

Design Summary: Schematic Design for InterImCDA's Farm & Nature Center Project

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Thesis Abstract

This report is both a pre-design summary, and site-specific design/build and planning resource, for InterImCDA and their new Farm & Nature Center in the Danny Woo Community Garden, within Seattle's International District. This report provides pre-design process details, as well as specific resources for future work in the garden including: Site history, context & site analysis, structural & programming exploration, identified sites for future development, site-specific design/build strategies, and an ecotype succession plan. At the end of the report is a set of more theoretical essays inspired by work on the professional project.

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DESIGN SUMMARY

SCHEMATIC DESIGN FOR INTERIMCDA'S
FARM AND NATURE CENTER PROJECT

MAY 2013





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MAY 2013

Prepared for:

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Title Graphic:

The Danny Woo Garden-Mercedes. 2010. Environmental Racism Blog, Seattle. Web. 12 May 2013.



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In the academic version of this report, found in the University of Washington Library, find a series of essays attached at the end entitled, *Ripples: Essays Inspired by the Work on the InterImCDA Farm & Nature Center*.

EXECUTIVE SUMMARY

This report is both a pre-design summary, and site-specific design/build and planning resource, for InterImCDA and their new Farm & Nature Center in the Danny Woo Community Garden, within Seattle's International District. This report provides pre-design process details, as well as specific resources for future work in the garden including: Site history, context & site analysis, structural & programming exploration, identified sites for future development, site-specific design/build strategies, and an ecotype succession plan.

The Danny Woo Community Garden (DWCG) began in 1975 to provide a place to garden for local elder immigrants, and continues serving 70 gardeners today on a terraced hillside. The Farm and Nature Center has earned initial funding of \$100,000 from the City of Seattle Department of Neighborhoods Large Projects Fund, and will be completed by the end of 2014. The center aims to provide additional capacity for the Children's Garden Project, Garden Volunteer Program, and Senior Gardener Community through a (approx.) 400 ft² structure with a kitchen, gathering room and improved courtyards. The DWCG is surrounded by neighborhoods in the process of development, increasing density, and "Up-Scaling", while also serving neighborhoods with many social services and disadvantaged populations. The garden will likely see increased use and pressure in the next decade from users, while its 1970s infrastructure will reach the end of its life. This is an exciting time for the DWCG to hitch itself to new development, grow programming for children, volunteers, and elders, and improve infrastructure. The Farm and Nature Center is a crucial part of this effort.

Design Methods

In the fall of 2012, InterImCDA was awarded \$100,000. In the summer of 2012, George Lee, a master's student in Landscape Architecture from the University of Washington began design/build work in the garden, and in October 2012 took on the Farm & Nature Center design as his MLA thesis. From October 2013 to April 2013 the pre-design process was undertaken, culminating in initial community consensus in early spring 2013. The following aspects of the collaborative design process are included in the Design Summary: **Site History & Contextual Analysis, Community Engagement & Coalition Building, Design Criteria Development for Structure & Programming, Site Analysis and Selection, and 10 Months of Weekly On-Site Observation.**

Design Results

- **Design/Build Coalition of InterImCDA staff, community members, and design/builders created and reached initial consensus.**
- **Design/Build to include new retaining wall, structure & landscape. Structure approx. 400ft² serving 35ppl. Will be 2 structures, a "Complex Shed" gathering/eatery room, and a "Micro-Building" enclosed utility-linked kitchen.**
- **The site chosen is above existing rolling benches. Site has infrastructural, programmatic, and public safety benefits.**
- **Site's existing terraced retaining walls totaling 12+ ft. high will be replaced. Walls to east and west may also be replaced.**
- **Existing pathway on site will be widened to accommodate structure by pushing retaining wall back and cutting down to meet benches.**
- **Design/Build partners will include University of Washington, Volunteers, and Independent Design/Build Contractors.**

Conclusion

This project will be the most ambitious the garden has undertaken since its creation, but well within the scope of InterImCDA. This report aims to be diverse and flexible enough to both support new iterations on the Farm & Nature Center in addition to entirely new projects future leaders in the garden may take on. The Farm & Nature Center is an exciting project that in many ways marks the evolution of DWCG into a new engagement with the community.



The History of Danny Woo Community Garden: 1975 to 2013

In 1975 resources specifically targeted to Asian and Pacific Islanders were scarce. The concept of culturally-appropriate services was new; social and health service agencies like the Chinatown/International District community clinic and the Head Start Center were just starting up; and Seattle's own P-Patch program was only a couple of years old (InterIm, 2009). Urban renewal and the top down planning of the 1960-70s was in full effect, gradually surrounding and cutting up the International District with the King Dome (1976) and I-5 (1969).

Activists and organizations led by InterImCDA, an community advocacy group working on many neighborhood issues took up the need for a garden after a local Landscape Architect saw the need for a garden for the elders in the community (Santos, 2012). Executive Director "Uncle" Bob Santos, negotiated with local landowner and community leader Danny Woo to take Woo's property on sloping open space on the north side of Chinatown/International District and convert it into a useful, functional space for the residents in the neighborhood. The vision was simple: A community garden for Asian elders to allow them to feel the earth in their hands, to plant the foods they missed from their native countries, and, most importantly, to provide social connections, recreation, and exercise for the aging immigrant residents. (InterIm, 2009)

Santos proposed an unprecedented private-public partnership that would eventually combine Danny Woo's property, Kobe Terrace Park (city), and other patches of city land, into the *Danny Woo International District Community Garden*. Santos recalls the day he negotiated the deal, "Danny and Wilma Woo owned the Quong Tuck Restaurant and Lounge, and it was becoming the hangout for the InterIm staff and local community activists. One day I asked Danny Woo for permission to build a garden for the Asian elders on his property above Main Street. But as a nonprofit agency, I told him InterIm could only afford \$1 a year for rent. I also asked him, 'Oh, and by the way, could we have a long-term lease?' Well, Danny said yes to the dollar, but no to the long-term lease. That was in 1975, and InterIm is still operating the garden." (InterIm, 2009)

People came together to plan and build the garden, terrace the slope, haul the lumber, till the soil, and plant the first seeds. As they did this, they broke down racial, ethnic, and generational barriers (InterIm, 2009). The garden is located at the edge of the historic Jackson regrade project (1907-1910), and likely on ground pre-dating the massive sluice cutting to cut through the First Hill/Beacon Hill ridgeline (Lewis, 1905). Santos tells the story of initial soil sampling, where he and a friend used a large truck tire rolled ahead of them to clear a path through blackberry brambles. Eventually, the site was sculpted into gardens by hand with little to no capitol. Terraces and staircases were created out of old railroad ties, fruit trees donated by a local who owned an eastern Washington orchard were planted, and the creation of tilth began by gardeners. Once the garden was complete, Bob Santos moved his annual Filipino Lechón, roasted pig celebration, to the garden from his personal home, and this tradition continues today. (Santos, 2012)

The garden is located in the Chinatown-International District of Seattle and was established in fits and starts from the 1850s until the 1920s. The district consists of Chinese, Japanese, Filipino, Vietnamese, Korean, Thai, Laotian, Cambodian, Pacific Islander, and other communities. The garden is sited in what was for much of the district's history Nihonmachi, or Japantown. Major conflicts with Seattle's populations of European descent have been ongoing, but three major historical events include the 1886 mob expulsion of Chinese from the city; 1942-1946 Japanese Internment during World War II; And in the 1960-70s, the threat to and invasion of the neighborhood by I-5 and Kingdome construction.



Since 1975, the garden has been kept up by non-profit InterImCDA, whom has partnered with the approximately 70 Asian-American elder gardeners, community volunteers, and the University of Washington College of Built Environments to keep the garden going. Thomas Im, Neighborhood Planner (1997-2013), in partnership with Garden Managers, Jonathan Chen (2008-2012) and Rachel Duthler (2012-2013), have led InterImCDA's contemporary work with the garden. In 2009, these garden leaders started the Garden Children's Program which continues today with AppleCorps Americorps volunteer Corinne Cahill.

