

# EVANSTON

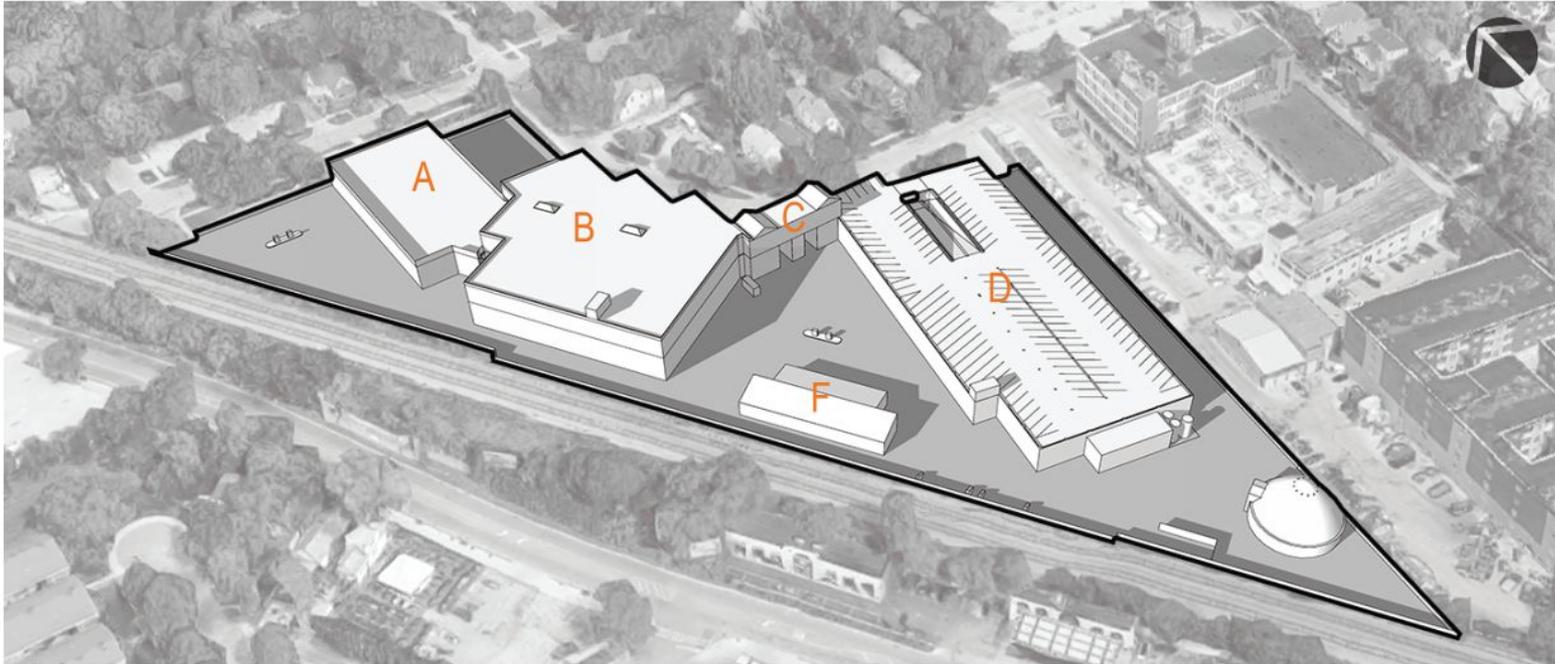


## Service Center Master Plan City Council Presentation



July 25, 2022

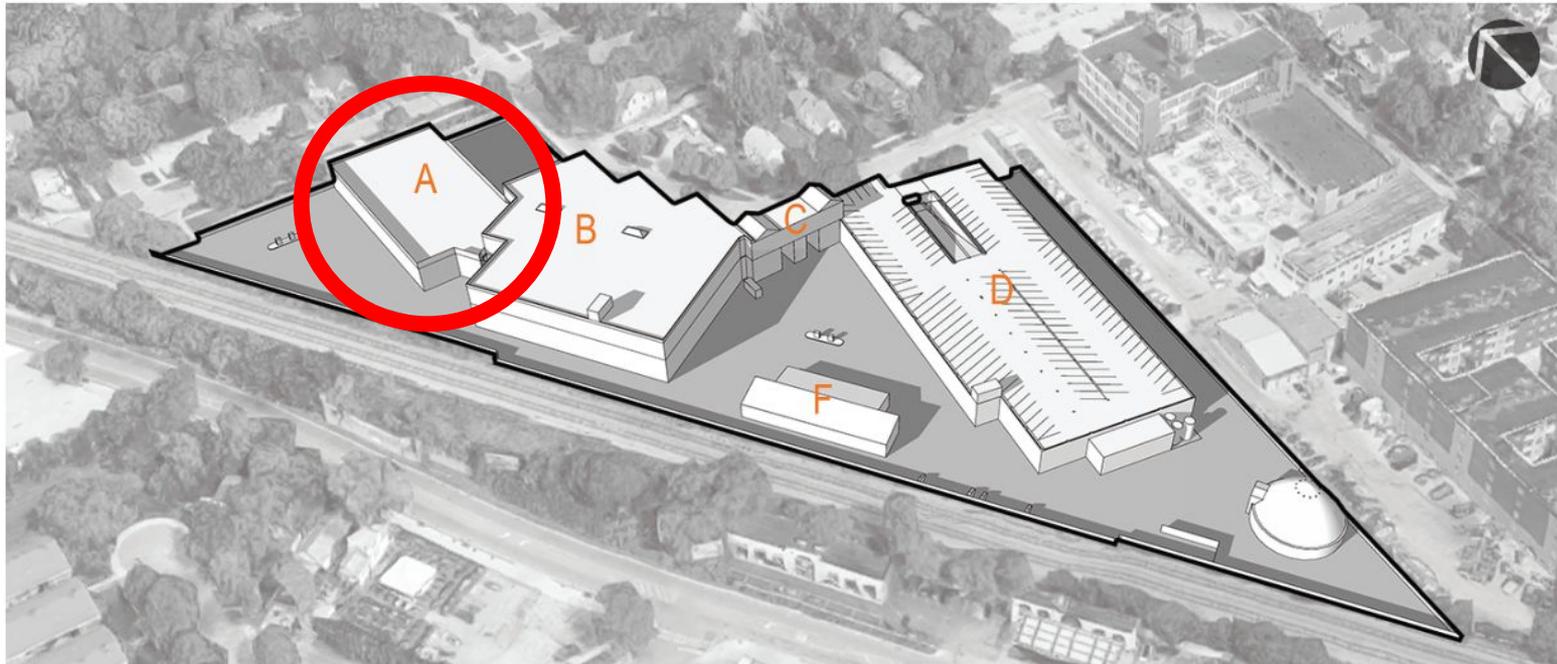
# Background



- Building A - Fleet**
- Building B - Operations**
- Building C - Parking Services**
- Building D - Vehicle Bays and Employee Parking**
- Building F - Storage Bins**
- Salt Dome- Salt Storage**
- Fuel Islands**



