

## PCC ROCK CREEK LEARNING GARDEN MASTER PLAN



## PROJECT OVERVIEW

The 3.6 acre PCC Rock Creek Learning Garden is located across the street from Building 9. This space currently holds 32 raised beds for cafeteria production, 16 Community beds and about an acre of row cropping. The Garden provides experiential education and learning opportunities for PCC students, faculty, staff and community members.

See the attached Existing Conditions plan for current garden configuration.

## THE 2011 LEARNING GARDEN MASTER PLAN

This Master Plan document builds on the 2011 Learning Garden Master Plan designed by Lango Hansen. The Learning Garden leadership, staff and volunteers have accomplished many of the original goals set out in this master plan. These goals included strengthening the connections to the garden, improving garden functionality and integrating the garden into the PCC Community. Due to the continued and growing interest in the garden, the need has become clear to build upon the original vision and further develop goals that address educational opportunities, way-finding, more efficient use of garden spaces and examine how to improve upon the work flow in the garden and the wider campus.

## HOW THE LEARNING GARDEN INTEGRATES INTO THE ROCK CREEK CAMPUS

Work at the Learning Garden extends beyond the garden's borders and into the greater campus. Fruit trees at the south, west and north ends of campus are harvested throughout the growing season. Food scraps are picked up from staff offices and the cafeteria to be delivered to the worm bin and made into compost. Produce and flowers are taken from the garden and delivered to the cafeteria or sold in the new 'Portlandia Farm-Standia' market farm stand at the center of campus. The Learning Garden also shares green house space with the Landscape Tech program and has set up a state of the art hydroponics system in a hoop house.

See the attached Campus Circulation diagram which maps out work flow routes for Office/Cafeteria Compost pick up, The Fruit Harvest Loop, and the Harvest/Farm Stand route.

## MASTER PLAN PROJECT GOALS:

- Update the current Learning Garden plan to reflect the existing conditions
- Create a vision for future development and enhancement opportunities for the garden
- Develop schematic level design drawings for a covered Outdoor Classroom and a Utility Building in the garden

## MASTER PLAN PROCESS

To develop this Master Plan the team had a series of 3 meetings with the stakeholder group and one meeting with the Learning Garden Advisory Council.

### Learning Garden Stakeholder group

Elaine Cole, Sustainability Coordinator  
Nora Lindsey, Learning Garden Coordinator  
Zahava Jones, Bond Program Project Manager  
Grant Bennett, Bond Program Architect

### Stakeholder Meeting 1

May 11, 2015

At this meeting Lango Hansen (LHLA) shared the Existing Conditions Plan developed through onsite meetings with the Learning Garden Coordinator. LHLA presented two site plan options that included two building orientations and locations and options for garden, pathway and raised bed layouts. Images of garden art, signage, hoop houses and raised beds were shared for discussion.

Initial space planning for the Learning Garden Utility building was discussed based on the schematic program provided by PCC. The garden lends itself to two options for building placement in the garden. Scott|Edwards Architecture (SEA) presented both options along with a diagram that visually expressed the relative sizes of the various programmatic elements and their spatial needs including access and utility requirements. Discussion focused on solar orientation, work space flow within the building and relationship to the rest of campus.

SEA also showed images of agricultural buildings, houses, and other structures as precedents for materiality, building form, screen elements, porches, dogtrot, and outdoor classrooms.



## **Stakeholder Meeting 2**

May 28, 2015

In the second meeting LHLA brought one comprehensive site master plan that combined the preferred building and garden orientations from the first two garden site plans. Garden pathways were further defined, establishing a main garden entry and a new pathway from the east. Specific garden elements were relocated based on feedback related to work flow within the garden. Additional vehicular access points from the gravel drive were added to allow flexibility. The team discussed adding metal 'silo' style cisterns to collect roof runoff from the utility building. Format for the Learning Advisory Council meeting presentation was discussed.

SEA presented a revised scheme responding to the initial feedback. They showed a diagram explaining how the new scheme responds to the work flow of vegetable and plant processing making it efficient while also being flexible. The group discussed the composting portion of the building, mostly the degree of enclosure required for various elements, overall building form including roof types and their implications for structure and response to solar orientation, as well as access to the building for various user groups like volunteers, students, and bike transporters.

## **Learning Garden Advisory Council Meeting**

June 4, 2015

LHLA walked through the history of the project and the Existing Conditions plan. They explained site design process starting with the two preliminary Garden options and finished with the Concept Plan.

