

# [the urban operative]

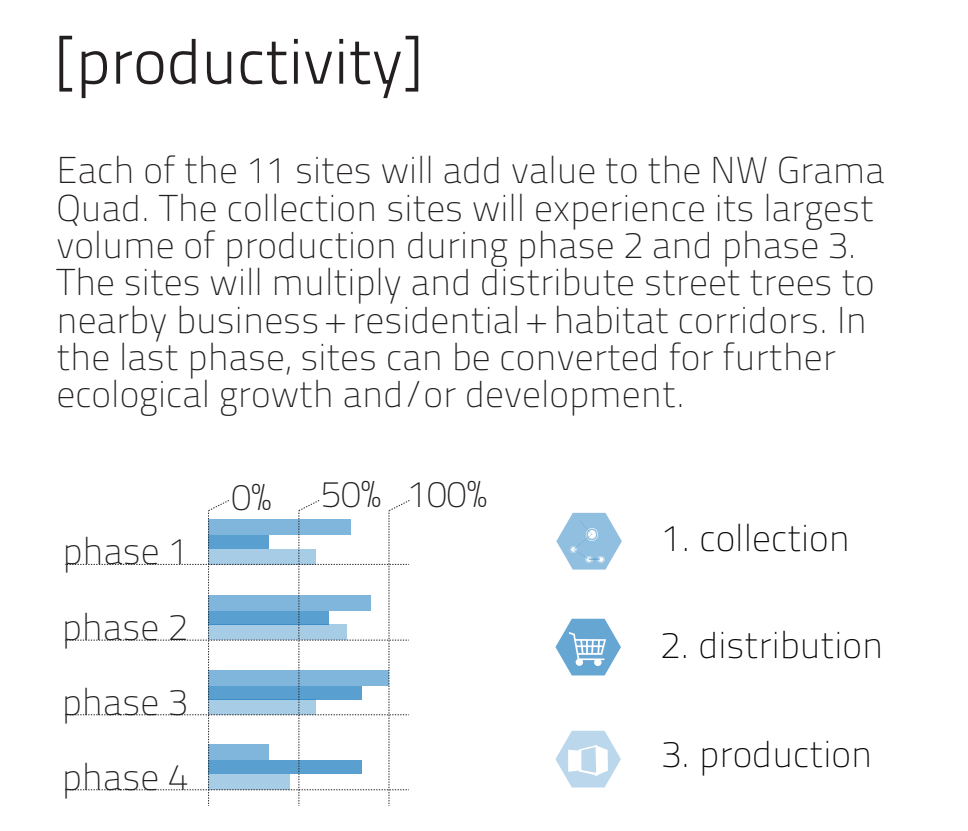
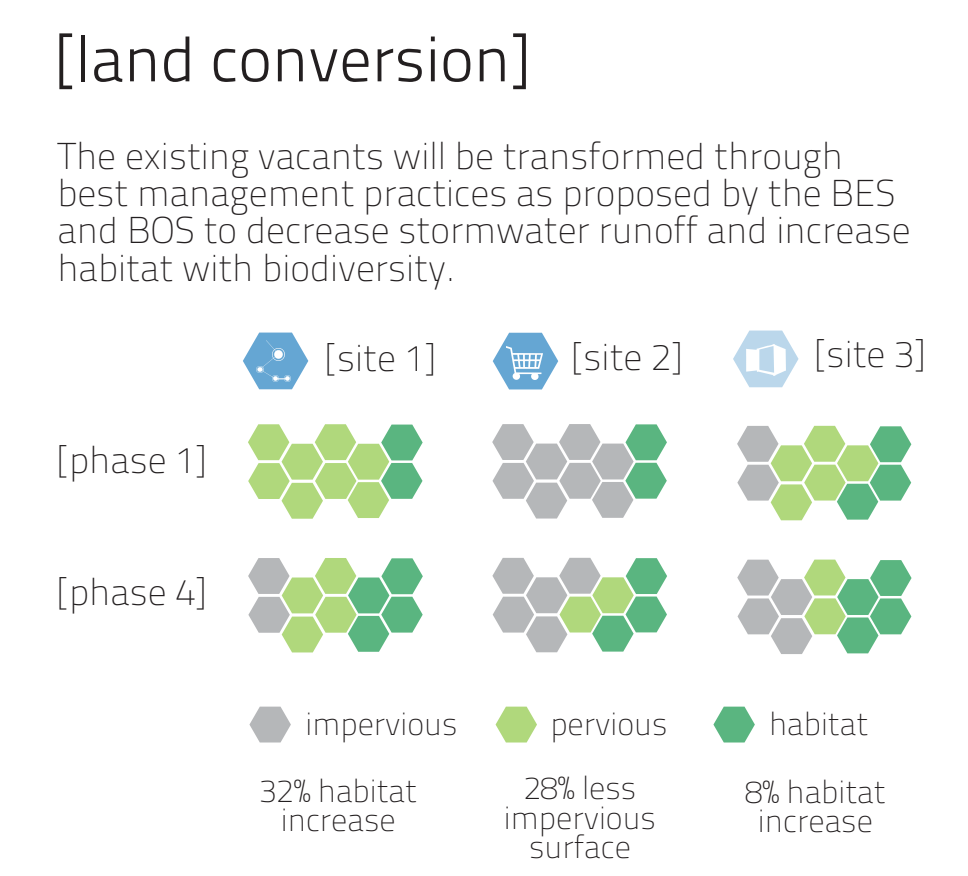
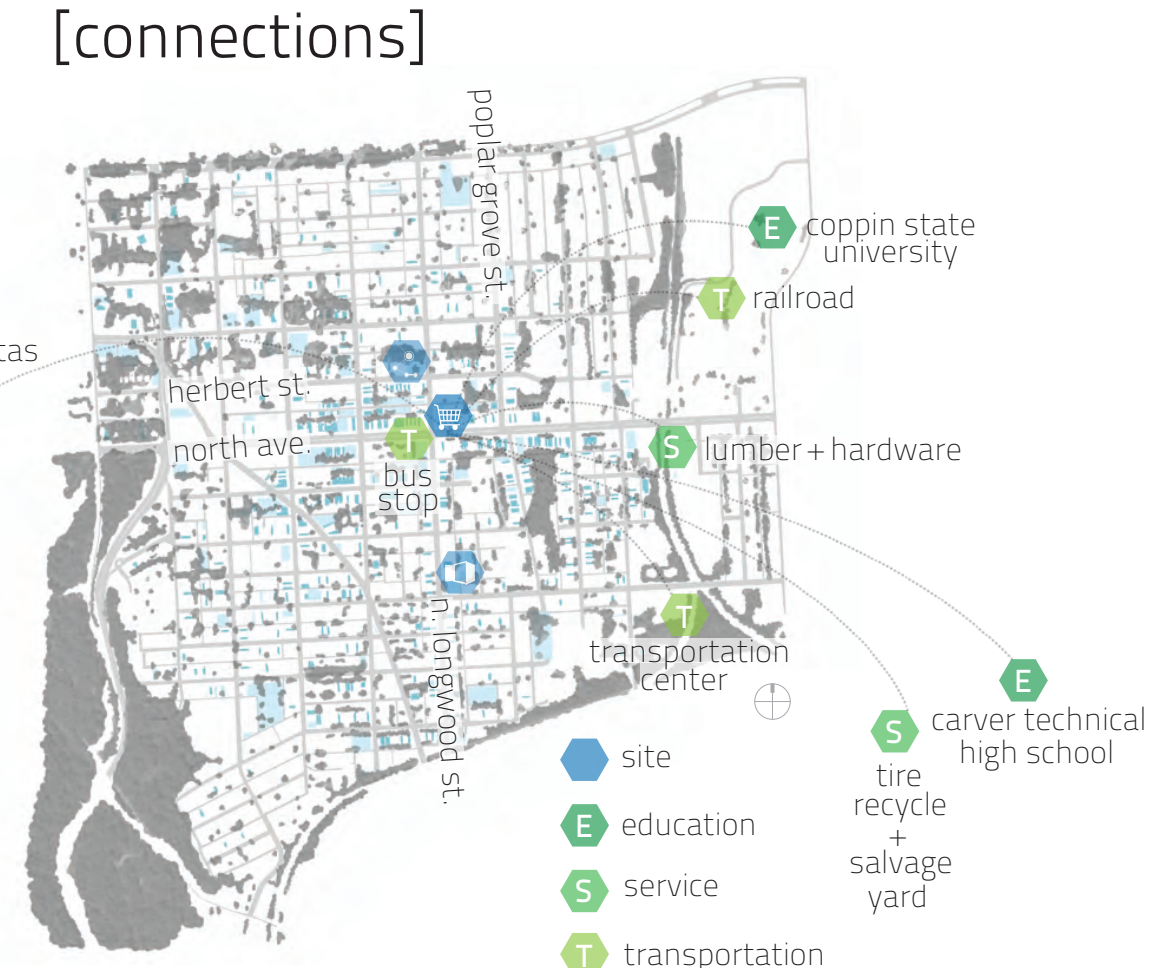