# Background



## **Building A - Fleet**

**Building B - Operations**

**Building C - Parking Services**

**Building D - Vehicle Bays and Employee Parking**

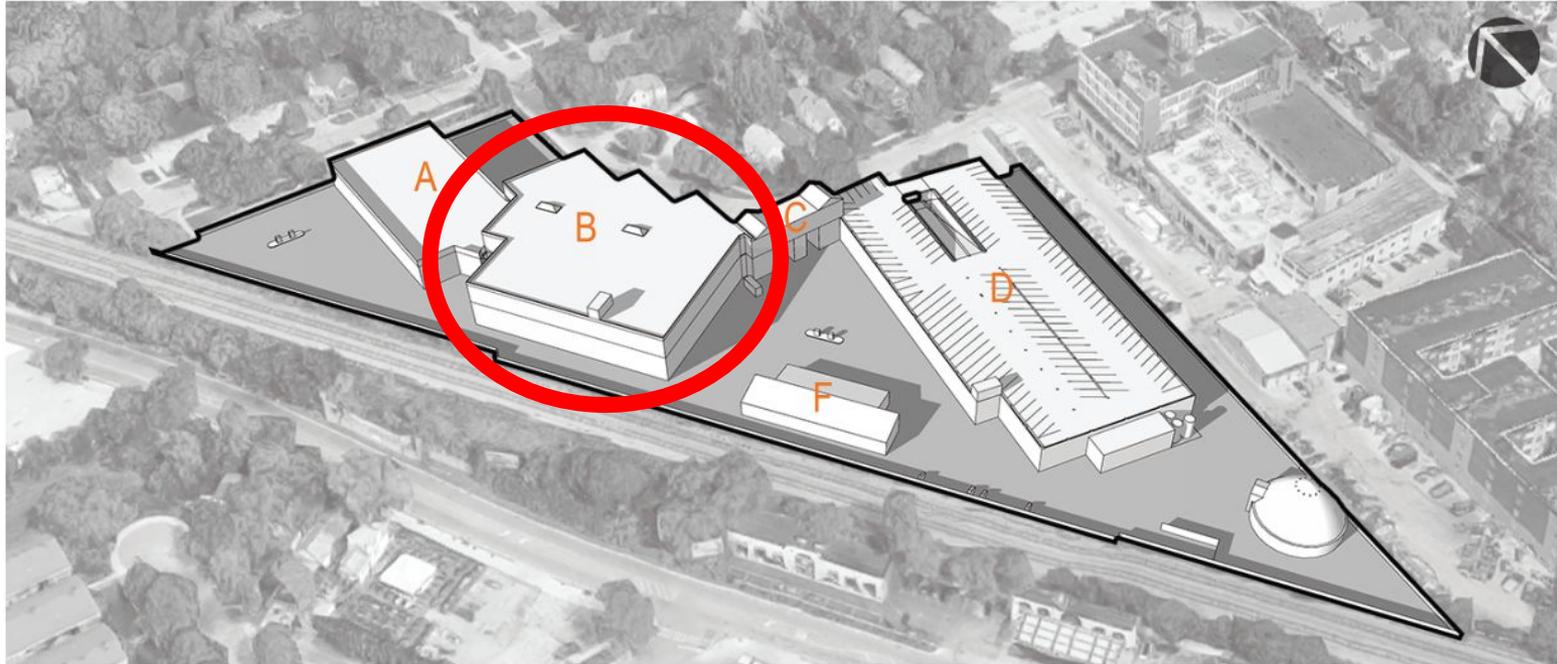
**Building F - Storage Bins**

**Salt Dome- Salt Storage**

