

**Board of Commissioners**

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Charlotte J. Nash, Chairman  
Jace W. Brooks, District 1  
Lynette Howard, District 2  
Tommy Hunter, District 3  
John Heard, District 4

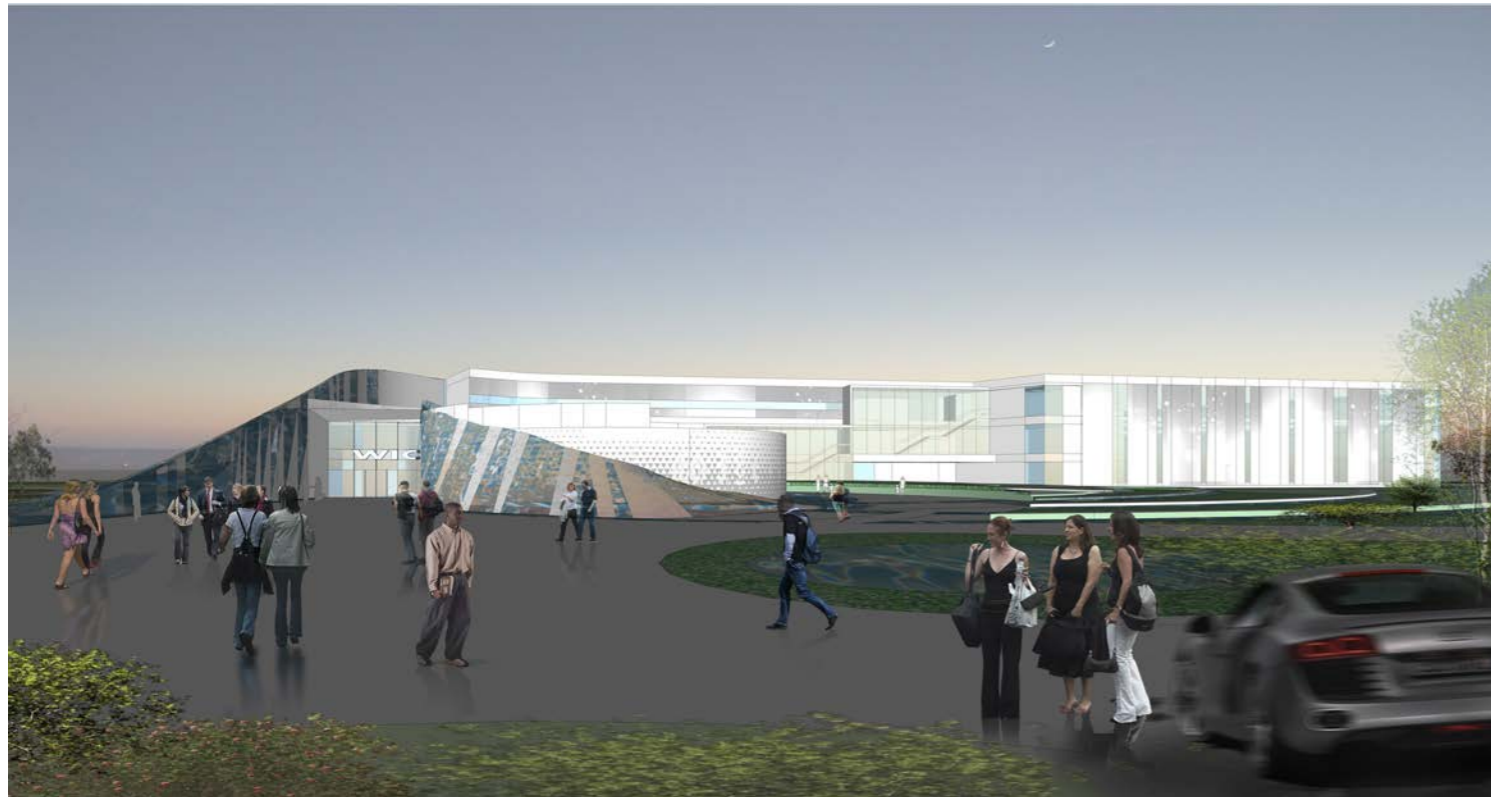


**Official**  
**Informal Briefing Minutes**  
**Tuesday, September 5, 2017 – 3:00 PM**  
**Present: Charlotte J. Nash, Lynette Howard, Tommy Hunter**  
**Absent: Jace Brooks, John Heard**

- I. **Water Resources**  
Water Innovation Center  
Chuck Button and design staff from Jacobs presented conceptual designs for a planned Water Innovation Center. No Official Action Taken.

# GWINNETT COUNTY WATER INNOVATION CENTER CONCEPTUAL DESIGNS REVIEW

SEPTEMBER 5, 2017



GWINNETT COUNTY WATER INNOVATION CENTER

SEPTEMBER 5, 2017

## **AGENDA**

SITE ANALYSIS

REVIEW OF CONCEPTUAL DESIGN

- OPTION 1

- OPTION 2

FEEDBACK ON OPTIONS

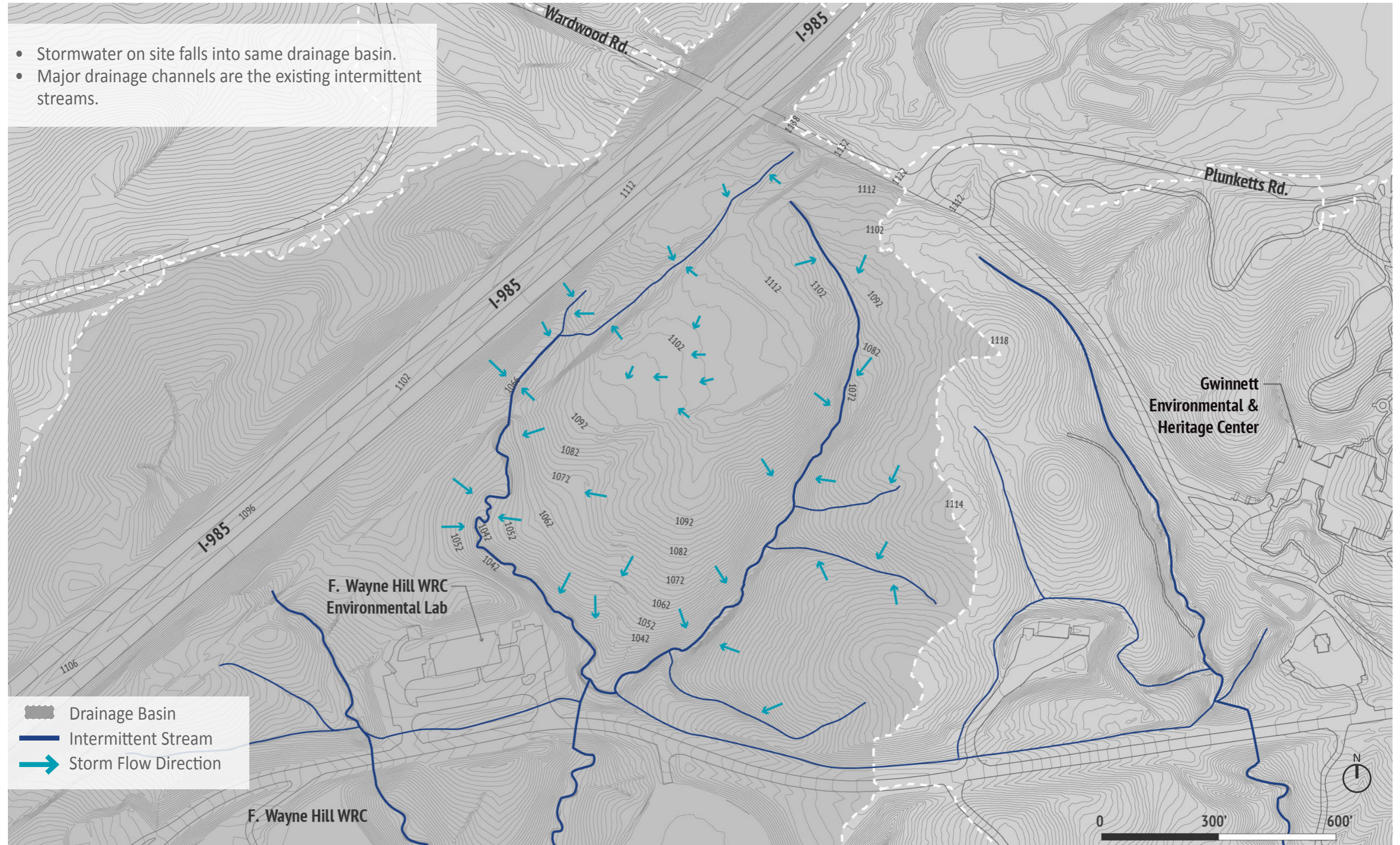
## SITE ANALYSIS: ADJACENCIES

- Next to I-985.
- F. Wayne Hill WRC and Gwinnett Environmental & Heritage Center are within walking distance.
- Opportunity to compliment existing trail system.



# SITE ANALYSIS: HYDROLOGY

- Stormwater on site falls into same drainage basin.
- Major drainage channels are the existing intermittent streams.



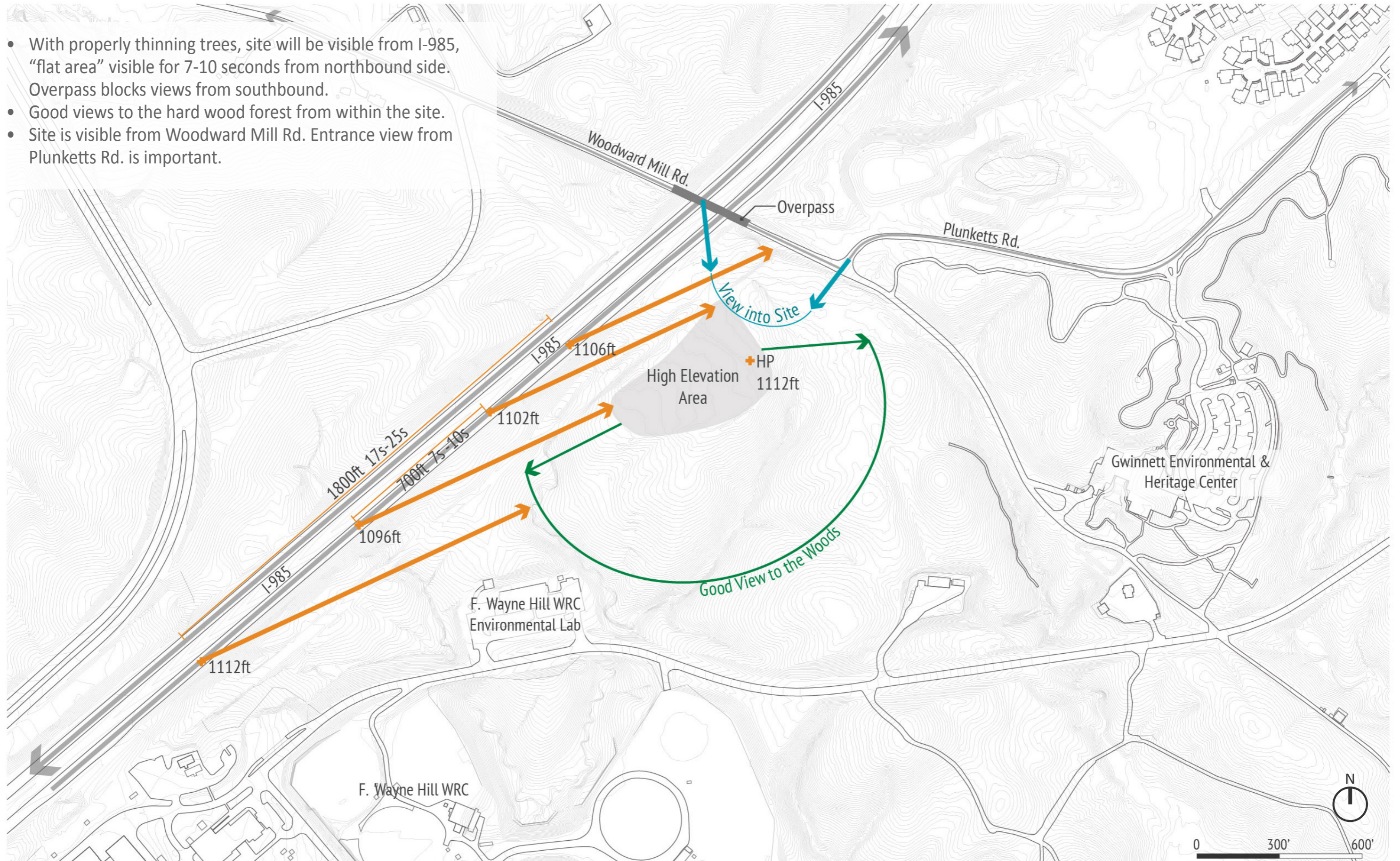
# SITE ANALYSIS: VEGETATION COVER

- Lower value pine trees in the “flat area”.
- Mixed Oak-Hickory successional forest and pine trees in some areas.
- Good Oak-Hickory successional forest in the sloped area of the site.



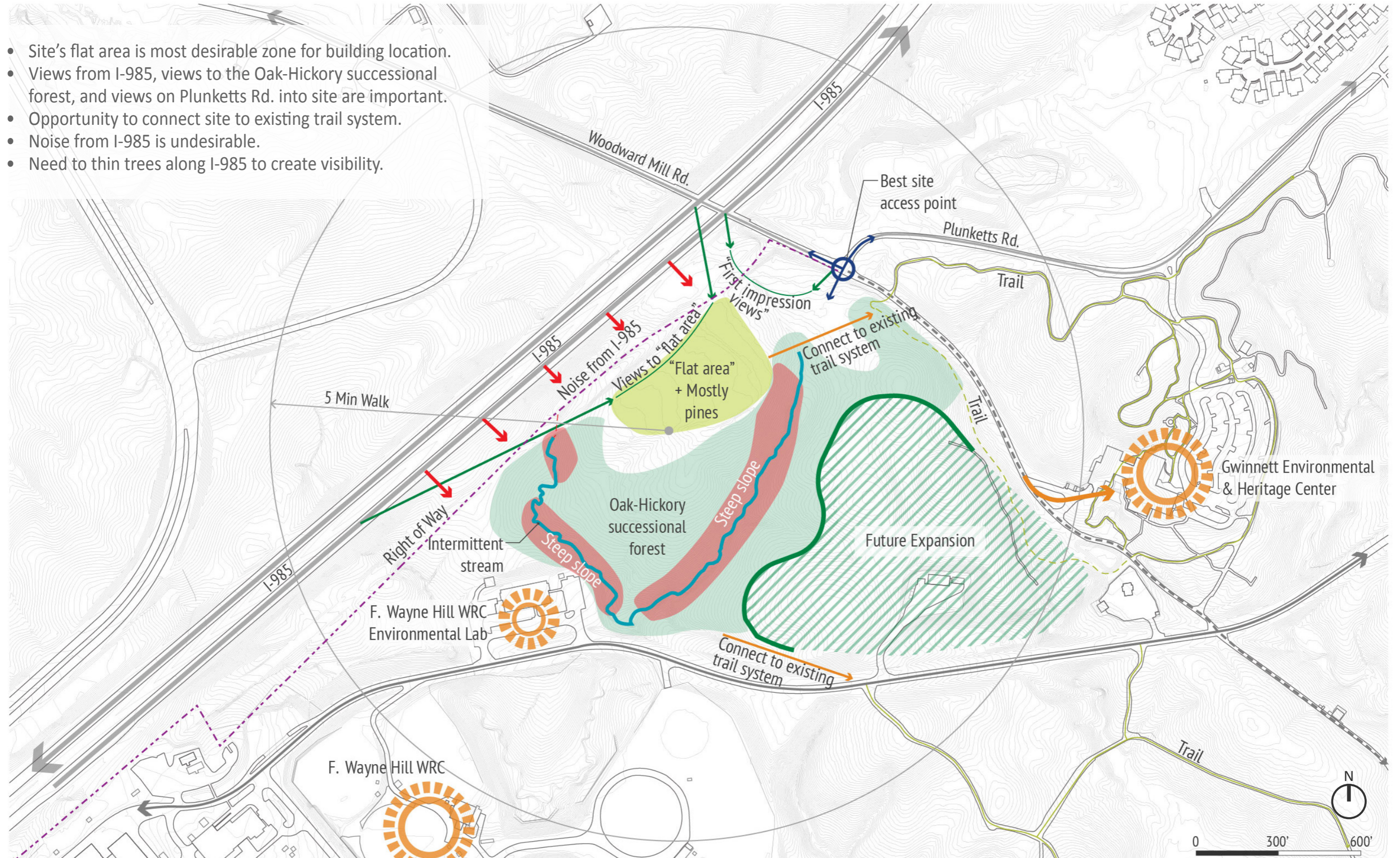
# SITE ANALYSIS: VIEWS

- With properly thinning trees, site will be visible from I-985, “flat area” visible for 7-10 seconds from northbound side. Overpass blocks views from southbound.
- Good views to the hard wood forest from within the site.
- Site is visible from Woodward Mill Rd. Entrance view from Plunketts Rd. is important.



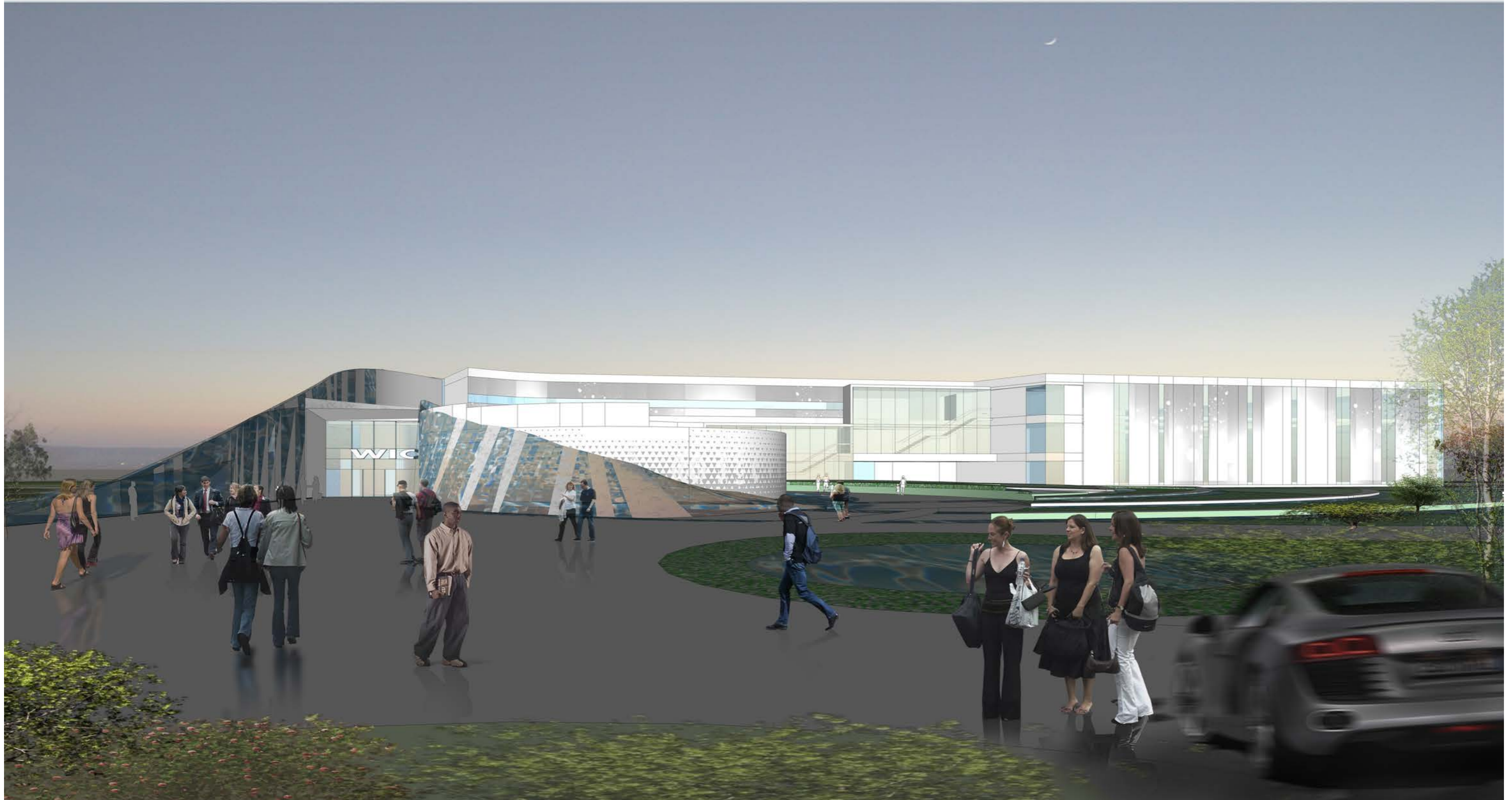
# SITE ANALYSIS: CONSTRAINTS AND OPPORTUNITIES

- Site's flat area is most desirable zone for building location.
- Views from I-985, views to the Oak-Hickory successional forest, and views on Plunketts Rd. into site are important.
- Opportunity to connect site to existing trail system.
- Noise from I-985 is undesirable.
- Need to thin trees along I-985 to create visibility.



