section could be demolished depending on need. The Library section could also remain as temporary housing of staff and limited services during construction. After construction, it could remain and be repurposed or be demolished as part of the new City Hall development. By replacing City Hall, the new building can be purpose-built with expansion flexibility to accommodate the future needs of the City. The intent could be to reinvigorate the historic location that the public already identifies as a focal point for civic services. A new building would help to promote the vision City leaders plan for the Washougal of the future. The building could express the City's values in efficient service and sustainability. The property has capacity for a new building plus parking even with the existing Community Center and Library building remaining. For the purposes of comparison, we are considering the building as the same size as the existing complex of buildings; approximately 13,000 sf (not including a basement). The Library would be relocated as described in Concept 1 and similarly, the construction process could occur in parallel to the Library relocation. Additionally, the Annex staff would be incorporated into the new building and the Annex used for temporary staff rehousing, repurposed for the Library, leased, or sold to offset project costs.



Estimated Cost: Based on a \$350/sf construction cost, the new building would cost \$4,550,000. Soft costs of 25% would make the project total approximately \$5,690,000. Cost for leasing a temporary space during construction might be avoided if operations can remain in the existing buildings during construction. Another consideration is the potential income received from lease or sale of the Annex.

Estimated Timeline: Funding and property search for Library locations – 1 year / City Hall Project funding – 1 to 2 years (concurrent to Library) / Design and permitting of City Hall – 1 year (concurrent City Hall funding) / City Hall construction (could not begin until the Library space is vacant) – 1 year

Estimated Project Duration: 4 years

CONCEPT 3: Washougal Community Library & Community Center Remain; Build a New City Hall

Build a new City Hall on the existing site, leave the Community Center and Library as is, temporarily leave the existing City Hall to provide services while construction occurs and demolish it after construction. The project would be completed with the construction of parking on the demolished City Hall site. This concept has all the advantages of Concept 2 and allows the Community Center and Library to remain as needed and replaced or repurposed as needed. This concept also has the advantage of no interruption of City Hall services during construction or delay for Library relocation.



Estimated Cost: Based on a \$350/sf construction cost, the new building would cost \$4,550,000. Soft costs of 25% would make the project total approximately \$5,690,000.

Estimated Timeline: City Hall Project funding – 1 to 2 years / Design and permitting of City Hall – 1 year (concurrent City Hall funding) / City Hall construction – 1 year

Estimated Project Duration: 4 years

CONCEPT 4: Build A New City Hall at Another Location

Building a new City Hall at another location within the City allows the existing complex to be repurposed by the Library and/or Community Center. In this concept, City Hall would remain functioning in its current location until the new facility was built. Building a new City Hall on another site has all the advantages of Concept 2 while also allowing the Library and Community Center to expand their functions on this site. Given the size of buildable area, there is potential to consider additions to expand the Library and Community Center in the future to include other functions. These functions may include community conference and meeting rooms, an indoor pool, basketball and fitness rooms, children's activity spaces, playgrounds, a Boys and Girls Club and/or homeless services.