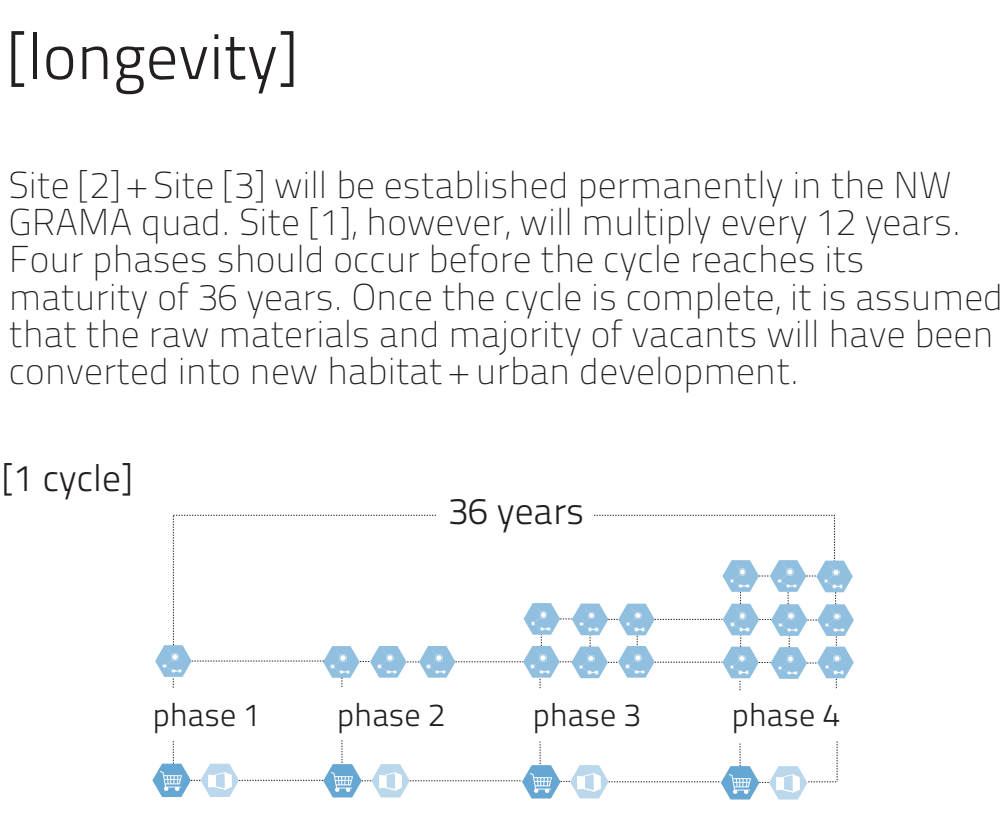
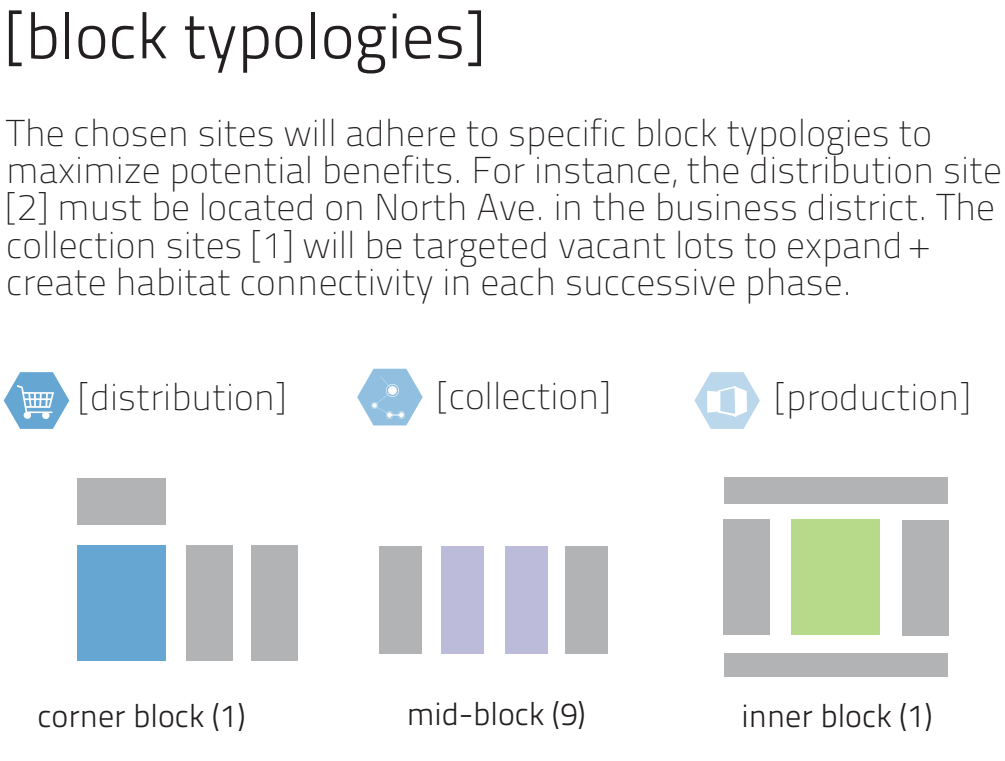
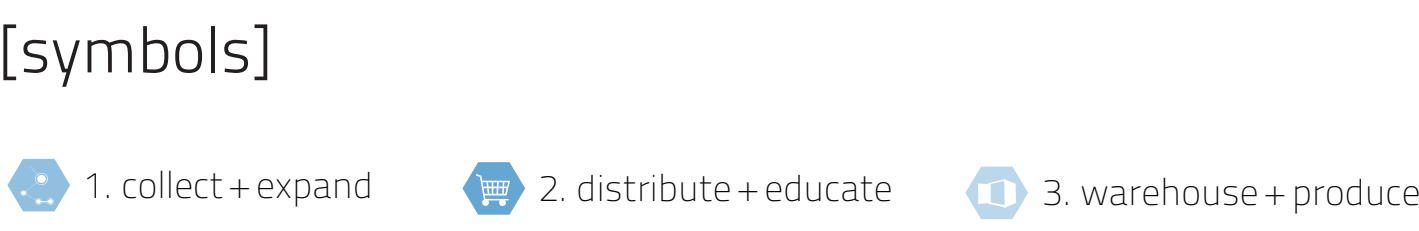
renovating baltimore's vacants

