



# *Self-sufficiency for the future of Malden*

KEYA PAYNE  
SENIOR CAPSTONE

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## **3 KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN**

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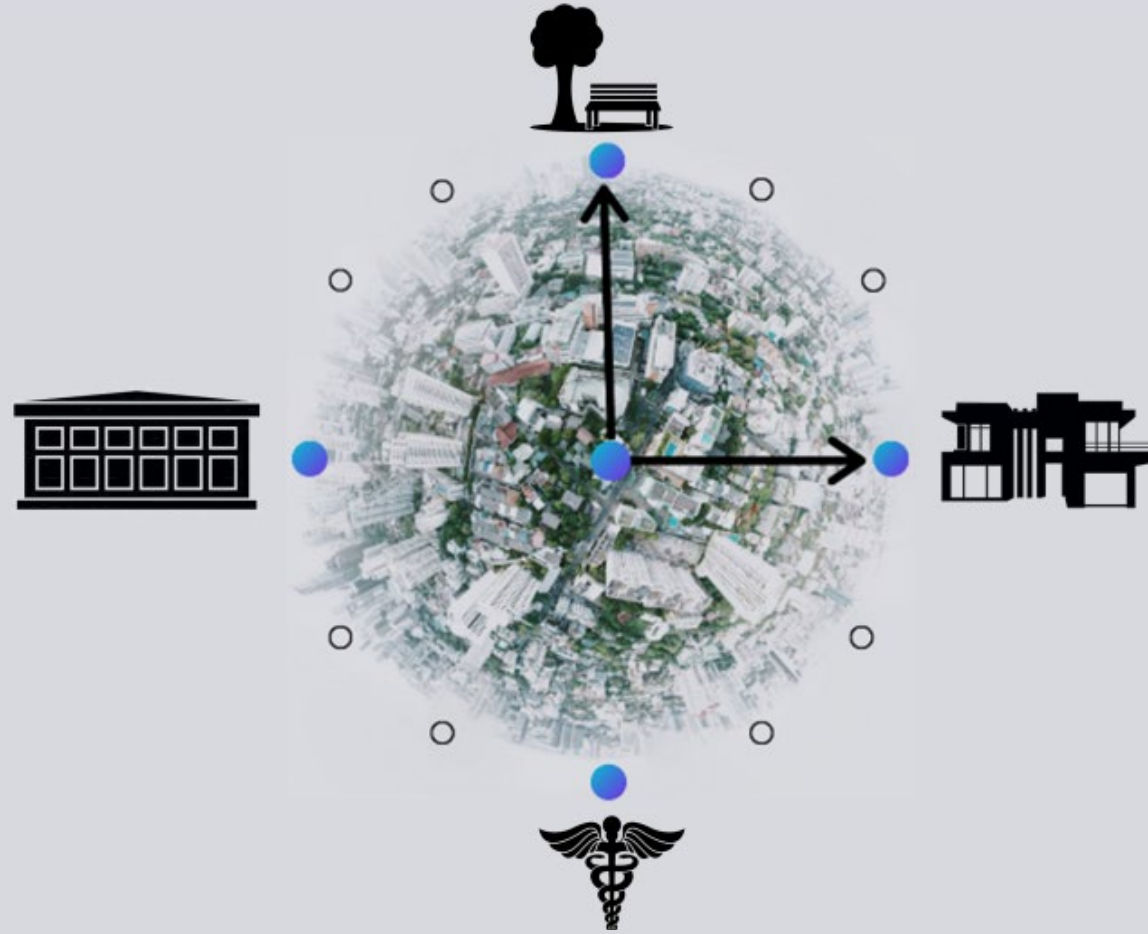


# KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN

15 Minute city

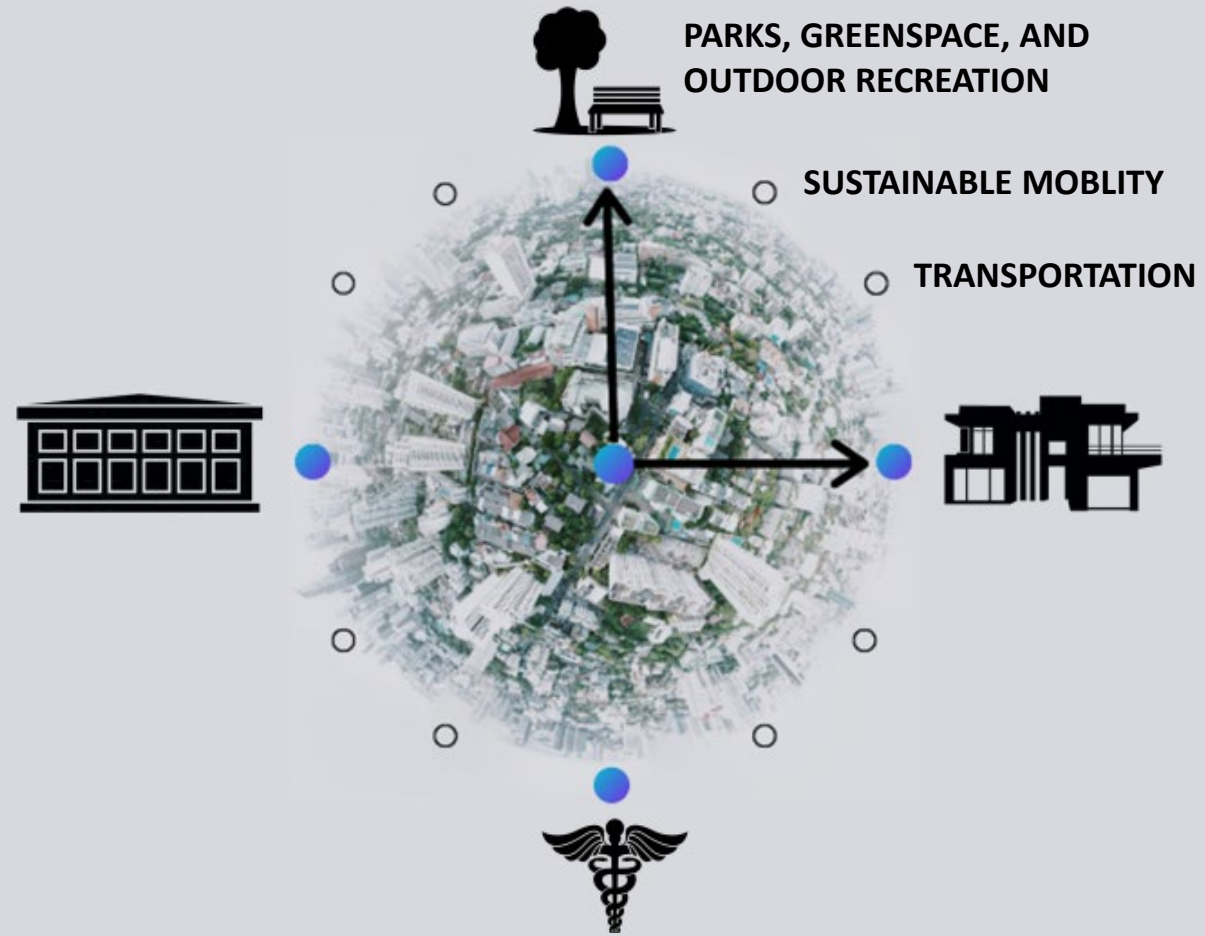
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### 1. 15 min community



