



POLLINATOR PARADISE

TAYLOR YARD PARCEL G2

Restoring Bee Habitat Through A Public Recreational and Educational Park in Los Angeles, California

Taylor Beck | LA 572 | Spring 2018 | Primary Advisor: Jay Kost | Secondary Advisor: Kathleen Pepple

What do these have in common?



What do these have in common?
ALL require pollination to exist.

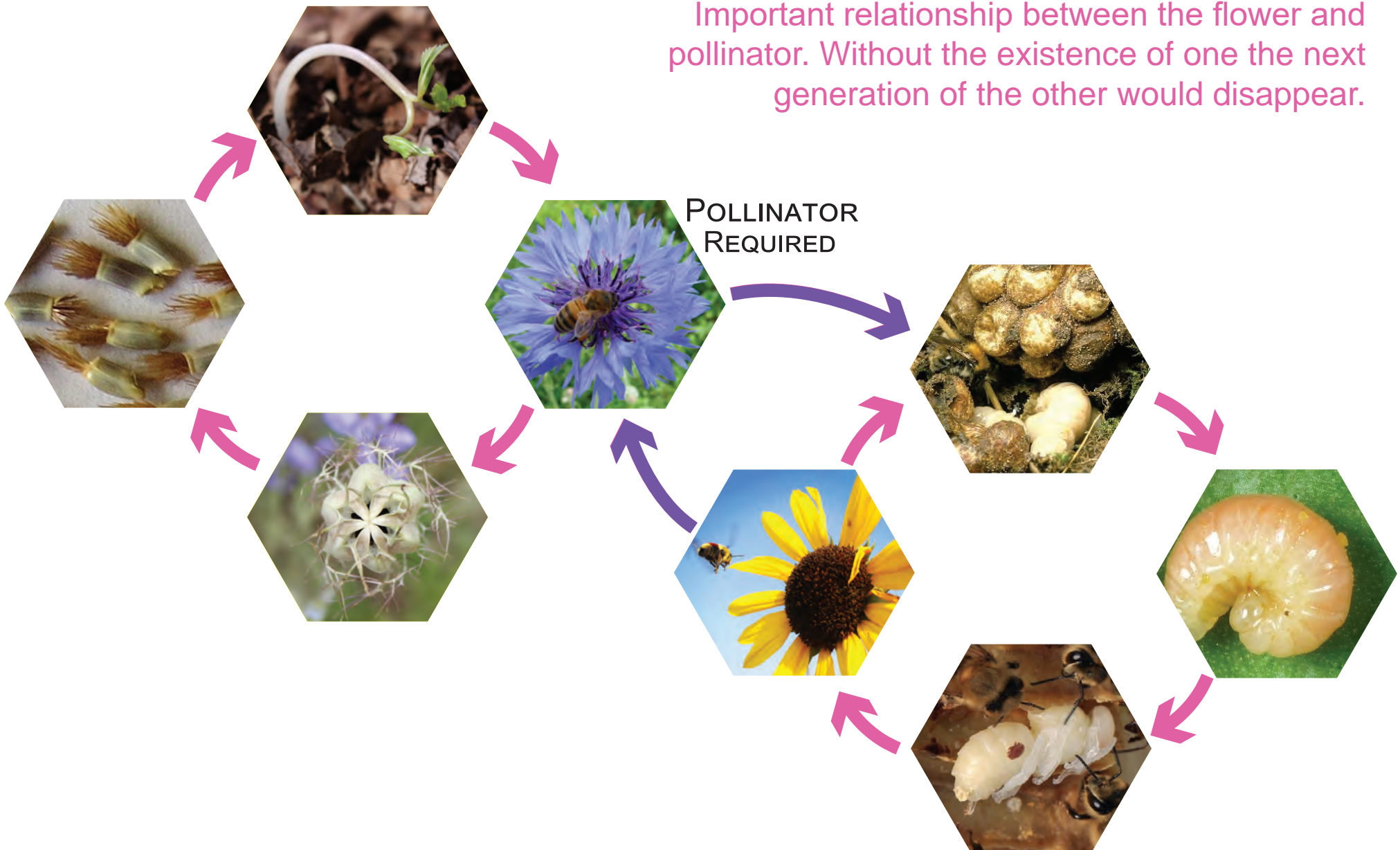


WHAT IS POLLINATION?



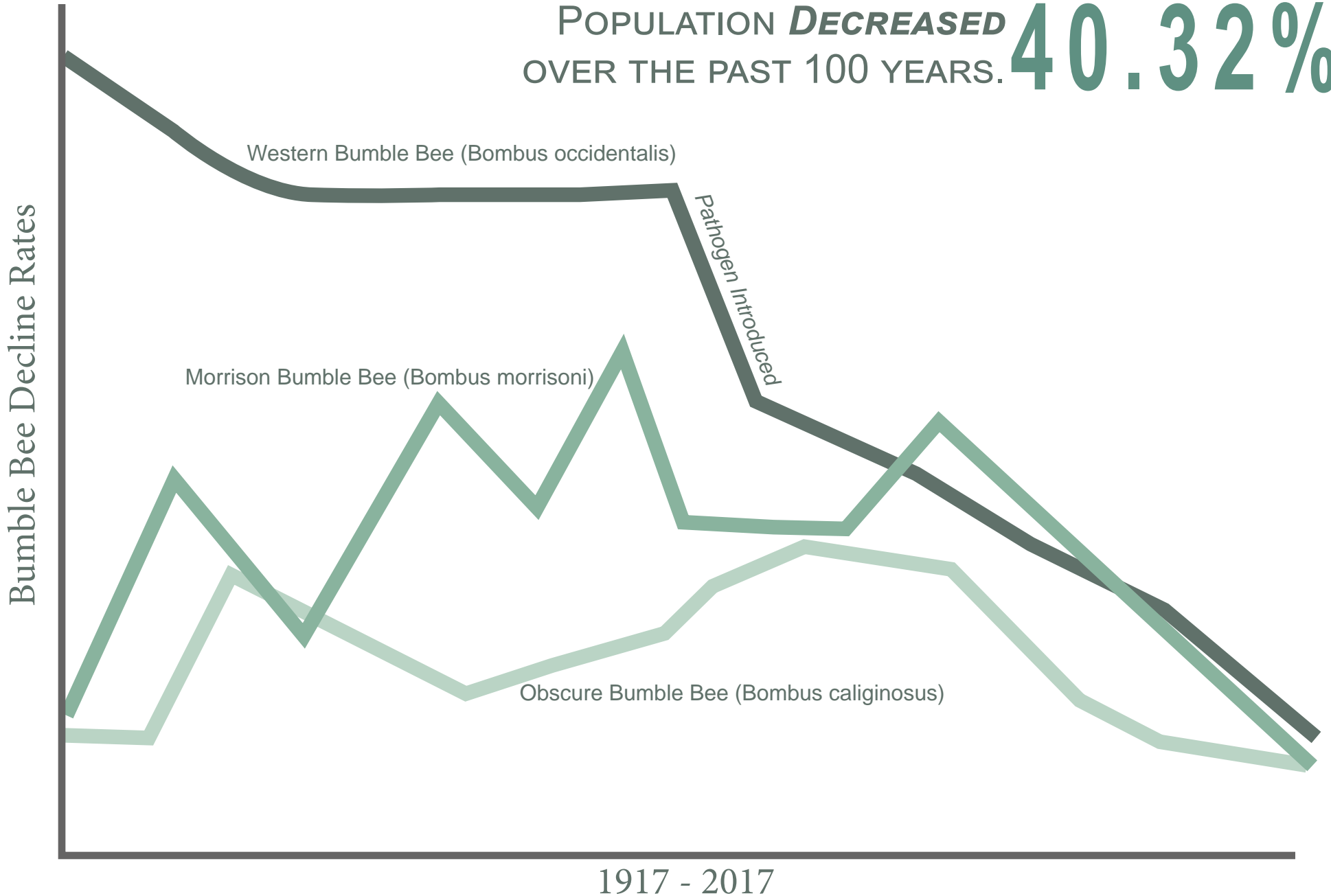
POLLINATION?

Important relationship between the flower and pollinator. Without the existence of one the next generation of the other would disappear.



ACCORDING TO THE IUCN OF THREATENED SPECIES

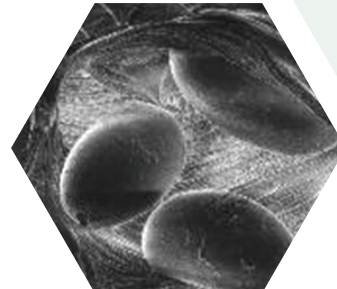
POPULATION **DECREASED** **40.32%**
OVER THE PAST 100 YEARS.



THE WESTERN BUMBLE BEE



THREATS



Due to the neonicotinoid chemicals, over **30,000** ***Bumble Bees*** died while pollinating a Linden tree.



THE WESTERN BUMBLE BEE

NON Aggressive

Furrier than most bees

Social

Does not produce commercial honey

Foragers

Most important pollinator of native perennials

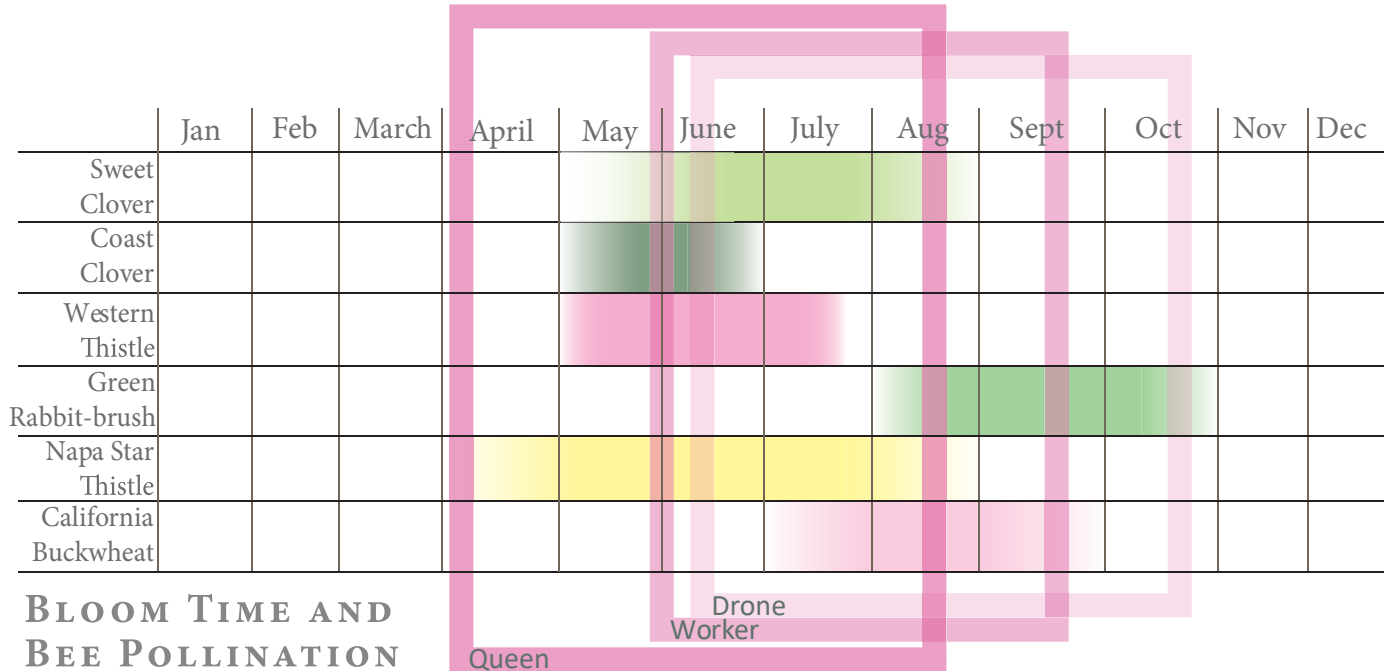
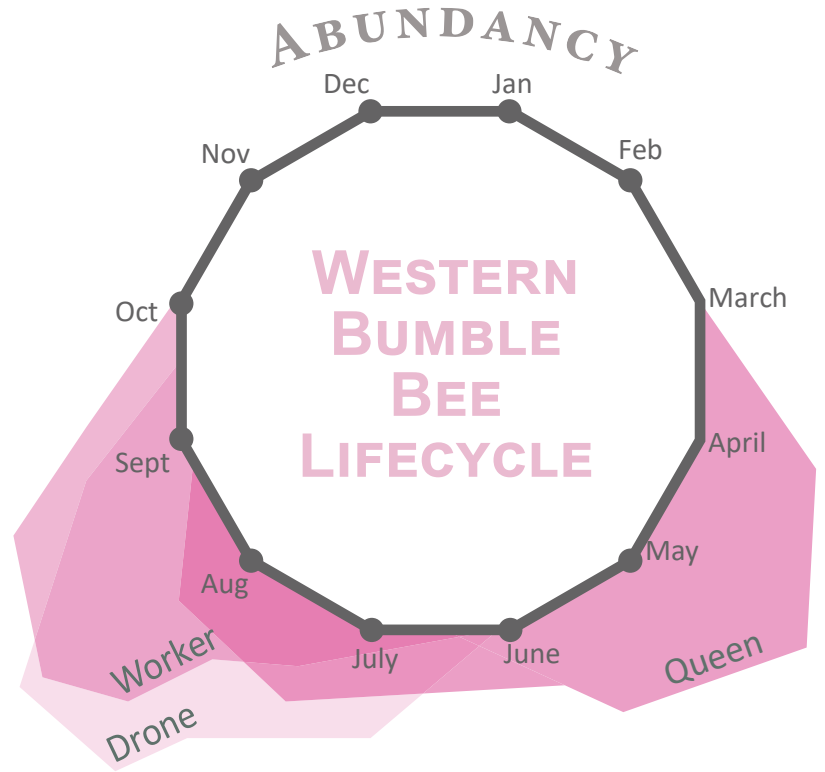
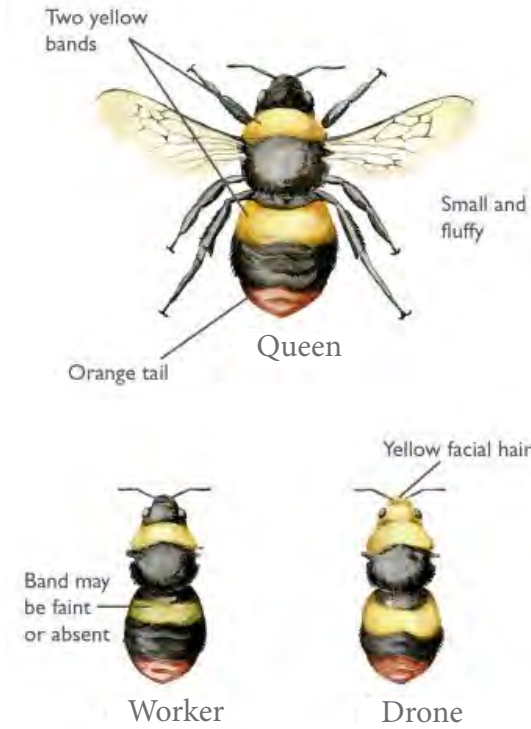
Nests underground, in fallen trees, and wood piles



