

# *Conceptual Design*



## *Bellingham Public Schools New District Office*

*Design Advisory Committee  
September 22, 2020*

# Today's Agenda

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- |                               |        |
|-------------------------------|--------|
| 1. Introductions              | 10 min |
| 2. Building Design Review     | 20 min |
| 3. Interior Layout & Approach | 35 min |
| 4. Break                      | 5 min  |
| 5. Sustainability Discussion  | 10 min |
| • Break-out group             | 15 min |
| • Break-out reporting         | 15 min |
| 6. Closing & Next Steps       | 10 min |

Today's Meeting



## BPS New District Office Review & Decision Matrix for Project

Site & Workplace Components Phase 1		Concept Design & Preliminary Planning Phase 1		Concept Design & Preliminary Planning Phase 1		End of Phase 1		Schematic Design 50%	
End of July 7/28/2020 DAC Mtg 2	Approval Responsibility	Mid August 8/11/2020 DAC Mtg 3 Sign-off	Approval Responsibility	End of August 8/25/2020 DAC Mtg 4 Sign-off	Approval Responsibility	End of September 9/22/2020 End of Phase Sign-off (October)	Approval Responsibility	Date TBD	DAC Mtg 6
Kick-off charette		Kick-off charette		Kick-off charette		Kick-off charette		Kick-off charette	
Engagement plan		Engagement plan		Engagement plan		Engagement plan		Engagement plan	
Engagement activities		Engagement activities		Engagement activities		Engagement activities		Engagement activities	
<b>Design Goals</b>		<b>Design Goals</b>		Design Goals		Design Goals		Design Goals	
<b>Site Analysis</b>		<b>Site Analysis</b>		Site Analysis		Site Analysis		Site Analysis	
<b>Macro Program</b>		<b>Macro Program</b>		<b>Macro Program</b>		<b>Macro Program</b>		Macro Program	
<b>Massing Studies</b>		<b>Massing Studies</b>		<b>Massing Studies</b>		<b>Massing Studies</b>		Massing Studies	
<b>Adjacencies</b>		<b>Adjacencies</b>		<b>Adjacencies</b>		<b>Adjacencies</b>		Adjacencies	
<b>Circulation Studies</b>		<b>Circulation Studies</b>		<b>Circulation Studies</b>		<b>Circulation Studies</b>		Circulation Studies	
<b>Building Concept</b>		<b>Building Concept</b>		<b>Building Concept</b>		<b>Building Concept</b>		<b>Building Concept</b>	
<b>Cost model (concept)</b>		<b>Cost model (concept)</b>		<b>Cost model (concept)</b>		<b>Cost model (concept)</b>		<b>Cost Model (concept)</b>	
<b>Sustainability Goals</b>		<b>Sustainability Goals</b>		<b>Sustainability Goals</b>		<b>Sustainability Goals</b>		<b>Sustainability Goals</b>	
<b>Concept Space plan'g</b>		<b>Concept Space plan'g</b>		<b>Concept Space plan'g</b>		<b>Concept Space plan'g</b>		<b>Concept Space plan'g</b>	
<b>Structure developm't</b>		<b>Structure developm't</b>		<b>Structure developm't</b>		<b>Structure developm't</b>		<b>Structure developm't</b>	
<b>Bldg Systems outline</b>		<b>Bldg Systems outline</b>		<b>Bldg Systems outline</b>		<b>Bldg Systems outline</b>		<b>Bldg Systems outline</b>	
<b>Exterior aesthetic vision</b>		<b>Exterior aesthetic vision</b>		<b>Exterior aesthetic vision</b>		<b>Exterior aesthetic vision</b>		<b>Exterior aesthetic vision</b>	
<b>Space planning</b>		<b>Space planning</b>		<b>Space planning</b>		<b>Space planning</b>		<b>Space planning</b>	
<b>Interior aesthetic vision</b>		<b>Interior aesthetic vision</b>		<b>Interior aesthetic vision</b>		<b>Interior aesthetic vision</b>		<b>Interior aesthetic vision</b>	

# Vision & Goals Review

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# Vision & Key Goals Revised

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## **VISION:**

A place that embodies the investment the community has made in education and all that it stands for - creating knowledge in its community, building character, and preparing the next generation to take action in the world.

## **KEY GOALS:**

1. **Community and connection** - a welcoming space that brings our staff, students, families, and community partners together
2. **Learning and collaboration** – a space that encourages learning from each other, the presence of great collaborative spaces
3. **Innovation** - an environment that encourages trust building and diversity to allow new ideas to flourish
4. **Flexibility** – designing the physical environment with future adaptability in mind
5. **Health and wellness** - design choices that enhance physical and psychological health

# Design Precepts:

Design Precepts are being developed in addition to the priority goals. They will also guide the design work.

**pre·cept**  
/'prē,sept/ *Noun*

Definition: a general rule intended to regulate behavior or thought.