michelle zucker

**[design concept]**

The City of Baltimore is on the threshold of change. The large number of vacancies are an ideal opportunity for stimulating local economic, social and ecological growth. The city has a long-standing relationship with the raven dating back to Edgar Allen Poe in 1845. Ravens are a symbol of undying devotion and a concept depicted in all aspects of design including habitat, social behaviors and movement through poetic abstraction.

The design operation will increase habitat by 25.7% over a 36 year cycle. The deconstruction of vacancies will follow existing, perforated canopy to address patch connectivity.



**1. collection + expansion [.40 ac.]**  
[tree nursery]

|                    |                     |              |
|--------------------|---------------------|--------------|
| little leaf linden | size: 1 yr. sapling | cost: \$3.00 |
|--------------------|---------------------|--------------|

**2. distribution and education [.27 ac.]**  
[cost estimates]

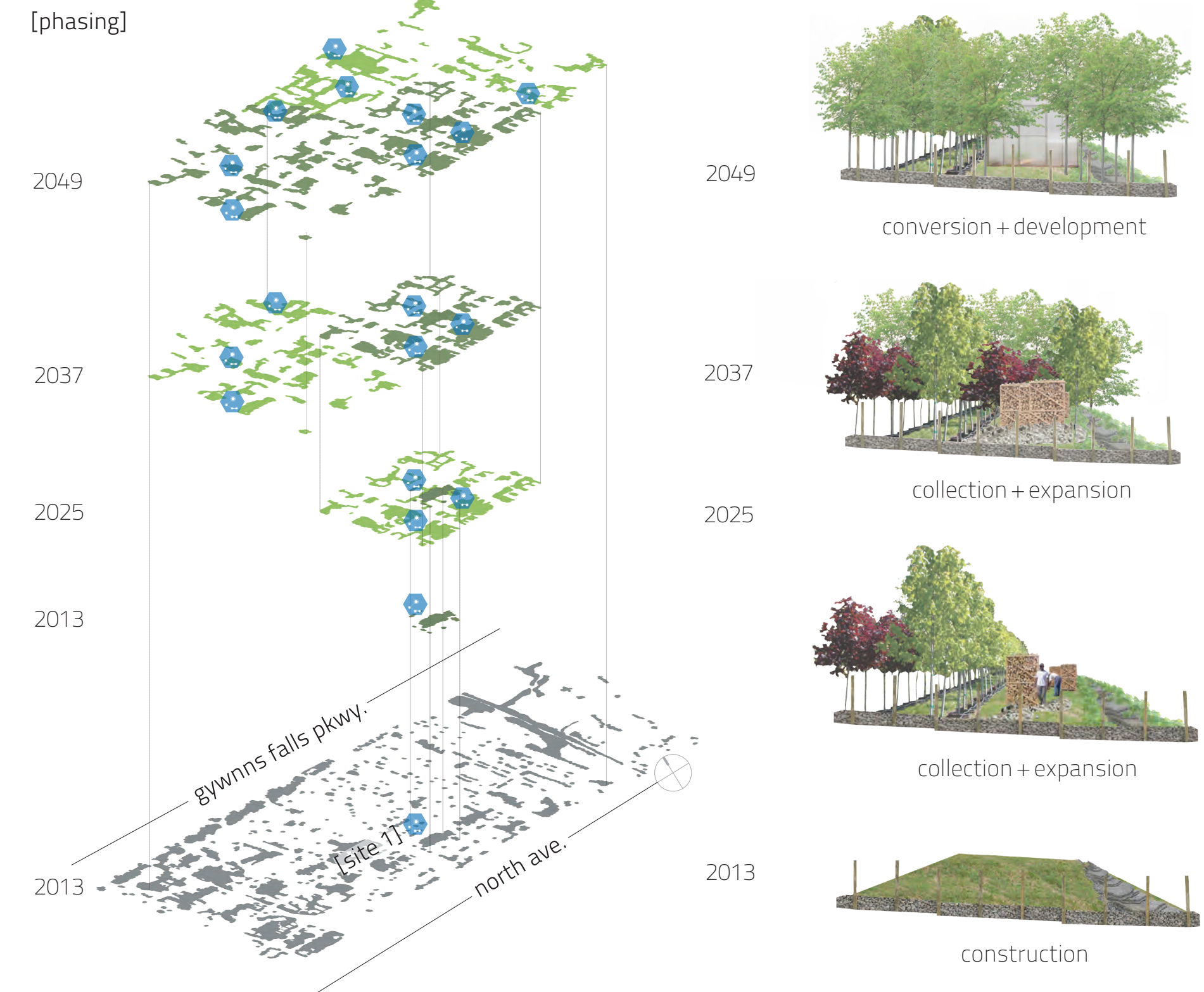
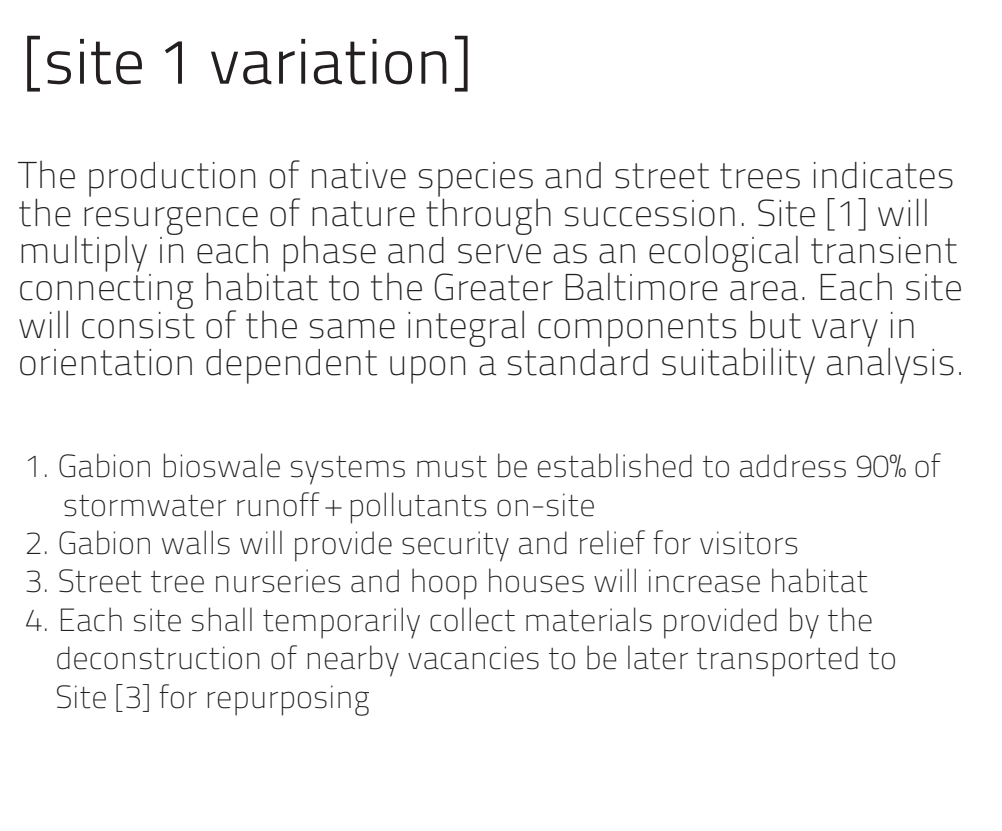
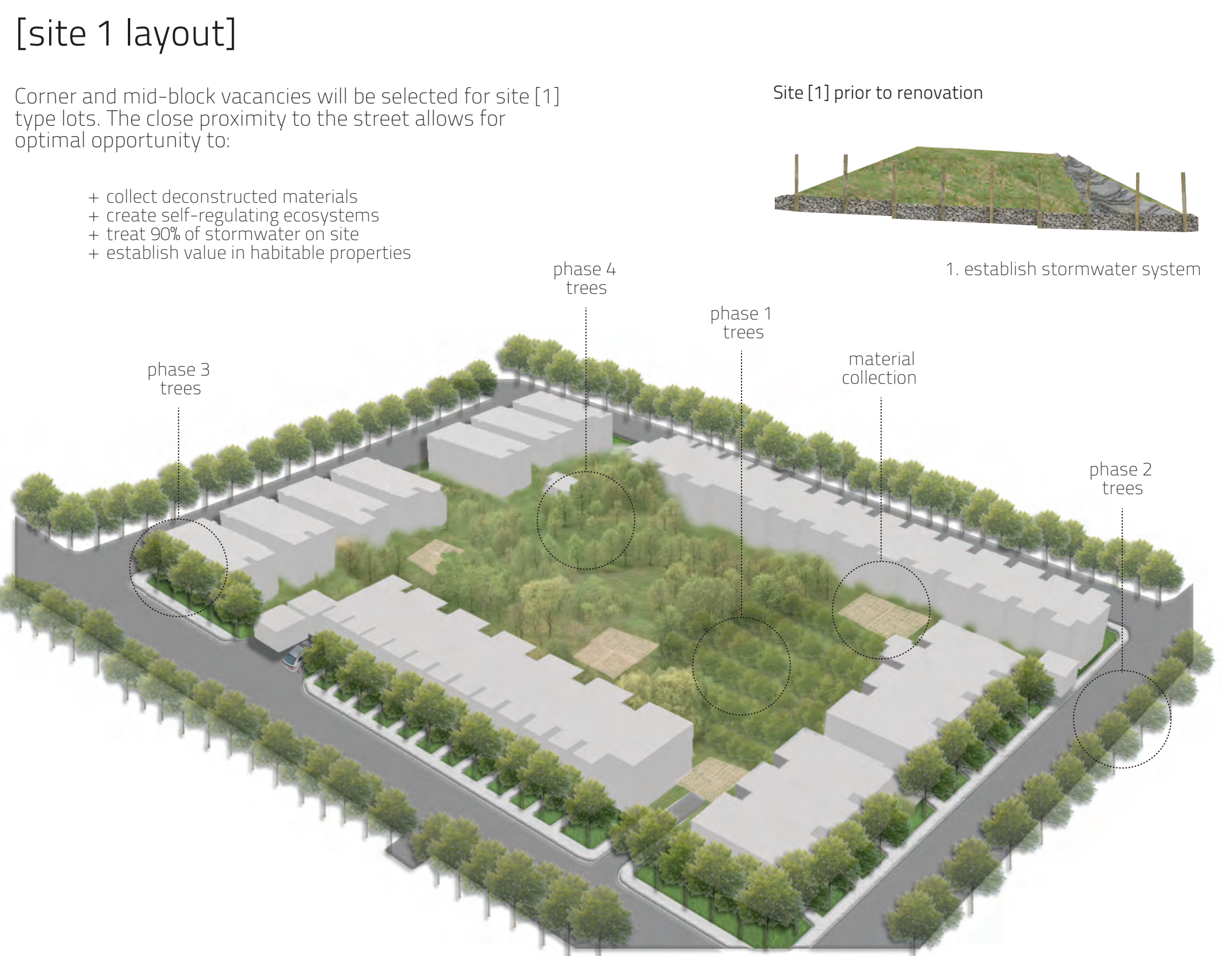
|              |                   |                  |
|--------------|-------------------|------------------|
| lumber       | size: 2"x4" sheet | cost: \$2.00     |
| bricks       | whole 3 cu. yds.  | \$0.10 / \$20.00 |
| concrete     | 3 cu. yds.        | \$15.00          |
| dirt fill    | 3 cu. yds.        | \$5.00           |
| asphalt fill | 3 cu. yds.        | \$5.00           |