In 1989, UW Architecture students Leslie Morishita and Brian Reading began the now 24 year-old design/build partnership with the University of Washington College of Built Environments by helping build the main tool shed. Part of their mission was to diversify the then euro-centric focus of the UW Architecture program, and start a common design vocabulary in the up until then vernacular/informal garden. UW Architecture Professors Badanes, Vanags, and Onouye, and the Neighborhood Design/Build Studio did several projects in the following 24 years: (Morishita, 2013)

1989 | L.Morishita, B.Reading, B.Onouye

Main tool shed built & vision for unifying Asian architecture in garden created.

1990 | S.Badanes, A.Vanags, B.Onouye

Pig roast pit and west vegetable washing station with deck and seating.

1991 | S.Badanes

Front gateway and steps with rock garden & southern lookout along path. Street front park area on west side on Main St.

1996 | S.Badanes

Accesible garden, work study student completed project.

2003 | S.Badanes

"New Face Project" Developed the bramble patch at southeast corner of garden, added paths, stairs, plots and common planting areas.

2007 | S.Badanes

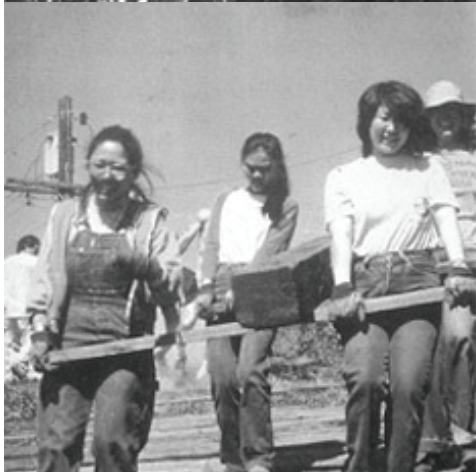
Gathering place, cascading benches on southern slope of garden.

2010 | W.S. A. White-Wiegand

Second tool shed and chicken coop construction.

'12-13 | W.S. G. Lee

Pig roast pit and west vegetable washing station with deck and seating.



Most recently, in 2010 UW BLA Work Study student Aaron White-Wiegand helped build the new chicken coop and children's shed (Hou, 2013); and from the summer of 2012 to spring 2013, UW Landscape Architecture Work Study student George Lee led the design/build aspect of a \$20,000 matching fund grant to replace a 100' retaining wall with an Americorps crew, and a 47' replacement staircase partnering with Im, Chen, and Duthler. Then, in the fall of 2012 InterImCDA was awarded a \$100,000 matching fund grant to construct a Farm & Nature Center in the garden, primarily to expand their Children's Garden Program. This project is the present issue in this Design Report.

Photos to left from above down:

Senior Gardener (InterImCDA, 2009)

Volunteers Carrying Railroad Tie during Garden Construction est. c1975 (InterImCDA, 2009)

Looking north at hillside near DWCG during Jackson Regrade October 30, 1905 (Lewis, 1905)

Photo on page to left:

"Uncle" Bob Santos serving up roasted pig at the DWCG's Annual Lechón Pig Roast Celebration. April 21, 2010.

(ER, 2010)



COMMUNITY COALITION

Community and site engagement has been central to the development of this pre-design/build plan. The main players working together to develop this plan have included:

Acknowledgements to those involved thus far:

The Gardening Elders:	Taiwanese, Chinese & Korean Gardeners
InterImCDA Planning & Architecture Staff:	Tom Im, Leslie Morishita, & Joann Ware
	All contributing InterImCDA Staff
Garden Managers:	Jonathan Chen & Rachel Duthler
Children's Program Coordinator:	Americorps Corinne Cahill
DWCG Volunteer Coordinator:	Allison Rinard
Long-time DWCG Design/Build Partner:	Architect/Professor Steve Badanes
ID Public Safety Specialist, SCIDpda:	Nic Li
Seattle Department of Neighborhoods	
Work/Study Design/Build Consultant:	George Lee, MLA Univ. of Washington
UW Landscape Architecture Reviewers:	Makie Suzuki, Eric Higbee, Flora Yeh
	Brian Gerich, Jake Woland & Rachel Berney
UW L.A. Professor Advisors	
Thesis Chair:	Jeff Hou
Thesis Advisor:	Nancy Rottle
Thesis Advisor:	Steve Badanes

Target groups for future community involvement:

Additional Gardening Elders:	Need to engage deeper and with more.
Children in DWCG Programs:	WILD, Bailey Gatzert & Childrens Garden
Architecture Firm Partners	
UW Design/Build Students	
Volunteer Engineers/Architects	Jon Padvorac, Joy Naganuma, Curtis McGuire
Volunteer & Work Study	Seattle Universities & College Students
	Seattle organizations like Seattle Works
	Americorps Service Crews



Gardener Community Meeting
Winter 2013

COMMUNITY DESIGN PROCESS SUMMARY

The execution of this \$100,000 grant to design and build a Farm and Nature Center will be the biggest single project the garden will have taken on since its creation in 1975. It is a great opportunity, but also will be a great challenge for the existing garden resources. The previous Small & Simple Grant of \$20,000 to replace a 100' long, 4' high Allan Block retaining wall, and 46' of replacement staircase, was an extensive and successful undertaking. However, for that grant project to succeed many were involved. The upcoming Farm & Nature Center will be at least 5 times as expensive and challenging, and will inevitably require that much more community involvement and support.

For the Small & Simple Grant, 1/5 the size, these groups worked together to succeed:

InterImCDA Support Staff & Garden Managers	(2) FT Staff offering 1/4 to 1/2 time
UW Graduate L.Architecture Work Study Student	(1) FT 3 mos., PT 19h/wk 7 mos.
Americorps Volunteer Labor Crew	(8) Members, 3 FT Weeks over the Summer
Volunteer Laborers	Hundreds of hours
(1) Volunteer Civil Engineering Consultant	(1) 10 Hours, 1/2 dozen meetings

The community coalition, as of April 2013, was in good shape having come to consensus on an initial delegation of responsibility, design criteria, and site selection. The short list of those involved thus far is on the opposite page. Community input and coalition building began in the summer 2013. InterImCDA staff and the UW Design/Build consultant were able to regularly discuss site options and design topics as work on the previous grant was done. As the project progressed this initial pattern of trust and listening set good footing as relationships transformed slowly into a more client and consultant relationship. To avoid the many problems with bringing stakeholders in late to the process, early on future Design/Build Studio Architect, Steve Badanes, and the Elder Community Gardeners were brought into the process with meetings for discussion and sharing of ideas. By the time of our final community pre-design meeting, early Spring 2013, to discuss hard choices of site, construction timelines and responsibilities, design criteria, etc. all parties had been in contact for a several months and were able to navigate a successful meeting.

Looking forward, it is important to keep the coalition alive with communication. Additional professionals need to be brought on or replaced: E.g. Engineer, Landscape Design/Builder; while more information needs to be collected from children and seniors to inform future design of the structure and landscape of the Farm & Nature Center. The good news is, all is beginning on good footing with relationships and thanks to the City, a \$100,000 grant.

Context & Characteristics

To understand the garden, it is important to examine its context at neighborhood and site scales. The Danny Woo Community Garden is at first glance another community garden, but if one is to design or conduct work there, it is vital the layers of context are understood.