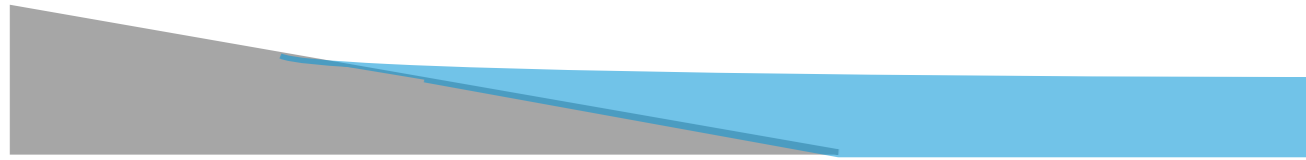


GWINNETT COUNTY WATER INNOVATION CENTER  
CONCEPTUAL DESIGN - OPTION 1

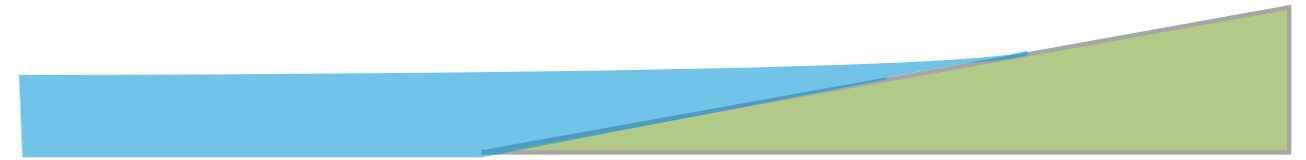


# INSPIRATION FOR CONCEPTUAL DESIGN - OPTION 1

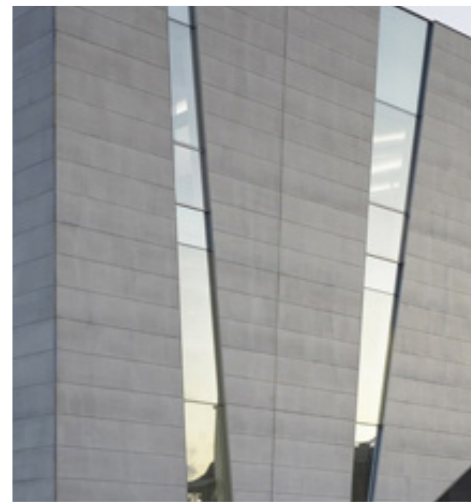
- WALL METAMORPHOSIS



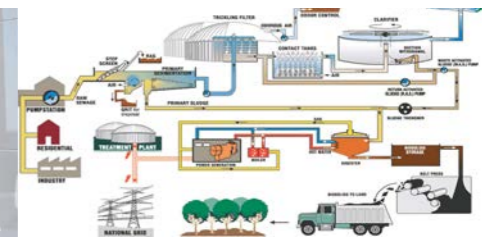
- WATER METAMORPHOSIS



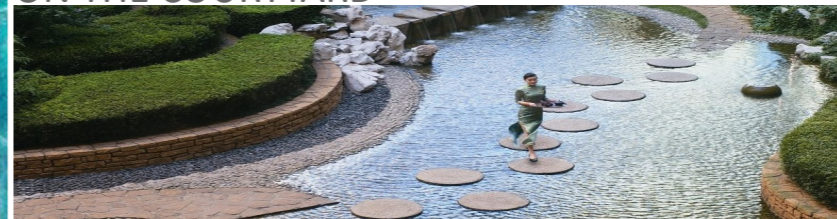
STONE - GLASS - WATER



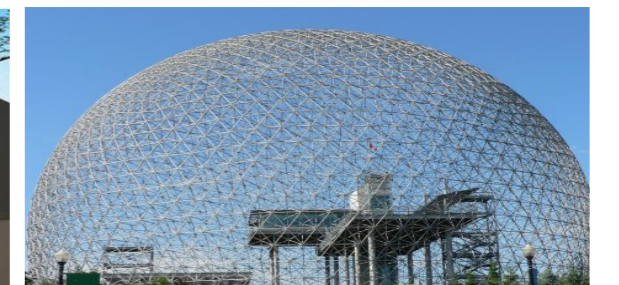
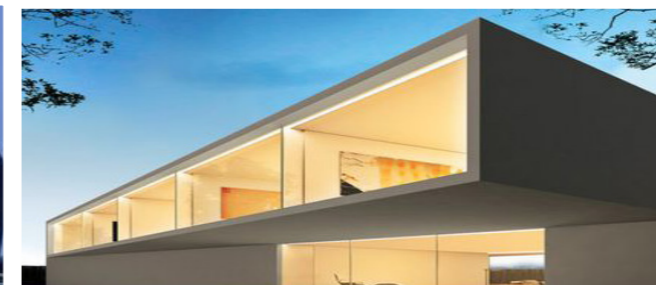
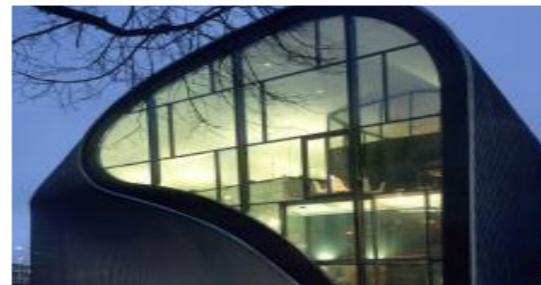
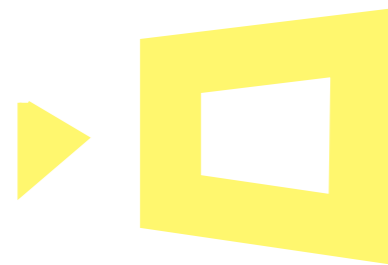
INSIDE THE BUILDING



ON THE COURTYARD



- LOOK INSIDE THE BUILDING



# SITE PLAN

**Pros:**

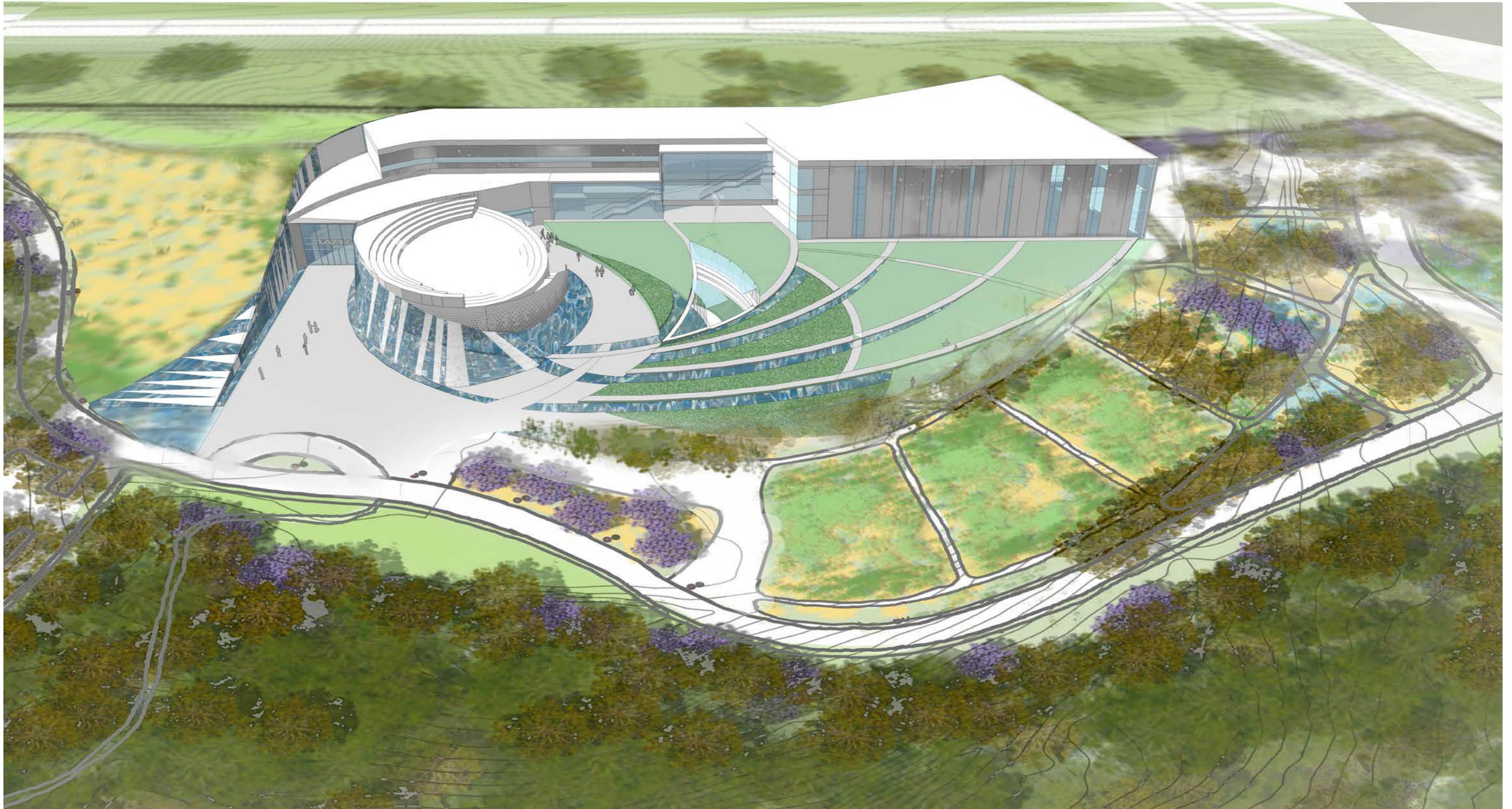
- Building has good visibility from I-985
- Internal courtyard enclosed
- Maximizes Water Facility expansion area
- Parking adjacent to building (both sides)

**Cons:**

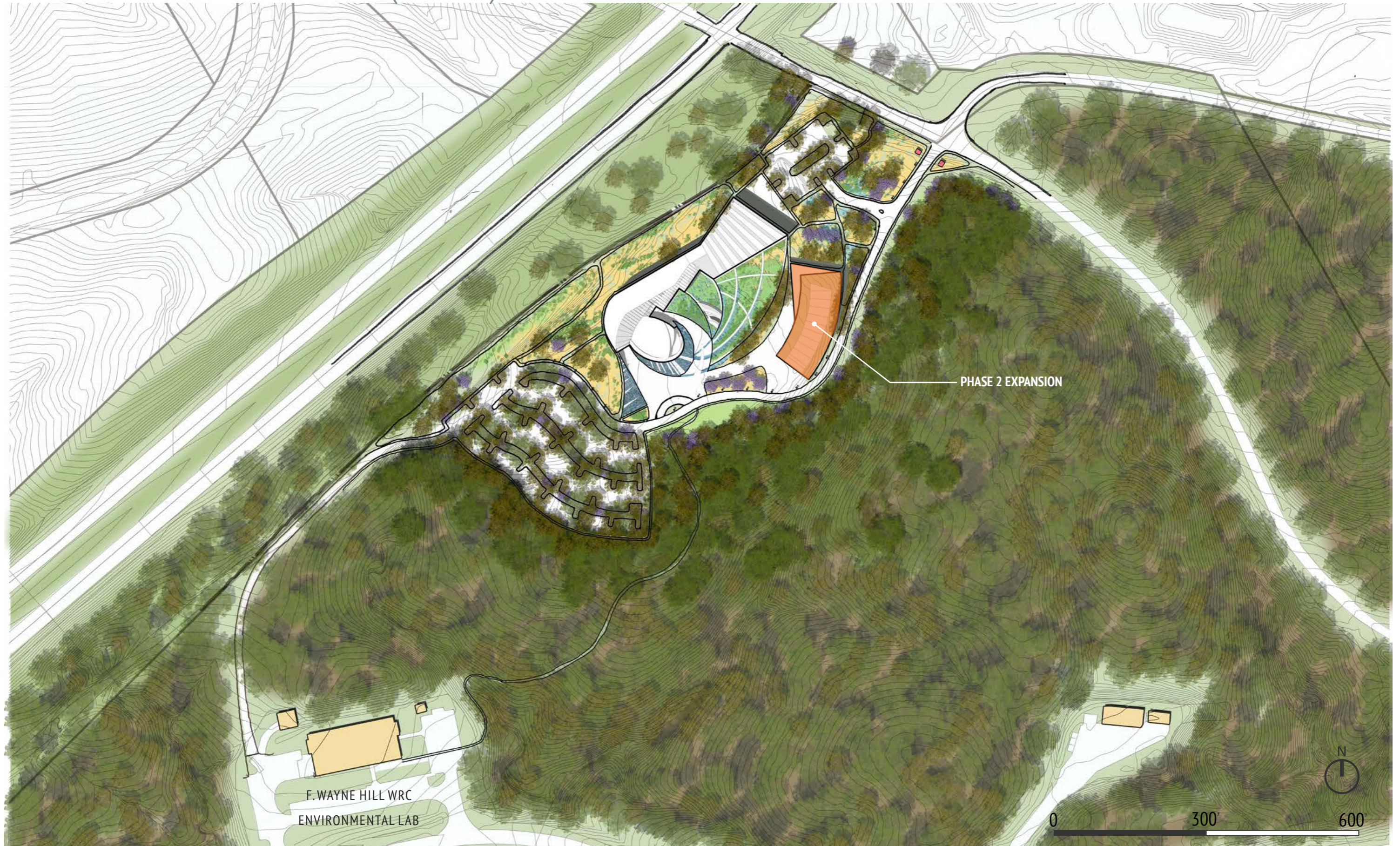
- Parking at foreground of building
- Parking split into two zones



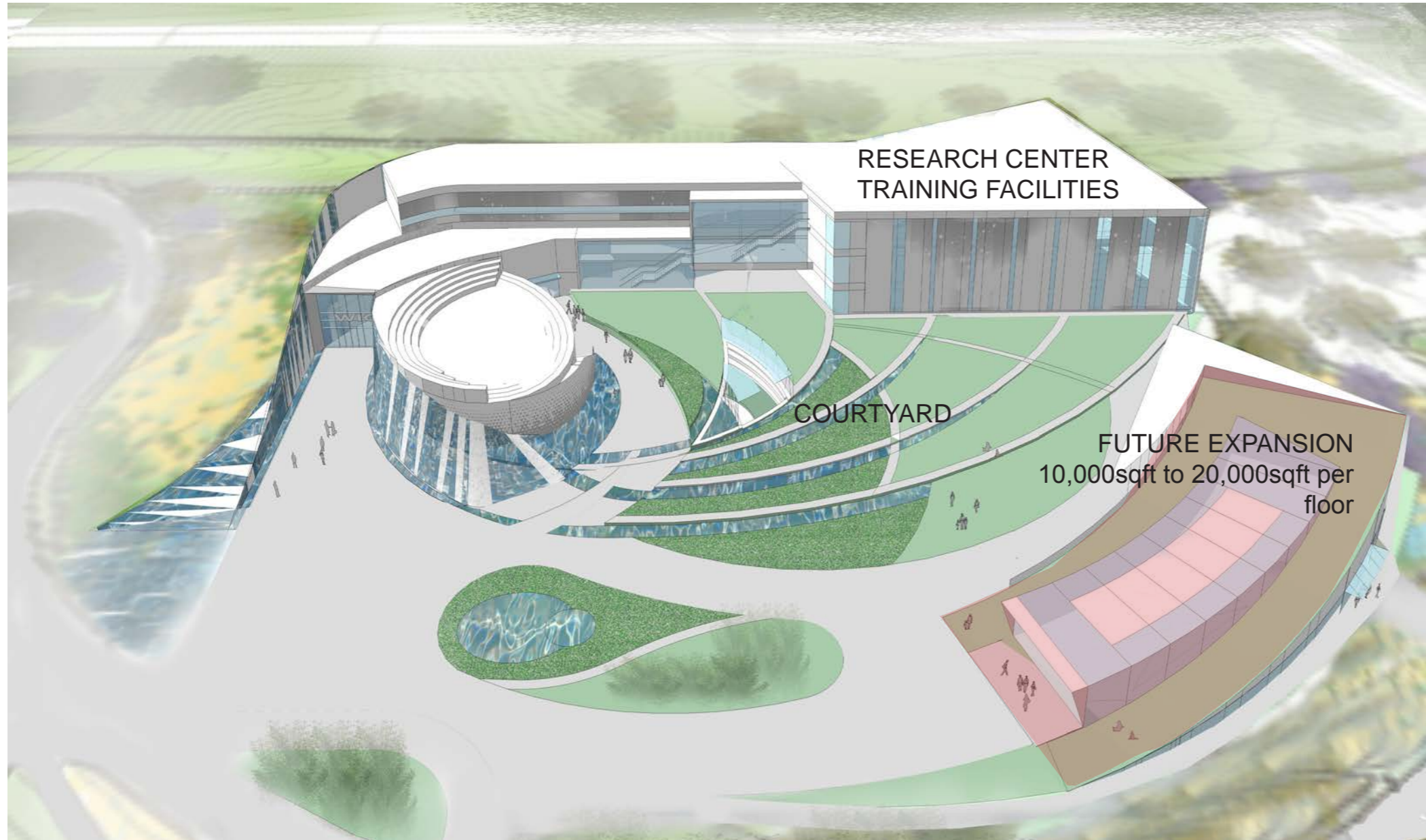
AXON VIEW



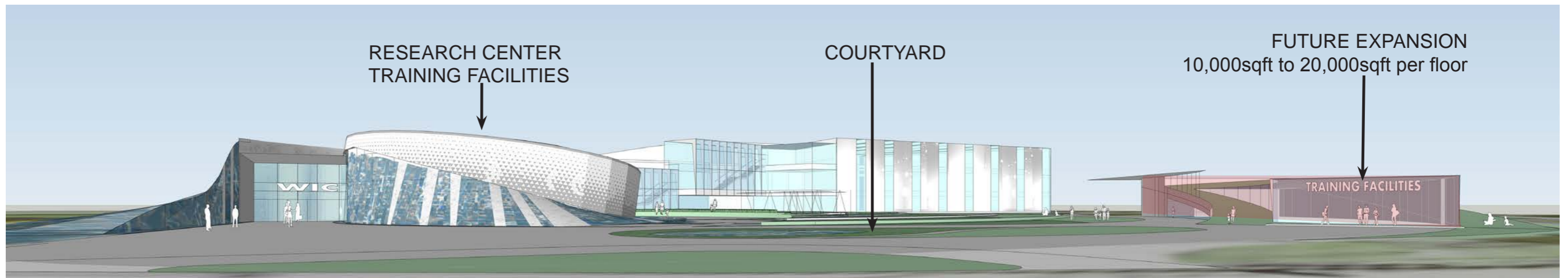
# SITE PLAN - WITH FUTURE EXPANSION (PHASE 2)