**3. warehouse + production [.61 ac.]**  
[debris quantity]

reuse potential

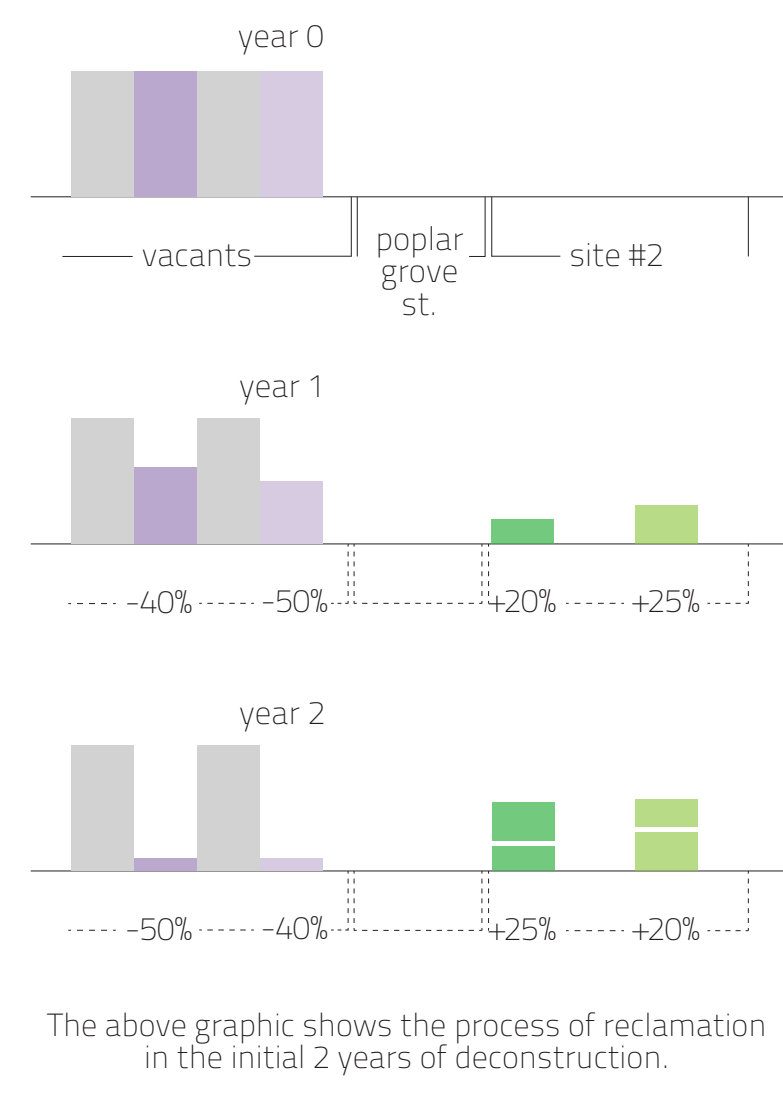
|          |       |              |      |         |                 |        |          |          |           |
|----------|-------|--------------|------|---------|-----------------|--------|----------|----------|-----------|
| concrete | brick | mixed rubble | wood | drywall | asphalt roofing | metals | plastics | textiles | cardboard |
|----------|-------|--------------|------|---------|-----------------|--------|----------|----------|-----------|

[epa]



[material reclamation]

The deconstruction effort will aim to recycle + reuse 50% of all reclaimed materials. This process will help alleviate building pressure on local landfills and free vital space for non-recyclable items. The materials will be integrated into future construction and development efforts.



[%] materials recycled



[phase 1]



During the construction phase, buildings will be covered in plastic sheeting to reduce the amount of dust and potential harmful chemicals from entering the atmosphere.

[human habitat connection]

A diverse mix of native species will provide habitat for biodiversity and pollinators in the region. Public paths function as "educational transients" where new urban, social and environmental experiences can occur.



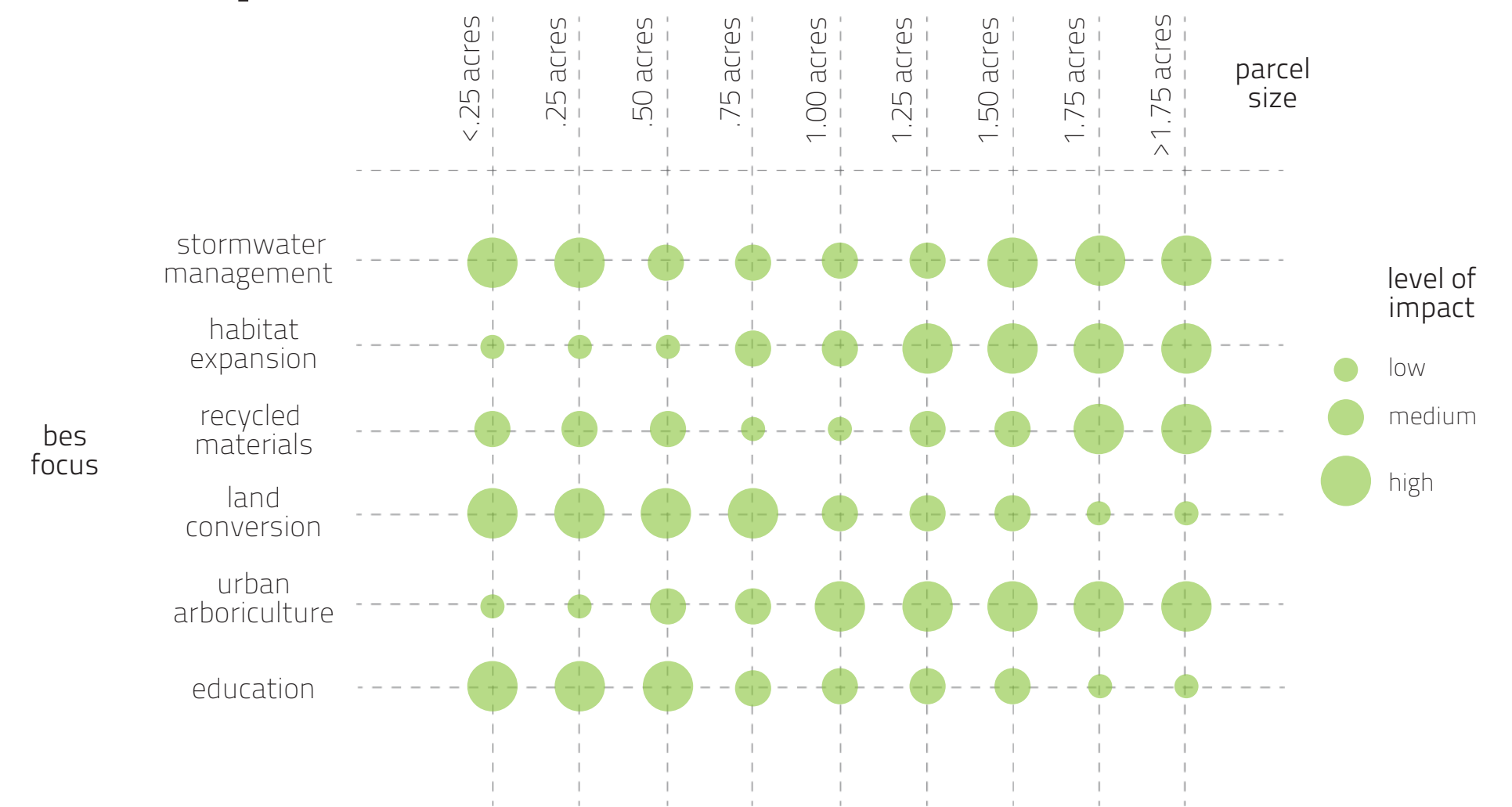
[site 2 plan]

The distribution + education center will be located along a busy corridor on North Ave. An adjacent vacant will be converted into offices and a store. All repurposed and recycled materials collected from site [1] + site [3] will be sold to the city and residents.

[sample site 2 design]



[bes infusion]