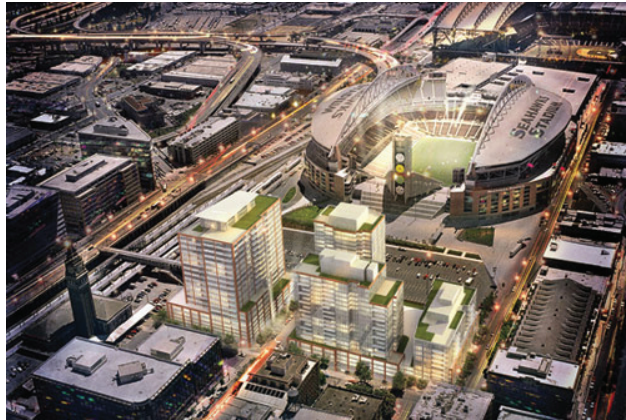
Neighborhood Scale

At the neighborhood scale for DWCG it is important to consider: Current and future transportation systems; neighborhood foci & asian cultural centers; prevalence of parks and green space; and neighborhood trends and changes.

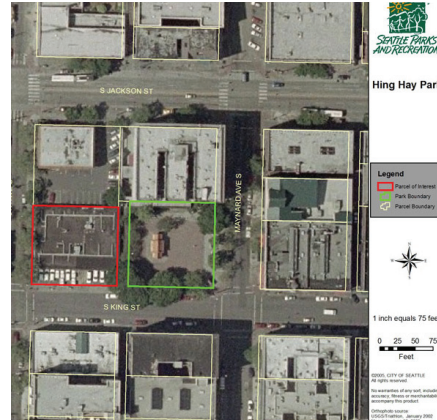
Big changes are happening now, and in the next decade, all around DWCG. To the east across I-5, the Yesler Terrace development will replace existing lower density low-income housing with a massive high-rise, mixed income development. To the west, just south of Pioneer Square, a large new market rate housing development, Stadium Place, is going in while Pioneer Square enjoys its own upscale renaissance . To the southwest, a new stadium for the Seattle Supersonics may be going in south of the existing stadiums, bringing more people through the International District to eat, park, and travel. And to the west and southeast, the Central District, Judkins Park and Beacon Hill are all developing quickly as people are priced out of other neighborhoods like Capitol Hill, or moving into Seattle to work in the developing downtown.

All this development will bring thousands of new people to DWCG who need the respite, recreation, and ecological connections medium size parks provide. This development also is likely to strain habitat for plants and wildlife, and the intact patches of woods and grassland at DWCG will increase in importance. In addition, the International Special Review District board will likely increase in importance to ensure that this development is a positive force in the neighborhood, and the DWCG will also need to adjust and best strategize to link into these developing resources.

Some relief is coming: Seattle's new waterfront park construction is planned to begin in 2016, and include a seawall beach at S. Washington St; Yesler Terrace designers have a, "spine of parks," integrated with a possible I-5 lid to Kobe Terrace; and Seattle Parks and Recreation has acquired a third of an acre to the west of Hing Hay Park (a few blocks south of the garden) to double its size in the next 5-10 years. However, these projects are likely to be small, open, urban plaza parks heavy on hardscape if they match contemporary precedent for recent downtown design. These new parks will not provide the rich experience available at DWCG, e.g. 30-year old trees, wildlife like sharp-shinned hawks, or a space large and varied enough to explore. They also are likely to not incorporate the unique and crucial programs of community gardening, hen keeping, or a children's farm and nature program. The DWCG will continue to be valuable to an enlarging community for its special character and experiences.



(Follansbee, 2012)



(City of Seattle, 2008)



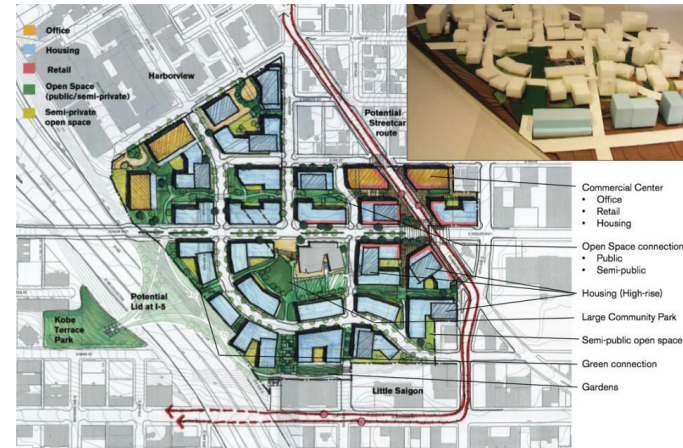
(Kruse, 2013)



(Waterfront Seattle, 2012)

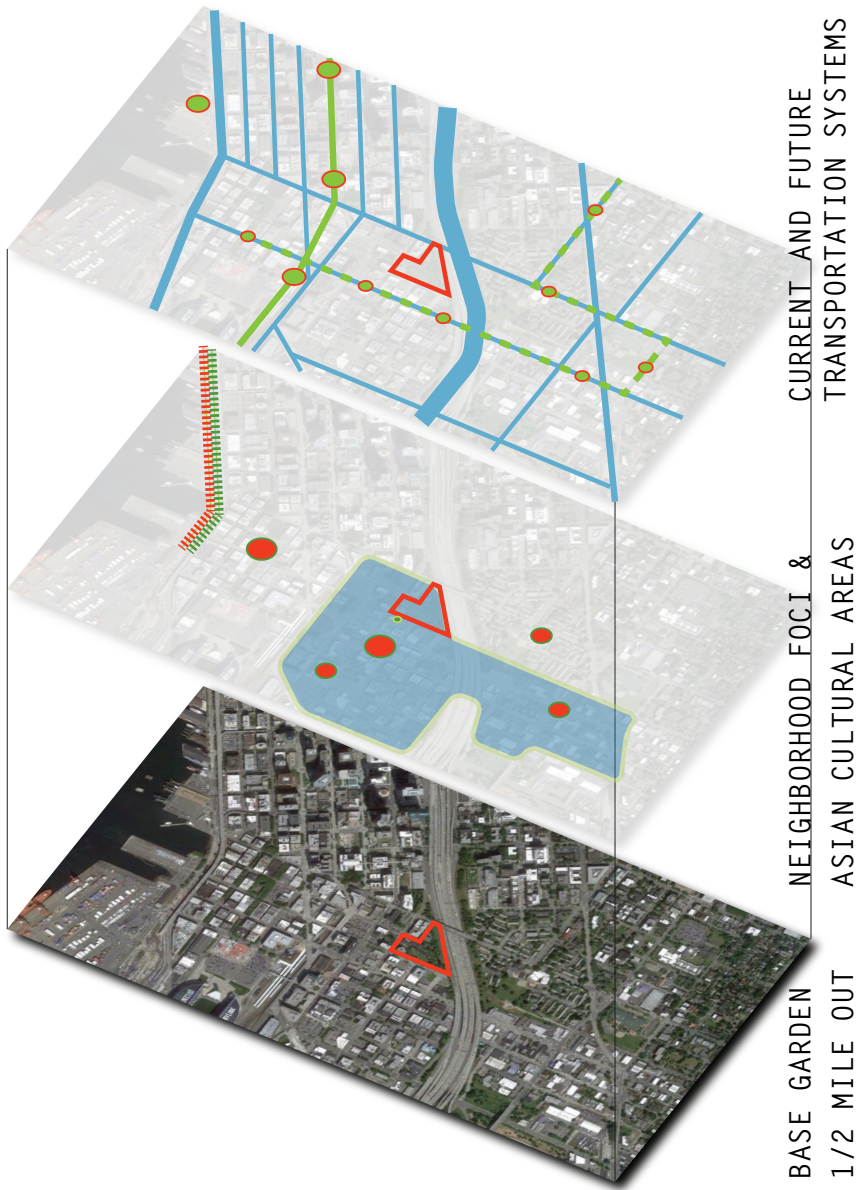


(Skyscrapercity.com, 2013)



(Holden, 2009)

NEIGHBORHOOD SCALE



\$20,000 SMALL & SIMPLE GRANT
COMPLETED APRIL 2013



46' juniper, cedar & gravel staircase



100' new block retaining wall

Unless otherwise notes, all satellite imagery is sourced from Google Earth Images.

