

# MICHIGAN MADE

## OUT OF SIGHT, OUT OF MIND? THE RISK OF COMPLACENCY

one project's attempt at water and energy conservation



# AGENDA :

- introductions
- process
- net positive water
- net positive energy
- wrap up

# AGENDA :

- introductions ————— | project history  
| living building challenge
- process | team
- net positive water
- net positive energy
- wrap up



"We really need a new facility."



six months



## TWO RULES:

1. All Imperatives are mandatory.
2. Living Building Challenge certification is based on actual performance.

PLACE				01. LIMITS TO GROWTH
	SCALE JUMPING		SCALE JUMPING	02. URBAN AGRICULTURE
			SCALE JUMPING	03. HABITAT EXCHANGE
				04. HUMAN POWERED LIVING
WATER			SCALE JUMPING	05. NET POSITIVE WATER
ENERGY			SCALE JUMPING	06. NET POSITIVE ENERGY
HEALTH & HAPPINESS				07. CIVILIZED ENVIRONMENT
				08. HEALTHY INTERIOR ENVIRONMENT
				09. BIOPHILIC ENVIRONMENT
MATERIALS				10. RED LIST
			SCALE JUMPING	11. EMBODIED CARBON FOOTPRINT
				12. RESPONSIBLE INDUSTRY
				13. LIVING ECONOMY SOURCING
				14. NET POSITIVE WASTE
EQUITY				15. HUMAN SCALE + HUMANE PLACES
				16. UNIVERSAL ACCESS TO NATURE & PLACE
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				18. JUST ORGANIZATIONS
BEAUTY				19. BEAUTY + SPIRIT
				20. INSPIRATION + EDUCATION

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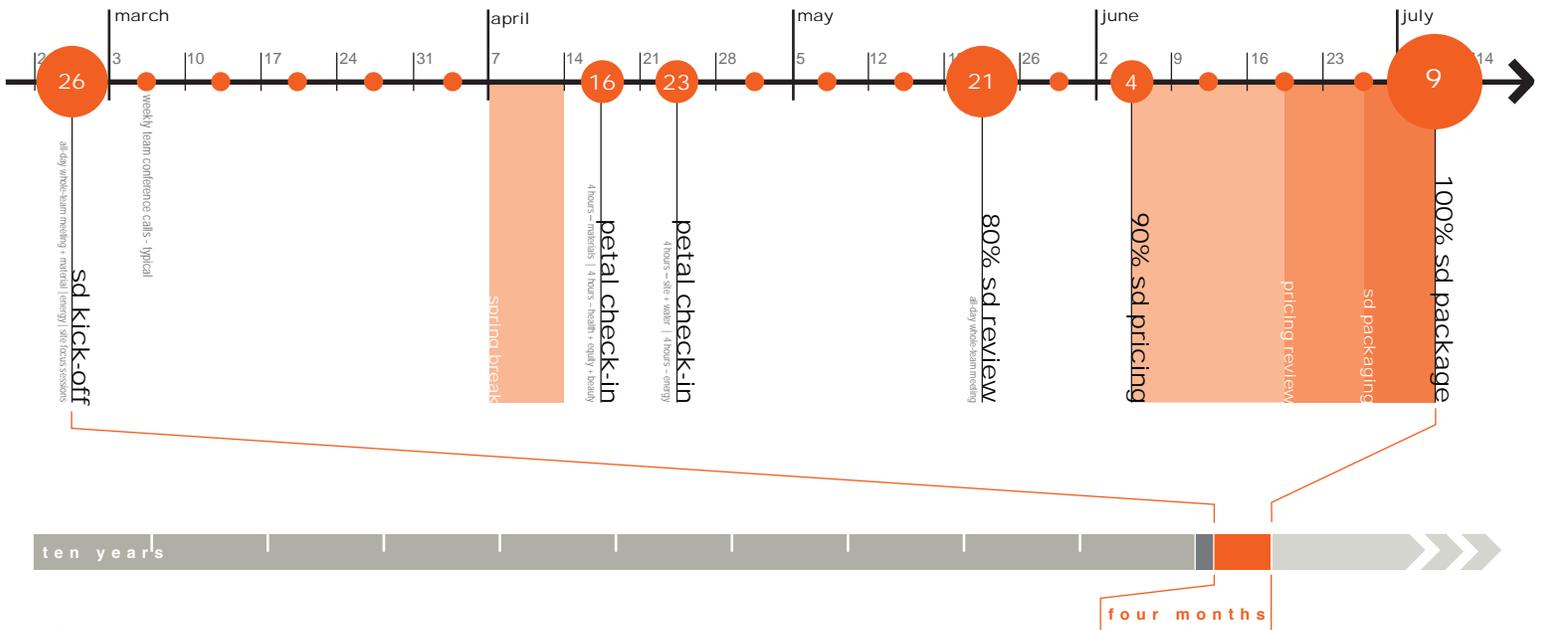
# AGENDA :

introductions

- process ————— | schedule
- net positive water | SD kick-off
- net positive energy | guiding principles
- wrap up