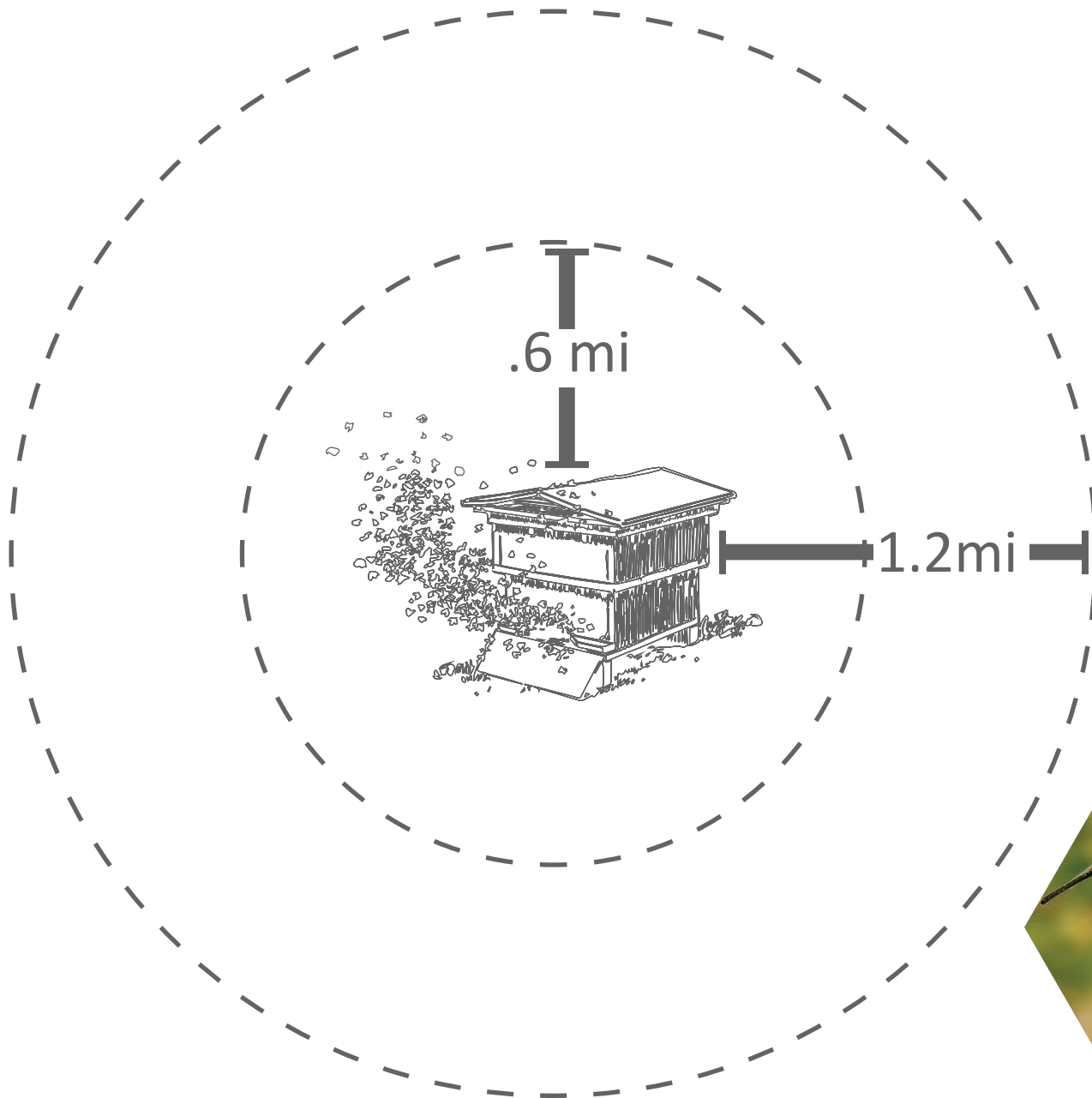
A LOOK AT THE HIVE



WESTERN BUMBLE BEE LIFE-CYCLE



IMPORTANCE OF A REFUGE



Will travel up to 1.2 miles from their hive

Hives can be as close as 5000 sq. feet apart

Pollinators are not competitive and usually have specific adaptations to thrive on certain types of flowers

Honey bees and bumble bees become competitive when a honey bee hive is on site, the honey bees usually dominate





DESIGN QUESTION

How can Landscape Architecture be utilized to re-establish Western Bumble Bee habitat while creating a functional and educational public space?

PROJECT GOALS



1. Pollinator Life-cycle

Create a suitable habitat for pollinators including the Western Bumble Bee



2. Experiential Education

Encourage guests to understand the importance of the Western Bumble Bee as a pollinator through interactive experiences



