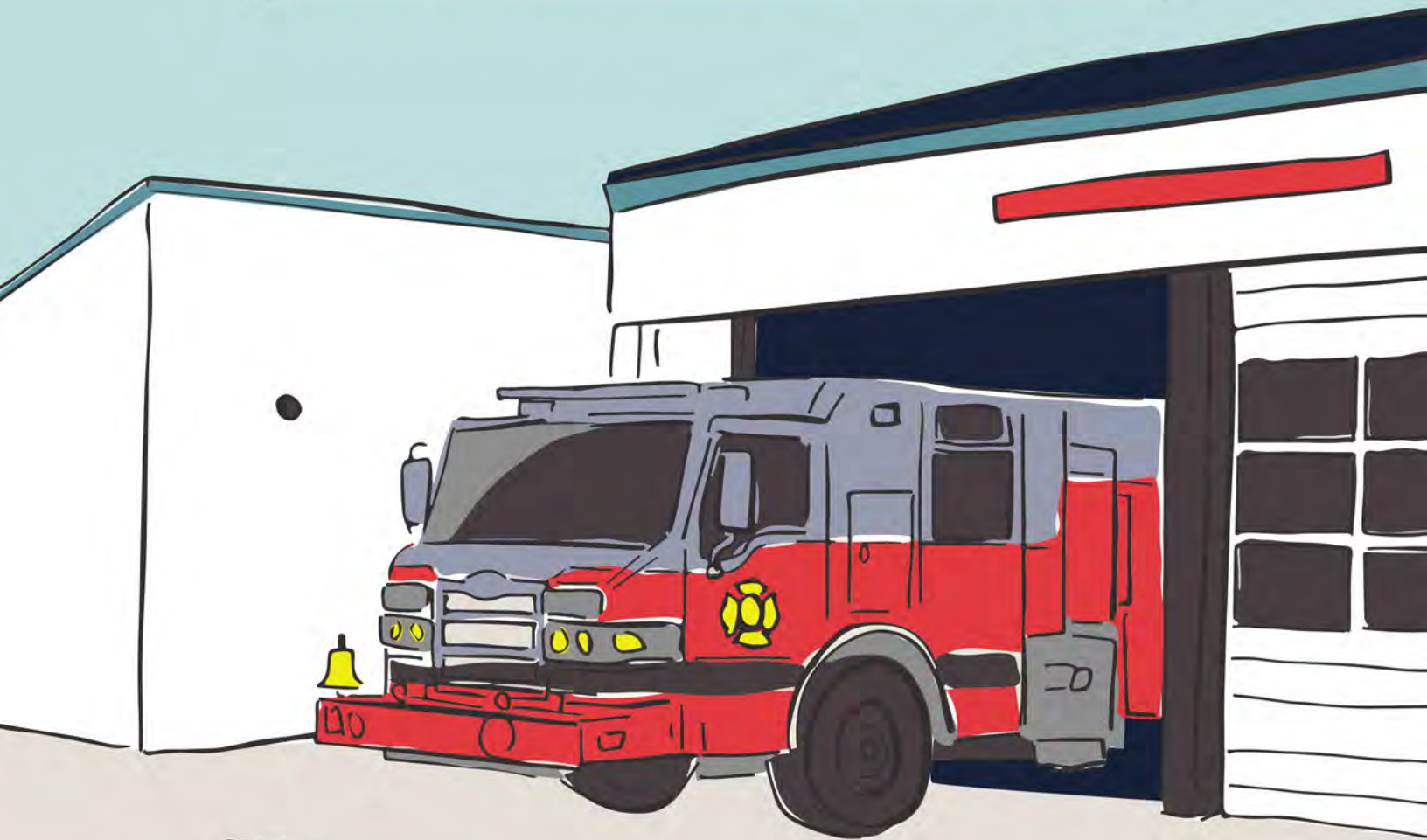


SOUTH SHORE FIRE STATION

Recommendation Report



Endorsed by members of the South Shore Fire Station Task Force on
February 20, 2025

Prepared for:

The City of Lake Oswego

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Summarizing the Recommendations and Findings of:

The South Shore Fire Station Task Force

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SUMMARY OF KEY FINDINGS



1

The South Shore Fire Station has reached the end of its useful life.



2

The City needs a fire station in the southeast quadrant of Lake Oswego to maintain the current level of system-wide service.



3

A new fire station should be built to meet the needs of the LOFD for the next 50 years. The long-term projected spatial need is approximately 14,000 sf.



4

The current location of Station 212 is optimum.



5

Alternatives, including renovating the existing facility, were deemed infeasible.



6

Staff should further explore the benefits and feasibility of acquiring additional land.



7

Based on comparable projects, a new build of this size could cost up to \$18 million.



8

The most viable funding source would be a General Obligation Bond.

Recommendation

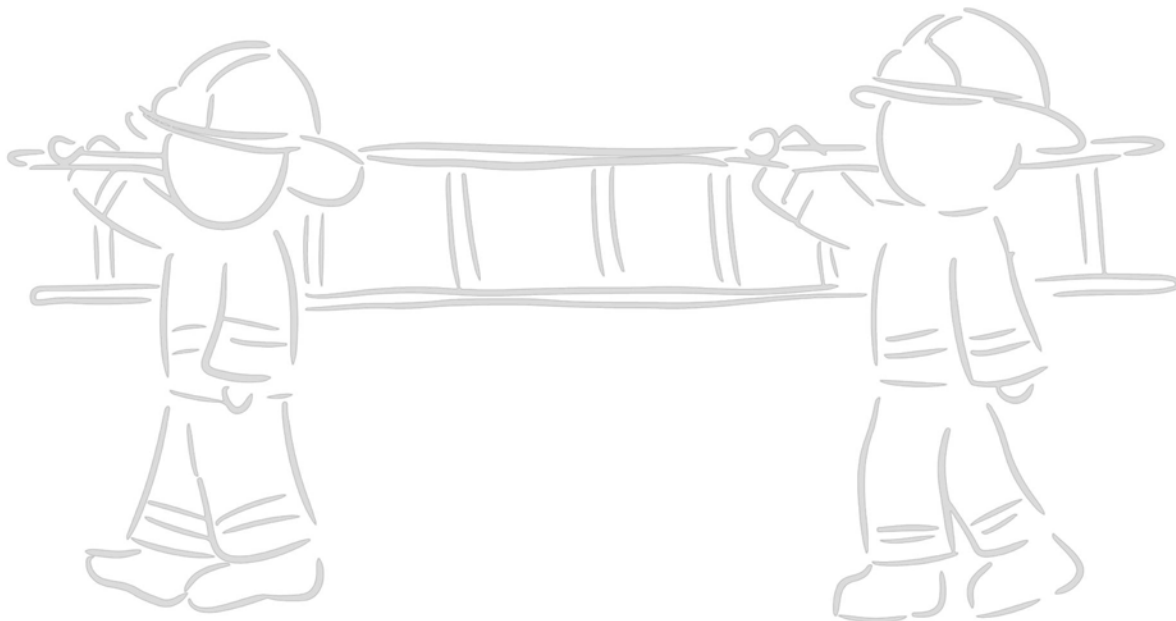
Having adopted the key findings detailed in this report, members of the South Shore Fire Station Task Force recommend that the City Council continue to pursue building a new station at the current site of the South Shore Fire Station.

Continuing this process would involve two significant bodies of work:

- **Determining Project Cost.** The cost estimate outlined in this report is based solely on comparable projects. To determine the *actual* cost of rebuilding the South Shore Fire Station, City staff would need to contract for professional services (including an owner’s representative, architect, and general contractor or cost consultant). This work – which would yield a preliminary station design and total project cost estimate – would take approximately seven months.
- **Generating Public Support.** The City Council could refer a bond measure to Lake Oswego voters for the election on November 4, 2025 or May 19, 2026. To ensure voters have all relevant information about this project, staff would conduct polling and execute the full-scale community engagement plan endorsed by the Task Force. This work would continue until the end of the election in which the bond is considered.

Project Timeline. The bodies of work outlined above constitute *Phase Two* of the South Shore Fire Station project, with *Phase One* consisting of the work just completed by the Task Force and *Phase Three* beginning with the passage of the bond and concluding with a ribbon cutting. The *Phase Two* timeline is outlined in Figure 1.

If the City Council directs staff to begin *Phase Two*, the next significant checkpoint would be in approximately **seven months**. At this time, staff would share conceptual station designs, the total proposed bond amount, and recommended timing for a bond.



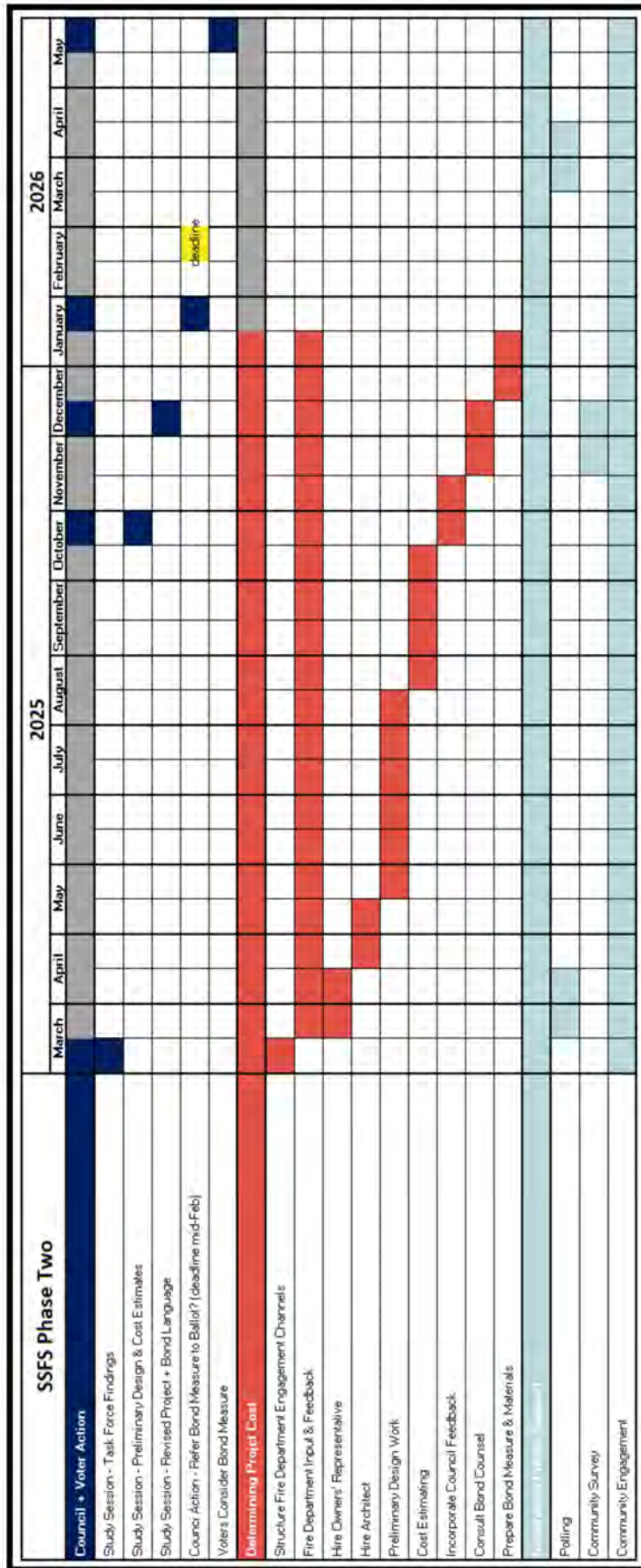


Figure 1. Project timeline for Phase Two, leading to a May 2026 bond measure.

Background

Constructed in 1971, the *South Shore Fire Station* is the oldest of Lake Oswego's four fire stations.

Location and Service Area. Located at 1880 South Shore Boulevard, firefighters based out of this facility primarily respond to calls for service within the southeast quadrant of the city. In 2024, firefighters from the South Shore Fire Station responded to 1,106 calls for service ranging from public service calls to medical emergencies, to fire and life safety incidents.

Project History. Our community has been considering changes to the South Shore Fire Station, in fits-and-starts, for nearly two decades. In 2007-08, City staff studied facility deficiencies and scoped replacement costs. In 2009, the City Council considered and deferred a rebuild. In 2018, there was movement to close the station, which met staunch public opposition.



Figure 2. The current South Shore Fire Station is approximately 5,500 square feet.

Current Effort. Results from the City's 2023 community survey found that more than 50% of respondents supported investing in the South Shore Fire Station project. In 2024, the City Council designated this project as a strategic initiative, directing staff to "begin a needs assessment and community engagement process to rebuild the South Shore Fire Station."

On September 3, 2024, the City Council adopted *Resolution 24-38*, creating the South Shore Fire Station Task Force. The charge of the group, from Resolution 24-38:

The Task Force shall review and provide feedback on:

- A. The Fire Department's assessment of community coverage needs,
- B. Existing facility and site conditions at the South Shore Fire Station,
- C. The Department's vision for their next generation of service provision,
- D. Preliminary project cost estimates, and
- E. A full-scale community engagement strategy, contingent upon a City Council decision to advance this project.

Staff launched a community-wide recruitment and selection process, yielding forty applications. In October, the City Council adopted Resolution 24-39 and Resolution 24-45, appointing seventeen members to the South Shore Fire Station Task Force. This resolution also designated Councilor Trudy Corrigan as the City Council's liaison to the Task Force, and Lieutenant Jonathan Isbell as the liaison to the International Association of Fire Fighters, Local 1159.

Task Force Composition. Nine Task Force members were nominated to represent key stakeholder groups while eight were selected for at-large positions. Stakeholder groups include:

- [McVey-South Shore Neighborhood Association](#)
- [Palisades Neighborhood Association](#)
- [Hallinan Neighborhood Association](#)
- [Mary's Woods](#)
- [Lake Grove Fire District](#)
- [Chamber of Commerce](#)
- [DEI Advisory Board](#)
- [Sustainability Advisory Board](#)
- [Budget Committee](#)

The eight members selected for at-large positions were chosen from a pool of forty applicants. The selected at-large members included two youth appointees. At their first meeting, members of the South Shore Fire Station Task Force unanimously selected Chris Durkee to serve as their Chair.

Task Force Action. The South Shore Fire Station Task Force held six regular meetings between October 24, 2024 and February 20, 2025. Many Task Force members also attended tours of two recently-built fire stations in neighboring districts: [Tualatin Valley Fire & Rescue's Station 39](#), and [Clackamas Fire District's Station 16](#).



Figure 3. TVF&R Station 39.



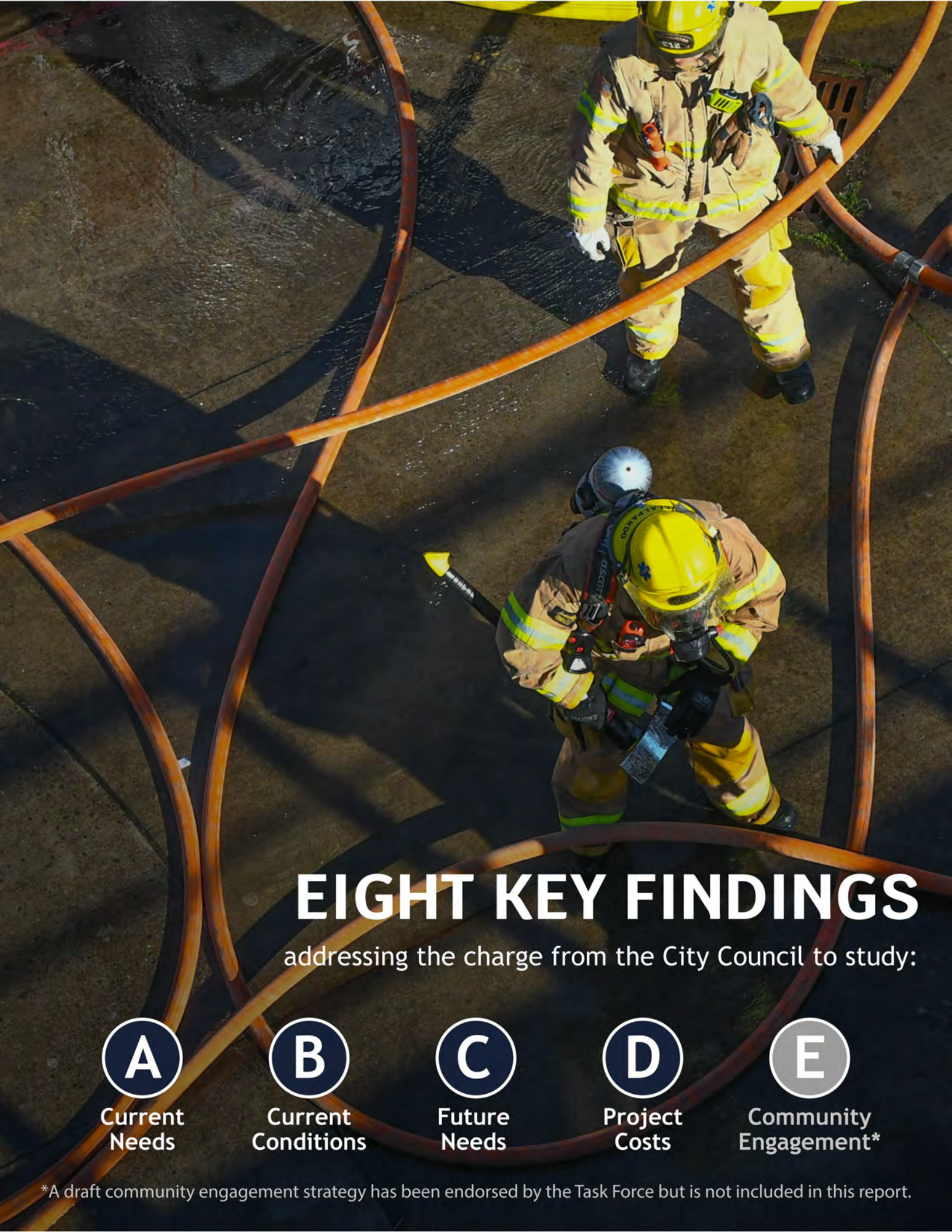
Figure 4. CFD Station 16.

At their regular meetings, Task Force members reviewed information prepared by project staff and produced eight key findings, summarized in this report. These findings address the first four prongs of the Task Force's charge, while the fifth, a full-scale community engagement strategy, is outlined in a separate document.

Task Force members formally endorsed both this report and the *Phase Two* community engagement strategy at their final meeting, on February 20, 2025.



Figure 5. Members of the South Shore Fire Station Task Force at their first meeting.



EIGHT KEY FINDINGS

addressing the charge from the City Council to study:

A

Current Needs

B

Current Conditions

C

Future Needs

D

Project Costs

E

Community Engagement*

*A draft community engagement strategy has been endorsed by the Task Force but is not included in this report.



The South Shore Fire Station has reached the end of its useful life.



A 2008 assessment of facility conditions, conducted by SERA Architects, systematically identifies design elements of the South Shore Fire Station that the Fire Department has outgrown. Over the last fourteen years, through strategic investment, the Fire Department has addressed deferred maintenance issues and extended the life of this facility. These improvements have included:

- Seismic upgrades to apparatus bay.
- Back-up generator repair.
- Remodeling group dorm space to create individual sleeping quarters.
- Major landscaping improvements to assist in eradicating rodent infestation.
- Repair and replacement of roof sections to address interior leaks.
- Sewer video scoping and preventative maintenance to keep lines clear.



Currently, there remain **eleven significant facility deficiencies** that need to be remedied. While some are regular maintenance items, most reflect a need to implement more modern services and department practices. These needs necessitate new spatial layouts and are limited by the initial construction of the building. Given the nearly comprehensive list of facility limitations, members of the Task Force concluded that this facility has reached the end of its useful life. Existing facility deficiencies include:

- Inadequate vehicle and apparatus storage.
- Electrical system and backup power in poor condition.
- Roof in need of replacement.
- HVAC system needs to be upgraded and/or replaced.
- Inadequate separation between living and office space limits opportunities for professional coaching.
- Group bathroom lacks privacy and equitable accommodations.



Figure 6. The rescue boat fits in the apparatus bay with less than three inches of clearance.

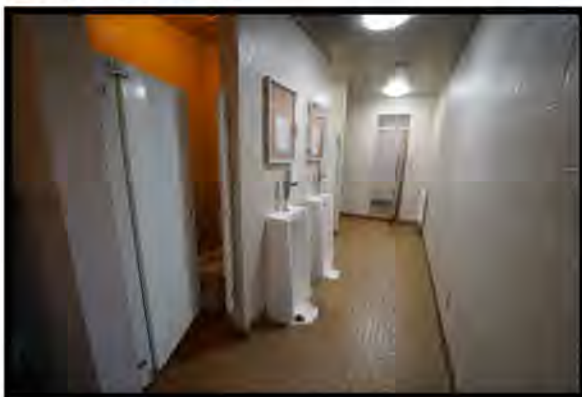


Figure 7. The group bathroom has two entrances and little separation between toilets and showers.

- ADA upgrades needed for public areas,
- Longstanding rodent problem.
- No diversion system for run-off from apparatus when cleaning and or flushing tanks; run-off currently goes into stormwater system which is out-of-compliance with code.
- Limited storage space.
- Not built to current “essential facility” seismic standards.



The City needs a fire station in the southeast quadrant of Lake Oswego to maintain the current level of system-wide service.

- A Current Needs
- B Current Conditions
- C Future Needs
- D Project Costs
- E Community Engagement

Current Level of Service. The City of Lake Oswego has four fire stations, housing 44 firefighter-paramedics and 12 vehicles and apparatus. In 2024, the Fire Department responded to 5,117 incidents. Of these, 69% were for medical services, 23% were for public assistance, 3% were fires, and 4% were false alarms.

LOFD as a System. The location of each emergency vehicle is monitored in real-time by LOCOM (Lake Oswego’s emergency dispatch center) allowing dispatchers to send the closest apparatus to any emergency. When one unit is deployed, those in adjacent units “step-up,” covering an expanded response area until the original incident is resolved. This dynamic approach to community coverage is highly efficient, ensuring residents receive rapid assistance and that the Fire Department maintains response time standards.