# LIVING BUILDING CHALLENGE™











## Diba Jimooyung Our Story

*The name of our people, Anishinabe, means “first man lowered from above and placed on the Earth”. The Anishinabek (plural) are descendents of this original man.*

Who we are and our origins are very unique. We have our own Creation story. Many *Anishinabek* believe that the Creator placed us in North America near the Great Salt Water (East Coast). We had established societies and family structures with our own language and spiritual beliefs. Many *Anishinabek* believe that we were given Seven Prophecies from the Creator. These Prophecies were foretold many generations before European contact. These Seven Prophecies will always guide the future of the *Anishinabek*.

Take a journey with us.  
Let us tell you our story.



Every solution must be



# Every solution must be Define success for this project



Every solution must be  
Define success for this project  
What inspires you?





<b>NIBWAAKAAWIN</b>	<b>Wisdom</b>	inspire learning
<b>ZAAGL'LDIWIN</b>	<b>Love</b>	serve the 7th generation
<b>MINAADENDAMOWIN</b>	<b>Respect</b>	be restorative
<b>AAKODE'EWIN</b>	<b>Bravery</b>	earn the right to occupy the land
<b>GWAYAKWAADIZIWIN</b>	<b>Honesty</b>	be authentic
<b>DABAADENDIZIWIN</b>	<b>Humility</b>	take only what you need
<b>DEBWEWIN</b>	<b>Truth</b>	everything is connected

# AGENDA :

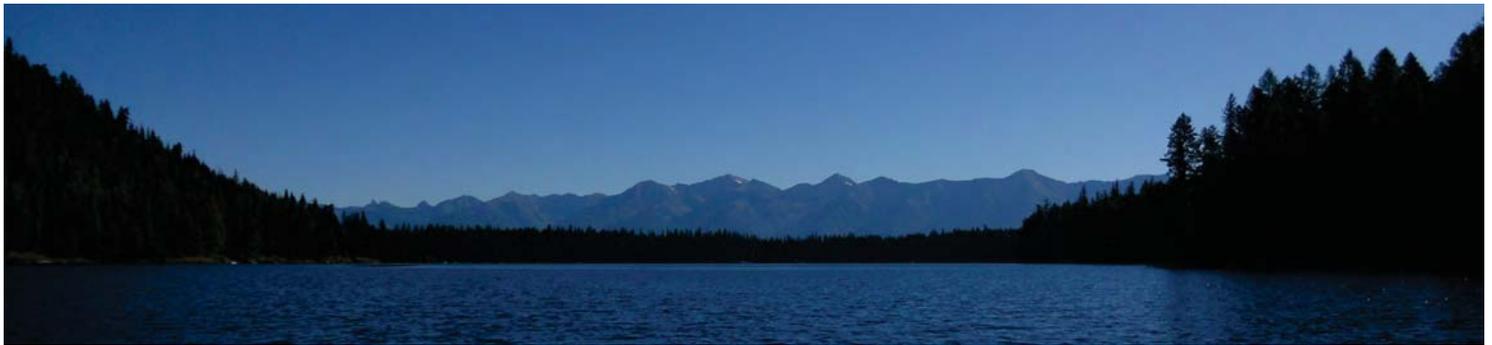
✓ introductions

✓ process

- net positive water ——— | petal intent  
| ideal conditions
- net positive energy | i05 requirements  
| i05 process
- wrap up | i05 solutions

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# PETAL INTENT:



WATER

SCALE JUMPING

05. NET POSITIVE WATER

“The intent of the Water Petal is to **realign** how people use water and to redefine ‘waste’ in the built environment, so that water is **respected** as a precious resource.”

# IDEAL CONDITIONS:



WATER

SCALE JUMPING

05. NET POSITIVE WATER

1

“All developments configured based on the **carrying capacity** of the site: harvesting sufficient water to meet the needs of a given population while **respecting** the natural hydrology of the land, the water needs of the ecosystem the site inhabits, and those of its **neighbors**.”

# IDEAL CONDITIONS:



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“Challenge **outdated** attitudes and technology with decentralized site- or district-level solutions that are appropriately scaled, **elegant**, and efficient.”

2

# i05 REQUIREMENTS



WATER

SCALE JUMPING

05. NET POSITIVE WATER

“Project water use and release must work in **harmony** with the natural water flows of the site and its surroundings.”