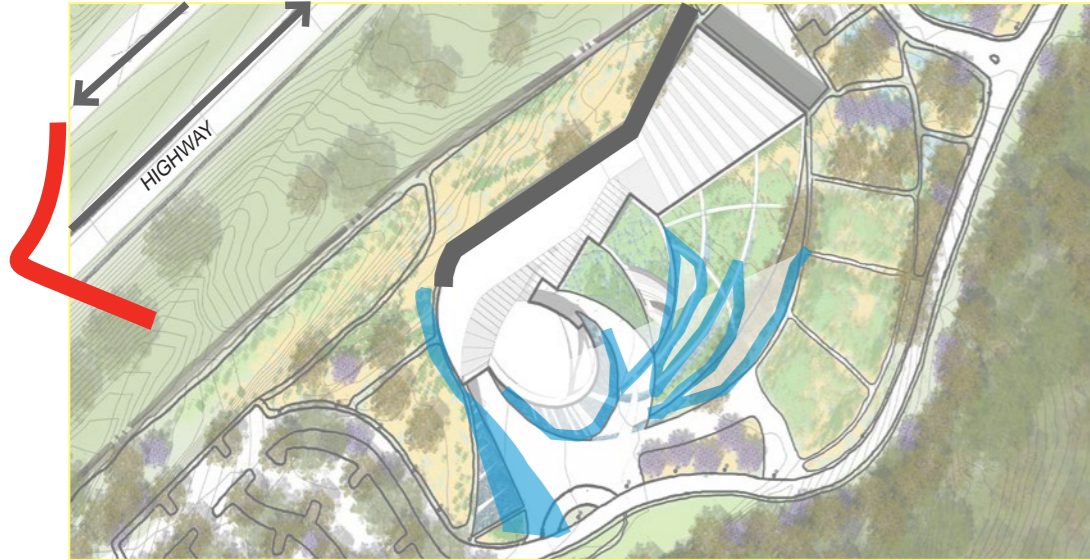
# CREATING THE CAMPUS- WITH FUTURE EXPANSION (PHASE 2)



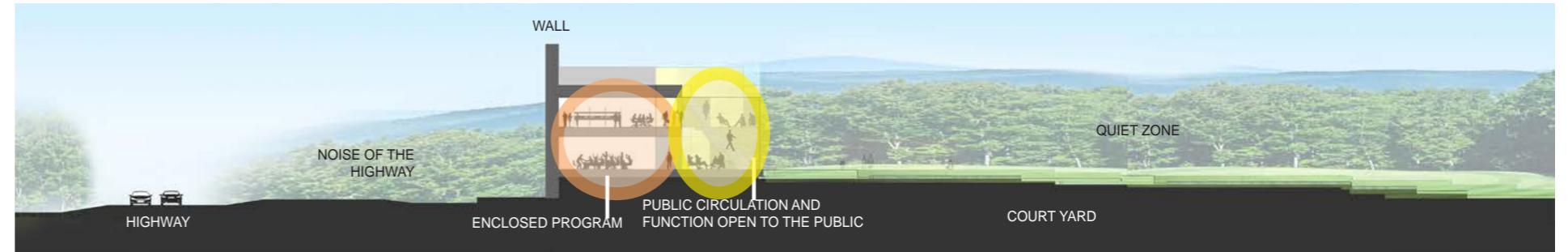
plan functional diagram



## VIEW FROM THE HIGHWAY



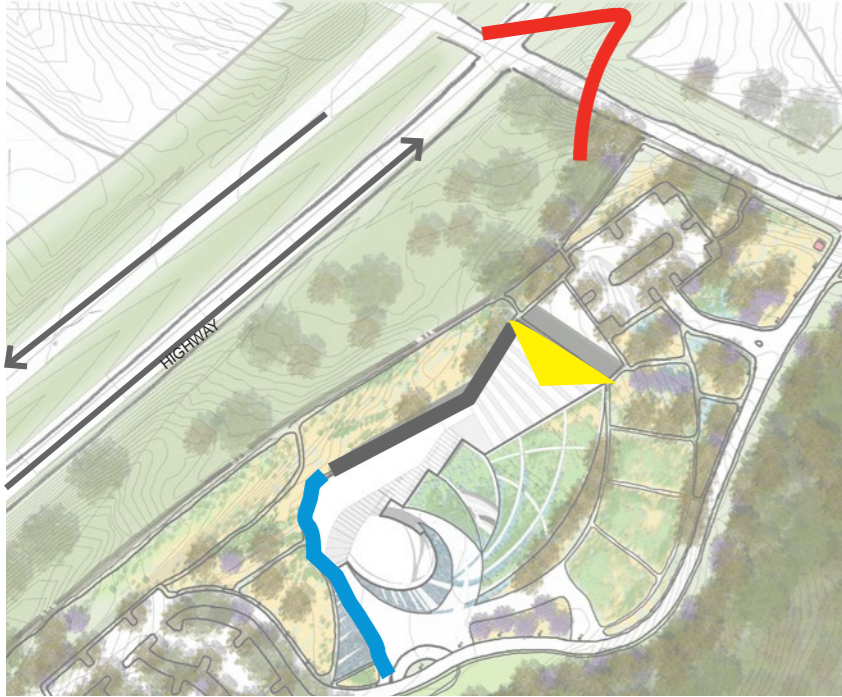
- WALL - ELONGATED FAÇADE PROVIDES EXTENDED VISIBILITY OF THE HIGHWAY
- WALL - PROTECTS FROM HIGHWAY NOISE
- WALL - CREATING AN ICONIC IMAGE VISIBLE FROM HIGHWAY



## wall metamorphosis



VIEW FROM THE HIGHWAY BRIDGE



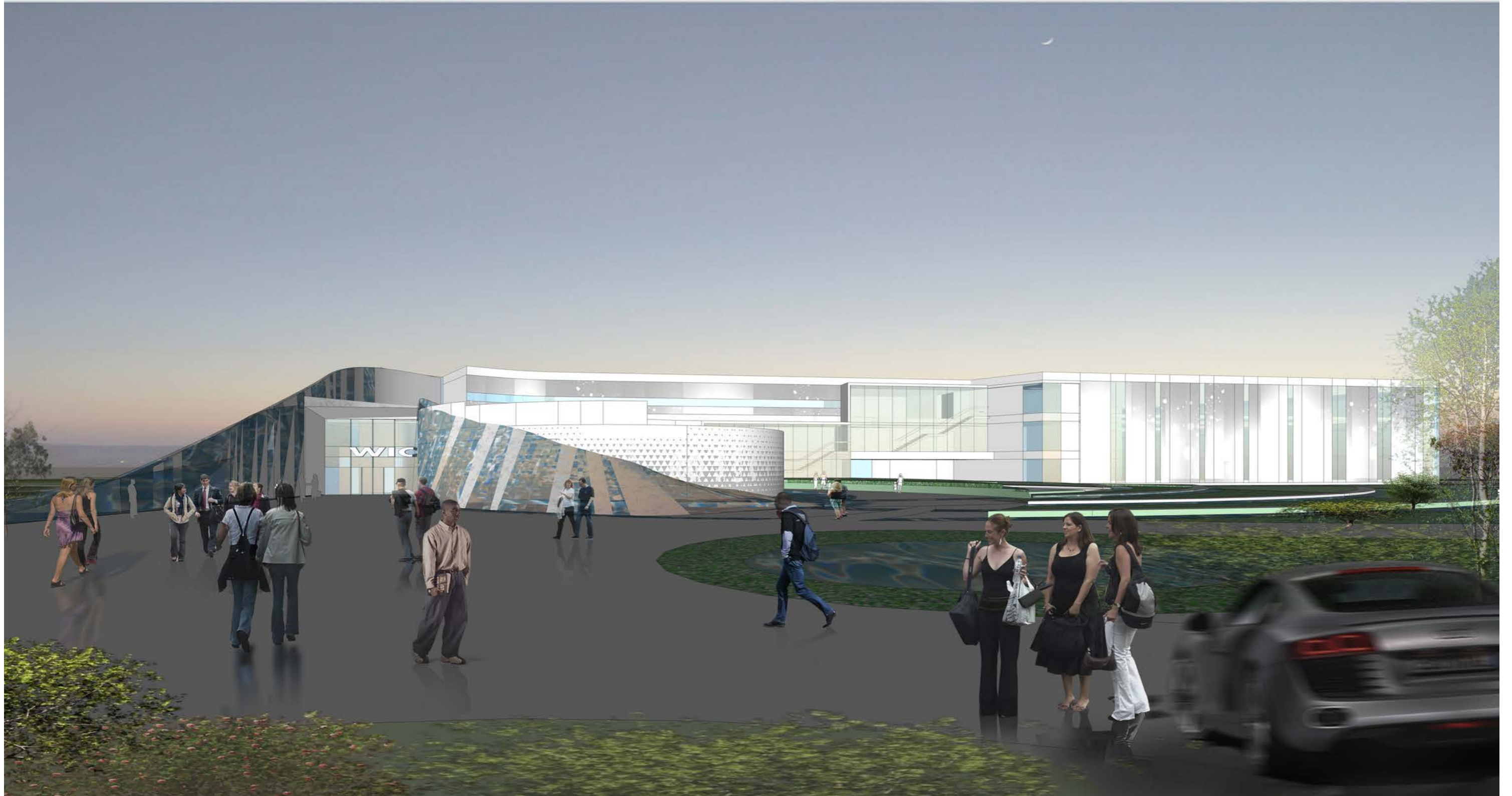
look inside the pilot lab





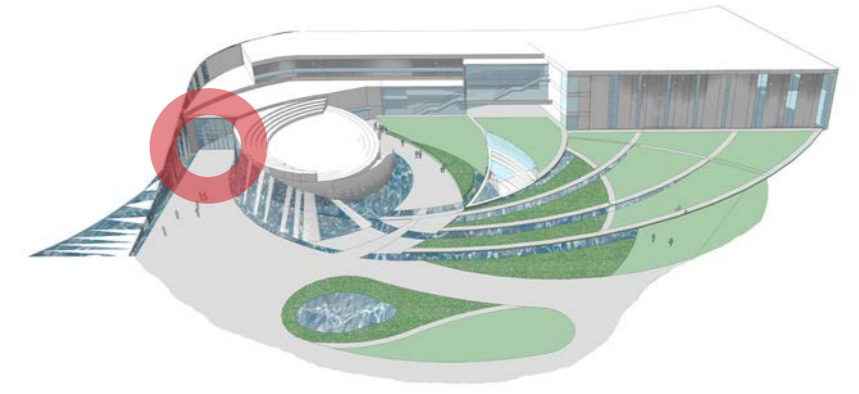
ENTRANCE VIEW TO CAMPUS

view of the main drop off area



# VISITOR EXPERIENCE

Going through visitors pavilion



main entrance

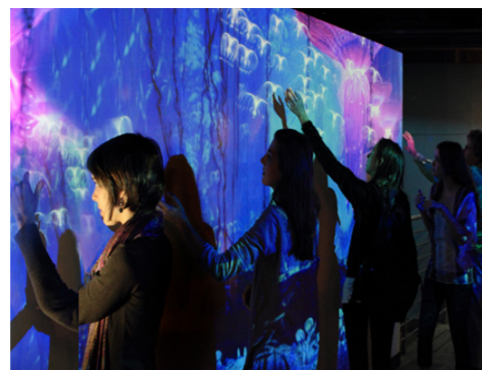


water wall

digital information wall

exhibition stands

auditorium

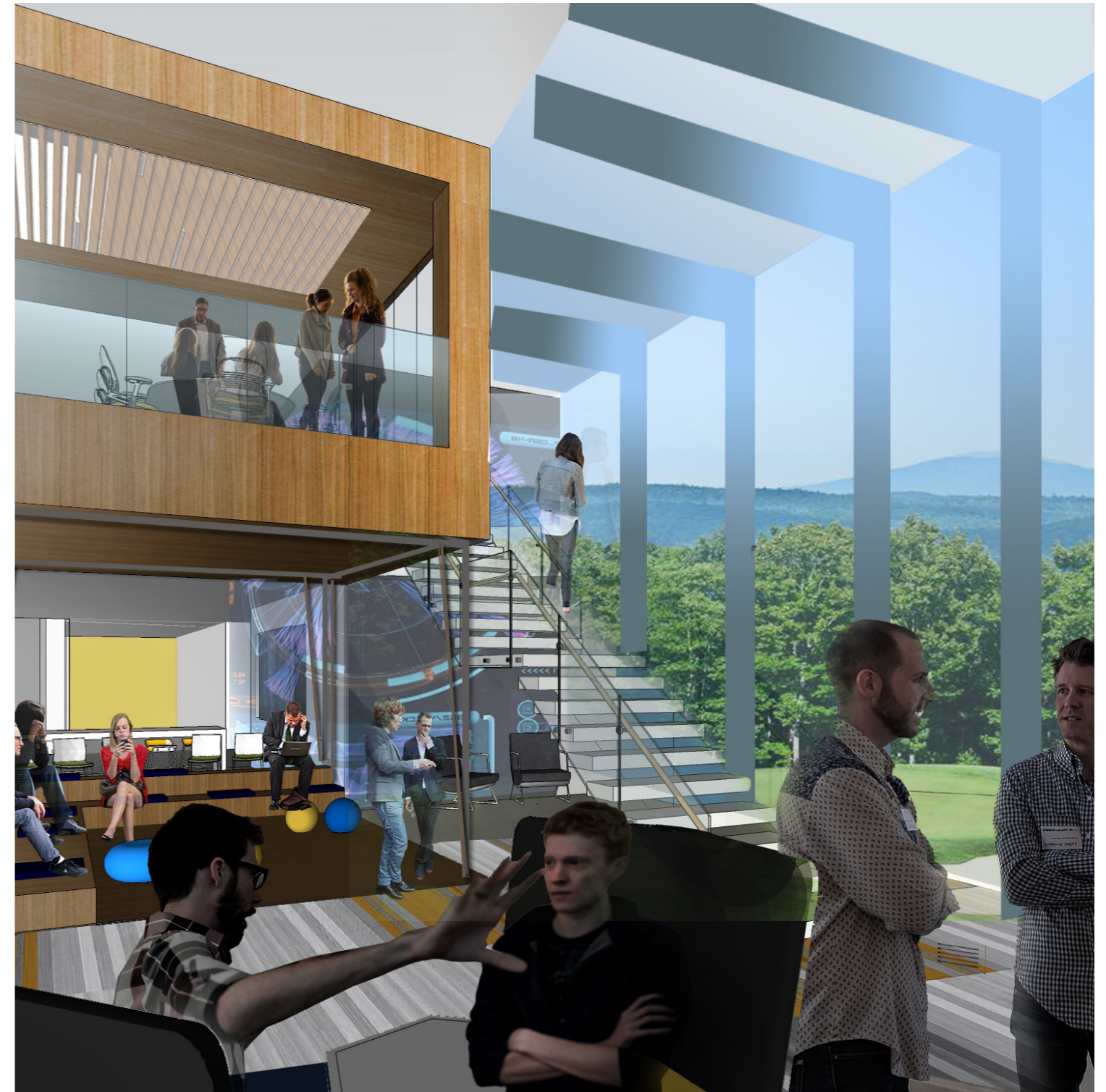


# USER/VISITORS EXPERIENCE

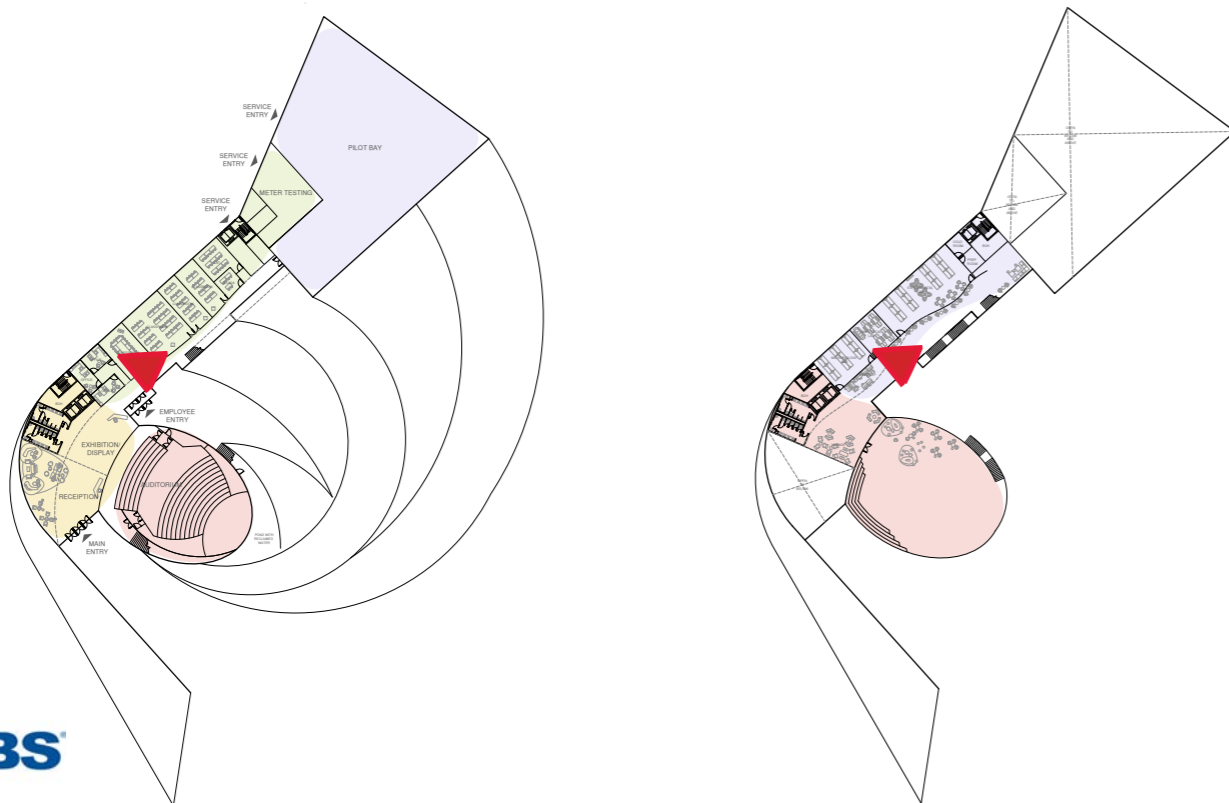
- collaborative engagement innovated environment
- daylight and outdoor connection