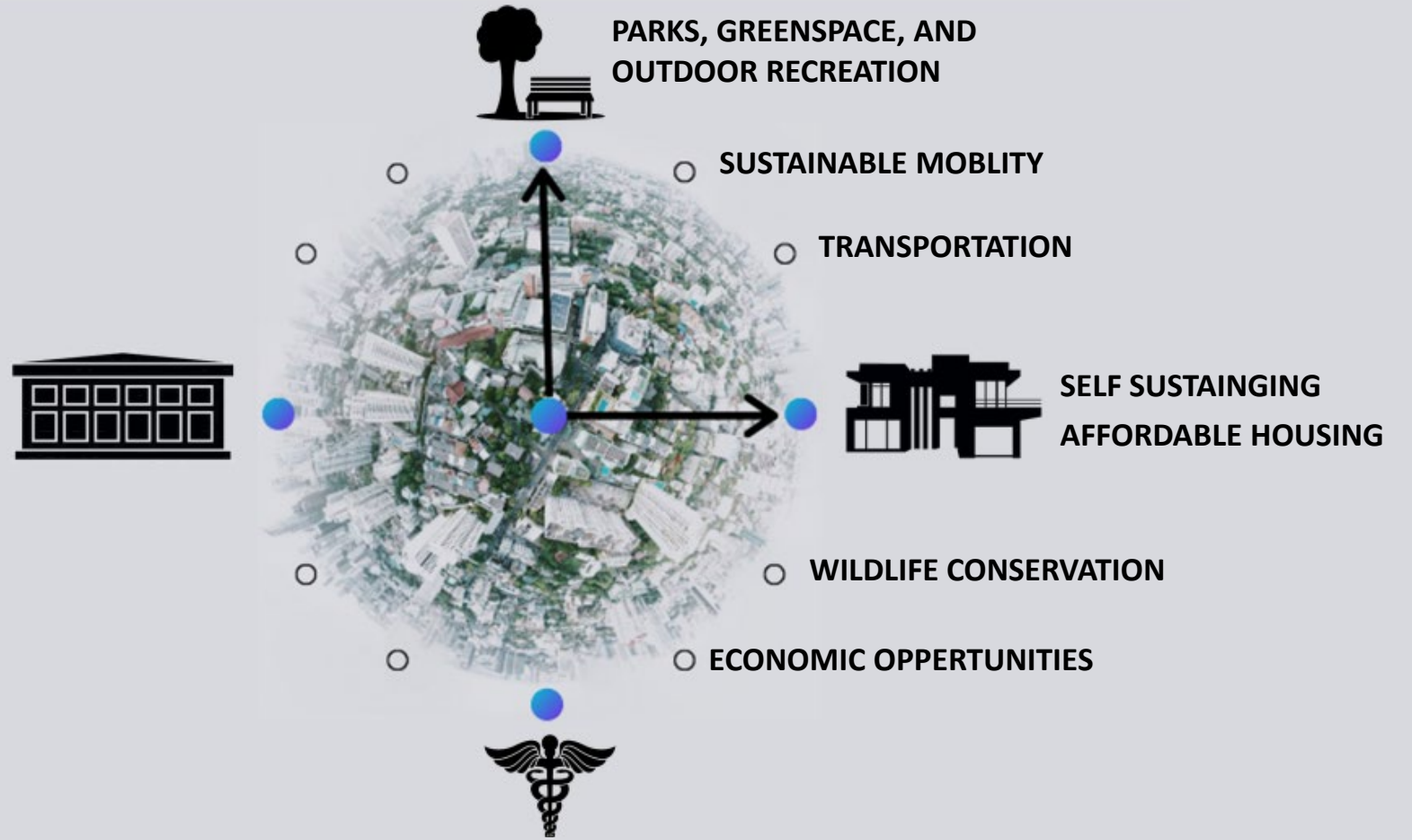
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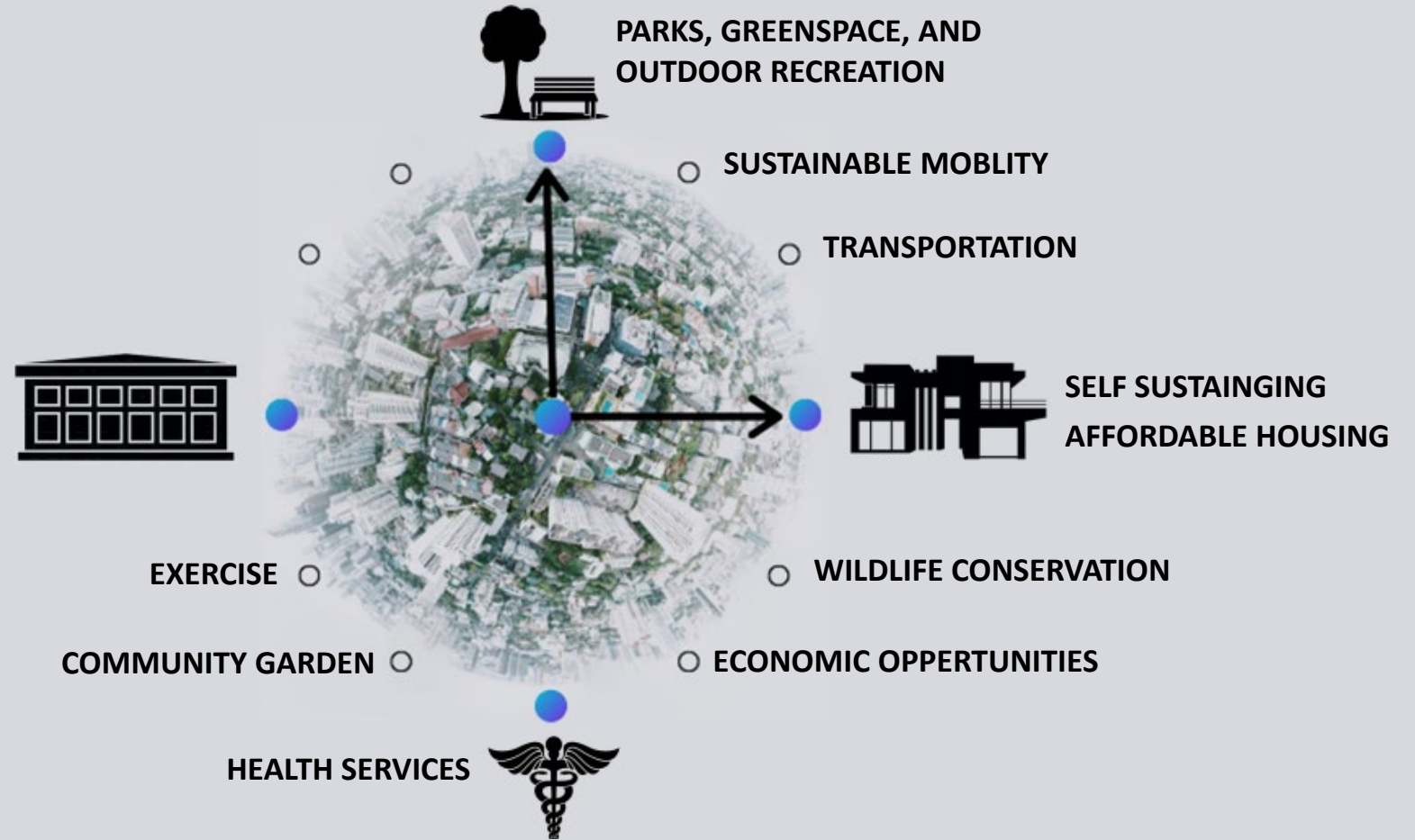
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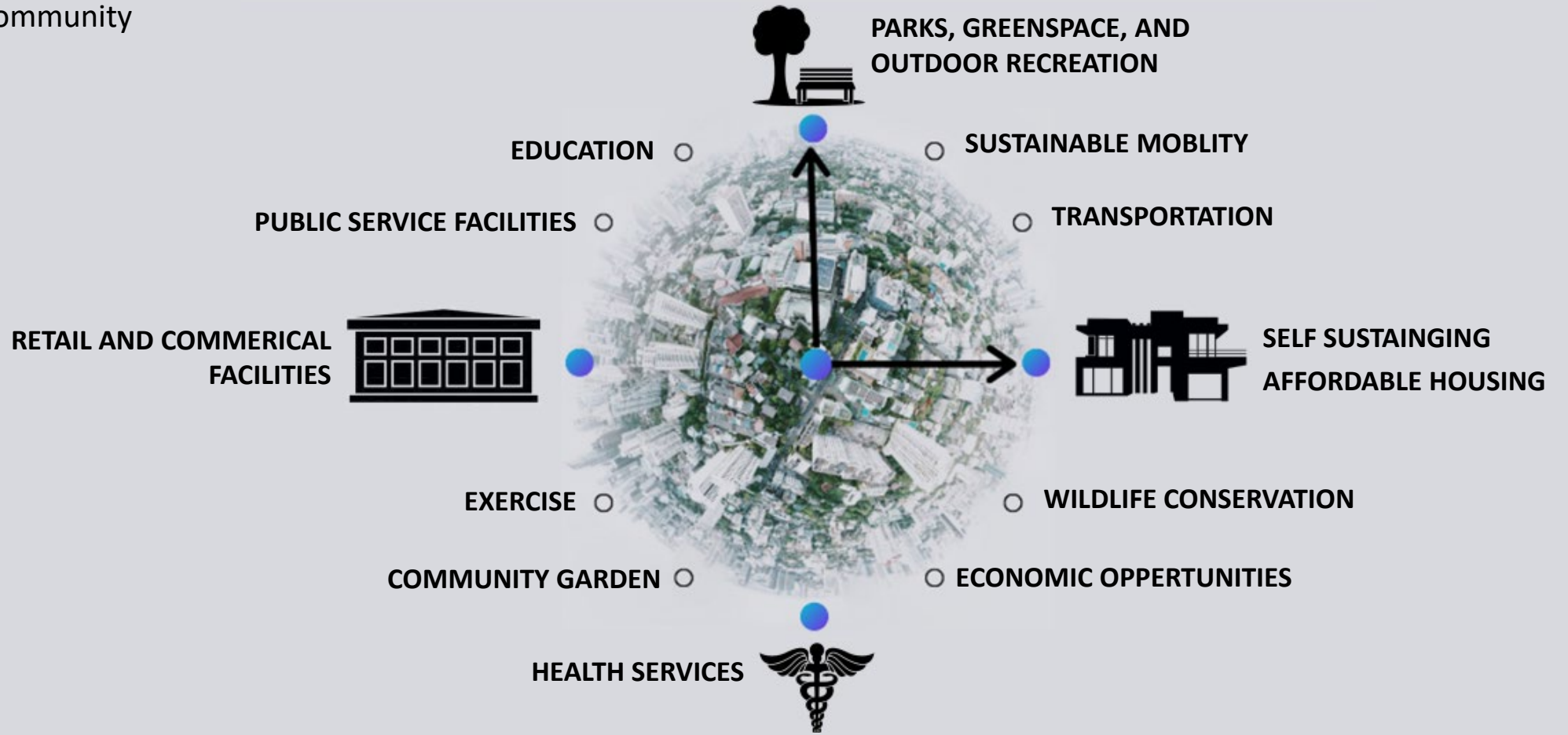