1

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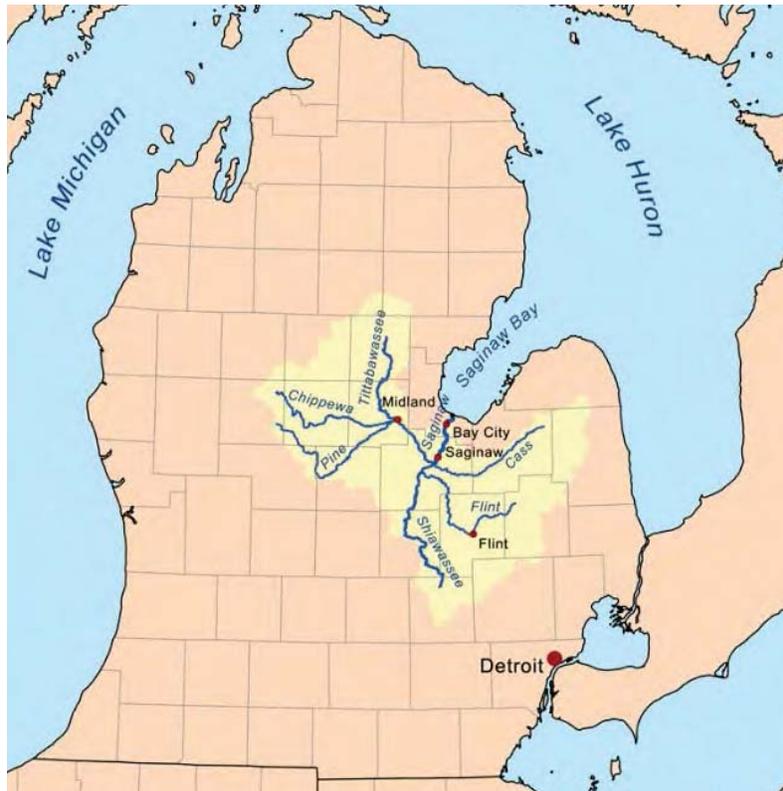
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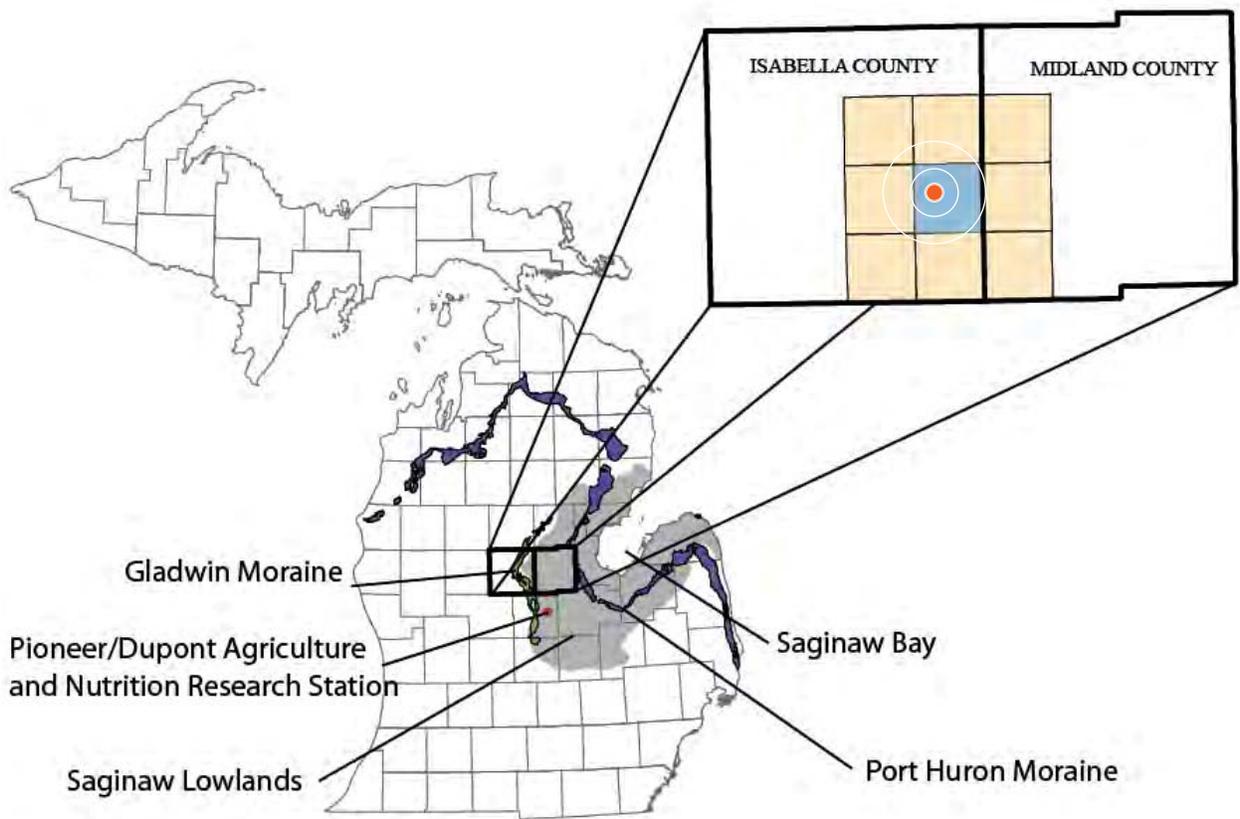
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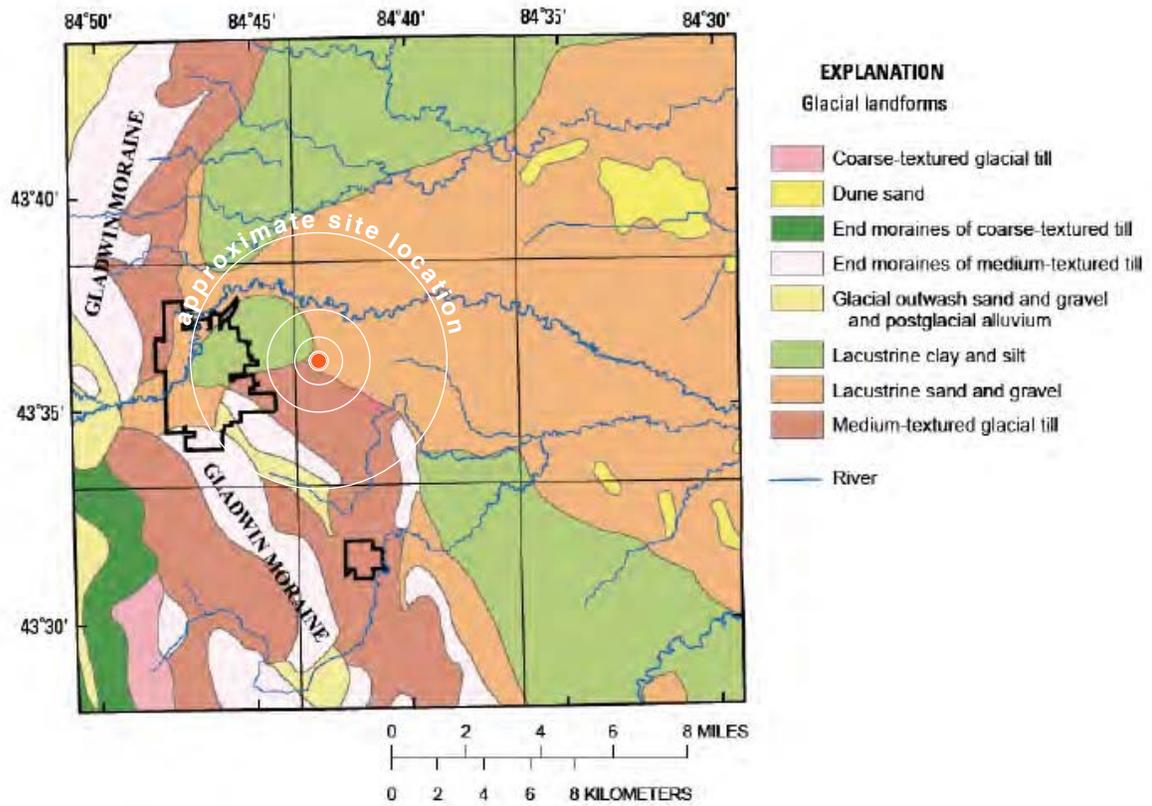
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“All stormwater and water discharge, including grey and black water, must be **treated onsite** and managed either through **re-use**, a closed loop system, or infiltration.”