**Fuel Islands**



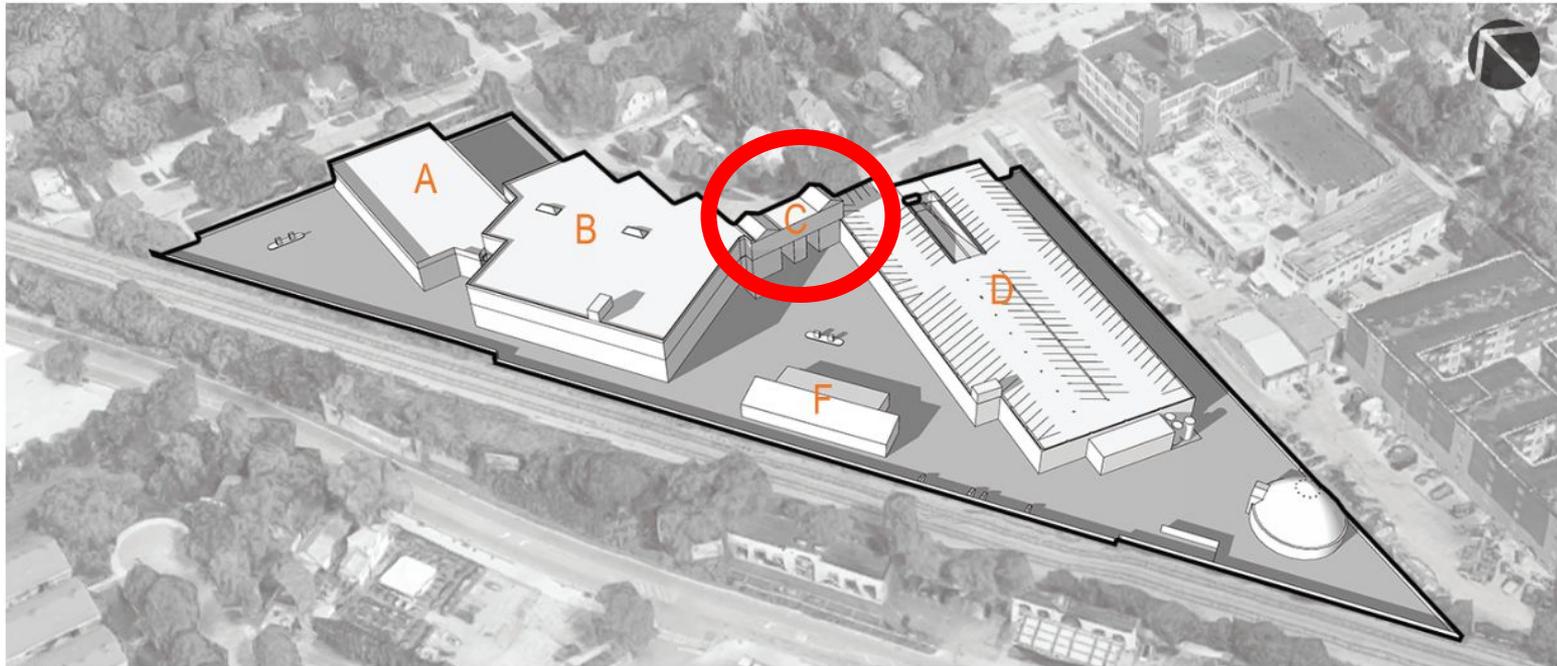
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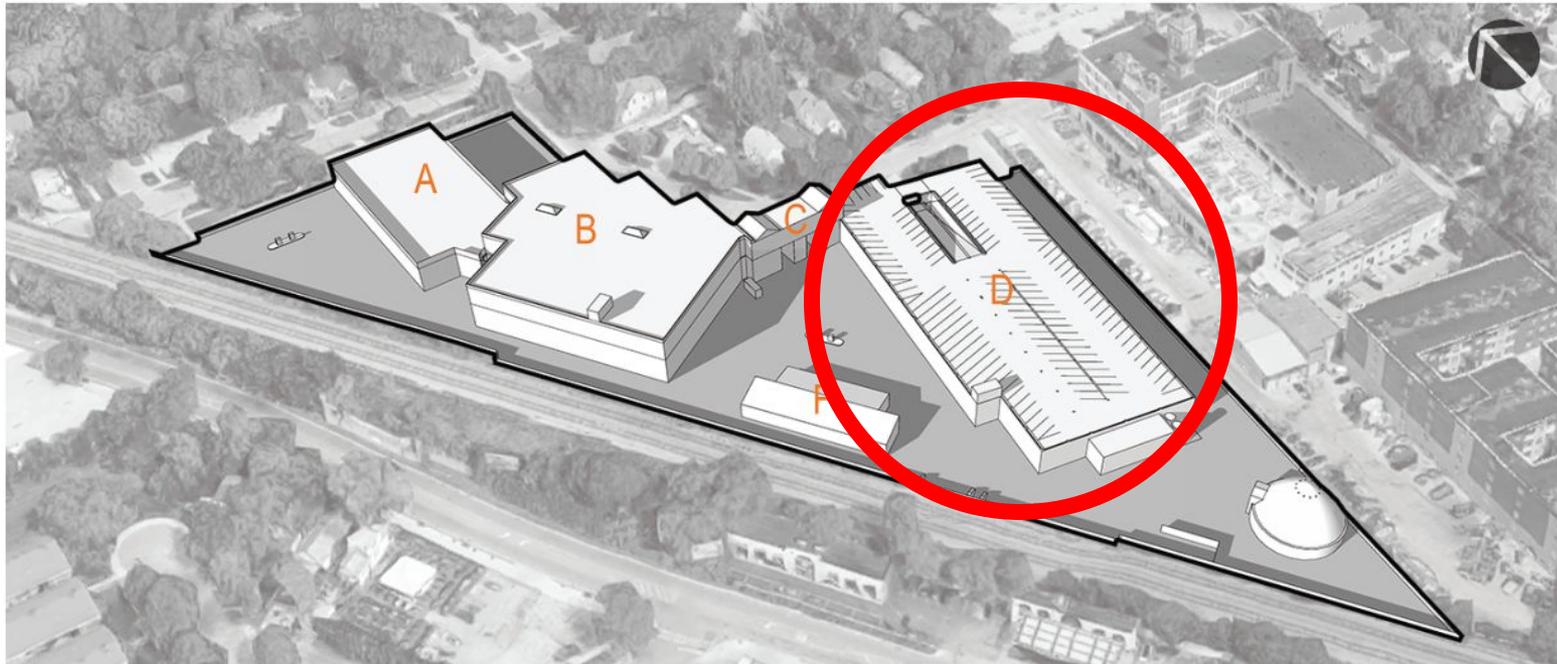
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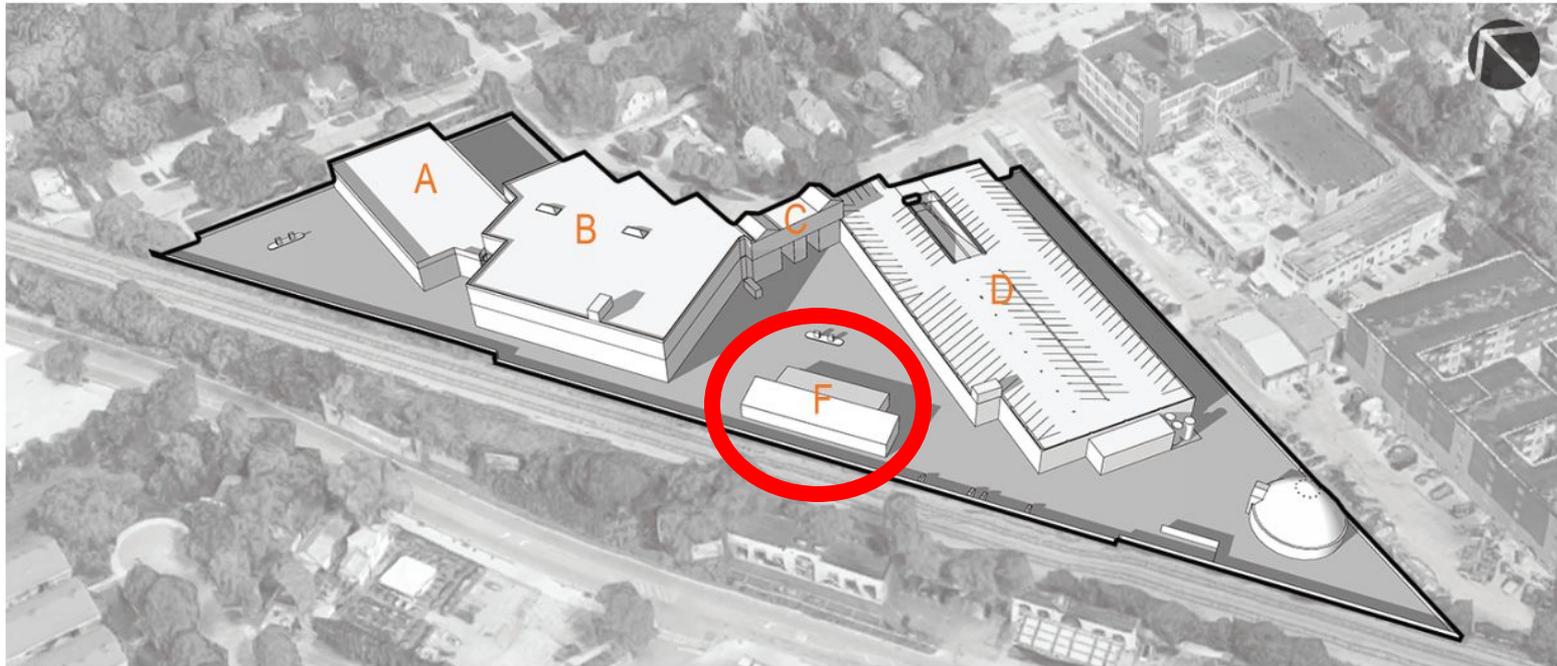