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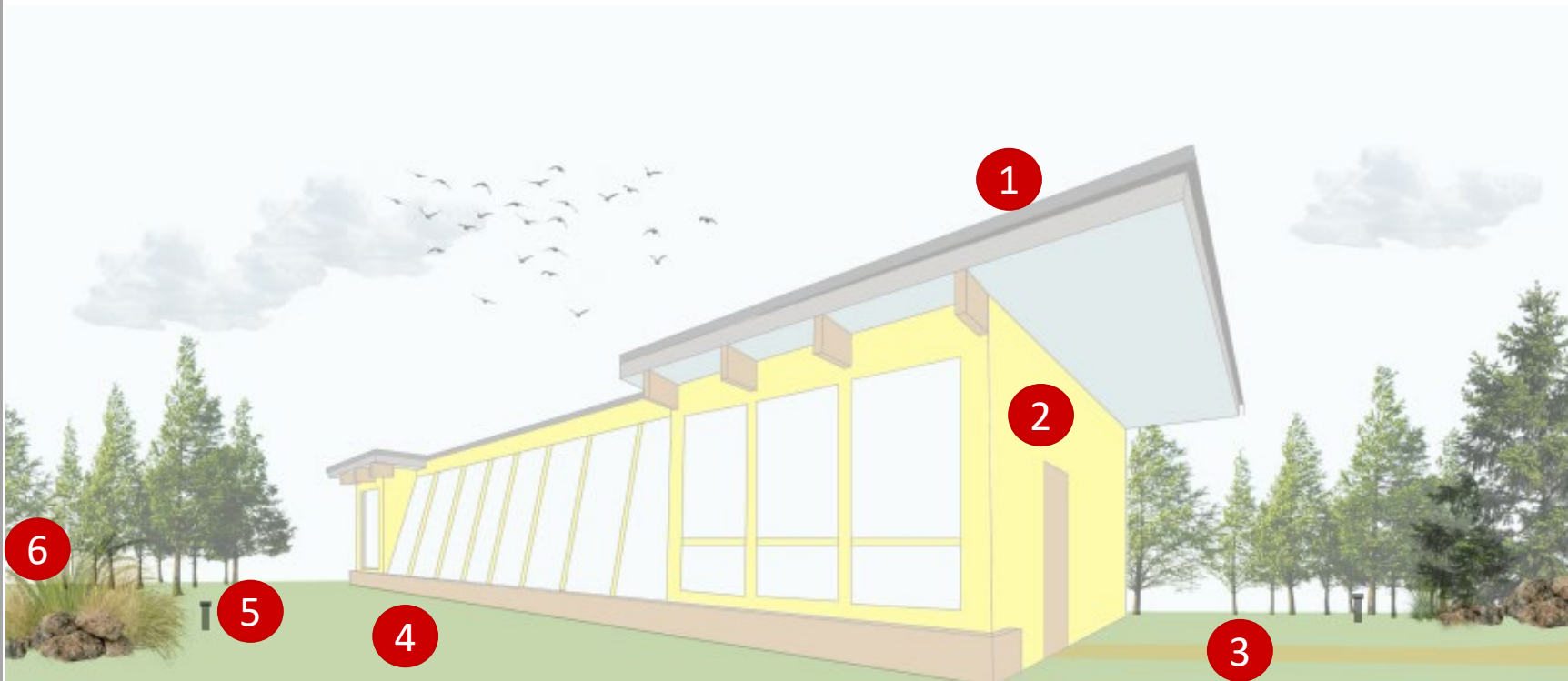
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# **KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN**