Site Scale

At the site scale, it is important to consider: Architectural foci and gathering areas; hotspots of threatening behaviors and littering; gardening and hen keeping areas; human circulation pathways; land ownership parcels; and areas of biodiversity and ecological richness. (See Diagram 1)

Architectural foci and gathering areas have been designed and built in DWCG over the last 24 years. Primarily, there are two major gathering areas in the garden: The, “Central Area,” sweeping from shed to hen house and courtyard, and the, “Southwest Area,” including the rolling benches and street side courtyard. Small architectural pieces in other areas offer micro-gathering and vegetable washing areas.

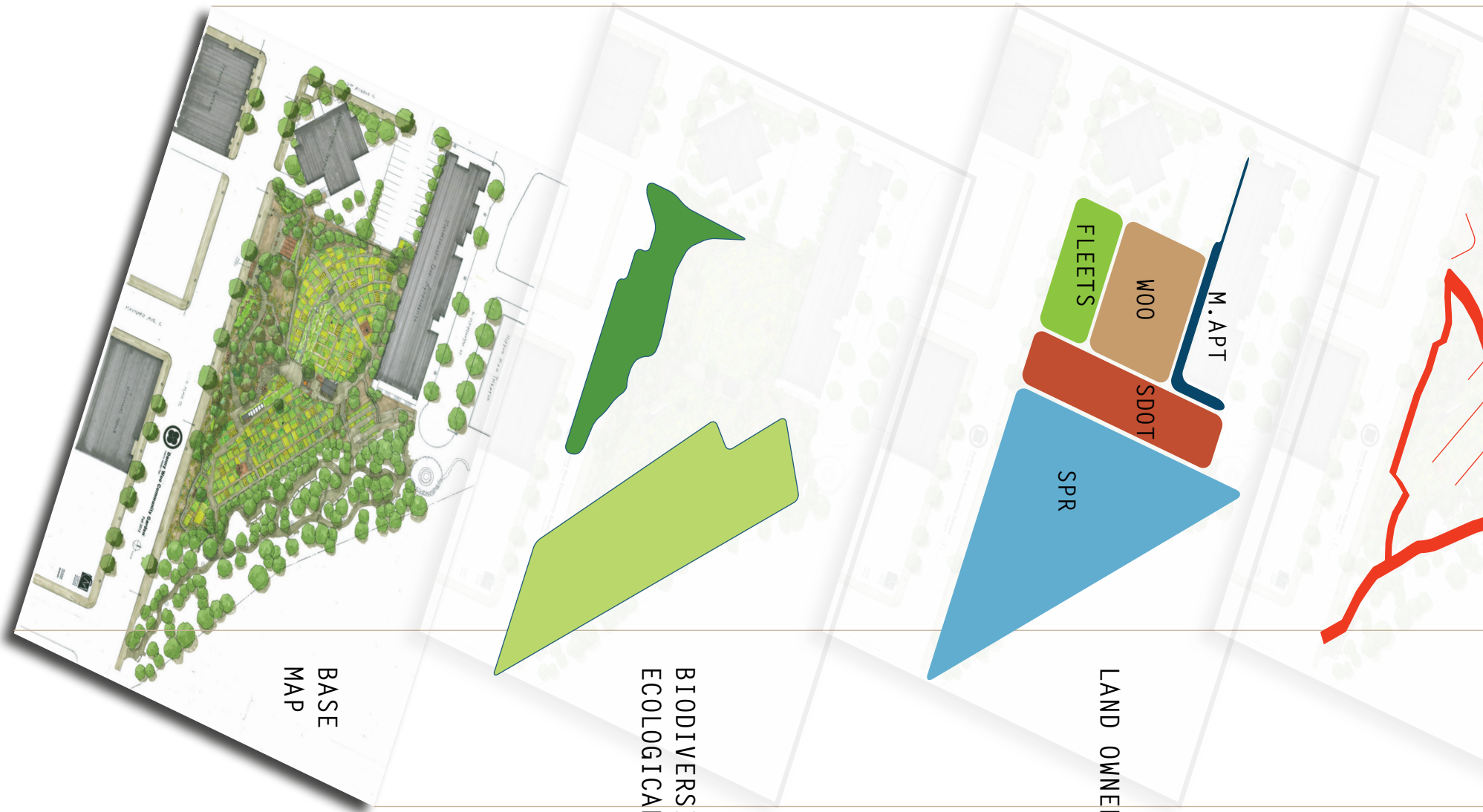
Hotspots of threatening behaviors and littering are very important to address in the future for the garden. The DWCG is in an urban location, has a diversity of plant cover and topography (i.e. not intense CP-TED design), and has limited maintenance capability from its managing agency. Dangerous prostitution, abusive IV drug and crack cocaine use, and people defecating are all real, common, important problems in the garden. Also nearby are needed social service agencies and their clientele, who are disproportionately mentally ill and drug addicted. These disadvantaged people use the DWCG space for beneficial and problematic uses, e.g. to relax and replenish vs. abuse alcohol and leave litter. Problem hotspots tend to show up away from garden plots; in areas containing partially obscured seating; and in unused and under maintained areas that provide visual barriers like large shrubs. Major problem hotspots are: The pathway furthest west in the garden; the area above the rolling benches (proposed building site); and the benches within 50 yards uphill of the S. Main entrance. Any design/build work in the garden must proactively address these issues, one option is utilizing CP-TED.

Gardening and hen-keeping areas make up most of the surface area of the garden save for the southwestern forested patch. These gardening areas consist of: Approximately 70 garden plots on terraces, maintained privately by individual senior Asian-Americans; a hen house collectively managed by InterImCDA and the gardeners; and the Children’s Gardens around the hen house, and 200 yards to the west along the terrace.

In regards to Human Circulation, people travel and commute regularly through the DWCG and Kobe Terrace Park from S Main St to S Washington St in a north south direction. To cross the steep, forested patch in the south of DWCG, people take the concrete staircase or the new juniper staircase. Primarily, entry/exit points are the main DWCG gate on S. Main St; the entrance at Kobe and DWCG to the north at S. Washington St; and the Kobe entrance at the terminus of S. Main St to the east. Other circulation in the garden is along a capillary system of trails and staircases corresponding to accessing terracing along the hillside. There is an ADA accessible garden plot at the north tip of the garden, but InterImCDA and SPR hope to expand overall accessibility.

Land ownership in the DWCG is complex. As seen in the diagram on the following page, it is shared between the Seattle Department of Transportation, Seattle Department of Fleets and Facilities, Seattle Department of Parks and Recreation, Metropolitan Apartments, and leased Danny Woo family land. Interestingly, InterImCDA, the agency responsible for managing the DWCG owns none of the land outright, rather, they control the land with a web of pro-bono leasing, informal adoption, and structured partnerships.

Lastly, the DWCG and Kobe Terrace contain areas of important wildlife and plant habitat. Primarily, there are three areas: Garden “grassland” with shrubs in the middle; wooded steep hillside to the south and west along S. Main St; and the wooded area of Kobe Terrace Park to the east. This is discussed more in the Ecotype Succession and Improvement section.