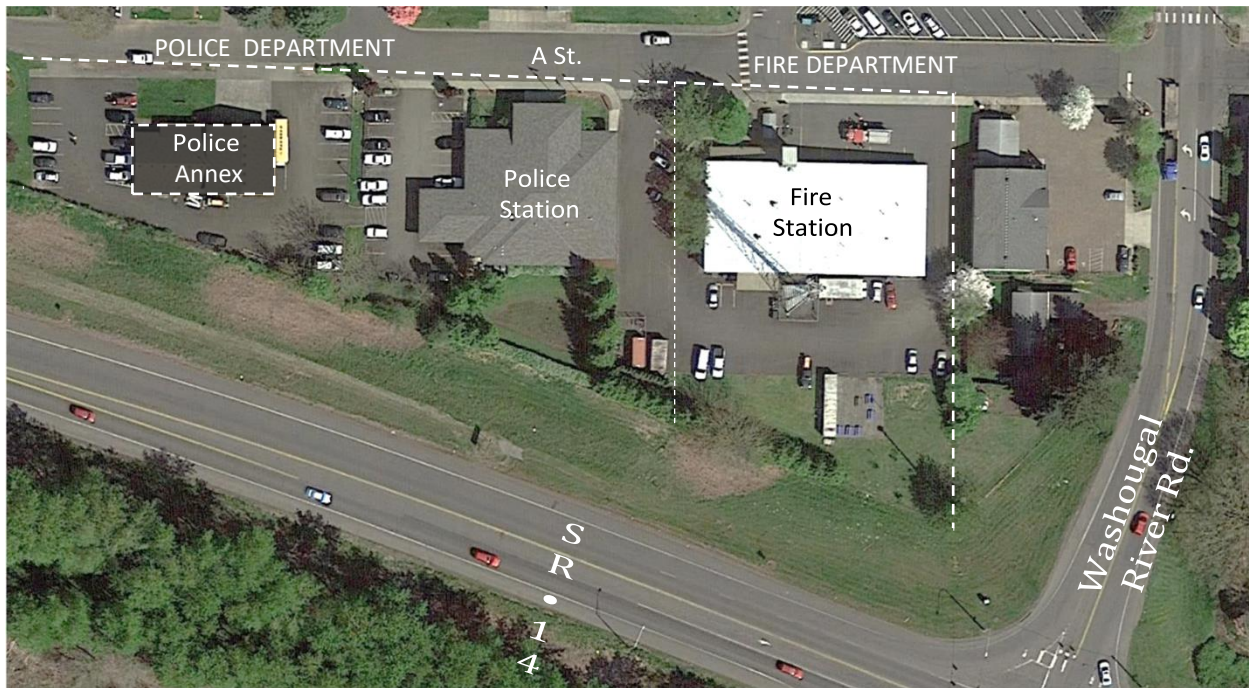
Estimated Cost: Cost and location of the new land is unknown. See Concept 3 above.

Estimated Timeline: City Hall Project funding and property search – 1 to 2 years / Design and permitting of City Hall – 1 year (concurrent City Hall funding) / City Hall construction – 1 year

Estimated Project Duration: 4 years

CONCEPT 1: Expand to Silver Star Building

This concept provides approximately 3,700 sf to alleviate current and future space requirements of the Police Department. By capturing the whole site, problematic vehicle parking and maneuvering issues are corrected and more area becomes available for training and outdoor functions. The site can further be secured with fencing and areas designated for impound and lost property storage. The Silver Star building has more than enough square footage to accommodate the immediate needs of the Police Department and can be remodeled as funding becomes available to address future program needs. A larger, well organized, and efficient Police Department sited directly adjacent to the Fire Station creates a focal point in the City that the public already associates with civil protection and safety services.



Estimated Cost: The City will lose potential revenue from the existing building, but there would be a minimal amount of capital expenditure on the building and impound area.

Estimated Timeline: Timing dependent on Silver Star Search and Rescue lease.

CONCEPT 2: Enlarge Existing Police Station

The existing Police Station is added onto by extending the building to the south or adding a second floor. The land available to the south is approximately 3,000 to 4,000 square feet which is adequate to solve current space needs. Being purpose built, the addition will integrate into existing building functions, however, portions of the existing building may need remodeling to fit with a new addition layout. This could also be an opportunity to improve other existing deficient elements such as providing new fencing to increase site security. Immediate operations would be impacted by construction, but it may be planned to allow the department to remain in operation in the building during work. Allocating an impound area on site remains a challenge. Vehicle parking issues are not addressed in this scenario and could be exacerbated with the addition of new staff. However, there is potential to correct the parking by combining parking with the Fire Station and/or Silver Star.