3. Public Recreation

Designate public areas for recreational use

CASE STUDY BREDE HIGH WOODS



Primary Objectives

1. Habitat Restoration
2. Increase Species Diversity
3. Public Engagement

CASE STUDY LEIGHTON BUZZARD

Primary Objectives

1. Create Bio Diverse Habitat
2. Engage Youth
3. Community Education



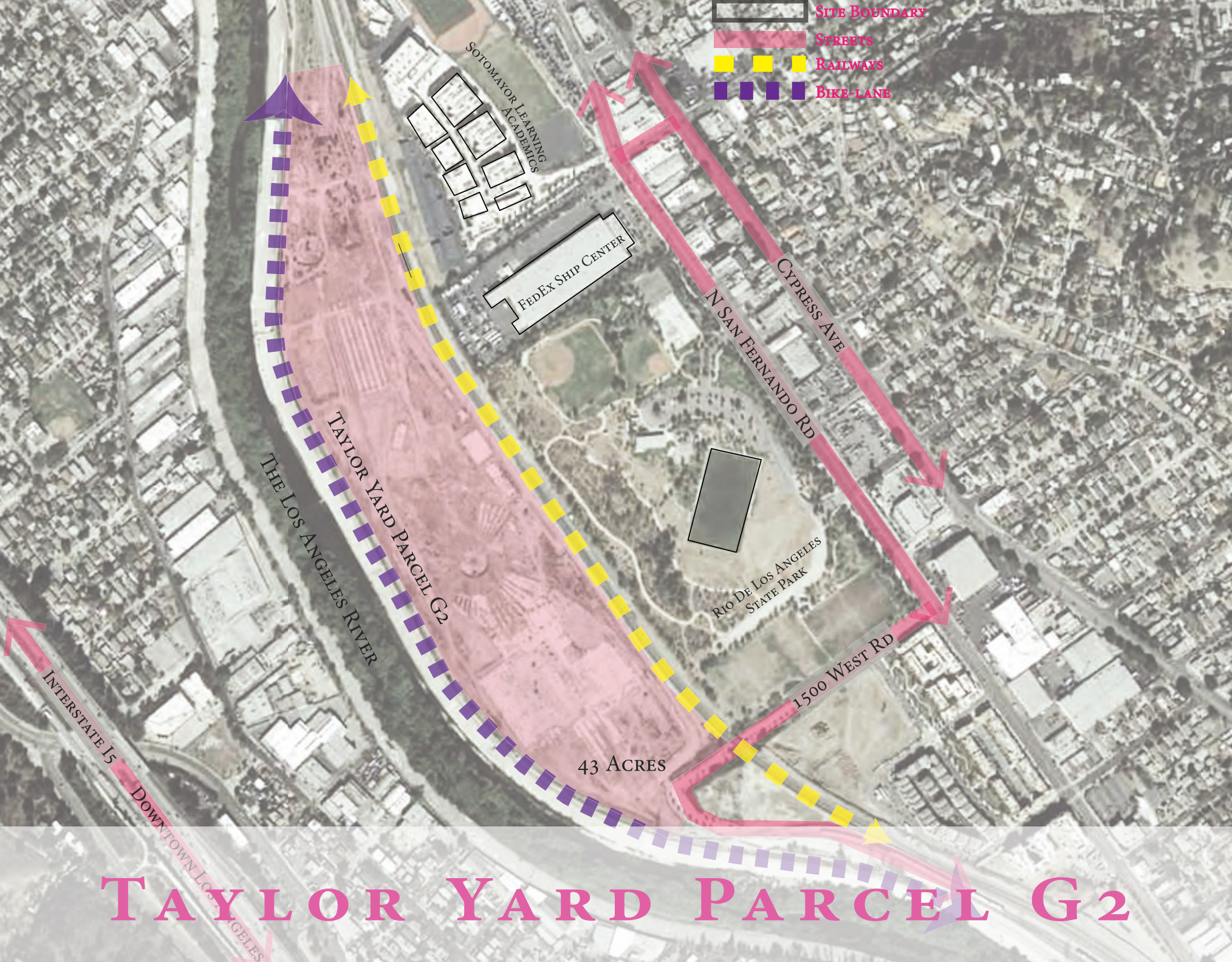
LOS ANGELES, CALIFORNIA



SITE LOCATION



-  SITE BOUNDARY
-  STREETS
-  RAILWAYS
-  BIKE-LANE



THE LOS ANGELES RIVER
 TAYLOR YARD PARCEL G2

SOTOMAYOR LEARNING
 ACADEMICS

FEDEx SHIP CENTER

RIO DE LOS ANGELES
 STATE PARK

43 ACRES

N SAN FERNANDO RD
 CYPRESS AVE

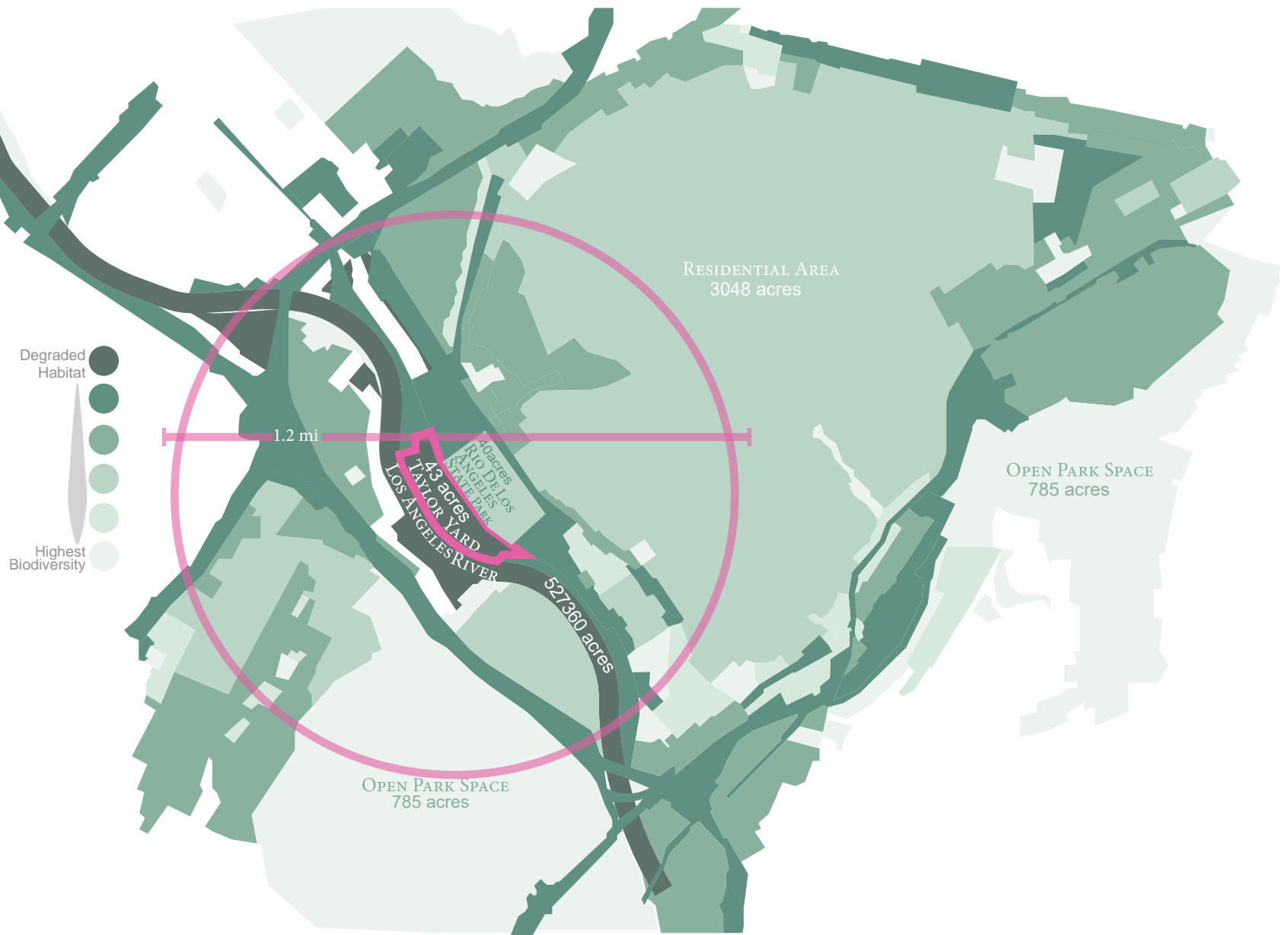
1500 WEST RD

TAYLOR YARD PARCEL G2

INTERSTATE I5

DOWNTOWN LOS ANGELES

HABITAT IN THE AREA





Sotomayor Learning Academics

Rio De Los Angeles State Park

Taylor Yard Parcel G2

Potential Parking Lot

Vehicular Entry

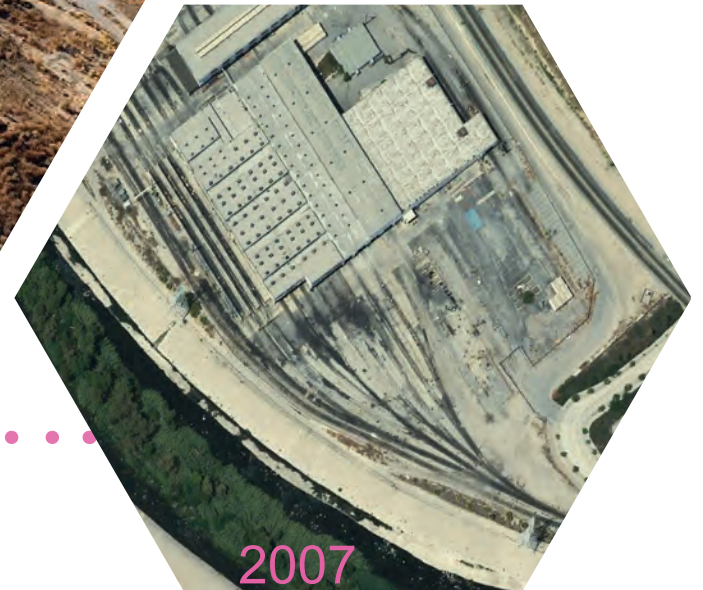
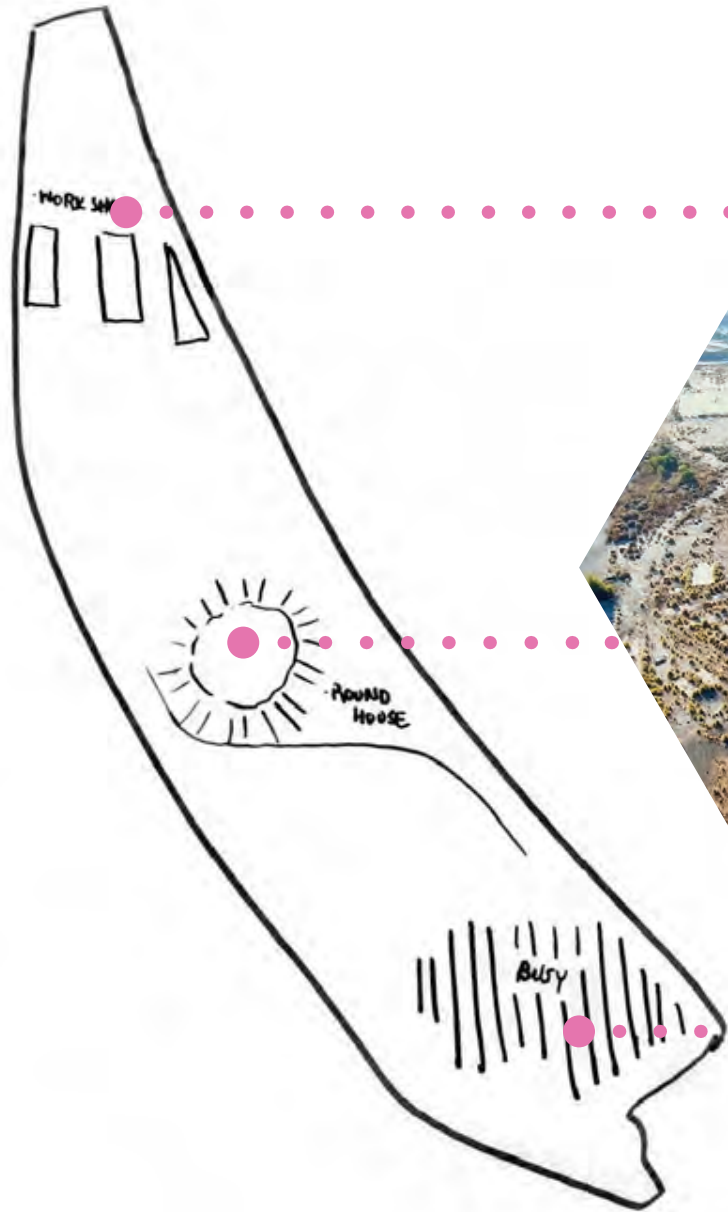
Bike Trail

Los Angeles River

Downtown Los Angeles

TAYLOR YARD PARCEL G2

SITE HISTORY



POLLINATOR LIFE-CYCLE

Habitat Zone

Fallen Logs
Stacked Wood Piles

Native Plant Species

Form
Function
Texture
Color
Repetition
Balance
Variety
Grouping

Orchard

Pollination
Agriculture

Bee Hotels

EXPERIENTIAL EDUCATION

Educational Center

Pollinator Museum

Educational Gardens

Native Plant Species

Outdoor Classrooms

Campus Space

Hive Production

Study Species

Vegetable Gardens

PUBLIC RECREATION

Ceremonial Plaza

Concerts
Events

Green Space

Farmers Market

Pathway Usage

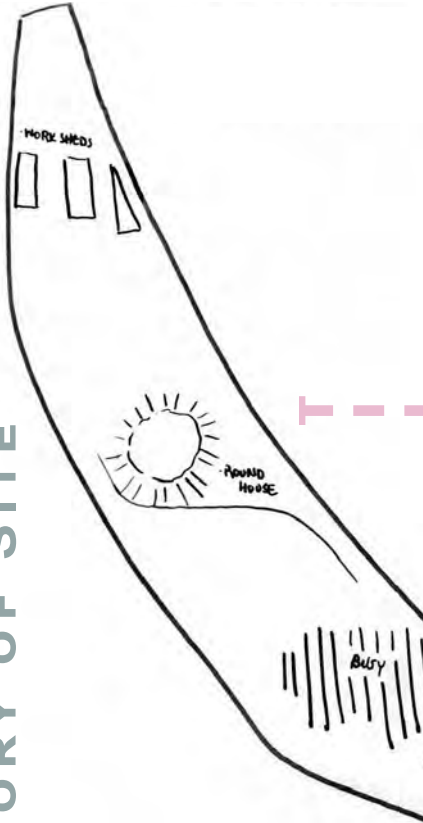
Woodland Trail
Educational Trail
Wooden Walkway
Raised Trail

Art Display Space

Show Off Student Work

DESIGN PROCESS

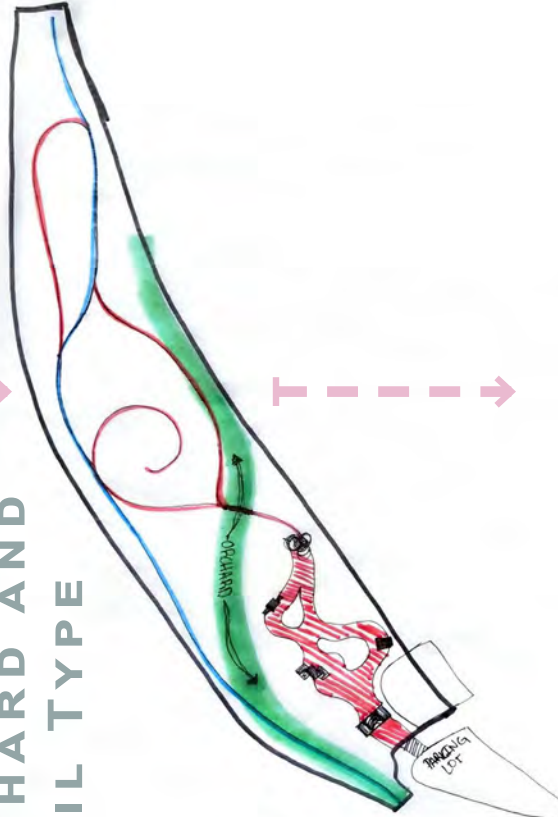
HISTORY OF SITE



CIRCULATION



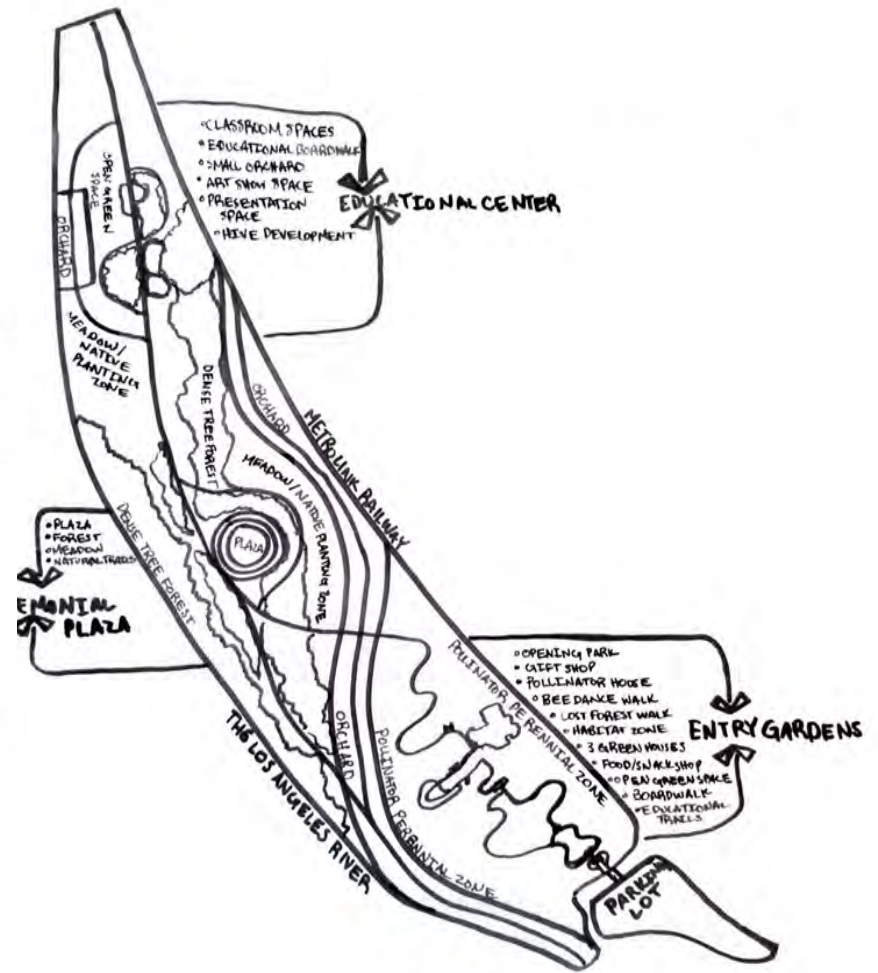
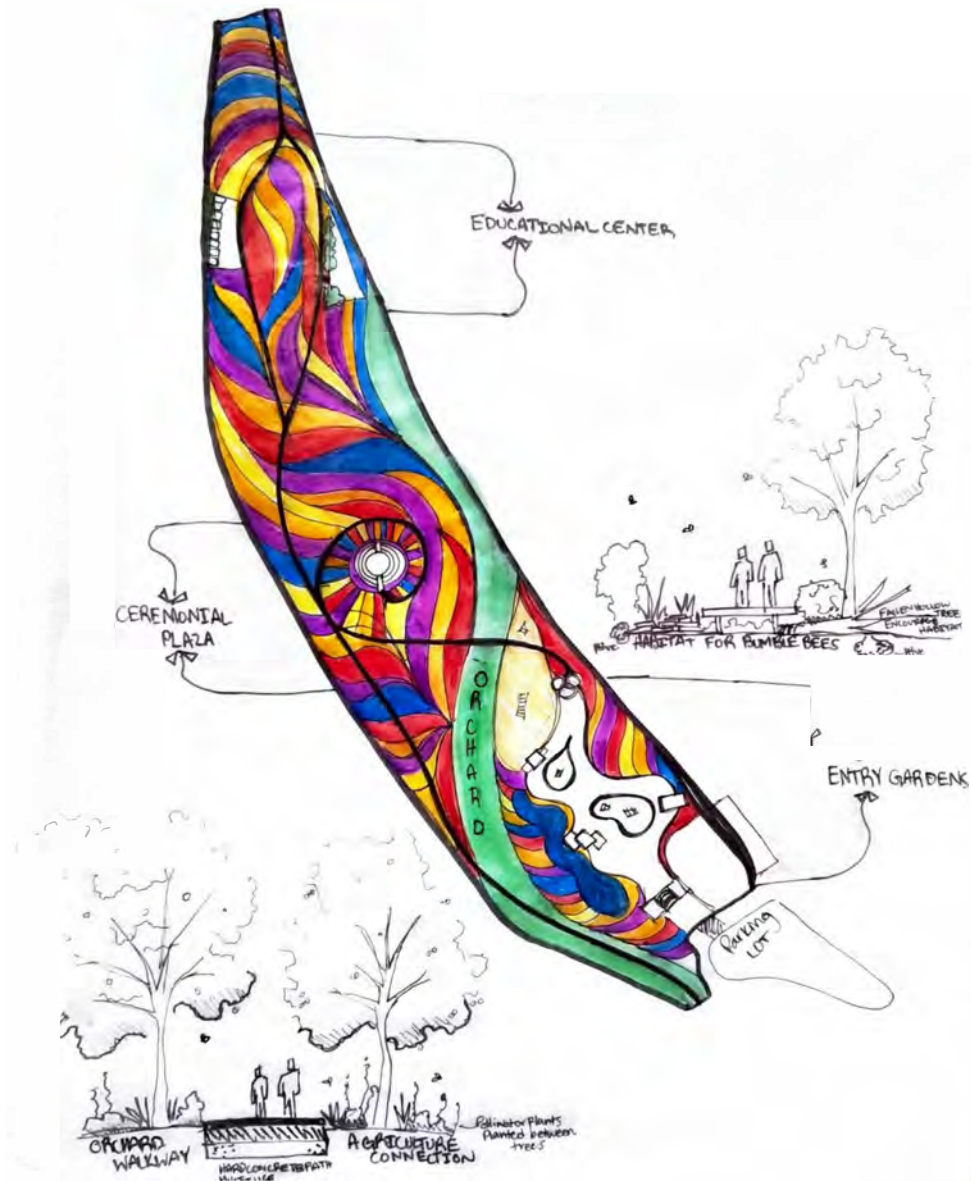
ORCHARD AND TRAIL TYPE