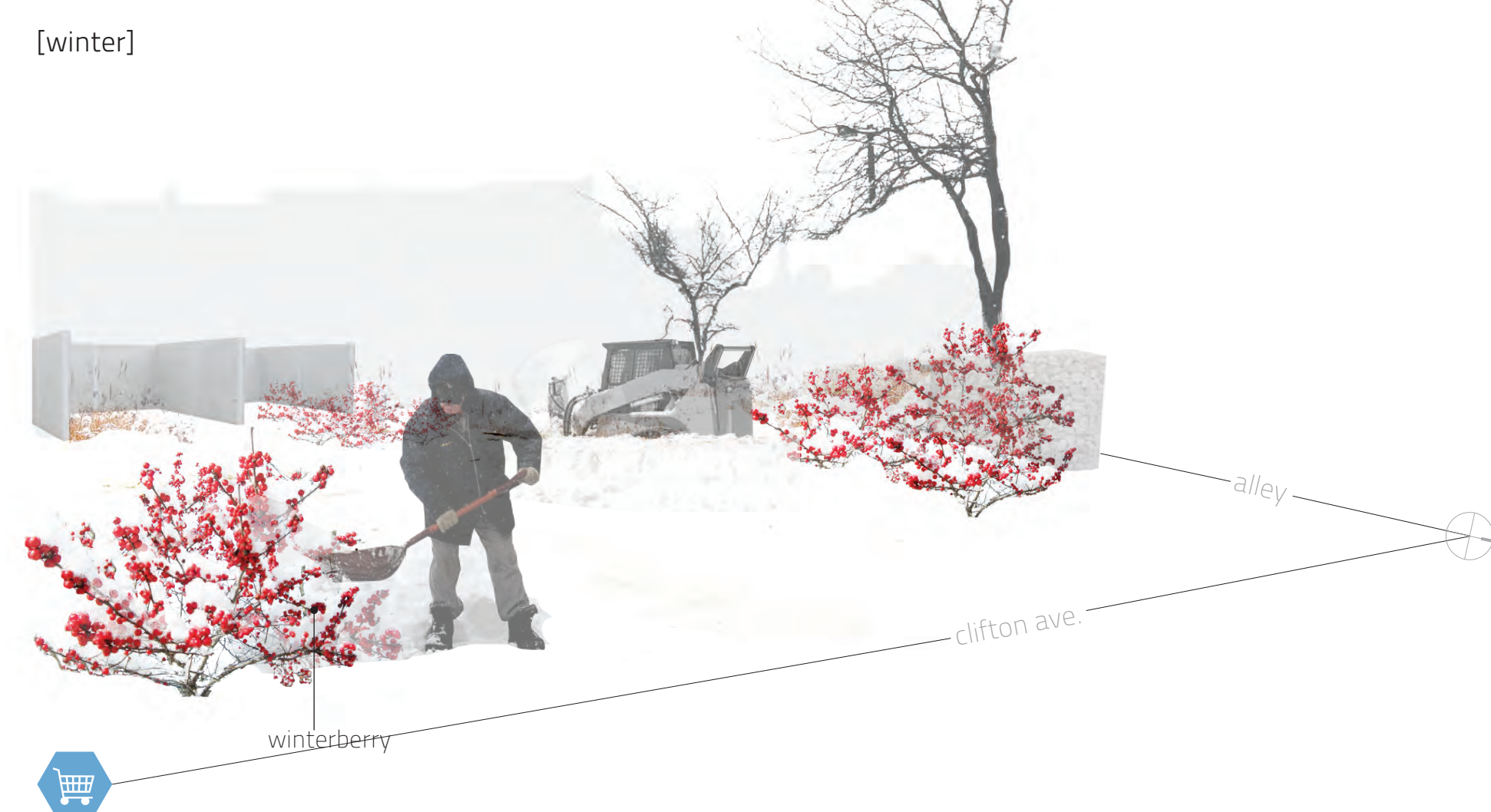
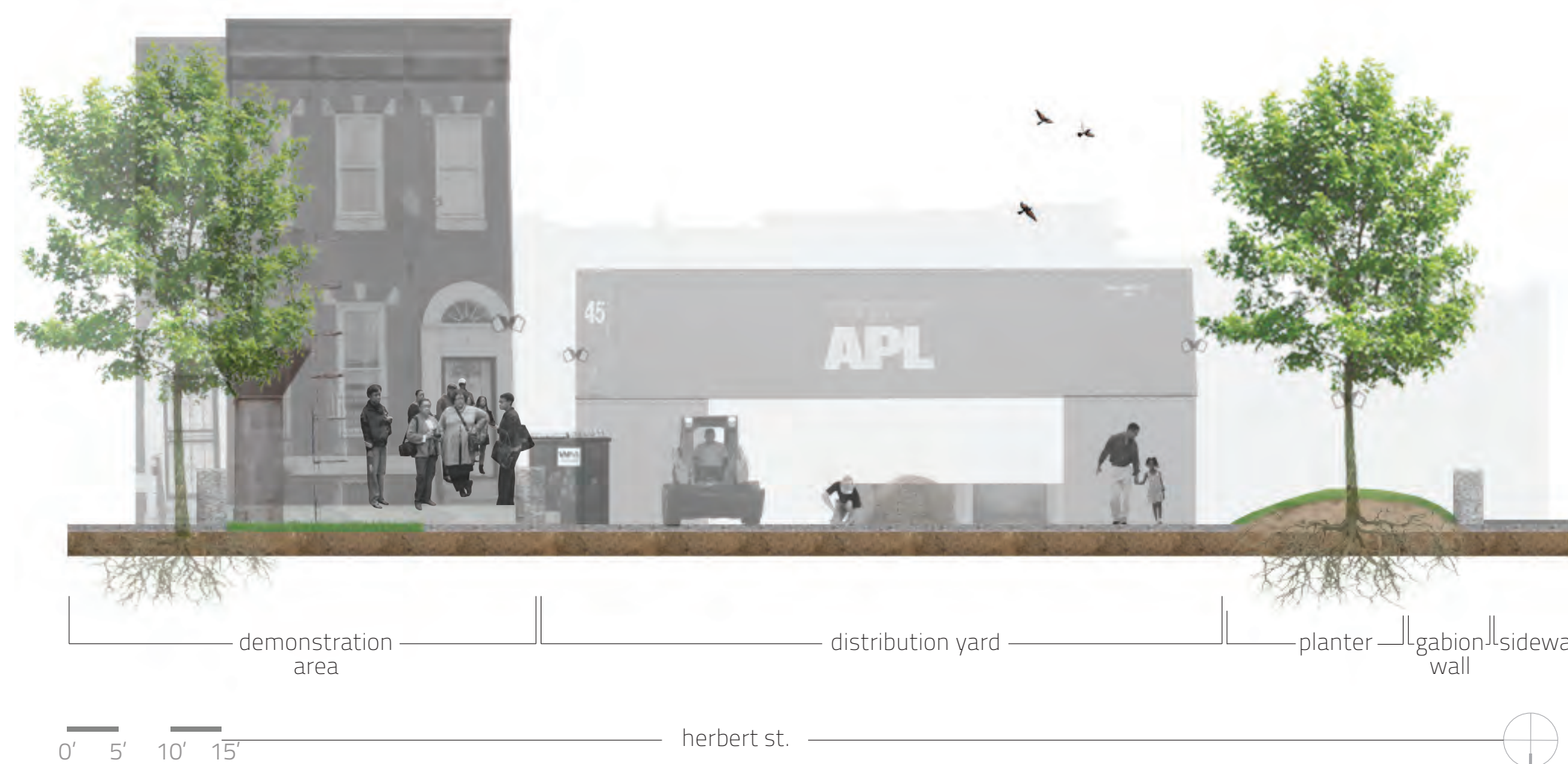
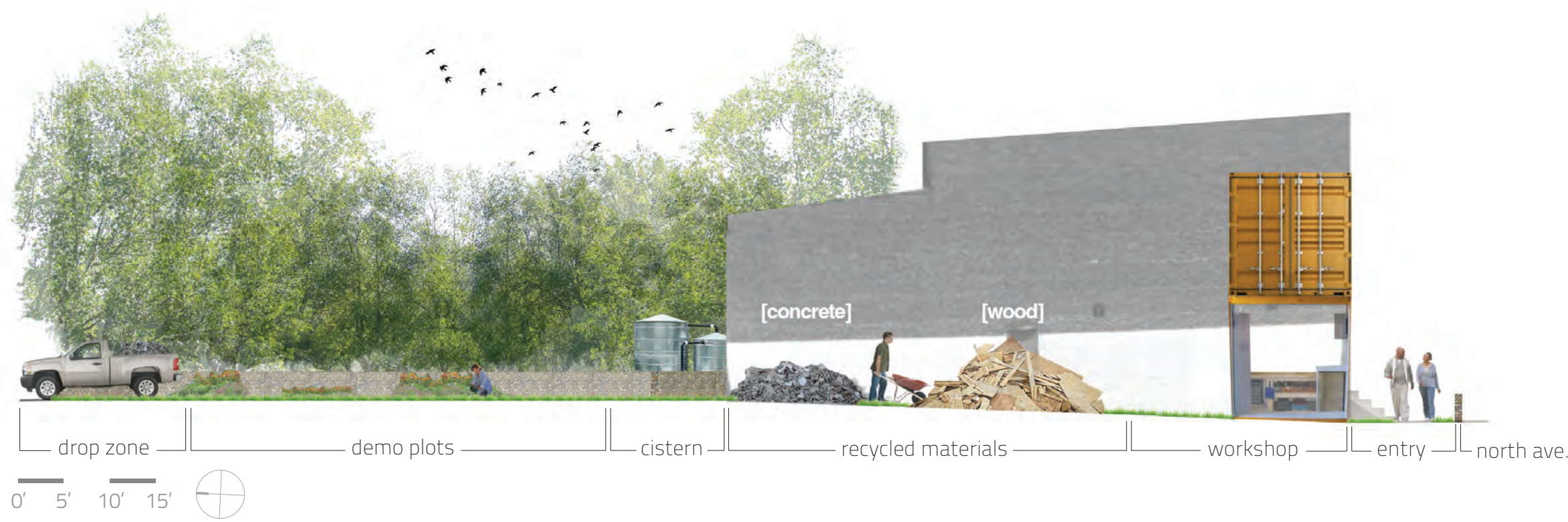


[seasonality]

The vegetative color will change with the seasons highlighting the production areas on each site.



[site 2 section]



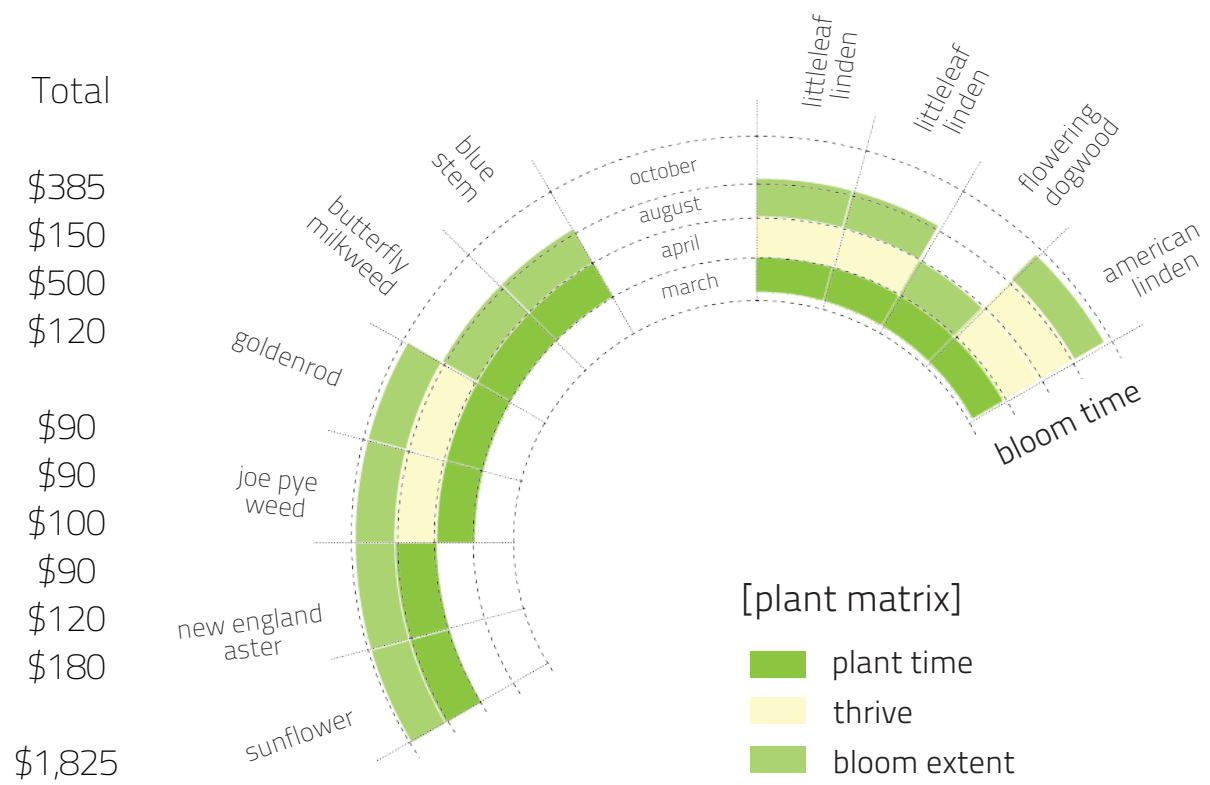
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The above sections show the different functions and site relationships of site [2]. The cross-sections express how users interact with the site as both contributors and spectators.

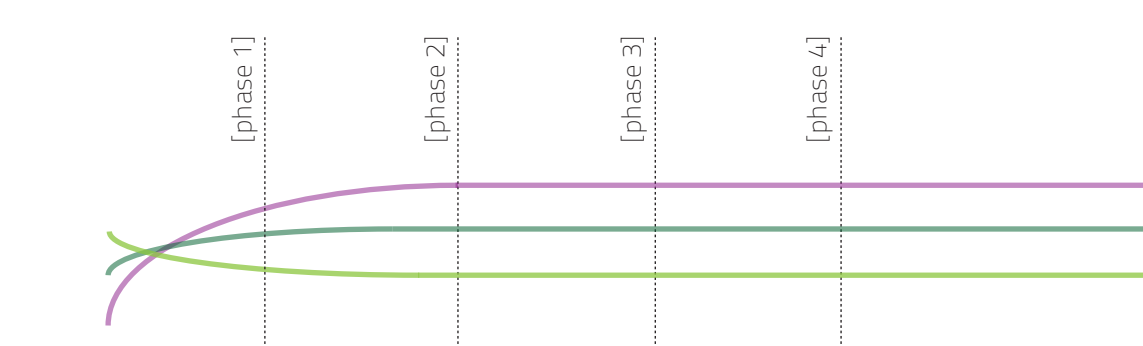
[planting schedule]

| Species            | Height    | Quantity | Size       | Cost | Total |
|--------------------|-----------|----------|------------|------|-------|
| American Linden    | 45' - 65' | 10       | 3 gal.     | \$35 | \$385 |
| Flowering Dogwood  | 15' - 25' | 10       | 1 gal.     | \$15 | \$150 |
| Little Leaf Linden | 50' - 70' | 20       | 2 gal.     | \$25 | \$500 |
| Little Leaf Linden | 50' - 70' | 60       | 1 yr. seed | \$3  | \$120 |
| Blue Stem          | 3' - 5'   | 15       | 1 qt.      | \$6  | \$90  |
| Butterfly Milkweed | 2' - 4'   | 15       | 1 qt.      | \$6  | \$90  |
| Goldenrod          | 3' - 5'   | 20       | 1 gal.     | \$10 | \$100 |
| Joe Pye Weed       | 2' - 6'   | 15       | 1 qt.      | \$6  | \$90  |
| New England Aster  | 2' - 6'   | 20       | 1 qt.      | \$6  | \$120 |
| Sunflower          | 3' - 5'   | 30       | 1 qt.      | \$6  | \$180 |



\$1,825

[short vs. long term costs]



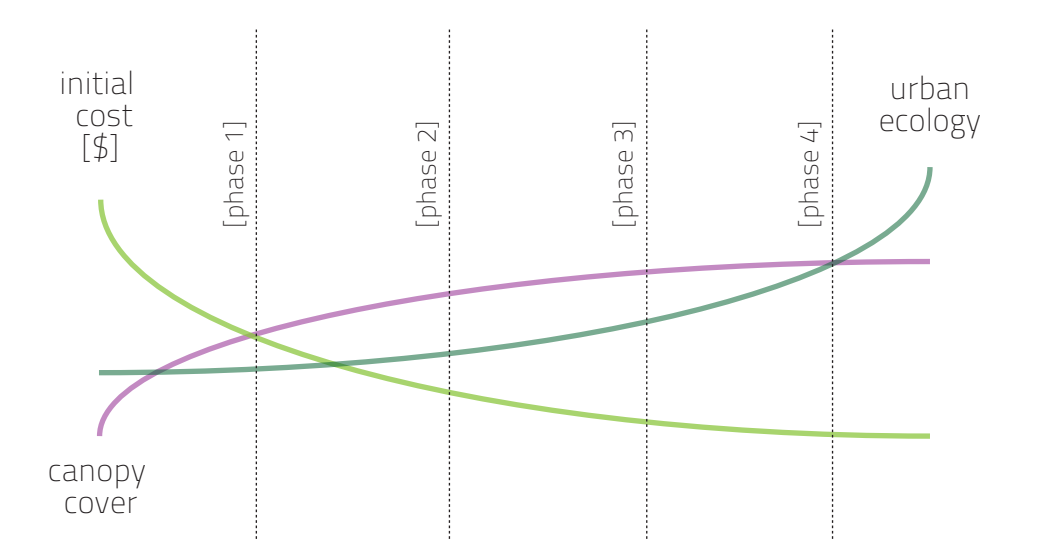
| Tree Nursery    | Time   | Nursery | Maintenance | Total/Tree |
|-----------------|--------|---------|-------------|------------|
| 1 year seedling | 3 yrs. | \$15    | \$75        | \$3,600    |
| 3 gal. tree     | 2 yrs. | \$15    | \$50        | \$1,500    |
| 5 gal. tree     | 1 yr.  | \$15    | \$50        | \$750      |

[planting perspective]



[planting cycle]

The first phase of the initial planting cycle should have a rich diversity in age between species. The 36 year cycle will allow for each street tree to be replaced at the completion of one full cycle while maintaining the suggested 40% canopy cover. A successful cycle will create + foster a self regulating ecosystem with the gradual introduction of native species. After the completion of phase two, a select grouping of trees may remain on site to begin the transition into future development.



**phase 1**  
 + site preparation  
 + deep rip soil 18"  
 + add organic matter in tilled soil

**phase 2**  
 + plant [50] 1 year seedling  
 + plant [25] 3 gal. linden trees  
 + plant [25] 5 gal. linden trees

**phase 3**  
 - transplant [25] 5 gal. linden street trees  
 - prune & cut back all branches except leader  
 + plant [25] 1 year seedlings

**phase 4**  
 - transplant [50] 3 & 5 gal. linden street trees  
 + plant [25] 1 year seedlings  
 + plant [25] 3 gal. flowering dogwoods

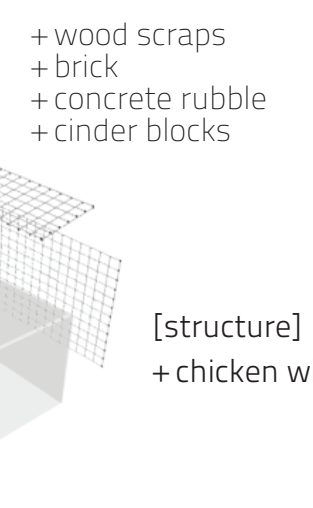
[site details]

Gabion walls and bioswales are easy to transport, inexpensive and can adapt to any landform. Each component can be recycled and reused.

[gabion wall]



[materials]



+ wood scraps  
 + brick  
 + concrete rubble  
 + cinder blocks

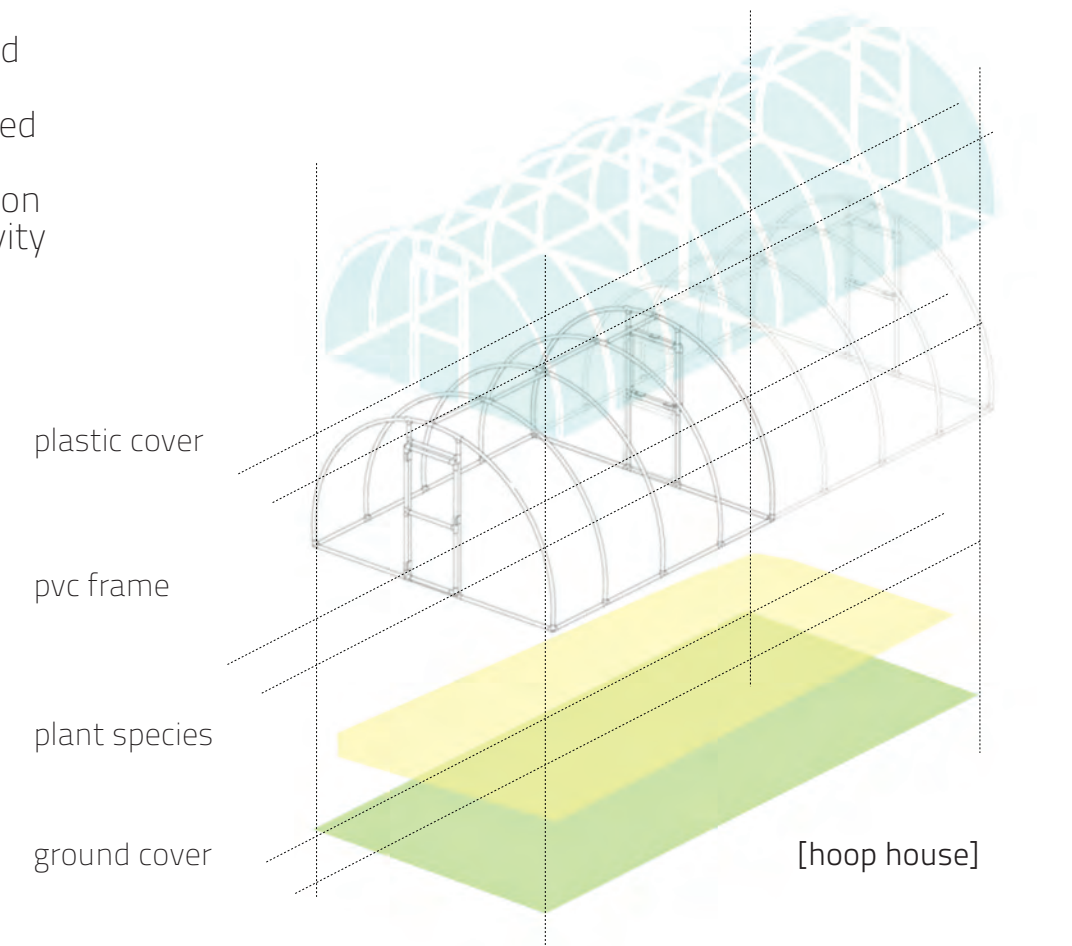
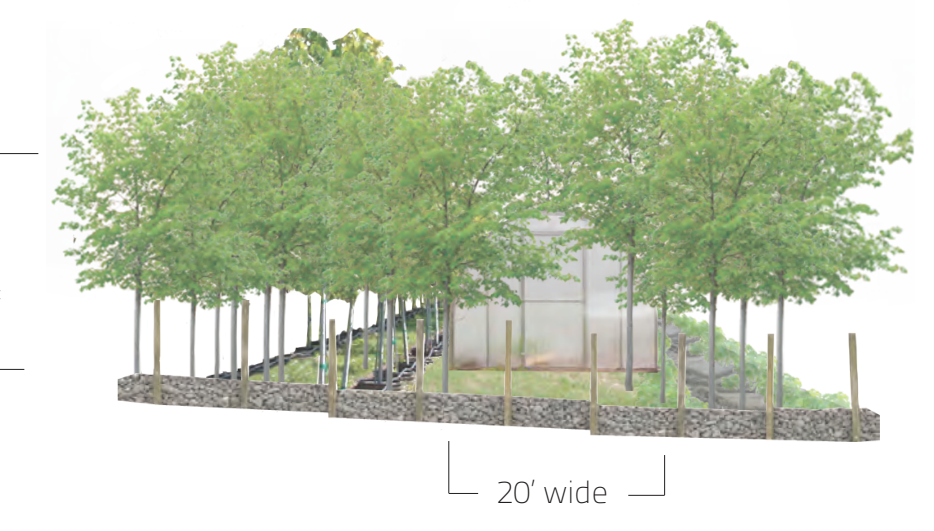
[gabion cost]

| Gabion       | Amount     | Cost  | Quantity | Total |
|--------------|------------|-------|----------|-------|
| Chicken Wire | 150'       | \$100 | 2        | \$200 |
| Concrete     | 3 cu. yds. | \$15  | 1        | \$15  |
| Fill Dirt    | 3 cu. yds. | \$5   | 1        | \$5   |

\$220

[hoop house]

By installing inexpensive hoop houses made from reclaimed material, the NW Grama Quad can extend food and plant production later into the growing season. Plants are shielded from the elements allowing them to mature without being subjected to nature's elements. Each hoop house installation can be temporary or permanent, depending upon productivity levels and solar orientation.



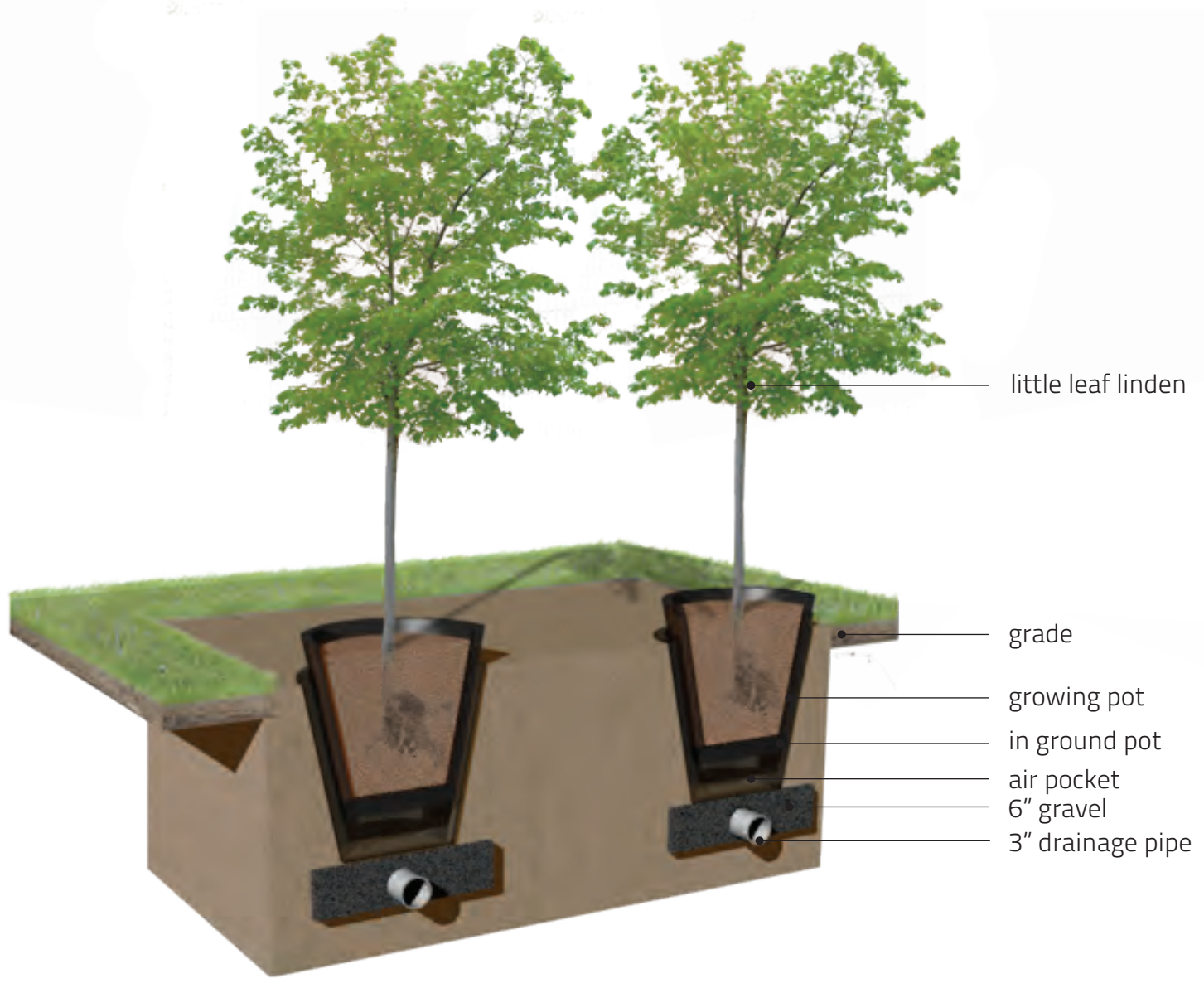
[safety]



A major concern of the BOS is safety. Flood lights and gabion walls have been added to all sites for security. Each site has two main entrances which are not readily accessible at all hours.