BASE
MAP

BIODIVERSITY
ECOLOGICAL RICHNESS

LAND OWNERSHIP

FLEETS

W00

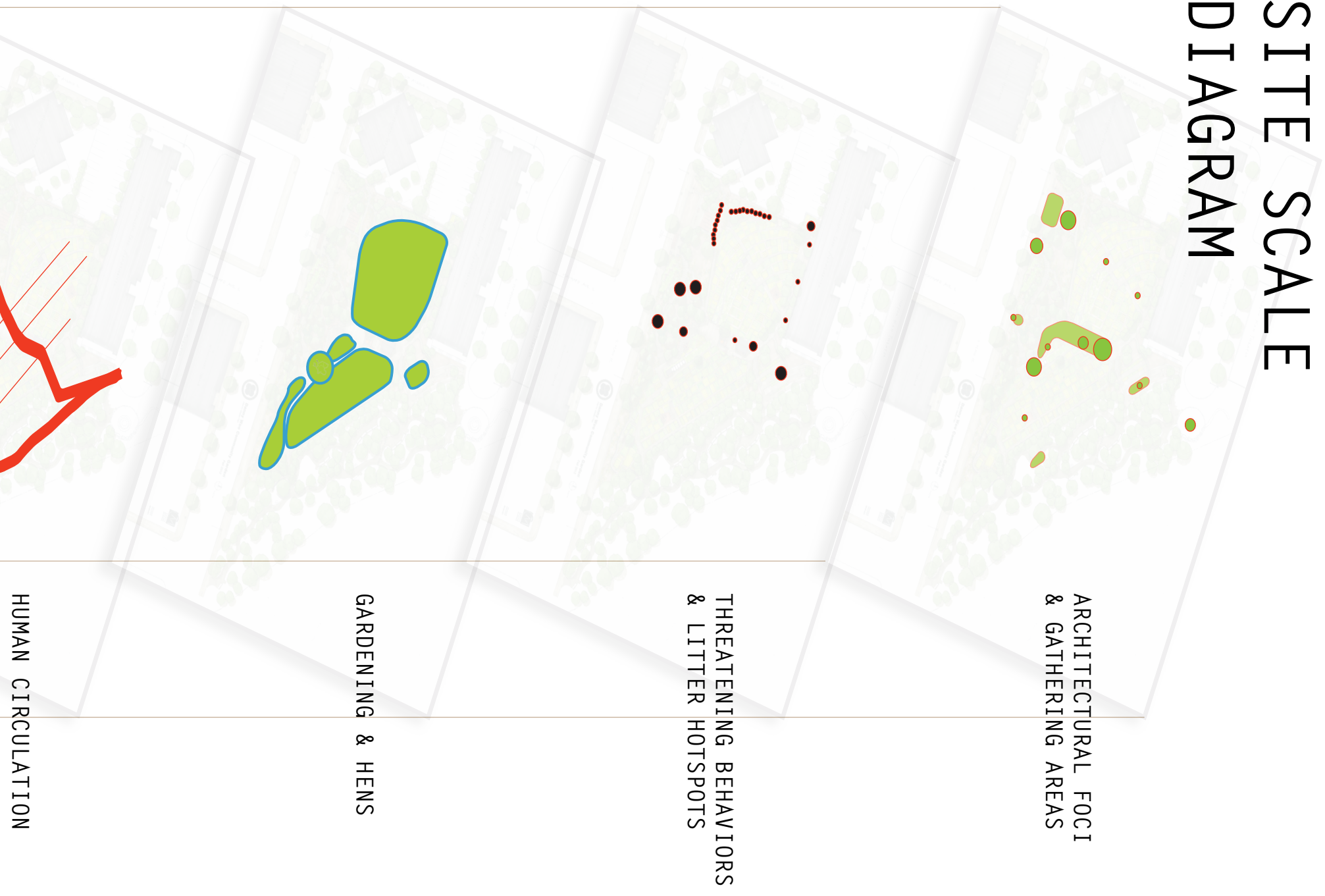
M.APT

SDOT

SPR


DIAGRAM 1

SITE SCALE DIAGRAM



THE SMALL POPUP



TIME.
EFFORT
x1 







OPERATION BUDGET

CONSTRUCTION BUDGET

POSSIBLE REVENUE/PROGRAMMING

BIG SIMPLE SHED



TIME.
EFFORT
x6  
 
 













OPERATION BUDGET

CONSTRUCTION BUDGET

POSSIBLE REVENUE/PROGRAMMING

COMPLEX SHED



TIME.
EFFORT
x12    
   
   

OPERATION BUDGET


























CONSTRUCTION BUDGET

POSSIBLE REVENUE/PROGRAMMING

(CHOSEN)

HEATABLE MICRO-BUILDING



TIME.
EFFORT
x25     
    
    
    
    

OPERATION BUDGET

CONSTRUCTION BUDGET

POSSIBLE REVENUE/PROGRAMMING

(Possibility)

DIAGRAM 2 See PAGES 14-15 for image references.

Design Criteria: Program & Architecture

Early on it became clear a basic form for the structure had to be decided upon in order to move forward. Programming criteria needed to define the structural choice, and all this would help define the search for a proper site.

Program Criteria

Initially, the program driver for this project was the expansion of the children's farm and nature program, and its integration with the existing community of senior gardeners. However, after brainstorming sessions and the winning of the grant, there were new ideas on the table including a commercial community kitchen, rentals for popup restaurants, and possible rentals for local non-profits as a small conference center. After all possibilities were brainstormed, it was crucial to define these various programmatic ideas in terms of facility needs, e.g. square footage and people counts. In the Diagram 4 the breakdowns reached are presented for Youth Field Classroom, Specialty Events, Activities Space for Elders, and Volunteer Program Space.

CHOSEN:

Person counts ranged from 4 to 70 people using the space, while the most common person count for events was between 4 and 30. In addition, certain activities put clear design criteria into place: E.g. Healthy cooking classes for youth requires a kitchen; environmental science classes require desk space and possible lab amenities; gardeners expressed interest in a greenhouse; volunteer program would like a place to rest and meet with volunteers requiring hand washing stations and a mud room, Etc.

Structural Design Criteria

After defining the programmatic parameters, there were still decisions to be made on the level of complexity and amenity the structure would provide. Factors considered included: Time to build, capitol and operational costs, and possibilities for programming and revenue. Diagrams 2 & 3 show these factors for each of the four structural types: The Small Popup, Big Simple Shed, Complex Shed, and Heatable Micro-Building.

CHOSEN:

Ultimately, the Complex Shed was decided upon. However, there is interest to strive for, or grow into a hybrid with Heatable Micro-Building. The Complex Shed is a good starting point, and can be built to accomodate insulation and utilities as funding and programming evolves. At the time of this publication, the prominent idea was for two buildings side by side: An eatery and classroom building (Complex Shed), and a kitchen building (Heatable Micro-Building.)

THE SMALL POPUP



(SGD, 2005)

off-grid.
no envelope.
little cover.
low effort/operations.

BIG SIMPLE SHED



(Howell Collective, 2010)



(Rising Earth 2011)

on or off grid.
no envelope.
lots of cover.
semi-unsecurable.
medium effort/operations.

COMPLEX SHED



(Houseplans Blog, 2010)



(Hatfield, 2013)

on or off grid.
no envelope.
able to be closed up.
cover & different rooms.
medium/high effort operations.

(CHOSEN)

HEATABLE MICRO-BUILDING



(SGD, 2005)



(Popular Mechanics, 2013)

on or off grid.
envelope, heatable.
most lockable.
multi-purpose use.
highest effort/operations.

(*Possibility*)

YOUTH FIELD CLASSROOM

Nutrition & Environmental Science

ACTIVITIES	USERS	#	FACILITIES
Healthy cooking & nutrition classes for youth.	youth age 9-21, teachers	10-30	Small kitchen with extra counterspace, dish washing space, and cutlery
Plant & soil science classes: looking at soil & plants under microscopes, identifying soil types, nutrition, soil & agricultural labs	youth age 9-21, teachers	10-30	Wet lab, microscopes, 'muddy area', lab surfaces, water, fridge
WILD teen program communal salsa, or value added food product making. Micro-business education.	youth age 13-19, teachers	10-20	Small kitchen with extra counterspace and cutlery, pantry, register, drawers
Class meals, communal meals.	youth age 9-21, teachers	10-30	Small kitchen with extra counterspace, dish washing space, and cutlery

SPECIALITY EVENTS:

Emerging Restaurateur Rentals

InterImCDA Development Events

ACTIVITIES	USERS	#	FACILITIES
Rented out to a local Restaurateur for a promotional popup dinner event.	Cook, server, guests	10-30	Small kitchen with extra counterspace, dish washing space, and cutlery. Nice dining surfaces.
InterImCDA fundraising and development events.	Professional staff/guests	10-70	Tea, snacks, catering, dining table, pinup space.
Conference space expansion for InterImCDA or other local, related non-profit workshop rental.	Professional staff	10-30	Tea, snacks, catering, conference table, electricity.