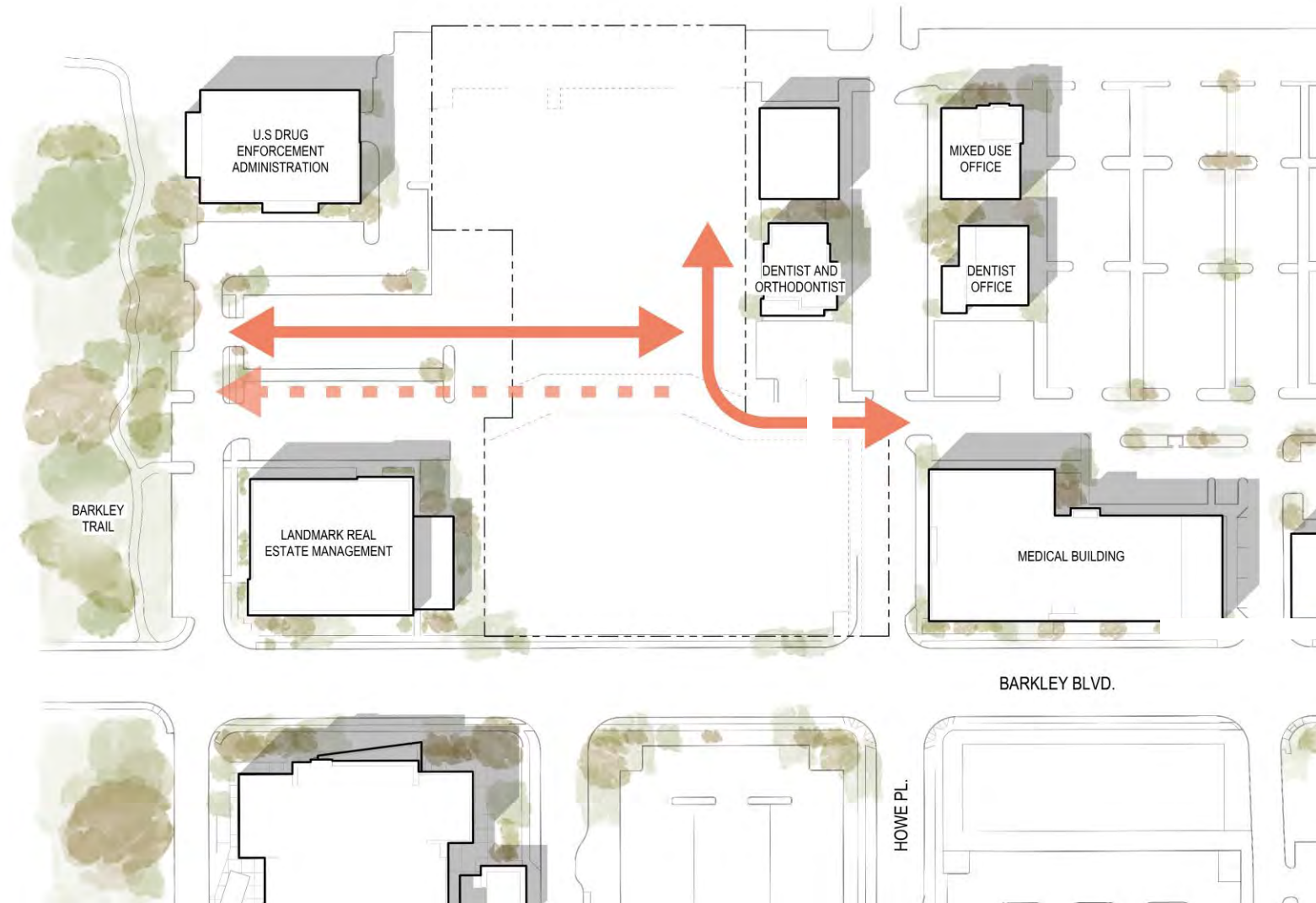
Workplace	Expression	Outdoor Environment (Landscape)	Health, Wellness, Sustainability	Technology	Stewardship (Cost + Value)
<b>Connectivity:</b> to each other, our students and families, our community	<b>Belonging, Warmth and Welcoming:</b> express the love and inclusive nature of our culture; reinforce all are welcome here; all children, families and employees are loved	<b>Outdoor Program:</b> outdoor meeting areas, gathering spaces, pathways, and flexible activity areas for employees; play area for children	<b>Encourage healthy choices:</b> design elements in the building to nudge staff toward healthy choices	<b>Mobility:</b> Infrastructure & technology that enables employee mobility	<b>Balanced Stewardship:</b> design for utility and functionality; look for ways to provide service to the community through design
<b>Daylight Access:</b> prioritize daylight access for all	<b>Presence of children:</b> they are the heart of our work; space for children & the artifacts of their learning visible throughout	<b>Garden:</b> provide a garden space for vegetables and herbs	<i>additional items tbd</i>	<b>Remote Work:</b> Spaces and technology that support increased remote work and itinerant district employees	<b>Education:</b> Capture, communicate, and display our sustainable & health metrics with the community & visitors
<b>Focus:</b> provide space for focused work to be conducted when needed	<b>Humble:</b> we are part of the learning ecosystem	<b>Awareness of Trails:</b> reference the adjacent walking trails		<b>Leverage technology:</b> infrastructure & systems to capture professional learning for distribution across the district	<b>Community Engagement:</b> Meeting spaces are a community amenity in addition to the district's professional learning center
	<b>Storytelling:</b> provide ways to tell the stories of our students and families	<b>Open yet Secure Building:</b> provide security in the building while maintaining an open, friendly environment			

# Building Design

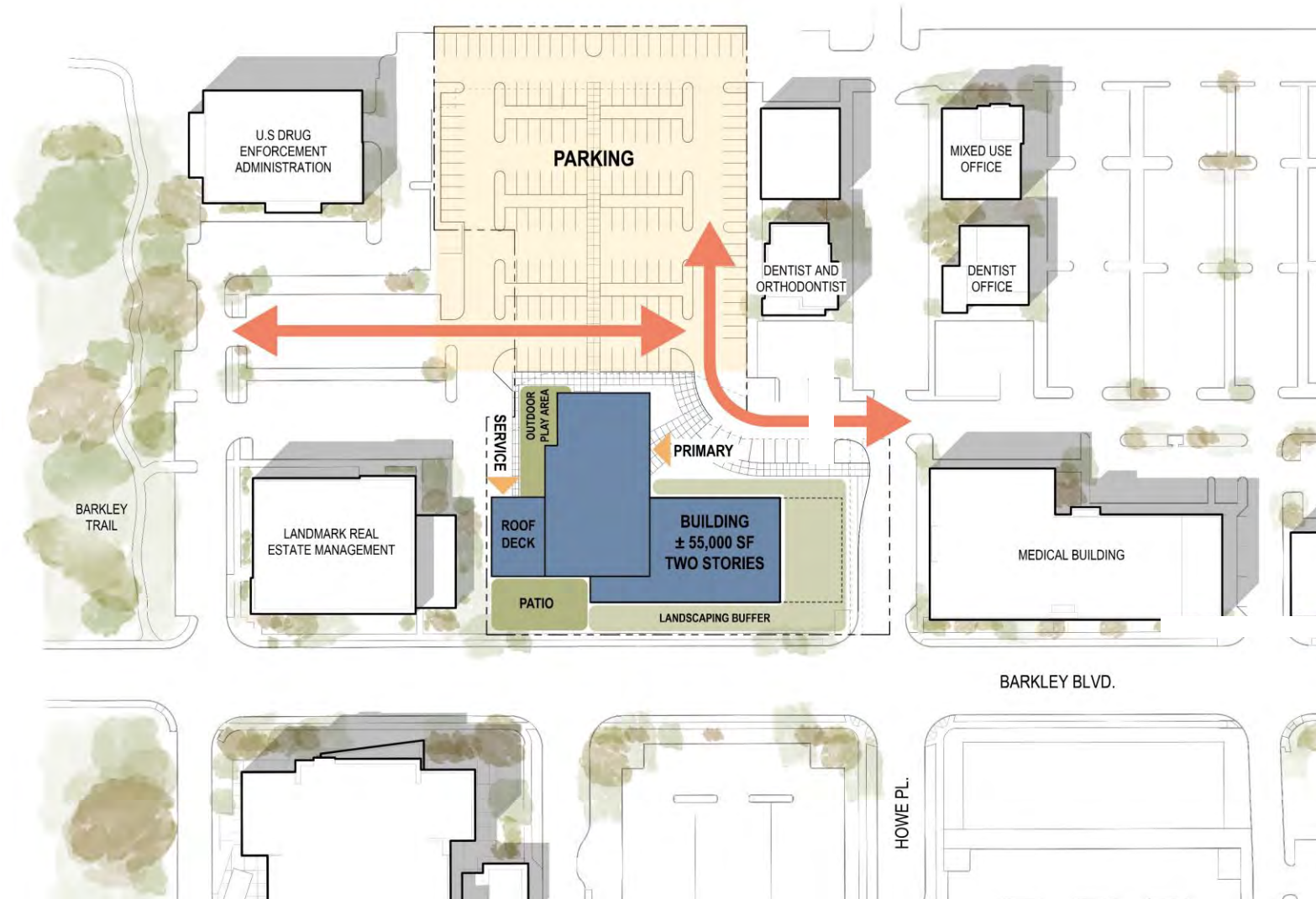
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# Site Option 2