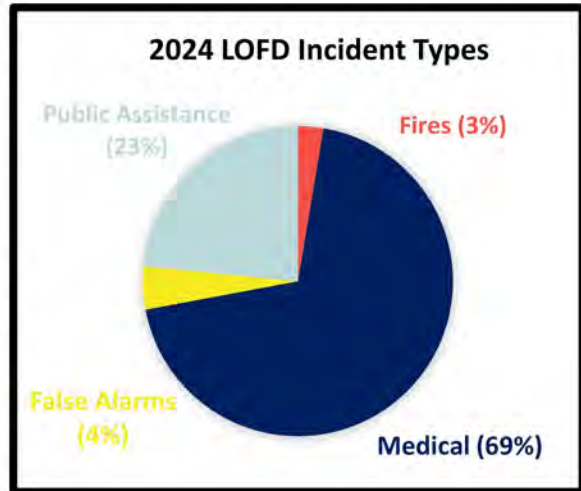
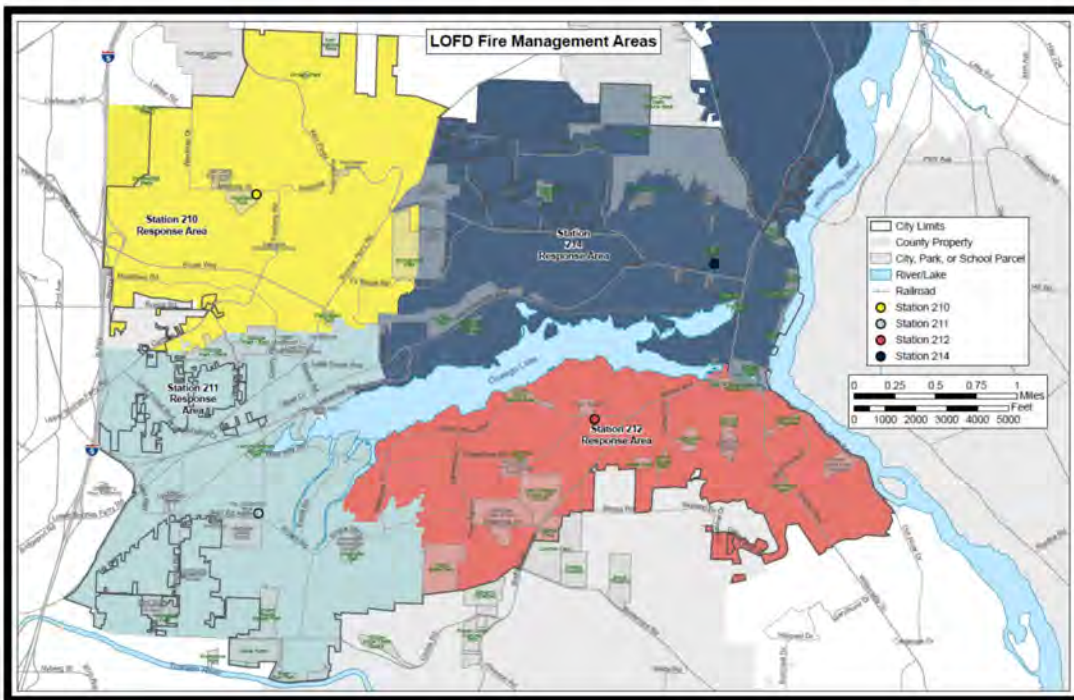


Figure 8. Nearly 70% of LOFD’s calls in 2024 were for medical incidents.

Figure 9. The City’s four fire stations are strategically located to ensure prompt response times for all Lake Oswego residents.



Response Time Standards. Two agencies maintain response time standards used by the LOFD: The National Fire Protection Association (NFPA) and Clackamas County. These response time standards include every step of the emergency response process, from the time a 911 call is answered to first-responders arriving on scene.

NFPA. The NFPA compiles and maintains a widely accepted set of standards for fire/medical call processing and response time. While these standards are non-binding, the LOFD measures themselves against these benchmarks.

Call Answering by LOCOM	< 15 seconds 95% of all calls
Call Processing Time by LOCOM	< 60 seconds 90% of all calls
Turnout Time for Firefighter-Paramedics	60 seconds
Travel Time for First Arriving Engine Company	240 seconds (4 mins)
Travel Time for First Arriving Paramedic	480 seconds (8 mins)

Clackamas County. The City holds a contract with Clackamas County to “stop-the-clock” for American Medical Response (AMR), the private ambulance company operating under exclusive franchise agreement with the County. Under this contract, LOFD’s first arriving paramedics are required to arrive within eight minutes of being dispatched, 90% of the time, for priority one calls. Priority one calls are high acuity incidents such as a cardiac event, stroke, difficulty breathing, or significant trauma. Failure to maintain this standard would lead the County to withhold funds.

Rationale for Standards. These standards are in place because of the significant impact response time has on survivability and loss mitigation.

In the event of cardiac arrest, the optimal response time threshold for predicting survival is 6.2 minutes, according to a 2021 paper published in Emergency Medical International. This survivability threshold is, on average, prolonged when a cardiac arrest takes place in public and a bystander is able to provide CPR.

In the event of a house fire, property destruction generally exceeds 50% after burning for 8 minutes according to the NFPA. As illustrated on the chart Fire Propagation Curve, there is a rapid increase in rate-of-loss between six and ten minutes.

ISO Rating. The Insurance Services Office (ISO) rates every fire department in the country on a scale of 1 (best) to 10 (worst) based on their fire protection and suppression capabilities. The ISO score issued to a fire department directly impacts the insurance rate of every home covered by that fire department. The Lake Oswego Fire Department currently holds an ISO rating of 2, the best ranking feasible for a community of our size.

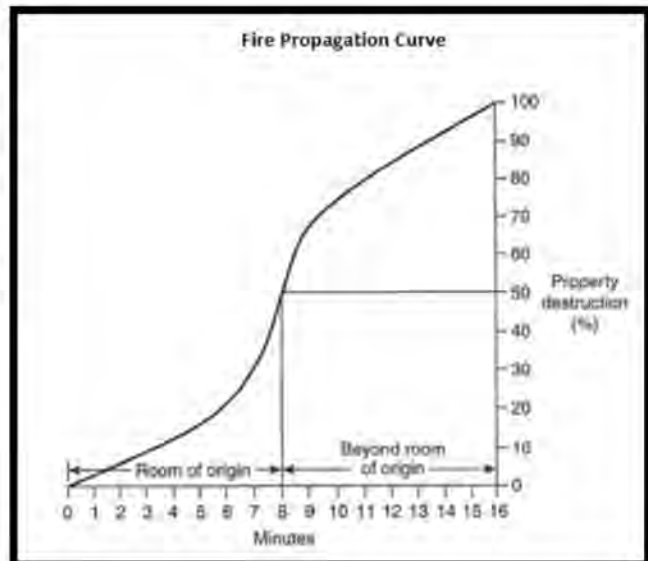


Figure 10. There is a rapid increase in rate-of-loss six-to-ten minutes after the beginning of a fire.

Response Time Impact of Closing Station 212. Closing Station 212 would result in **35% of residences** in the 212 Fire Management Area (FMA) falling below the critical 6-minute drive time threshold (1,139 residences). Currently, **12% of residences** in the 212 FMA (461) and 4% of residences city-wide (777) fall below this threshold.

Drive Time v. Response Time. The following tables and maps depict *drive time*, a significant component of total *response time*.

The Task Force used this metric to analyze the impact of closing Station 212 because *drive time* is a function of station location, while other components of *response time* (call processing and crew turnout) are not. As outlined in the NFPA 1710 response table on the previous page (Table 1), total response time is approximately two minutes longer than drive time. A drive time of six minutes or less (shown as green or yellow) enables LOFD to consistently arrive at priority one incidents less than eight minutes after LOCOM answers the 911 call.

Explanation of Tables and Figures. Figure 11 and Figure 12 illustrate drive time coverage with and without Station 212. Tables 2-5 quantify the coverage bands, with Table 2 and Table 3 outlining current service levels (city-wide and “zoomed-in” to the Station 212 Fire Management Area) and Table 4 and Table 5 showing coverage levels without Station 212.

These maps and tables rely on Esri drive time data. Slight discrepancies in total land area and residences are due to “clipping” variations and do *not* impact the findings.

Functionally, these are *best-case scenario* drive times. This analysis does not factor-in high-volume traffic conditions, hazards which may block primary response routes, or instances in which the primary response vehicle is already on a call.

In Tables 2-5, the percentage of residences within a six-minute drive-time are circled.

Response	Sq Miles	Percent	Residences	Percent
≤4 Min	7.15	54.17%	13,067	68.97%
≤6 Min	4.15	31.48%	5,102	26.93%
≤8 Min	1.06	8.00%	600	3.17%
> 8 Min	0.17	1.28%	177	0.93%
Lake	0.67	5.07%	0	0%
Total	13.20	100%	18,946	100%

Response	Sq Miles	Percent	Residences	Percent
≤4 Min	1.62	63.38%	2,489	65.07%
≤6 Min	0.62	24.32%	875	22.88%
≤8 Min	0.26	10.21%	349	9.12%
> 8 Min	0.05	2.08%	112	2.93%
Total	2.56	100%	3,825	100%

Response	Sq Miles	Percent	Residences	Percent
≤4 Min	5.71	43.28%	10,988	58.34%
≤6 Min	4.80	36.40%	6,300	33.45%
≤8 Min	1.79	13.58%	1,426	7.57%
> 8 Min	0.22	1.66%	122	0.65%
Lake	0.67	5.07%	0	0%
Total	13.19	100%	18,836	100%

Response	Sq Miles	Percent	Residences	Percent
≤4 Min	0.23	8.93%	418	10.93%
≤6 Min	1.38	53.70%	2,068	54.07%
≤8 Min	0.87	33.83%	1,183	30.93%
> 8 Min	0.09	3.53%	156	4.08%
Total	2.56	100%	3,825	100%

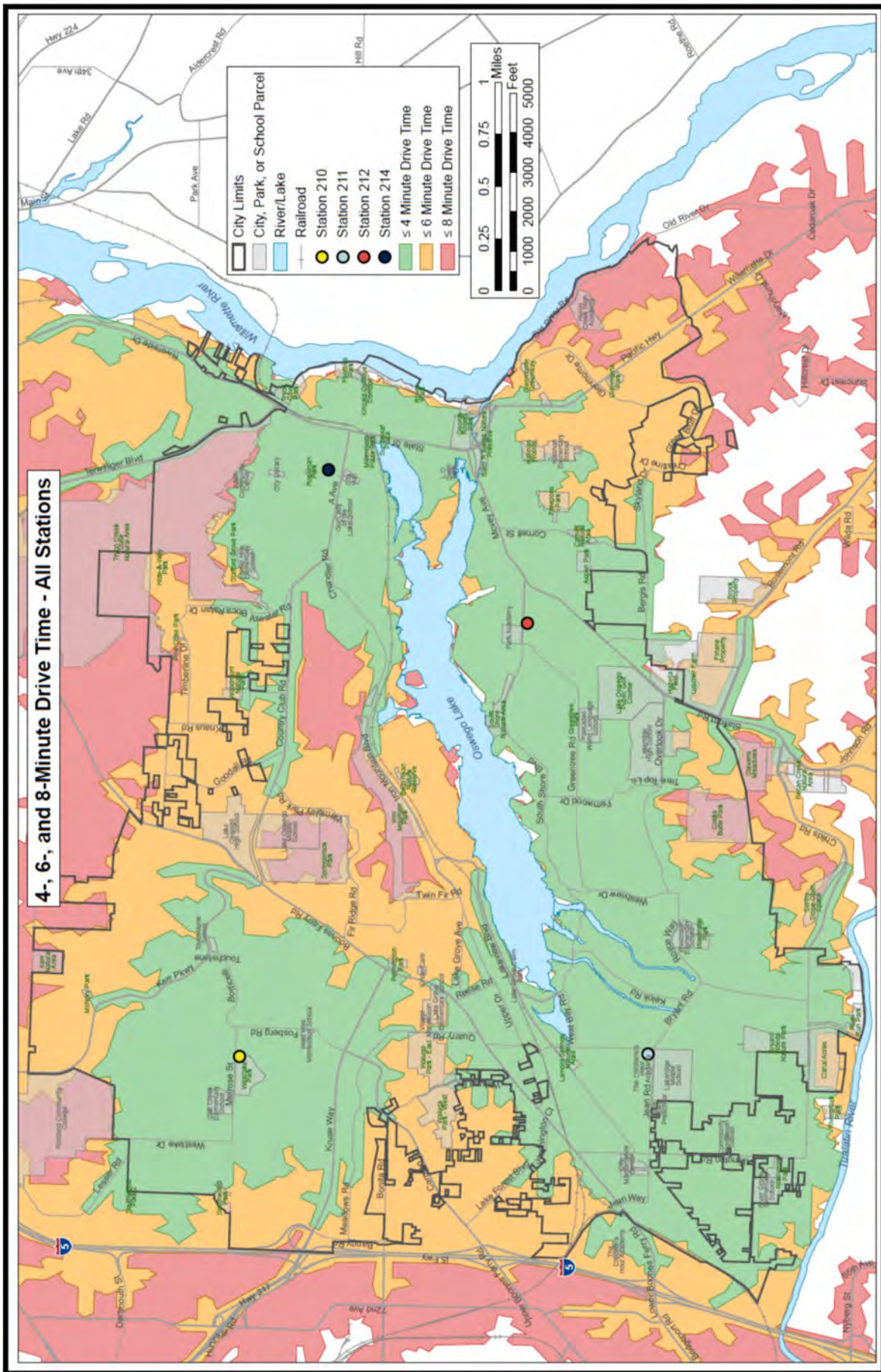


Figure 11. Current drive time coverage, illustrated using Esri drive time data with 4-, 6-, and 8- minute bands.

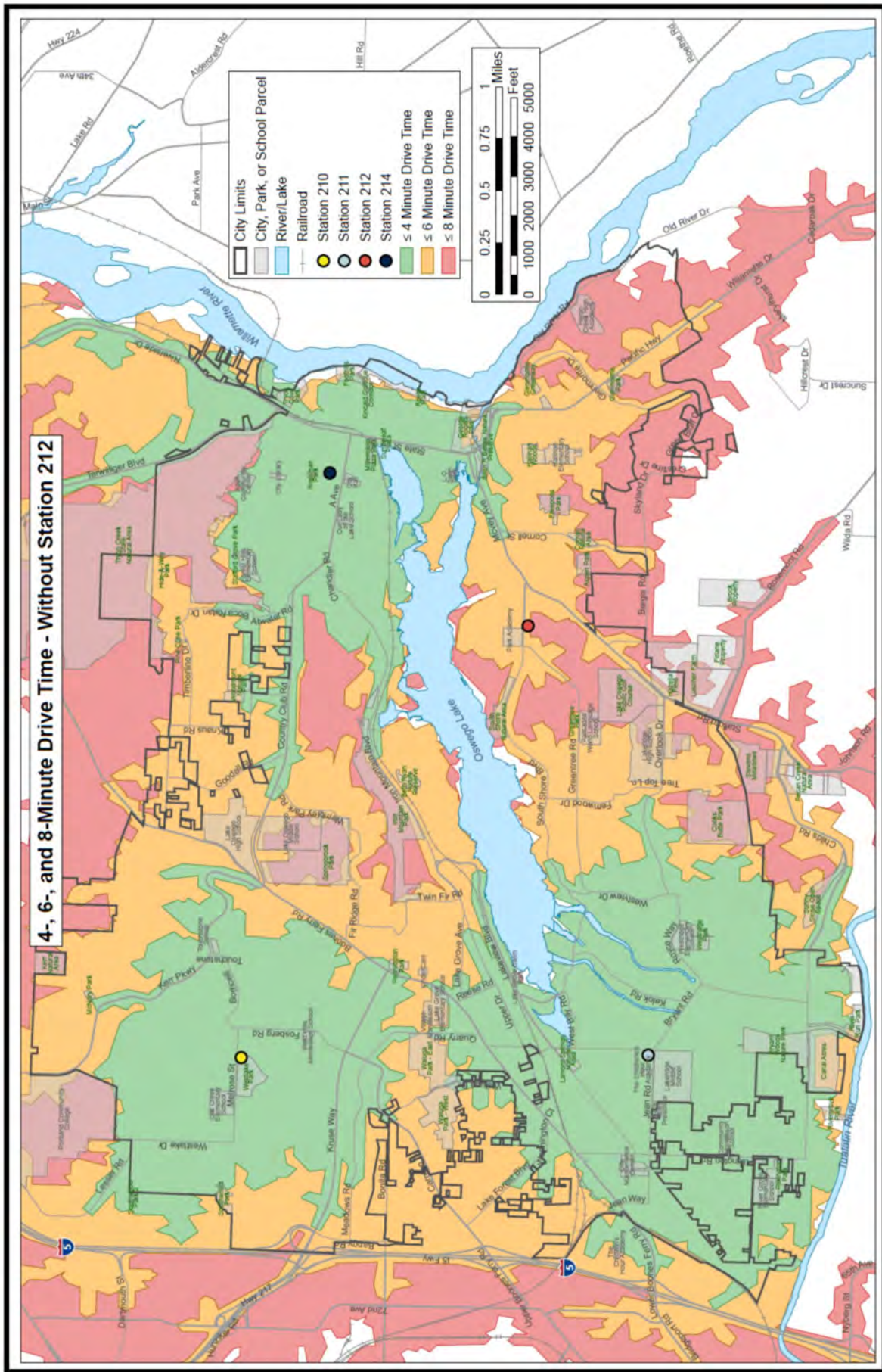


Figure 12. Drive time coverage if Station 212 were decommissioned, illustrated using Esri drive time data with 4-, 6-, and 8- minute bands.



A new fire station should be built to meet the needs of the LOFD for the next 50 years. The long-term projected spatial need is approximately 14,000 sf.



Drivers of Square Footage. There are three main spaces in a fire station: The Apparatus Bay, Living Quarters, and Public-Facing Space. Task Force members reviewed the elements in these spaces that drive square footage as they toured Station 212, along with two recently constructed fire stations in neighboring communities.

In the **Apparatus Bay**, key drivers of square footage are:

Apparatus Bays. These sixteen-foot-wide covered lanes are equipped with overhead electrical hookups, overhead plumbing, and underground drainage and filtration. Most apparatus bays have doors at both ends, allowing operators to pull-through and avoid backing. Station 212 should have three-and-a-half apparatus bays, similar to the Main Fire Station. The current station has two single-depth back-in bays.

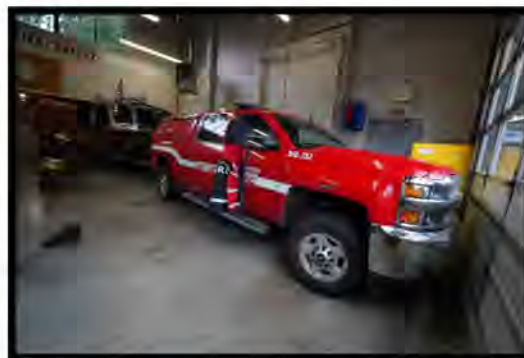


Figure 13. There are two single-depth back-in apparatus bays at the current station.

Turnout Room. Storage for the two sets of turnouts worn by firefighters on calls. Best practice is to store these in a separate room to mitigate the spread of carcinogens. The current station has been retrofitted to create a separate storage space, but it is undersized.



Figure 14. The existing turnout room is undersized.

Decontamination Room. A pressure-negative space (or sequence of spaces) where firefighters and gear can get clean following a call. Firefighters at Station 212 currently clean up post-call in the group bathroom adjacent to their living quarters. Turnout gear is sent to Portland for cleaning.

EMS Storage. A designated room for EMS stock, including a locked refrigerator for medication. Station 212’s EMS storage room doubles as the laundry room.

Shop. Space for maintaining and repairing rescue equipment. A cleaning supply closet in Station 212 has been repurposed for this function.

General Storage. At 212, the equipment for the rescue boat team is one of the most significant storage needs. This is currently housed on a floating rack between the engine and rescue boat.

General Circulation. While there are not traditional hallways in the apparatus bay, the 15% designated for circulation provides for walkways connecting each element listed above.

In the **Living Quarters**, key drivers of square footage are:

Bunk Rooms. Fire stations have almost universally shifted away from shared bunk rooms, favoring individual dorm-style rooms instead. Private sleeping quarters support gender diversity and better rest, particularly in stations that house multiple crews. Having more rooms than active crew members enables smooth shift changes and upstaffing during emergency events. The Fire Department retrofitted Station 212's sleeping quarters in 2020, creating four individual bunk rooms, plus a lieutenant's quarters.

Bathrooms. Similarly, group locker rooms are being replaced by single-occupant bathrooms. This simultaneously supports gender diversity *and* results in a more efficient use of square footage. Except for the lieutenant's quarters, Station 212 currently has a single group bathroom (not locker room) that serves both the bunk room and the living space.



Figure 15. A cleaning closet doubles as the shop.

Battalion Chief Quarters. A Battalion Chief oversees all firefighters at all stations during their 24-hour shift. Their quarters typically consist of a bunk, bathroom, and separate office. Lake Oswego's Battalion Chiefs currently operate out of the Main Fire Station.

Kitchen + Dining. Just like in a home, except with three refrigerators and an automatic shut-off switch for outlets and appliances.

Day Room. The heart of a fire station, this is where firefighters train, rest, and connect with each other during the lulls in their 24-hour shifts.



Figure 16. The kitchen, dining room, and day room are where firefighters spend most of their downtime.



Figure 17. The current station has a single group office, limiting opportunities for professional coaching.

Lieutenant Office. Designated space for the shift Lieutenant, who is responsible for the crew housed at Station 212. The current station does not have any private office space, which is important for coaching or counseling firefighters and managing administrative tasks.

Group Office. An area, separate from the living zone, where firefighters can write incident reports and complete other administrative functions. Other public safety employees, like police on patrol, could also use this space for mid-shift report writing. The current station has a single shared office with two desktop computers.

Fitness Room. Firefighters are expected to work out for one hour per shift. The current gym space is a converted storage room abutting the Lieutenant’s quarters.

Laundry Room. Currently, the laundry room is little more than a closet with a washer and dryer.

Storage. Minimal (compared to the app bay) but necessary.

Data, Electrical, Mechanical. Another prerequisite.

General Circulation. Hallways and walkways connecting these elements. Once again, 15% is applied as a standard.

In the **Public-Facing Space**, the primary drivers of square footage are:

Multipurpose Room. A publicly accessible multipurpose room provides space for both department and community functions. In other communities, these are used for Department trainings and meetings, community classes (like CPR, first aid, CERT), and public meetings (Boards & Commissions, Neighborhood Associations). There is no public-facing space in the current station.

Public Bathroom. Two single-occupant bathrooms.

Respite Room. A small room where people attending a public meeting or class can have privacy. Often used as a lactation room or for attending to medical needs.

Lobby, Entry, Storage. Vestibule plus reception area for members of the public. Storage accounted for here, as well.

General Circulation. Hallways and walkways connecting these elements, 15%.

Estimating Square Footage Need. Staff used a 2007 feasibility study by Mackenzie Architects outlining a potential rebuild of the South Shore Fire Station, along with floorplans from six other projects, to estimate the necessary square footage for each space listed above. This process did *not* include consideration of how these elements may fit together, which is typically where efficiencies can be found that reduce the total project square footage. This is work that would be conducted by an architect in *Phase Two* of this project.

Staff outlined three spatial programs, ranging between 12,000-14,000 square feet, assigned cost estimates, and asked the Task Force to weigh the trade-offs of each option. Members of the Task Force, observing the relatively small difference in cost between a 30-year fire station (with six dorms) and a 50-year fire station (with eight), **unanimously recommended the spatial program projected to meet the fire department’s needs for the next 50 years.**



Figure 18. Exercise equipment is strategically positioned under a skylight.