View of the first floor to the atrium

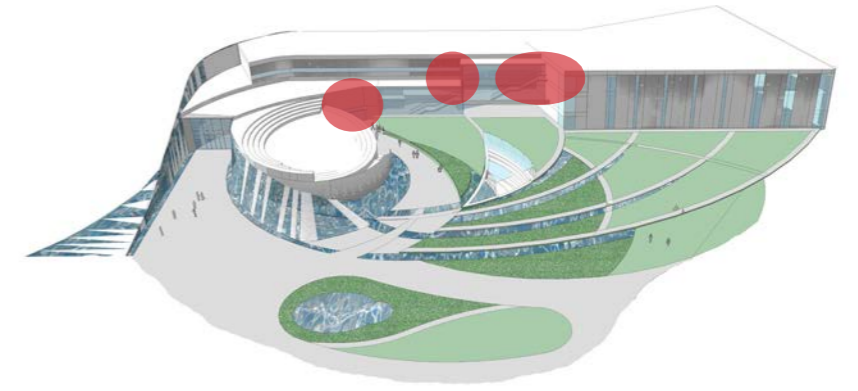


View of the second floor to the atrium



# VISITOR EXPERIENCE

All functions are organized along main axis, allowing the building to merge with its surroundings - creating views to the park, access to daylight and optimizing internal connections



labs / workspace



atriums



walk around pilot lab



workspace



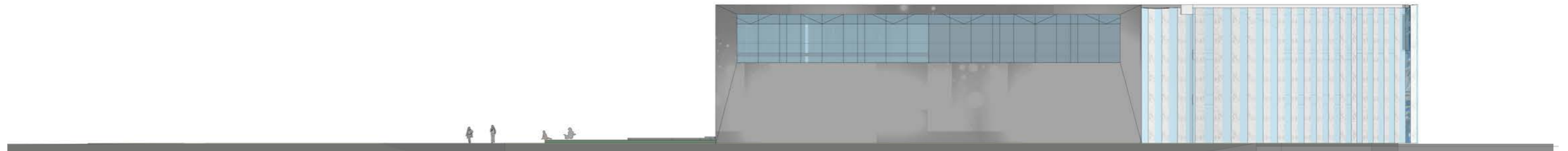
dining terrace



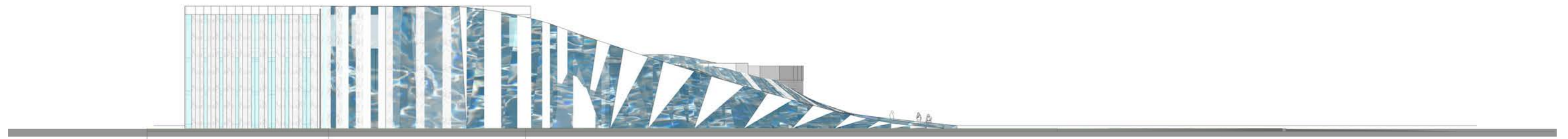
ELEVATIONS



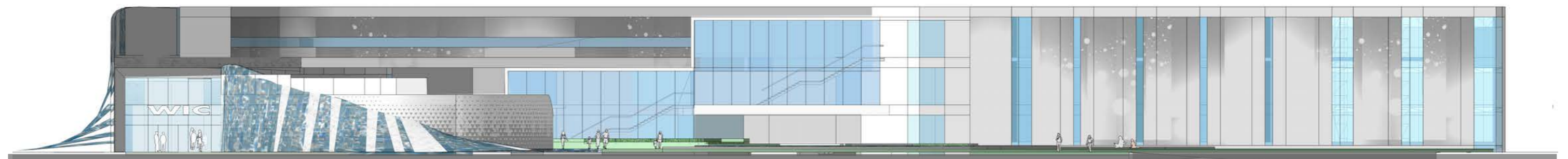
north - west elevation



north - east elevation



south - west elevation



south - east elevation

# FIRST FLOOR PLAN

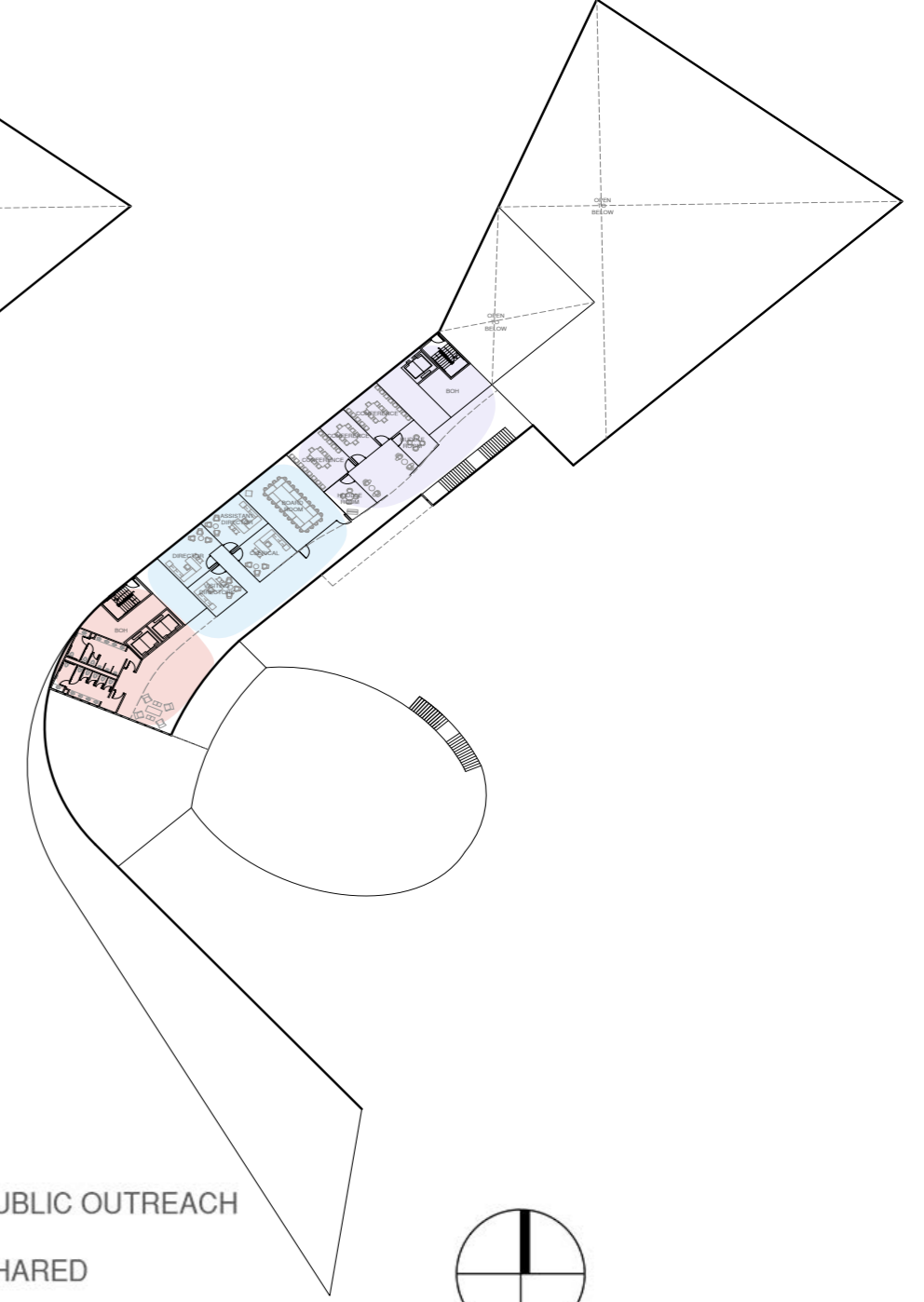
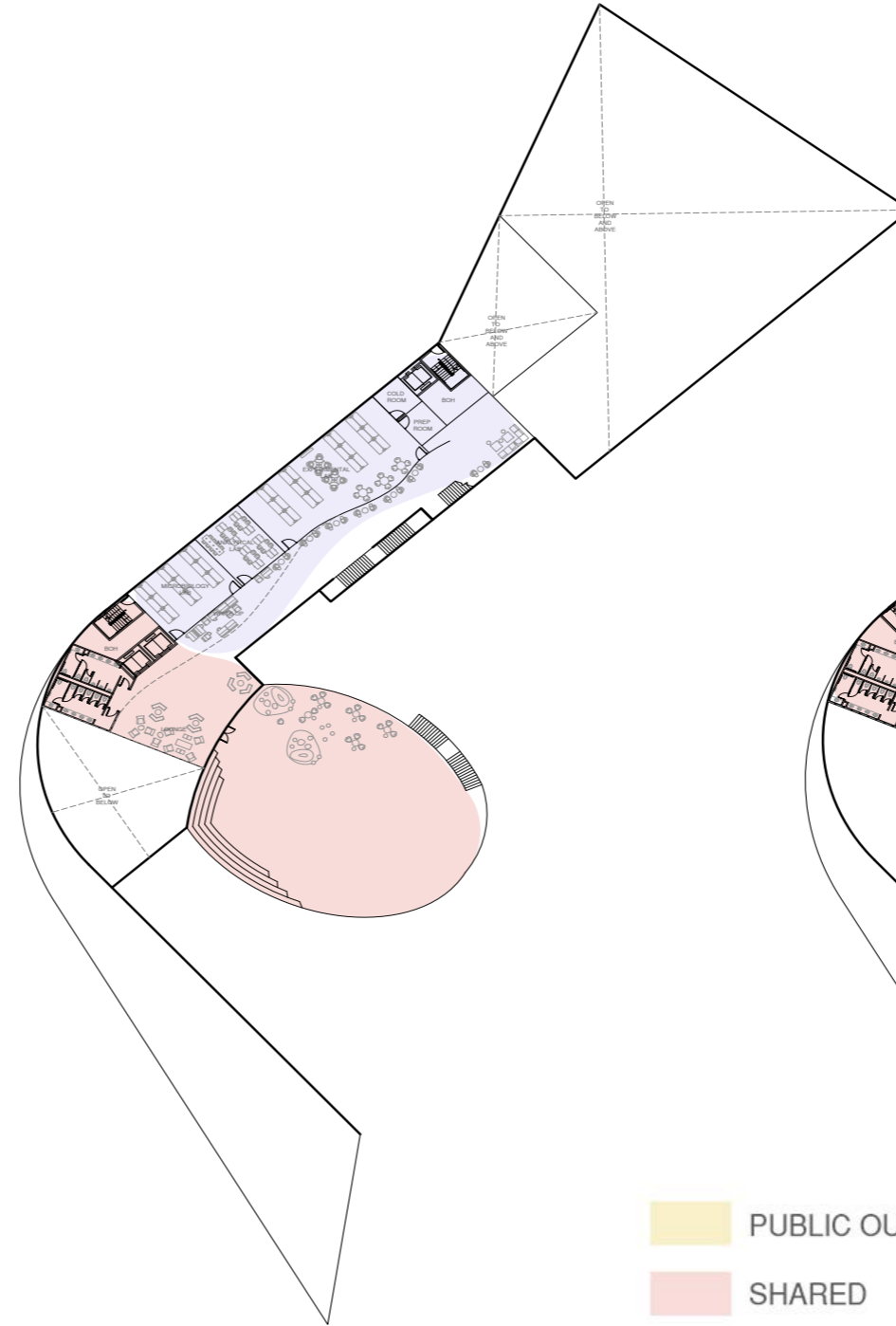
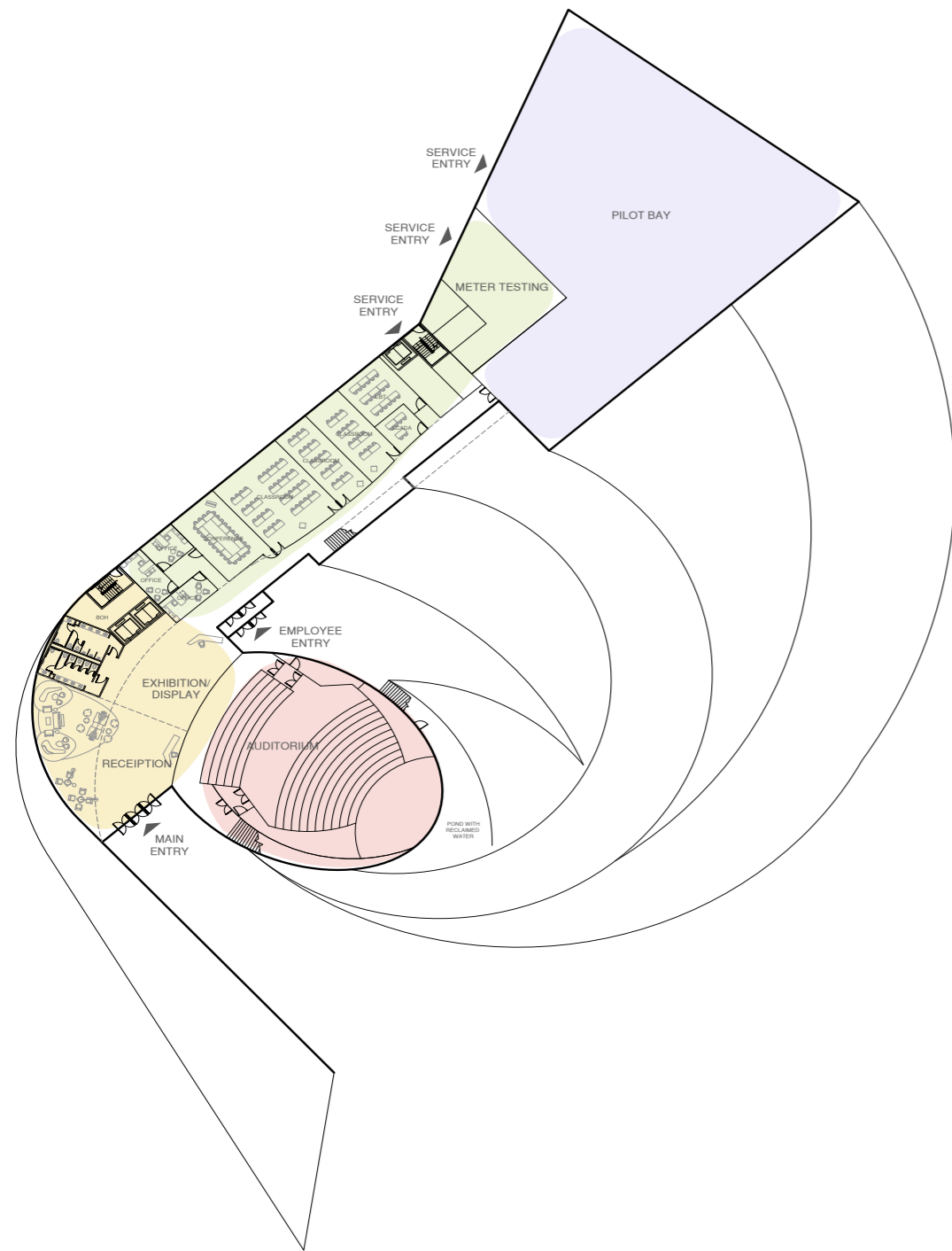
Visitor Pavilion  
Auditorium  
Training Facilities  
Pilot Lab

# SECOND FLOOR PLAN

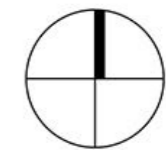
Dining Area  
Outside Terrace  
Research Labs