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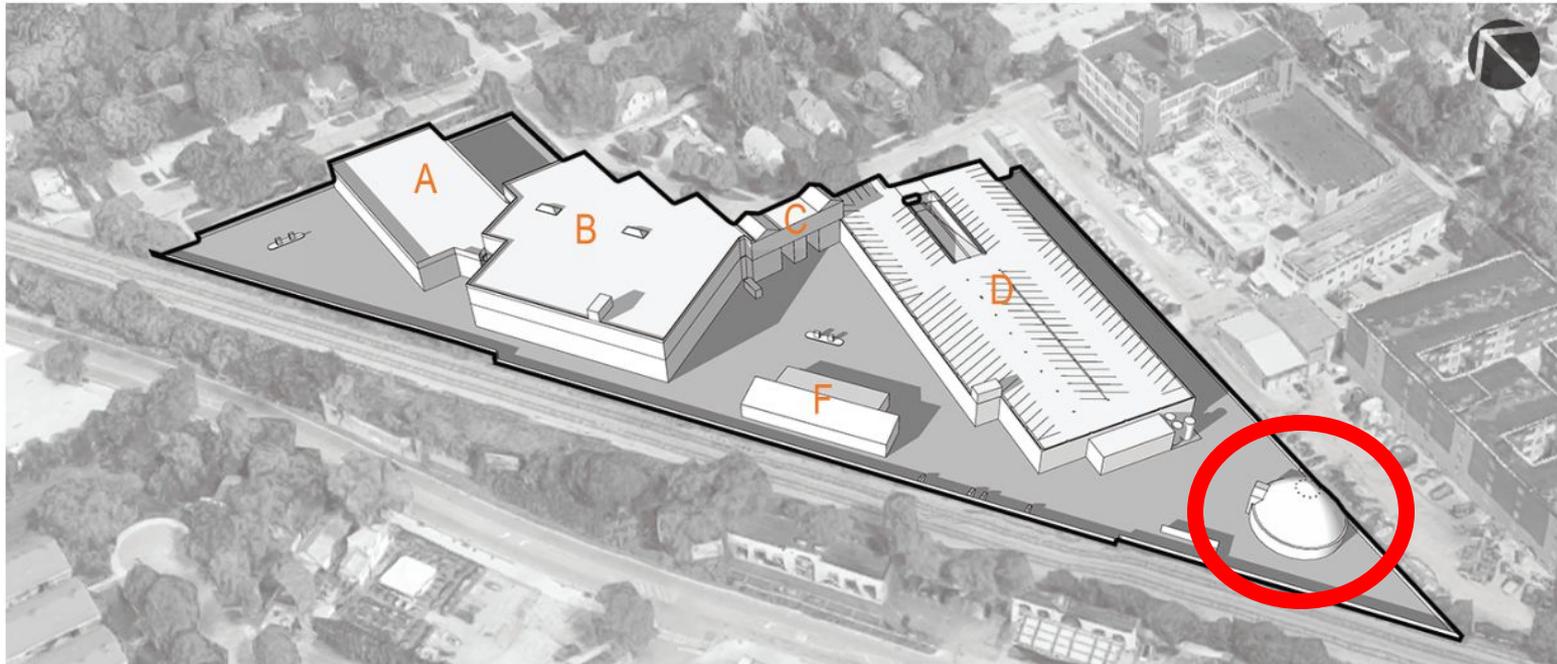
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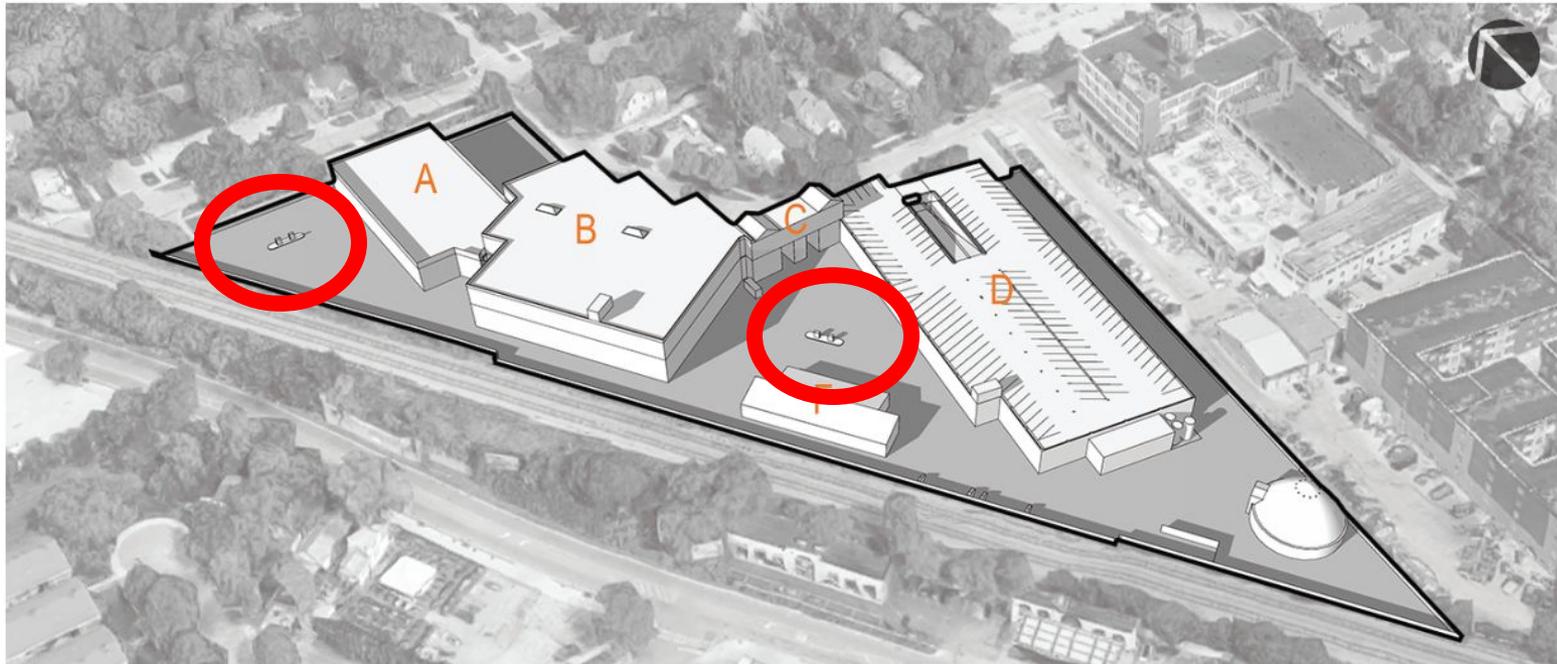
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# Master Planning Project