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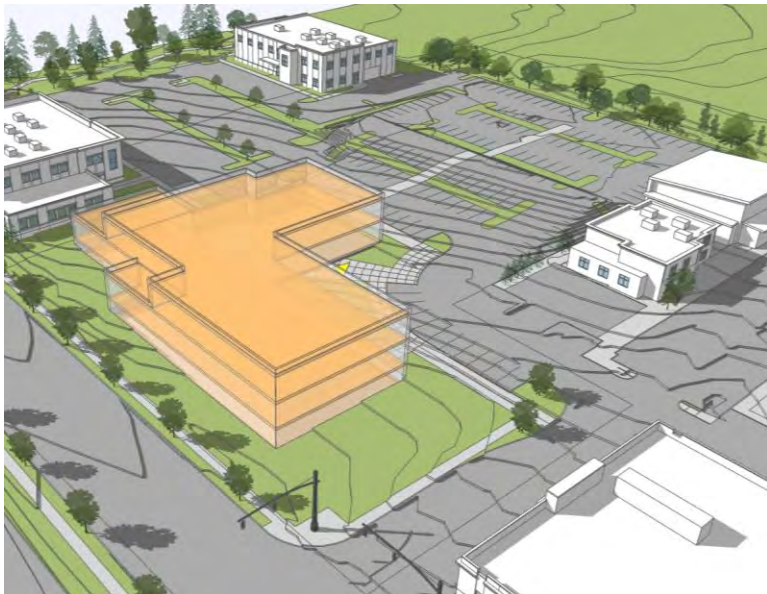


# Site Option 2



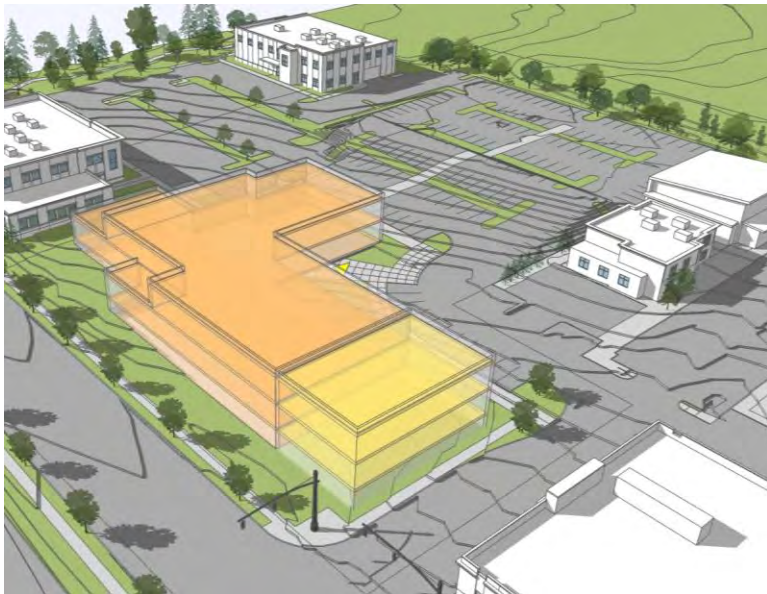
# Site Option 2

- Relocated access road allows more site area
- More landscaped area provided
- Building entry on east side
- Better visual orientation to building entry
- More interesting building form



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- More interesting building form