# THIRD FLOOR PLAN

Research Facilities -  
Offices and Conference Space  
Administration



- PUBLIC OUTREACH
- SHARED
- RESEARCH
- TRAINING
- ADMINISTRATION



# GWINNETT COUNTY WATER INNOVATION CENTER

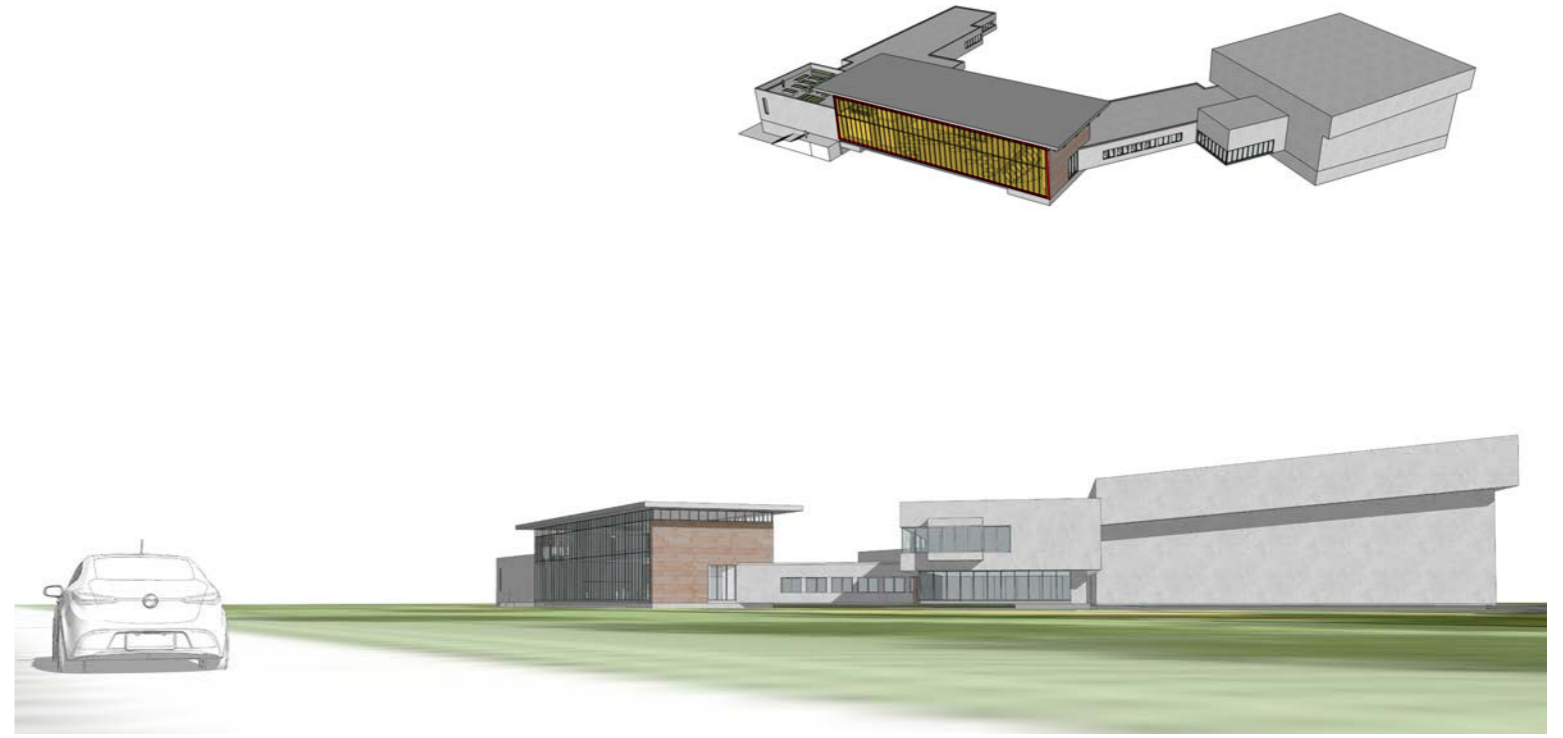
## CONCEPTUAL DESIGN - OPTION 2



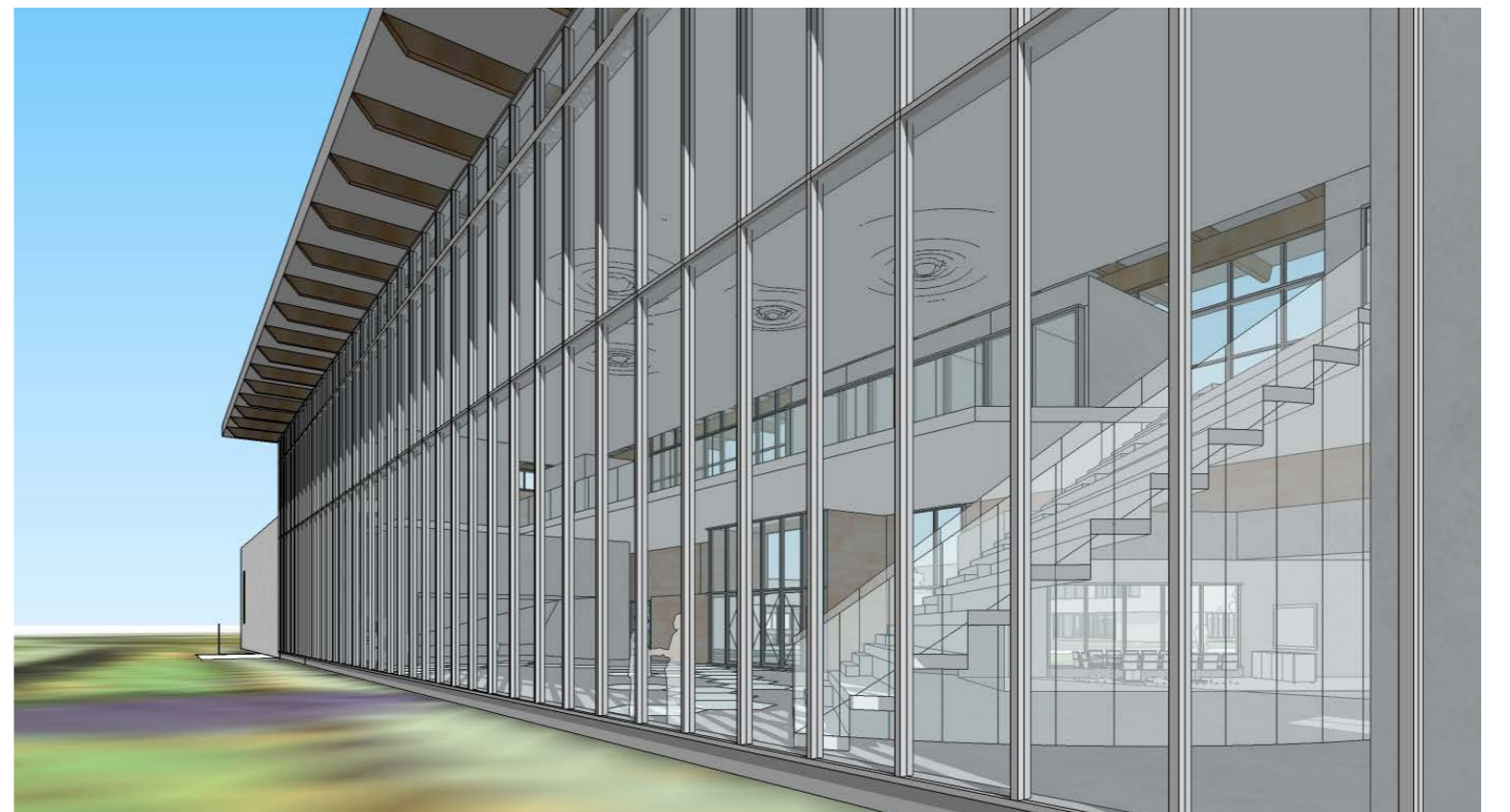
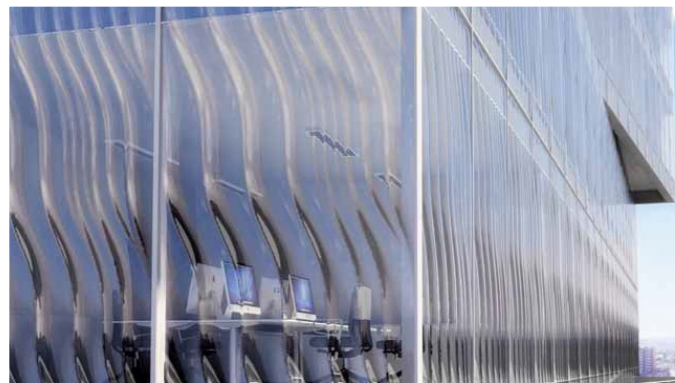
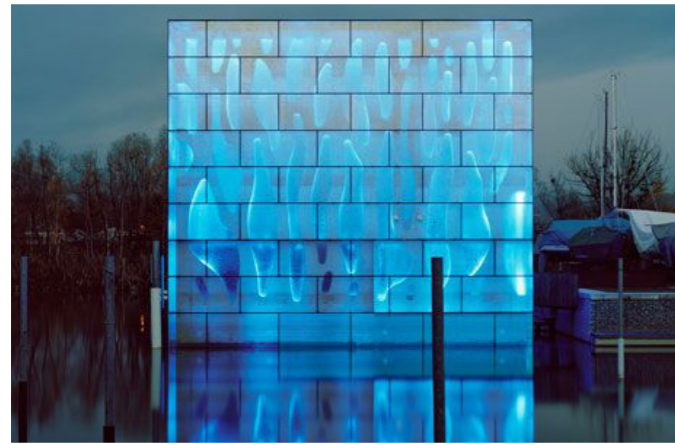
# INSPIRATION FOR CONCEPTUAL DESIGN - OPTION 2

## VISIBILITY FROM HIGHWAY - GLASS BOX

**Totally opening the activities to the view of passing traffic**



## Glazed lobby - water display / functional gathering space





# SITE PLAN

## Pros:

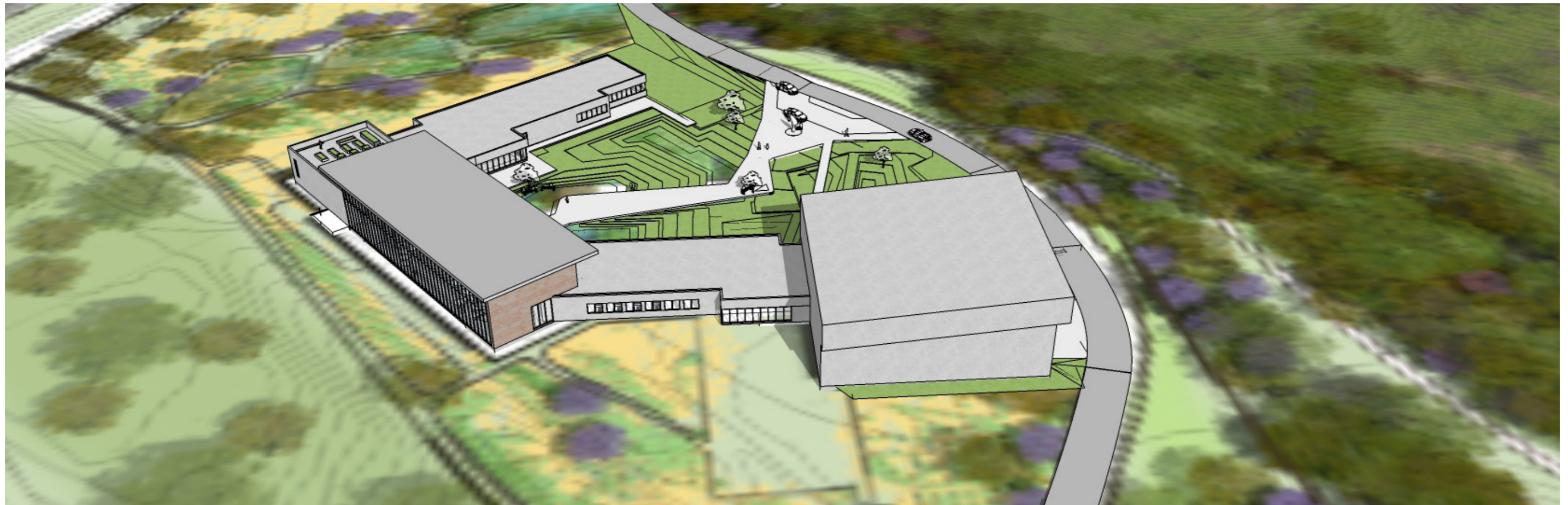
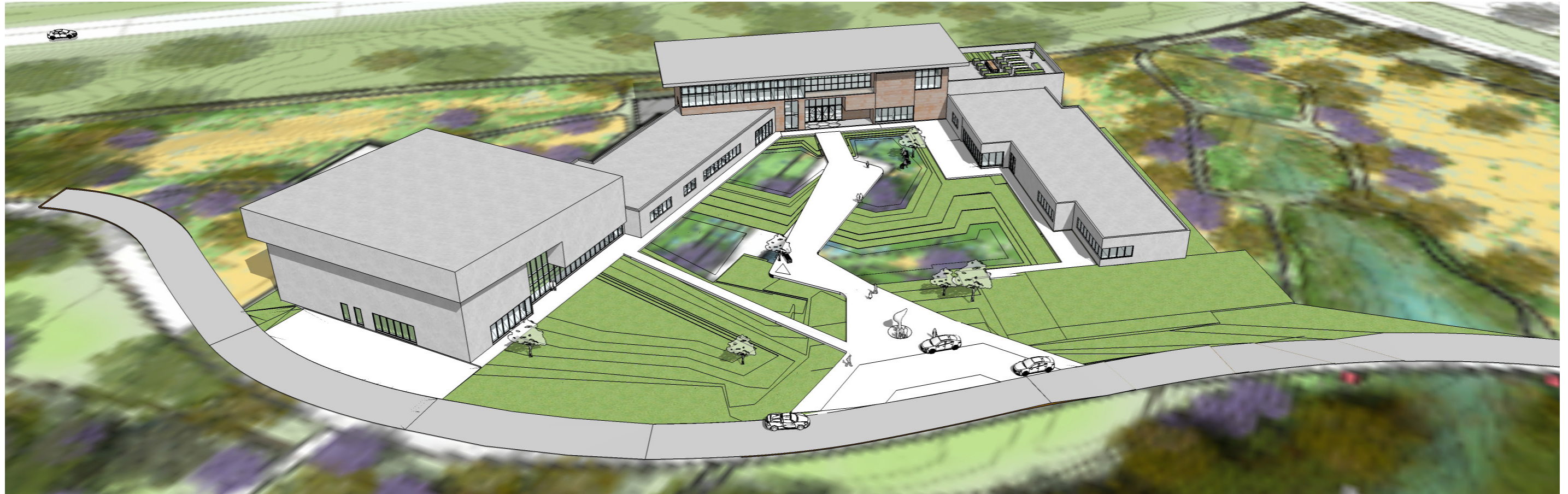
- Building has good visibility from I-985
- Building courtyard opens to woodland
- Natural landscape/BMP showcase at site entry
- Rich visitor arrival sequence
- Minimal vehicle/pedestrian conflict
- Keeps most construction out of mixed hardwoods

## Cons:

- Parking farther from building



AERIAL VIEW



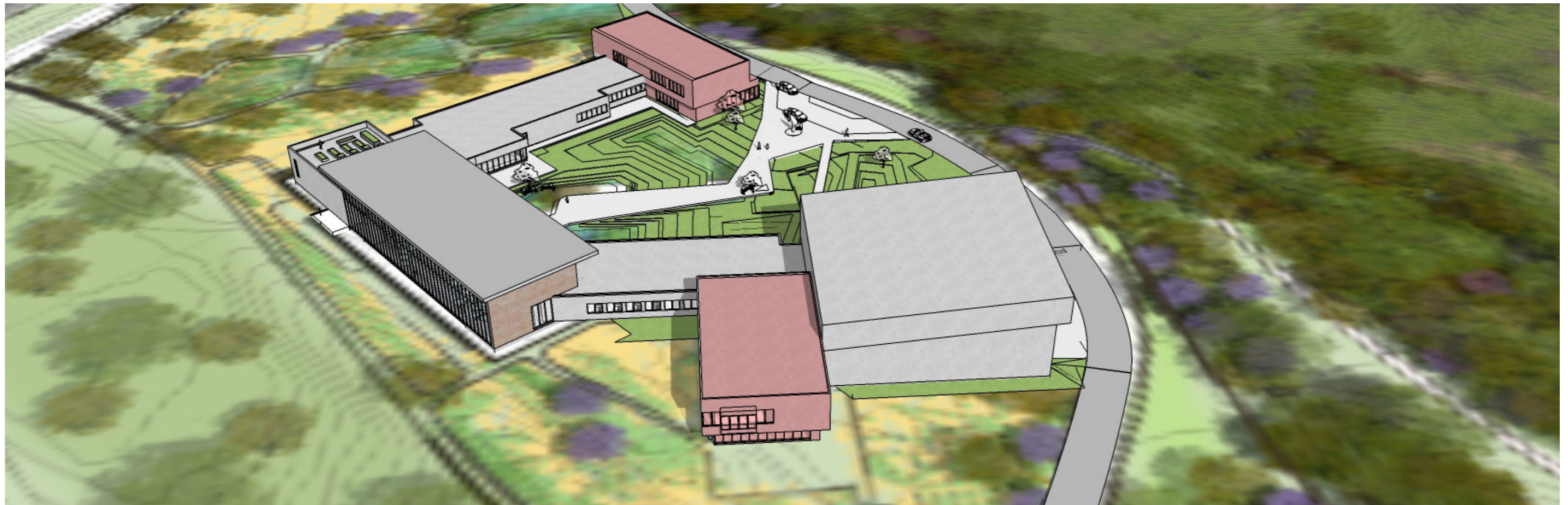
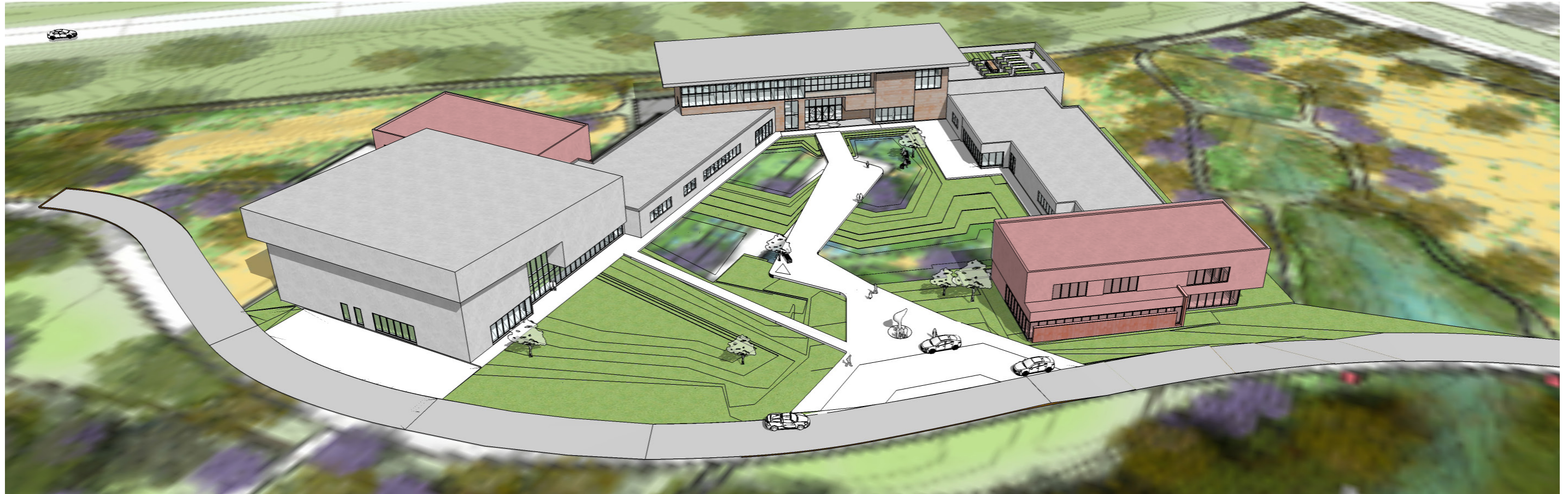
AERIAL VIEW



# SITE PLAN - WITH FUTURE EXPANSION (PHASE 2)



AERIAL VIEW - WITH FUTURE EXPANSION (PHASE 2)



VIEW FROM THE HIGHWAY



VIEW FROM THE HIGHWAY BRIDGE



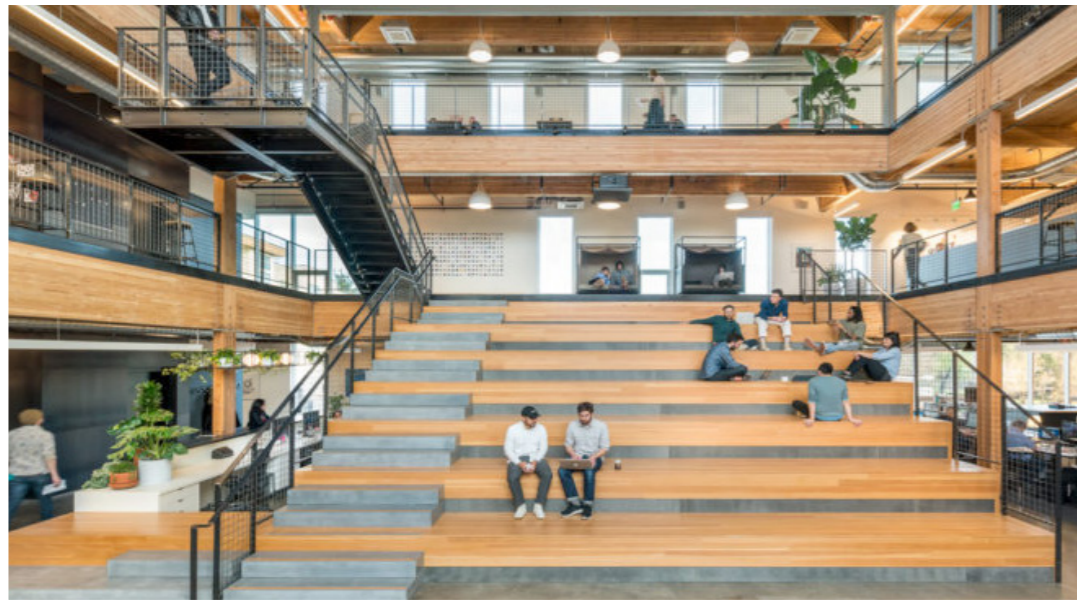
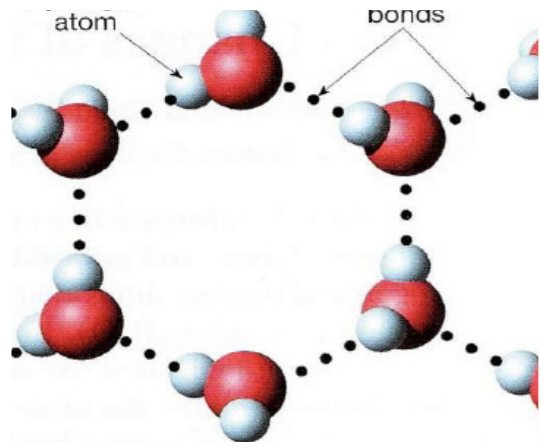
COURTYARD VIEW



