



## INFORMATIONAL MEMORANDUM

TO: **Transportation and Infrastructure Services Committee**  
FROM: **Brandon Miles, Business Relations Manager**  
CC: **Mayor Allan Ekberg**  
DATE: **January 13, 2023**  
SUBJECT: **Public Works Campus, Phase 2**  
**Project No. 92230601**  
**Cost Estimate for Adapting the Existing Building vs. New Construction**

### **ISSUE**

Update on the City of Tukwila Public Works Campus Phase 2. This update will focus on providing comparative cost estimates for adapting the existing building versus new construction.

### **BACKGROUND**

Miller Hayashi Architects has prepared a memo<sup>1</sup> discussing the comparative cost estimates<sup>2</sup> and issues with adapting and reusing the existing building, compared with construction of a new building. These costs are for comparative purposes and not intended to be cost estimates for construction. This analysis only focuses on the reuse or new construction of 26,000 square feet. With either option an additional 14,000 square feet of building space will need to be constructed. Additionally, the cost estimate does not include the site improvements and other site elements. These combined cost estimates will be presented to the City Council in February when staff presents its preferred design option.

Several of the program elements would not be able to fit or additional costs would be incurred to allow the elements to fit on site.

### **DISCUSSION**

The total estimated cost for reusing the existing building is \$30,715,978 versus a total estimated cost of \$31,819,133 for new construction of a 26,000 square foot building. In addition to the concerns raised by Miller in its memo to the City, the project team also has the following concerns with adaptive reuse of the building.

1. It's difficult to fit all the project elements on the site. In order to fit these elements on the property, structured parking and other elevated structure options would need to be considered. This would add an additional cost not required for the new construction. In lieu of the structured options, the City would need to acquire additional land or defer the disposition of the Longacres and/or Minkler Shop property. Delaying the future sell of these properties would result in an opportunity cost of between \$6-12 million. Additionally, one of the stated goals in the public safety plan was to consolidate public works operational activities on one property.
2. Adaptive reuse of the building does not meet one of our program objectives to future proof the site for future City needs. Creating a large open space provides maximum flexibility for the City in the future for modifications.
3. Reusing the existing building would require visitors of the building and city employees to walk from their cars through an active shop yard.

### **FINANCIAL IMPACT**

N/A

### **RECOMMENDATION**

Discussion only.

**ATTACHMENT:** Memo from Miller Hayashi, dated January 10, 2023.

<sup>1</sup> The project team consisting of SOJ, and John Palewicz reviewed and provided comments on the memo and the conclusions.

<sup>2</sup> These are not construction cost estimates but are cost estimates to compare two possible alternatives. The project team will present construction cost estimates for the preferred option in February.

## MEMORANDUM

Date: 1/10/2023

Regarding: Tukwila Public Works Maintenance & Engineering Building Test-to-fit  
Analysis of the Existing UPS Building

To: Brandon J. Miles, Business Relations Manager, City of Tukwila

From: Laura Maman, Principal, Miller Hayashi Architects

## INTRODUCTION

This memorandum provides information and analysis in regards to adapting the existing UPS Facility at 11231 East Marginal Way South in Tukwila as part of the development project for the Tukwila Public Works Maintenance & Engineering Building. This memorandum addresses the condition of the existing building, the feasibility of implementing the Public Works program in the existing building, and seeks to compare the conceptual cost of renovation to the cost of new construction.

## DESCRIPTION OF STRUCTURE

The following description and observations are based on a field visit conducted by a structural engineer on October 12, 2022. The one-story loading dock facility is framed with structural steel bents and cold formed steel purlins and girts with metal roofing and siding. The diaphragm consists of steel rods. The vertical lateral force resisting system in the north-south direction are the steel bents. There is no obvious vertical lateral force resisting system in the east-west direction. The loading bay structure is elevated approximately 4 feet above the first floor of a small two-story office area. Based on the age of the building it is expected that the building would be supported by conventional shallow reinforced concrete foundations. There is deterioration, distortion, or damage at structural elements throughout the loading bay area including many damaged purlins and girts.

The site supporting soils are liquefiable, and in the event of a significant earthquake the existing structures would see settlement that could cause collapse. Recommended foundation retrofits would include adding concrete grade beams and foundations along with piles to ~100 feet deep.

Deterioration of the existing structure at the loading bay would require repair/replacement of a significant portion of the existing structure including the roof and the exterior walls.