## Project Goals

- **Assess conditions**
- **Develop a modernization strategy which addresses deficiencies and responds to the Climate Action and Resilience Plan (CARP)**
- **Address storage deficiencies**

# Facility / CARP Assessment

## Primary Issues

- Little investment since initial construction in 1980
  - Physical deterioration
  - Not suited to adapt to CARP
- Building D has significant and ongoing structural issues
  - Poor structural design
  - Over \$1.2 million spent in last 10 years on emergency repairs



2014 Structural Deterioration



2017 Structural Failure

# Facility / CARP Assessment

## Primary Issues

- **Inadequate storage for equipment and materials**
  - **Limited on site expansion options**
  - **Potential sale of the Recycling Center**
  - **Equipment stored outside and exposed to weather**
  - **Larger equipment and future electrification requires more space**



Overcapacity Building D Equipment Bays



Equipment Stored Exposed to Weather

# Facility / CARP Assessment

## Primary Issues

- **HVAC and Electrical Systems beyond useful life**
  - **Equipment failures and water damaged**
  - **Refrigerants used being phased out**
  - **Equipment no longer supported by vendors**
  - **Not prepared for migration to electrification**
- **Fuel Systems beyond useful life**
  - **Frequent and costly failures**
  - **Lack of reliability**



Water Damaged and Outdated Electrical Switchgear



Fuel System Beyond Useful Life, and Exposed to Weather

# Facility / CARP Assessment

## Primary Issues

- **Safety Concerns**
  - **Yard traffic and congestion**
  - **Chemical storage**
  - **Site security**
- **Limited Emergency Response Capacity**
  - **Inadequate emergency power generator**
- **Lack of ADA Compliance**
  - **Architectural elements largely not updated since 1980**



Limited Circulation Space



Inadequate Backup Power Generation

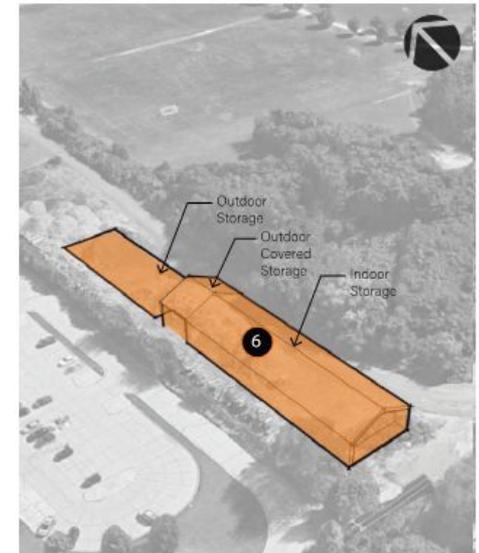
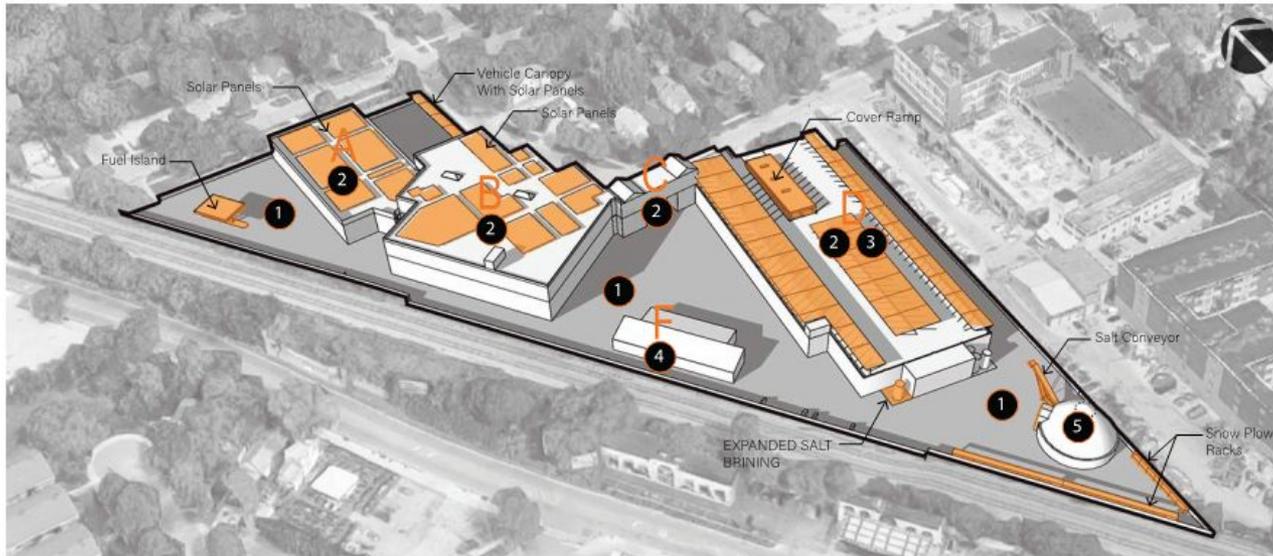
# Improvement Strategies

## Two Strategies Developed for Consideration:

- **Option 1**
  - **Modernize the complex**
  - **Repair Building D**
  - **Construct a new storage building in the James Park maintenance yard**
  
- **Option 2**
  - **Modernize the complex**
  - **Replace/Expand Building D**

# Improvement Strategies

## Option 1



### Renovate Buildings A, B, C, and D. Reconstruct Building F

- \$21.7 m<sup>1</sup> without CARP
- \$33.7 m<sup>1</sup> with CARP

### Construct new storage building at James Park

- \$10.5 m<sup>1</sup> with CARP

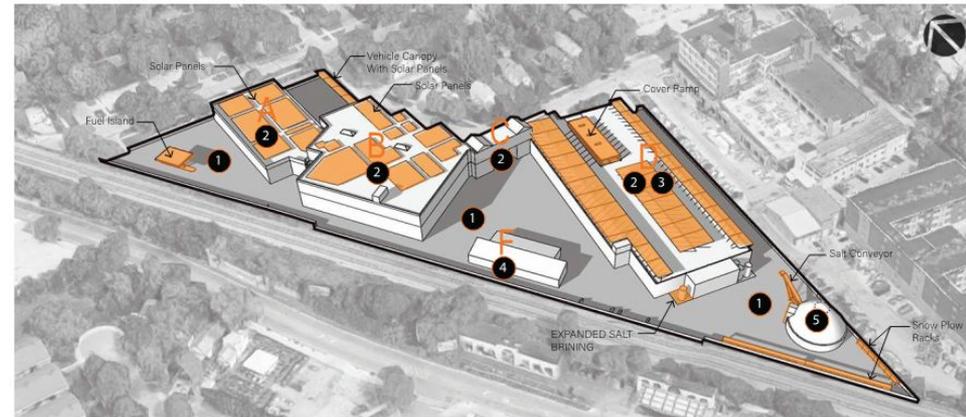
1. AACE Class 5 estimate with budgetary range between -50% and +100%

# Improvement Strategies

## Option 1

### Site:

- Reconstruct and consolidate fuel islands
- Resurface paving
- Improve security
- Construct covered snow plow racks



### CARP Items:

- Install photovoltaic panels

# Improvement Strategies

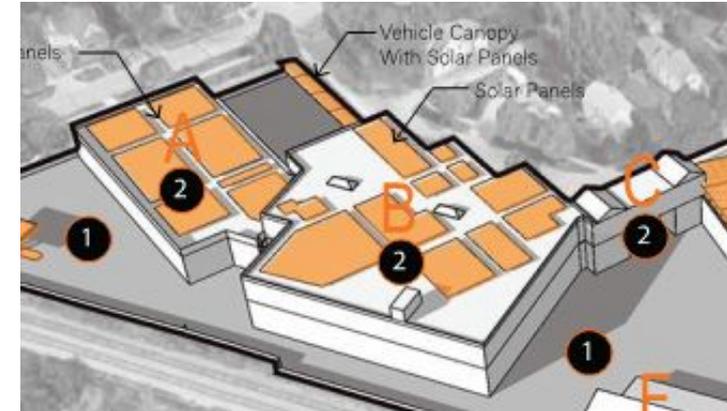
## Option 1

### Buildings A, B and C:

- Upgrade mechanical, electrical, and plumbing systems
- Address ADA deficiencies
- Replace roofing, windows, and doors
- Provide additional or reconfigure office spaces

### CARP Items:

- Expand electrical service
- Electrify mechanical systems
- Install fleet electrification infrastructure
- Install photovoltaic panels



# Improvement Strategies

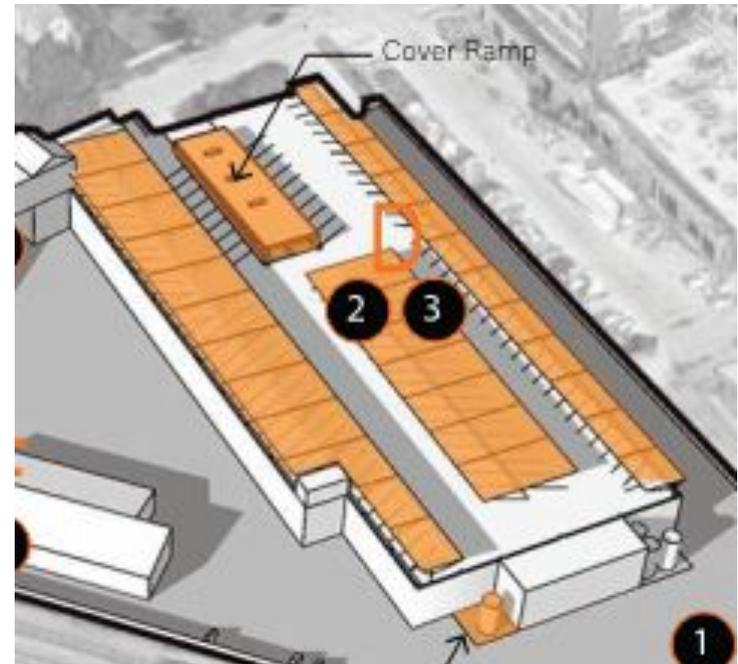
## Option 1

### Building D:

- Address structural deficiencies
- Cover ramp
- Upgrade mechanical, electrical, and plumbing systems
- Address ADA deficiencies
- Replace windows and doors

### CARP Items:

- Expand electrical service
- Electrify mechanical systems
- Install fleet electrification infrastructure
- Install photovoltaic panels



# Improvement Strategies

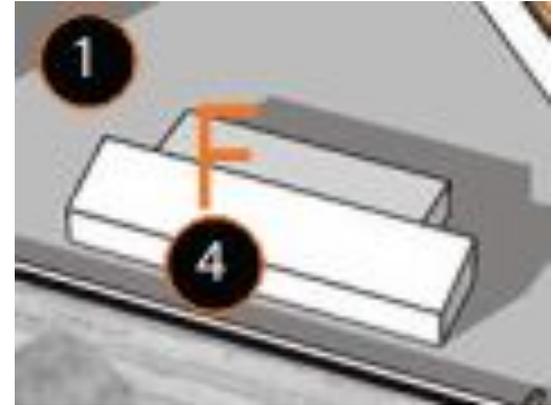
## Option 1

### Building F:

- Reconstruct to provide drive-through vehicle washdown

### CARP Items:

- Install electrified mechanical systems
- Stormwater capture for washdown



# Improvement Strategies

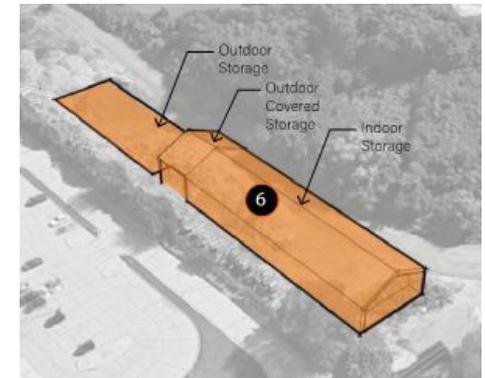
## Option 1

### James Park:

- Construct 15,000 square foot storage building
- Construct 3,000 square feet of covered outdoor storage
- Construct a 12,000 square foot paved maintenance yard

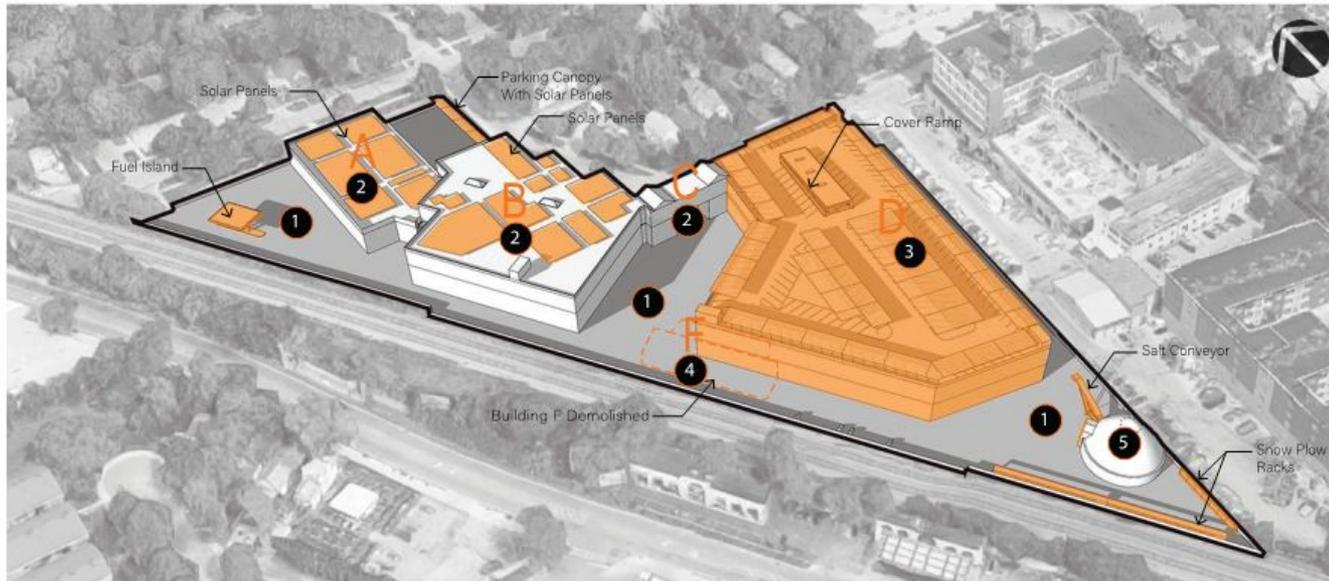
### CARP Items:

- Install photovoltaic panels
- Install electrified mechanical systems



# Improvement Options

## Option 2



**Renovate Buildings A, B, and C. Demolish and construct a new expanded Building D.  
Demolish Building F**

- \$83.9 m<sup>1</sup> without CARP
- \$95.9 m<sup>1</sup> with CARP

1. AACE Class 5 estimate with budgetary range between -50% and +100%

# Improvement Strategies

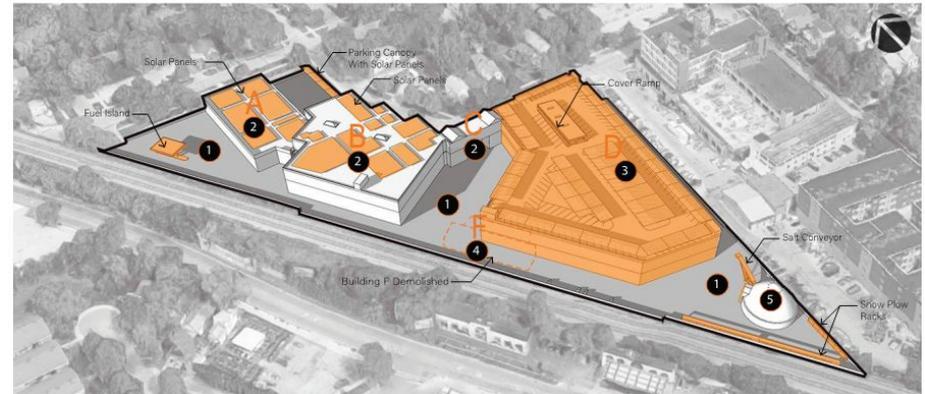
## Option 2

### Site:

- Reconstruct and consolidate fuel islands
- Resurface paving
- Improve security
- Construct covered snow plow racks

### CARP Items:

- Install photovoltaic panels



# Improvement Strategies

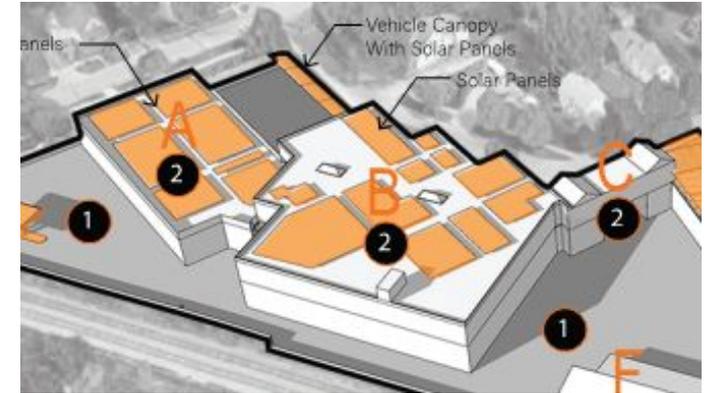
## Option 2

### Buildings A, B and C:

- Upgrade mechanical, electrical, and plumbing systems
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### CARP Items:

- Expand electrical service
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# Improvement Strategies

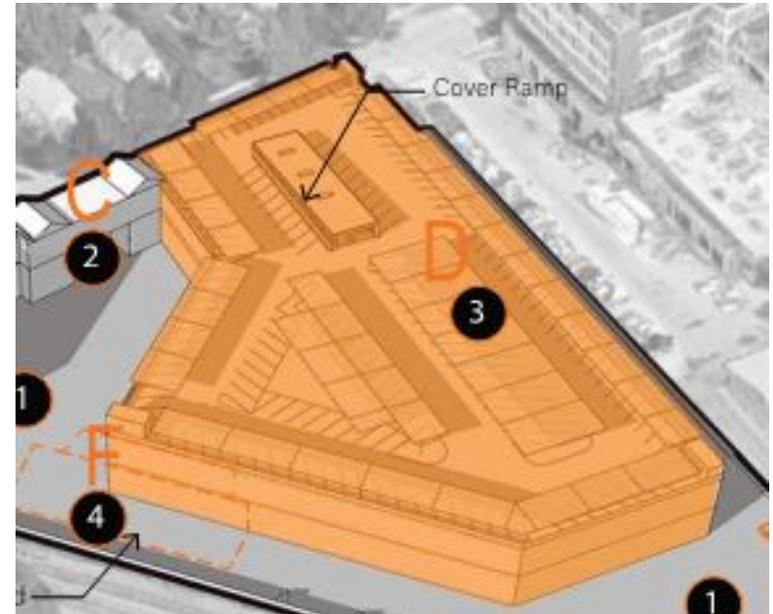
## Option 2

### Building D:

- Replace with larger structure to meet storage demands

### CARP Items:

- Install photovoltaic panels
- Install electrified mechanical equipment
- Expand electrical system
- Install fleet electrification infrastructure

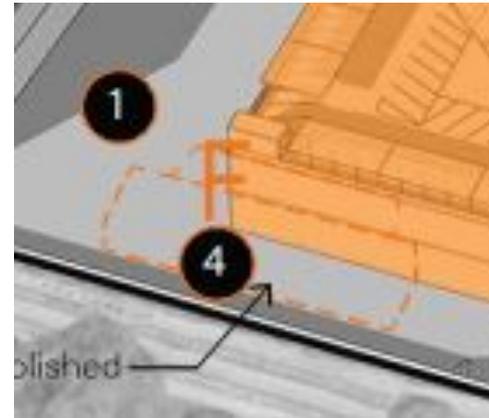


# Improvement Strategies

## Option 2

### Building F:

- Eliminate and consolidate with expanded and new Building D

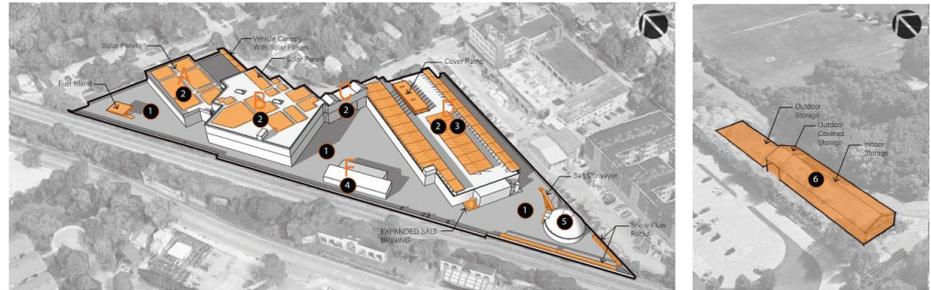


# Improvement Strategies

## Estimated Capital Cost Summary

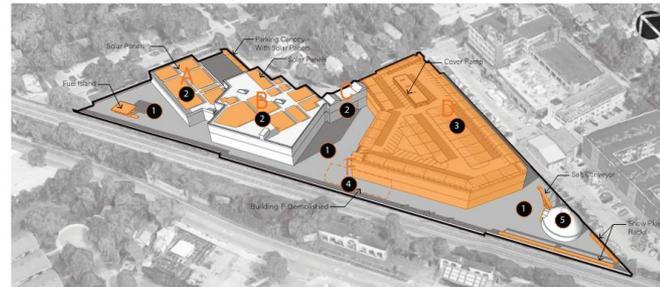
### Option 1

- Base Scope: \$21.7 m<sup>1</sup>
- CARP Items: \$12.0 m<sup>1</sup>
- James Park Facility: \$10.5 m<sup>1</sup>
- Grand Total: \$44.2 m<sup>1</sup>



### Option 2

- Base Scope: \$83.9 m<sup>1</sup>
- CARP Items: \$12.0 m<sup>1</sup>
- Grand Total: \$95.9 m<sup>1</sup>



1. AACE Class 5 estimate with budgetary range between -50% and +100%

# Staff Recommendations

## Proceed with Option 1

- Lower overall cost
- Meets current and future needs
- Eliminates need to relocate Building D functions during reconstruction

## Initial Phasing

- Begin with north fuel system replacement
- Determine Public Works storage area (Recycling Center or new James Park storage building)
- Work with consultant to develop a phasing plan for other improvement items and coordinate with fleet electrification

# Open Discussion