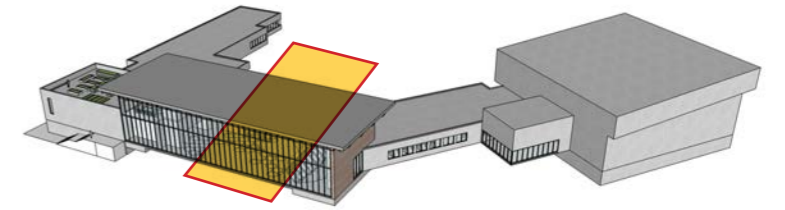
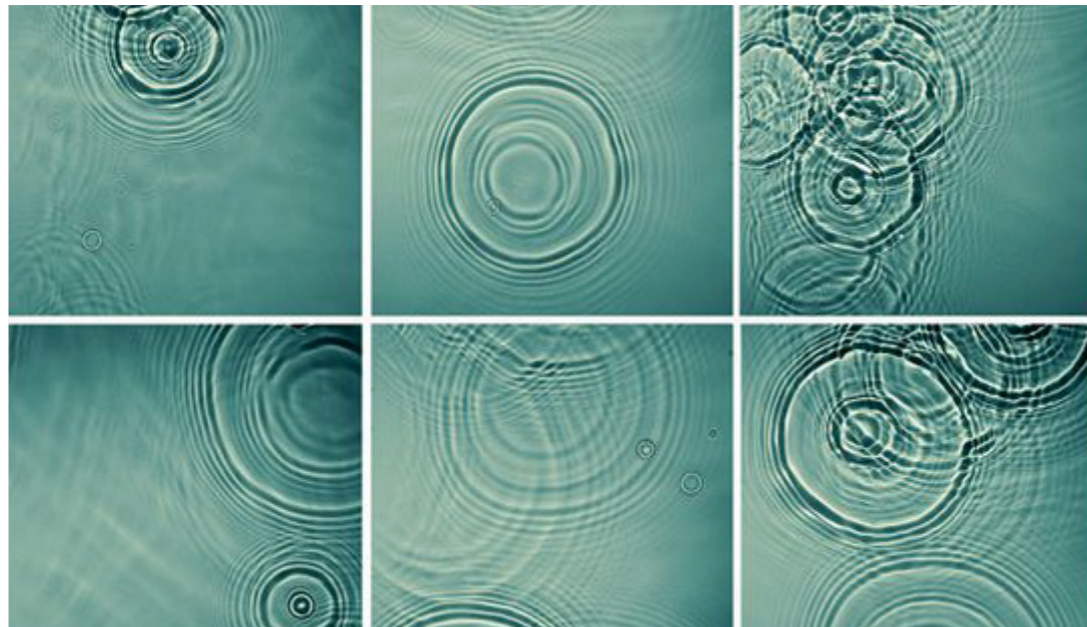


VISITOR EXPERIENCE

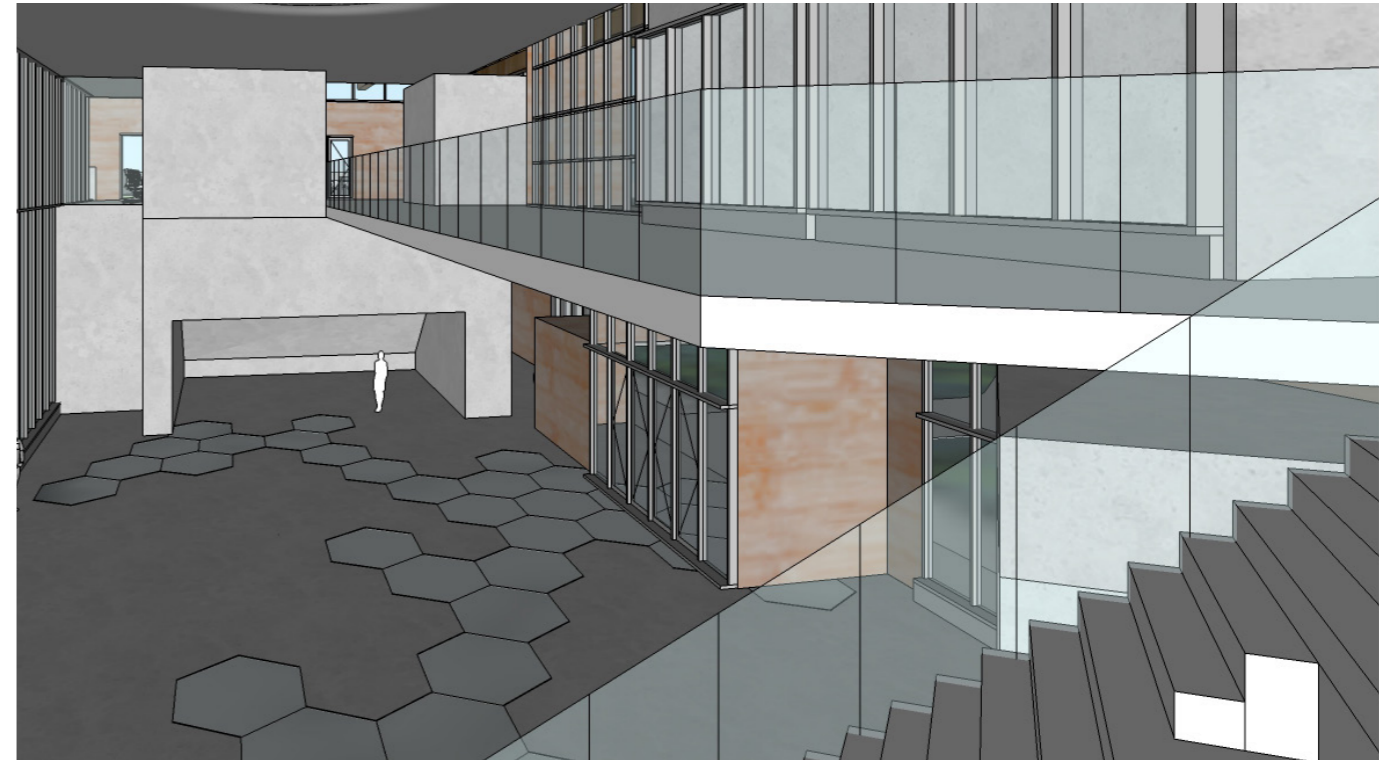
Bridge and Display



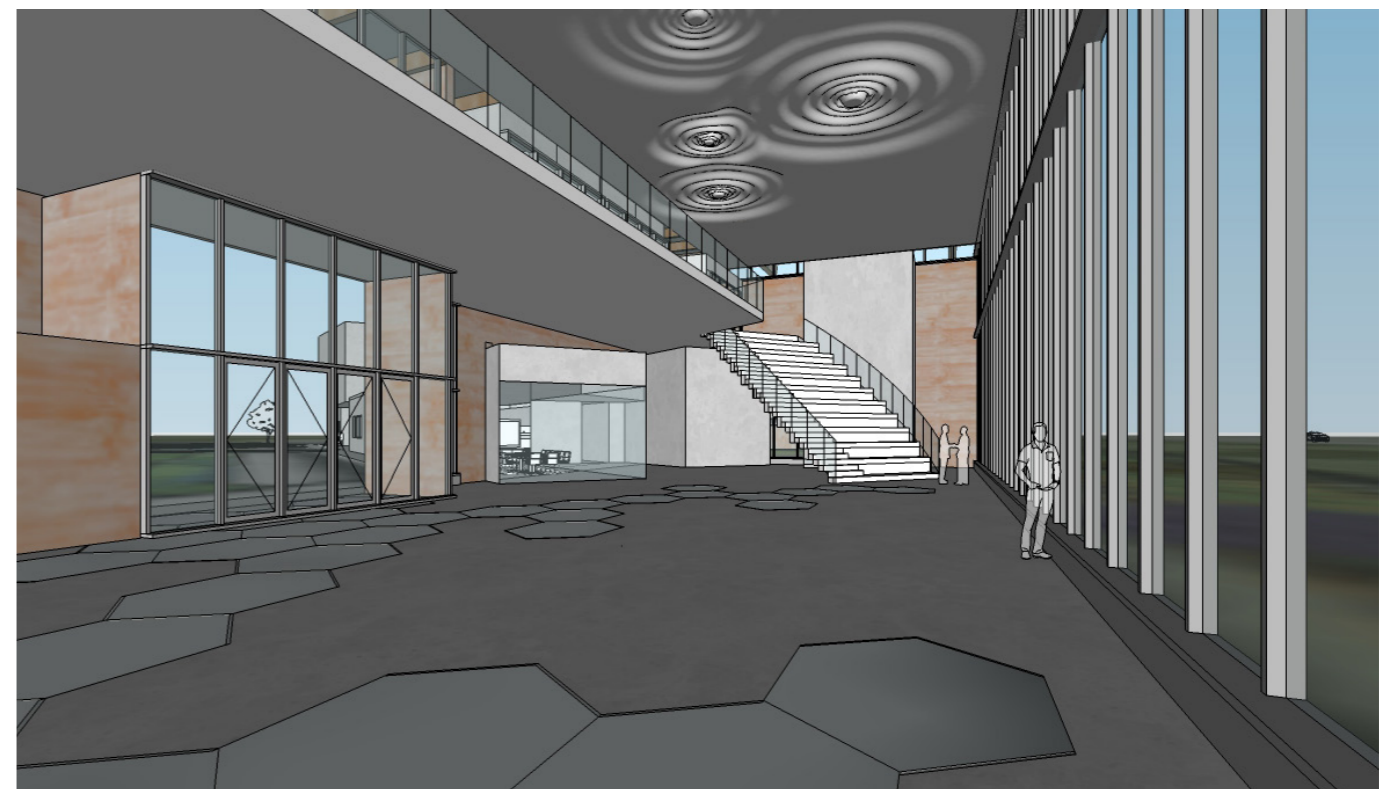
Wavy ceiling- water ripples concept



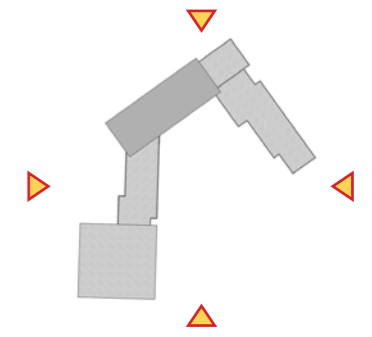
Interior views



Interactive water display/ feature wall



# ELEVATIONS



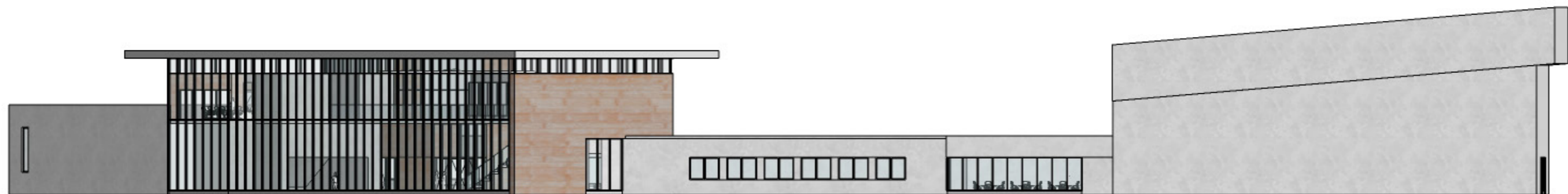
North Elevation



South Elevation



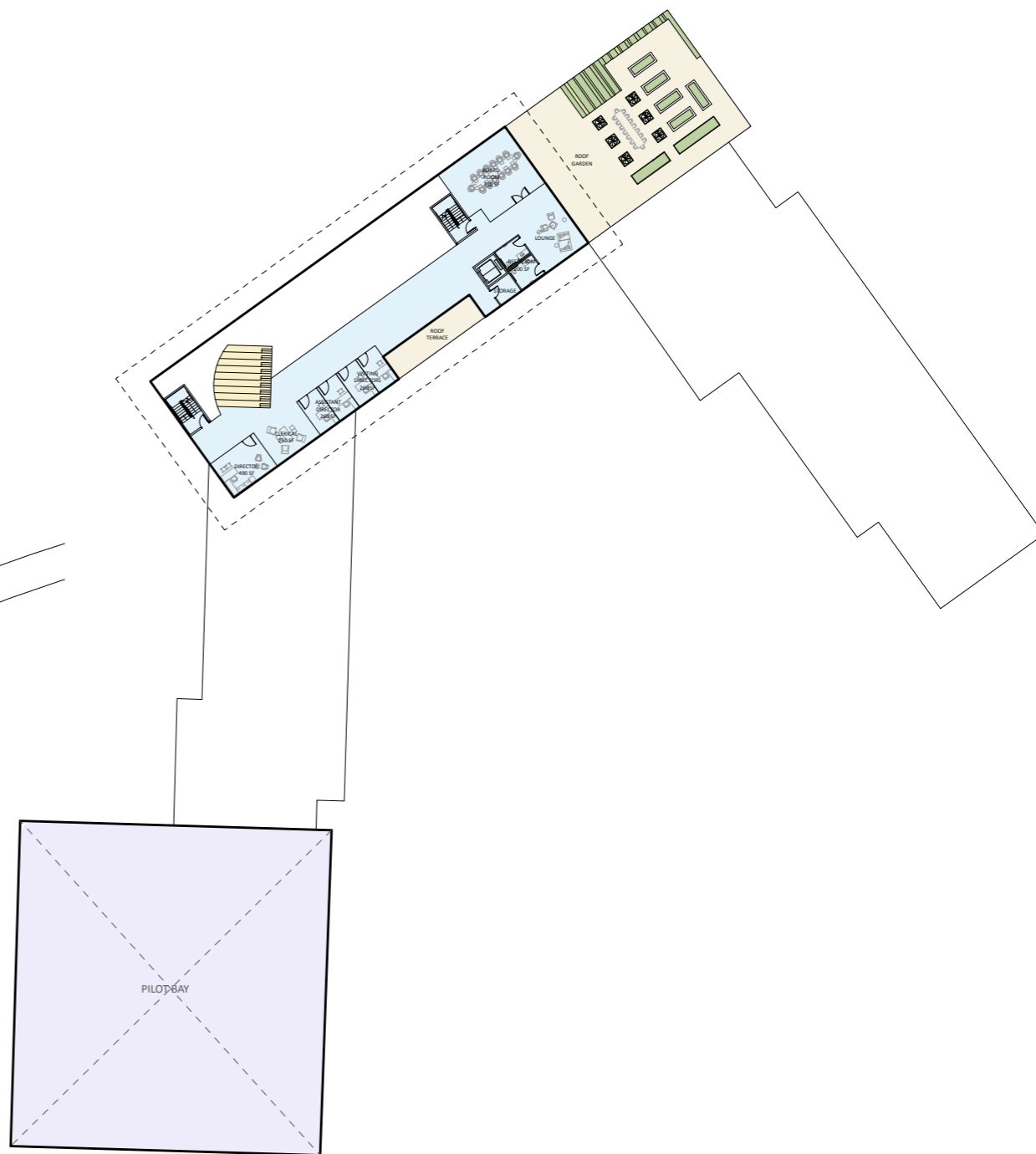
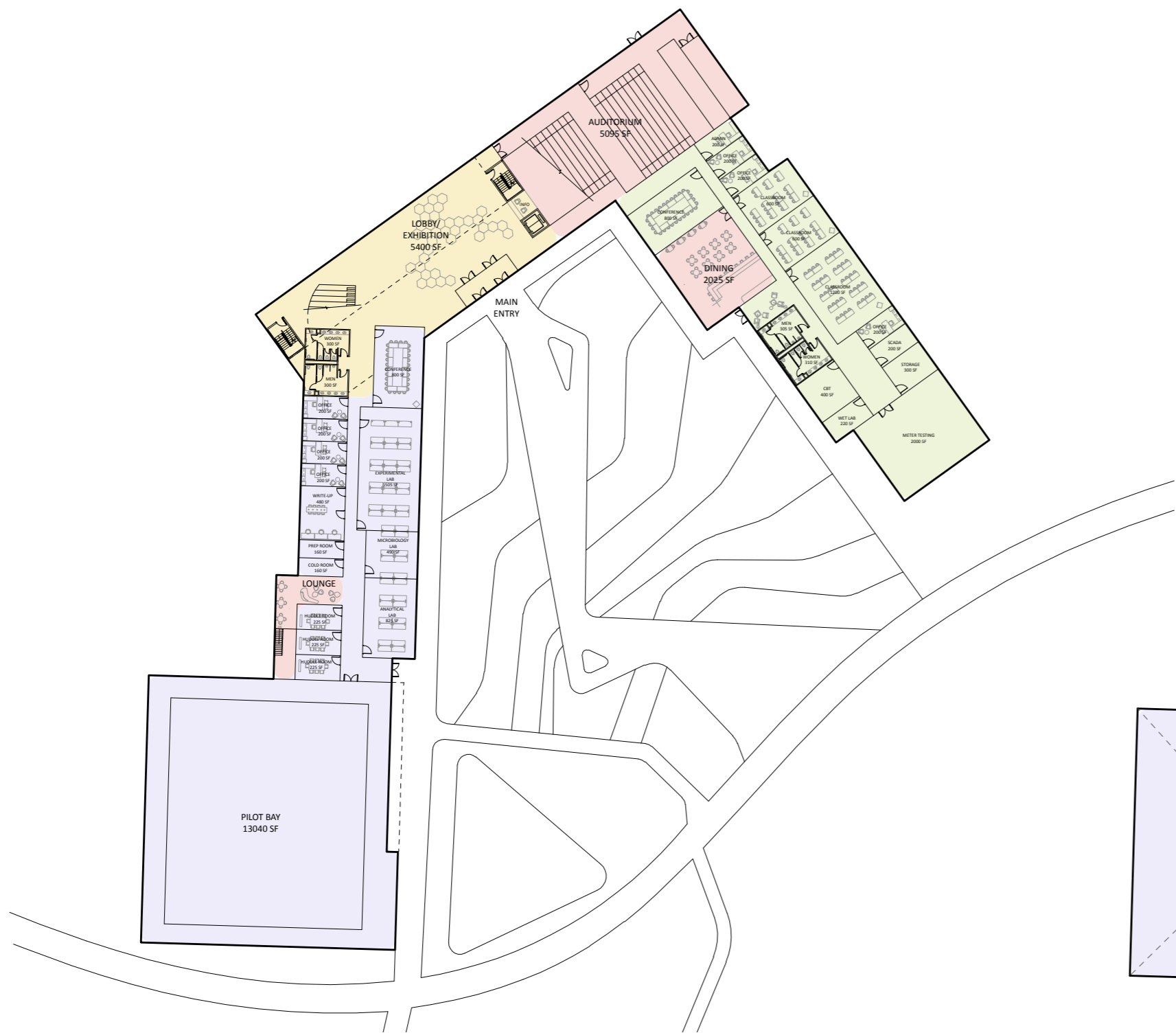
East Elevation