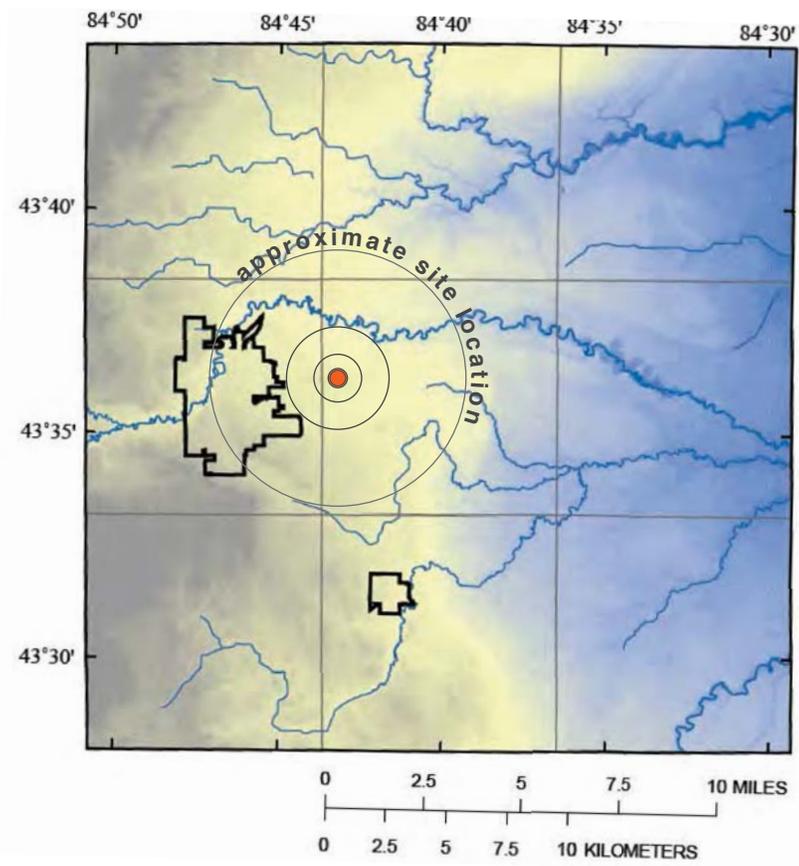
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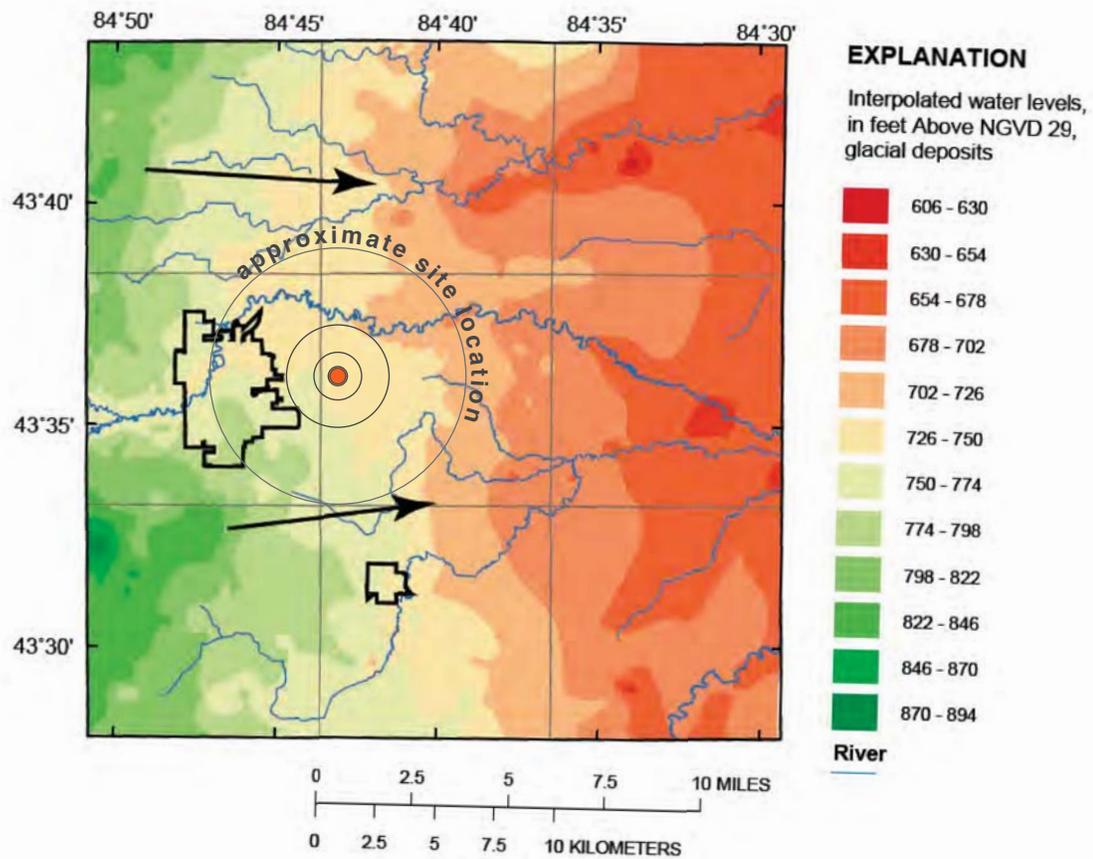