Table 6. Square Footage Estimate – Line Items	
	Square Feet
App bay subtotal	6,542
Living subtotal	5,827
Public-facing subtotal	1,588
Total	13,957

Table 6 cont. Square Footage Estimate – Line Items	
App Bay	Square Feet
(75' x 16' per bay x 3.5 bays)	4,200
Turnout room	250
Decontamination room(s)	400
EMS storage	158
Shop	231
App bay side storage	450
General circulation in app bay (15%)	853
Subtotal	6,542
Living Quarters	Square Feet
Bunk (183sqft x 8 bunks)	1,464
Bathroom w/ shower (64sqft x 5 bath)	320
BC Quarters (bunk, office, shower)	770
Kitchen + dining	550
Day room	400
Lieutenant office	109
Group office	245
Fitness	600
Laundry	100
Storage	200
Data, electrical, mechanical	309
General circulation in living space (15%)	760
Subtotal	5,827
Public-Facing Space	Square Feet
Multipurpose room	900
Public bathroom (64sqft x 2 bath)	128
Respite room	109
Lobby, entry, storage	244
General circulation in public-facing space (15%)	207
Subtotal	1,588

Outdoor Elements. The methodology used to generate preliminary cost estimates (see Key Finding 7) relies on an industry standard: total project cost / square footage of built space. This methodology accounts for the cost of outdoor elements (and design features) too, but they are not explicitly outlined in the preceding section.

Outdoor elements that are expected to be a part of this project include:

- ADA pathway connecting Southshore Blvd and Kilkenny Rd (current non-compliant pathway on recommended project site).
- Covered outdoor patio.
- On-site parking.
- Electric vehicle charging infrastructure.
- Backup generator.
- Diesel fuel tank for on-site refueling.



The current location of Station 212 is optimum.



Beginning with **142 alternative sites** in the southeast quadrant of the City, Task Force members developed seven criteria to analyze feasibility and response-time impact. After reviewing this analysis, Task Force members concluded that the current location of Station 212 is optimum.

Method. Staff used the [2023 Buildable Lands Inventory](#) to identify vacant and partially vacant parcels within City limits. Parcels already developed to their highest and best use (classified as developed) were eliminated from consideration.

In this analysis, vacant parcels are those with a building improvement value of less than \$20,000 while partially vacant parcels have an existing single-detached home that may be large enough to further subdivide or develop. Specifically, parcels were classified as partially vacant if they are greater than 5x the minimum lot size OR are 2-5x the minimum lot size with building value less than \$200,000.

Staff narrowed the search to the Station 212 Fire Management Area, leaving **142 parcels** categorized as vacant or partially vacant in consideration.

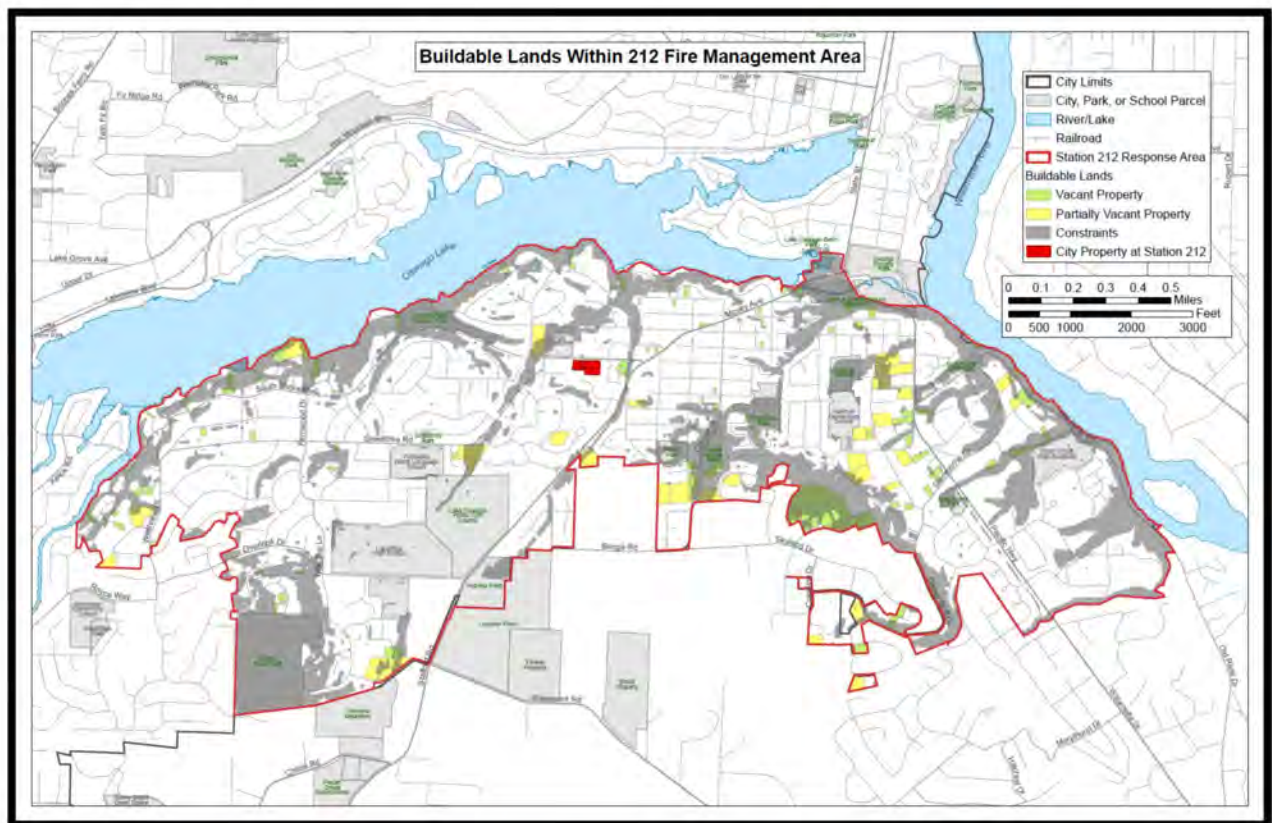


Figure 19. There are 142 vacant or partially vacant parcels in the 212 Fire Management Area, as defined by the 2023 Buildable Lands Inventory.

Filtering for physical constraints, staff then eliminated parcels with less than 0.40 developable acres. Developable acres are those unconstrained by steep slopes (>25%), water bodies, FEMA flood hazard areas, the greenway management overlay district along the Willamette River, or sensitive lands. This filter left **39 parcels** categorized as vacant or partially vacant in the 212 Fire Management Area.

Task Force members then developed a list of seven criteria to narrow the search, identifying the characteristics below as those of the optimum fire station site:

1. **Location.**
 - No sites west of the current location need further consideration.
 - The far periphery of the east side can also be excluded from further consideration.
2. **Zoning.** Current zoning must allow for a major facility, or there needs to be a high likelihood a variance would be granted.
3. **Access.** The site should be on an arterial (major or minor) or major collector road.
4. **Geohazards.** A new station should not be located on a fault line or land with unmitigable landslide risk.
 - Steep slopes, flood hazards, and sensitive lands have already been considered.
5. **Size.** A larger site, close to 41,000 square feet, would be ideal.
6. **Response Time.** An alternative site should result in a net improvement in response times city-wide, with significant improvements for the neighborhoods in the southeast quadrant of the city.
7. **Acquisition.** Non-public land may be considered, though acquisition costs and time are likely to have a significant impact.
 - Avoiding condemnation was raised as a strong preference.

Staff reviewed the 39 remaining vacant or partially vacant parcels using this set of criteria. Ten were eliminated because they were west of the current station. Twelve were eliminated because they were on the far periphery of the east side. The remaining **17 parcels** all were zoned to permit a major public facility via conditional use permit.

Only **1 of the remaining parcels** was located along a high-volume road. This site, along Stafford Road, was analyzed using the remaining four criteria.

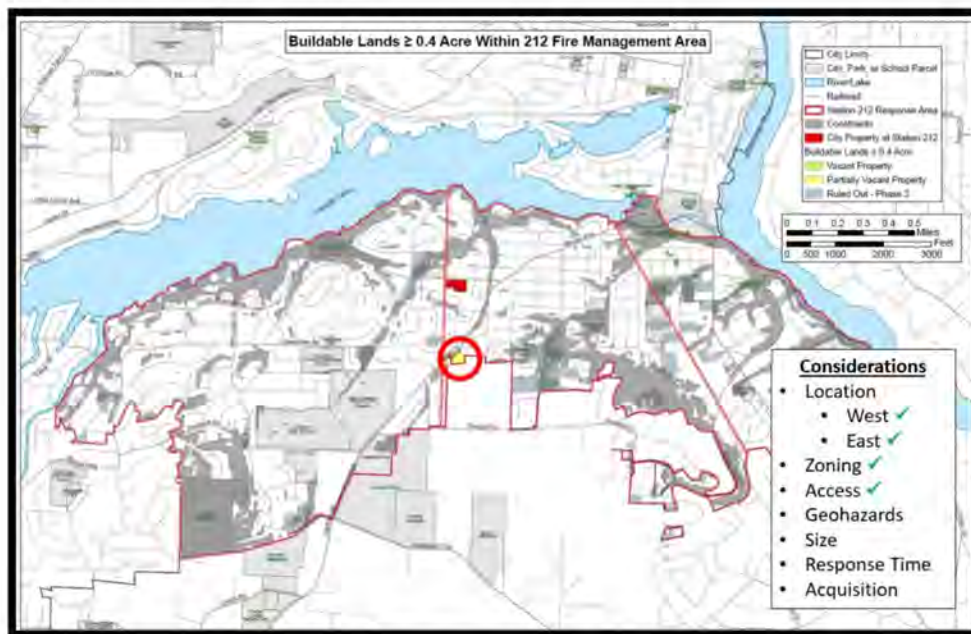


Figure 20. There was one parcel, along Stafford Rd, that met the criteria of a viable alternative.

Stafford Road Alternative.

This site is in a landslide area with weak foundation soil. It has slightly more than one acre of developable land (44,694 square feet), more than the 40,000sf identified by the Task Force as ideal. Locating a station at this site is projected to result in a slight improvement (<0.5%) in city-wide response times while disproportionately slowing response times to the far-east end

of the 212-fire management area (Mary's Landing neighborhood), resulting in an FMA-level response time slow-down of 3.43%. A single-family home is currently situated on this parcel and the cost of acquisition is projected to exceed \$1.5 million with condemnation being the likely mode of acquisition.

McVey-Cornell Alternative.

Staff also attempted to find the site that would yield the best possible response times, for comparison, without regard for land availability. This location was determined to be at the intersection of McVey Ave and Cornell St. This site yielded a 3.15% improvement in city-wide response time (bringing 99.05% of Lake Oswego residences under

the six-minute drive time threshold) but would require the acquisition of *at least* five homes, almost certainly through condemnation, resulting in significant cost, time, and reputational impacts.

Optimum Location.

Members of the Task Force unanimously selected the current site as the optimum location for a fire station rebuild. They voted to classify the Stafford Rd site as their preferred alternative, specifying that the current site is *significantly* preferred to the Stafford Rd site. The McVey-Cornell option was considered non-viable due to the lack of available land.

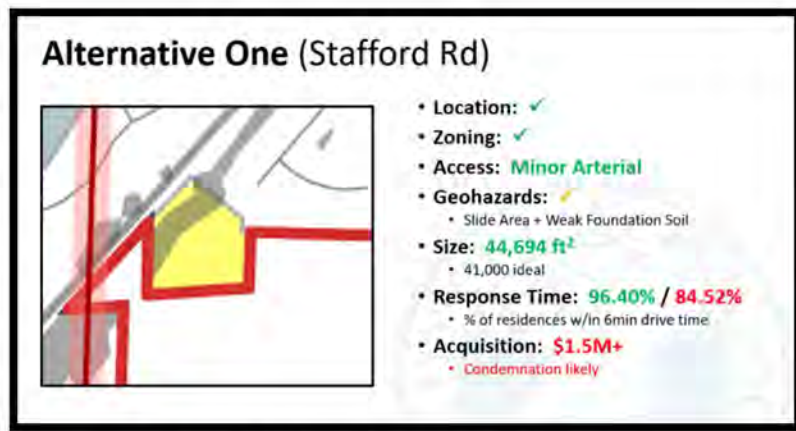


Figure 21. Analysis of Alternative One (Stafford Rd).

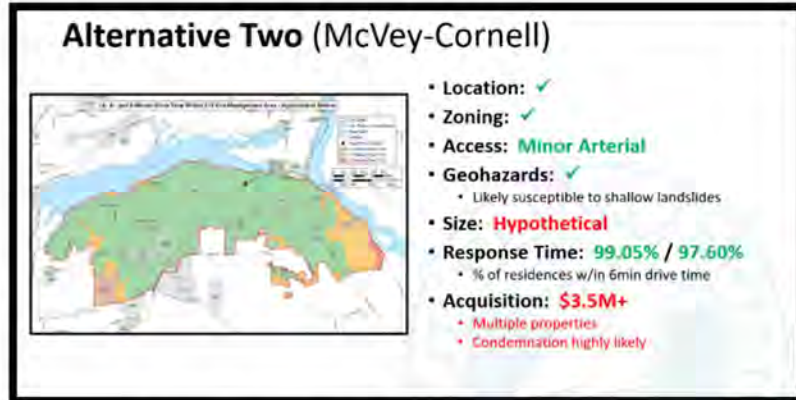


Figure 22. Analysis of Alternative Two (McVey-Cornell).



Figure 23. Analysis of Current Site.

Table 7. Site Comparison			
Characteristics	Current Site (1880 South Shore)	Alternative One (Stafford Rd)	Alternative Two (McVey-Cornell)
Location	NA	✓	✓
Zoning	✓	✓	✓
Access	Major Collector	Minor Arterial	Minor Arterial
Geohazards	✓	✓	✓
Size	31,512 ft ²	44,694 ft ²	Hypothetical
Response Time	95.90% / 87.95%	96.40% / 84.52%	99.05% / 97.60%
Acquisition	None	\$1.5M+	\$3.5M+

In Tables 7-13, the percentage of residences within a six-minute drive-time are circled.

Table 7 summarizes the circled portion of Tables 8-13, in order.

Table 8. Current Coverage (clipped to USB)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	7.15	54.17%	13,067	68.97%
≤6 Min	4.15	31.48%	5,102	26.93%
≤8 Min	1.06	8.00%	600	3.17%
> 8 Min	0.17	1.28%	177	0.93%
Lake	0.67	5.07%	0	0%
Total	13.20	100%	18,946	100%

Table 9. Current Coverage (clipped to 212 FMA)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	1.62	63.38%	2,489	65.07%
≤6 Min	0.62	24.32%	875	22.88%
≤8 Min	0.26	10.21%	349	9.12%
> 8 Min	0.05	2.08%	112	2.93%
Total	2.56	100%	3,825	100%

Table 10. Coverage with Alternative One (Stafford Rd Station) (clipped to USB)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	7.86	60.05%	13,870	73.43%
≤6 Min	3.87	29.56%	4,338	22.97%
≤8 Min	0.63	4.84%	590	3.12%
> 8 Min	0.06	0.44%	91	0.48%
Lake	0.67	5.11%	0	0%
Total	13.09	100%	18,889	100%

Table 11. Coverage with Alternative One (Stafford Rd Station) (clipped to 212 FMA)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	1.68	65.54%	2,463	64.39%
≤6 Min	0.62	24.27%	770	20.13%
≤8 Min	0.24	9.50%	501	13.10%
> 8 Min	0.02	0.69%	91	2.38%
Total	2.56	100%	3,825	100%

Table 12. Coverage with Alternative Two (McVey-Cornell Station) (clipped to USB)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	8.38	63.88%	14,538	76.97%
≤6 Min	3.56	27.16%	4,170	22.08%
≤8 Min	0.45	3.46%	181	0.96%
> 8 Min	0.05	0.40%	0	0%
Lake	0.67	5.10%	0	0%
Total	13.11	100%	18,889	100%

Table 13. Coverage with Alternative Two (McVey-Cornell Station) (clipped to 212 FMA)				
Response	Sq Miles	Percent	Residences	Percent
≤4 Min	2.14	83.64%	3,120	81.57%
≤6 Min	0.36	13.96%	613	16.03%
≤8 Min	0.06	2.41%	92	2.41%
> 8 Min	0	0%	0	0%
Total	2.56	100%	3,825	100%

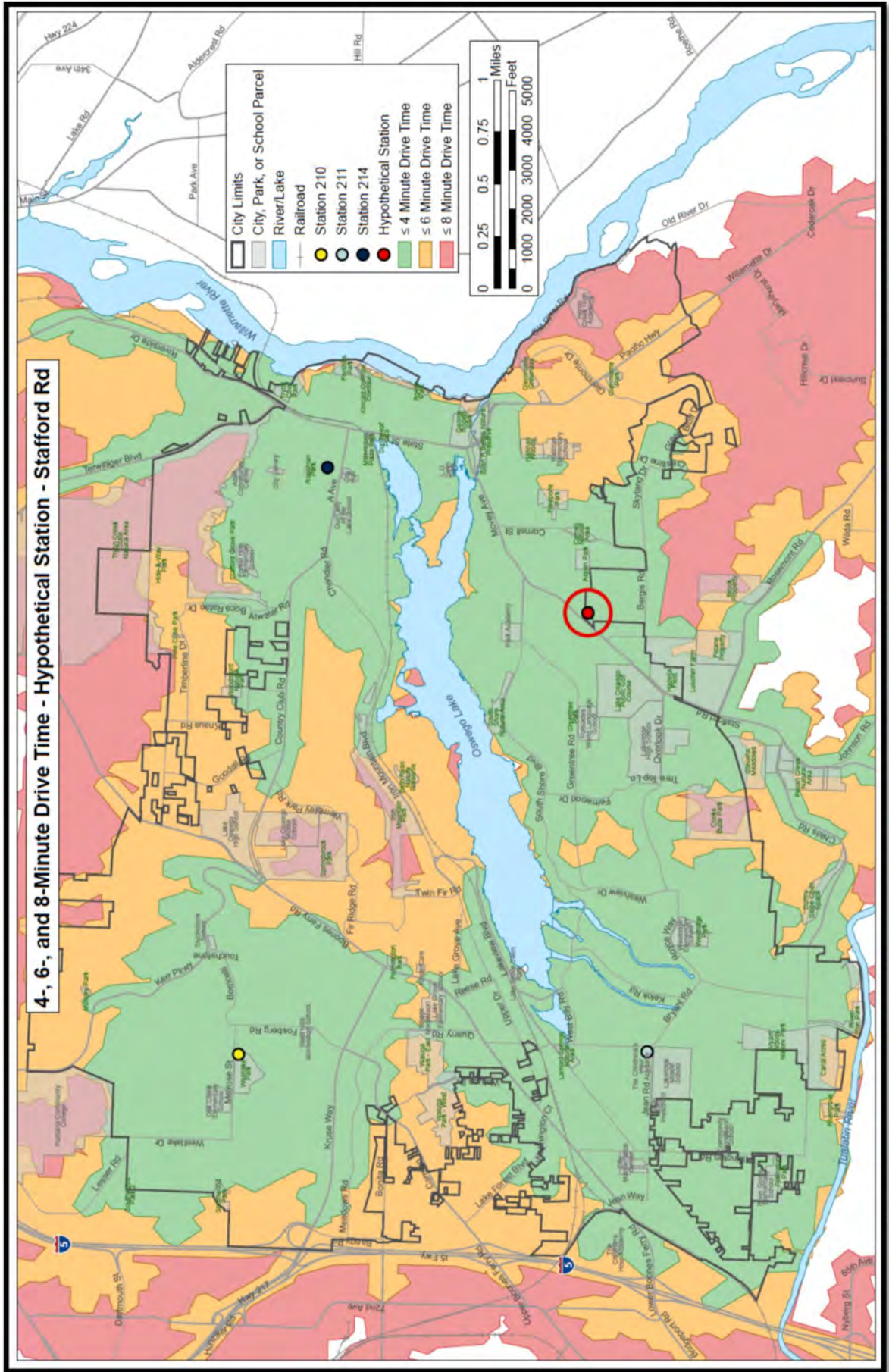


Figure 24. Drive time coverage if Station 212 were replaced by a new station on Stafford Rd, illustrated using Esri drive time data with 4-, 6-, and 8-minute bands.

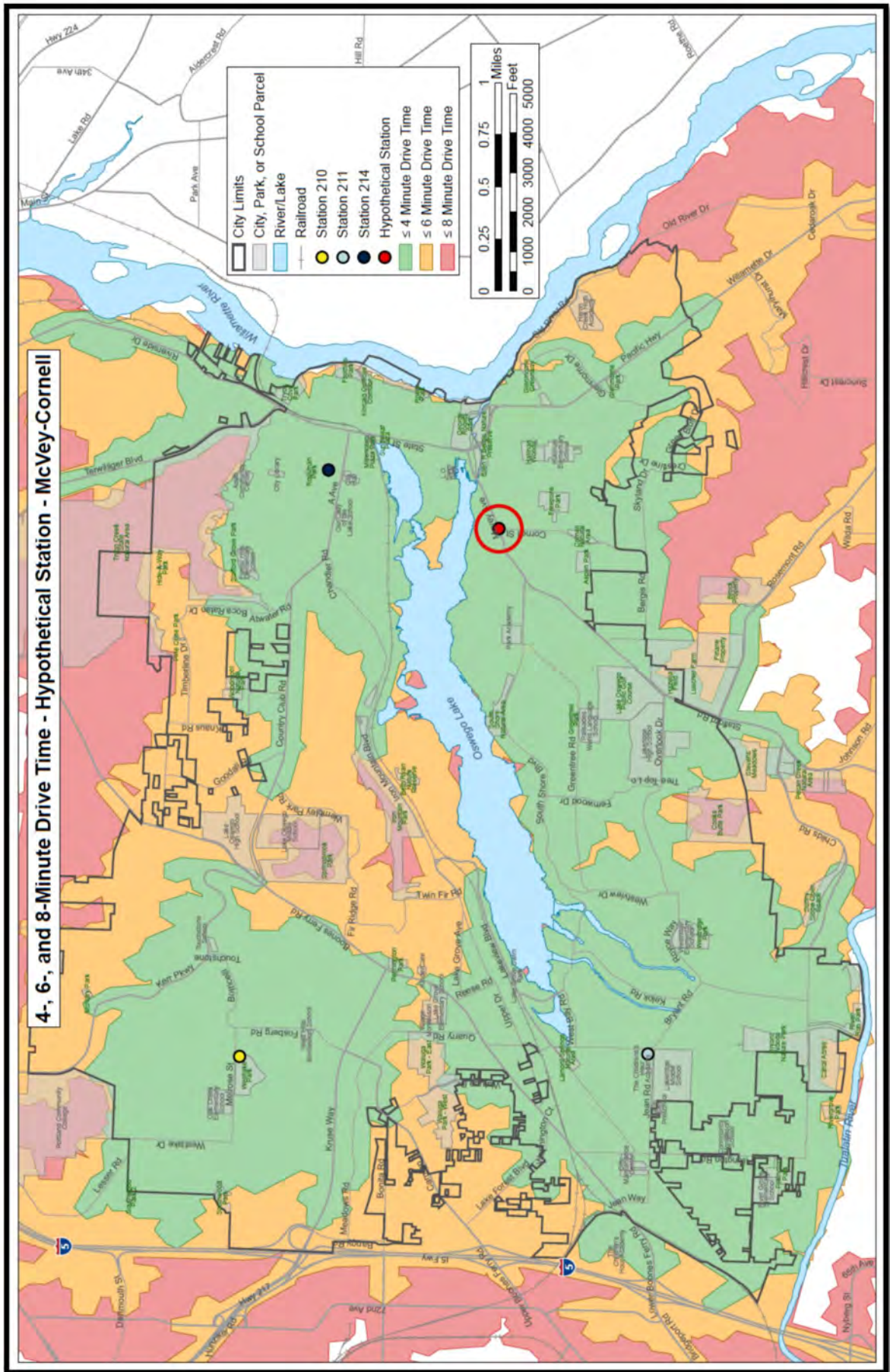


Figure 25. Drive time coverage if Station 212 were replaced by a new station at the intersection of McVey Ave and Cornell St, illustrated using Esri drive time data with 4-, 6-, and 8- minute bands.