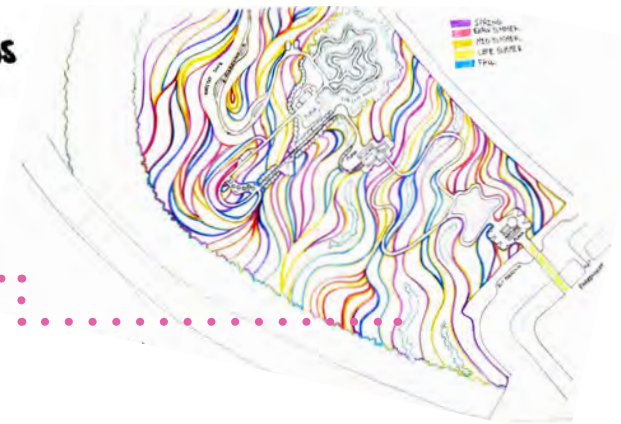
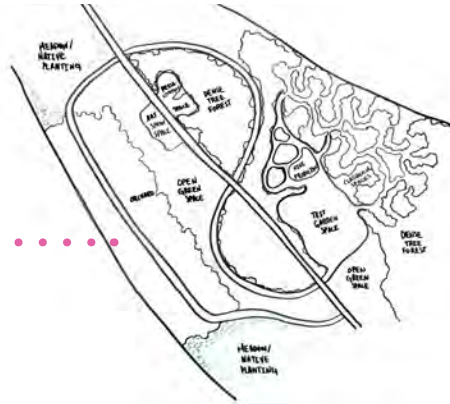
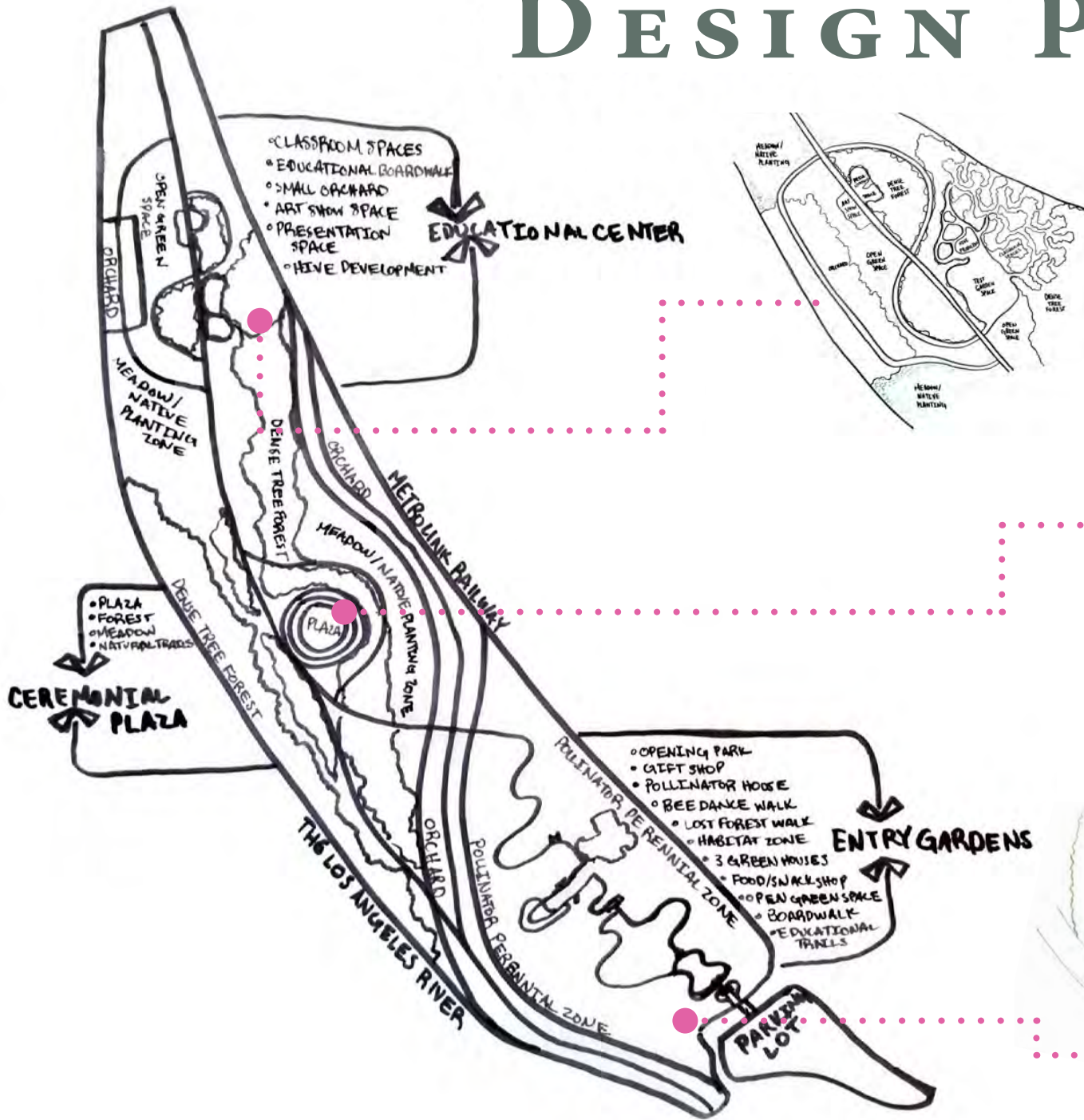
PLANTING PLAN



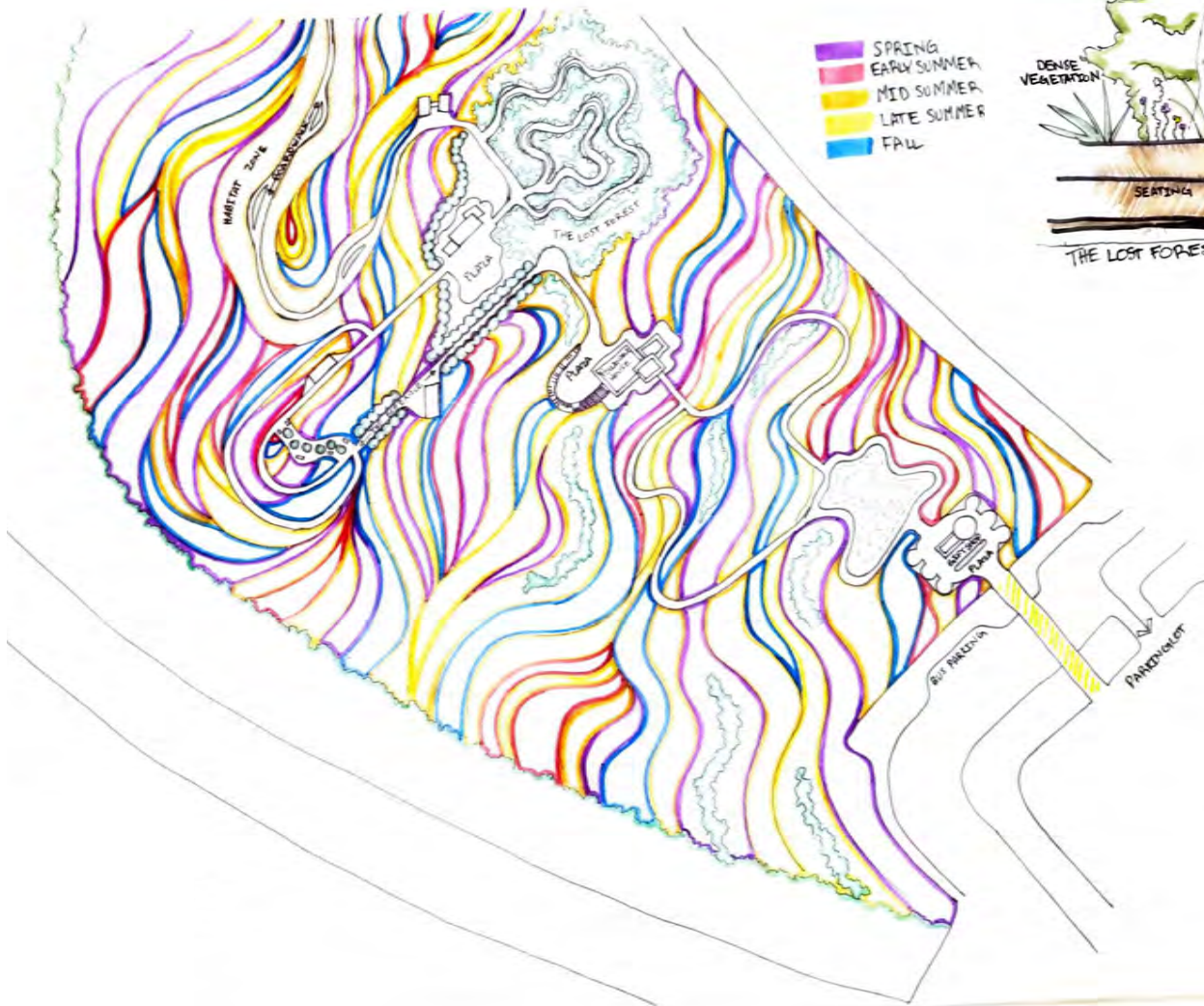
DESIGN PROCESS



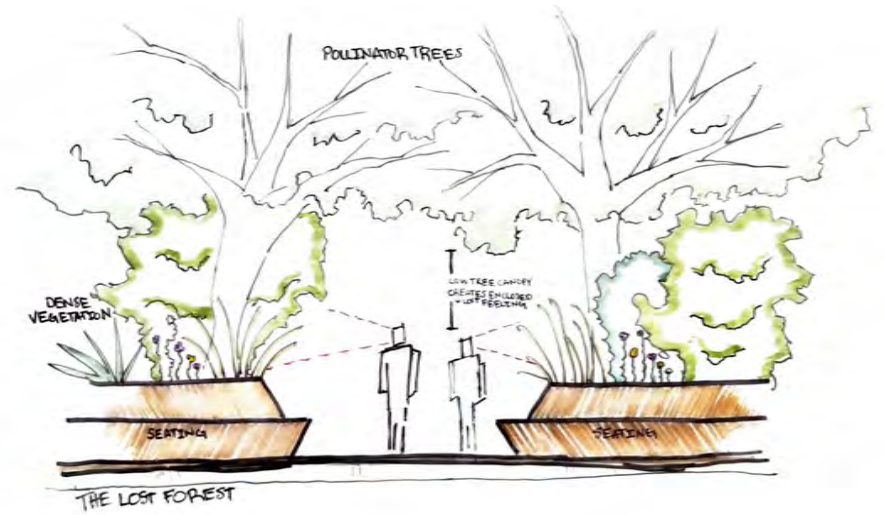
DESIGN PROCESS



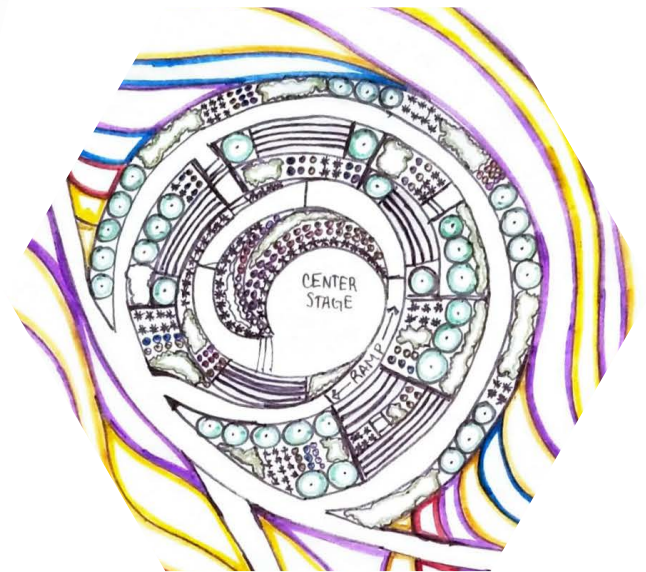
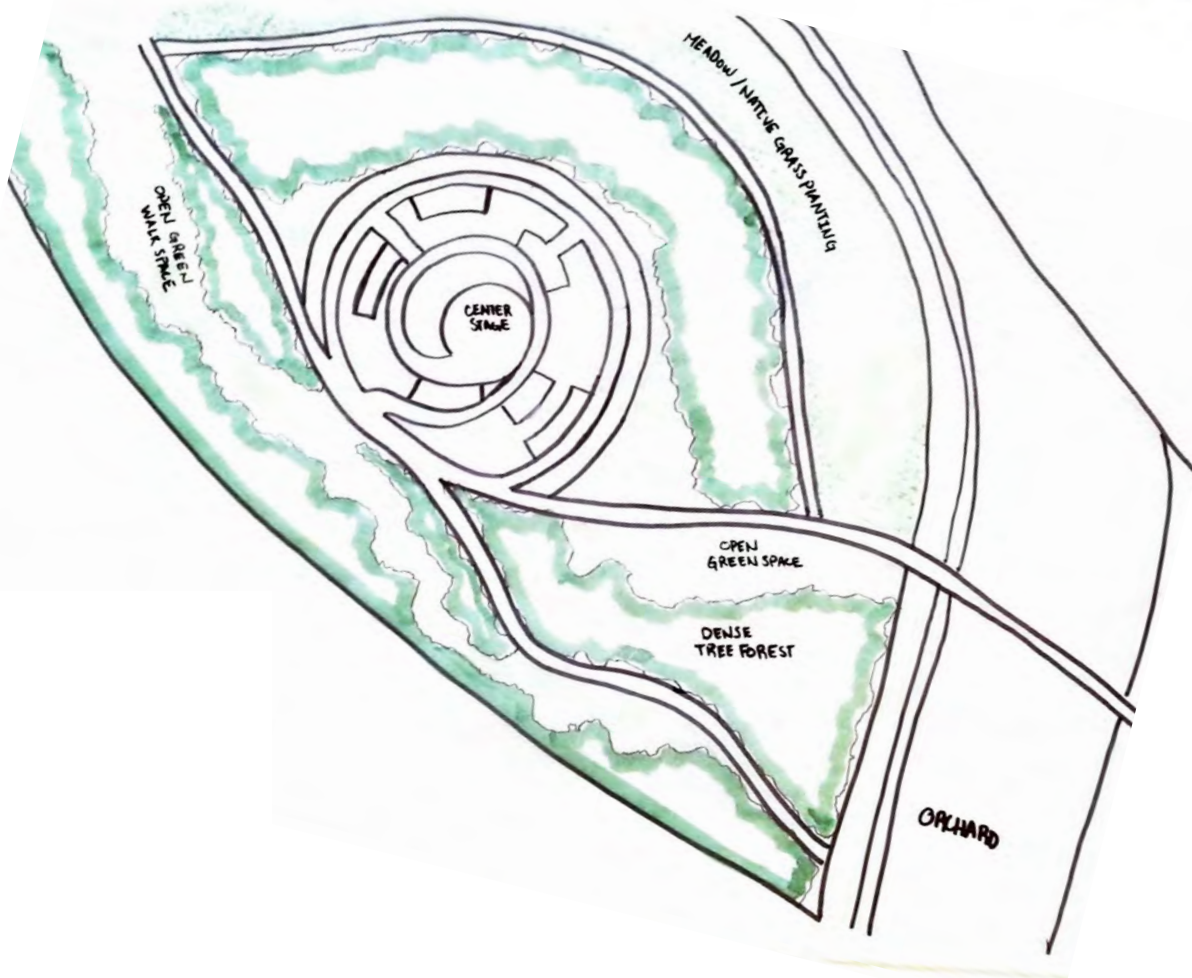
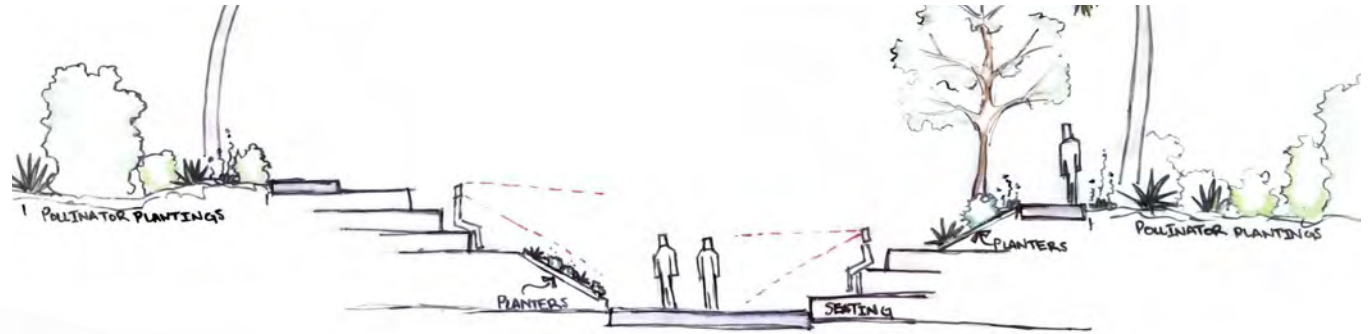
ENTRY GARDEN