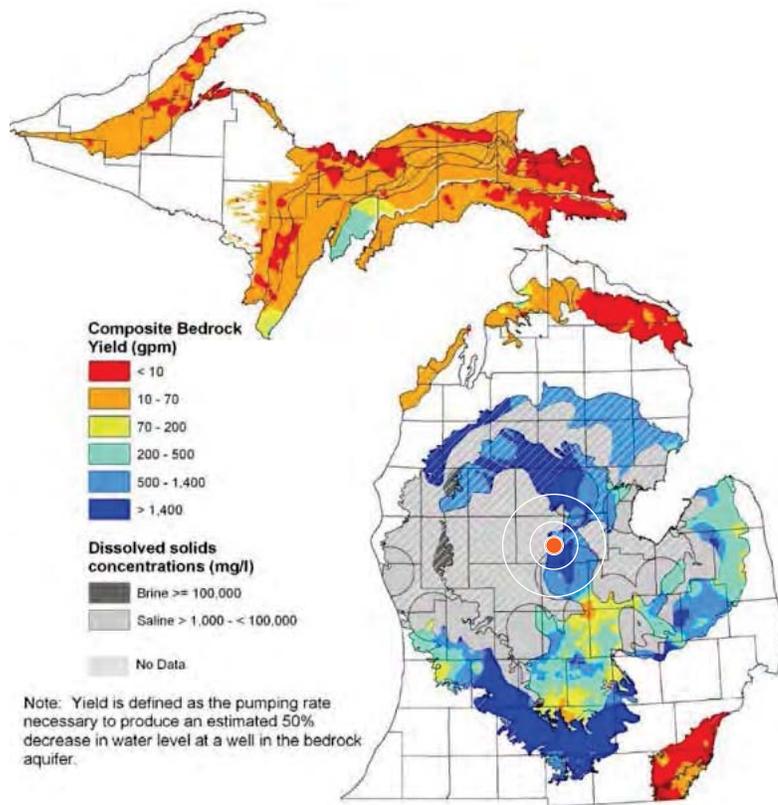




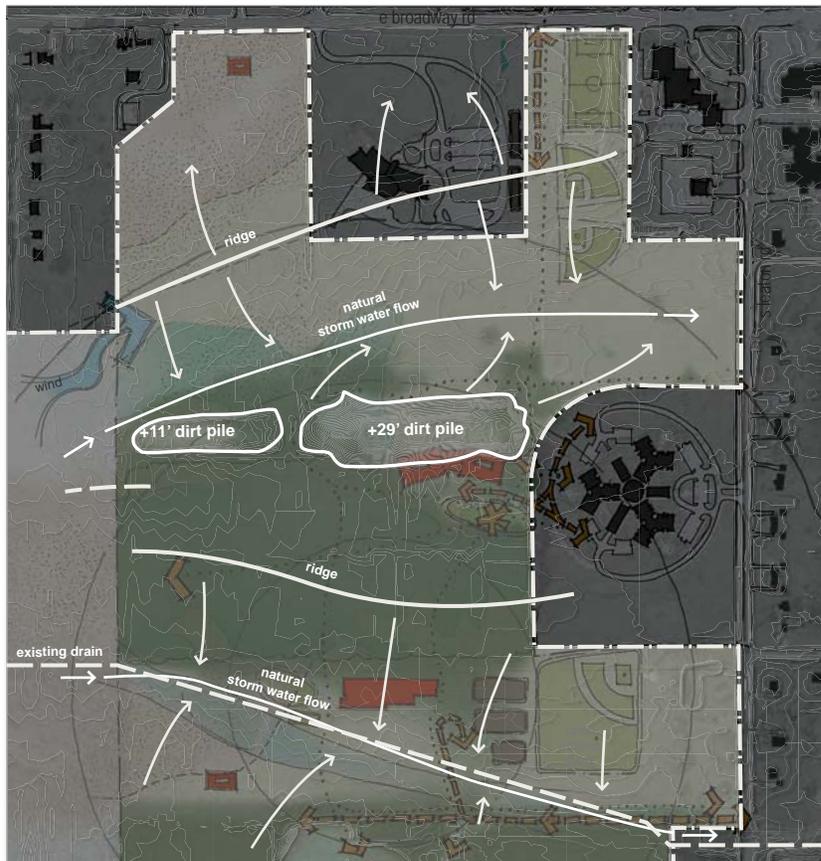


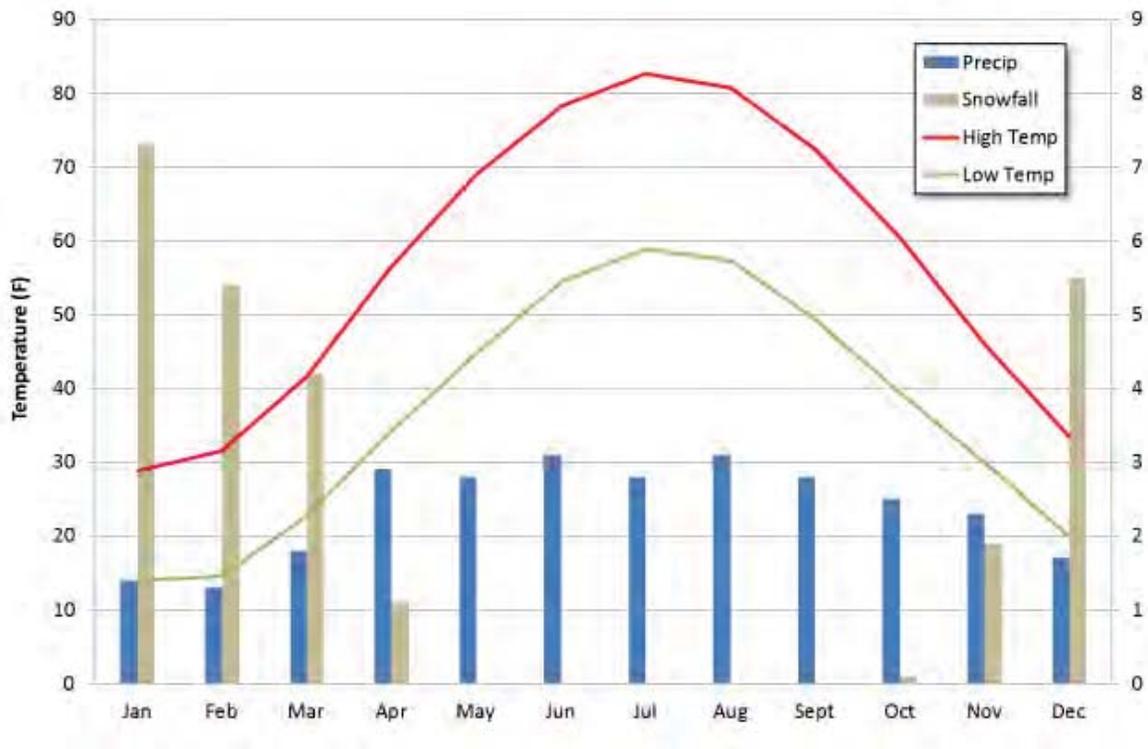












- wetlands**  
(to be confirmed)
- prime farmland**
- limits to growth compliant area**
- Undeveloped Land**
- site boundary**



## i02- urban agriculture

-  prime farmland
-  potential project boundary
-  site boundary

### Potential Phase One Agriculture Requirement | L3 Transect 0.10 < 0.24 floor area to site ratio (FAR)

Floor Area 60,381 SF  
**35% Agriculture - 4.8 acres**  
Buildable site (max) - 13.9 acres





### SCTC main building

- Square Footage | 60,381
- orientation best in east-west direction
  - 11,000 SF of wellness center could be phased or built as a separate building



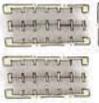
### future housing

- Square Footage | unknown
- each site is drawn with two 50' x 150' buildings
  - these buildings at three stories would house approx. 60 students



### agriculture outbuilding

- Square Footage | unknown
- the exact program for this is in development and placed on the master plan for relational purposes.



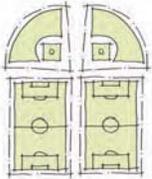
### parking

- spaces needed | 205  
(300 student capacity divide in half plus 35 faculty)
- LBC has special limitations on parking
  - only 20 non-covered parking spaces allow by LBC
  - parking that is on site will be more incorporated into the landscape