Alternatives, including renovating the existing facility, were deemed infeasible.

A Current Needs

B Current Conditions

C Future Needs

D Project Costs

E Community Engagement

Renovating the Existing Facility. **Renovation**, in this discussion, is considered the repair or improvement of the existing facility while **rebuilding** involves the complete demolition of the old facility and the construction of a replacement.

When considering this question, Task Force members coalesced around the perspective that it is preferential to renovate a structure when some portion of the original remains useable. Task Force members then talked through the spaces in the existing facility and were unable to identify a single structural feature worth building around.

Living Quarters. Station 212’s living quarters are made of unreinforced cinder blocks. This is not seismically sound, and reinforcement would not be cost effective. Further, this space wraps around the back of the apparatus bay, making retrofitting a pull-through bay impossible. For these reasons alone, renovation of the living quarters is not recommended.

Apparatus Bay. The existing apparatus bay has been seismically reinforced. However, it is not the adequate length or width to accommodate the future needs of the companies housed at this station. If modified, it would be to such an extent that it is hard to imagine the existing reinforced bay offering any substantial cost savings. The bay is positioned near the back corner of the existing lot, making expansion infeasible and the possibility of a pull-through bay likely impossible.



Figure 26. At the existing facility, the living quarters (red) surround the apparatus bay.

Closing Station 212 + Contracting for Service. Key Finding 2 establishes that closing Station 212 would leave a hole in *the City's* emergency response network. This is, however, an incomplete picture of the emergency services that support Lake Oswego residents.

TVF&R. Staff explored the possibility of contracting for service with Tualatin Valley Fire & Rescue (TVF&R) which provide fire and medical service to the residents both south and west of Lake Oswego. TVF&R is Lake Oswego's closest mutual aid partner, regularly responding to calls within City limits, which LOFD reciprocates.

TVF&R has two stations close to Lake Oswego: Station 55 on Hidden Springs Rd in West Linn and Station 39 on McEwan Rd. Staff repeated the drive time analysis outlined in Key Finding 2, including these stations, and found they would do little to mitigate the slower drive times that would result from Station 212 closing. See Figures 28 and 29.

AMR. American Medical Response (AMR) already provides medical care and transport for Lake Oswego residents, responding to many of the same calls as LOFD. While Clackamas County contracts with LOFD to "stop the clock" for AMR on medical calls, the City could, instead, contract with AMR to stage an additional ambulance in the 212 Fire Management Area. This could maintain rapid response times for the vast majority of high acuity calls but would create a unique set of costs and inconsistent levels of community oversight (the City Council would continue to oversee LOFD but not AMR).



Figure 27. AMR holds an exclusive franchise agreement with Clackamas County to provide medical transport service.

Staff found that neither partnership would be a viable *permanent* replacement for a fire station in the southeast quadrant of Lake Oswego. However, **contracting for service may be a viable strategy for maintaining coverage levels during construction.**

Notes on Transition Planning. If a new fire station is constructed on the current site, LOFD would develop a plan to maintain service levels for all residents during construction. Possible strategies include:

- Phasing construction to enable the station to remain online.
- Creating temporary quarters and apparatus storage elsewhere in the 212 FMA.
- Rehousing the 212 crew at an adjacent firehouse (211 or 214) and contracting for additional service with partners.

LOFD will assess transition coverage options *after* preliminary site designs are developed, as the facility design, along with land acquisition decisions, will affect the feasibility of each strategy listed above. Depending on the method(s) selected, these costs may add to the total bond amount.



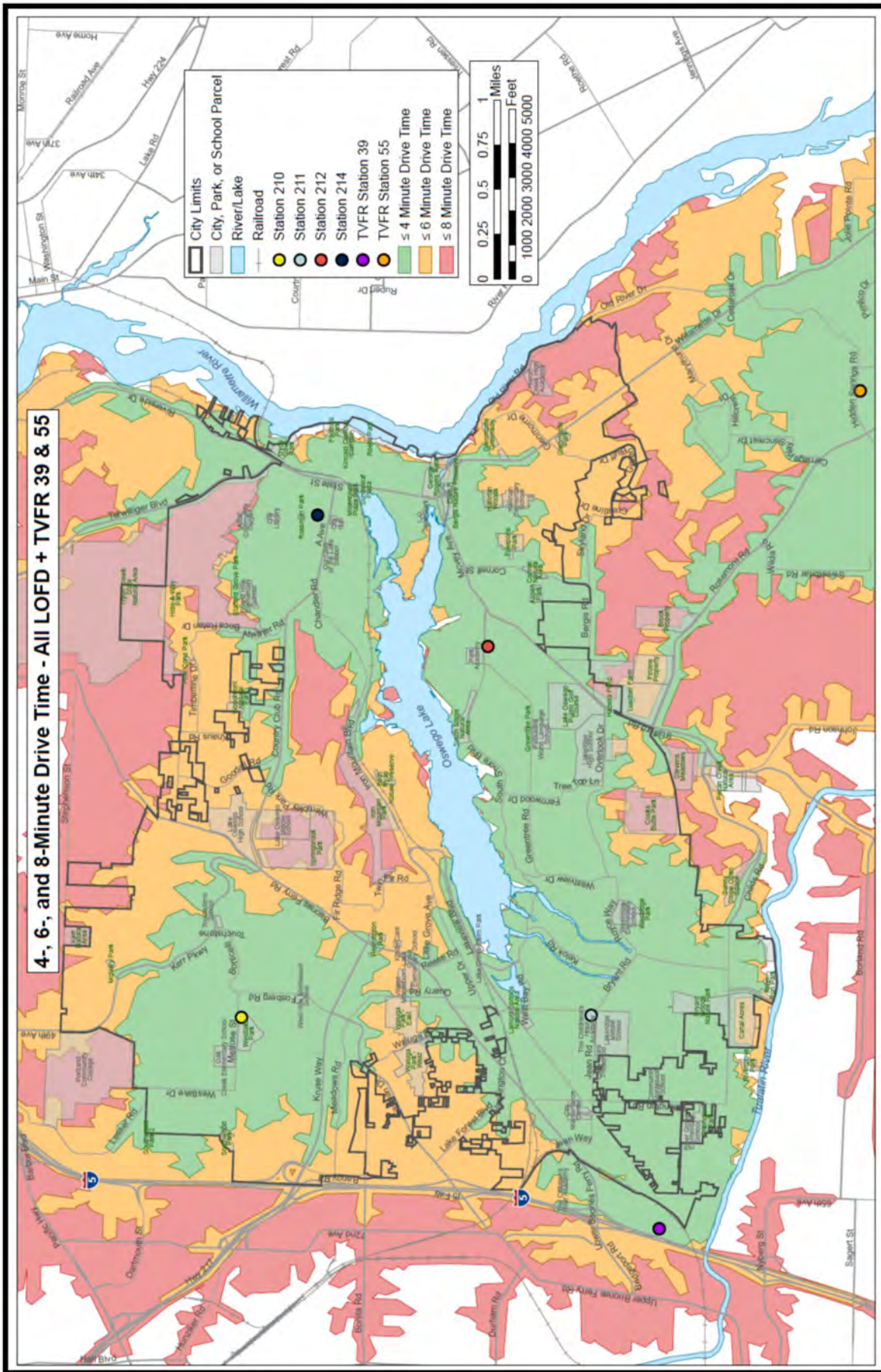


Figure 28. Current drive time coverage, including TVFR stations 39 and 55, illustrated using Esri drive time data with 4-, 6-, and 8- minute bands.

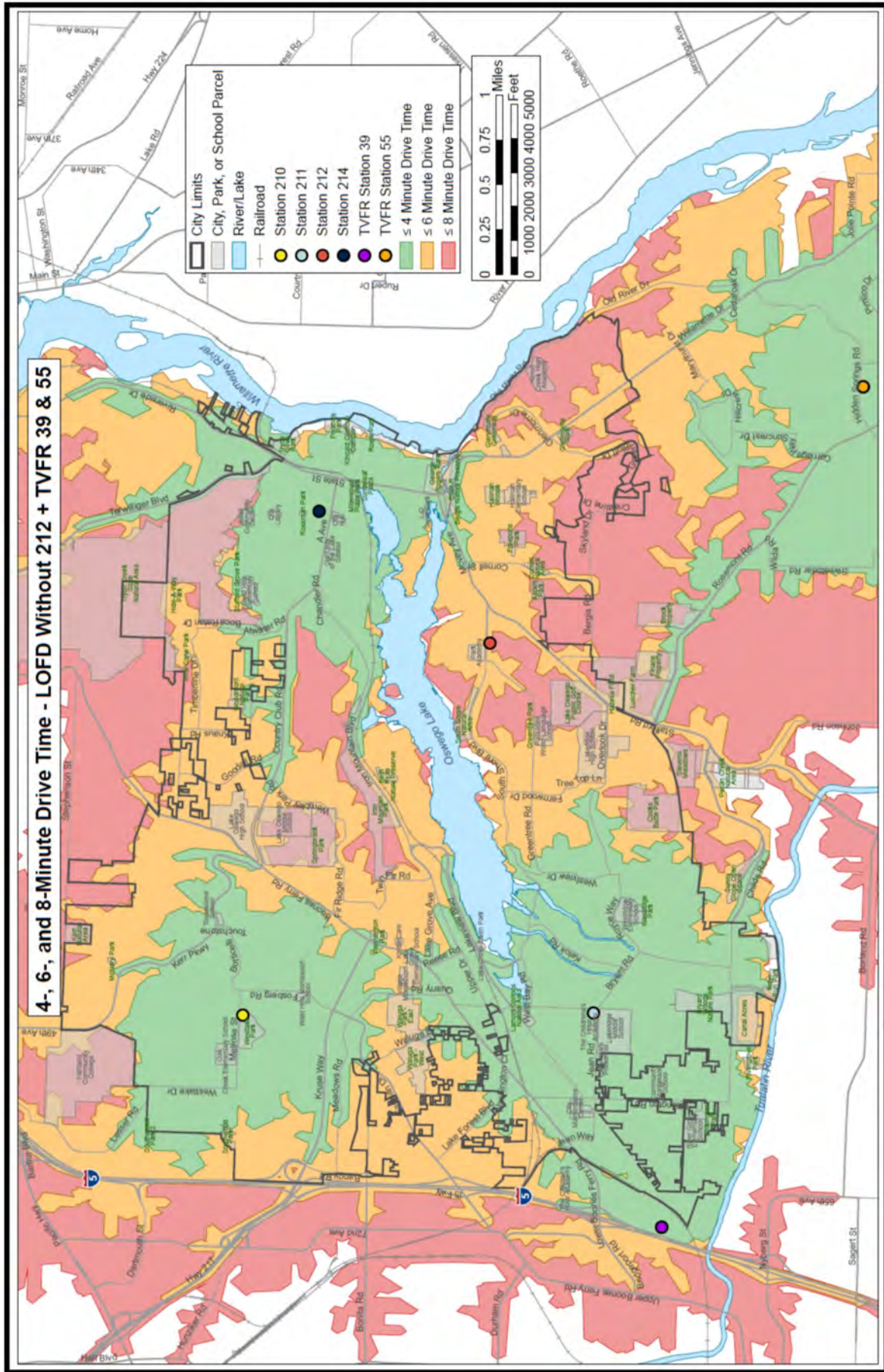


Figure 29. Drive time coverage if Station 212 were decommissioned, including TVF&R stations 39 and 55, illustrated using Esri drive time data with 4-, 6-, and 8- minute bands.

6

Staff should further explore the benefits and feasibility of acquiring additional land.

- A Current Needs
- B Current Conditions
- C Future Needs
- D Project Costs
- E Community Engagement

Site Needs. With approximately 14,000 square feet needed to accommodate the spatial program outlined in the previous section, and a maximum allowable lot coverage of 35% at the current site, the ideal lot size for a 50-year fire station would be approximately 40,000 square feet.

Current Site. The site of the existing fire station (1880 South Shore Blvd) and the City-owned lot immediately to the east total approximately 31,500 square feet (0.72 acres).

Two Stories. The lot coverage issue could be addressed by building a two-story fire station, with bunk rooms on a second floor and living space level with the apparatus bay and multipurpose room on the ground floor. The drawbacks of a two-story fire station include the potential for slightly slower response times (<10 seconds) and additional cost.

Adjacent City-Owned Land. The City owns an additional parcel (1.3 acres) directly to the east of the two lots currently recommended as the site for the new fire station. This land is available for construction staging but not for building, as it is slated to house a new water reservoir.

Neighboring Lot. Directly to the west of the South Shore Fire Station is a privately-owned parcel that is approximately 15,800 square feet. The owners of this home are supportive of the South Shore Fire Station project and shared with staff that they would be “willing sellers” if their land is needed for expansion of the fire station.

No acquisition price has been discussed but a preliminary analysis by staff puts the total cost of acquisition and demolition under \$1 million.



Figure 30. The current site of Station 212 is shown in red (31,500sf); the City’s water reservoir parcel is shown in blue (57,000sf); the privately-owned parcel considered for acquisition is shown in yellow (15,800sf).

Acquisition Considerations. There is a moderate grade differential between the neighboring lot to the west and the South Shore Fire Station lot. Project staff would need to contract with technical experts to determine if the grade differential can be mitigated in a way that is cost effective. Technical assessment is also needed to determine the potential benefits of an expanded site – it is possible that more land would enable a station with better organization and more programmatic elements, but the extent to which this is true is not known.

Articulating a preference for investing more up front to avoid the need for renovation or expansion in the future, members of the Task Force recommend contracting for professional services to determine the benefits, feasibility, and cost of acquiring the lot directly to the west of the current fire station.



Based on comparable projects, a new build of this size could cost up to \$18 million.



Numbers in Context.

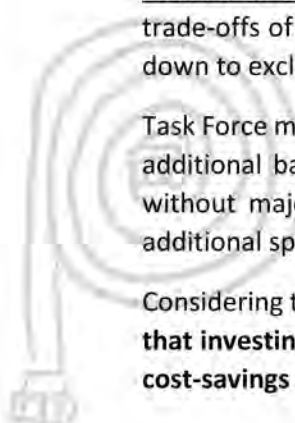
Function of this estimate. The purpose of a preliminary cost estimate is to determine *project scale*.

Relying solely on the cost of comparable projects, it does *not* include a single specific design element and therefore cannot be value engineered. Adjusting the projected square footage significantly changes the total anticipated cost. However, this exercise yields no functional benefit as the utility of the preliminary cost estimate is limited to work occurring up to the first City Council checkpoint.

Task Force Usage. Members of the Task Force used preliminary cost estimates to consider the trade-offs of designing a station scaled to accommodate future community needs v. one pared-down to exclusively remedy existing issues.

Task Force members found that the inclusion of future-looking facility elements (overflow dorms, additional bay space) would significantly extend the length of time the facility could operate without major renovation or expansion, while requiring approximately 2,000 square feet of additional space.

Considering the cost associated with the inclusion of these elements, **Task Force members found that investing in these features during a rebuild would be prudent, the long-term benefits and cost-savings outweighing the up-front costs.**



Method. Staff used a standard industry practice for developing a preliminary cost estimate: finding the cost per square foot of comparable projects, escalating to the projected mid-point of construction, and multiplying by the estimated square footage.

What is included in this number? All construction costs (hard costs) and project management and design costs (soft costs) are included in this estimate. Site work, while not specifically outlined, is accounted for by this method, as is demolishing the existing facility, and escalation.

What is excluded from this number? Costs associated with financing this project (selling the bond), maintaining service in the fire management area while this station is under construction, and acquiring land are all excluded from this estimate. These will all be accounted for in a *Phase Two* cost estimate.



Cost per Square Foot. Staff reviewed the costs associated with constructing fifteen comparable projects – thirteen recently-constructed fire stations, plus Lake Oswego City Hall and the Lake Oswego Recreation and Aquatic Center.

Excluding one outlier, the average cost per square foot of constructing these fire stations, in 2025 dollars, is **\$853/sf**. Recognizing the potential for above-average site work (grading bedrock, construction of retaining walls, rebuilding an ADA-compliant pathway), staff opted to use a **hard cost range of \$850-\$900/sf** for cost estimating.

At this phase, soft costs are calculated as a percentage of hard costs. The industry standard for generating preliminary cost estimates is 30%. This puts the total cost per square foot range at **\$1,105-\$1,170/sf**, in 2025 dollars.

Variables

- **Hard Costs (\$850-900/sf)**
 - Cost/SF Range of Comparable Projects
- **Soft Costs (\$255-270/sf)**
 - As percentage of hard costs (30%)
- **Escalation (5%)**
 - Average annual range

Calculation

1. Find: **Soft Costs \$255-270/sf**

$$\text{Hard Costs} * \text{Soft Cost Multiplier}$$

$$\$850-900/\text{sf} * 30\%$$
2. Find: **Total Cost/SF \$1,105-1,170/sf**

$$\text{Hard Costs} + \text{Soft Costs}$$

$$\$850-900/\text{sf} + \$255-270/\text{sf}$$
3. Find: Adjusted for Time

$$\text{Total Cost/SF} * \text{Escalation ('26)} * \text{Escalation ('27)}$$

$$\$1,105-1,170/\text{sf} * 5\% * 5\%$$

\$1,218 - \$1,290/sf

Finally, to account for a construction mid-point during 2027, staff escalated this estimate to 2027 dollars. Construction costs have fluctuated significantly in the last five years, but the current industry standard for cost-estimating is to use 3-5% annual escalation. Applying a 5% escalator twice yields our functional cost per square foot range of **\$1,218 - \$1,290/sf**.

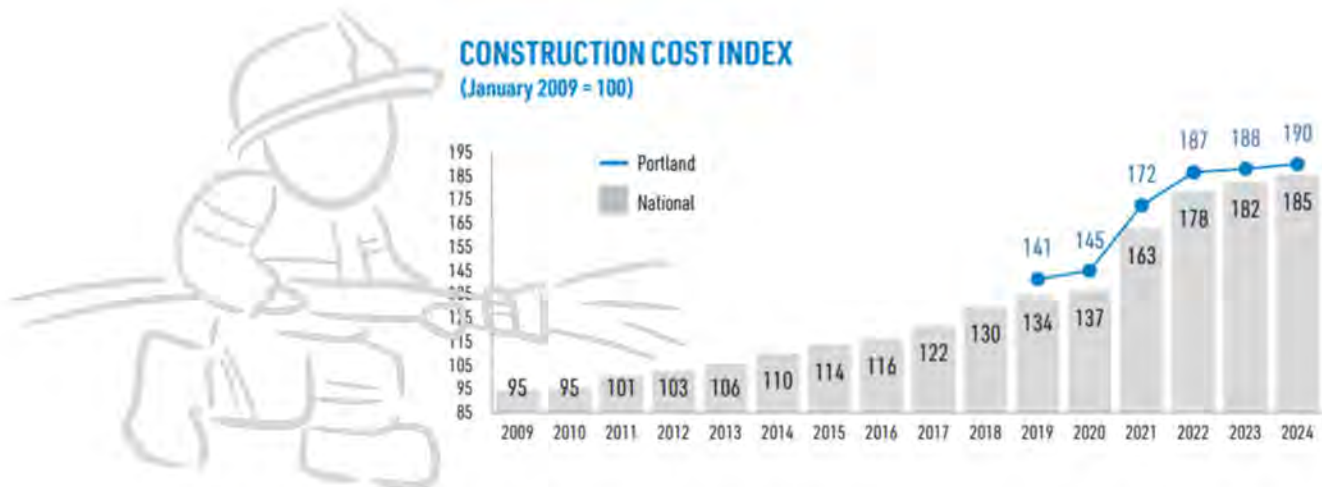


Figure 31. The Mortenson CCI shows a steady increase (1-2%) over the last three years. The average annual increase for the last five years is 4.7%.

Total Project Cost. Applying this cost per square foot multiplier to the square footage estimate calculated in Key Finding 4 (13,958sf) produces a total preliminary project cost estimate of \$17,000,844 - \$18,005,820. Rounded to **\$17-\$18 million.**

This estimate rests on conservative assumptions which, if modified, could produce a lower project cost estimate. For example, using 3% annual escalation would reduce both ends of the range by approximately \$700,000. Reducing square footage by 1,000 square feet takes \$1.2M off the bottom end of the range and \$1.3M on the top. Soft costs of 20% lead to reductions of \$1.3-1.4M. Taken together, these three modifications would produce a project cost estimate in the range of \$14-15M.

Staff recommend continuing to use conservative assumptions for the preliminary cost estimate. The second phase of cost estimating, which will lead to the final bond number, will be generated independently from the preliminary cost estimates.

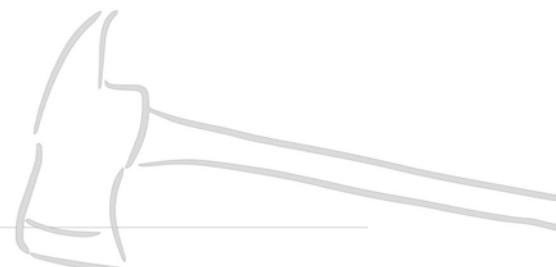
Next-level cost estimate. One of the primary bodies of work in the second phase of this project, which the Task Force recommends the City Council pursue, is the development of a *specific project estimate*.

This work requires contracting for professional services – hiring an owner’s representative and architect to develop preliminary facility designs, then a general contractor or cost consultant to provide line-item cost estimates for our specific project.

In this phase, the architect team will assess site constraints, developing a layout that incorporates as many of the recommended elements as possible while identifying efficiencies to reduce the total size and cost. Through this process, they will also identify the scale of the site work needed to support this project, which is a critical cost and design consideration we have not yet explored.

This design (or possibly *these designs*, if Council directs staff to further explore the possibility of land acquisition) will be shared with a general contractor or cost consultant who will develop a line-by-line cost estimate. Staff will escalate the cost, based on the anticipated start-date of construction, and provide this cost estimate to the City Council.

The City Council would review the preliminary project design(s) and cost estimate(s), determining how much they are willing to ask voters to pay (setting a bond amount). Staff would then assess the feasibility of these constraints and return to the City Council with a recommended set of project modifications. Members of the City Council would then decide whether or not to continue pursuing this project by referring a bond measure to the ballot.





The most viable funding source would be a General Obligation Bond.



Recommendation. Members of the Task Force reviewed all traditional funding options for this project and concluded that a General Obligation (GO) bond would be the most viable funding source.