INDUSTRIAL  
TECHNOLOGY  
CENTER

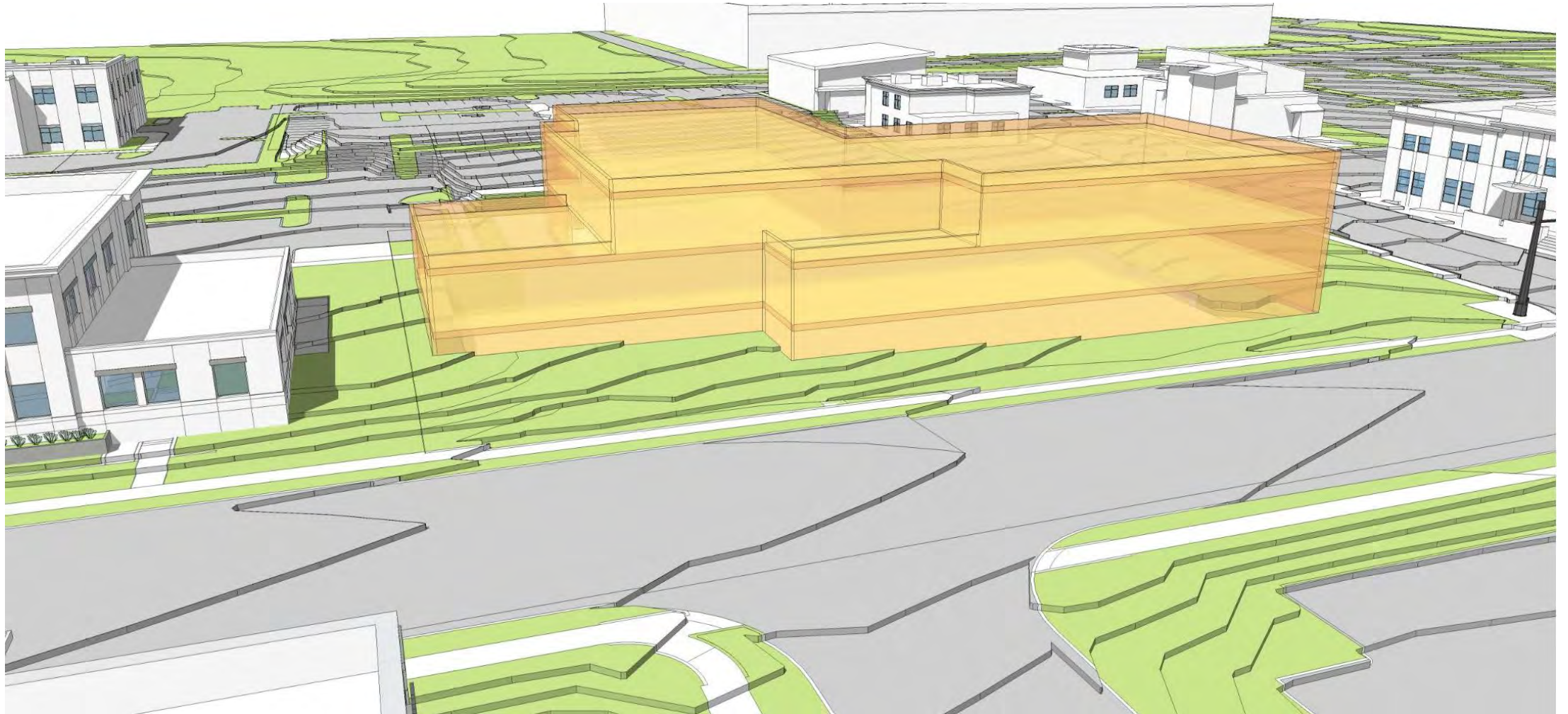


# Building Design Options

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# Massing Model

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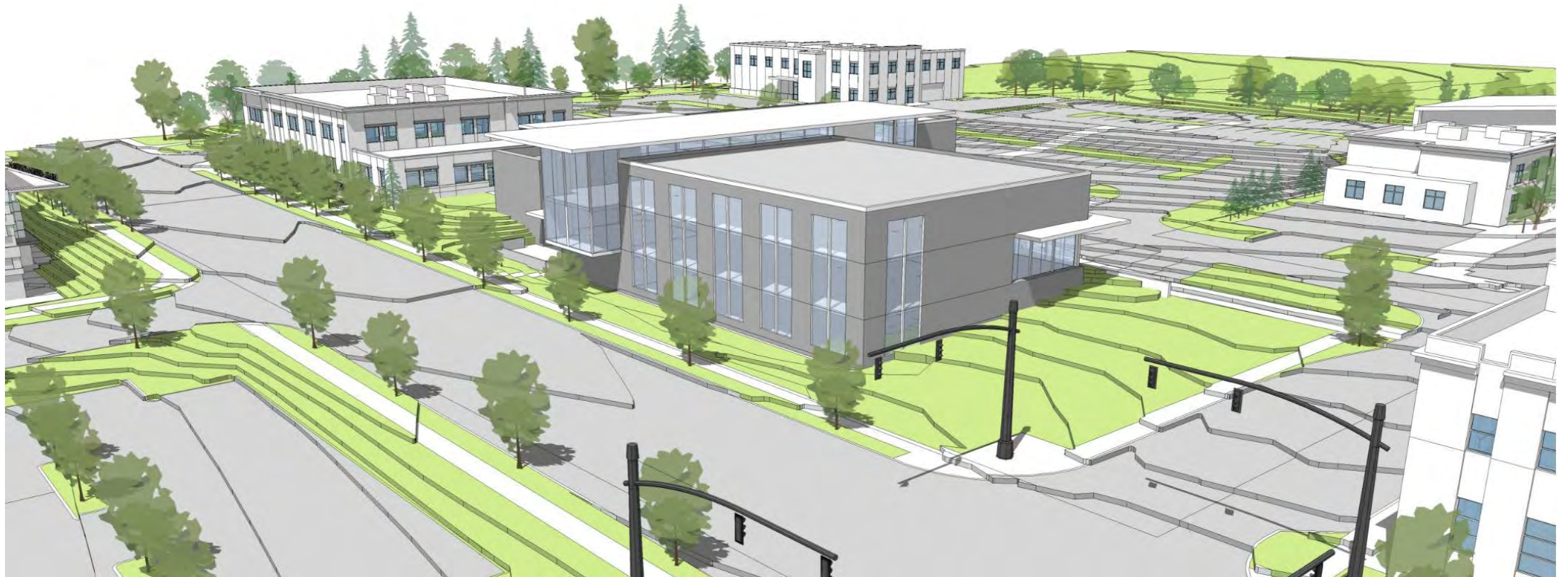
# Option 1

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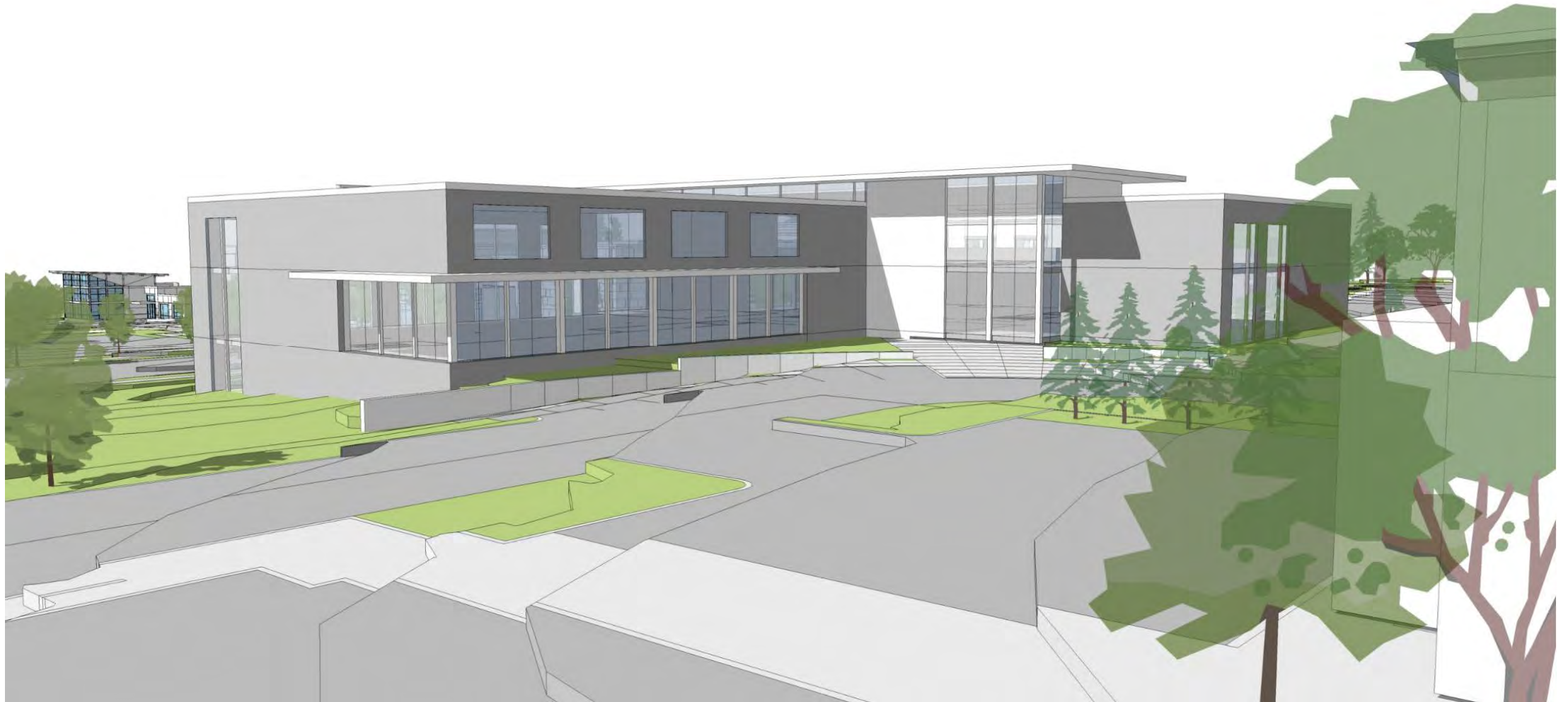
# Option 1