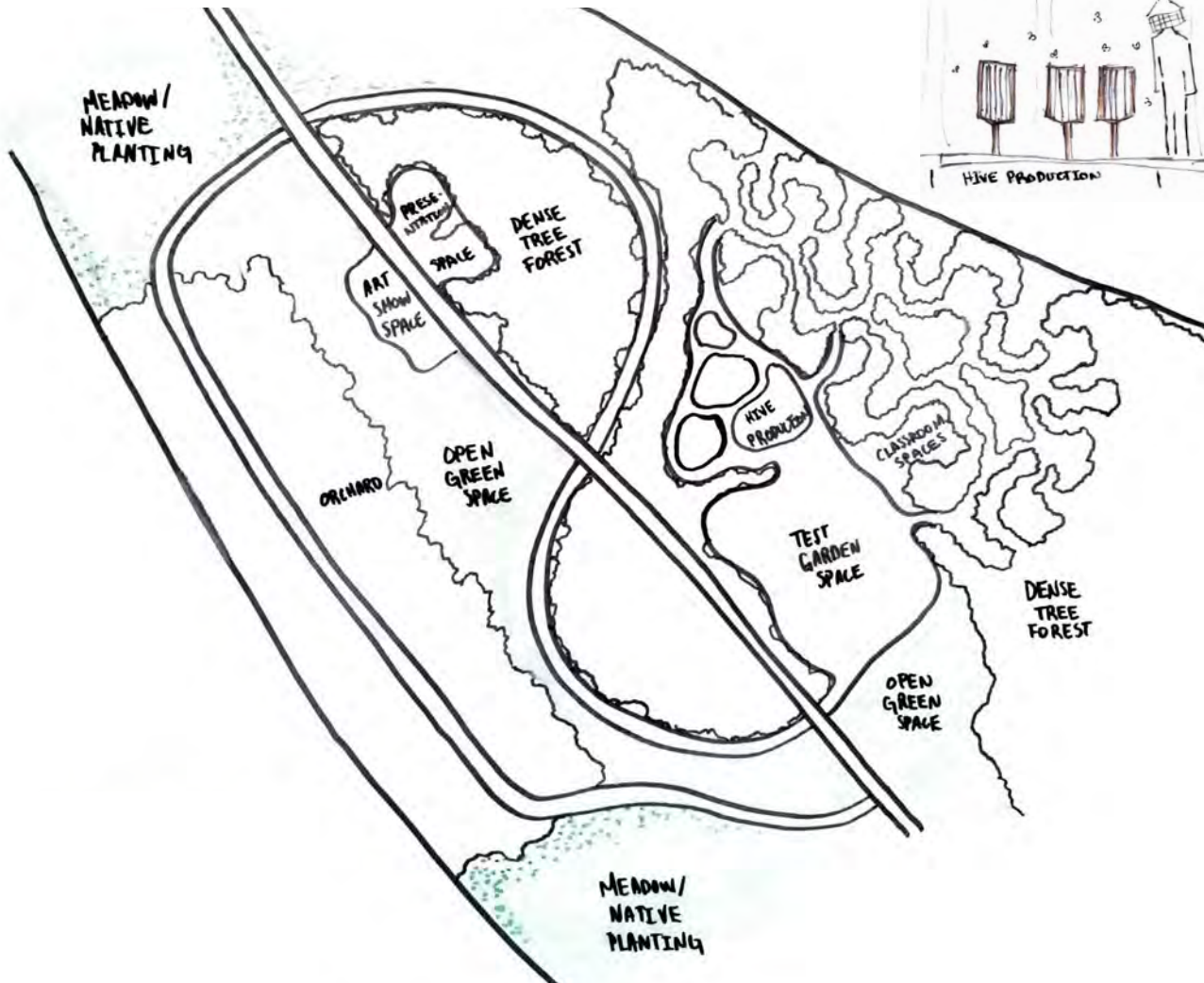
- SPRING
- EARLY SUMMER
- MID SUMMER
- LATE SUMMER
- FALL



CEREMONIAL PLAZA



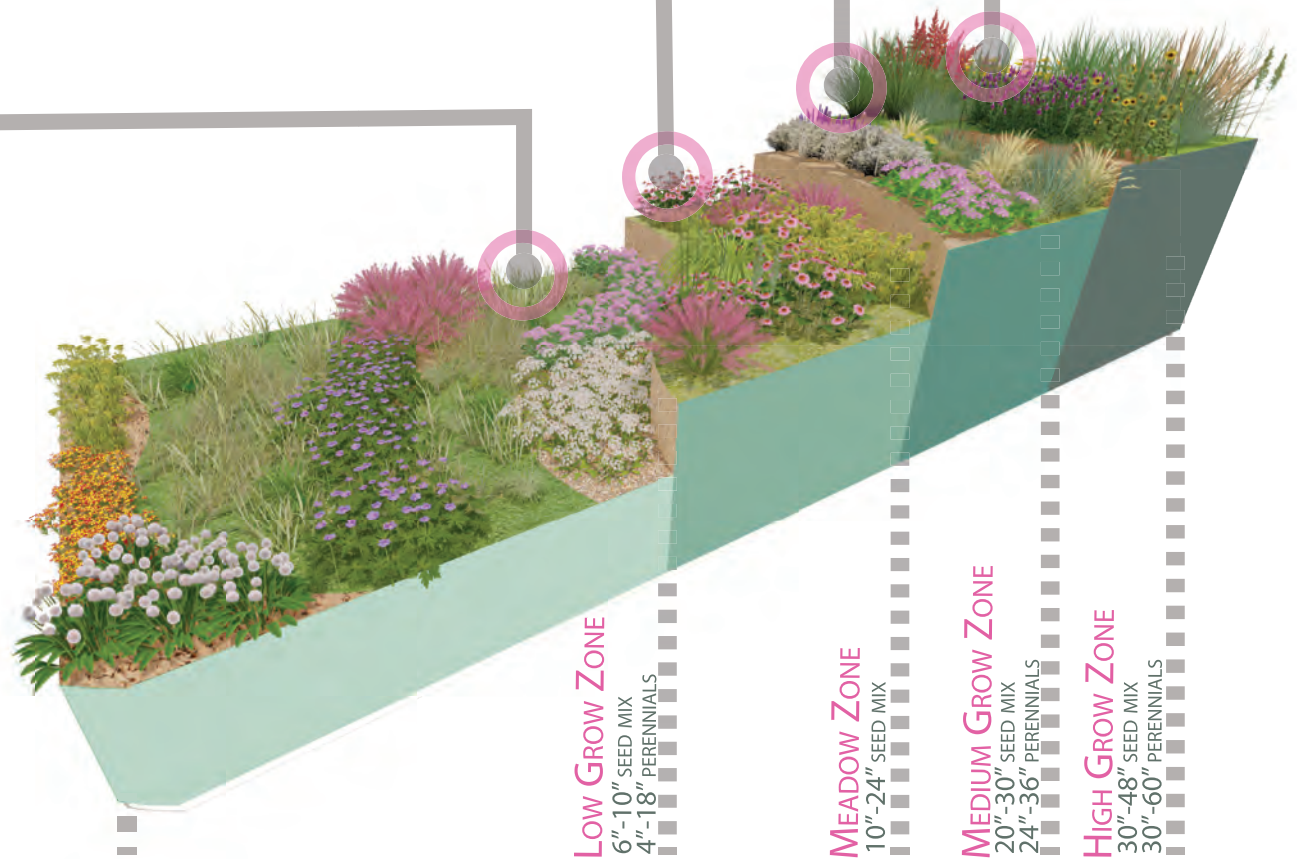
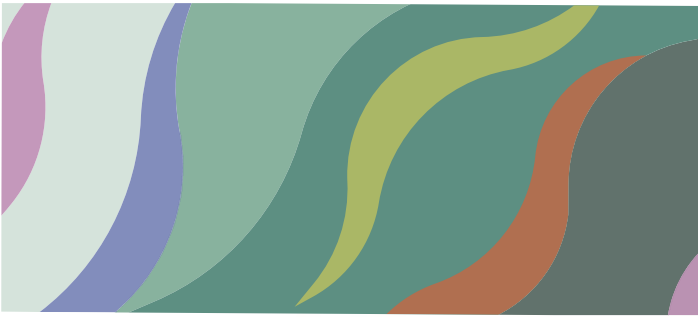
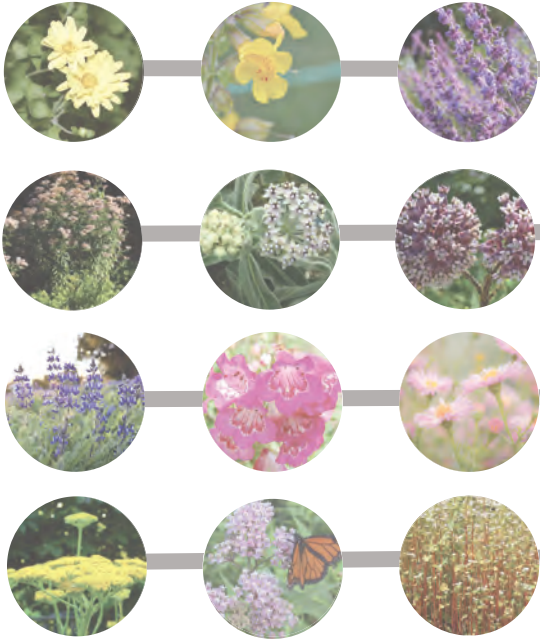
EDUCATIONAL CENTER



POLLINATOR PARADISE



PLANTING PLAN



PLANTING PLAN



- SPRING LOW

 - GOLDEN YARROW ⊕
 - DWARF BRODIAEA ○○
 - LANE LEAF LIVE FOREVER *
 - REDSKIN ONION ○○
- EARLY SUMMER MEDIUM

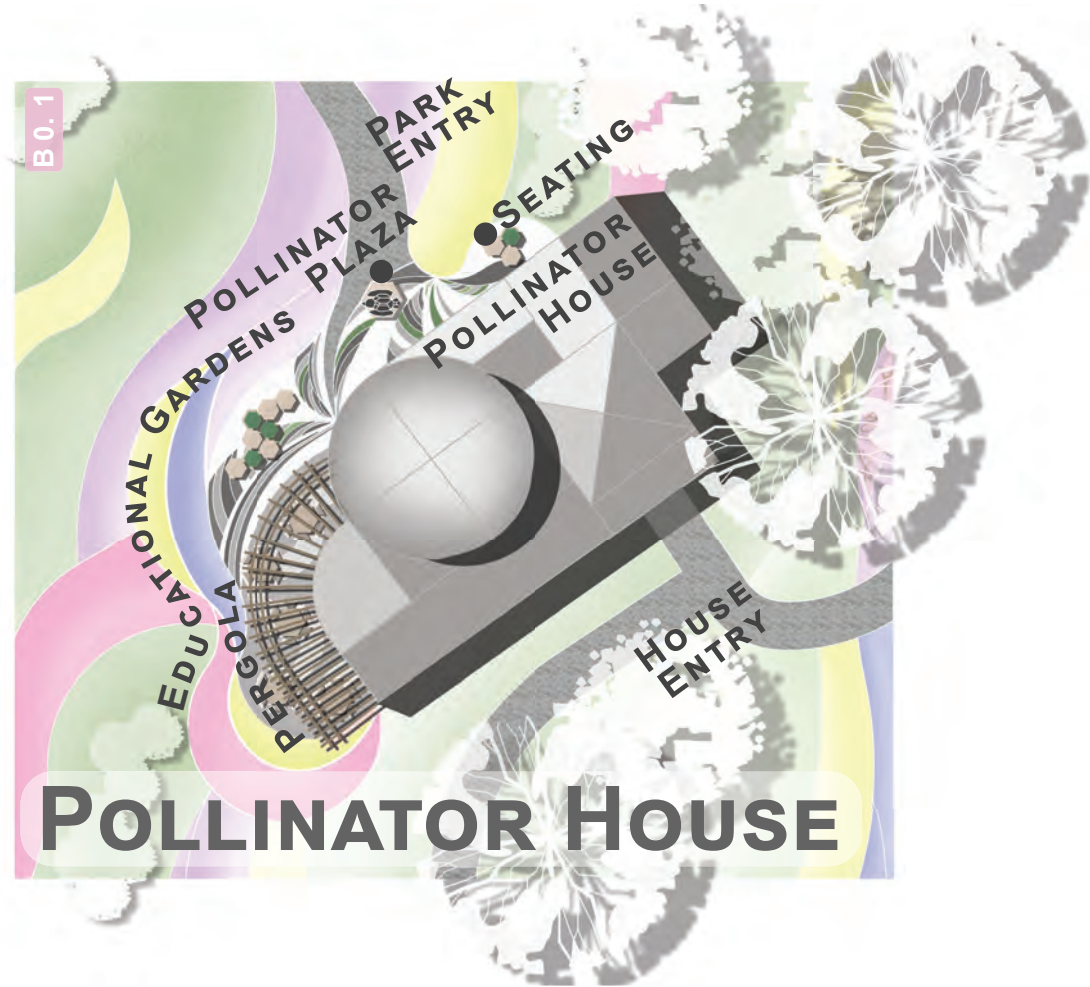
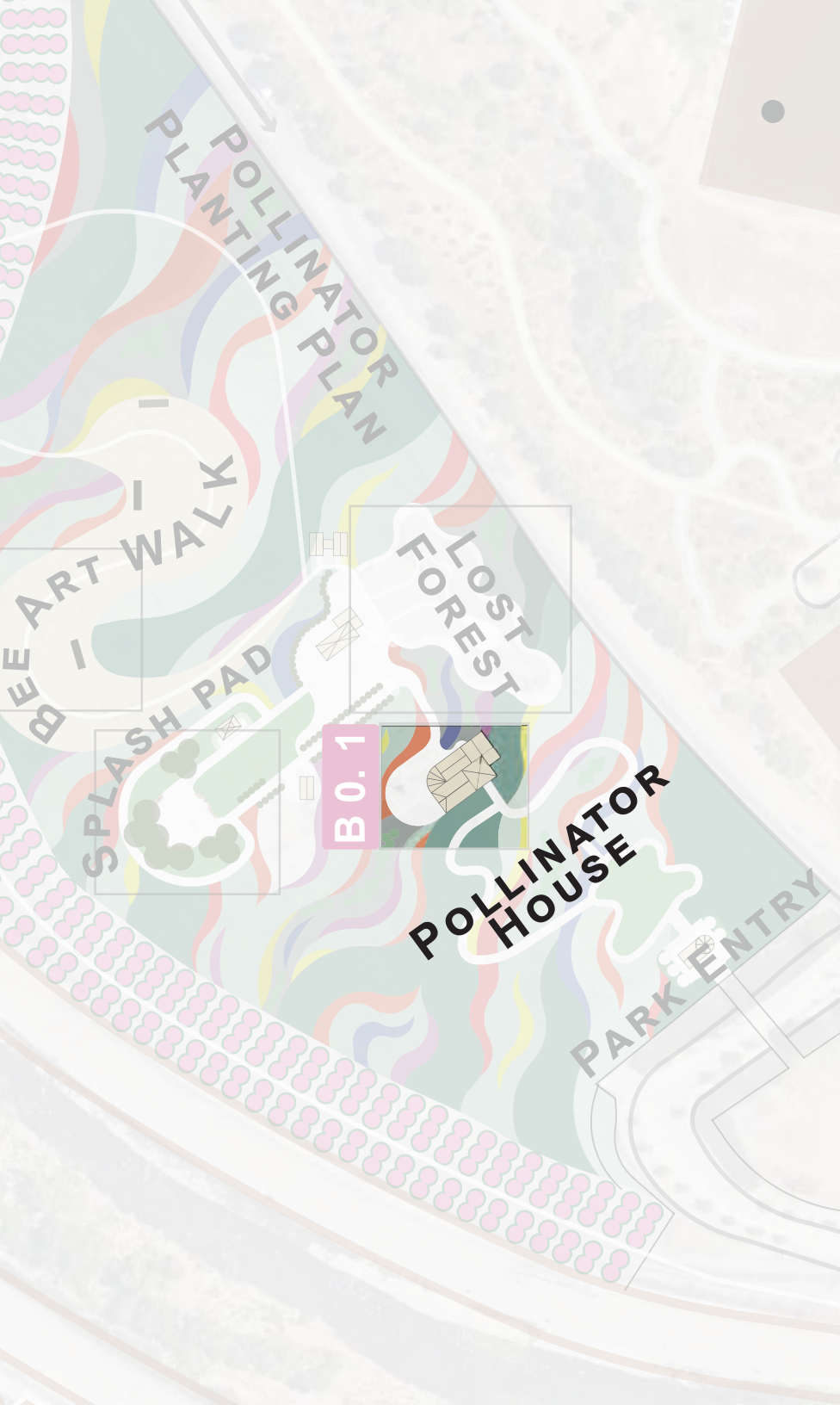
 - PURPLE SAGE ○○
 - CONETO BUCKWHEAT ●●
 - SOAP PLANT ○○
- SUMMER TALL