The funding sources considered by the Task Force include relying on existing institutional resources (department contingencies), applying for grants, and seeking contributions from stakeholders who may benefit from the project. The Task Force found that there would be significant downsides to draining the City’s reserves, and that the amount of available grant/partnership funding would likely fall far short of the full project cost. For these reasons, along with the “affordability” of the bond ask, Task Force members recommended this as the most viable funding source for this project.

Funding for Recent City Projects. As a part of their review, Task Force members considered the funding methods behind three recent City projects:

The Lake Oswego Aquatic and Recreation Center (LORAC) has been primarily funded through a general obligation bond (Parks, 2019) and contributions from the Lake Oswego School District. When the Parks bond was on the ballot in May 2019, it received 6,864 votes of support, passing with 62%. The total project cost is approximately \$46 million, as of February 2025.



City Hall was primarily funded using urban renewal dollars, leveraging resources collected through the East End Urban Renewal District to complete the \$41 million project in 2021.



The Lake Oswego Maintenance Center was completed in 2017 for \$13.6 million. The funds for this project were primarily sourced from the City’s restricted *enterprise funds* (water fund, wastewater fund, stormwater fund, and street maintenance fund). While specific components of the South Shore Fire Station project may be supported with enterprise funds, the vast majority of project elements are ineligible.



Figures 32-34. From top to bottom: The Lake Oswego Aquatic and Recreation Center; Lake Oswego City Hall; and the Lake Oswego Maintenance Center.

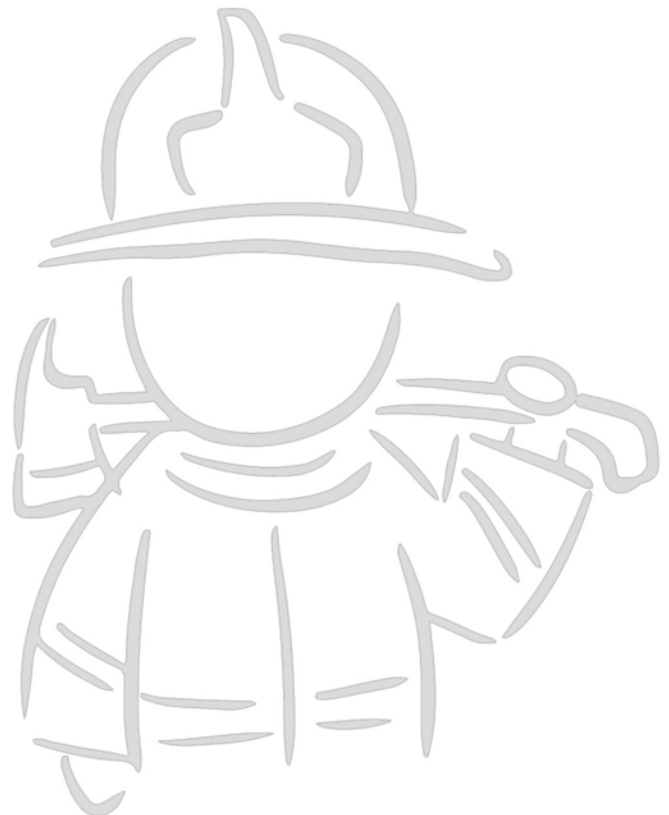
Annual Cost per Household. The 2025 total assessed value of Lake Oswego properties is approximately \$9.3 billion. The City, when issuing bonds, generally opts for 20-year terms, resulting in interest rates between 4-4.5%.

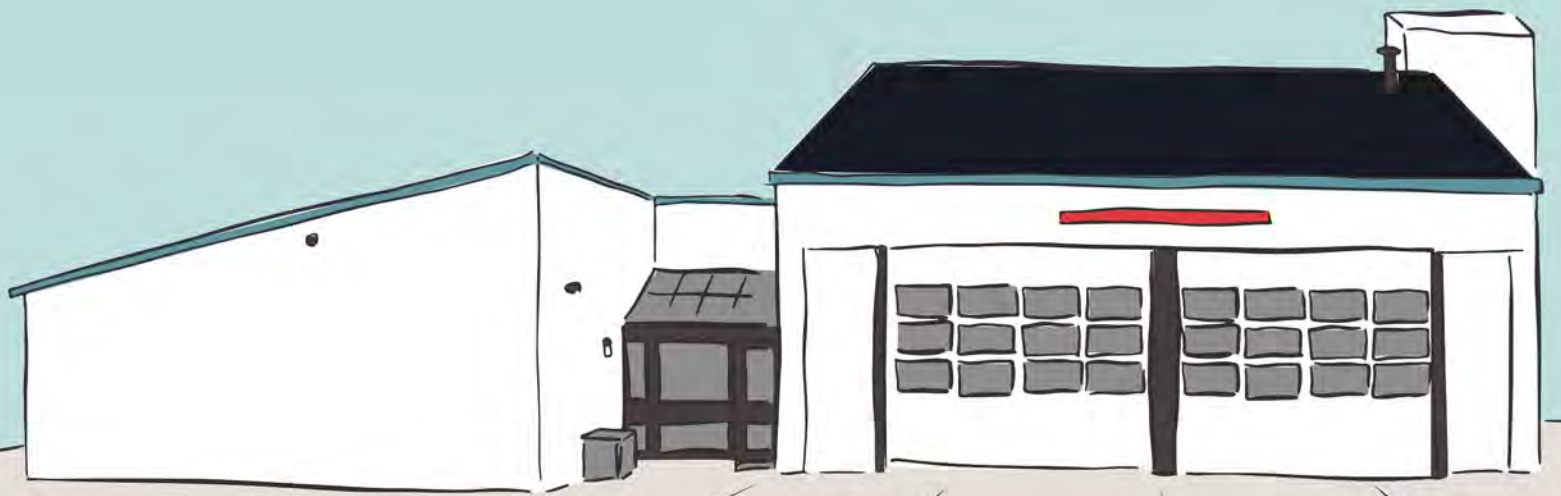
For an \$18 million bond, the **millage rate increase** – the amount of tax owed per \$1,000 of assessed value – would be approximately **\$0.16** based on 2025 conditions. In this example, the owner of a home with an assessed value of \$600,000 would pay an additional **\$95 per year for 20 years** (without adjusting for changes to the assessed value of their home).

Arriving at a Bond Number. The preliminary cost estimates outlined in Key Finding 7 will *not* form the basis of a bond number. Instead, if the City Council directs staff to pursue *Phase Two* of this project, as recommended by the Task Force, staff will contract for professional services, developing a project design and specific cost estimates.

This process would involve hiring an owner’s representative and architect to develop preliminary project designs and sharing those designs with a general contractor or cost consultant to generate specific project cost estimates (in 2025 dollars). Once staff have established the total cost of construction, they will also factor in costs associated with design and project management, land acquisition, maintaining service during the transition, and financing – escalating costs as appropriate. Staff would then solicit guidance from the City Council, incorporating feedback into final project design and budget.

With City Council approval, staff would consult with bond counsel to determine financing costs – finalizing the bond amount, subsequent millage rate increase, and developing ballot referral language. This package would then be presented to the City Council for referral to the voters.





© 2025

RESOLUTION 24-38

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE OSWEGO CITY CREATING AN AD HOC SOUTH SHORE FIRE STATION TASK FORCE.

WHEREAS, a 2024 City Council Initiative is to 'begin a needs assessment and community engagement process to rebuild the South Shore Fire Station.'

WHEREAS, the creation of an ad hoc South Shore Fire Station Task Force to review and provide feedback on the Fire Department's assessment of community coverage needs, existing facility and site conditions at the South Shore Fire Station, the Department's vision for their next generation of service provision, preliminary project cost estimates, and a full-scale community engagement strategy would help staff make a recommendation to the City Council.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Lake Oswego that:

Section 1. Creation. Pursuant to LOC 12.50.010(1), an ad hoc South Shore Fire Station Task Force ("Task Force") is hereby created.

Section 2. Membership. The Task Force's membership shall consist of not more than 20 community members, appointed and approved as provided by the City Charter, Sec. 19 and LOC 12.50.015(1).

The membership shall include at least one representative from:

- The Fire Department Labor Union (non-voting)
- The McVey-South Shore Neighborhood Association
- The Palisades Neighborhood Association
- The Hallinan Neighborhood Association
- Mary's Woods Staff
- The Business Community
- The City's Budget Committee
- The City's DEI Advisory Board
- The City's Sustainability Advisory Board
- They City's youth engagement network

Additional at-large community members will be selected through a public recruitment process.

Section 3. Term. The term of the Task Force is from the date of this Resolution through March 1, 2025, unless its tasks are concluded earlier or the term is extended by resolution of the City Council.

Section 4. Tasks. The Task Force shall review and provide feedback on:

- The Fire Department's assessment of community coverage needs,
- Existing facility and site conditions at the South Shore Fire Station,
- The Department's vision for their next generation of service provision,
- Preliminary project cost estimates, and

- A full-scale community engagement strategy, contingent upon a City Council decision to advance this project.

Section 5. Effective Date. This Resolution shall take effect upon passage.


Considered and enacted at the regular meeting of the City Council of the City of Lake Oswego on the 3rd day of September, 2024.

AYES: Mayor Buck, Verdick, Mboup, Rapf, Corrigan, Afghan, Wendland


NOES: None

EXCUSED: None

ABSTAIN: None



Joseph M. Buck, Mayor



Kari Linder, City Recorder

ATTEST:

APPROVED AS TO FORM:



Ellen Osoinach, City Attorney

RESOLUTION 24-39

A RESOLUTION OF THE CITY COUNCILORS OF THE CITY OF LAKE OSWEGO APPROVING APPOINTMENTS TO THE SOUTH SHORE FIRE STATION TASK FORCE.

WHEREAS, the Lake Oswego City Council has adopted Resolution 24-38 creating an ad hoc South Shore Fire Station Task Force; and

WHEREAS, the Mayor has proposed appointing, subject to the approval of the Councilors per City Charter, Sec. 19, those listed on **Exhibit A** to this Resolution as members of the South Shore Fire Station Task Force.

NOW, THEREFORE, BE IT RESOLVED by the Councilors of the City Council of the City of Lake Oswego that:

Section 1. The persons identified on **Exhibit A** are approved for appointment to the South Shore Fire Station Task Force created under Resolution 24-38.

Section 2. Effective Date: This Resolution shall take effect upon passage.

Considered and enacted at the regular meeting of the City Council of the City of Lake Oswego on the 1st day of October, 2024.

AYES: Councilors Rapf, Corrigan, Afghan, Wendland, Verdick, Mboup

NOES: None

EXCUSED: None

ABSTAIN: Mayor Buck



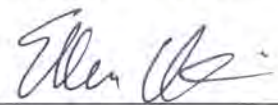
Joseph M. Buck, Mayor

ATTEST:



Kari Linder, City Recorder

APPROVED AS TO FORM:



Ellen Osoinach, City Attorney



Exhibit A to Resolution 24-39

South Shore Fire Station Task Force Appointments

October 1, 2024

(term expires March 1, 2025)

1. City Council Liaison (non-voting): **Councilor Trudy Corrigan**
2. Labor Liaison (non-voting): **Jonathan Isbell, Lieutenant**
3. Hallinan Neighborhood Representative: **Christian Manz**
4. McVey-South Shore Neighborhood Representative: **Ellen Steel**
5. Palisades Neighborhood Representative: **Chris Durkee**
6. Mary's Woods Representative: **Patrick Cechini**
7. Lake Grove Fire District Representative: **Jonathan Harrell**
8. Chamber of Commerce Representative: **Pakin Chanyapakorn**
9. Budget Committee Representative: **Carrie Love**
10. DEI Advisory Board Representative: **Ginny Perelson**
11. Sustainability Advisory Board Representative: **Buzz Chandler**
12. At-Large, Youth: **Aidan Shannon**
13. At-Large, Youth: **Dashel Hinrichs**
14. At-Large: **Gabriella Tuna Garamvolgyi G. Roman**
15. At-Large: **Jeff Gudman**
16. At-Large: **Karen Sampson**
17. At-Large: **Kianna Angelo**
18. At-Large: **Jim Wolper**
19. At-Large: **Mignon Reynolds**

RESOLUTION 24-45

A RESOLUTION OF THE CITY COUNCILORS OF THE CITY OF LAKE OSWEGO APPROVING THE APPOINTMENT OF A MEMBER TO THE SOUTH SHORE FIRE STATION TASK FORCE.

WHEREAS, the Chamber of Commerce liaison to the South Shore Fire Station resigned; and

WHEREAS, the Mayor appointed Liza Parker to serve as the Chamber of Commerce liaison, subject to Council approval, pursuant to Section 19 of the City Charter;

NOW THEREFORE, BE IT RESOLVED, that the City Councilors of the City of Lake Oswego approve the Mayor's appointment of Liza Parker to serve on the South Shore Fire Station Task Force through March 1, 2025.

This resolution shall take effect upon passage.

Considered and adopted by the City Councilors of the City of Lake Oswego at a regular meeting held on the 15th day of October, 2024.


AYES: Councilors Corrigan, Afghan, Wendland, Verdick, Mboup

NOES: None

ABSTAIN: Mayor Buck

EXCUSED: Rapf

ATTEST:



Joseph M. Buck, Mayor



Kari Linder, City Recorder

APPROVED AS TO FORM:



Ellen Osoinach, City Attorney

[blank]



2.7

South Shore Fire Station 212

Facility Information

- Date of Construction
- Building Size
- Current Use
- Hours of Operation

Existing Conditions Assessment

- Building Description
- Summary of General Building Conditions
- Consultant Reports
 - Structural
 - Mechanical Electrical Plumbing
 - Roof
 - Environmental
- Existing Building Deficiencies
- Cost Forecast

Space Program Assessment

- Summary of Program Deficiencies and Future Needs
- Existing Program Deficiencies
- Future Space Program Requirements

Parking

2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT



FACILITY INFORMATION

Date of Construction

1971

Building Size

5,463 SF

Current Use

The Lake Oswego South Shore Fire Station (Station 212), located in the city's southeast region, provides fire response services including fire safety inspection and enforcement, fire prevention and suppression, and public education and information. Ambulance service is currently provided by a private company. Fire response services must be dispersed based on geography and population area to meet the goal of reaching 90% of fire, rescue, and medical emergencies in six minutes or less, 24 hours a day. The Lake Oswego Fire Department also provides contracted services to several areas outside of the City of Lake Oswego, including Lake Grove, Alto Park, and Riverdale-Dunthorpe.

Station 212 is the oldest of the four Lake Oswego fire stations. Currently there is no administrative component at this station.

Hours of Operation

Fire protection is provided year round, 24-hours a day, seven days a week.

EXISTING CONDITIONS ASSESSMENT

Building Description

Construction

One story structure with concrete block on concrete stem walls and slab on grade. Interior walls and roof are wood framed.

Exterior Design / Materials

Stucco with aluminum windows and doors. Composition and metal panel roofing at sloped roofs, APP torch applied roof at flat roof areas.

Interior Design / Materials

Carpet flooring at office and living area of crew quarters. Kitchen / Dining in crew quarters has wood plank flooring system. Sheet vinyl flooring in restrooms. Exposed concrete at engine bays and support areas. Painted concrete block is the typical interior wall finish. Painted gypsum wallboard is the typical interior ceiling finish. Doors are solid wood with paint finish.

Special Features

Engine bay has subgrade holding tank for foam fire additive. Tank has a gate valve to direct waste to storm or sewer systems.

Zoning

PF – Public Functions Zone

Occupancy Designation

B – Office

Special Requirements

Essential Facilities for Emergency Operations

Summary of General Building Conditions

The South Shore Fire Station is old and out-of-date. The station does not meet current facility standards found at other stations within the city. The major deficiencies are associated with the building systems and envelop.

Structural Consultant Report-KPFF

Building Description

The South Shore Fire Station was built in 1971 based upon the existing building drawings that were available for our review. It appears that a seismic upgrade was done to the garage portion of the building but drawings for the upgrade were not available for review. The code used for the building design is not listed on the existing drawings. It is expected that portions of the building that were not seismically improved are insufficient for immediate occupancy in a seismic event.

The building is a one story wood framed roof supported by concrete block walls. The roof is framed with 2x joists and overlaid with 3/8" plywood sheathing. Concrete block walls appear to be reinforced with vertical reinforcement but horizontal shear reinforcing does not appear to be shown on the drawings.

Current Condition

A walk through of the building did not show any obvious signs of structural damage or distress and the building appeared to be in good condition. It appears possible that some roof leaking may be occurring and could lead to structural damage of the roof framing.

Seismic Lateral Resisting System

The lateral resisting system for the building is CMU shearwalls, reinforcing is unknown. Although the main garage bay for the fire station was seismically improved it is not clear what it code forces it has been designed for.

Recommendations

A seismic study of the building should be performed if the building is expected to continue to be used as a fire station and if the building is expected to maintain occupancy in a seismic event. It is likely that new plywood sheathing would be required on the roof, additional steel hardware would be required at joist and beam connections to the walls to transfer diaphragm shear, and additional improvements may be required for the garage bay.

It is also recommended the roof and supporting structure be reviewed for leaks and signs of water damage.

Plumbing Consultant Report - PAE

Water and Plumbing Systems

Description:

- Domestic Hot Water: The domestic hot water is produced by a single 50-gallon gas water heater.
- Fixtures: Plumbing fixtures are a mixture of older style units – tank type water closets and urinals with flush valves.

General Condition:

- The domestic water piping is galvanized and not expected to have an extended service life.
- The storm drain and sanitary sewer piping systems appear to be in working condition, with no known problems, other than the roof drains tend to clog from tree leaves and limbs.
- Plumbing fixtures appear to be fully functional in good shape.

Code Issues:

- The roof drains are single units without a secondary path for overflow protection. Roof overflow drains are required under current code.
- The plumbing fixtures do not meet current low water flow requirements.
- Backflow devices were not observed on the building water service where water hoses are commonly connected.

Fire Protection Systems

Description:

The building has a wet sprinkler system in the office / crew quarters. Fire water service is provided in the engine bay to fill pumper engines.

General Condition: Good.

Code Issues: None noted.

(HVAC) Heating, Ventilating, and Air Conditioning Consultant Report - PAE

Building Systems

Description:

- The building served by three package rooftop units (two Carrier 48BH006's and one Lennox GCS16) with gas heat located on the roof.
- Roof mounted exhaust fans are used to exhaust toilet rooms, cooking spaces and the engine bay.
- Gas fired radiant heater is used in the engine bay.

General Condition:

- The package rooftop units appear to be old and beyond their useful service life. The units have reportedly been in water when the single roof drain plugs up and floods the roof. The units have been elevated using

4x4 timbers, but are not anchored in any way.

- A neighbor has complained about the sound of the rooftop unit operation at night. Although the unit operation sounds normal, the configuration of the units in a well may cause sound to be transmitted upward toward the neighbor (on the hill behind the station.)

Code Issues:

- The air handlers are not seismically braced for an “Essential Facility.”
- Some exposed ductwork does not have insulation as required by the Oregon Energy Code.

Electrical Consultant Report - PAE

Power System

Description:

- Service: Electrical power service is provided by serving utility. Service is routed underground to the CT enclosure, main disconnect and main distribution panel located at the electrical room.
- Distribution – 208V: Power distribution is provided by at 240/120. A main disconnect in the electrical room and feeds the two G.E. branch panelboards. There are a few spare breakers in the panels.

General Condition

- Service: The service feed are the responsibility of the utility which ends at the level 1 CT enclosure. The incoming conductor type would need to be verified by the utility, if the building was to undergo a significant remodel, the utility typically requires a new service be provided, due to the age and conductor type used in the older services.
- Distribution – 208V: The electrical equipment is all original, same vintage as the building, and is showing its age. Replacement breakers are still readily available for the two G.E. panels.

Code Issues:

- Service: None.
- Distribution: Electrical room is being used as a storage closet, items are blocking the clearance areas of the electrical equipment.

Power System – Emergency

Description:

- Emergency Source: The building uses a 15KW natural gas engine generator set located in covered shelter at the building exterior. The generator is connected to utility natural gas system and there is a backup fuel storage tank. There is one automatic transfer switch (ATS) located in the level 1 electrical room, which feeds both branch panelboards.

General Condition:

- Source: The generator is showing signs of age with rusting on the external exhaust system and housing. Testing and maintainance and engine run hours is unknown.

2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT

- Distribution: The ATS uses an older power relay system of controls and has had field modifications done to provide a manual system testing capability. Usable life expectancy is questionable.

Code Issues:

- Source: None.
- Distribution: Branch wiring appears to be per code.

Lighting System

Description:

- Luminaire/Source - Interior: Most of the original lighting was probably a incandescent light source that has been retrofit with screw in type compact fluorescent lamps. Truck bay is using T8 linear fluorescent lamps, appear to be retrofit.
- Exit/Path of Egress: Most of the lighting throughout the building is connected to the emergency power source.
- Control: Interior spaces have wall switch control, most single level control. No occupancy sensors.

General Condition:

- Luminaire/Source -Interior: Luminaires are same age as building, service life is questionable.
- Exit/Path of Egress: Luminaires condition same as interior.

Code Issues:

- Luminaire/Source - Exterior: none.
- Luminaire/Source - Interior: none.
- Exit/Path of Egress: none.

Signal Systems

Description:

- Fire Alarm: No fire alarm system is present, only ceiling type spot detectors.
- Telecom: The phone rack is located in the electrical room.

General Condition:

- Fire Alarm: n/a.
- Telecom: n/a.

Code Issues:

- Fire Alarm: Fire detection and annunciation is required sleeping rooms.
- Telecom: None.

Roofing Consultant Report - PRC

SOUTH SHORE FIRE SUBSTATION			
ROOF AREAS:	A	B	C
BUILDING USE:	Fire Station / Living Quarters	Fire Station / Garage	Fire Station / Living Quarters
GENERAL ROOF STRUCTURE:	Plywood sheathing	Plywood Sheathing	Plywood Sheathing
ROOF SYSTEM TYPE:	Metal roof panels with batten covered seams	Fiberglass reinforced asphalt shingles	APP torched applied membrane
NOTES:	The metal roof system is from original construction and is near the end of its service life. The gutters and roof edges are deteriorated and failing in areas.	The asphalt shingles appear to be fairly new compared to the structure. No failures were observed to the roof system.	The roof system has reached the end of its service life and is failing.
ESTIMATED LIFE REMAINING:	1 -3 years	18 - 22 years	Failing
NEXT ACTION:	Replace	Maintain	Replace

2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT

PHOTO DOCUMENTATION & OBSERVATIONS

1.01



Area A: The metal roof system is aged and is deteriorating in areas.

1.02



Area A: Photo of roof edge where the gutter and downspouts are deteriorated and are failing in areas..

1.03



Area B: Photo of asphalt shingles servicing the garage area. Shingle roof system is performing well with no failures observed.

1.04



Area C: The roof area is failing at numerous locations and requires replacement in the very immediate future.

1.05



Area C: Drains are problematic due to the high level of tree leaves and other organic debris.

1.06



Area C: No overflow drains exist resulting in standing water as high as 3-inches deep over the entire roof surface.