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# Option 1

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# Option 1

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# Option 2

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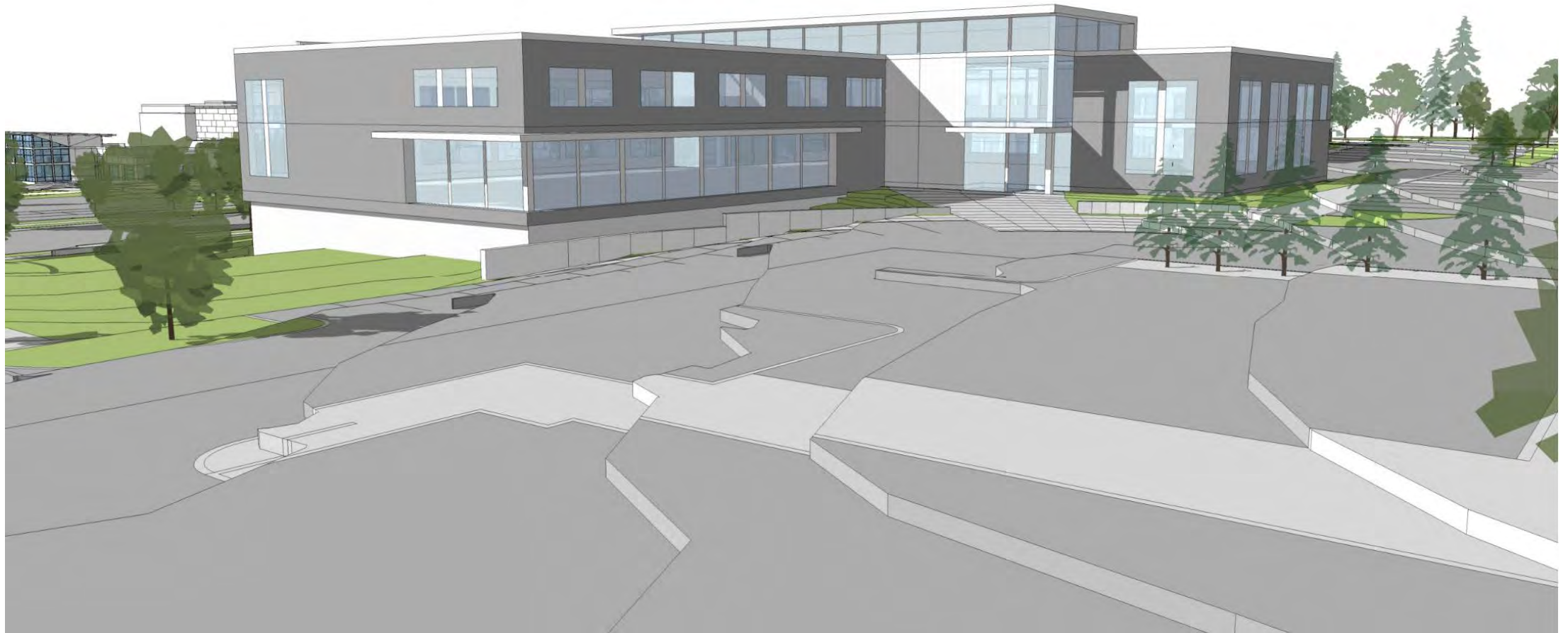
# Option 2

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# Option 2

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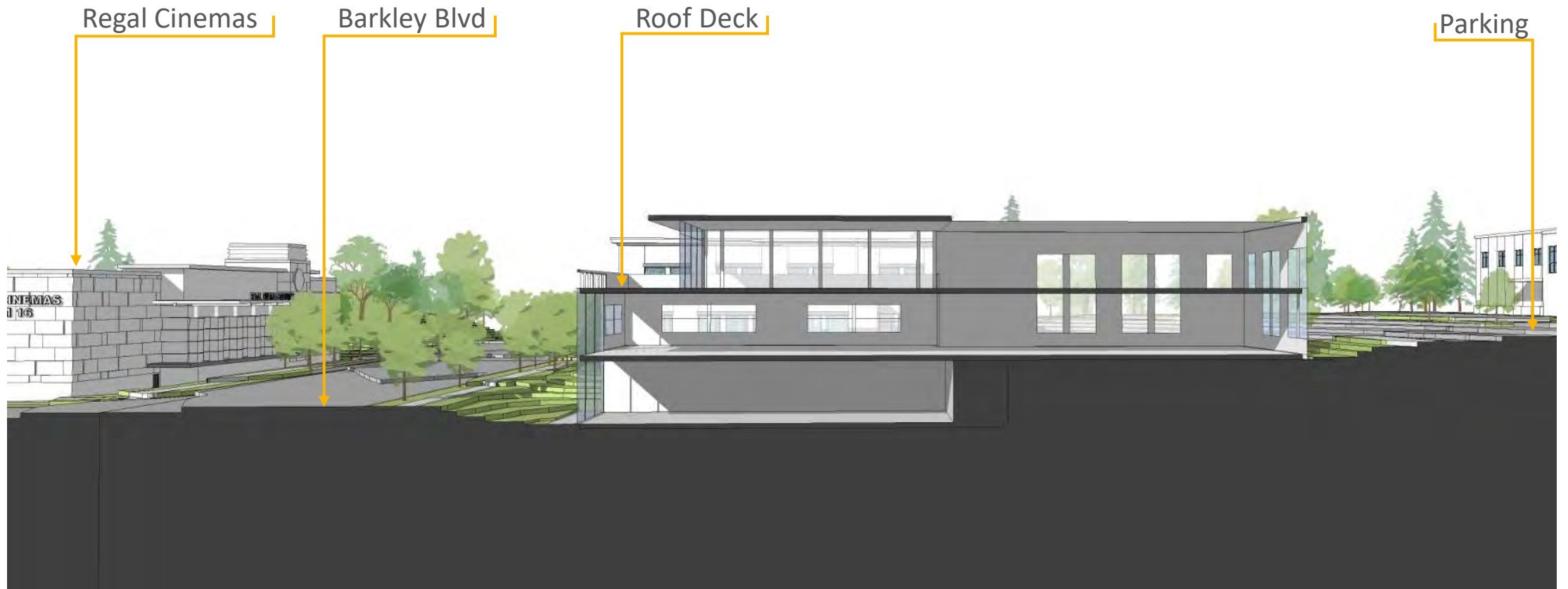
# Option 2