Fire resistant design

## KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN

### 2. Fire resistant design




#### KEY

1. Fire resistant roof
2. Fire resistant walls and windows
3. Emergency responder access
4. Home ignition zone
5. Irrigation system
6. Landscaping and fire wise plants
7. Disaster plan

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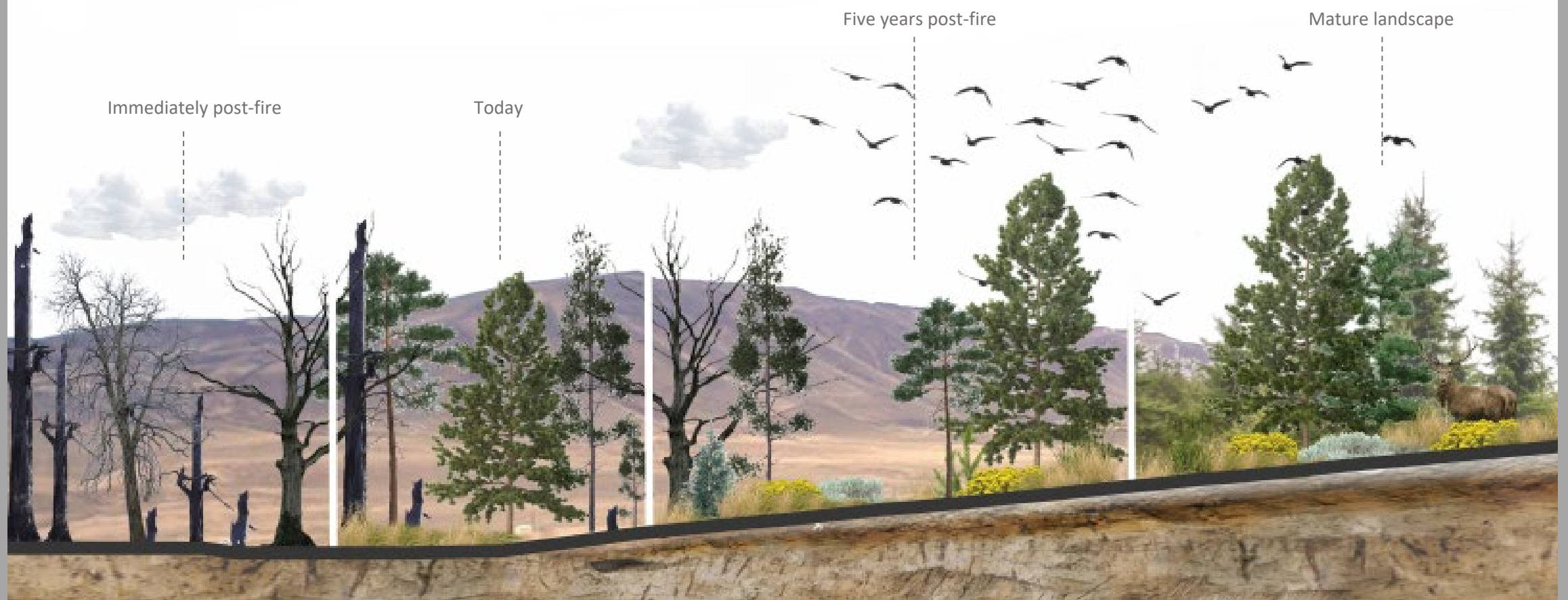
# 3 KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN

Restoration



## KEY ELEMENTS FOR THE SELF SUFFICIENCY FOR THE FUTURE MALDEN

### 3. Ecology restoration



## ANALYSIS



Ecological restoration needed throughout Malden.