Conclusions

Area A:

The metal panel roof system is at the end of its anticipated service life and is failing at several locations. The edge flashings and gutter system have deteriorated and are not controlling the drainage water at this time. Due to the high level of trees surrounding the roof system, organic debris is a constant impedence to the gutter assembly. Replacement is required in 1 - 3 years to control water intrusion into the structure.

Area B:

The asphalt shingles are performing well with no observed failures. The installation of this roof area is unknown but does appear to have been installed in the last couple of years.

Area C:

The existing membrane has reached the end of its service life and has been failing for the last several years. Replacement is required to control the ongoing leaks into the building. Drainage must be upgraded to meet minimum building code requirements.

2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT

Environmental Consultant Report - APEX

Apex Environmental conducted a limited hazardous materials inspection of the Lake Oswego South Shore Fire Station building. The building was wood-framed with one level. The primary materials of the investigation were Asbestos Containing Building Materials (ACBM), Lead Containing Paint, mercury containing fixtures and potential polychlorinated biphenyls (PCBs).

The survey team was comprised of Brad Kelsay (Project Manager, Asbestos Hazard Emergency Response Act (AHERA) Accredited Inspector).

This limited survey characterized the extent of suspect ACBMs and lead painted surfaces throughout the structures. No sampling of suspect materials were conducted at the site, destructive methods were not utilized during the survey. All materials were found to be in relatively good condition at the site. Materials in good condition do not give off fibers and health is not compromised by the presence of the asbestos containing building materials. Therefore, there may be asbestos containing building materials concealed within wall cavities or other inaccessible areas. Roofing at the site is built up roofing, the surface should be presumed to contain asbestos until empirical sampling proves otherwise. No suspect piping or other suspect insulations were identified during the inspection.

Flooring at the site was ceramic tile and is not suspect for asbestos. Six suspect fire doors were observed at the site. Three mechanical isolation joints were found on roof heating system and is suspect to contain asbestos. Gypsum wallboard/joint compound was observed at the site and tests positive in some cases. Wallboard is located throughout the facility.

All painted surfaces at the site are presumed to contain lead based upon the age of the structure. Adherence with OSHA 1926.62 is required including exposure assessment elements from contractors to be performing demolition activities.

Fluorescent light fixtures at the site will need to be recycled and/or disposed of according to regulations due to mercury content. Light fixtures at the site appear to be newer in style and therefore are unlikely to contain PCB ballasts; however older fixtures may still contain these materials and should be verified during demolition.

A comprehensive survey for asbestos materials would be required prior to demolition or renovation occurs at the site. This survey is not intended to be comprehensive and many of the materials indicated above may not contain asbestos. Cost estimates for abatement of potential hazardous materials will vary widely due to lack of empirical sampling. Cost estimates could range from \$1,000-\$30,000 for the South Shore Fire Station.

Existing Building Deficiencies

Code / Site:

- Insufficient parking.
- Current site does not allow for drive through fire engine bays.

Code / Building:

Building envelop does not meet current energy code.

Accessibility:

No accessibility improvements have been provided.

Other Architectural Items:

Private bunk rooms are not provided.

Structural:

Building does not meet current seismic code requirements for an essential facility.

Plumbing:

- Galvanized pipe used for water distribution is aged and approaching the end of its service life.
- Plumbing fixtures do not meet current ADA or low-flow code requirements.
- It appears that there are no backflow devices at water hose connections.

Fire Protection:

- R-13 residential fire suppression system. No deficiencies observed

Heating, Ventilating and Air Conditioning (HVAC):

- Roof top package units are old and beyond their use full service life. Plugged roof drains have flooded roof and exposed units to standing water.
- Units sitting on 4x4 timbers and are not connected or seismically braced as required by code for an 'essential facility'.
- Portions of the exposed ductwork are not insulated.

Electrical:

- Older service would require replacement if building were to undergo a significant renovation.
- Electrical equipment is same age as building and would need to be replaced if the building were to undergo significant renovation.
- Electrical room is being used for a storage closet and is a violation of the code.
- Emergency generator is aging and showing signs of rust on exhaust and housing. Condition is unknown. Usable life expectancy is unknown.
- Luminaries are the same age as building and are nearing their end of service life.



2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT

- No fire alarm annunciation in sleeping areas.
- Sprinkler water flow is not monitored.

Roof:

- Metal roof system is nearing its end of service life and will require replacement in 1 to 3 years.
- APP torch applied membrane roofing at flat roofs is currently failing and is beyond its service life.
- Roof drains are frequently clogged with tree debris and have flooded in the recent past.

Environmental:

Suspect materials include:

- Asbestos at tile and vinyl flooring
- Asbestos at ceiling tile
- Asbestos at gypsum wallboard and joint compound
- Lead Paint at painted surfaces

Recommended Further Investigations

Essential Facilities Study

Evaluate existing conditions relating to essential facilities requirements including structural / seismic, mechanical, electrical, emergency services and access.

A seismic hazards investigation

Accessibility Study to identify non ADAAG code compliant features

- Restroom access, clearance and fixtures
- Counter and fixture heights
- Handrail extensions

Comprehensive hazardous materials survey is required for renovation or demolition

- Asbestos materials
- Lead paint
- Mercury
- PCB's

Cost Forecast

H & Construction: Foreconstruction Costs

Project: South Shore Fire Station 212
 Owner: City of Lake Oswego
 Date: September 12, 2008

DESCRIPTION	LOW AMOUNT	HIGH AMOUNT
A. Seismic Upgrade		
1. Install new roof sheathing	33,000	37,000
B. New Roofing		
1. Replace metal roof with new raised seam metal roofing	114,000	133,000
2. Replace membrane roofing with single-ply membrane roofing	18,000	22,000
C. Full ADA Upgrades		
1. Renovate crew quarters restrooms including all new plumbing fixtures	138,000	152,000
D. HVAC Upgrades		
1. Replace three HVAC roof top units with high efficiency units	67,000	89,000

SPACE PROGRAM ASSESSMENT

Station 212 currently includes an apparatus bay of 2,000 square feet with two overhead doors for single-sided entry. There are no drive-thru bays at this station with bays long enough to store the Department's ladder truck. The apparatus bay accommodates 1 fire engine, 1 boat, and 1 brush truck. No administrative personnel are located here.

Station 212 has a number of significant issues that hinder the staff and the overall function of the facility. These issues are related to both the size of the facility as well as the layout.

In September 2007, Group Mackenzie completed a feasibility study for the replacement of the South Shore Fire Station utilizing the existing site and the property adjacent. Since this study was completed, the City completed the purchase of the adjacent property. This study determined that a future 9,075 square foot facility is appropriate to replace the existing 5,463 square foot building based on a program analysis and deficiency review completed at the time. Today's space requirements remain consistent with the study.

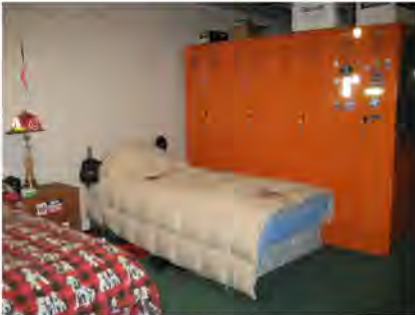
Existing Program Deficiencies

The station's program deficiencies include the following:

- The lack of drive thru apparatus bays requires that all equipment, including the station's single fire engine, be backed into the bays.
- The existing bay depth requires the current rescue boat to be stored separately from the truck, causing a delay in emergency response time due to the time required to negotiate the attachment of the boat to the truck.



2.7 SOUTH SHORE FIRE STATION 212 FACILITIES ASSESSMENT



- The existing bay depth does not allow for an oversized ladder truck if this program element were required in the future.
- There is no conditioned turn out equipment storage space outside of the apparatus bay, causing premature degradation of the equipment caused by UV light exposure.
- The facility does not adequately support staff of both genders because of co-habitation within large bunk rooms rather than in small, single bunk rooms.
- At approximately 80 SF, the shop is significantly undersized.
- Program functions such as training, large meetings and community functions cannot be accommodated within the building.
- The EMS supply room is located within the Laundry Room as a result of a lack of space.
- The staff exercise area is undersized to function effectively.
- The facility is lacking dedicated general storage space, causing storage to be dispersed throughout the building in other program areas.

Future Space Program Requirements

Station 212, in its current state, will be the least prepared of the four fire stations, to serve the projected population growth. This is primarily a result of current program and building deficiencies.

In Group Mackenzie's feasibility study to replace Station 212, several site and floor plan options were analyzed, including both one and two story schemes. "Site Scheme A" was chosen by the Fire Department as the preferred option with a projected gross building area of 9,075 square feet. Site Scheme A assumed a one-story building layout.

Program spaces included in Group Mackenzie's Site Scheme A include 3 drive thru apparatus bays, a community multi-purpose room, 4 bunk rooms, and a Battalion Chief's office and living quarters. Reference this study for a complete list of program spaces.

With a provision of 4 bunk rooms, this fire station will have the capacity to staff one fire engine or ladder truck at any one time. Each fire engine requires a staff of 3 to 4 per shift, with 3 shifts required for 24 hour a day operation.

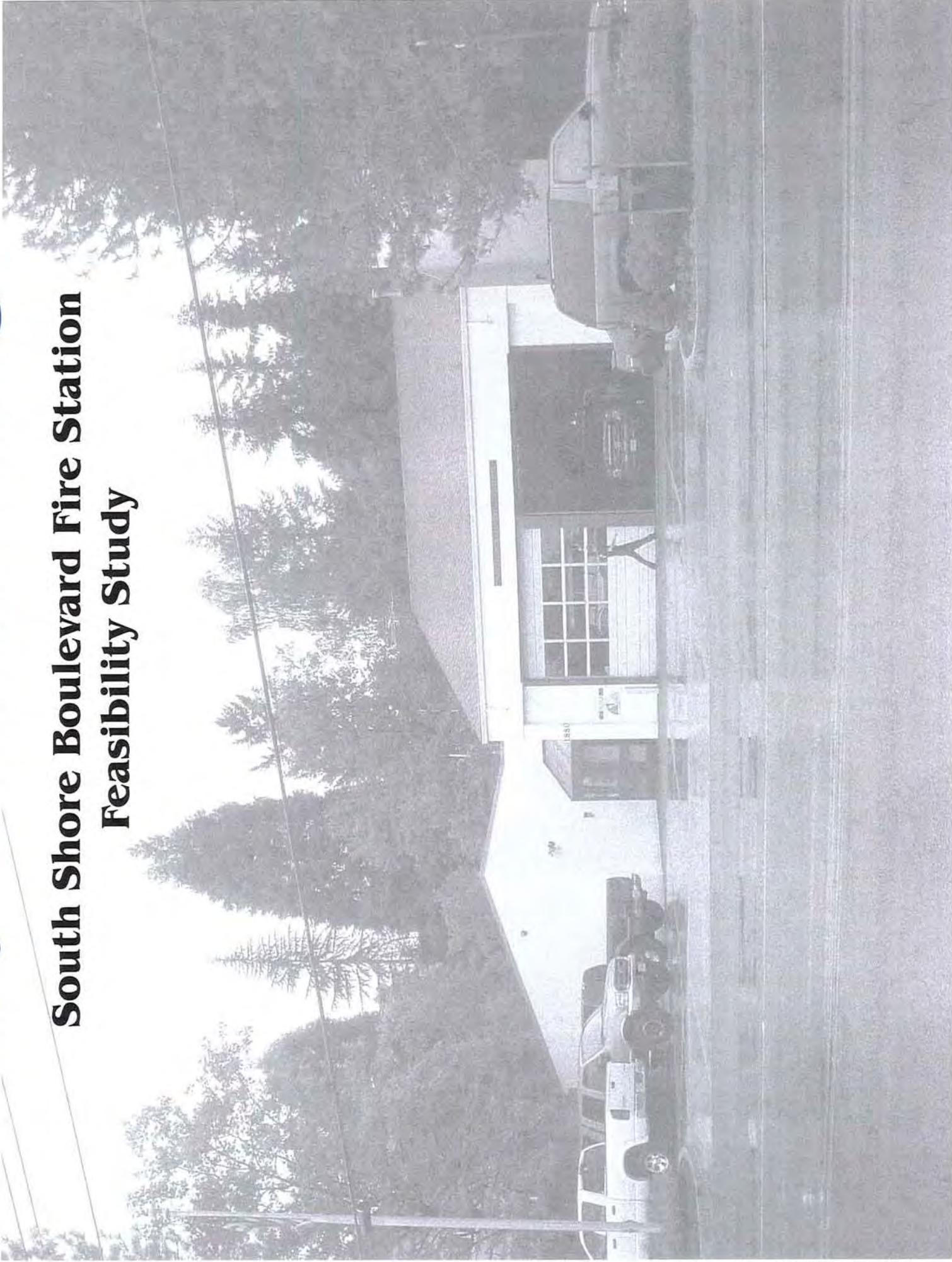
PARKING

Currently there are 6 on-site parking spaces available at Station 212. Per the existing feasibility study, zoning code indicates the following parking ratios for Industrial Uses under storage, warehouse, truck and auto storage uses: 1 space per 1500 SF or .75 spaces per employee on the max shift, whichever is greater. The study assumed 10 parking spaces, based on the fire department's recommendations.

Additional parking may be required to meet the community room's assembly occupancy type.

City of Lake Oswego

South Shore Boulevard Fire Station Feasibility Study



Prepared by Group Mackenzie
September 2007



SEPTEMBER 13, 2007

LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

2070354.00

GROUP
MACKENZIE

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INTRODUCTION

This study represents the results of Group Mackenzie's investigations for a new fire station at the existing South Shore Boulevard Fire Station site in Lake Oswego, Oregon. The investigations were a brief study to evaluate the existing lot and adjacent lot to the east to aid the City of Lake Oswego in a decision to purchase the adjacent lot or develop on the existing lot only.

As part of our study we met with Battalion Chief Dave Morris and Project Manager Brant Williams to review the needs of Lake Oswego Fire Department (LOFD) and develop a space needs program describing the room or area and approximate size required for the space. The result of that meeting was the program included in this report (page 2, 3 and 4).

As part of our site investigations, we researched the zoning code and have outlined the regulations associated with the adjacent site (see page 6). The site is zoned PF: Public Function, and is adjacent to residential zones on four sides (see Zoning Map on page 5).

Having this background information, we developed three site schemes and two floor plan schemes of how the site and building might be developed. Each of the schemes have advantages and disadvantages identified and a preliminary construction cost estimate was prepared for each of the three schemes (pages 14 and 15).

SITE DEVELOPMENT LIMITATIONS AND DESIGN NOTES

1. Setbacks: The following setbacks are required for the construction of any structure in this zone:
 - a. The setback of any respective yard (front, side, street side, or rear) shall be equal to the minimum required yard for the property abutting the respective yard's lot line.

(Front-North)abutting property: zoned R-10: 25 feet
(Side-West)abutting property: zoned R-10: Portions of structures less than 18 feet: 10 feet/Portions of structures greater than 18 feet: 15 feet
(Side-East)abutting property: zoned R-7.5: Portions of structures less than 18 feet: 5 feet/Portions of structures greater than 18 feet: 10 feet
(Rear-South)abutting property: zoned R-7.5: 30 feet

While it might be possible to appeal the setbacks to obtain greater flexibility on the site, all of the schemes depict the setbacks and comply with setback requirements.

2. Height of structure: The maximum height of any portion of a structure shall be the greater of:
 - a. 35 feet, or
 - b. A height as determined by the ratio of one foot in height for every 3.5 feet of distance from the portion of the structure to the lot line of the nearest residentially zoned property, to a maximum height of 75 feet.

Our structure would be either one or two-story with a height of approximately 34'-0" with a two-story pitched roof scheme and would be below the maximum 35 feet height limit.

3. Lot coverage: The maximum lot coverage shall not exceed 50%, except if the lot adjoins residentially zoned properties on two or more sides, in which event the lot coverage shall not exceed 35%. The subject site abuts residentially zoned property on all sides.

The lot coverage maximum dictates the building footprint. While it might be possible to appeal this requirement, all the schemes are below the maximum lot coverage requirements.

4. All development in any Public Function zone will be developed under a unified site plan. The site plan will identify circulation patterns and access points, method of provision of public services and general placement of lots and structures, general area and type of uses.

Parking Requirements:

Public or fire uses are not specifically given a specific parking requirement in the city code. City staff has indicated, for such uses they use the most similar use to the proposed use. City staff provided the following ratio for Industrial Uses under storage, warehouse, truck and auto storage uses. City staff stated that the 'similar use' used for the fire stations may change. It may change due to city staff determining a more similar use or ratio to use (but that based on an Industrial use the regulations are as follows):

1 space per 1500 SF or .75 spaces per employee on the max. shift, whichever is greater.

Stall Size: Standard: 8.5x18.5' 26 foot aisle Compact: 8.0x16.0' 20 foot aisle

The maximum number of parking spaces shall not exceed 125% of the minimum number of required spaces. Up to 50% of the total parking requirement may be provided in compact car spaces. Sites which require a total of 50 or more parking spaces shall designate at least 5% of the number of parking spaces as employee carpool or vanpool parking. Parking reductions are allowed but were not pursued for this study.

For our studies, LOFD staff requested that design for 10 parking stalls (5 for the shift coming on duty and 5 for the shift leaving duty).

Landscape Requirements:

Minimum of 20%.

All of the schemes exceed the minimum landscape requirements.

INTRODUCTION





Department: APPARATUS BAY AND RELATED ROOMS

Space / Rm Use	Number of Rooms	Optimal Size Req'ts		Space Requirement in Square Feet	Comments	Min Size Req'ts		Square Feet Req'd
		Room Size W	Room Size L			Room Size W	Room Size L	
Apparatus Bay	3	16	75	3600	Ladder Truck (43') and Engine (32') Boat and Brush Rig Coupled 40' slab in front 3' min for Boat Equipment Rack	16	60	2880
Apparatus Bay side circulation/stor	1	6	75	450		6	60	360
Turn Out	1	9	20	180	15 Lockers; 2.5' per locker	9	20	180
EMS / Decontamination	1	12	15	180	Could be downsized; Sink	12	15	180
Shop	1	10	15	150		10	15	150
Storage	1	10	15	150		10	15	150
Hose Storage	1	8	8	64	Can be outside or storage area out of UV light 3x8	3	8	24
SUBTOTAL				4710				3900
GENERAL CIRCULATION (15%)				707				585
TOTAL SQUARE FOOTAGE				5417				4485

Department: LIVING QUARTERS

Space / Rm Use	Number of Rooms	Room Size		Space Requirement in Square Feet	Comments	Min Size Req'ts		Square Feet Req'd
		W	L			Room Size W	L	
Sleeping Rooms	4	12	14	672	4 Lockers; 3 Min Size: 2'x2.5'	10	14	560
Men's Shower Room	1	11	18	198	2 Shower Heads; 1 wc; 1 urinal	11	18	198
Women's Shower Room	1	11	14	154	Shower/Toilet	11	14	154
Kitchen	1	20	25	500	3 refrigerators; 3 pantry lockers - 4 preferred	15	15	225
Dining	1	10	20	200	Adjacent to Day Room - Open	10	20	200
Dayroom	1	20	20	400	5 recliners; 2 desks (one with computer)	20	20	400
Lt. Office	1	10	15	150	File, Desk, 2 visitor chairs	10	15	150
Battalion Chief Office	1	10	15	150		10	15	150
Battalion Chief Dorm	1	12	14	168	Linked to BC Office; Accessible to Visitors; Away from Day Room	12	14	168
Exercise / Workout	1	18	26	468	Treadmill, Elliptical, Stationary Bike, Wt Rack 4'	18	26	468
Laundry	1	6	8	48	Cage Center 8x8 area, Misc Rack, TV 96" h	6	8	48
Storage	1	8	10	80		8	10	80
Telephone / Data	1	11	12	132		11	12	132
Electrical Rm	1	9	10	90		9	10	90
Water Heater / Mechanical	1	10	10	100		10	10	100

SUBTOTAL

3510

GENERAL CIRCULATION (15%)

527

TOTAL SQUARE FOOTAGE

4037

3123

468

3591

Department: COMMUNITY USE ROOMS - Could be deleted

Space / Rm Use	Number of Rooms	Room Size		Space Requirement in Square Feet	Comments	Min Size Req'ts		Square Feet Req'd
		W	L			Room Size W	L	
Uni-sex Toilet Room	2	7	8	112	Min Code Required	0	0	0
Lobby	1	8	18	144		8	18	144
Vestibule	1	6	6	36	Safe Area, Brochures BC near door	6	6	36
Storage	1	8	8	64	For Chairs, CPR	0	0	0
Mtg Area / Community Rm	1	18	30	540		0	0	0

SUBTOTAL

896

GENERAL CIRCULATION (15%)

134.4

TOTAL SQUARE FOOTAGE

1030.4

180

27

207

LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

2070364 00

SEPTEMBER 13, 2007





LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

Fire Station - Summary Requirements

Space / Rm Use	Space Requirement in Square Feet	Comments	Space Requirement in Square Feet
Apparatus Bay	4710		3900
Living Quarters	3510		3123
Community	896		180
SUBTOTAL	9116		7203
GENERAL CIRCULATION (15%)	1367		1080
TOTAL SQUARE FOOTAGE	10483		8283

Site Requirements:

Requirement	Comments
Generator	Refrigeration, Lights, Communications, Min Outlets
Parking	Min 10
Trash Enclosure / Lawn Equipment	10x15 includes recycling
Condensers	In front, but not visible