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# Site Option 3 Section

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# Mass Timber Overview

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Glue Laminated Timber (GLT)



Cross-Laminated Timber (CLT)



Dowel-Laminated Timber (DLT)



Photo: StructureCraft



Photo: StructureCraft



Photo: LendLease



Photo: StructureCraft



Photo: Ema Peter

**STRUCTURAL SOLUTIONS | POST, BEAM + PLATE**



Photo: ©Albert Vecerka/Esto

# Street Edge



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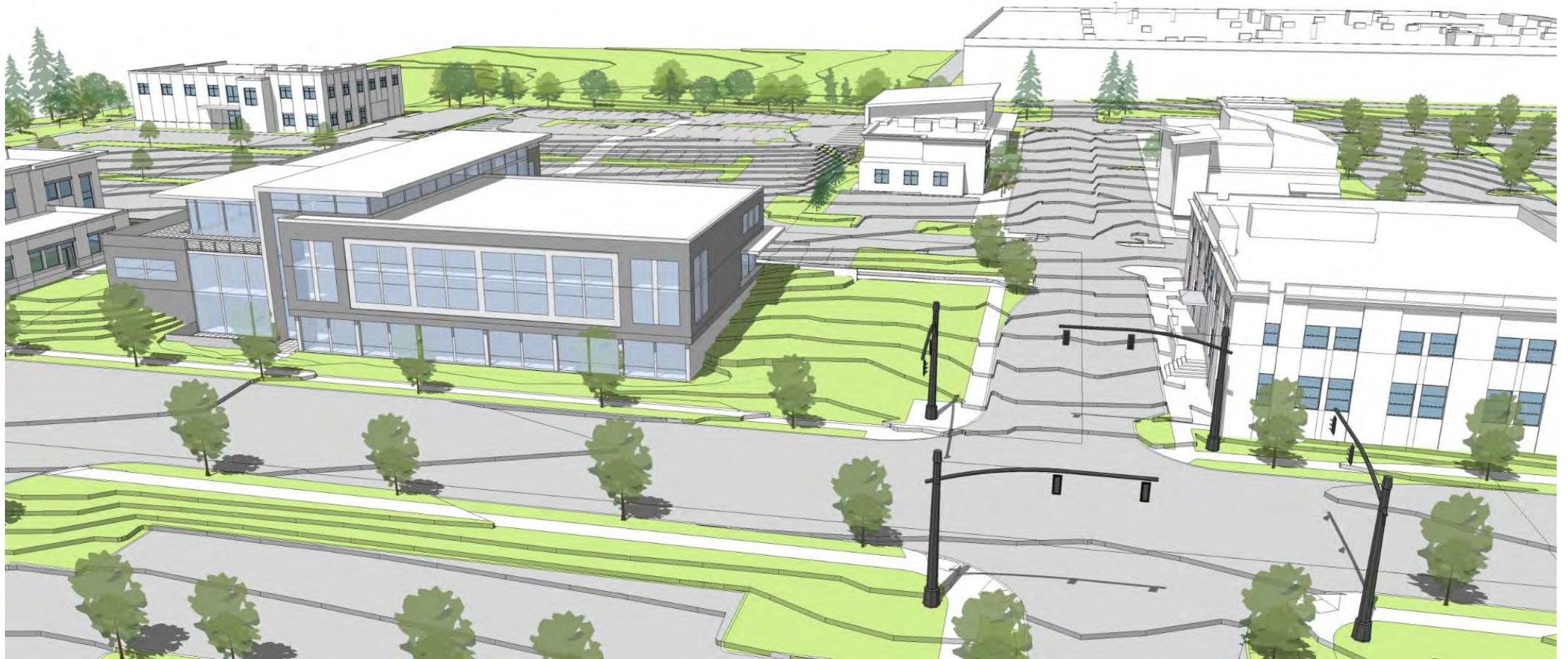