## ANALYSIS



Ecological restoration needed throughout Malden.



Irrigation system needed for surrounding environment and to reduce fire risk.

## ANALYSIS



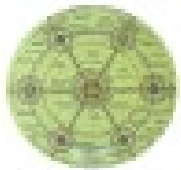
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Possible area for housing, including open spaces.



## ANALYSIS



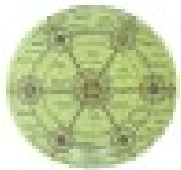
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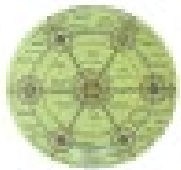
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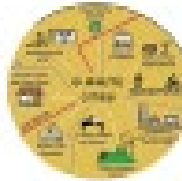
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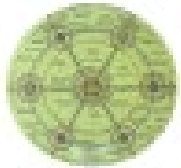
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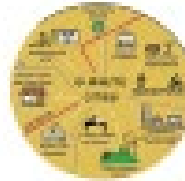
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Roads could be reduced to Pine City Maiden RD.

## ANALYSIS



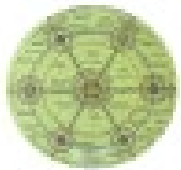
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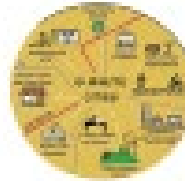
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Improvements needed to Palouse to Cascade State Park Trail.

## ANALYSIS



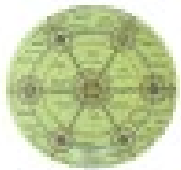
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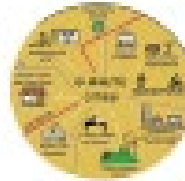
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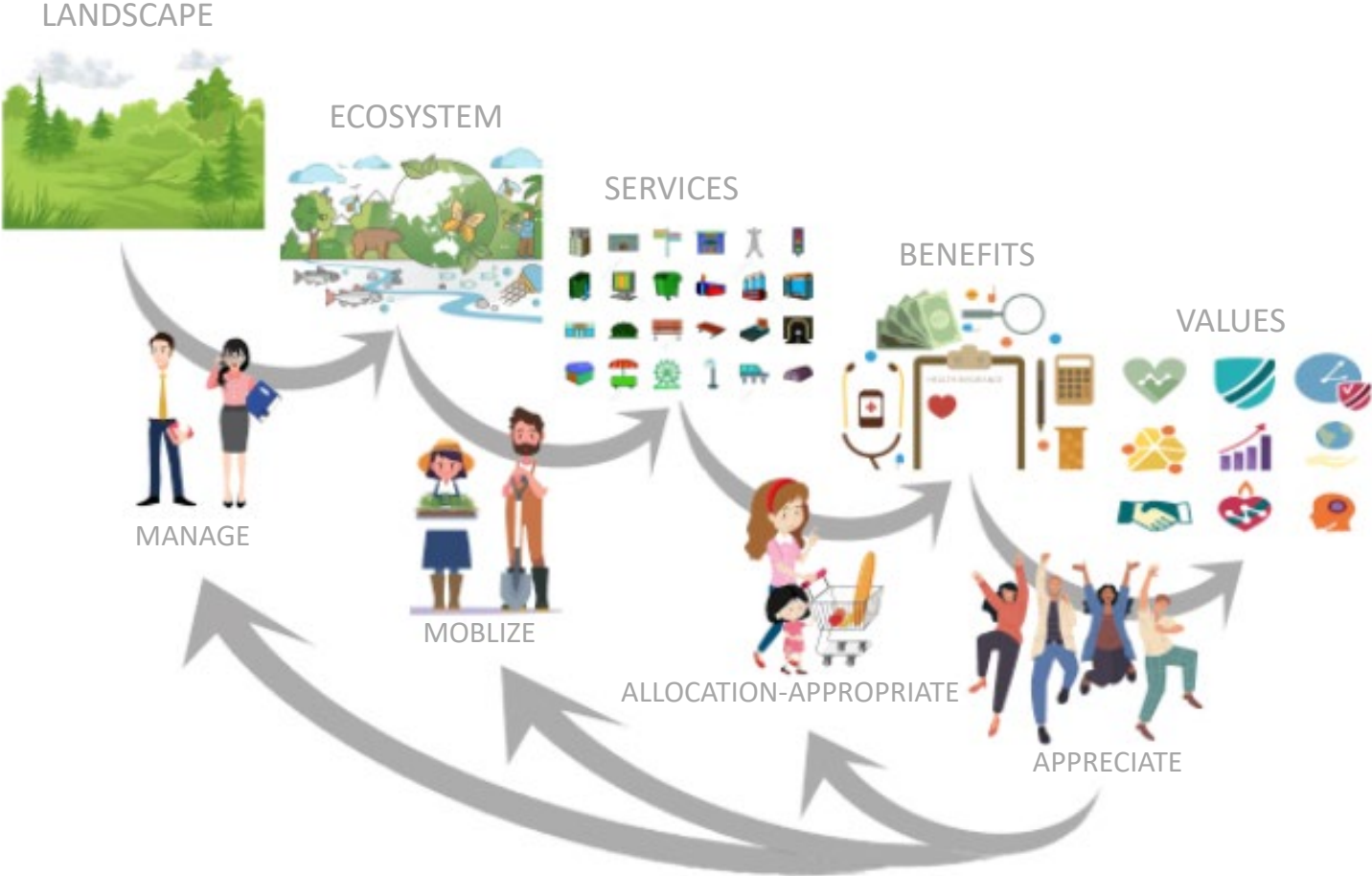


Improvements needed to Palouse to Cascade State Park Trail.



Pedestrian/bicycle circulation can be increased.