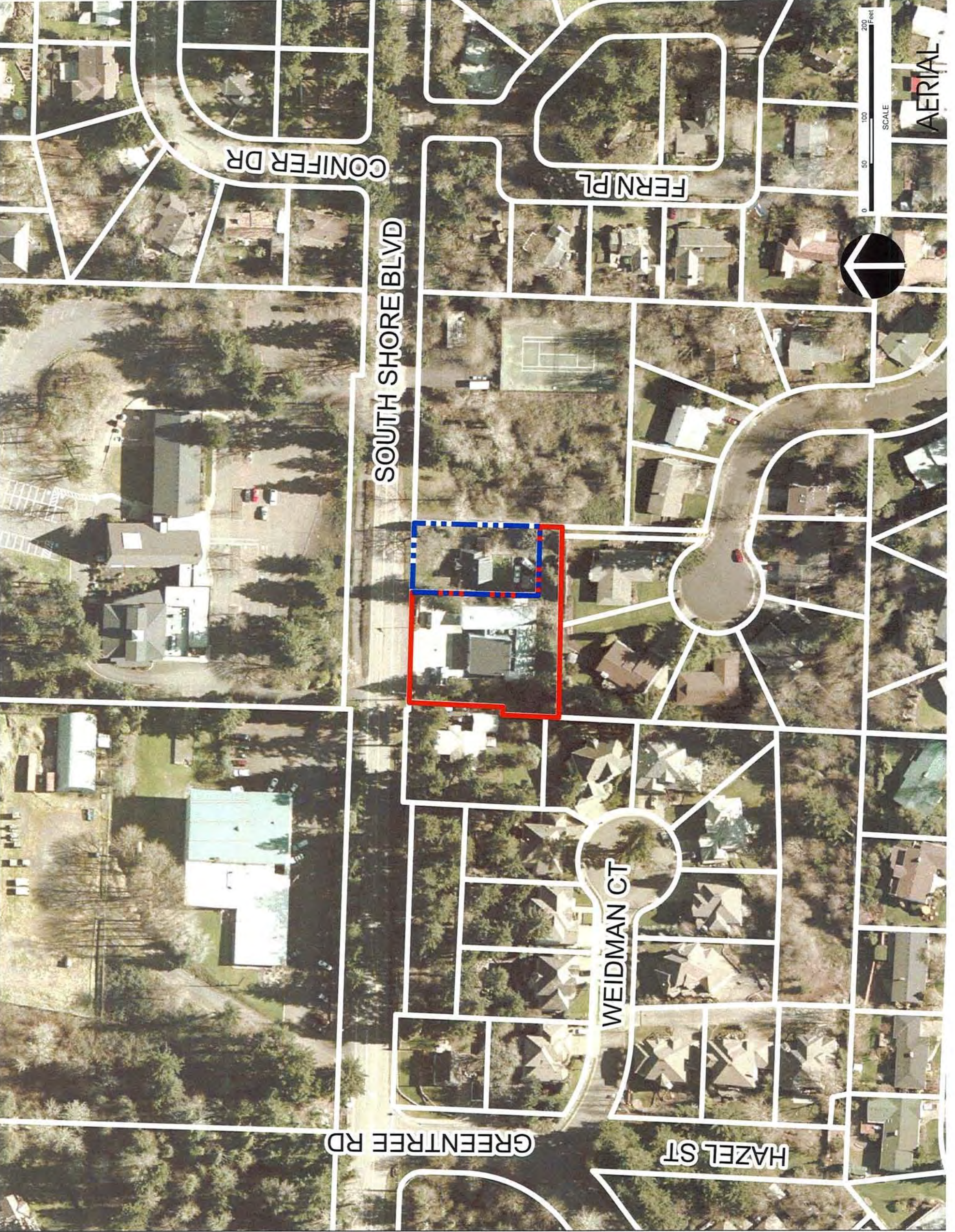
SEPTEMBER 13, 2007

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LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

MACKENZIE GROUP

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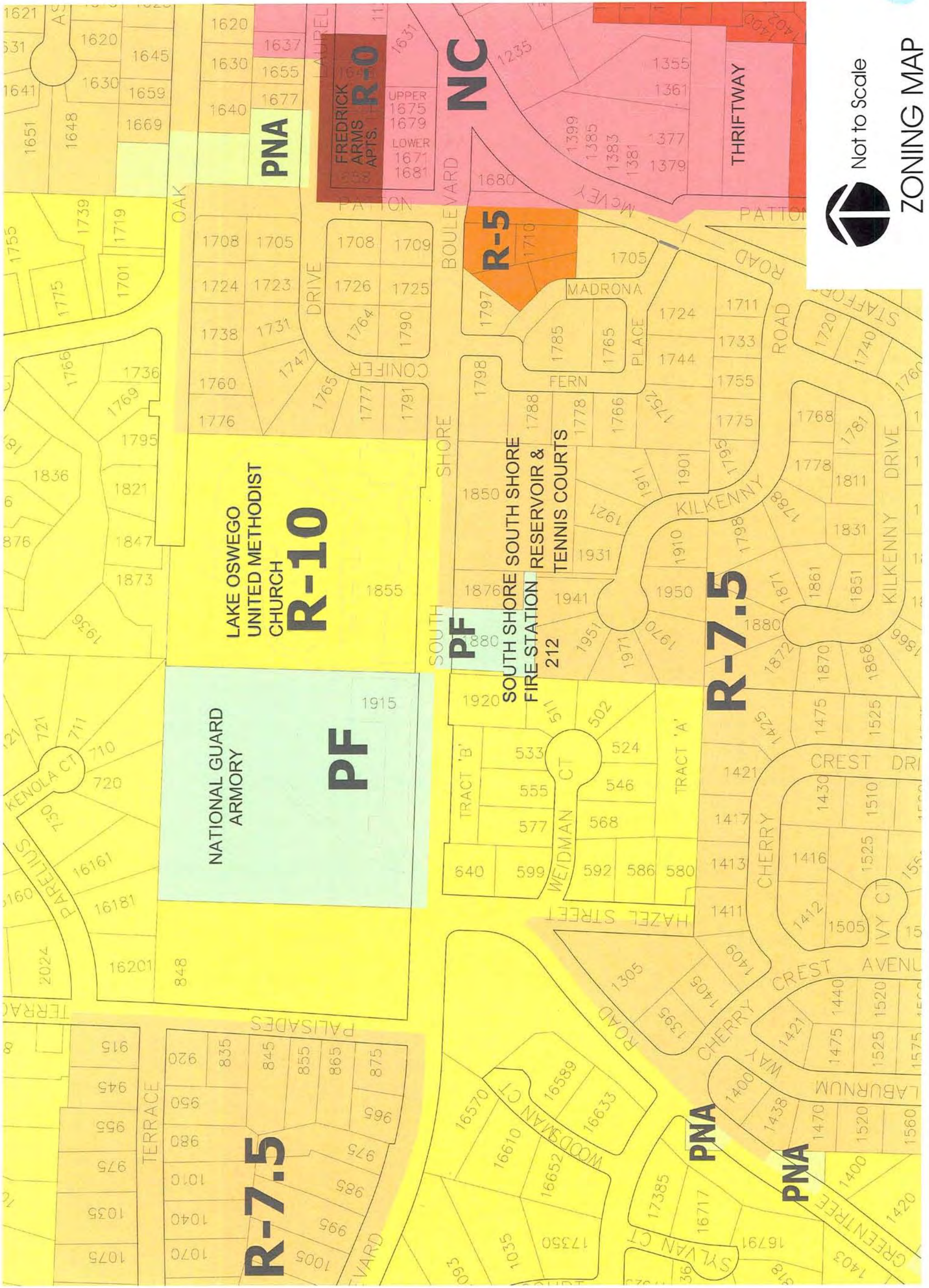
SEPTEMBER 13, 2007

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MACKENZIE GROUP

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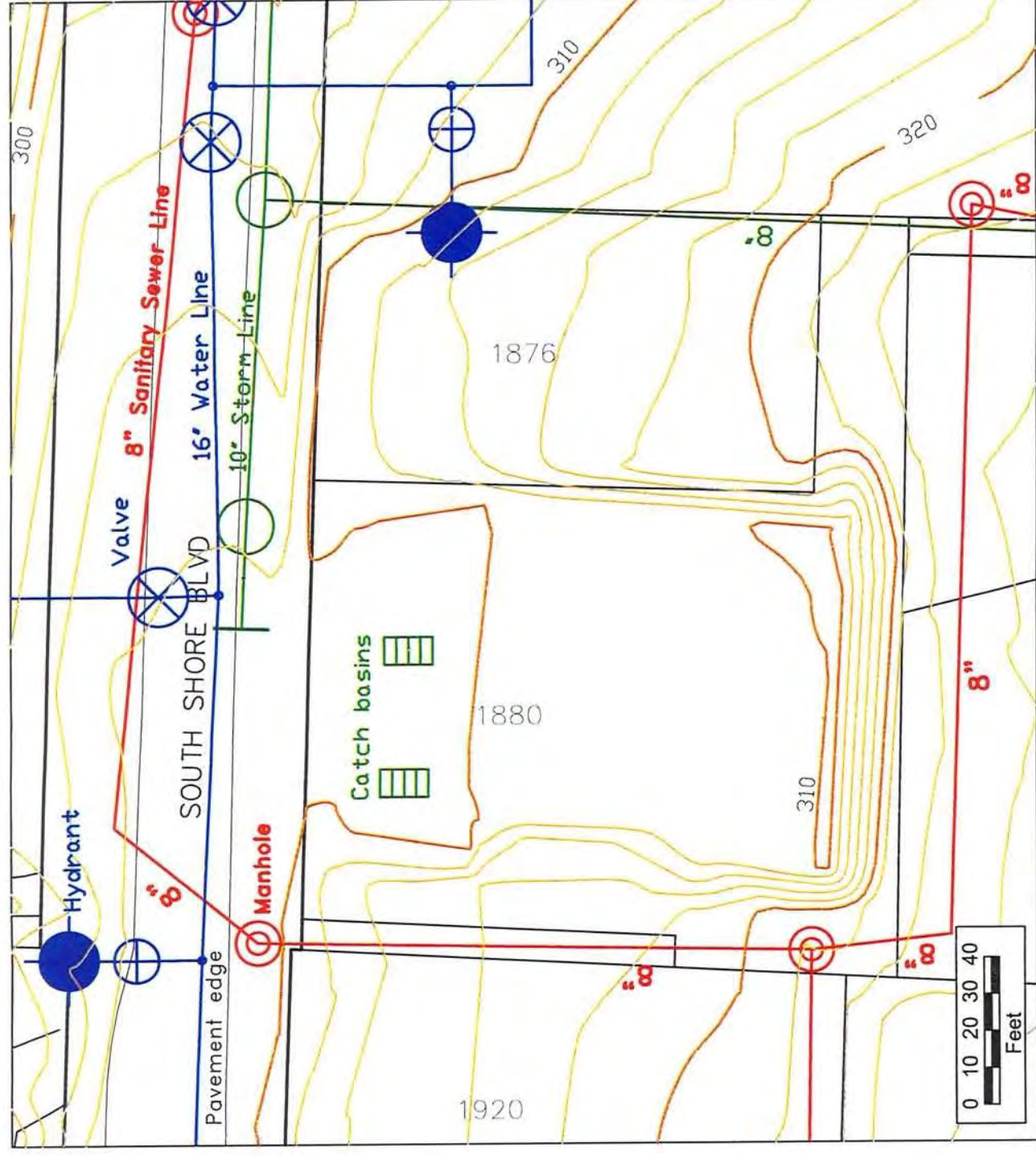
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ZONING MAP



LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

ENGINEER
MACKENZIE

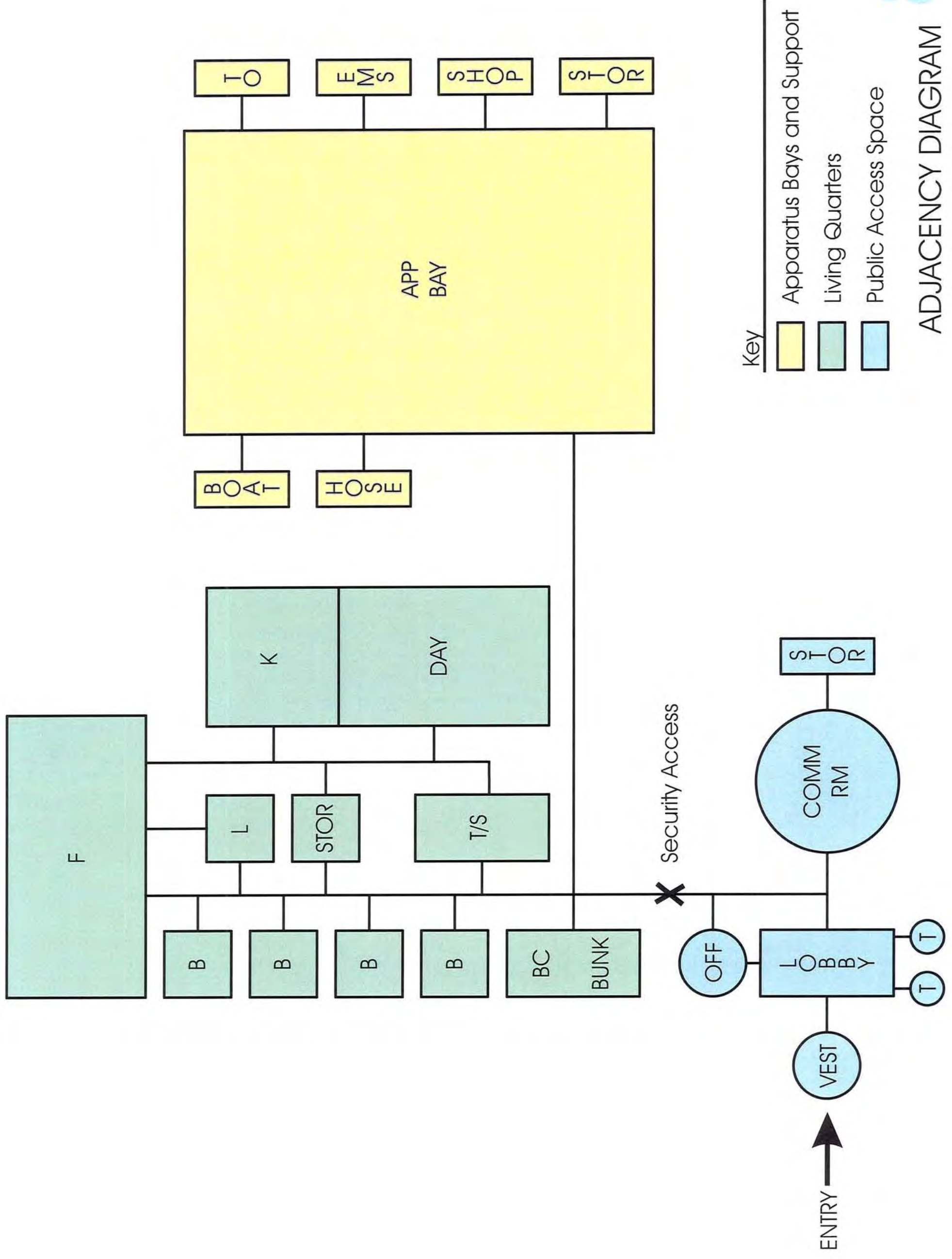


- Available service connection from South Shore Blvd for storm, water and sanitary
- Certain schemes will require retaining walls due to existing grades
- Existing manhole on site – condition to work around to avoid cost of re-configuring

Not to Scale



UTILITIES MAP



Key

- Apparatus Bays and Support
- Living Quarters
- Public Access Space

ADJACENCY DIAGRAM



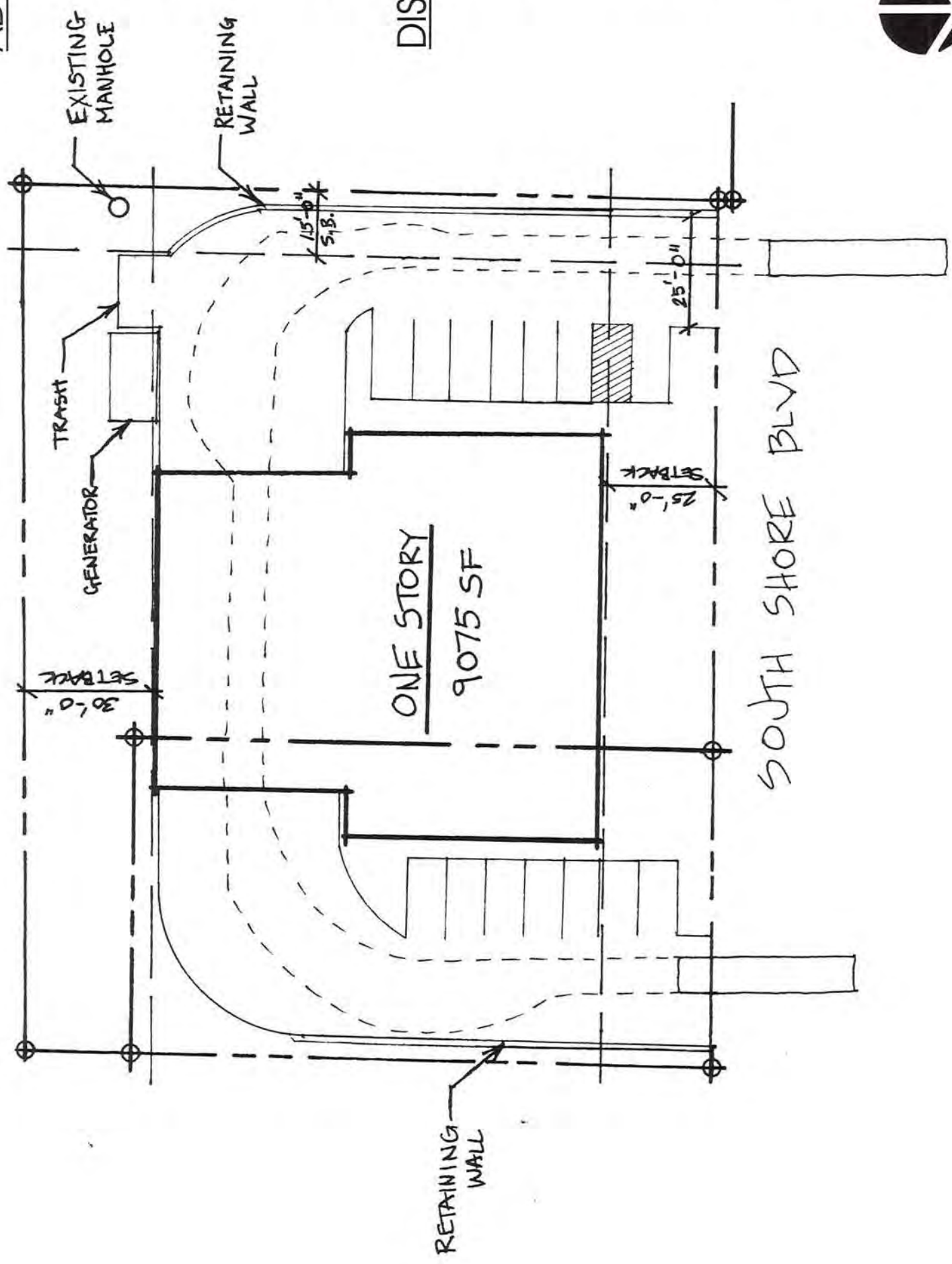
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ADVANTAGES

- Has (14) parking stalls
- Drive-through bays
- 75'-0" deep apparatus bays
- Achieves targeted program requirements
- Good landscape frontage to South Shore Blvd
- One story provides faster reflex time

DISADVANTAGES

- Purchase of adjacent lot
- Excavation of existing lot
- Retaining walls at east and west sides of lot
- Variance for parking setback requirement needed
- Comprehensive plan amendment needed
- Zoning map amendment needed



SITE SCHEME A



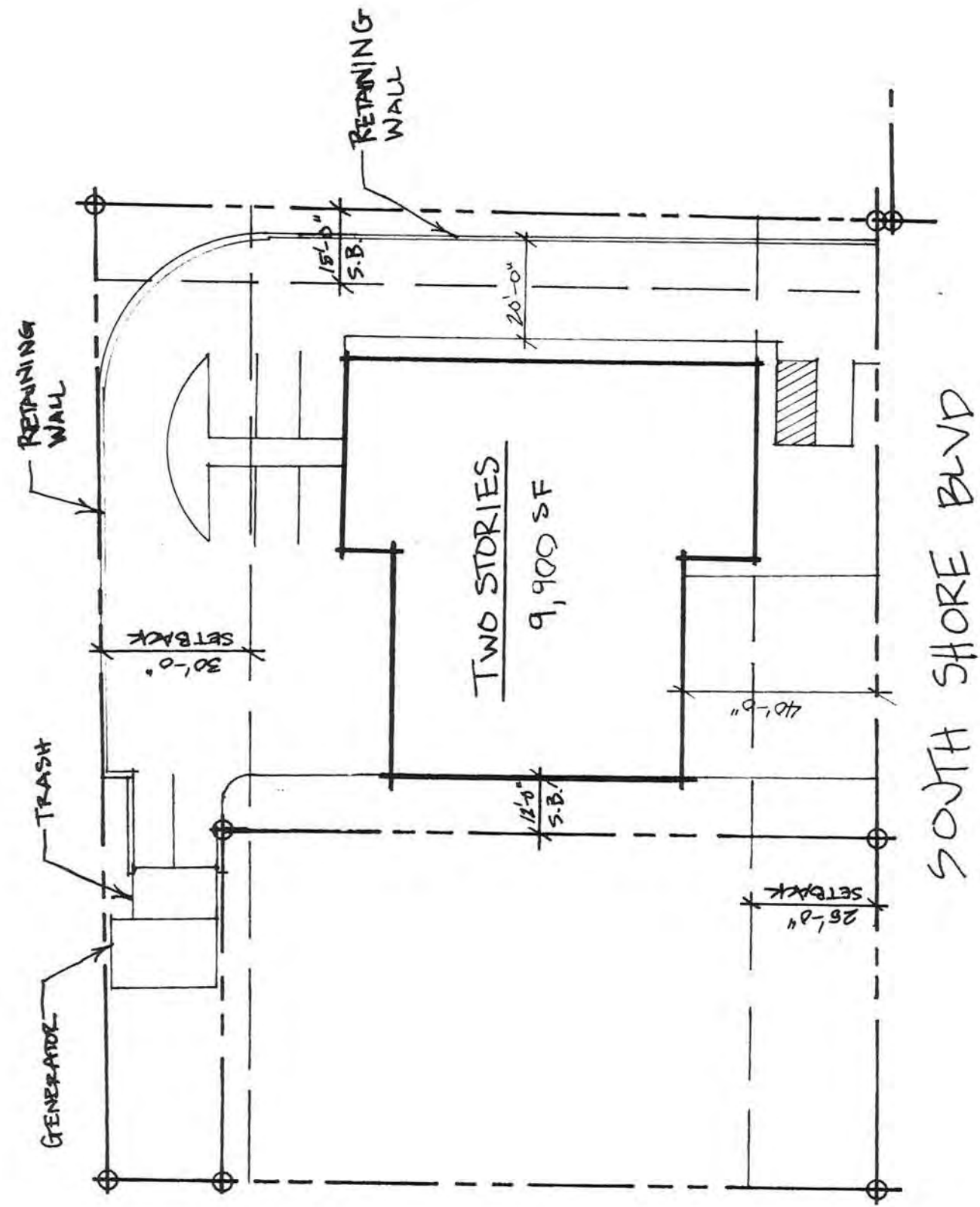
LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

ADVANTAGES

- Utilizes existing site only
- Has (9) parking stalls
- Drive through bays for engines
- Emergency generator and trash enclosure behind building

DISADVANTAGES

- Two story
- 60'-0" deep apparatus bays
- Retaining walls at south and west sides of lot
- Ladder fire truck most likely must back into bay
- Variance - parking setback requirement