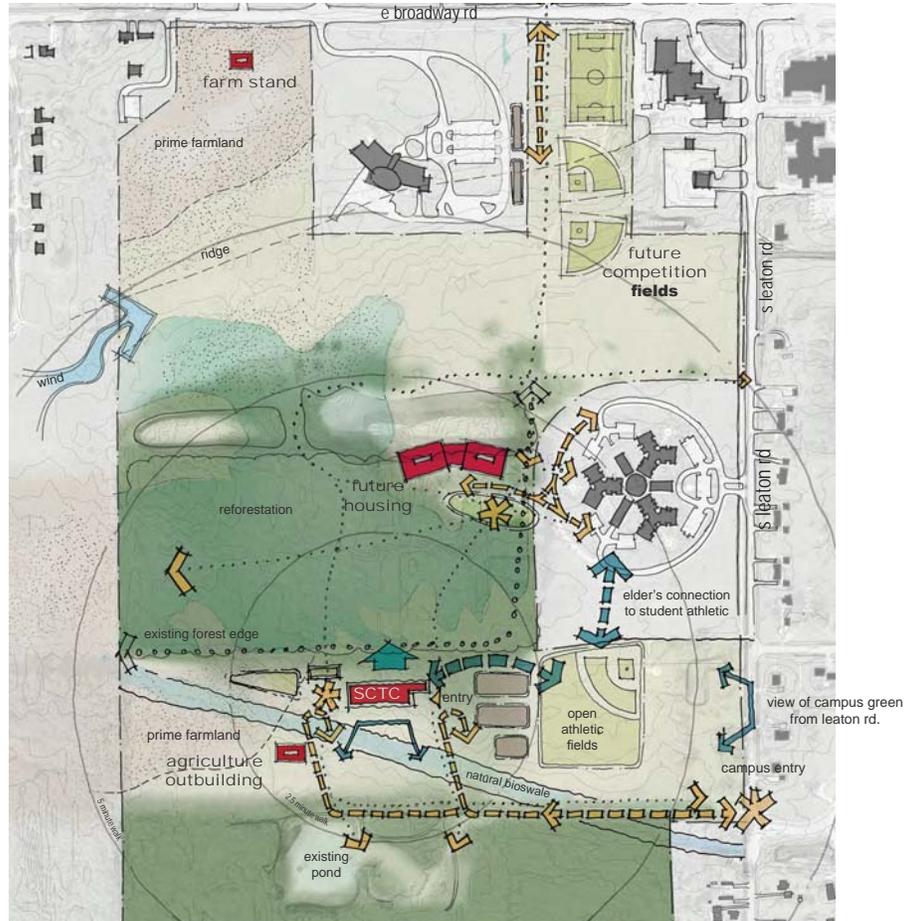
### wetlands / drainage field

- estimated maximum of an acre for drainage field
- constructed wetlands approximately 2000 sf
- drainage field need to be on higher ground

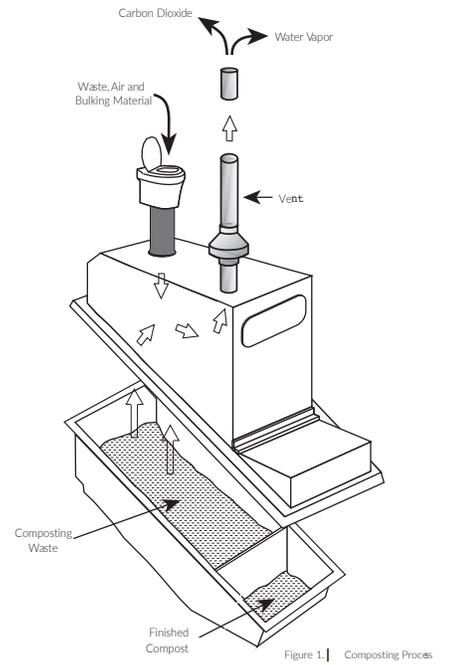


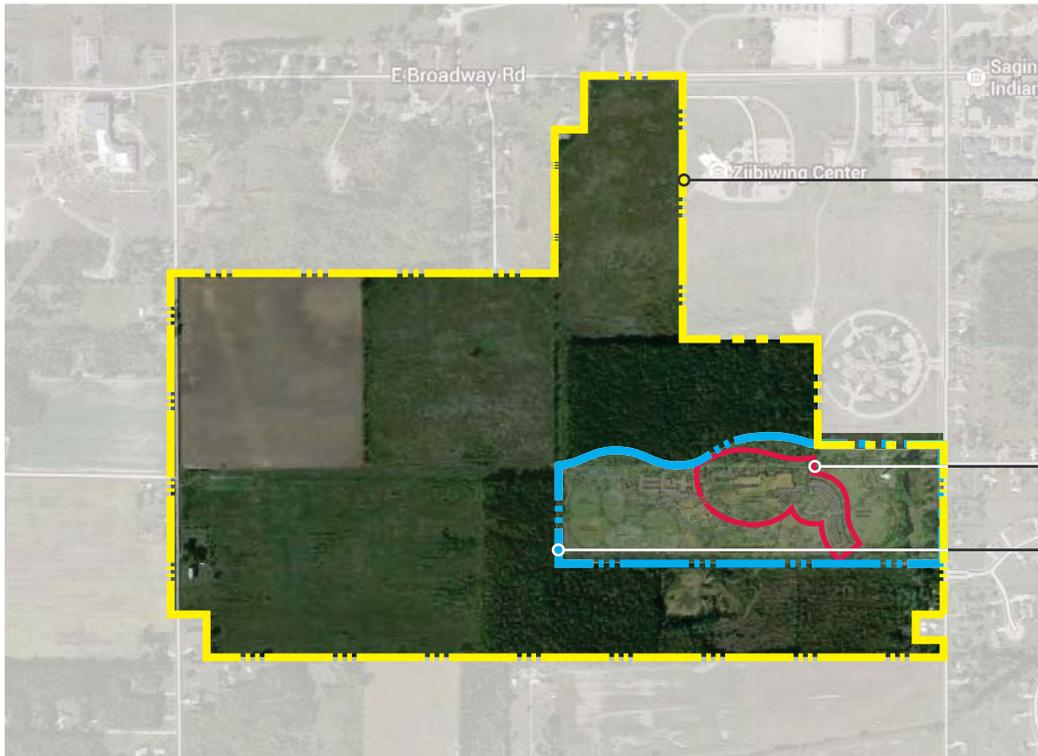
### athletic fields

- 2 baseball/softball fields
- 2 soccer fields









**SCTC whole campus boundary**

campus area: 295 acres

**LBC project boundary**

LBC project area: 9.85 acres  
LBC project FAR: 0.14

**SCTC campus boundary | phase I**

SCTC project area: 46.87 acres