 - PRIDE OF MADEIRA ○○
 - GREAT VALLEY GUMWEED ++
 - DOUGLAS SAGEWORT ○
- FALL LOW

 - RED FLOWER BUCKWHEAT ⊕
 - RED SAND VERBENA ○○
 - DESERT MINT ●●

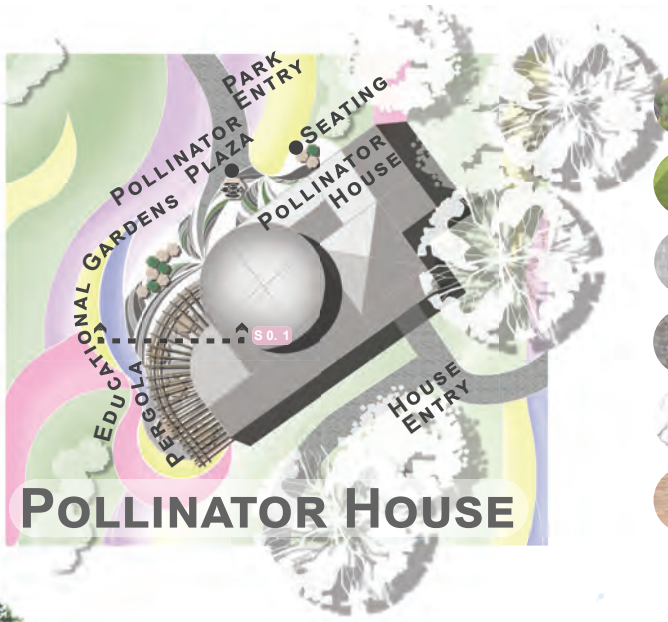


HOPE









POLLINATOR HOUSE

HOPE



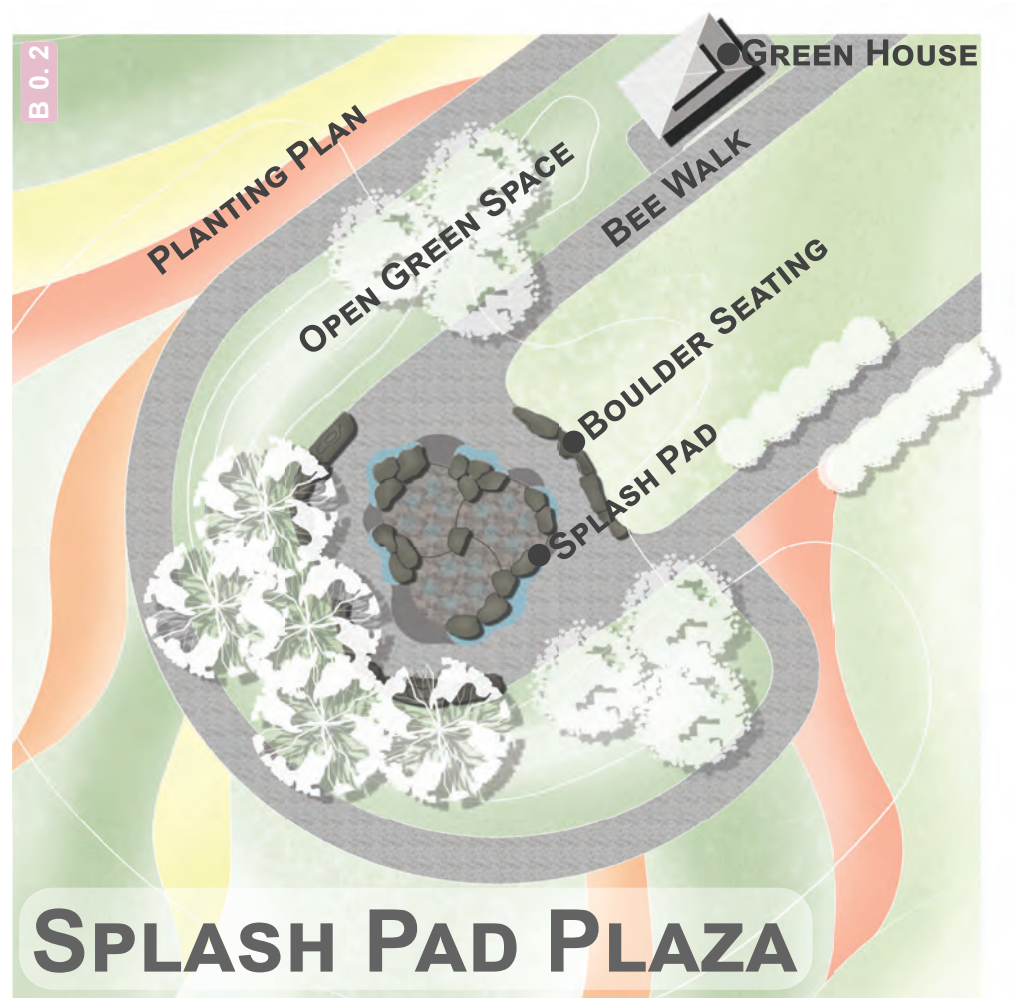
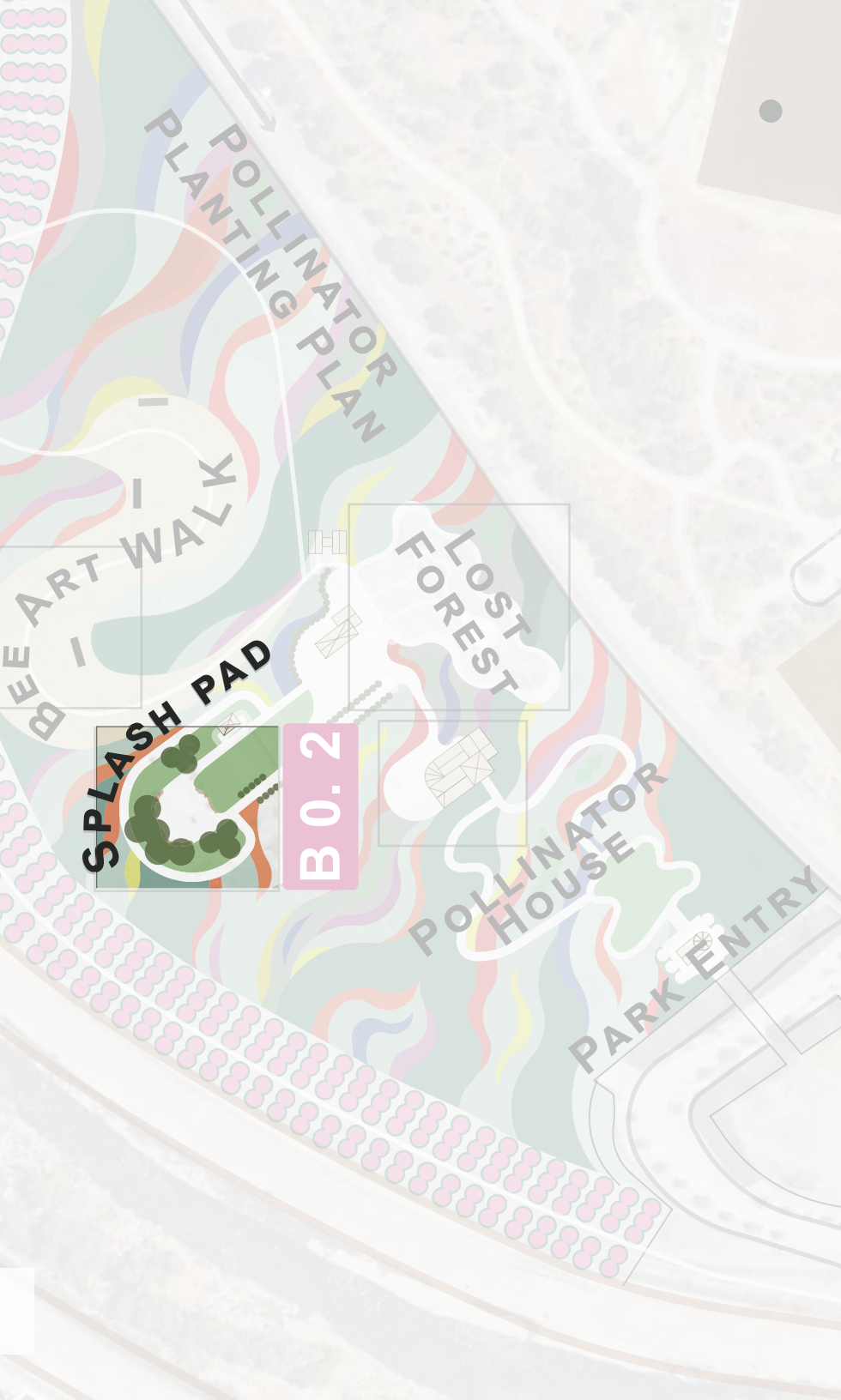
POLLINATOR HOUSE

-  Educational gardens to describe the planting concept on a small, personal scale.
-  The soft scape within the paving plan allows for change between the hard surfaces.
-  Paving pattern that represents the worker and drone bees. A light secondary color to give hierarchy to the queens' pattern.
-  Queens' paving material; the dark color gives hierarchy to the section. The lighter patterns branch off of the queens' pattern.
-  Seating elements made of natural stone from California. These artist pieces are designed around the six sided shape of a bee hive.
-  The natural wooden pergola provides shade for the seating area along with a subtle change to the outdoor plaza.






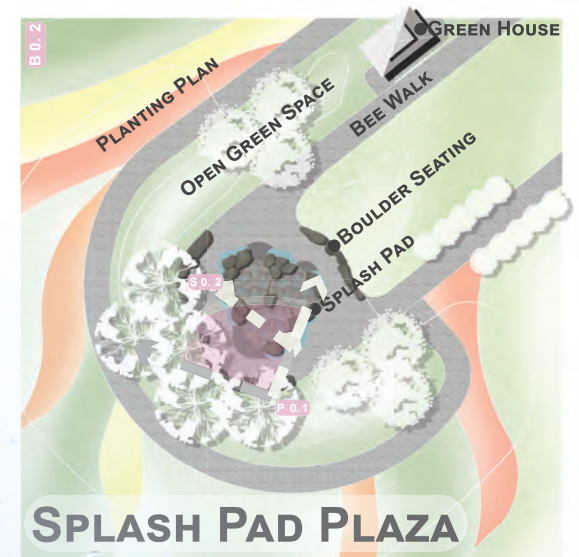
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NEEDS



NEEDS

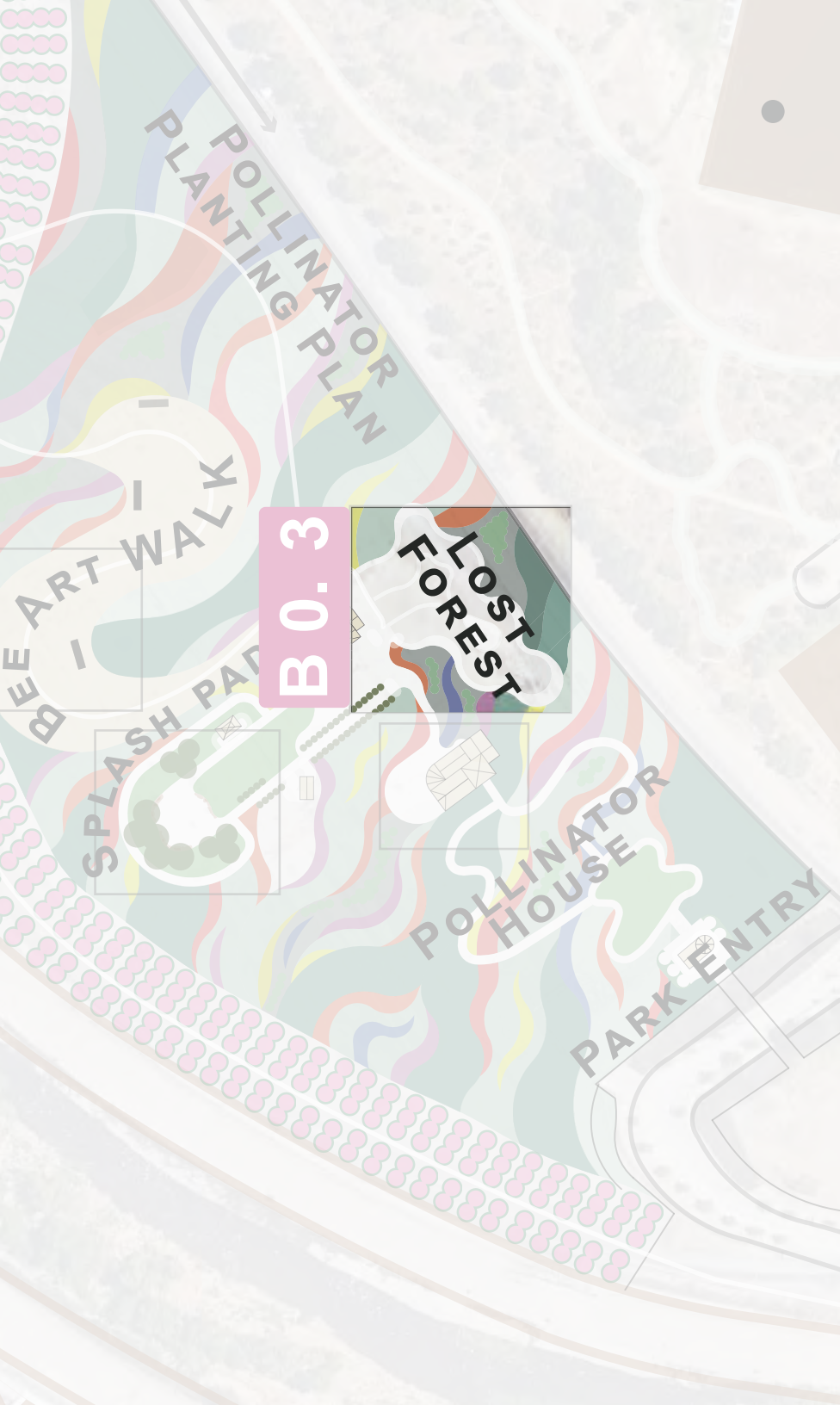
-  **A** Non slip surface for visitors to play on while visiting the splash pad.
-  **B** Fountains that spray water up to four feet high during play on the splash pad.
-  **C** Californian boulders to protect the pollinator fountain and the human zone.
-  **D** Underground splash pad system; pressure activated to conserve water.