# Ecosystem for Malden's Future

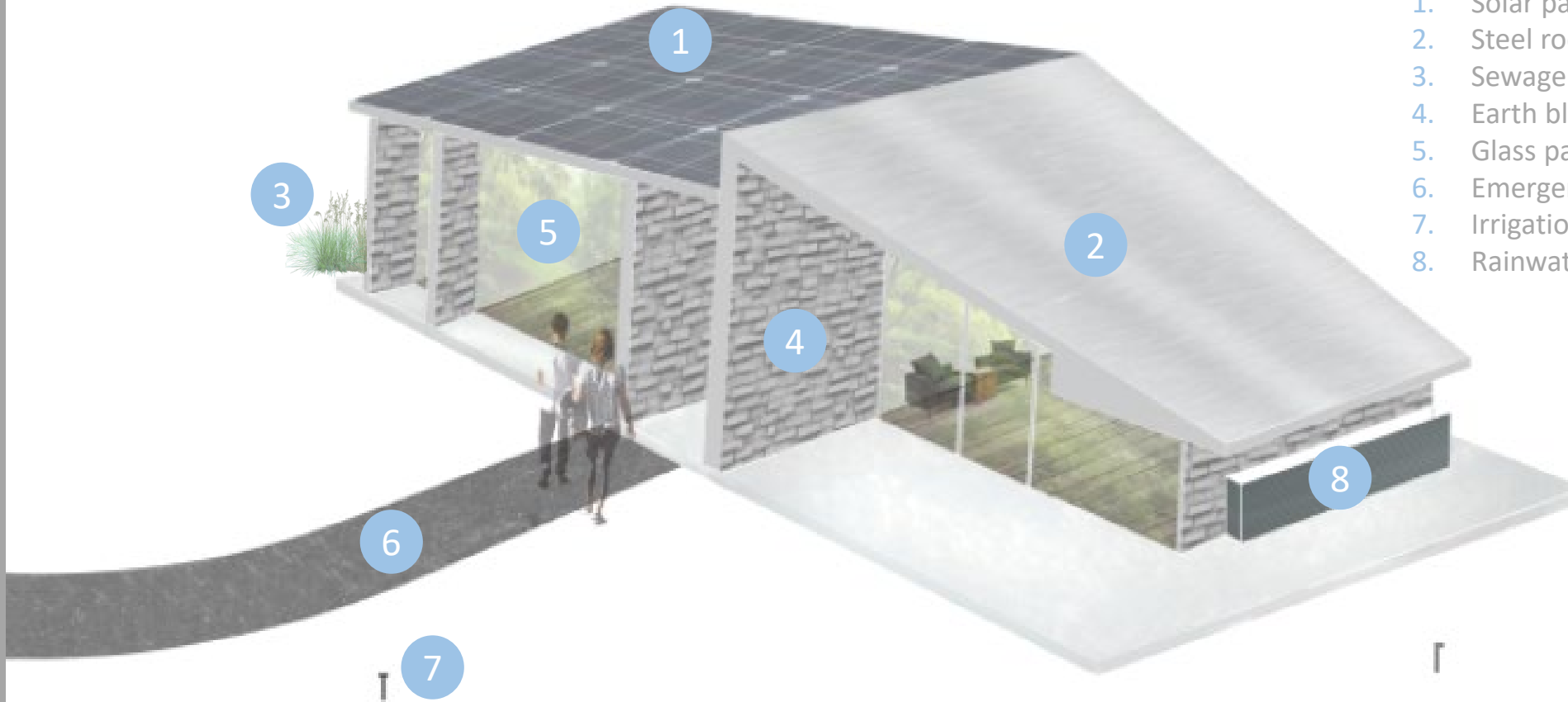




## SITE CONCEPT – HOUSING

### KEY

1. Solar panels
2. Steel roof
3. Sewage treatment plants
4. Earth blocks
5. Glass panels
6. Emergency responder access
7. Irrigation system
8. Rainwater collector