# Site Arrival

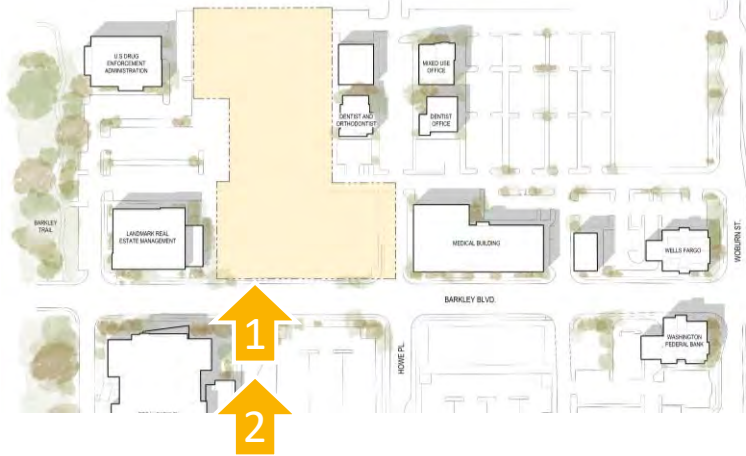


# Site Arrival

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# Visibility



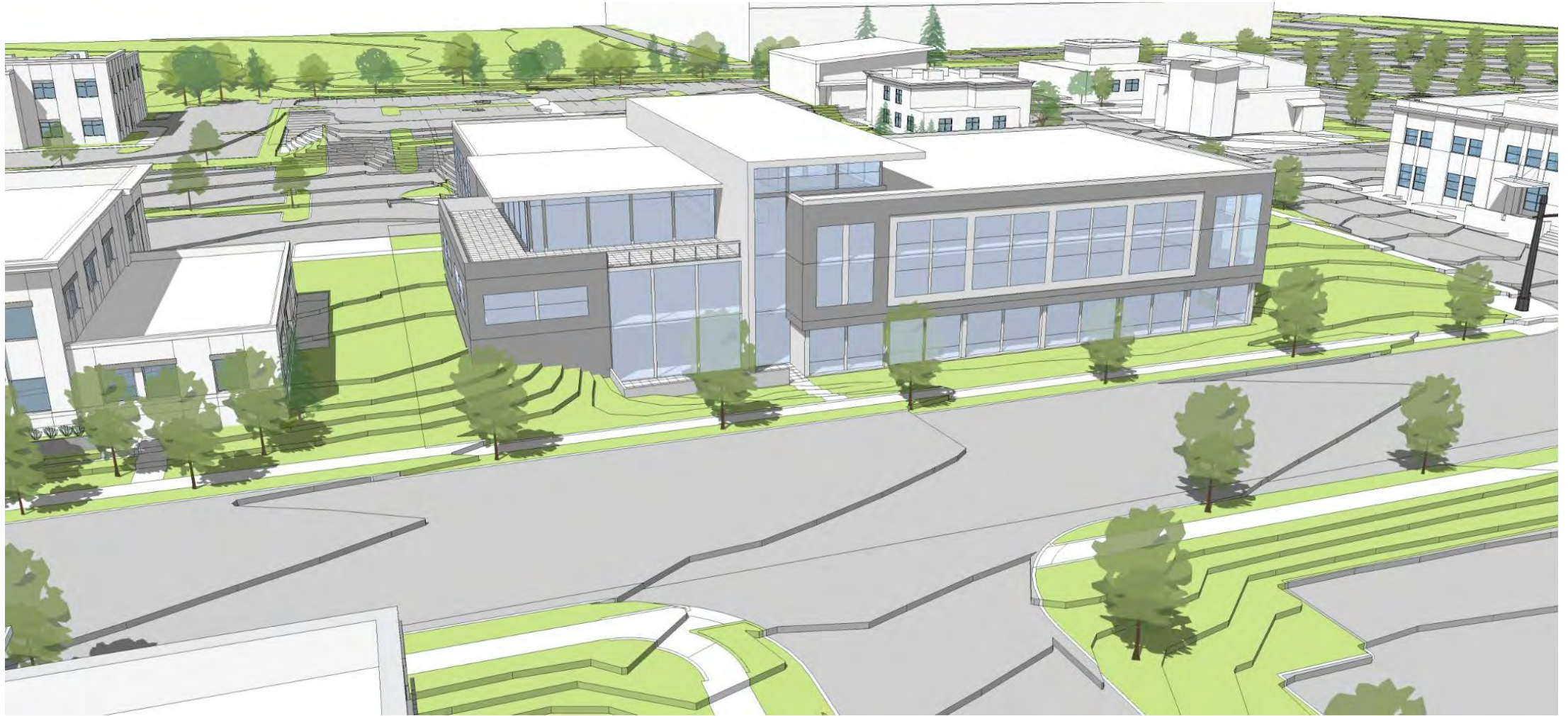
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# Visibility

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# Conceptual Space Plans

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# How does our Space Planning approach align with our goals?

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**Community and Connection-** *a welcoming space that brings our staff, students, families, and community partners together*

- Reception front and center, first thing a visitor sees
- Family Engagement and meeting space close by to serve distraught families when occasions arise
- Entry to ELC from atrium, visibility of children
- Flex space adjacent to and within atrium for community partners
- Professional development / conference center easily accessible and outside of the secure zone for use after-hours by community members

**Learning and Collaboration** - *a space that encourages learning from each other, the presence of great collaborative spaces*

- Elimination of suites to provide easier access to all staff
- More visibly open workspaces (workstation and offices)
- More enclosed collaboration spaces nearby workspace to enhance the exchange of information
- Touchdowns for visitors and itinerant staff nearby workspace for easy interaction

**Health and wellness** - *design choices that enhance physical and psychological health*

- All workspaces and all professional development spaces have access to daylight
- Offices (which are typically occupied less than those in workstations) moved off of the perimeter to allow for greater daylight penetration into the space
- Fitness and healthy choices are supported by a fitness space, shower and locker rooms, inter-connecting stair, bike storage

# How does our Space Planning approach align with our goals?

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**Innovation-** *an environment that encourages trust building and diversity to allow new ideas to flourish. (Taking risks, experimentation, iteration, mistakes, diversity, and strong social cohesion are among the ingredients that foster innovation.)*

- Greater access to each other (no suites, more openness)
- Magnet spaces that bring people together (atrium, conference centers, lunchroom, outdoor deck)
- Display of work-in-progress to inform and spark ideas from staff who may be tangential to the work (more to be developed on this in the next phase)
- Providing choice in where staff do their work

**Flexibility-** *designing the physical environment with future adaptability in mind*

- Simplified office standards (1 office, workstation, touchdown) and modularity to reduce renovations for organizational change
- Eliminating suites to allow for change to be more easily accommodated
- Infrastructure and public elements sized for expected growth of the district population
- Large meeting spaces with operable walls for meeting space flexibility
- Building in future expansion (within the building and in planning a future addition)

As we move into the next phase of design, additional elements will be considered to augment these and support these goals.