There are significant deficiencies in the lateral force resisting system. The existing lateral force resisting system would be expected to perform poorly in an earthquake based on new science and engineering standards which have developed since these structures were built. A full seismic upgrade would be required to comply with current building codes.

A change in use and occupancy would trigger a substantial alteration and the requirement for full compliance with all applicable current codes including energy code and accessibility regulations.

## PROGRAMMATIC CONSIDERATIONS

The existing building is approximately 26,000 square feet. This accommodates less than 65% of the approximately 40,000 square feet of space identified for the Public Works interior program elements.

The existing building does not readily accommodate ADA access. New ramps and an elevator or lift would be required to navigate between the various levels.

The one-story building is an inefficient use of limited site area. The position of the existing building on site poses challenges for site circulation and traffic flow.

#### COST COMPARISON EXERCISE

Refer to the attached cost comparison. This comparison is useful to understand the value of the existing building within the larger context of conceptual options for development of the site. The cost comparison looks at the building only, it does not include costs related to site improvements or site utilities. This is not a detailed cost estimate. It is a rough order of magnitude comparison intended primarily to provide an understanding of the value of the existing building.

#### CONCLUSIONS

1. Extensive modifications would be required to repair the existing structure. New foundations and a new lateral structural system would be required for earthquake safety to meet current building code.
2. Comprehensive replacement of the building envelope (exterior walls and roof) would be required to meet current energy code.
3. Replacement of the mechanical system would be required to meet the program needs and current mechanical code. Extensive modification to the electrical system and most likely replacement of the electrical service would be required to meet the programmatic needs and current codes.
4. Retaining the structure and adapting it to fit the Public Works program would present significant design challenges and would likely diminish the functionality and efficiency of the new facility.
5. Retaining the one-story building results in less open site area. The test-to-fit process identified that it is a challenge to fit the needed site program on the property along with a one-story building. Retaining the existing one-story building may require more expensive strategies to implement site program, would reduce future flexibility, and may necessitate retaining other city properties resulting in opportunity cost of property that would otherwise become surplus.
6. Renovation of an existing building inherently has a greater potential for the discovery of unforeseen existing conditions; therefore, a higher estimating contingency has been applied to the renovation scenario in the cost comparison exercise.

#### ATTACHMENTS

Cost Comparison  
Photos of the existing facility

Tukwila Public Works Maintenance and Engineering Building - Test-to-Fit Phase  
 COST COMPARISON  
 Draft 1/10/2023

<b>RENOVATION</b>	SF	\$/SF		Comments
Hazmat Abatement	26000	\$15	\$390,000	abatement of hazardous materials while protecting elements to remain
Selective Demolition	26000	\$15	\$390,000	selective removal of building elements while protecting elements to remain
Seismic Upgrades	26000	\$45	\$1,170,000	full seismic upgrade to lateral force resisting system to meet building code
Foundation Retrofit	26000	\$27	\$702,000	retrofit of foundations to address poor soil conditions (liquefiable soils on site)
Roof Replacement	26000	\$40	\$1,040,000	removal of existing roof assembly, replacement with energy code compliant insulation and new roofing
Cladding Replacement	26000	\$40	\$1,040,000	removal of exterior cladding, replacement with energy code compliant insulation and new cladding
HVAC, Plumb, FS	26000	\$65	\$1,690,000	new mechanical systems to meet energy code requirements (existing systems not sufficient for intended use)
Electrical, Telecom	26000	\$65	\$1,690,000	new electrical system to meet energy code requirements (existing system not sufficient for intended use)
Interior Tenant Improvements	26000	\$140	\$3,640,000	interior walls, floor finishes, ceiling finishes, doors, relites, casework, etc.
Vertical Conveyance	26000	\$10	\$260,000	allowance for new elevator
subtotal			<u>\$12,012,000</u>	
General Conditions		10%	\$1,201,200	
Estimating and Design Contingency		25%	<u>\$3,003,000</u>	contingency at concept phase to account for unknowns
			\$16,216,200	
General Contractor Overhead and Profit		8%	\$1,297,296	
Escalation to Spring 2025		14%	<u>\$2,451,889</u>	
			\$19,965,385	
Soft Costs, project related costs		35%	\$10,750,592	
			<b>\$30,715,978</b>	Project Cost, 26,000 SF renovation only, excludes site improvements