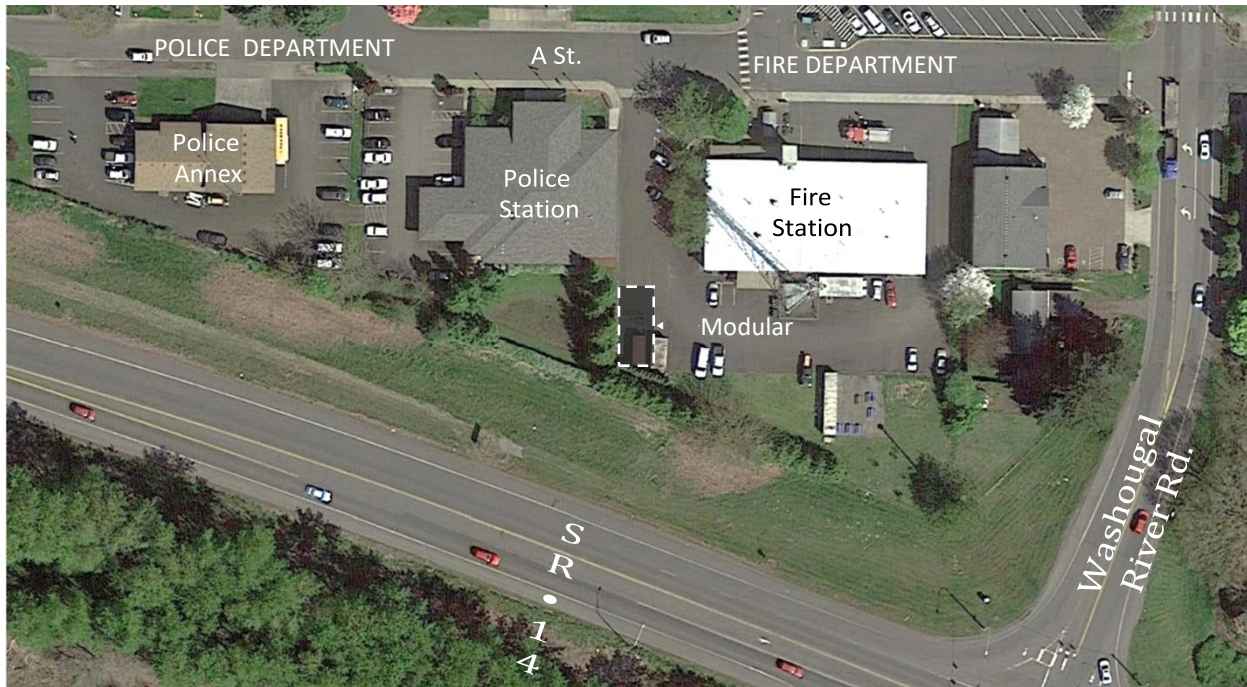
Estimated Cost: Based on a cost of \$350/sf construction, costs of a 3,000 sf to 4,000 sf addition would cost \$1,050,000 to \$1,400,000. Soft costs of 20% would make the project cost total between \$1,260,000 and \$1,680,000.

Estimated Timeline: Funding – 1 year / Design and permitting – 6 months / Construction – 6 months

Estimated Project Duration: 2 years, 3 months

CONCEPT 3: Add Modular Building

By relocating some functions, such as the detective services, into a modular structure, some of the office crowding could be alleviated. A 1,500 to 3,000 sf structure could be located on the parking lot to the west of the Silver Star building or to the south of the existing building. By locating a modular structure immediately south of the existing building, there are opportunities to connect the two buildings more directly with less impact on parking. Locating to the west of the Silver Star Building limits a direct connection and impacts parking for police staff and Silverstar Search and Rescue. Being a predesigned structure, there will be limitations to the functions that are possible in the building, but the impact to operations during construction would be minimal. Allocating an impound area on site remains a challenge.



Estimated Cost: Based on \$50 to \$100/sf construction costs, the building would be \$100,000 to \$300,000. Soft costs of 15% would make the project costs total between \$115,000 and \$345,000.

Estimated Timeline: Funding – 1 year / Documentation and permitting – 3 months / Manufacturing and installation – 3 months

Estimated Project Duration: 1 year, 6 months

Concept 4: Add Satellite Police Station

The current location is centralized and services the downtown area. By adding a second, satellite facility, Washougal can spread the police presence throughout the City. A building of 1,500 to 3,000 square feet could house the current overflow and projected growth. Strategically identifying a location for a second location could help mitigate areas subject to frequent crime, areas that are underserved due to access, and areas that are slated for future expansion of the City. Considerations in the Northeast area of town would geographically balance the police coverage. Tenant space with associated off-street parking could be rented immediately and a purpose built structure planned for the future. The City would need to purchase land or repurpose existing property for the purposes of this project. The existing Annex building, currently housing Public Works staff, could be used for relocation if a strategic location is unnecessary and Public Works staff can be relocated. If unable to repurpose an existing structure, the City would need to fund a new building. The drawbacks to this approach include the inefficiencies of managing two locations, the cost of redundant systems, and the lack of direct staff interactions. There would be no impact to operations during construction. An impound area could be added to the satellite facility. Vehicle parking issues would be alleviated in a scenario with a second station.