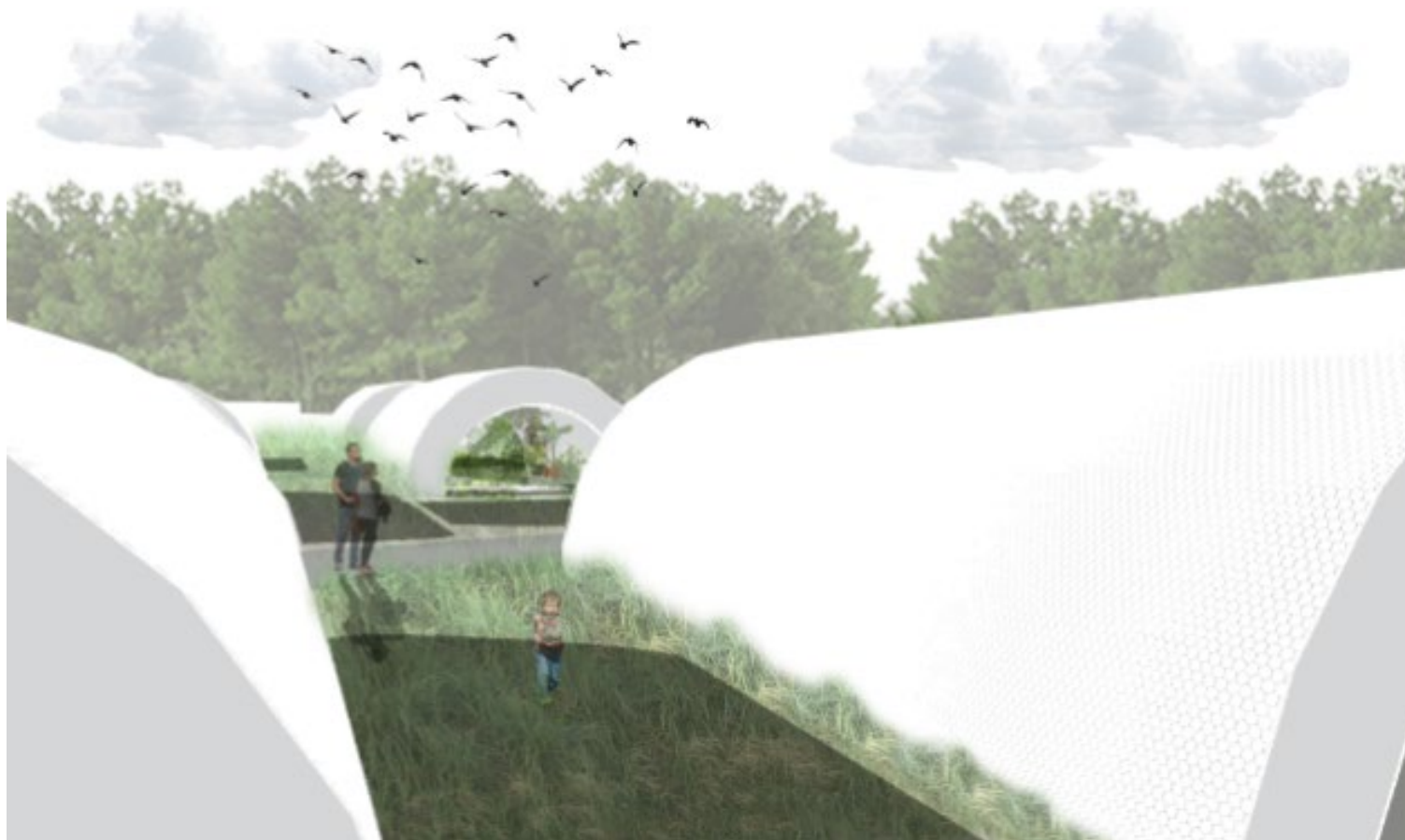


## SITE CONCEPT - GREENSPACE



This is a view of 1 acre gardens

## SITE CONCEPT - GREENSPACE



This is a view of the greenhouses



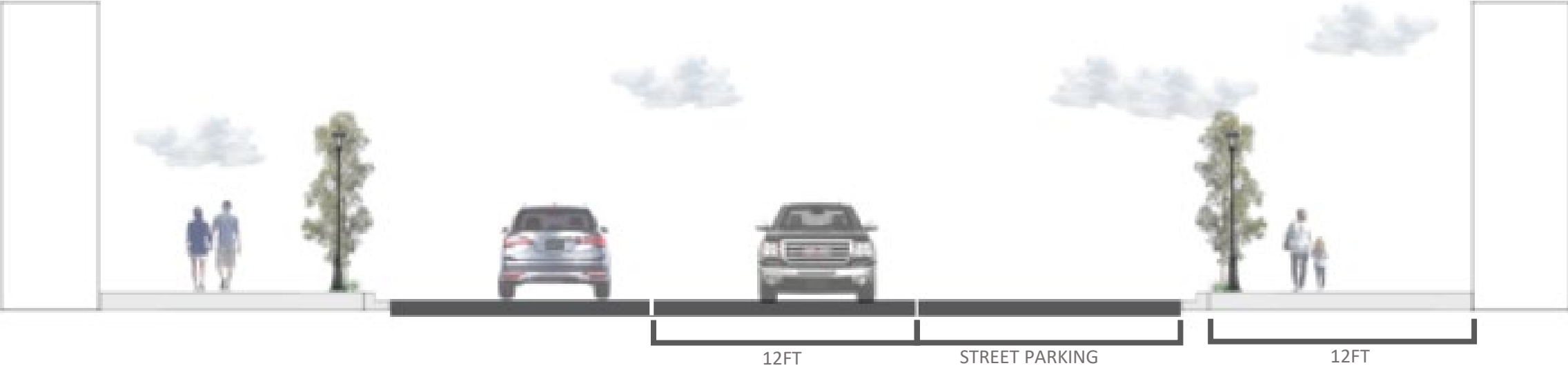
SITE CONCEPT – TOWN CENTER

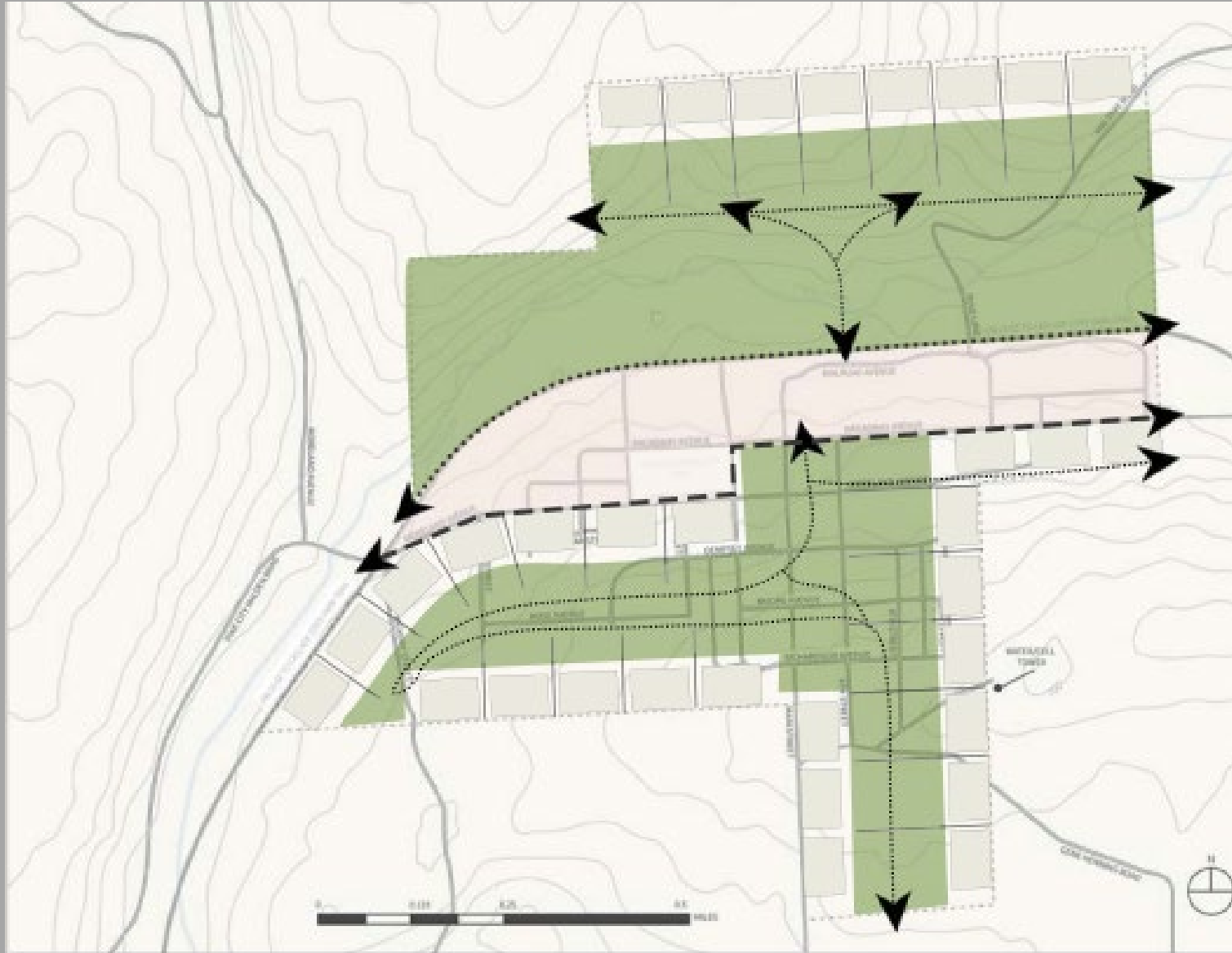







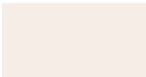





SITE CONCEPT - CIRCULATION





# SITE CONCEPT

## LEGEND

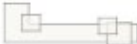




-  HOUSING
-  TOWNCENTER
-  OPEN GREEN SPACE
-  PARK
-  LAND SEPERATION
-  PEDESTRIAN CIRCULATION
-  VEHICULAR CIRCULATION