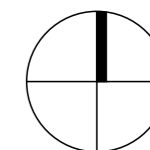
West Elevation

# FIRST FLOOR PLAN

# MEZZANINE FLOOR PLAN

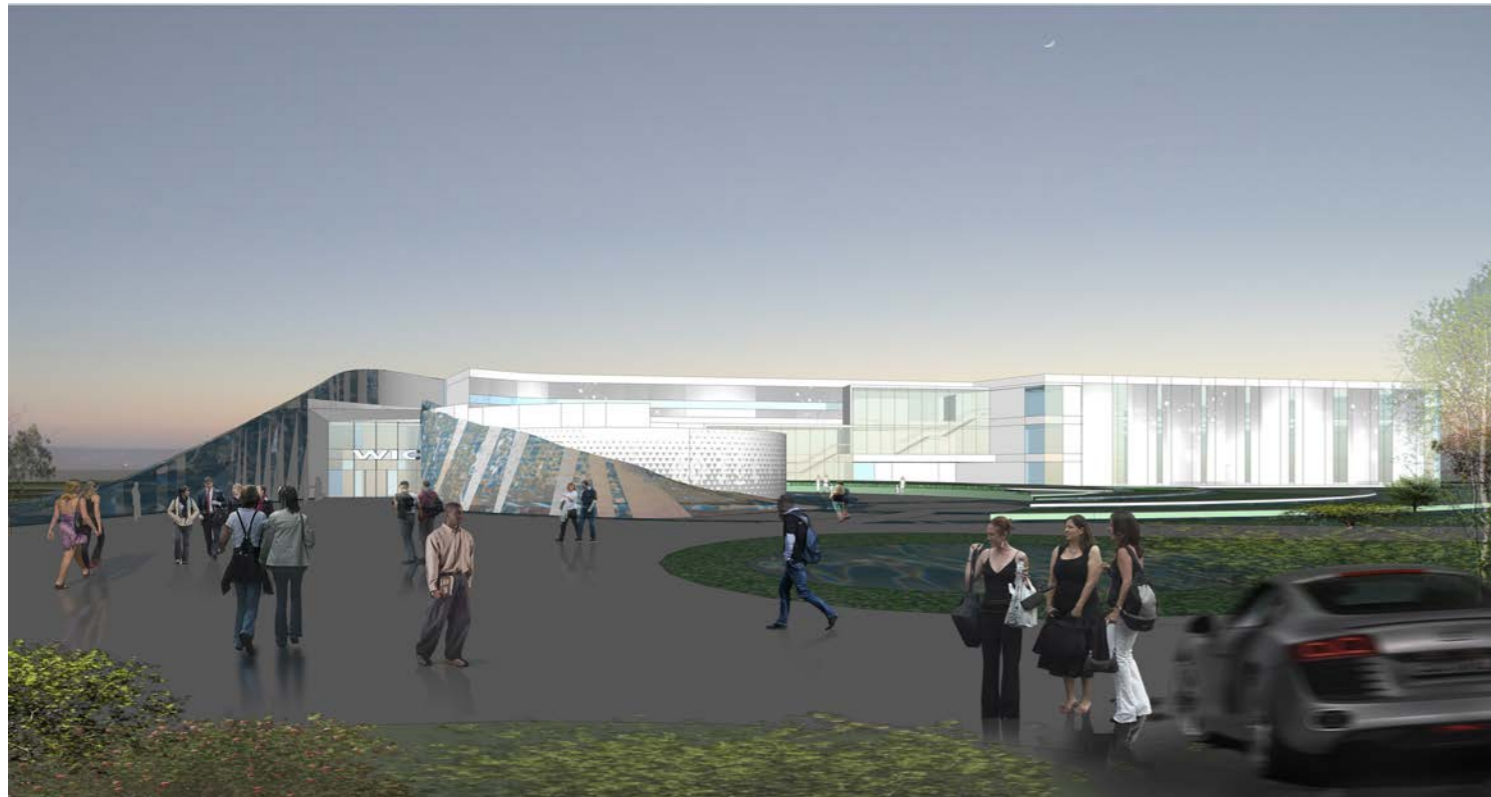


- PUBLIC OUTREACH
- SHARED
- RESEARCH
- TRAINING
- ADMINISTRATION



# GWINNETT COUNTY WATER INNOVATION CENTER

OPTION 1



OPTION 2



# GWINNETT COUNTY WATER INNOVATION CENTER

## SUPPLEMENTAL INFORMATION



# SITE ANALYSIS: SITE PHOTOS



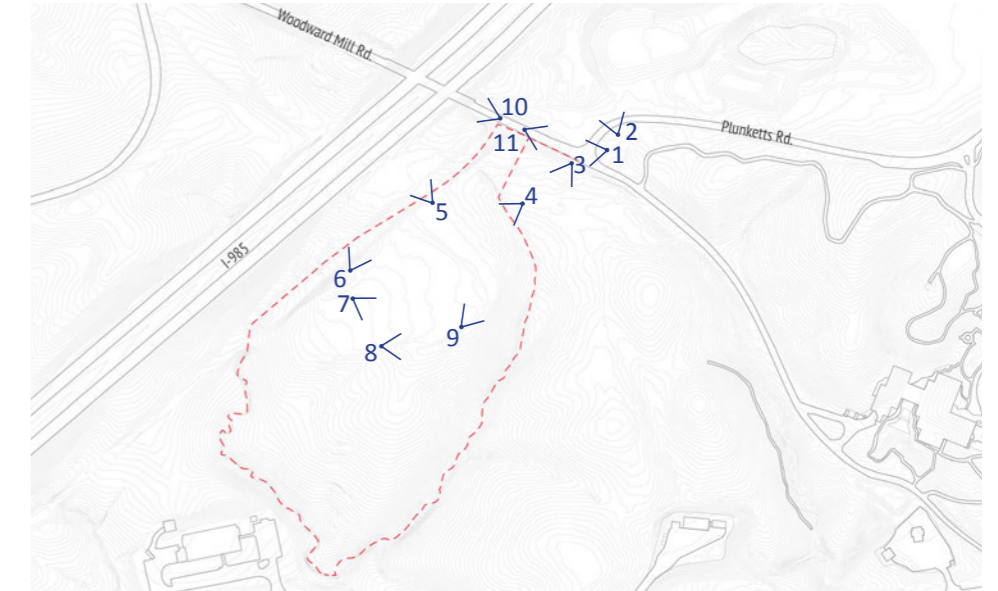
1. Site at Plunketts Rd. & Woodward Mill Rd.



2. Surrounding neighborhood



3. Big elevation drop into site



4. Intermittent stream



5. I-985 beyond



6. Big elevation drop close to I-985



7. "Flat area" in the middle



8. Elevation drop on the south side of site



9. Elevation change



10. Looking at Northwest on Woodward Mill Rd.



11. Looking towards Plunketts Rd. on Woodward Mill Rd.

# SITE ANALYSIS: ADJACENCIES

- Next to I-985.
- F. Wayne Hill WRC and Gwinnett Environmental & Heritage Center are within walking distance.
- Opportunity to compliment existing trail system.



## SITE ANALYSIS: ELEVATION

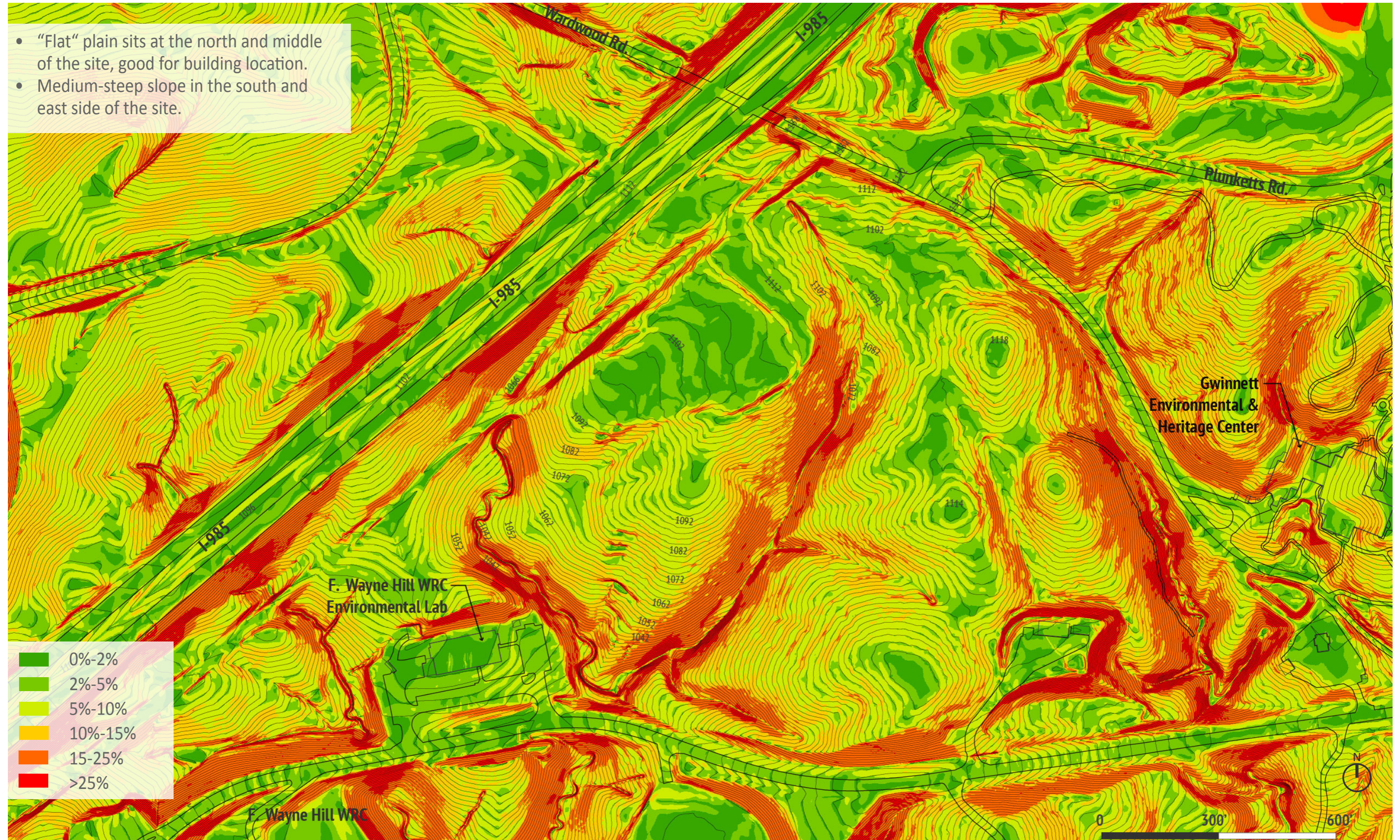
- High point of site is at north end of property along Woodward Mill Rd. and interstate 985.
- Site falls substantially in elevation towards the south end of site and towards F. Wayne Hill WRC.





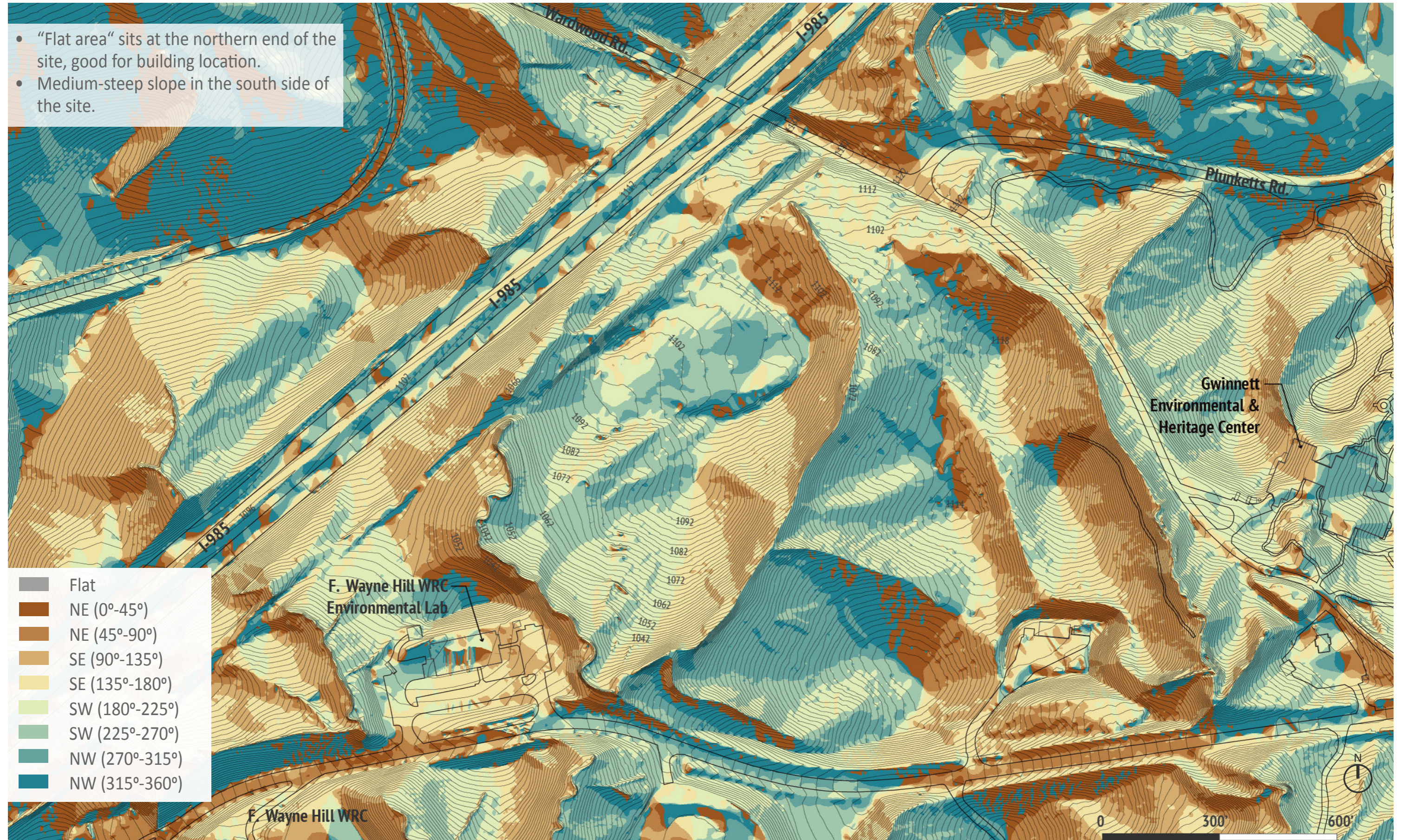
## SITE ANALYSIS: SLOPE PERCENTAGE

- “Flat” plain sits at the north and middle of the site, good for building location.
- Medium-steep slope in the south and east side of the site.



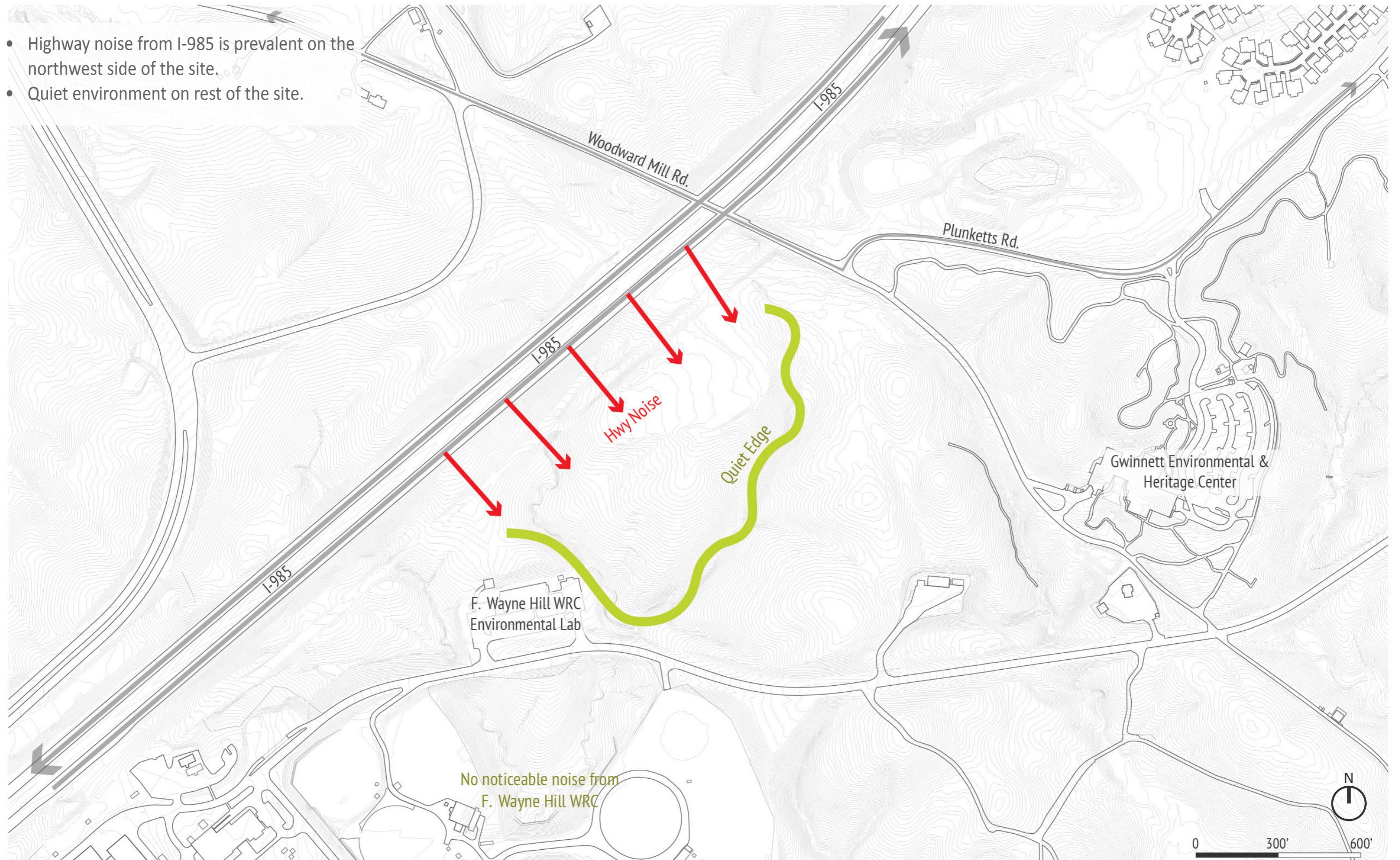
# SITE ANALYSIS: SLOPE ASPECTS

- “Flat area” sits at the northern end of the site, good for building location.
- Medium-steep slope in the south side of the site.