DIAGRAM 4

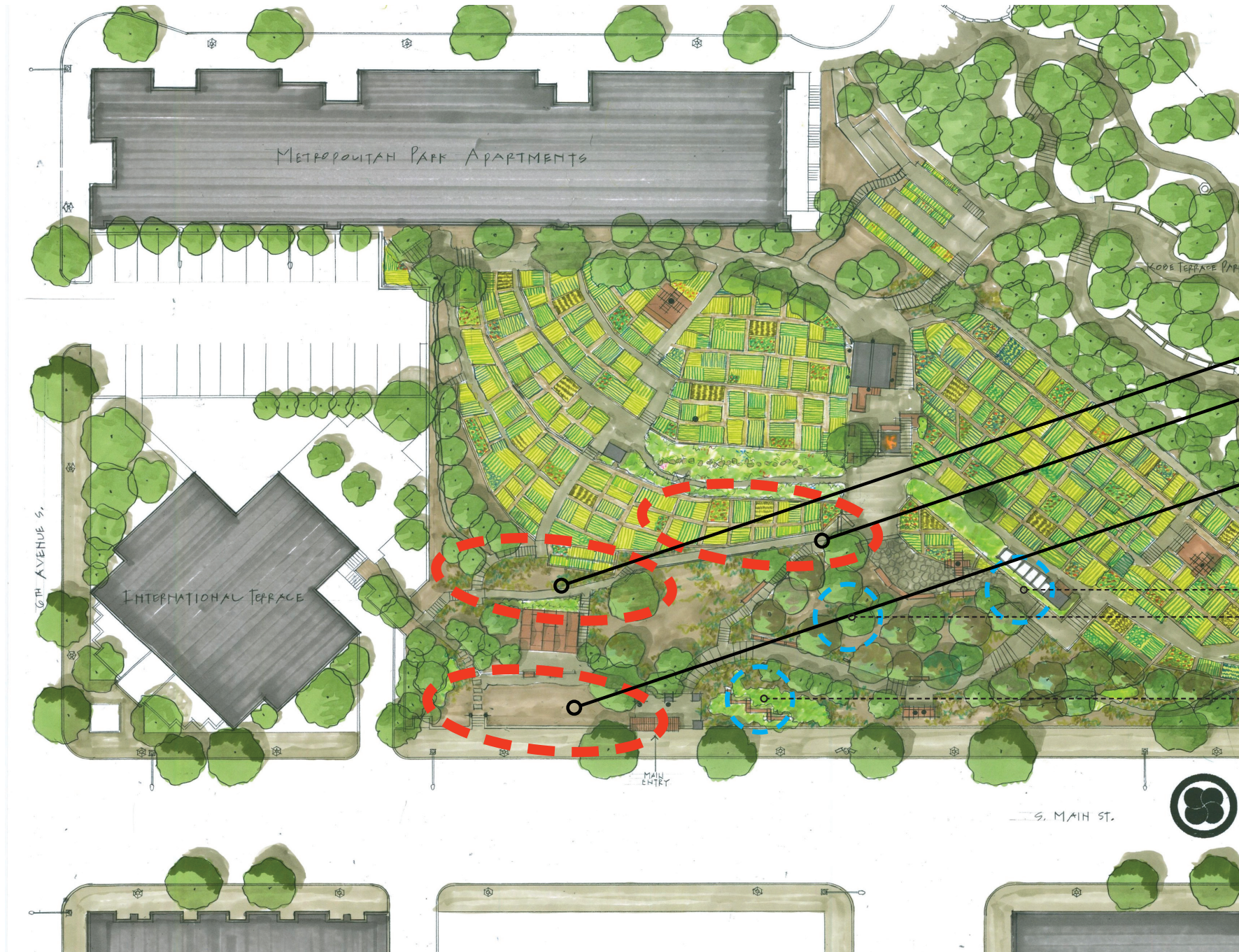
ACTIVITIES SPACE FOR ELDERS: Gardening & Nature Theme

ACTIVITIES	USERS	#	FACILITIES
All gardener meetings and smaller gardener meetings with garden manager.	Elderly gardeners Garden staff	20-60	Light food preparation, tea making, pinup space, big table or seating arrangement.
Gardeners can sign out space to host visiting family or friends in a space outside their apartment, e.g. cards, meals, holidays, crafts.	Elderly gardeners, kids, adults.	4-20	Small kitchen with extra counterspace, dish washing space, and cutlery. Large table for communal activity.
Structured elder activities like origami, canning, oral history collection, etc.	Elderly gardeners, staff, adults, kids.	4-30	Small kitchen for tea and snacks. Storage closets, big table or many tables.
Supplemental gardening amenities, e.g. greenhouse and bathroom.	Elder gardeners	1-10	Greenhouse able to have 'plots' and a bathroom. Securable by gardeners with access system.

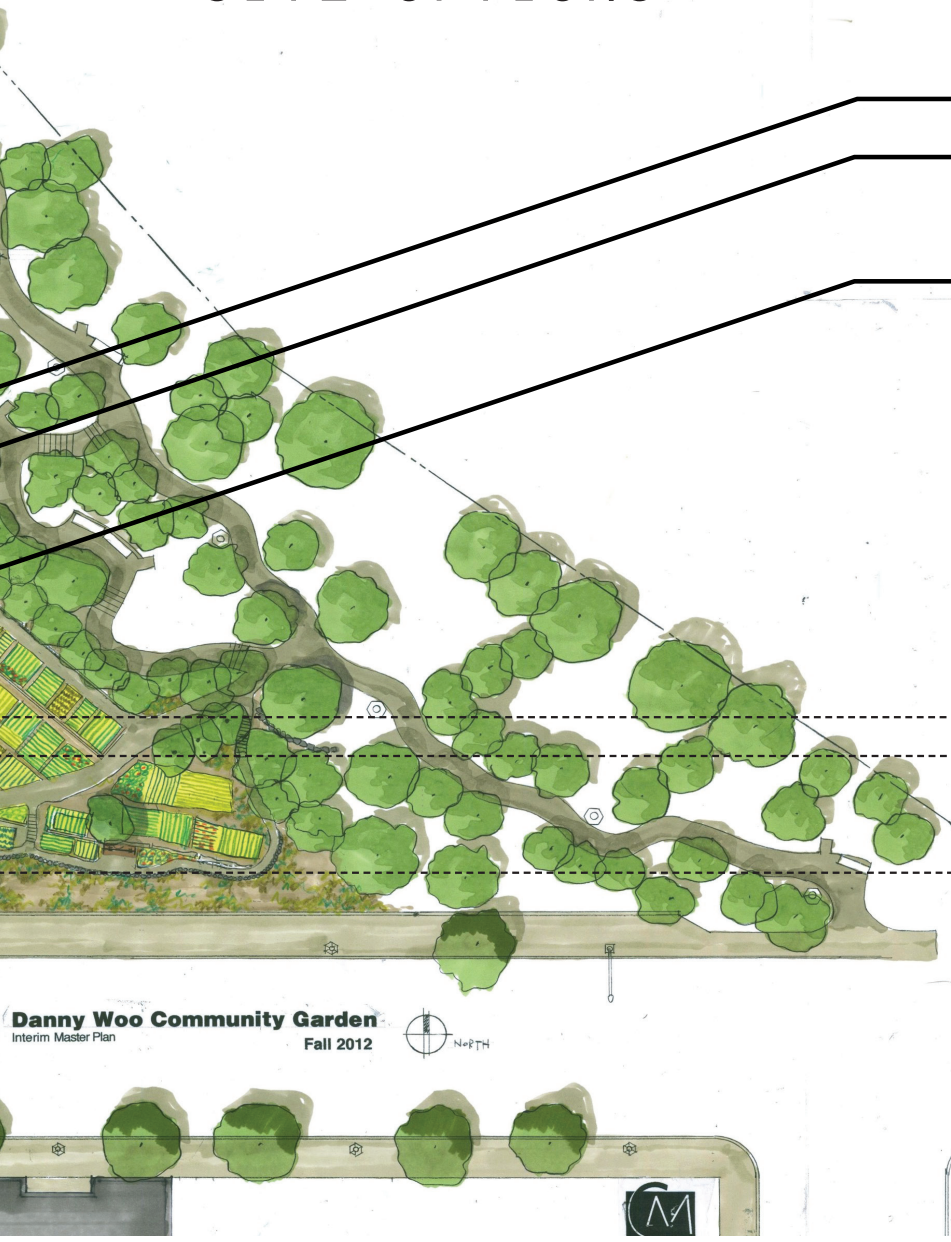
VOLUNTEER PROGRAM: Hosting & Building Relationships