Estimated Cost: Based on a \$350/sf construction costs, the building would be \$1,050,000 to \$2,100,000. Soft costs of 25% would make the project costs total between \$1,575,000 and \$2,625,000 (plus the cost of land).

Estimated Timeline: Funding and property search – 1 year / Design and permitting – 9 months / Construction – 9 months

Estimated Project Duration: 2 years, 6 months. Land Use approval may add to the duration.

CONCEPT 1: Move the Storm Water Department into the Silver Star building

Moving a portion of the Storm Water staff to the Silver Star building will alleviate overcrowding at their current location and relieve vehicle parking requirements for the whole Service Yard. The Service Yard could be opened up further by relocating some bulk storage and equipment storage to the Silver Star site. This concept necessitates Silver Star Search and Rescue find new accommodations.



Estimated Cost: Costs for relocating the department are minimal, but the loss of potential lease income from Silver Star building would need to be considered.

Estimated Timeline: 1-2 months.

CONCEPT 2: Move Public Works Functions to New Property and Build New Buildings and Yard

This concept will provide a yard and buildings that are appropriately sized. The new complex will allow Public Works managers to be integrated with their staff and provide purpose built facilities for operations material and equipment storage, service and maintenance repair, environmentally compliant wash down area, de-icing, fuel and oil storage, spoils dumping and covered and uncovered vehicle parking and storage. The current buildings combined square footage equals approximately 21,500 sf. Our initial assumption is that the buildable area and yard need to increase by 50% to accommodate capacity deficiencies, which would give a new combined square footage of approximately 32,250.



Estimated Cost: Based on \$75/sf construction costs, the new building or buildings would be approximately \$2,400,000 plus the cost of new land. Soft costs of 20% would make the project costs total approximately around \$2,880,000. The old location would be sold to help fund the new project.

Estimated Timeline: Funding and property search – 1 year / Design and permitting – 6 months / Construction – 6 months

Estimated Project Duration: 2 years

CONCEPT 3: Move Public Works Operations and Service Yard to Wastewater Treatment property

By moving Public Works functions to the unused portion of the Wastewater Treatment Center, the Service Yard and its buildings can be upsized. The Unused pond area is about twice the size of the current Public Works property including the administration building. Increased truck traffic on HWY 14 may be a concern and need to be coordinated with the Washington Department of Transportation. The current combined building and yard area equals approximately 21,500 sf. Our initial assumption is that the buildable area and Service Yard need to be increased by 50% to accommodate capacity deficiencies. The new buildings and Service Yard would therefore be approximately 32,250 sf.



Estimated Cost: Based on \$75/sf construction costs, the new building or buildings would be approximately \$2,400,000. Soft costs of 20% would make the project costs total approximately \$2,880,000. The old location could be sold to help fund the new project.

Estimated Timeline: Funding - 1 year / Design and permitting – 6 months (could happen in conjunction with funding phase) / Construction – 6 months

Estimated Project Duration: 1 year, 6 months

CONCLUSION

While it will be challenging to develop a plan to replace and revitalize the City's aging buildings, it is also an opportunity for City leadership to set Washougal on a new path. Replacing these buildings will take time, cost money, generate attention, and create significant City landmarks.

Can its planning be leveraged to engage other City leaders and support other interests to strengthen Washougal, increase livability and attract new citizens?

Can it be used to engage the public, generate discussion and develop a new vision for the future?

Can it help reinforce downtown development, reinvigorate a particular location, support sustainability and thoughtful management of natural resources?

Planning of this scope, gives Washougal the opportunity to create a new identity and redefine its place in Clark County.

FUTURE ACTION

Please note that the future facilities plan will include parks and cemetery facilities.