SEA presented the utility building design to the Learning Garden Advisory Council. This presentation started by explaining the design process that lead to the final building orientation, layout and overall form, finishing with color perspectives that evoked the character of the building in its context. There were many questions regarding functionality, durability, degree of enclosure for certain parts of the building, and ease of access with larger equipment.

## **Stakeholder Meeting 3**

June 11, 2015

In the last stakeholder meeting the group reviewed the site comments from the Learning Garden Advisory Council meeting and discussed final changes to the garden plan such as switching the location of the Children's Garden and widening the East/West Pathways. Possible phasing scenarios were discussed and other site details related to costing were explored.

Comments received during the Learning Garden Committee meeting related to the building were also discussed. It was determined that no additional provisions were necessary for solar power beyond relocating the existing system. Regarding a drinking fountain, after some discussion it was decided that the sinks could be used to fill water bottles and they could be chilled down in the walk-in cooler if necessary. Final steps for wrapping up the master plan were discussed and SEA promised to have a pricing package for the structures ready to send to Fortis Construction before the end of the week.

## **LEARNING GARDEN SITE SUMMARY**

### **A Working Courtyard**

The garden is structured around a working courtyard at the northwest corner of the garden property. Framed by the utility building to the north, and the covered outdoor classroom to the south, the working courtyard becomes the heart of the garden, providing a flexible space for both work, education, and recreation. Movable chairs and picnic tables can easily change the layout of this educational space. Seating can be placed out in the sun, or under the cover of the outdoor classroom, for shade and cover from the rain. The courtyard can accommodate small groups or classes of up to 30 people or more.

A windmill stands at the southern end of the courtyard. The farm windmill is a symbol of the American west and an iconic feature in rural landscapes. This approx. 25 foot tall windmill metal structure will primarily serve as an iconic art piece, its height will help in locating the garden from the entry drive, and from all over campus.

The courtyard design includes a number of sustainable elements that can serve as educational pieces within the garden. The courtyard will be paved with permeable concrete pavers constructed to absorb water and prevent stormwater runoff. The utility building roof will drain to two approximately 5,000 gallon metal 'silo' style cisterns on the east and west side of the building. These cisterns will collect rainwater during the rainy months and provide irrigation water for the garden in during the growing season. Once the cisterns fill with water they will overflow into stormwater swales planted with water loving plants. The outdoor sink in the 'back porch' area of the utility building will also drain to these swales. The outdoor classroom is topped with a greenroof that will absorb rainwater and decrease stormwater runoff from this structure.

The earthen oven is a well-loved feature of the Learning Garden and the center of many outdoor events. The existing earthen oven will be relocated or rebuilt at the west end of the outdoor classroom. The new oven structure will have associated storage and space which will aid in food preparation and provide shade from the afternoon sun.

### **Circulation**

The new master plan improves pedestrian and vehicular circulation throughout the garden. Pathways will be compacted gravel. East/west pathways will be 6 feet wide with at least 8 feet clear space for larger vehicles to maneuver. North/South pathways will be 5 feet wide. There will be wider space at path intersections for vehicles to turn around. There will be a minimum 15 feet provided between the garden and the south fence for mower access. A new east/west pathway will run along the north edge of the orchard and ramp down the slope to the east to the main entry road. The street crossing will include a concrete pad with ADA ramp. This new path will add access to the garden from the east side of campus.

The utility building faces the street and will get some new landscaping which will frame the new main entry to the garden. The 'Dog Trot' space at the utility building will be a place to check in visitors, store their belongings, and begin garden orientation.

The existing vehicular drive along the west edge of the garden provides vehicular access to the site. The garden design allows for many places for vehicles to pull into the garden for deliveries and pick up of materials such as bark chips and compost. The plan identifies a dedicated compost drop-off area and provides access drives into the hoop house and the working courtyard.

### **Specialized Garden Spaces**

Specialized gardening spaces have been added to the plan including a Hoop House at the south edge of the site. This 30' by 90' by approximately 10' height metal hoop structure with clear plastic sheeting will extend the growing season for row cropping or raised beds.

The Master plan has allocated space for a Children's garden. The Master Plan looks ahead toward plans for a Childcare program on campus, and this space will provide an outdoor gardening experience geared to children. This layout of this garden space is yet to be determined, but could include child-height raised beds for plantings and natural places to play, such as a stick or willow structure.

Students in the Landscape Tech or other programs are often looking for space to use for school projects and growing experiments. The Student Projects zone, north of the Hoop House provides an area for students to use.

### **Raised Beds**

The dimensions of the existing (48) six foot wide by ten foot long raised beds are difficult to maintain. They are too wide to reach across and too tall. New raised beds will be built with 2x8 cedar or juniper wood, two boards high. Galvanized Lag bolts will be used instead of wood screws to help with the longevity of the structures. Raised beds will be a narrower 4 foot width and will vary in length from 4x11' for the community beds to up to 20' long for the farm stand/cafe/teria beds. The longer beds will improve the efficiency of garden maintenance.

### **Row Cropping**

Although many new raised beds will be constructed, row cropping will still be an important style of planting in the Learning Garden. The garden coordinator has expressed an interest in expanding perennial and flower crops in the garden. The existing row cropping zone along the north end of the garden will be used for this purpose. Other row cropping zones will be used for the farm stand, cafe/teria, pumpkins and student projects.

### **Orchard, Fruit, and Bees**

The existing perennial cane fruit (grapes and berries), blueberries, bees, and orchard spaces are functioning well, and will remain as-is. The existing tool shed next to the gravel road will be repurposed as an orchard tool and bee keeping storage building. (We had also discussed moving the frame of the existing cob shed over to fulfill this purpose instead as it will provide another opportunity for a class to practice building a cob structure, and is more meaningful to the history of the garden than the manufactured Tuff Shed).

## LEARNING GARDEN UTILITY BUILDING SUMMARY

Agricultural buildings usually have a simplistic beauty derived from their emphasis on functionality. Despite being a relatively small structure on the PCCRC campus, the learning garden building is no different. The learning garden currently has many smaller structures scattered throughout the garden making it hard for volunteers to get oriented, awkward for the garden managers to maintain, and difficult for those working in the garden to be efficient in processing plants and vegetables.

There are many factors driving the placement and design of the utility building; solar orientation, storm water management, materiality, flexibility, work place efficiency, strong street and campus presence, and a distinct welcoming entrance to the garden all inform the design and placement of the small building. Sitting on the north side of the site gives the building a face towards campus, announcing the presence of the learning garden as people walk by or drive in. This location also allows the building to have the long exposure face south making solar access advantageous. A dogtrot form creates a distinct entrance, a "front porch" for visitors and volunteers to check in with the garden coordinator, set down belongings, or simply take a quick peek at the garden. The dogtrot can also act as a protected work space for flower arranging or vegetable staging increasing the amount of activity that is visible by passerby. Another level of flexibility is offered by a large sliding barn style door that helps protect users from inclement weather like wind and rain.

PCCRC has a great emphasis on sustainability and the utility building in the learning garden continues this theme with more than just its solar orientation. A butterfly roof allows for large north face windows above head height maintaining work space inside the building while also creating a deep overhang, shading the outdoor processes on the south. This form maximizes roof drainage to feed the large cisterns on the east and west end of the building. Water management and reuse is also expressed by implementing sink drains that lead to bioswales.

Materiality is another important aspect of sustainability considered for the utility building. PCCRC has access to barn wood that is ready to be refurbished and used as siding or built in to one of the large sliding barn doors. The old wood will complement new wood siding as well as the steel primary structure. With longevity in mind, steel was chosen for its durability in adverse weather conditions as well as the everyday wear and tear of being in a high activity work area.

The primary interior space of the utility building is similar to many agricultural buildings by having one large room with storage along the perimeter walls for such things as tools, equipment, a work bench, "insinkerator," and worm bin while allowing the center to be a flexible, open workspace. Depending on the need of the Learning Garden any number of tables (we have shown one) with wheels can be used to provide flexibility in working space. The open dogtrot area can also become a workspace if necessary activating the outdoor space and creating interest by those passing by. Less flexible program spaces such as the office, restroom and walk-in cooler are located across the dogtrot from the workroom.

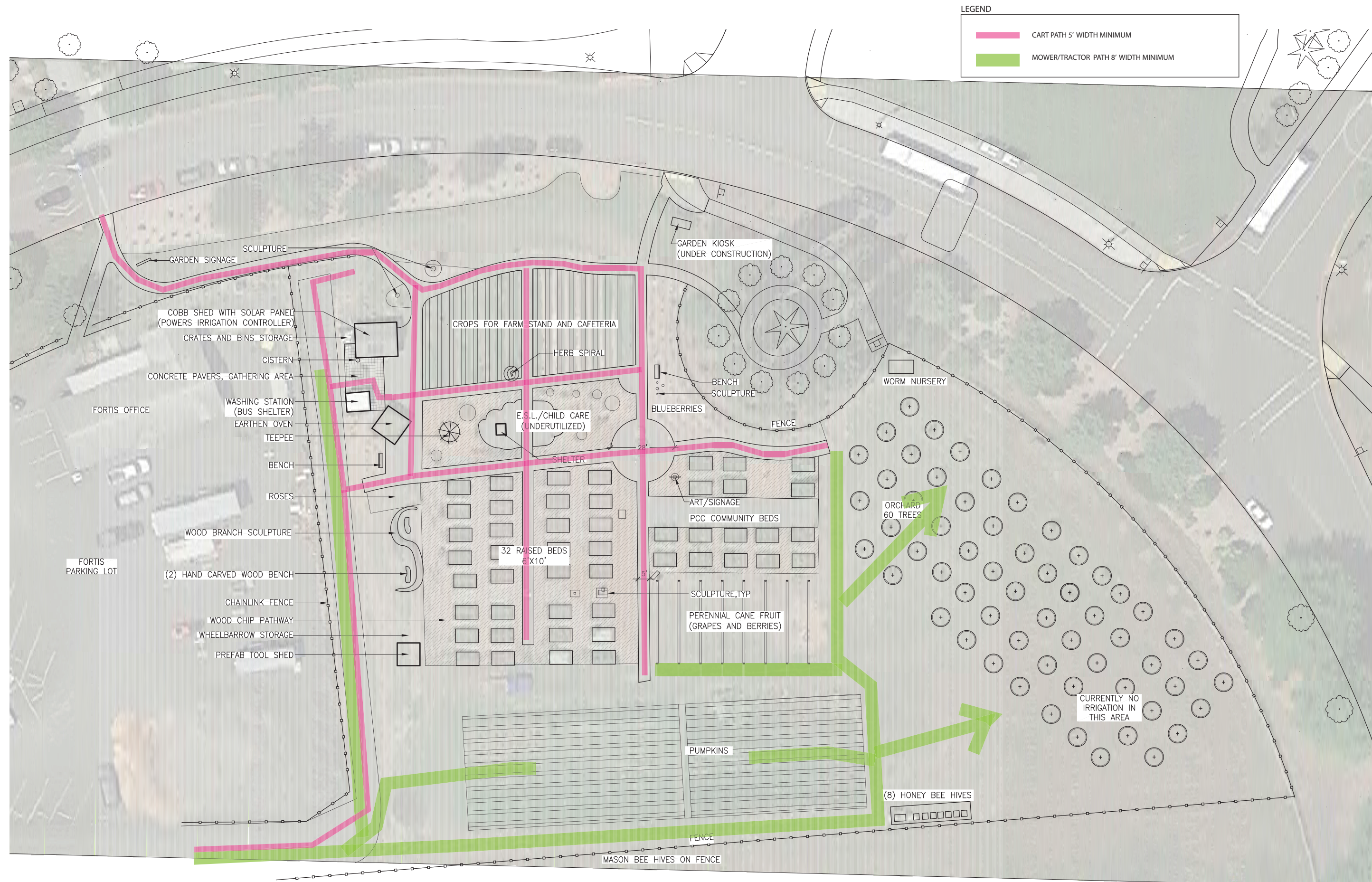
Outside, the long porch with southern exposure provides covered space for processing the vegetables and plants from the garden. There is a logical progression from staging to data collection (weighing and note taking), to washing and processing and finally storage in the walk-in cooler. All of this happens under the cover of the butterfly roof protected from hot sun and rain on darker days. The deep roof overhang also allows the possibility of bike racks for volunteers who stop by to help out. To save space on the inside of the building, wheelbarrows are stored outside where they can be stacked and locked up.

## LEARNING GARDEN OUTDOOR CLASSROOM SUMMARY

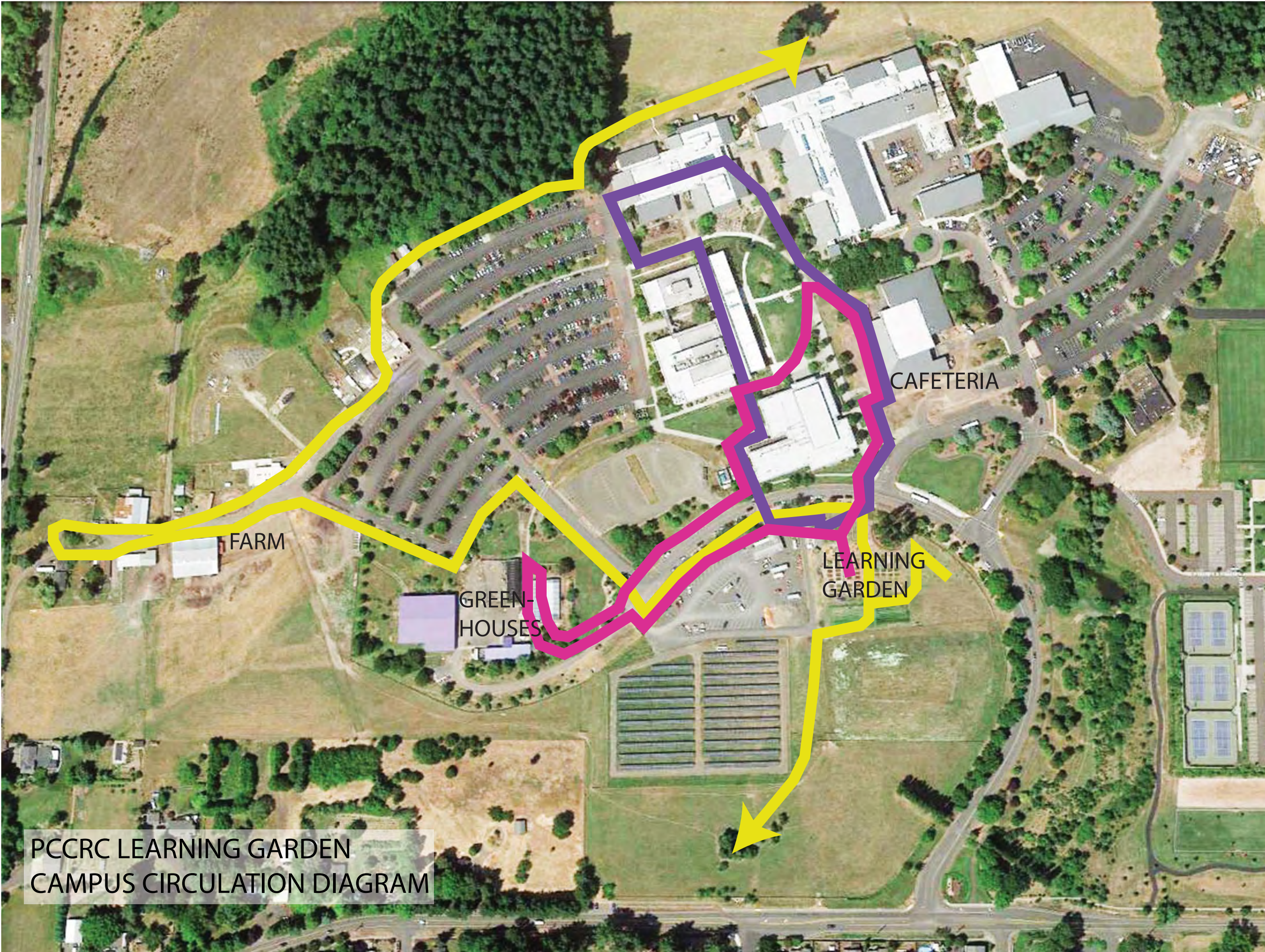
Another advantage of the utility building site plan is the opportunity to create a small courtyard in a similar fashion to old farm steads with buildings dotting the edges a central open space. The outdoor classroom helps define this courtyard and is an intentional space for students to learn and work. An airy structure, simply and elegantly framed serves as the overhead plane that defines the outdoor room. On top of the outdoor classroom a green roof helps manage storm water runoff and while it may not be immediately obvious, the size of the structure and glimpses of greenery as seen from a distance are indicators that the classroom is leading by example for sustainability.

On the west end community gathering and socializing is emphasized with a favorite element in the learning garden, the earthen oven. This does double duty as the sun sets by offering more shade during late afternoons. The flexibility of this structure is exemplified by its simplicity and possibility for moveable screens on the south side to provide more shade from the sun and protection from other elements like wind and rain.









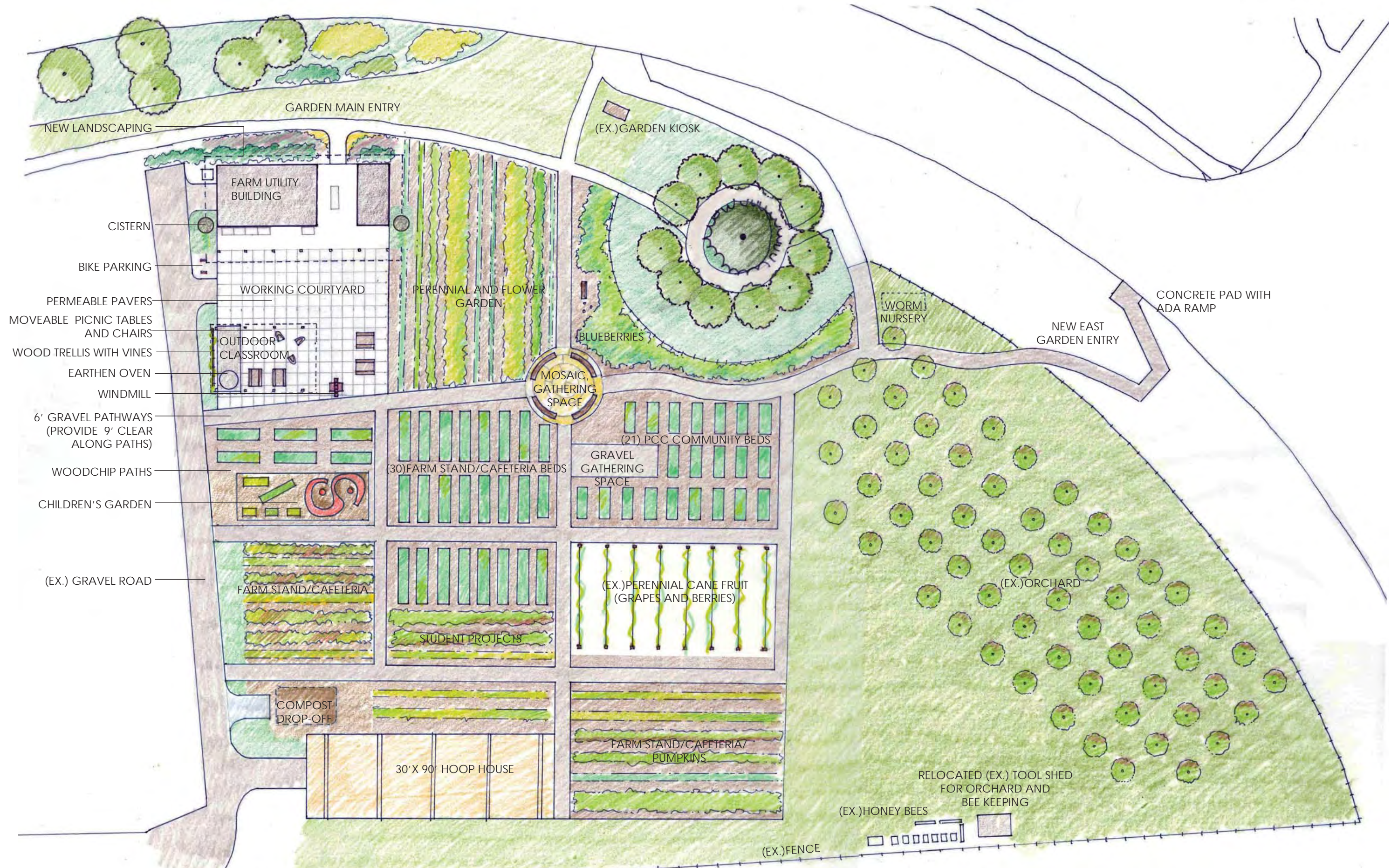
  
HARVEST/FARM  
STAND ROUTE

  
OFFICE/CAFETERIA  
COMPOST PICK-UP

  
FRUIT HARVEST LOOP

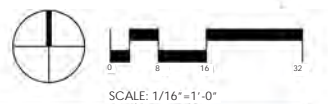
PCCRC LEARNING GARDEN  
CAMPUS CIRCULATION DIAGRAM