[pot-in-pot]

Pot-in-pot planting is the ideal solution for street tree planting in the NW Grama Quad. The dual pot system allows for easy tree extraction during any season with root protection + minimal soil loss.

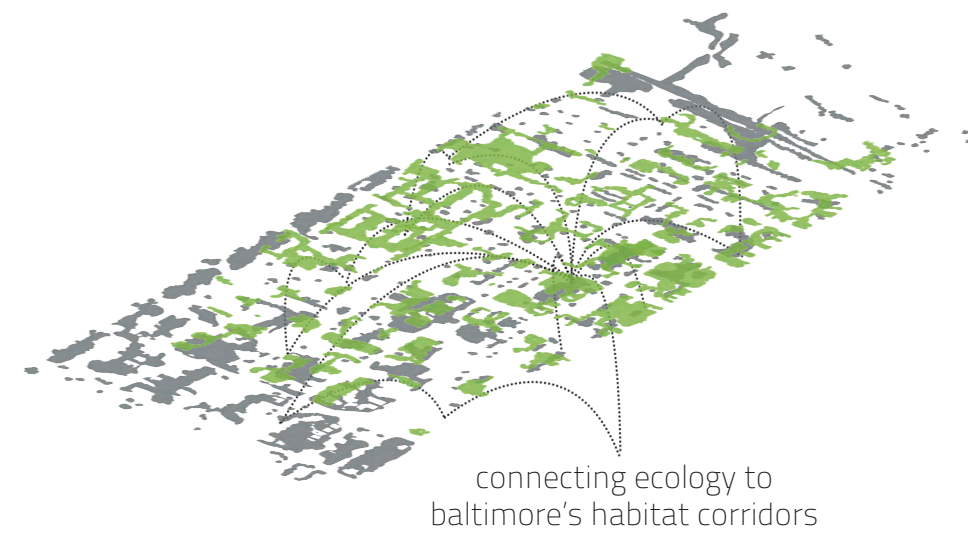
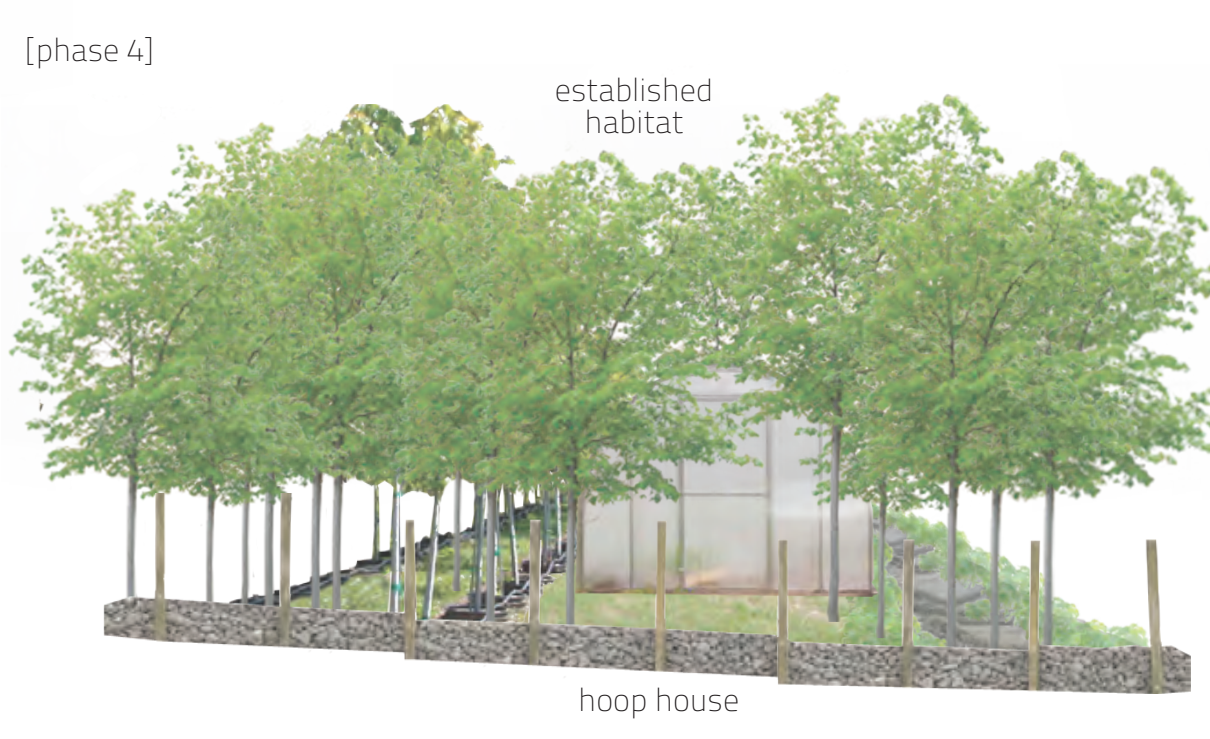


The Little Leaf Linden will make up the 92% of the street trees in the NW Grama Quad due to its rapid growth rate, aesthetic appeal and pollinator attraction.

- + 3 gal. & 5 gal. linden + pot-in-pot planting + canopy: 6' - 10' + \$35 per tree + asymmetrical shape
- + 10 gal. linden + pot-in-pot planting + canopy: 15' - 25' + \$120 per tree + bird nesting + sensitive to salt
- + 25 gal. linden + street tree planting + canopy: 30' - 40' + mature + asymmetrical shape + provides shade + needs to be replaced in 36 yrs.

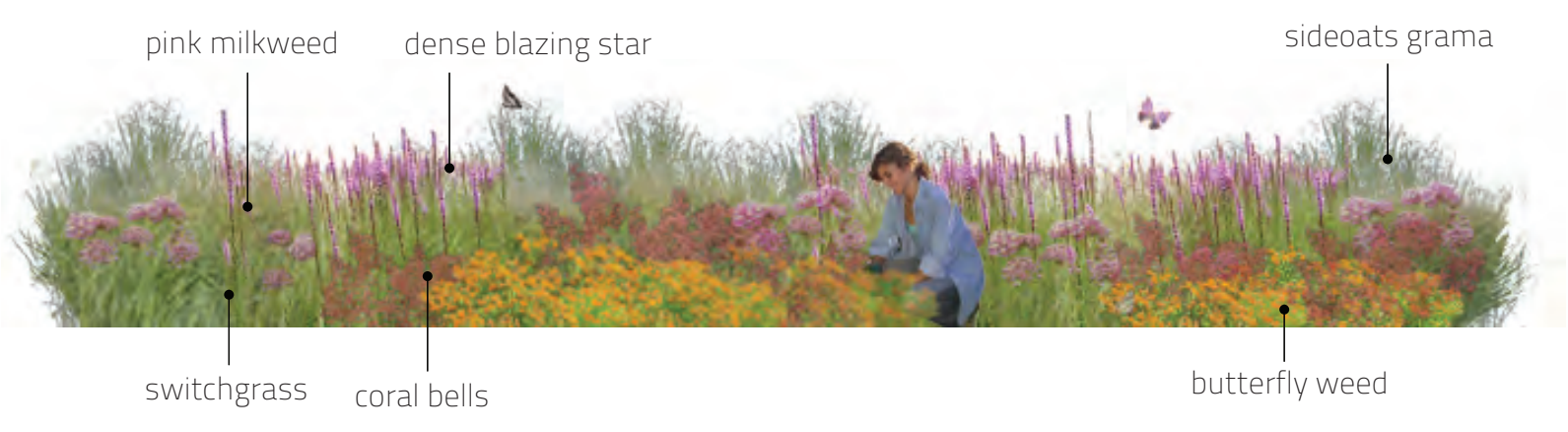
[greening]

Trees will help to stimulate economic growth, reduce the amount of stormwater, improve air quality, reduce cooling and heating costs, and lastly increase property values. The City of Baltimore will be able to double the tree canopy from 20-40% due to the street tree nursery planted on the western edge of the site.



[partners]

Species availability according to partner:



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