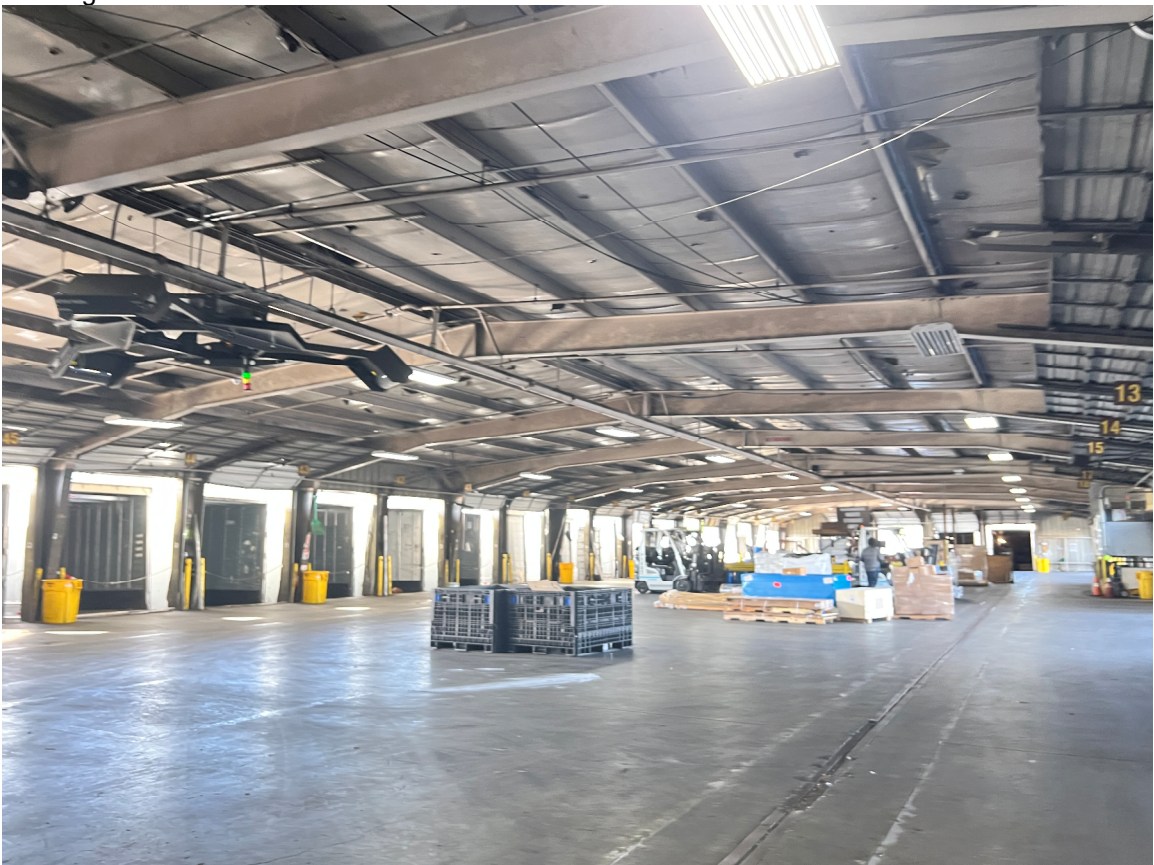
<b>NEW CONSTRUCTION</b>	SF	\$/SF		Comments
Hazmat Abatement	26000	\$12	\$312,000	abatement of hazardous materials for full bldg demo
Building Demolition	26000	\$10	\$260,000	
New Construction	26000	\$450	\$11,700,000	generalized cost per square foot for new construction
Deep Foundation System	26000	\$25	\$650,000	deep foundations to address liquefiable soils
subtotal			<u>\$12,922,000</u>	
General Conditions		10%	\$1,292,200	
Estimating and Design Contingency		20%	<u>\$2,584,400</u>	contingency at concept phase for new construction
			\$16,798,600	
General Contractor Overhead and Profit		8%	\$1,343,888	
Escalation to Spring 2025		14%	<u>\$2,539,948</u>	
			\$20,682,436	
Soft Costs, project related costs		35%	\$11,136,696	
			<b>\$31,819,133</b>	Project Cost, 26,000 SF new building only, excludes site improvements

Photos of 11231 East Marginal Way South

From King Count Parcel Viewer:



Loading dock area:



Photos of 11231 East Marginal Way South

Existing office area:



Exterior relationship to grade:

