



**Multi-Use Development**  
**Portland, Oregon**  
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# **Husky Developers**

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# New Findings

- Archeological Artifacts
- Wood Chips covering 65+% of property
- Average water table at 25ft



# Potential Archeological Site

- Sub-contracted Archeological Department at University of Portland
- Archeological Findings: **INSIGNIFICANT**
- Construction of retaining wall and pilings to be supervised by Archeologist
- Open Communication with SHPO and local Tribes

# Geotechnical Considerations

- 100 ft Pilings for Foundation
- Retaining Wall to Protect Pilings from Flood



# Emissions

- Collect and Disperse Methane Gas from the decomposition of Wood Chips
- Connect Parking Garage Ventilation to Methane Exhaust System
  - Modeling determined total emissions as insignificant source
  - Modeling determined combining sources as safe
  - Will monitor total emissions

# Greenway

- 26% of Total Land Available for Greenway
- Greenway Spans the Length of the Willamette River and Runs 50 ft Inland
- Boulevard Treatments along Length of the Building

# Structural Design

- Outside Perimeter: 375' N-S x 325' E-W
  - Each Floor has usable space of 121,875 ft<sup>2</sup>
- Two 5 story towers attached to NW and SW side of building, used for parking, bicycle storage, extra shopping, and facility storage.
  - Each Floor has usable space of 12,000 ft<sup>2</sup>
- Underground Parking: 121,875 ft<sup>2</sup>
  - For Residents, Employees, and Shoppers
- 76% of Total Allowable Land Used

# Main Building Interior Design

- **Parking Garage** in Basement: 10' Ceiling
- 1<sup>st</sup> Floor: 20' Ceiling; **Shopping Center and Restaurants**
- 2<sup>nd</sup> – 4<sup>th</sup> Floors: 11' Ceilings; **Research Facilities for Biotech Lab**
- 5<sup>th</sup> – 9<sup>th</sup> Floors: 11' Ceilings; **Biotech Laboratory**
- 10<sup>th</sup> – 12<sup>th</sup> Floors: 10' Ceilings; **Offices**

# Main Building Interior Design

- **13<sup>th</sup> – 18<sup>th</sup> Floors: 10' Ceilings; Apartments**
  - Floors 13&15: **112** One BedRm Apt; 1,000 ft<sup>2</sup> each
  - Floors 16&17: **56** Two BedRm Apt; 2,000 ft<sup>2</sup> each
  - Floors 14&18: **54** Two BedRm Apt; 2,000 ft<sup>2</sup> each
  - Floors 14&18: Workout Facility; 4,000 ft<sup>2</sup> each
- **19<sup>th</sup> – 20<sup>th</sup> Floors: 12' Ceilings; Penthouse/Townhouses**
  - 27 Townhouses; 4,000 ft<sup>2</sup> each at Two Stories High
  - Two Level Terrace; 5,500 ft<sup>2</sup>; Available to Townhouses Only
- **Roof: Green Garden**
  - Available for Resident Use

# Tower Interior Design

- 1<sup>st</sup> Floor: 20' Ceiling: **Retail**
- 2<sup>nd</sup> – 3<sup>rd</sup> Floors: 11' Ceilings: **Theater & Parking**
- 4<sup>th</sup> Floor: 11' Ceiling: **Bicycle Storage and Changing Rooms**
- 5<sup>th</sup> Floor: 11' Ceiling: **Leaseable Space or Facility Storage**
- Roof: **Green Garden**
  - Available for Public Use, Lunch Space for Office Workers

# Uninterruptible Power Supply

- Power Hook-Up to Two Substations
- On-sight Generator for Three Days
- Fuel Cell Generator Connected to Ventilation and Refrigeration



# Stormwater Treatment

- Minimize Runoff with Green Garden Roofs
- Recycle Stormwater and use for Toilets
- Bioswale for Treatment: Infiltration
- Modeling determined Stormwater Retention Unnecessary

# Hazardous Materials

- Secure Biotech Lab with Keycards
- Contain All Volatiles in Fire Protected Room
- Install CO<sub>2</sub> Monitors in HVAC
- Install pH Sensors and Emergency Shut-Off Valve for Biotech Sanitary Sewer

# LEED Standards

- **Sustainable Sites**

- Alternative Transportation

- Trip Reduction resulting from Onsite Housing and Dining
- Bicycle Storage and Bus Service

- Reduced Site Disturbance

- Stormwater Management

- Reduce Heat Island Effect (Green Roof)

- Light Pollution Reduction



# **LEED Standards cont.**

- **Water Efficiency**
  - Water Reduction
  - Water Efficient Landscaping



# LEED Standards cont.

- **Energy & Atmosphere**
  - Optimize Energy Performance
  - Renewable Energy
  - Ozone Protection
  - Green Power



# **LEED Standards cont.**

- **Materials and Resources**
  - Construction Waste Management
  - Resource Reuse
  - Recycled Content
  - Local/Regional Materials
  - Rapidly Renewable Materials



# LEED Standards cont.

- **Environmental Quality**
  - Carbon Dioxide Monitoring
  - Indoor Air Quality Management
  - Low-Emitting Materials
  - Chemical & Pollutant Source Control
  - Controllability of Systems
  - Daylight and Views

# LEED Standards cont.

- **Innovative Design**

- Education in Water Reduction (give residents information packets)
- Education in Energy Reduction (give residents information packets)

# **LEED Rating**

- Projected Silver Rating at 44 Points
- Possible Gold Rating of 63 Points



# Projected Costs

Foundation	\$30 Million
Building	\$200 Million
Parking Garage	\$15 Million
Hazardous Waste	\$2 Million
Continuous Energy	\$0.5 Million
LEED	\$15 Million