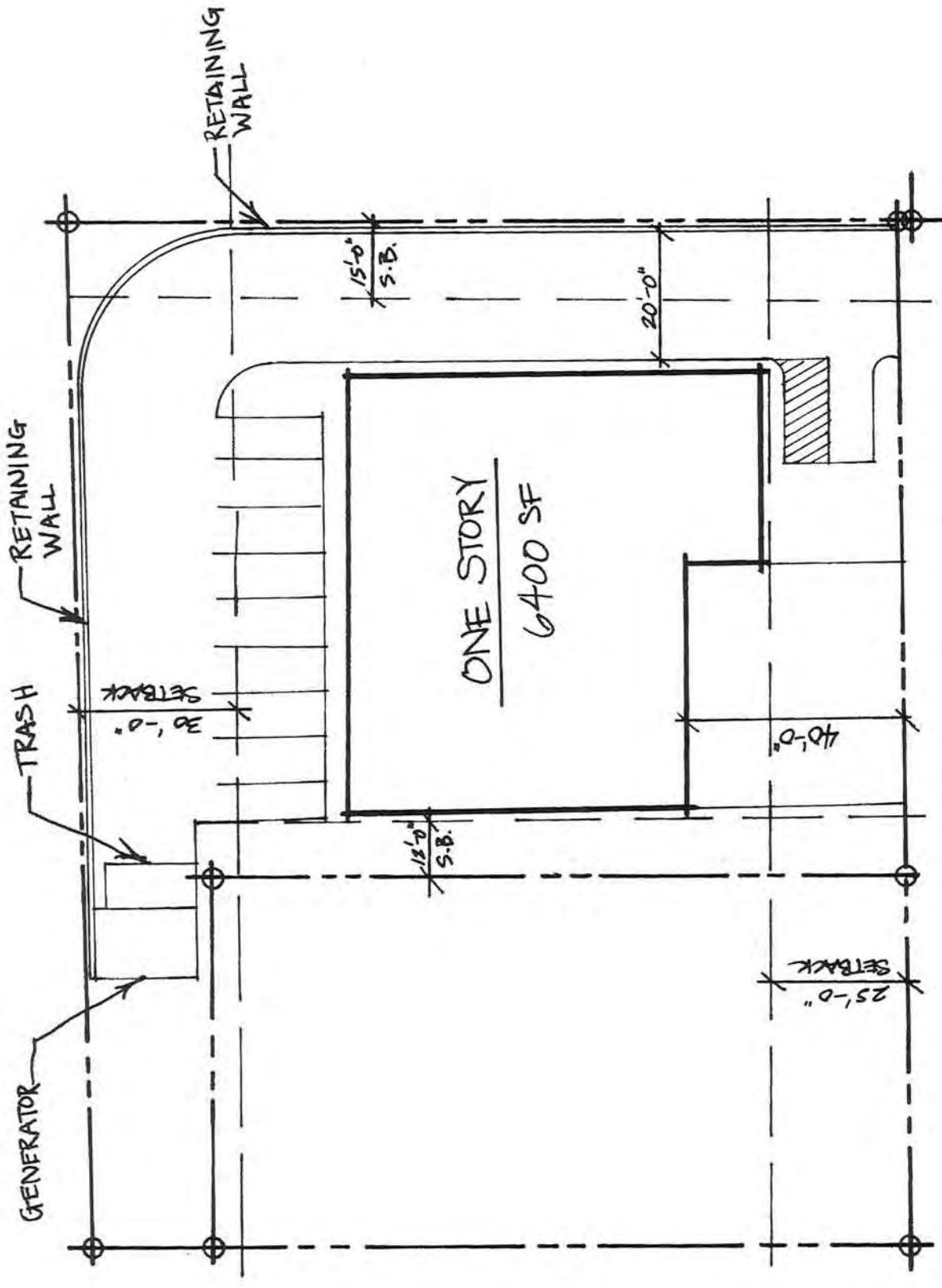


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SITE SCHEME B



LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY



SOUTH SHORE BLVD

ADVANTAGES

- Utilizes existing site only
- Has (10) parking stalls
- Emergency generator and trash enclosure behind building

DISADVANTAGES

- Fire apparatus must back into bays
- Minimal square feet of station
- Retaining walls required at south and west sides of lot
- Variance parking setback requirement



SITE SCHEME C

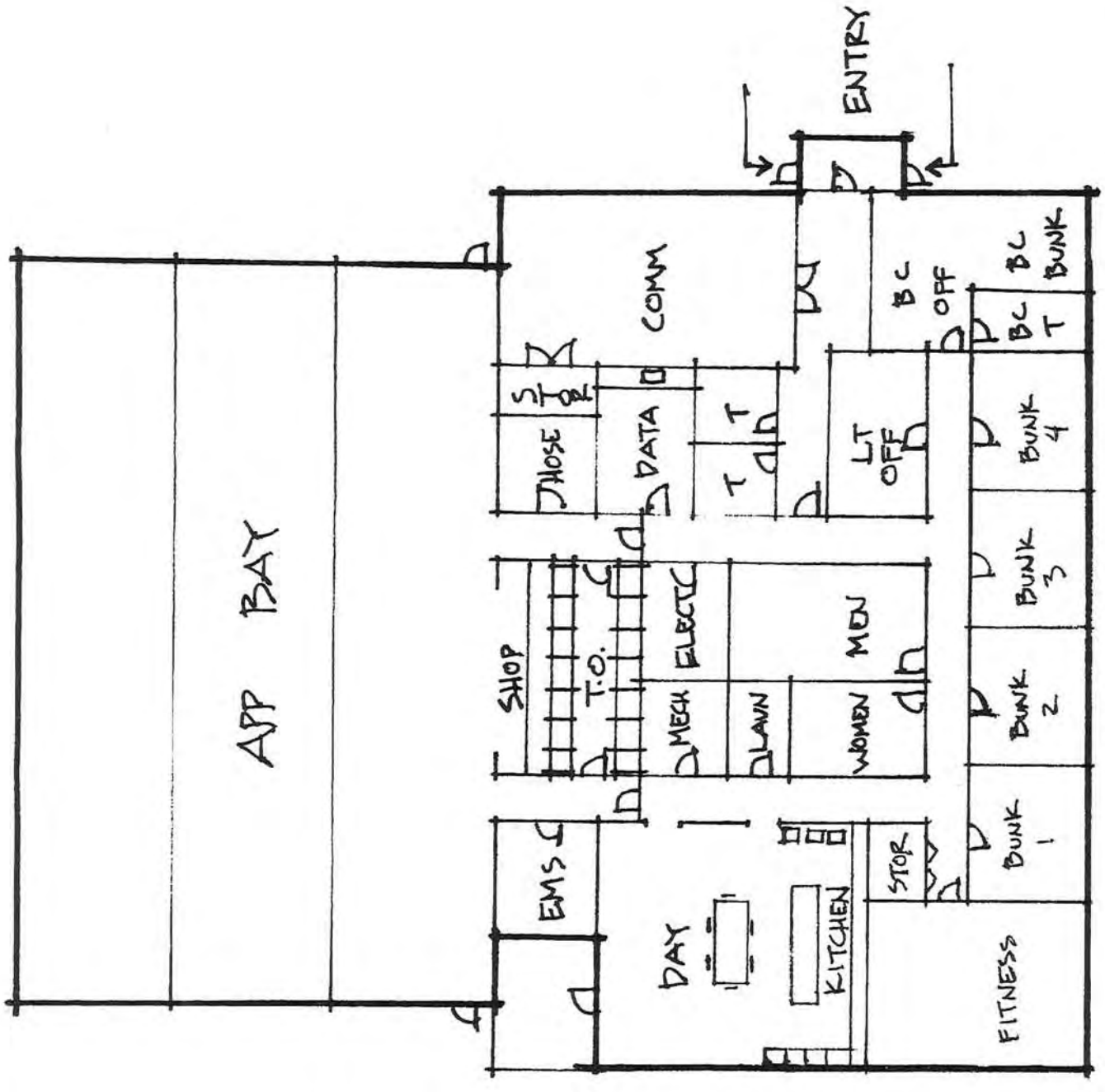


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LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

ARCHITECT
MACKENZIE



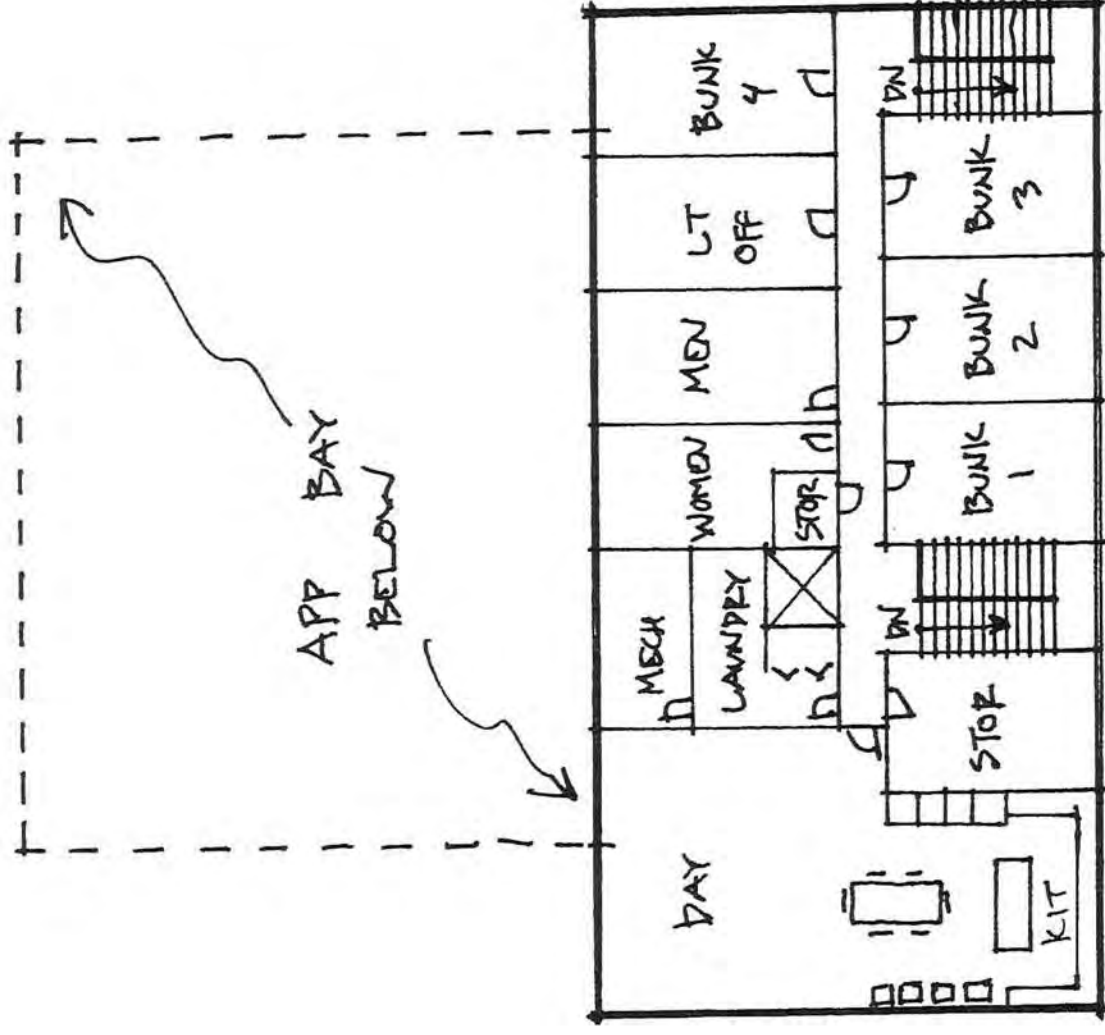
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FEET

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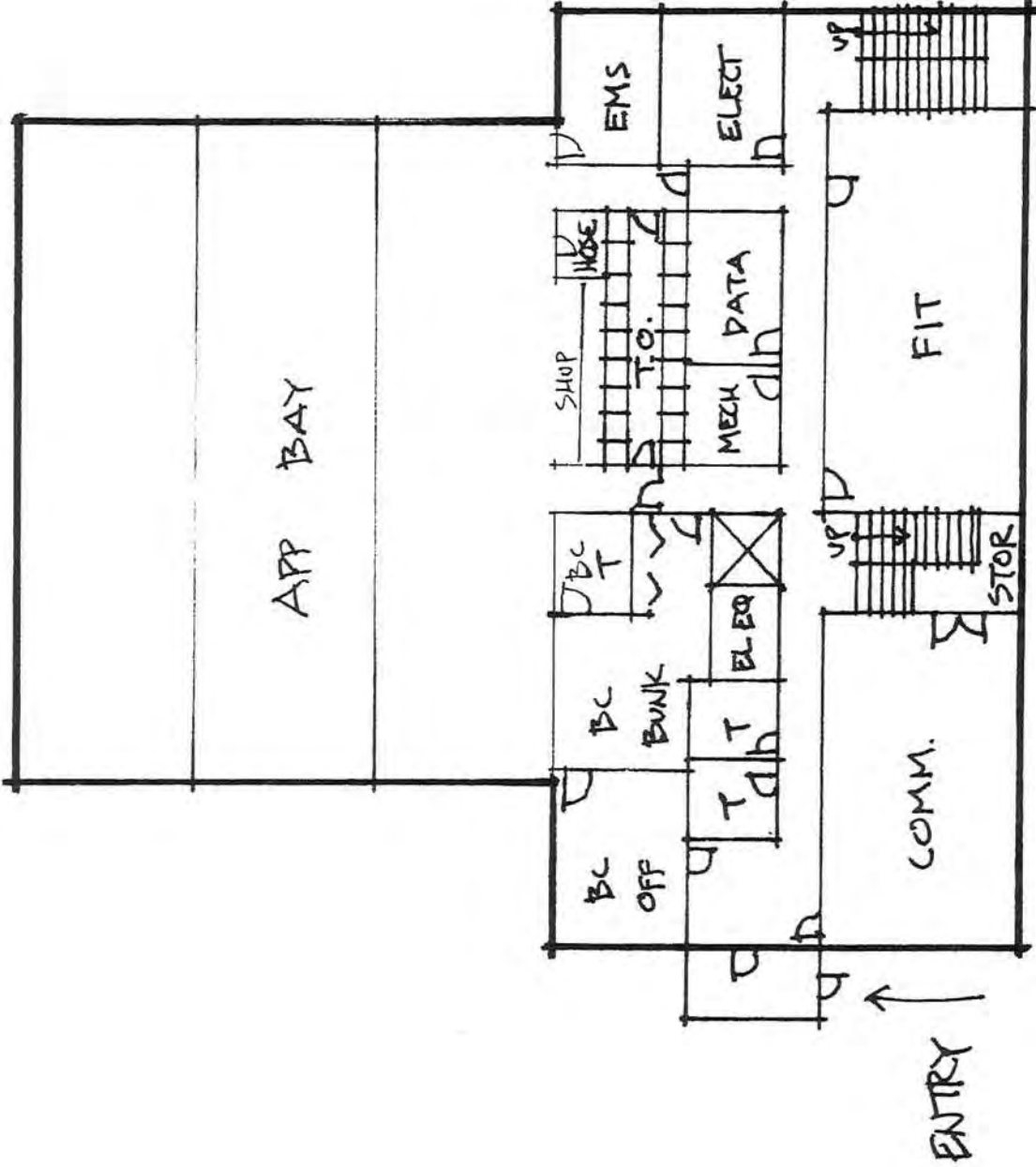
ONE STORY FLOOR PLAN



LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY



Second Floor



First Floor



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TWO STORY FLOOR PLAN



LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

Summary of All Options Lake Oswego South Shore Fire Station

	Scheme A One Story - Two Sites	Scheme B Two Stories - Existing Site	Scheme C One Story - Existing Site
Site Area (Acres)	0.73	0.48	0.48
Floor Area (SF)	9,000	9,900	6,400
Construction Cost	\$2,329,615	\$2,327,768	\$1,687,343
1.5% for Art	\$34,944	\$34,917	\$25,310
Acquired Land Cost	\$350,000	\$0	\$0
Total Construction Cost	\$2,714,560	\$2,362,685	\$1,712,653
Cost/SF	\$301.62	\$238.66	\$267.60
10% Design Fee Estimate	\$232,962	\$232,777	\$168,734
Total Construction/Design Cost	\$2,947,521	\$2,595,462	\$1,881,388

Additional Costs

- Asbestos abatement
- Data system design
- Traffic analysis
- Tree arborist
- Topo and boundary survey
- Geotechnical analysis
- FF&E
- Temporary relocation/moving
- Signage
- Telephone
- Bond issuance
- Legal
- Insurance
- Permit fees
- Owner contingency

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LAKE OSWEGO SOUTH SHORE BLVD FIRE STATION FEASIBILITY STUDY

MACKENZIE

ESTIMATE PREPARED BY: GROUP MACKENZIE
FOR: City Of Lake Oswego
DATE: 18-Sep-2007

ESTIMATE PREPARED BY: GROUP MACKENZIE
FOR: City Of Lake Oswego
DATE: 19-Sep-2007

ESTIMATE PREPARED BY: GROUP MACKENZIE
FOR: City Of Lake Oswego
DATE: 19-Sep-2007

ESTIMATE PREPARED BY: GROUP MACKENZIE
FOR: City Of Lake Oswego
DATE: 18-Sep-2007

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SYSTEM DESCRIPTION	ONE STORY SCHEME - Scheme A		COST
	MEASURE	UNIT	
OFF-SITE IMPROVEMENTS Curbs and Sidewalks Driveway	200 LF		\$85.00
ON-SITE IMPROVEMENTS	2		\$10,000.00
Retaining Wall - 10ft high Water Quality Vault	23,000 GSF 250 LF		\$5.00 \$200.00
DEMOLITION	1 EA		\$45,000.00
SUB STRUCTURE	2,904 CY 5,000 GSF 1 LS		\$75.00 \$10.00
FOUNDATIONS	9,000 FPA 9,000 FPA 0 XWA		\$8.00 \$5.00 \$55.00
SUPERSTRUCTURE	9,800 RA 700 CA		\$15.00 \$15.00
EXTERIOR WALLS	7,266 XWA 1,459 XDWA 4 EA		\$32.00 \$45.00 \$16,000.00
EXTERIOR DOORS/WINDOWS	9,900 RA 16,256 PSF		\$9.00 \$5.00
ROOFING	8,100 CFA		\$3.00
FLOOR FINISHES	1 LS		\$20,000.00
CEILING FINISHES	1 LS		\$8,000.00
SPECIALTIES Blinds, Casework, Cabinets Lobby Finishes			\$8.00
MECHANICAL	9,000 GSF 9,000 GSF 9,000 GSF		\$8.00 \$12.00 \$3.00
ELECTRICAL	9,000 GSF 9,000 GSF 9,000 GSF 1 EA		\$8.00 \$3.00 \$40,000.00
Service/Distribution Lighting/Power Special Electrical Systems			\$5.00 \$3.00 \$1.00
GENERAL CONDITIONS	8 MOS		\$35,000.00
CONTRACTOR FEE/BOND	%		\$16,000.00
TOTAL CONSTRUCTION COST			\$2,055,147.72
COST / SQ. FT.			\$228.46

ADDED FACTORS	MEASURE	UNIT	COST
ESCALATION FACTOR	%		3.00%
DESIGN & ESTG CONTINGENCY	%		10.00%
TOTAL CONSTRUCTION COSTS (COST/ISF)			\$258.85
TOTAL CONSTRUCTION COST			\$2,329,615.37

SYSTEM DESCRIPTION	TWO STORY SCHEME - Scheme B		COST
	MEASURE	UNIT	
OFF-SITE IMPROVEMENTS Curbs and Sidewalks Driveway	125 LF		\$85.00
ON-SITE IMPROVEMENTS	2		\$10,000.00
Retaining Wall - 10ft high Water Quality Vault	14,300 GSF 240 LF		\$5.00 \$200.00
DEMOLITION	1 EA		\$45,000.00
SUB STRUCTURE	807 CY 5,000 GSF		\$75.00 \$10.00
FOUNDATIONS	6,500 FPA 6,500 FPA 800 XWA		\$10.00 \$5.00 \$55.00
SUPERSTRUCTURE	3,400 UFA 7,150 RA 4 FLT 2 STP 700 CA		\$55.00 \$15.00 \$10,000.00 \$20,000.00 \$15.00
EXTERIOR WALLS	6,352 XWA 1,270 XDWA 4 EA		\$32.00 \$45.00 \$10.00
EXTERIOR DOORS/WINDOWS	7,150 RA 16,252 PSF		\$9.00 \$6.00
ROOFING	8,910 CFA		\$3.00
FLOOR FINISHES	1 LS		\$20,000.00
CEILING FINISHES	1 LS		\$8,000.00
SPECIALTIES Blinds, Casework, Cabinets Lobby Finishes			\$8.00
MECHANICAL	9,900 GSF 9,900 GSF 9,900 GSF		\$8.00 \$12.00 \$3.00
ELECTRICAL	9,900 GSF 9,900 GSF 9,900 GSF 1 EA		\$8.00 \$3.00 \$40,000.00
Service/Distribution Lighting/Power Special Electrical Systems			\$5.00 \$3.00 \$1.00
GENERAL CONDITIONS	8 MOS		\$35,000.00
CONTRACTOR FEE/BOND	%		\$16,000.00
TOTAL CONSTRUCTION COST			\$2,054,517.44
COST / SQ. FT.			\$207.53

ADDED FACTORS	MEASURE	UNIT	COST
ESCALATION FACTOR	%		3.00%
DESIGN & ESTG CONTINGENCY	%		10.00%
TOTAL CONSTRUCTION COSTS (COST/ISF)			\$235.13
TOTAL CONSTRUCTION COST			\$2,327,768.26

SYSTEM DESCRIPTION	ONE STORY SCHEME - Scheme C		COST
	MEASURE	UNIT	
OFF-SITE IMPROVEMENTS Curbs and Sidewalks Driveway	130 LF		\$85.00
ON-SITE IMPROVEMENTS	2		\$10,000.00
Retaining Wall - 10ft high Water Quality Vault	14,400 GSF 270 LF		\$5.00 \$200.00
DEMOLITION	1 EA		\$45,000.00
SUB STRUCTURE	484 CY 5,000 GSF		\$75.00 \$10.00
FOUNDATIONS	6,400 FPA 6,400 FPA 700 XWA		\$8.00 \$5.00 \$55.00
SUPERSTRUCTURE	7,040 RA 350 CA		\$15.00 \$15.00
EXTERIOR WALLS	5,636 XWA 1,127 XDWA 2 EA		\$32.00 \$45.00 \$16,000.00
EXTERIOR DOORS/WINDOWS	7,040 RA 12,036 PSF		\$9.00 \$6.00
ROOFING	5,760 CFA		\$3.00
FLOOR FINISHES	1 LS		\$20,000.00
CEILING FINISHES	1 LS		\$8,000.00
SPECIALTIES Blinds, Casework, Cabinets Lobby Finishes			\$8.00
MECHANICAL	6,400 GSF 6,400 GSF 6,400 GSF		\$8.00 \$12.00 \$3.00
ELECTRICAL	6,400 GSF 6,400 GSF 6,400 GSF 1 EA		\$8.00 \$3.00 \$40,000.00
Service/Distribution Lighting/Power Special Electrical Systems			\$5.00 \$3.00 \$1.00
GENERAL CONDITIONS	8 MOS		\$35,000.00
CONTRACTOR FEE/BOND	%		\$16,000.00
TOTAL CONSTRUCTION COST			\$1,489,270.32
COST / SQ. FT.			\$232.70

ADDED FACTORS	MEASURE	UNIT	COST
ESCALATION FACTOR	%		3.00%
DESIGN & ESTG CONTINGENCY	%		10.00%
TOTAL CONSTRUCTION COSTS (COST/ISF)			\$263.65
TOTAL CONSTRUCTION COST			\$1,687,343.27

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COST ESTIMATES