## SITE ANALYSIS: NOISE

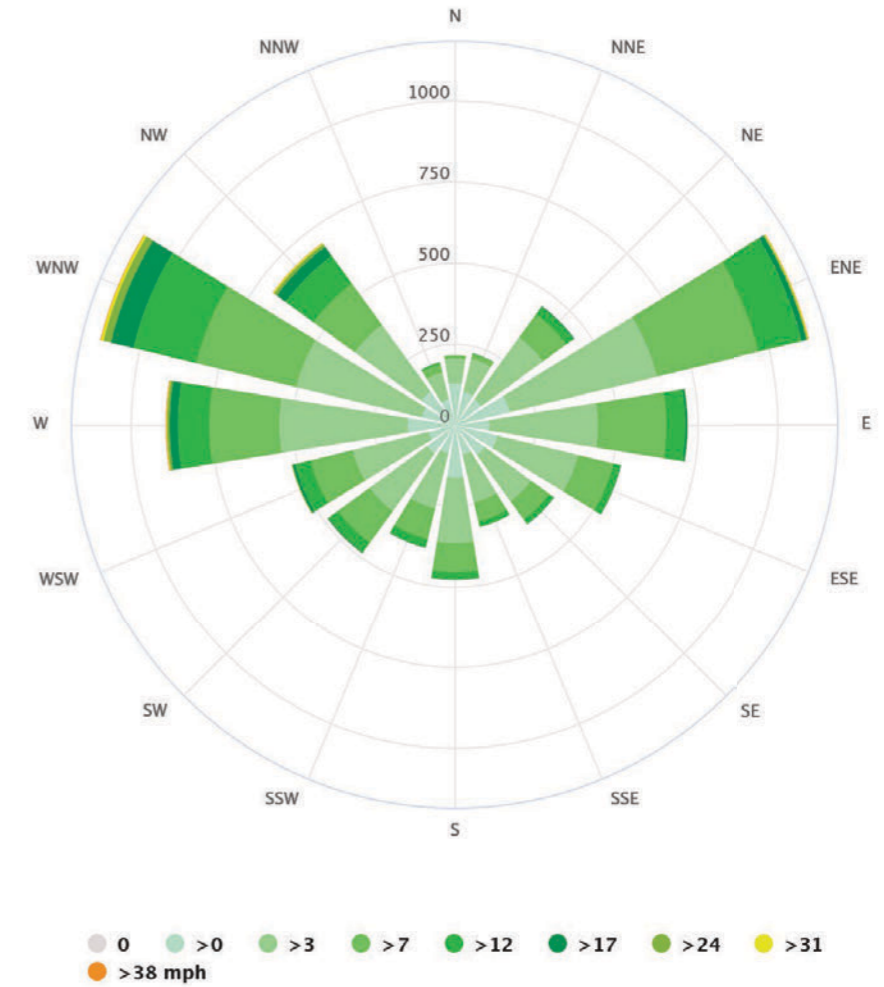
- Highway noise from I-985 is prevalent on the northwest side of the site.
- Quiet environment on rest of the site.



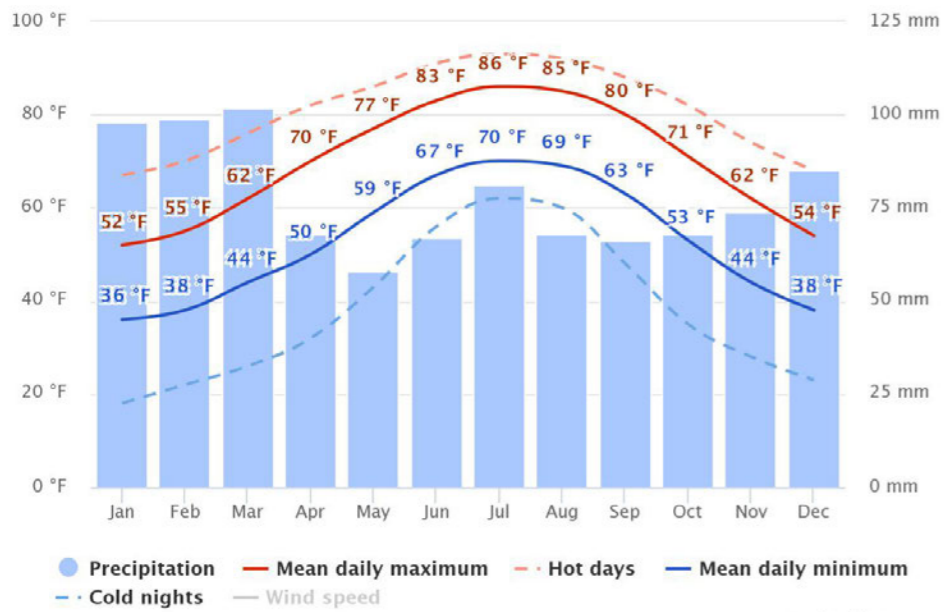
# SITE ANALYSIS: CLIMATE

- Climate is humid and hot in summer.
- Prevailing wind directions are east-northeast and west-northwest.
- High precipitation in winter.

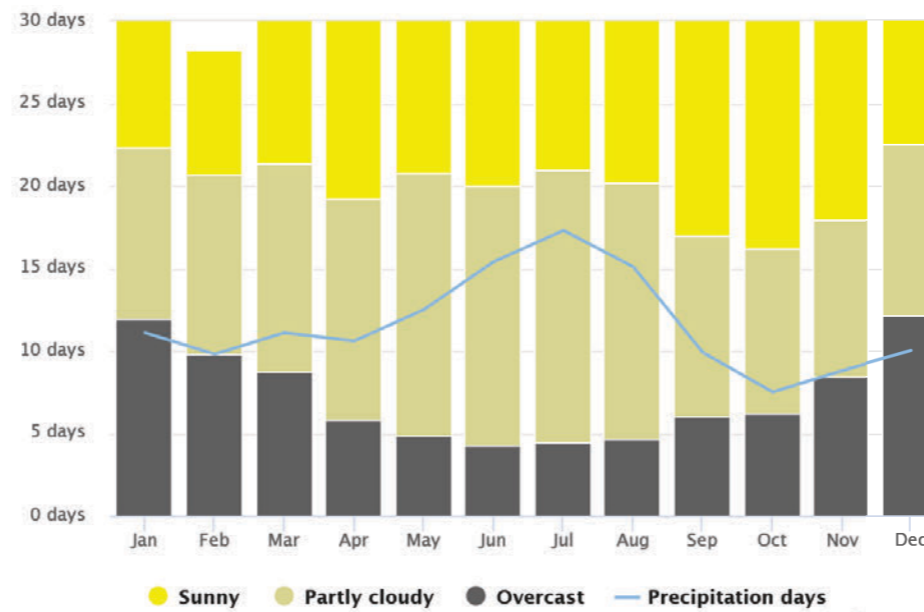
Wind rose



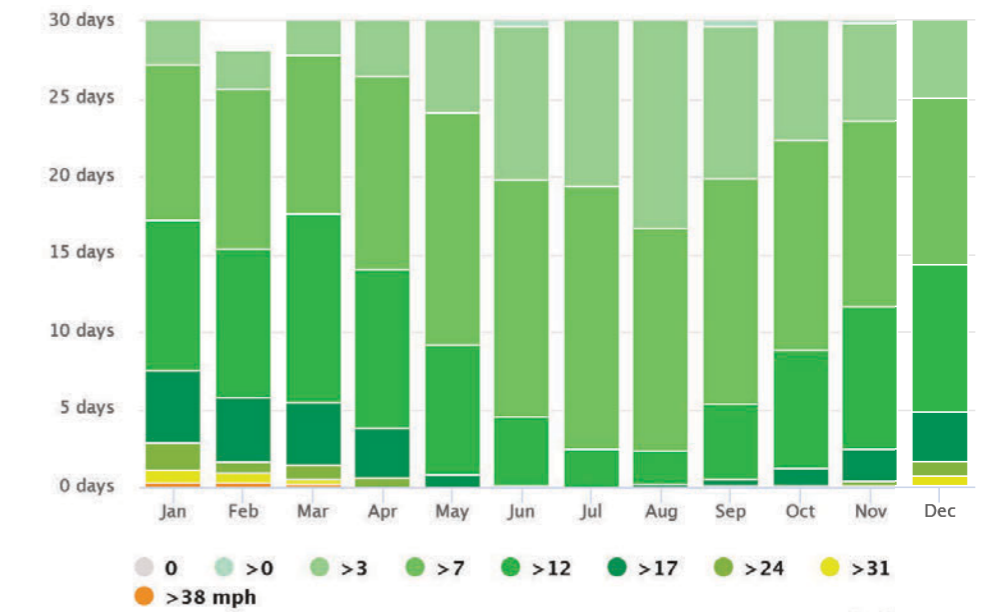
Average temperatures and precipitation



Cloudy, sunny and precipitation days



Wind speed



# PROGRAM SUMMARY

GWIC

<b>Training &amp; Safety</b>		<b>Research Center</b>		<b>Items added by Jacobs</b>	
				<b>Lobby/Education/Administration</b>	
Office	600.00	Office		Lobby	5,400.00
1	200.00	1	800.00	Auditorium (400, sloped flr.)	5,095.00
2	200.00	2	200.00	<b>Elevator</b>	<b>90.00</b>
3	200.00	3	200.00	<b>Egress Stairs</b>	<b>320.00</b>
Classroom	2,400.00	4	200.00	<b>Sub Total</b>	<b>10,905.00</b>
1	600.00	Write-Up Stations	480.00		
2	600.00	(10 @ 50 sf ea.)		<b>Mezzanine</b>	
3	1,200.00	Conference Areas	1,475.00	<b>Administration</b>	<b>2,330.00</b>
Conference	800.00	1	800.00	<b>Director</b>	<b>295.00</b>
Meter Testing	2,000.00	2	225.00	<b>Assist Director</b>	<b>260.00</b>
Wet Lab	200.00	3	225.00	<b>Clerical</b>	<b>250.00</b>
Administration	200.00	4	225.00	<b>Board Room</b>	<b>730.00</b>
<b>Break Kitchen</b>	<b>1,520.00</b>	Toilets/Showers	600.00	<b>Visiting Director(s)</b>	<b>260.00</b>
Men's Room	305.00	(2 @ 300 ea.)		<b>Toilets</b>	<b>200.00</b>
Women's Room	310.00	Experimental Lab	1,505.00	<b>Lounge</b>	<b>335.00</b>
Storage	300.00	Analytical Lab	825.00	<b>Elevator</b>	<b>90.00</b>
CBT	400.00	Microbiology Lab	490.00	<b>Egress Stairs</b>	<b>320.00</b>
SCADA	220.00	Prep Room	160.00	<b>Storage</b>	<b>150.00</b>
<b>Sub Total</b>	<b>9,255.00</b>	Cold Room	160.00	<b>Circulation</b>	<b>2,070.00</b>
Circulation	1,695.00	Pilot Bay	13,040.00	<b>Sub Total</b>	<b>4,960.00</b>
<b>Total</b>	<b>10,950.00</b>	<b>Atrium/Common</b>	<b>690.00</b>		
		<b>Sub Total</b>	<b>20,225.00</b>	<b>Total</b>	<b>15,865.00</b>
		Circulation	1,535.00		
		<b>Total</b>	<b>21,760.00</b>		
<b>Total</b>					<b>48,575.00</b>

# PROGRAM SUMMARY WITH EXPANSION

## GWIC WITH EXPANSION

### Training & Safety

Office	600.00	
1	200.00	
2	200.00	
3	200.00	
Classroom	2,400.00	
1	600.00	
2	600.00	
3	1,200.00	
Conference	800.00	
Meter Testing	2,000.00	
Wet Lab	200.00	
Administration	200.00	
<b>Break Kitchen</b>	<b>1,520.00</b>	
Men's Room	305.00	
Women's Room	310.00	
Storage	300.00	
CBT	400.00	
SCADA	220.00	
<b>Sub Total</b>	<b>9,255.00</b>	
Circulation	1,695.00	
<b>Total</b>	<b>10,950.00</b>	

### Research Center

Office		
1	800.00	200.00
2		200.00
3		200.00
4		200.00
Write-Up Stations	480.00	
(10 @ 50 sf ea.)		
Conference Areas	1,475.00	
1	800.00	
2	225.00	
3	225.00	
4	225.00	
Toilets/Showers	600.00	
(2 @ 300 ea.)		
Experimental Lab	1,505.00	
Analytical Lab	825.00	
Microbiology Lab	490.00	
Prep Room	160.00	
Cold Room	160.00	
Pilot Bay	13,040.00	
<b>Atrium/Common</b>	<b>690.00</b>	
<b>Sub Total</b>	<b>20,225.00</b>	
Circulation	1,535.00	
<b>Total</b>	<b>21,760.00</b>	

### Items added by Jacobs

#### Lobby/Education/Administration

Lobby	5,400.00
Auditorium (400, sloped flr.)	5,095.00
<b>Elevator</b>	<b>90.00</b>
<b>Egress Stairs</b>	<b>320.00</b>
<b>Sub Total</b>	<b>10,905.00</b>

#### Mezzanine

<b>Administration</b>	<b>2,330.00</b>
Director	295.00
Assist Director	260.00
Clerical	250.00
Board Room	730.00
Visiting Director(s)	260.00
Toilets	200.00
Lounge	335.00

<b>Elevator</b>	<b>90.00</b>
<b>Egress Stairs</b>	<b>320.00</b>
<b>Storage</b>	<b>150.00</b>
<b>Circulation</b>	<b>2,070.00</b>
<b>Sub Total</b>	<b>4,960.00</b>

<b>Total</b>	<b>15,865.00</b>
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Training & Safety Expansion **11,000.00**

Research Center Expansion **8,760.00**

**Total 68,335.00**

# CONCEPTUAL COMPARISON

## Summary Sheets

		Total \$	\$/SF	
<b>A.</b>	<b>Option 1 - Water Metaphor</b>	51,370 SF		
	<b>Sitework</b>	2,839,720	55.28	
	<b>Building</b>	17,244,835	335.70	
	<b>Subtotal</b>	<hr/> 20,084,555	390.98	<b>20,084,555</b>
	<b>General Conditions</b>	10%	2,008,456	39.10
	<b>OH&amp;P</b>	11.5%	2,540,696	49.46
	<b>Contingency</b>	20%	4,926,741	95.91
	<b>Total Construction Cost</b>	<hr/> 29,560,448	575.44	<b>29,560,448</b>
<b>B.</b>	<b>Option 2 - Gateway Metaphor</b>	49,617 SF		
	<b>Sitework</b>	2,836,710	57.17	
	<b>Building</b>	17,386,399	350.41	
	<b>Subtotal</b>	<hr/> 20,223,109	407.58	<b>20,223,109</b>
	<b>General Conditions</b>	10%	2,022,311	40.76
	<b>OH&amp;P</b>	11.5%	2,558,223	51.56
	<b>Contingency</b>	15%	3,720,546	74.99
	<b>Total Construction Cost</b>	<hr/> 28,524,190	574.89	<b>28,524,190</b>

# CONCEPTUAL COMPARISON

## OPTION 1

Item	Quantity	UM	Unit Cost	Total	Div Total
<b>A. Option 1 - Water Metaphor</b>					
<b>A.1 Sitework</b>					
A.1.1 Sitework	1	LS	2,839,720.00	2,839,720	
A.1.2					
A.1.3					
A.1.4					
A.1.5					
A.1.6					
A.1.7					
A.1.8					
A.1.9					
A.1.10					
A.1.11					
A.1.12					
Subtotal					2,839,720
<b>A.2 Building</b>					
A.2.1 Foundations - Footing & Walls	600	CY	475.00	285,000	
A.2.2 Slab on Grade	600	CY	450.00	270,000	
A.2.3 Superstructure Structural Steel (10# / SF)	333	TON	2,500.00	832,500	
A.2.4 Floor Deck	24,700	SF	3.50	86,450	
A.2.5 Roof Deck	30,870	SF	2.50	77,175	
A.2.6 Concrete Slab on Deck	350	CY	350.00	122,500	
A.2.7 Enclosure - Water Wall	3,400	SF	300.00	1,020,000	
A.2.8 - Porcelanosa Rain Screen	30,196	SF	55.00	1,660,780	
A.2.9 - Glass	1,300	SF	100.00	130,000	
A.2.10 - Curtain Wall	10,594	SF	135.00	1,430,190	
A.2.11 - Roof	30,688	SF	25.00	767,200	
A.2.12 Interior Construction & Specialties	51,370	SF	50.00	2,568,500	
A.2.13 Casework / Equipment & Furniture	51,370	SF	25.00	1,284,250	
Subtotal					10,534,545
<b>A.3 Mechanical</b>					
A.3.1 Plumbing & Fire Protection	51,370	SF	25.00	1,284,250	
A.3.2 HVAC & Controls	51,370	SF	50.00	2,568,500	
Subtotal					3,852,750
<b>A.4 Electrical</b>					
A.4.1 Service & Distribution	51,370	SF	6.00	308,220	
A.4.2 Power	51,370	SF	9.00	462,330	
A.4.3 Lighting	51,370	SF	18.00	924,660	
A.4.4 Telecommunications & IT	51,370	SF	6.00	308,220	
A.4.5 Audiovisual Allowance	1	LS	700,000.00	700,000	
A.4.6 Security	51,370	SF	3.00	154,110	
Subtotal					2,857,540
					20,084,555
					20,084,555

## OPTION 2

Item	Quantity	UM	Unit Cost	Total	Div Total
<b>B. Option 2 - Gateway Metaphor</b>					
<b>B.1 Sitework</b>					
B.1.1 Sitework	1	LS	2,836,710.00	2,836,710	
B.1.2					
B.1.3					
B.1.4					
B.1.5					
B.1.6					
B.1.7					
B.1.8					
B.1.9					
B.1.10					
B.1.11					
B.1.12					
B.1.13					
Subtotal					2,836,710
<b>B.2 Building</b>					
B.2.1 Foundations - Footing & Walls	964	CY	475.00	457,900	
B.2.2 Slab on Grade	812	CY	450.00	365,400	
B.2.3 Superstructure Structural Steel (10# / SF)	248	TON	2,500.00	620,000	
B.2.4 Floor Deck	4,680	SF	3.50	16,380	
B.2.5 Roof Deck	51,326	SF	2.50	128,315	
B.2.6 Concrete Slab on Deck	65	CY	350.00	22,750	
B.2.7 Enclosure - Porcelanosa Rain Screen	47,628	SF	55.00	2,619,540	
B.2.8 - Glass	5,481	SF	100.00	548,100	
B.2.9 - Curtain Wall	5,440	SF	135.00	734,400	
B.2.10 - Window Wall	3,640	SF	100.00	364,000	
B.2.11 - Roof	51,326	SF	25.00	1,283,150	
B.2.12 Interior Construction & Specialties	49,617	SF	50.00	2,480,850	
B.2.13 Casework / Equipment & Furniture	49,617	SF	25.00	1,240,425	
Subtotal					10,881,210
<b>B.3 Mechanical</b>					
B.3.1 Plumbing & Fire Protection	49,617	SF	25.00	1,240,425	
B.3.2 HVAC & Controls	49,617	SF	50.00	2,480,850	
Subtotal					3,721,275
<b>B.4 Electrical</b>					
B.4.1 Service & Distribution	49,617	SF	6.00	297,702	
B.4.2 Power	49,617	SF	9.00	446,553	
B.4.3 Lighting	49,617	SF	18.00	893,106	
B.4.4 Telecommunications & IT	49,617	SF	6.00	297,702	
B.4.5 Audiovisual Allowance	1	LS	700,000.00	700,000	
B.4.6 Security	49,617	SF	3.00	148,851	
Subtotal					2,783,914
					20,223,109
					20,223,109