ACTIVITIES	USERS	#	FACILITIES
Volunteer meetup and orientation. Equipment hand out, lunch or snack breaks. Bathroom use.	Volunteers and staff.	5-60	Mudroom, rain gear drying area, bathroom, washing hands station, place to eat and drink water.

(Design for 5-35 People)
(Children to Elders)



NARROWING DOWN SITE OPTIONS



SITE A // Ranking #1

SITE B // Ranking #2

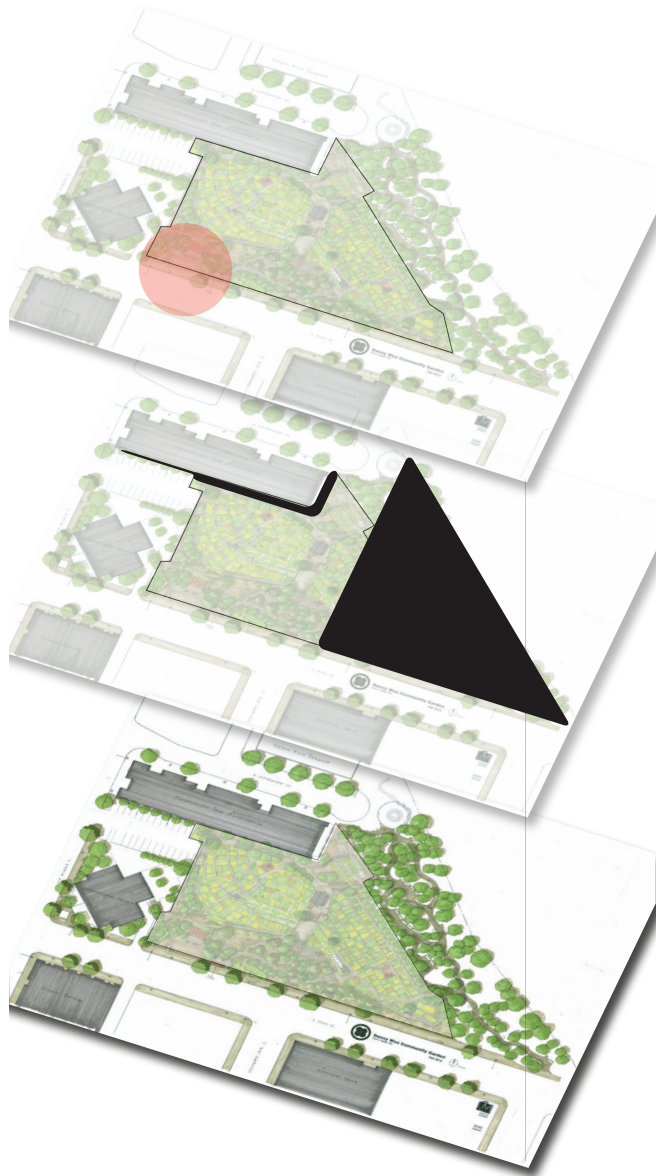
SITE C // Ranking #3

These sites were initially considered but eventually factored out chiefly because of steep topography, ecological disturbance, or disturbance of existing successful garden areas.



SUBTRACTIVE SITE ANALYSIS

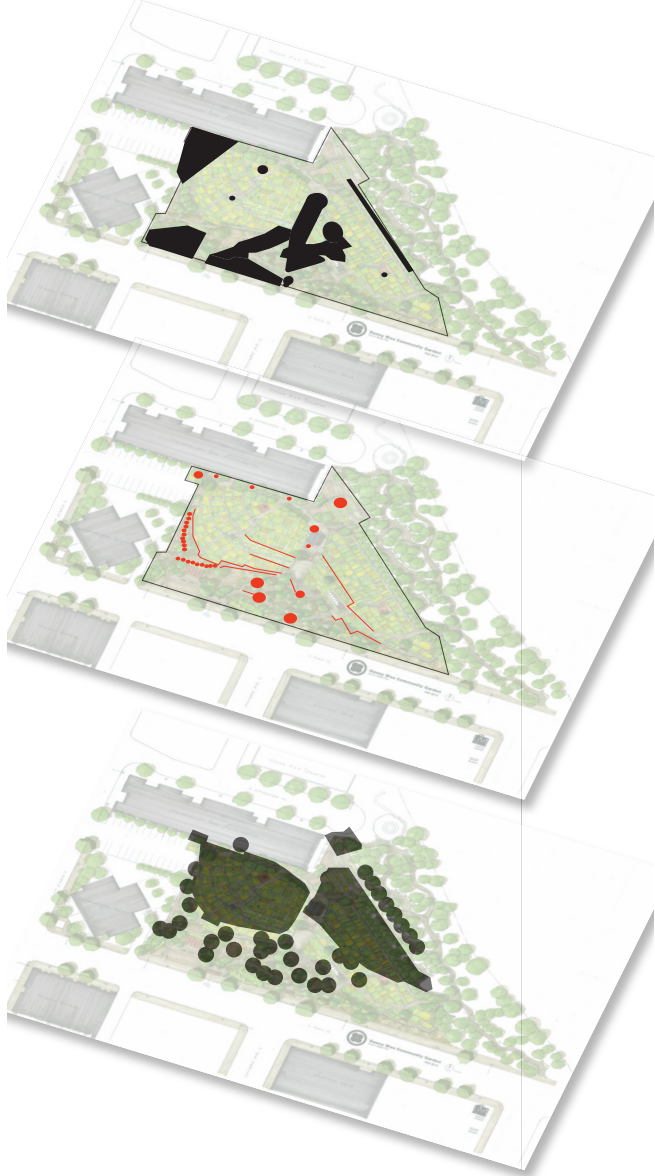
By marking poor sites gray, bad sites black, and areas that may benefit from being near the new structure red, possible sites begin to emerge.