# Master plan

## LEGEND

-  TOWNCENTER BUILDINGS
-  TOWNCENTER BUILDINGS
-  TOWNCENTER BUILDINGS
-  TOWNCENTER BUILDINGS
-  GREEN HOUSES
-  HOUSING

## FLORA



NORTHERN CATALPA  
*Catalpa speciosa*



COMMON HACKBERRY  
*celtis occidentalis*



EUROPEAN BEECH  
*agus sylvatica*



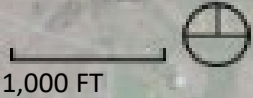
MOUNTAIN MAHOGANY  
*Cercocarpus montanus*



BLACK WALNUT  
*Juglans nigra*



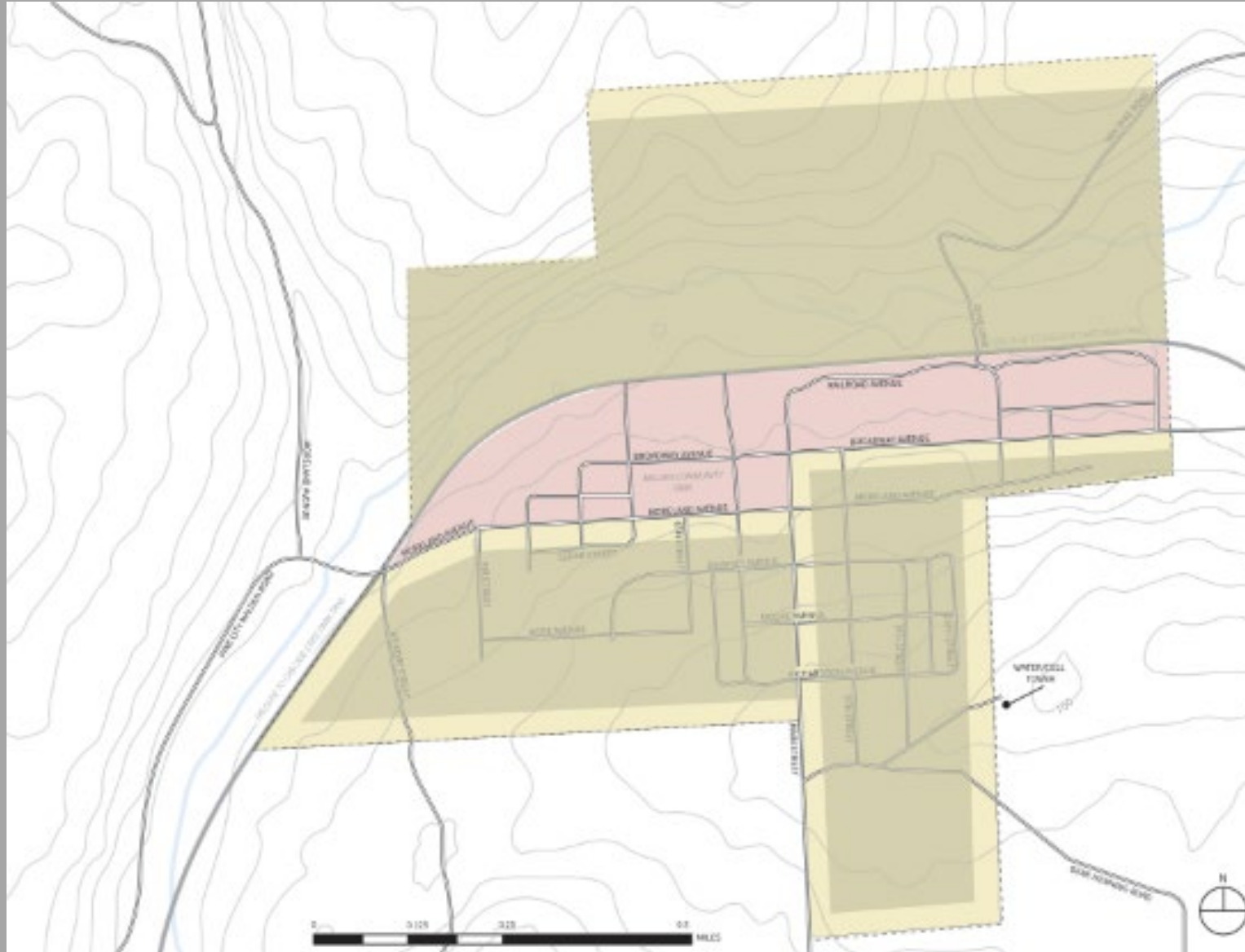
KENTUCKY COFFEETREE  
*Gymnocladus dioicus*



## NEW ZONING MAP

### LEGEND

- CITY LIMITS
- PINE CREEK
- TRAIL
- ▭ ROADS
- OPEN SPACE  
RESIDENTIAL ZONE
- TOWN CENTER  
MIXED USE ZONE
- LOW DENSITY  
RESIDENTIAL ZONE





This is a view of the city plan



**THANK YOU!**

## REFERENCES

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- Freedman, E. (2022, October 14). Utah is building a '15-minute city' on the site of a former prison. Retrieved February 14, 2023, from <https://www.independent.co.uk/climate-change/news/utah-toxic-dust-salt-lake-drought-b2201533.html>
- Nabil, N. (2021, June). Southeast University Journal of Architecture - seu.edu.bd. Retrieved February 15, 2023, from [https://seu.edu.bd/seuja/downloads/vol\\_01\\_issue\\_01\\_Jun\\_2021/SEUJA-Vol01Issue01-1.pdf](https://seu.edu.bd/seuja/downloads/vol_01_issue_01_Jun_2021/SEUJA-Vol01Issue01-1.pdf)