## LEARNING GARDEN MASTER PLAN

PORTLAND COMMUNITY COLLEGE ROCK CREEK CAMPUS



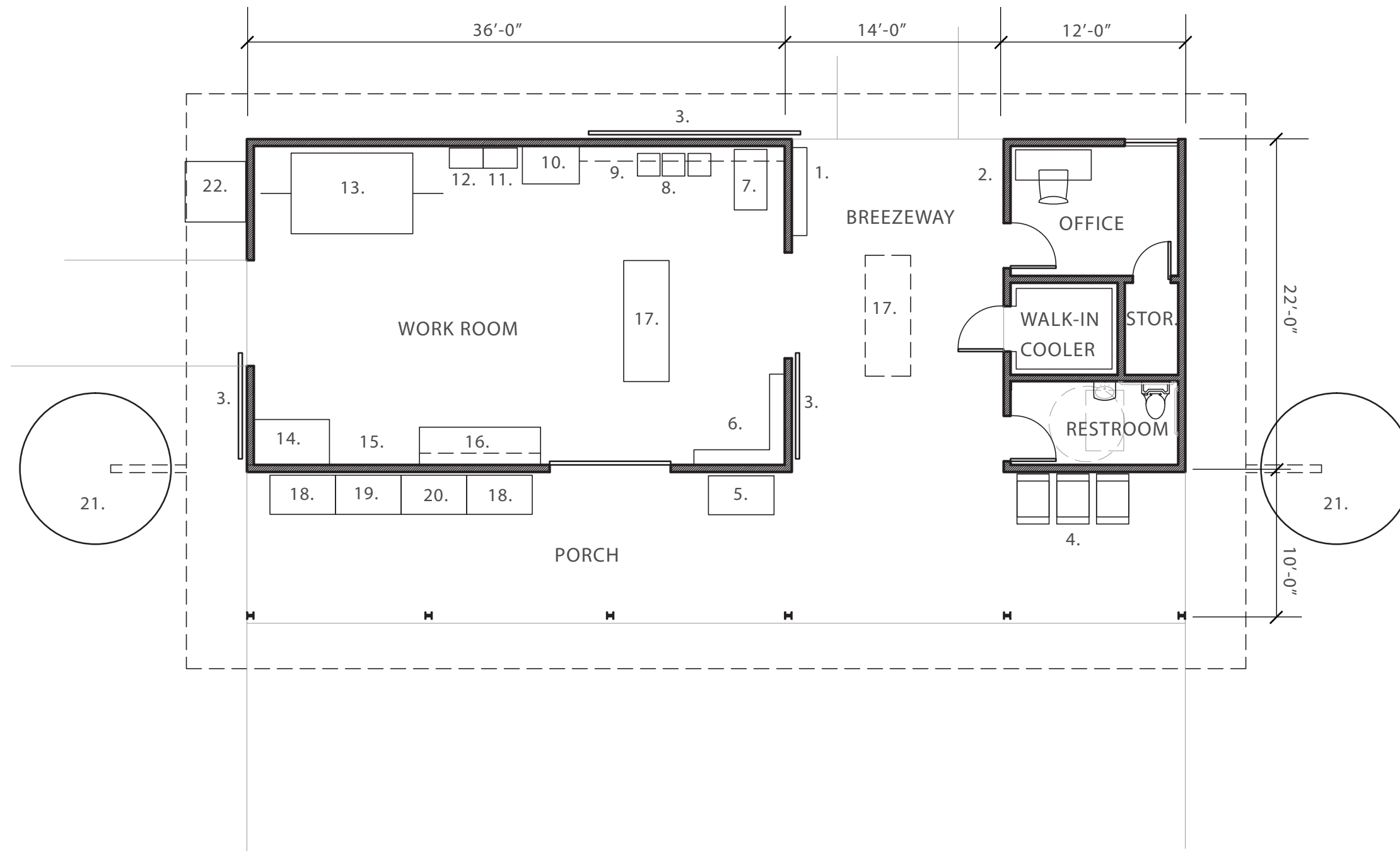
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LANDSCAPE ARCHITECTS

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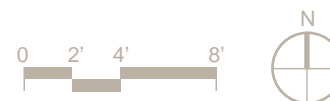