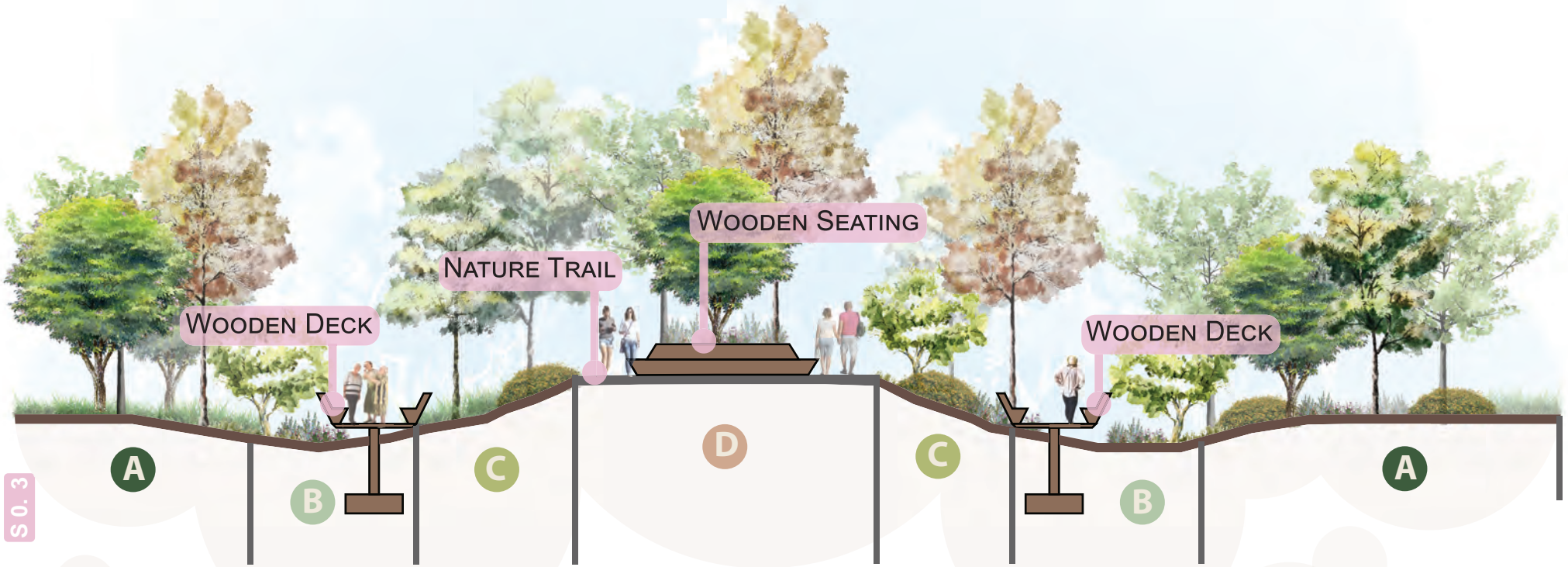


A JUMP IN THE SPLASH PAD

STRUGGLES



STRUGGLES



S.O. 3



A

Structural ground coverage such as fescues, and other grasses to support the planting plan design.



B

Forest vegetation found in low areas. The dry creek provides elevation change within the Lost Forest.



C

Dense shade perennials that require pollination that add an educational aspect to the lost forest along with the nature trails.



D

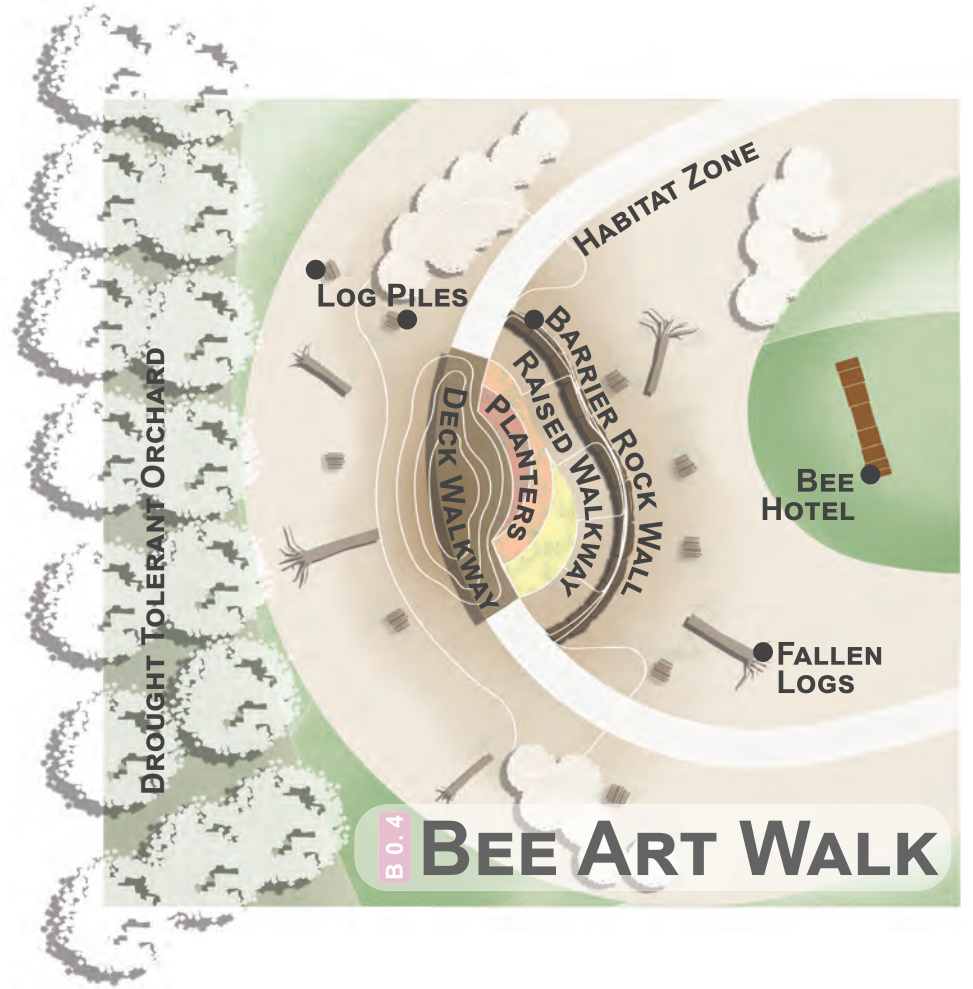
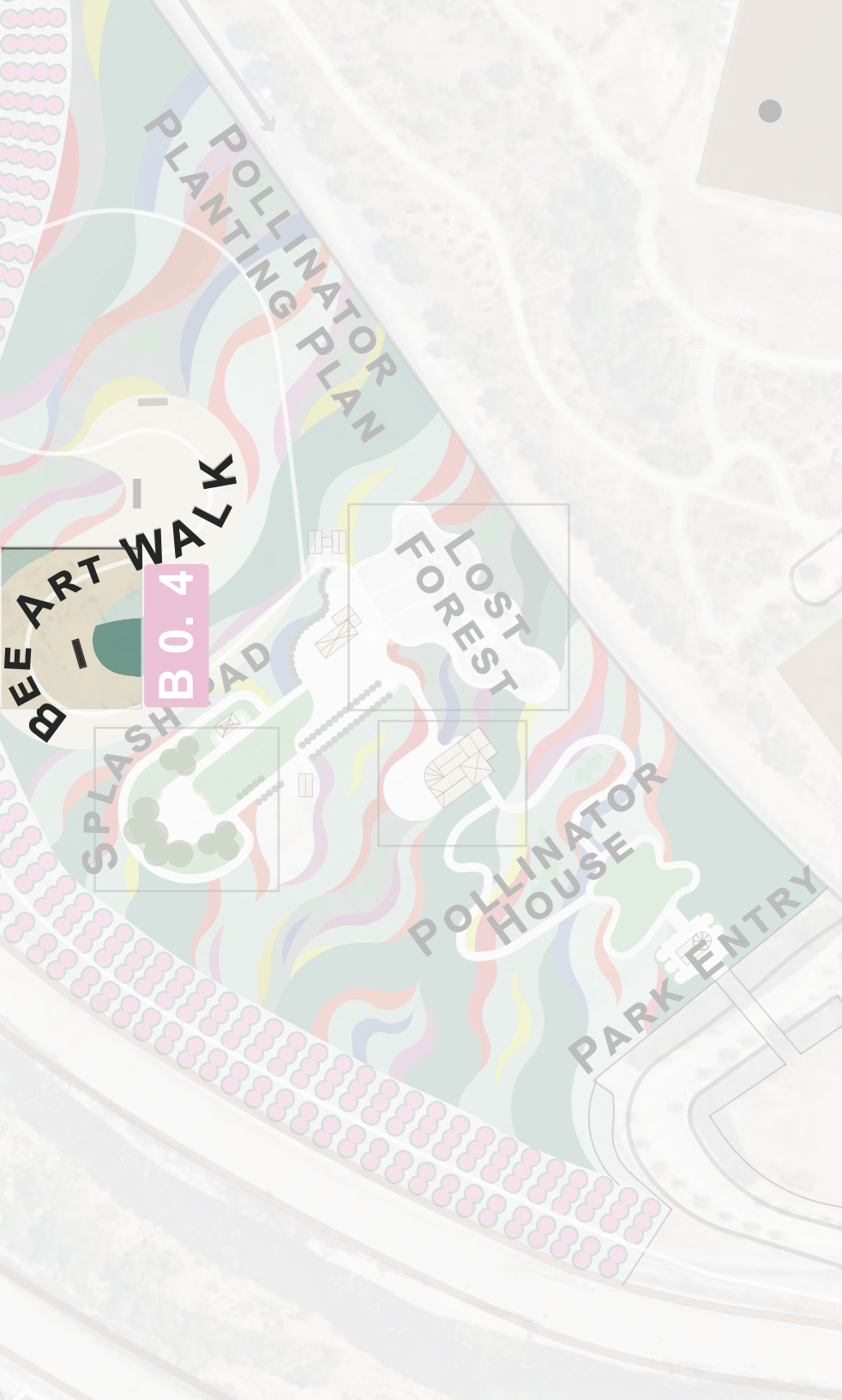
Tall perennial plantings that reach over the back of the wooden seating. Guests interact with the plants and create a connection to the forest.

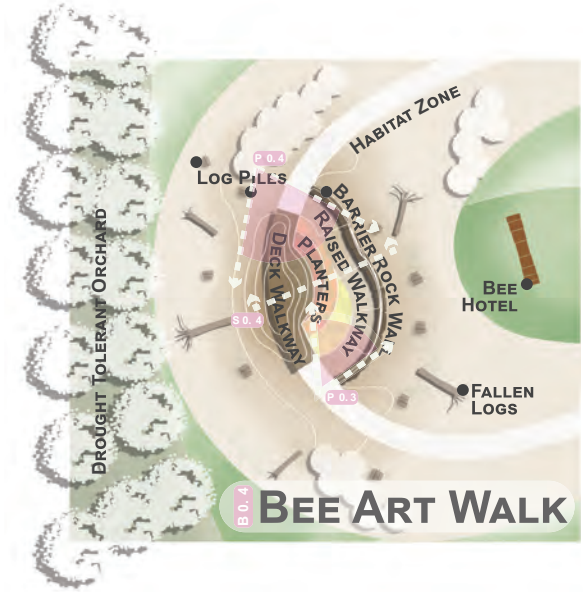
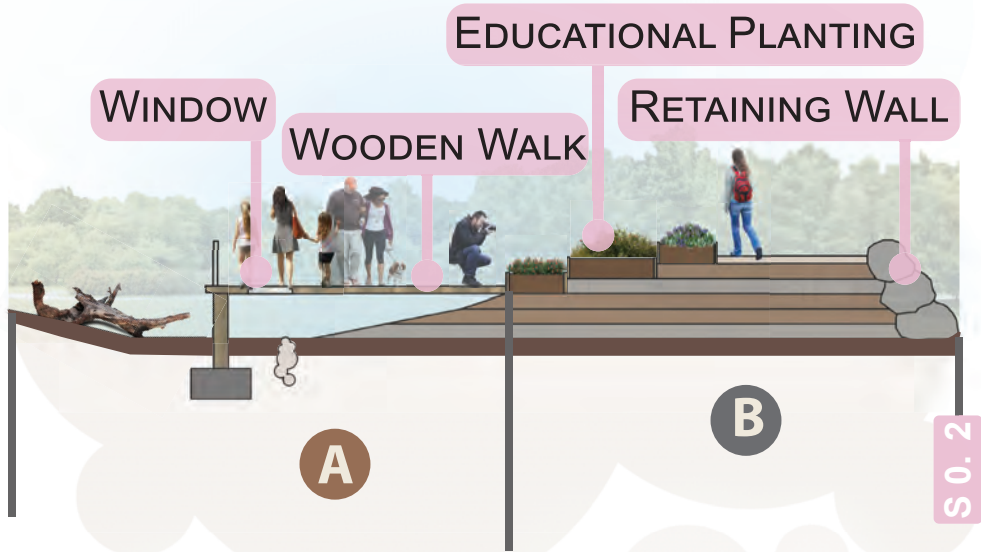




A STROLL THROUGH THE LOST FOREST

COMMUNITY



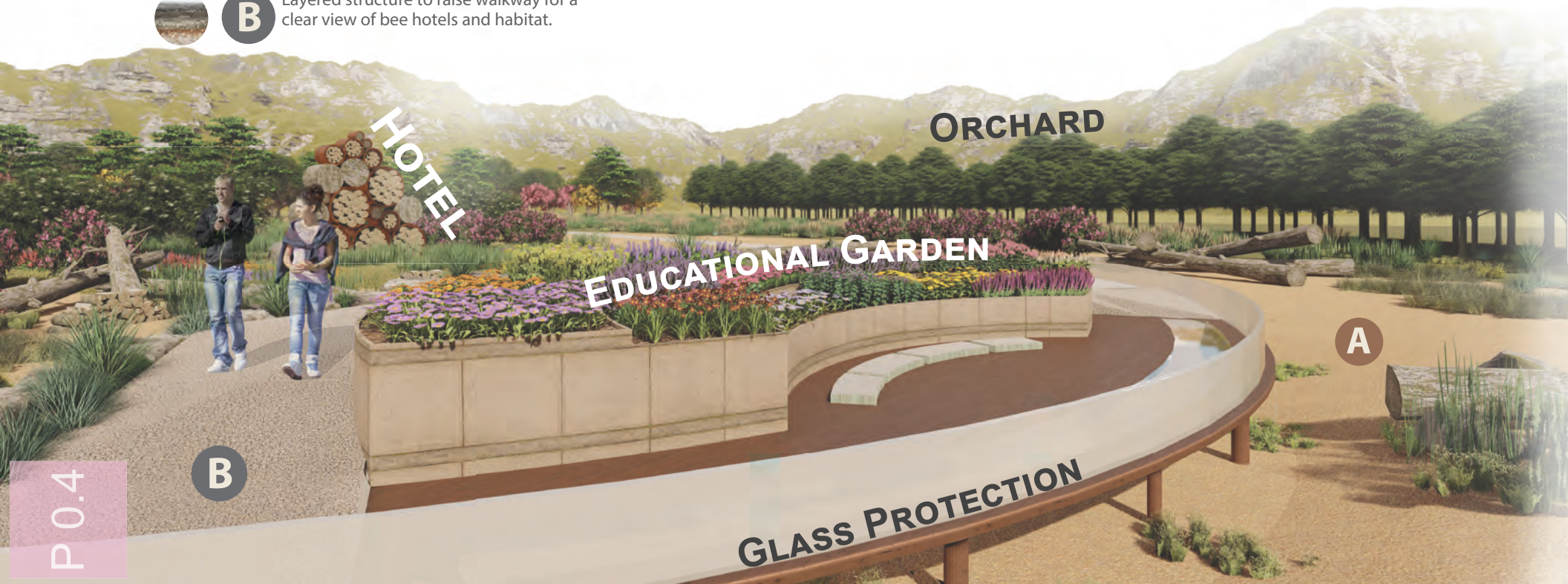


A Bee Habitat: minimal plantings, open soil, and fallen trees.



B Layered structure to raise walkway for a clear view of bee hotels and habitat.

COMMUNITY

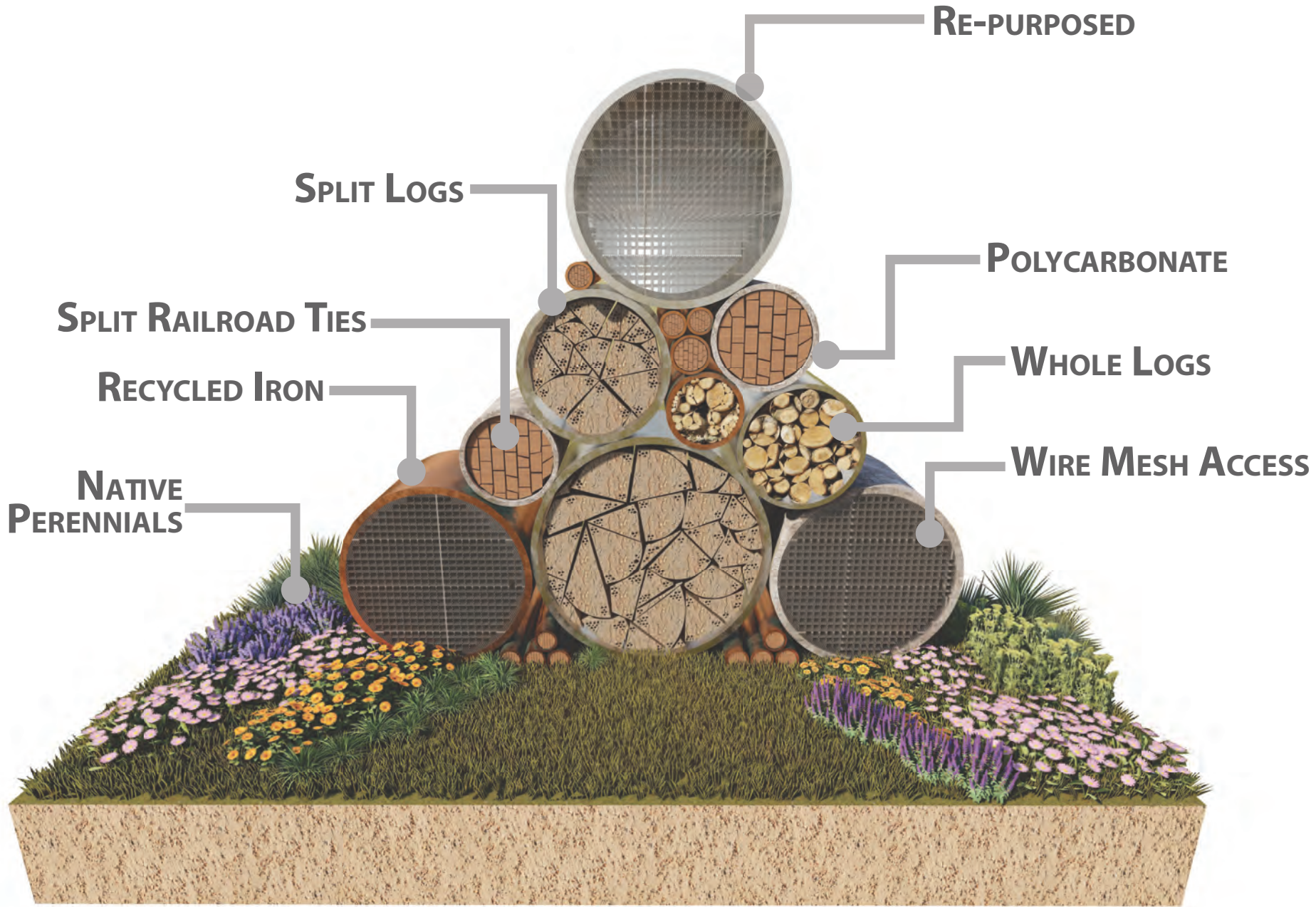


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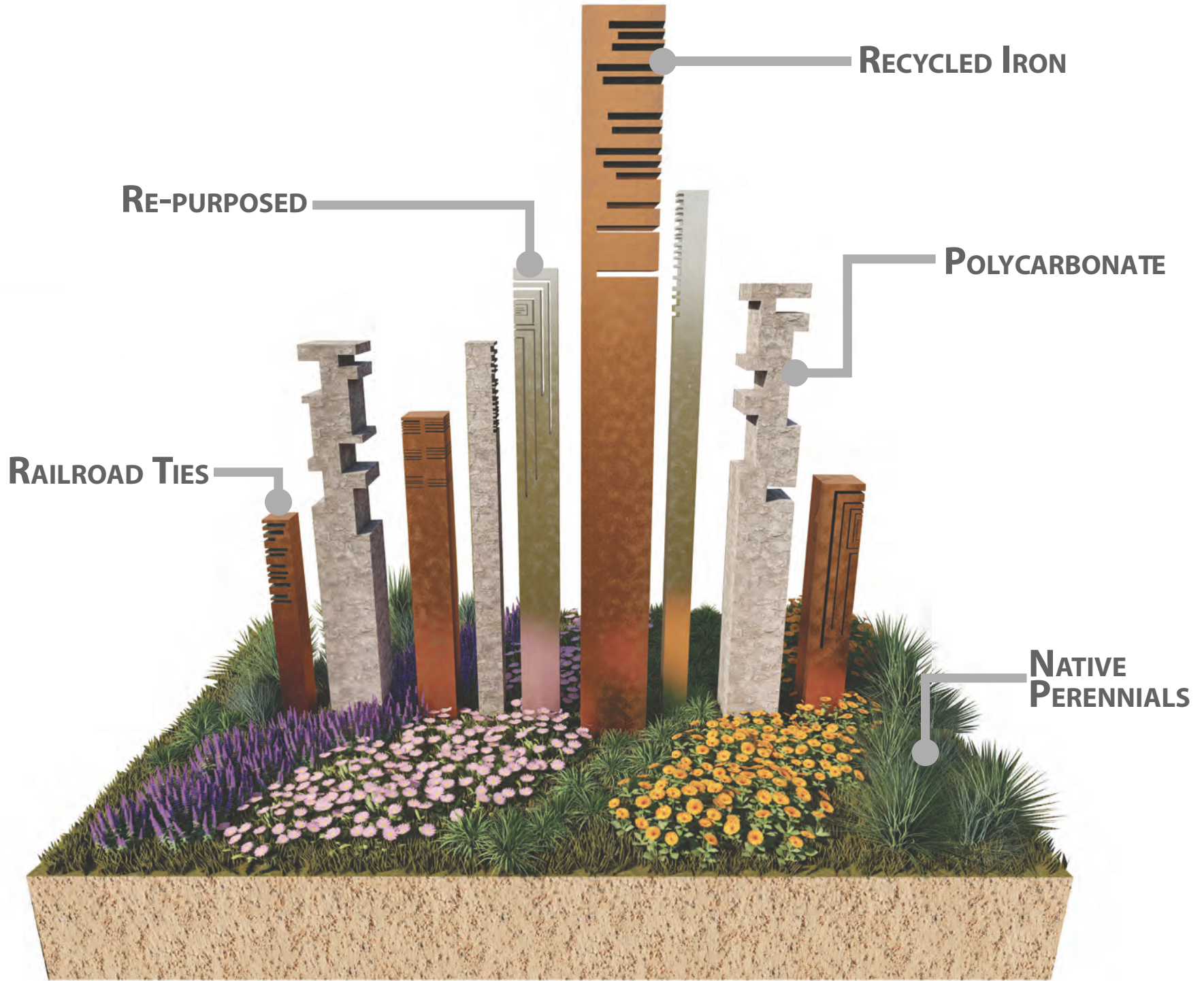


A DAY AT THE BEE HOTEL

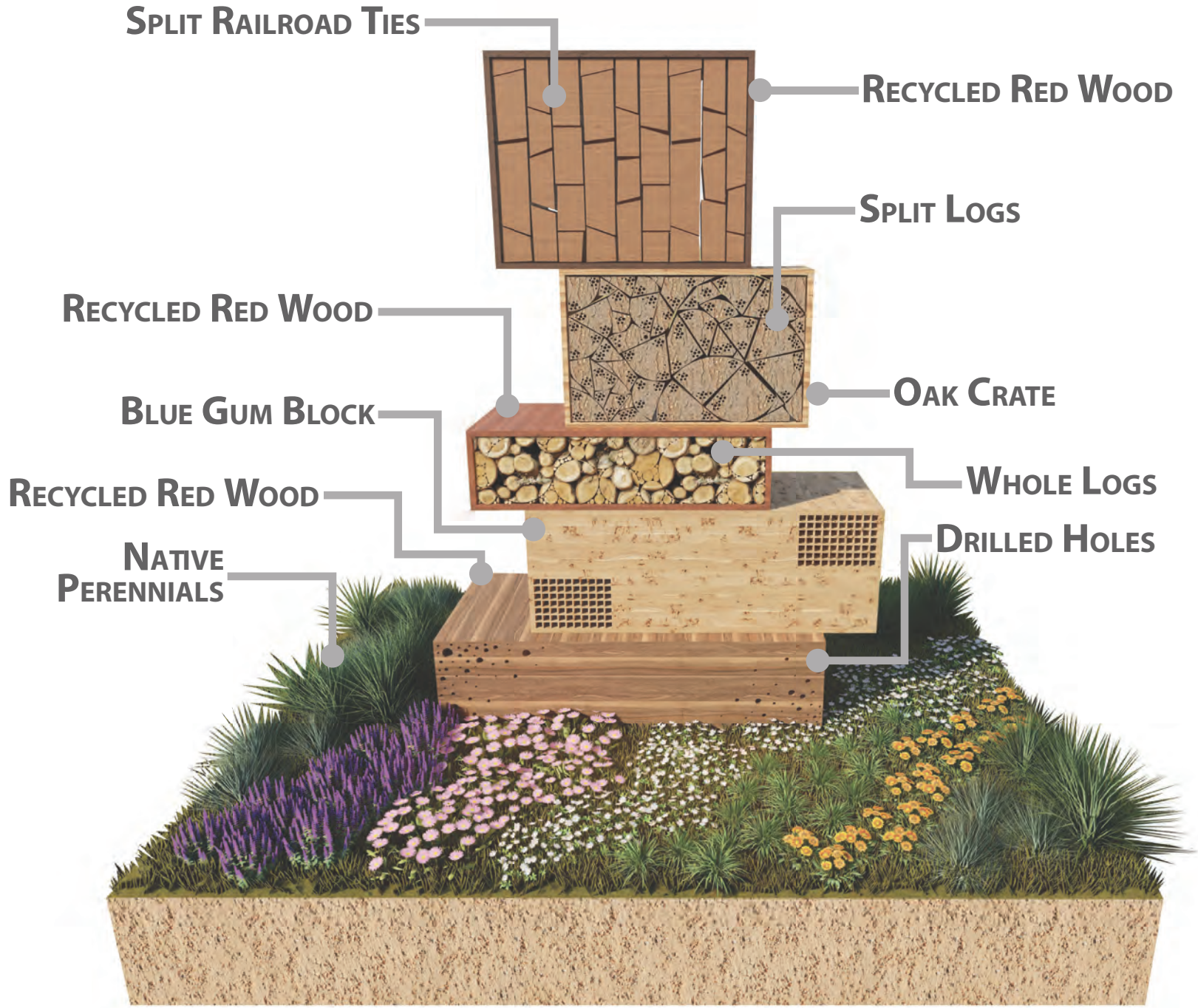
BEE HOTEL



BEE HOTEL



BEE HOTEL



BUMBLE BEE

It's just not fair they're getting scarce.
There's not that many to be seen
our little furry flying friends
That keep our country green

Roads and Pavements cutting up
The greenness of our Earth
And now we have to compete
With gardens made of astro turf.

We work so hard to be busy
And do what we do best
Collecting sticky stuff upon our legs
And take it to our nest

But if you don't stop cutting away
The flowers and our trees
you'll see a bigger decline
And the end of bumble bees

-Author unknown

THANK YOU.



QUESTIONS?

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