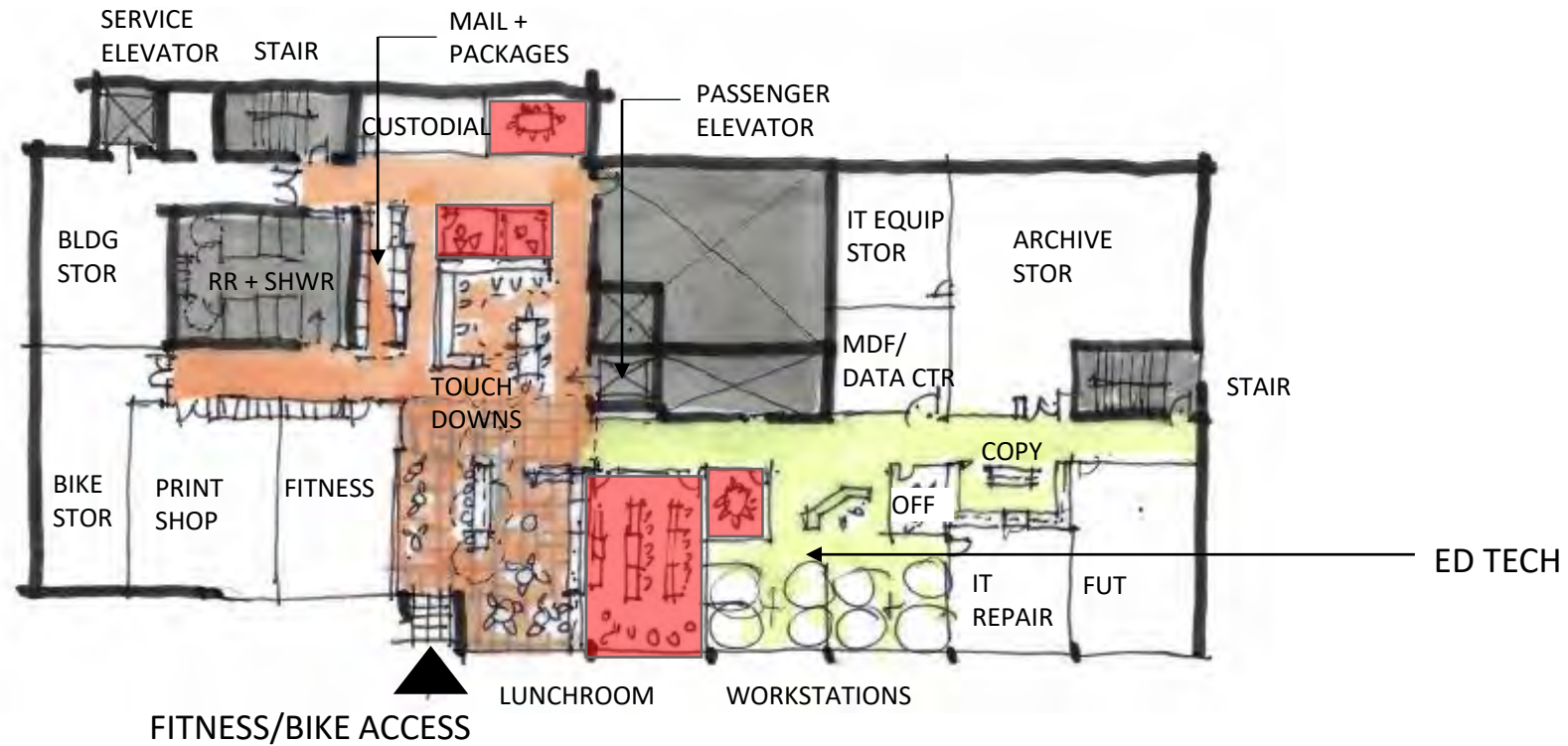
# Conceptual Space Plan – Main Level



# Conceptual Space Plan – Upper Level



# Conceptual Space Plan – Lower Level



## KEY CODE

- Core elements
- Public circulation
- Conference Center
- Staff workspace
- Meeting or Focus
- ● Design opportunity

WORKSTATIONS

# Sustainability Strategy

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# Standards

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**Washington Sustainable Schools**  
 (Founded 2005 – Collaborative for High Performing Schools)

- Oriented towards sustainability and resource efficiency while providing a flexible framework to meet local needs.



**LEED**  
 (Started 1993 – US Green Building Council – Standard developed with Natural Resources Defense Council)

- Prioritizes sustainability and resource efficiency while accommodating factors associated with personal health.



**WELL**  
 (Started 2013 – International Well Building Institute, aligned with International Living Future Institute – Living Building Challenge)

- Measures attributes of a building that impact occupant health.



**FITWEL**  
 (Launched 2016 by CfAD – Center for Active Design)

- Focused on the impact that workplace design has on occupant health and well-being.

# Menu



SUSTAINABILITY  
ENERGY  
HEALTH  
WELLNESS  
STEWARDSHIP

		SUSTAINABILITY	ENERGY	HEALTH	WELLNESS	STEWARDSHIP
Washington Sustainable Schools	Site	•				
	Water	•				
	Material + Waste	•				
	Energy		•			
	Indoor Environment			•		
	Integration + Education					•
LEED	Location + Transportation	•				
	Sustainable Sites	•				
	Water Efficiency	•				
	Energy + Atmosphere		•			
	Materials + Resources	•				
	Indoor Environment				•	
	Innovation					•
	Regional Priority					•
WELL	Air				•	
	Water				•	
	Nourishment				•	
	Light				•	
	Fitness			•		
	Comfort			•		
FITWEL	Wellbeing			•		
	Healthy Food				•	
	Occupant Safety			•		
	Social Equity			•		
	Reduced Absenteeism			•		
	Community Health					•

# Sustainability

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- Provide connections to public transportation and bicycle lanes / trails
- Provide electric vehicle charging stations
- Divert construction waste from landfill
- Minimize building footprint
- Reduce heat islands (high reflectance) at site and roof surfaces
- Reduce light pollution (minimize light trespass, utilize sensors / timers)
- Provide drought-tolerant native landscaping to reduce irrigation water use
- Reduce potable water use at building interior with water-efficient fixtures
- Provide stormwater management / Low-Impact Development (LID) practices
- Utilize recycled content in building materials
- Utilize local / regional materials



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# Energy

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- Provide occupant sensors and daylight-responsive lighting controls
- Provide daylighting for occupied spaces
- Provide enhanced commissioning of building systems prior to occupancy
- Reduce energy loads in heating and cooling system beyond code requirements
- Provide opportunities for natural ventilation
- Provide HVAC controls that enable individual occupant comfort
- Explore opportunities for renewable energy (solar hot water / photovoltaics)



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**Green** indicates project goals or code-mandated prerequisites

# Health

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- Provide access to outdoor views for building occupants
- Provide HVAC filtration to minimize indoor pollutants
- Specify low-VOC and low-emitting fixtures and finishes
- Implement construction-phase indoor air quality management plan
- Provide staff shower and changing facilities
- Establish and implement a tobacco- and smoke-free policy
- Provide secure and covered (or interior) bicycle storage
- Provide permanently-installed shading devices at building exterior
- Provide tunable (color-adjustable) lighting fixtures
- Implement a cleaning protocol for occupied spaces



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# Wellness

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- Provide a publicly-accessible use at the ground floor level
- Provide stairways connecting all building floors, locate in a prominent position
- Orient main building entrance towards an outdoor pedestrian area
- Provide prominently-located water bottle filling stations for building occupants
- Provide on-site lactation room
- Provide dedicated spaces for mindfulness – break, exercise, and quiet rooms
- Incorporate biophilic-design strategies – provide connections to nature
- Provide regular occupants access to outdoor amenities (gardens)
- Incentivize transit use
- Provide educational signage promoting stair use at all elevator landings
- Provide and promote active workstations for building occupants
- Establish healthy food and beverage policies and provide healthy snack bar for building occupants



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# Stewardship

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- Provide a balanced use of public resources for program and budget
- Building as Learning Laboratory for education of occupants and visitors
- Conduct post-occupancy evaluations for building users
- Provide building energy usage monitoring and educational information
- Establish and implement a comprehensive emergency preparedness plan for building occupants
- Provide waste management plan for recycling and food waste / compostable materials
- Implement green cleaning policy and program
- Implement environmentally preferable supply purchasing policy



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# Discussion Topics

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What's important to you?

- **Reduced energy usage?** (Mechanical equipment and lighting fixtures that outperform code requirements)
- **Solar energy production?** (Rooftop solar photovoltaics)
- **Sustainable materials?** (High-recycled content or renewable resources)
- **Natural ventilation?** (Occupant-controlled windows)
- **Biophilic-design?** (Bringing nature in, providing connections and views out)
- **Local / regional materials?** (Promoting local economy)
- **Or...?**

# Next Steps

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# Next Steps

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1. Prepare the Design Brief for Review and sign-off (a workplace equivalent to Ed Specs)
  - Introduction – why this project, participants, project description
  - Goals – organization + project
  - Design narrative
  - Quantitative Program – space summary
2. Estimate of cost under development
3. Building systems design narrative being developed