## PCC Learning Garden

Rock Creek Campus  
06.12.2015 | Project # 15058

## Utility Building Plan



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LANDSCAPE ARCHITECTS PC

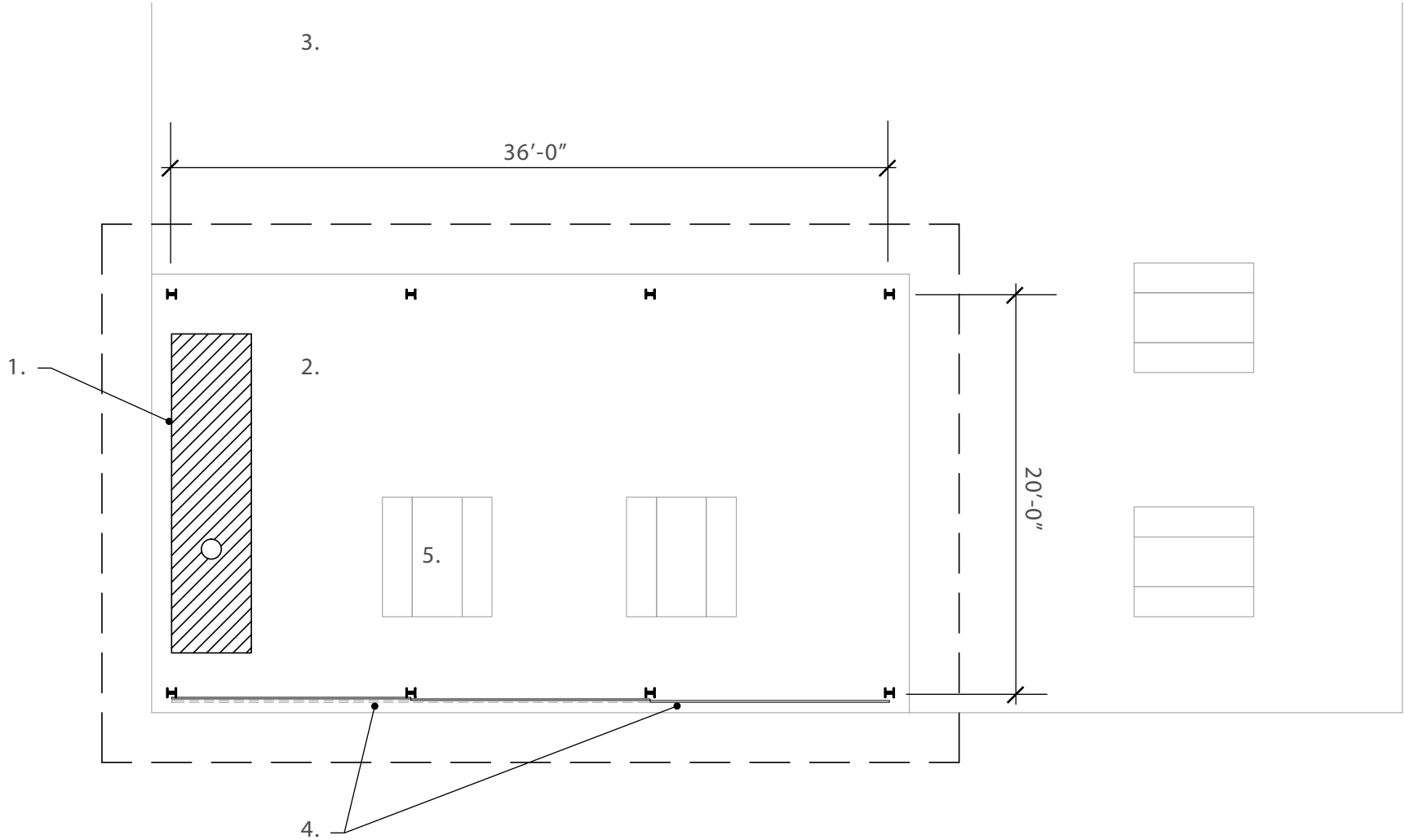
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Outdoor Classroom Plan



Legend

- 1. Earthen Oven
- 2. Concrete Pad
- 3. Courtyard Pavers
- 4. Sliding Wooden Panels
- 5. Picnic Table







## PCC Learning Garden

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Portland, Oregon  
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Perspective 1

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LANDSCAPE ARCHITECTS PC

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Perspective 2

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