PROXIMITY TO UTILITIES

OFF-LIMIT
LAND OWNERSHIP

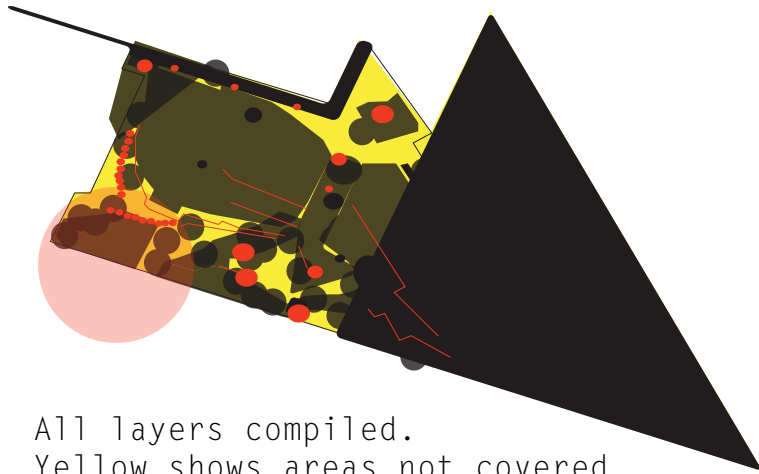
GARDEN BASE



SUCCESSFUL SPACES IN
GARDEN TO PRESERVE

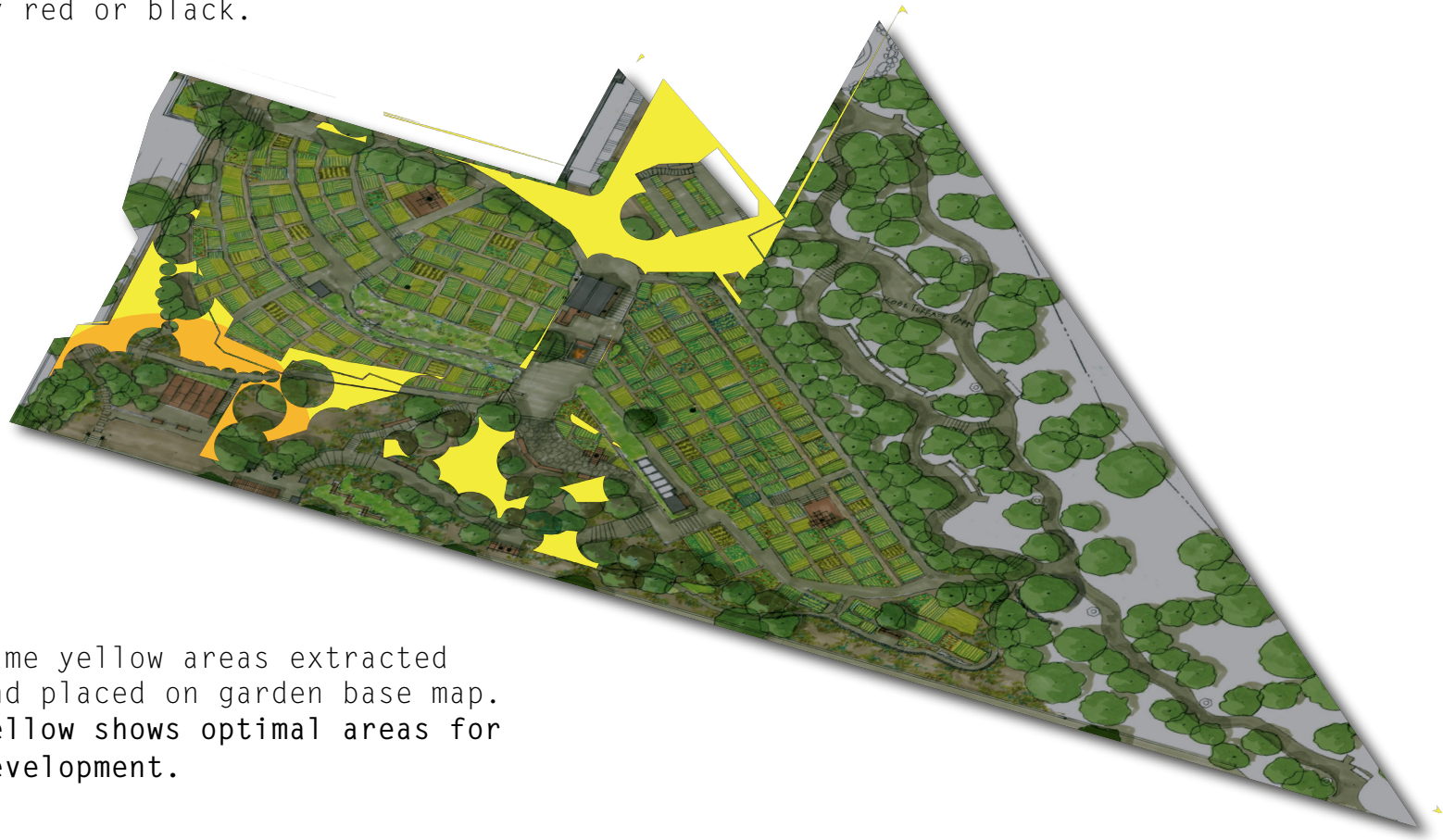
POTENTIAL AREAS TO
IMPROVE INFRASTRUCTURE
& TROUBLE HOTSPOTS

GARDEN PLOTS AND
PRODUCTIVE TREES



The garden is used by many, fulfills many purposes, and has many different site characteristics. To include all the factors while moving forward towards an overall site selection, a subtractive method was used as a decision rubric. The axonometric diagrams on these pages visually show the results of this method.

All layers compiled.
Yellow shows areas not covered
by red or black.



Same yellow areas extracted
and placed on garden base map.
Yellow shows optimal areas for
development.



SITE B

#2 Ranked Site.

1. Ample room.
2. Building here could fix existing retaining wall problems.
3. South facing.
4. Good existing access staircase.
5. Flatter site, could require less excavation.
6. *Furthest from utilities.*
7. *Displaces gardens.*
8. *Could block view of those entering garden from below.*
9. *Trees restrict possible views.*



SITE C

#3 Ranked Site.

1. Ample room.
2. South facing.
3. Best for utilities and construction.
4. No climb for access.
5. Flatter site, could require less excavation.
6. *Potential conflict with existing courtyard design.*
7. *Could block informal surveillance from street and create problem hotspots.*



SITE A (CHOSEN) #1 Ranked Site.

1. Ample room.
2. Builds off existing courtyard design.
3. Displaces little.
4. Blocks no views.
5. Building here could fix existing dead space & retaining wall problems.
6. Great view, south facing, entices street passerbys.
7. Close to utilities, good access.
8. **Some excavation.**

SITE “A” Above *Rolling Benches* is Chosen

After months of discussion, subtractive analysis, and individual site research, all the above materials were discussed at our final pre-design meeting and Site A, Above Benches, was chosen unanimously.

The site provides ample room for the structure; will complement and build on the lower courtyard to improve the garden’s sidewalk presence; can be combined with a retaining wall replacement; enjoys excellent views; and replaces an underused, problem hotspot.



SITE PHOTOGRAPHS



INITIAL SCHEMATIC DESIGN

DESIGN GUIDELINES

In addition to the primary programmatic guidelines covered earlier, other supplemental guidelines were developed to address additional social, environmental, site, and logistical concerns.

PRIMARY PROGRAMMATIC GUIDELINES

Food & Nature Children's Field Classroom
Activities Space for Elders
Speciality Events
Volunteer Program Space
5-35 People

SUPPLEMENTAL GUIDELINES

Environmental & Long-Term Operational Sustainability
Social Calibration for Positive Feedback Loops
Unique Character of Garden
Serving Disadvantaged Children & Seniors
Democratic Design to Increase Welcome Factor &
Reduce Threatening Behaviors
Improve Community Nutrition & Public Health
Connection to the Greater Community



(Benschneider, 2013)

Kundig
Chicken Point House
Frey House

PRECEDENTS

These three precedents, from Japan, China, and the Pacific Northwest bring inspiration from the three important regions synthesized at the site.



(NJA, 2011)

Tezuka Architects
Roof House



(Turenscape, 2013)

Kongjian Yu | Turenscape
Shenyang Architectural Campus
'rice paddy campus'

Olson Kundig's integration of architecture into vertical landscape elements, and use of large openable building walls, reflect client interests and site topographical conditions.

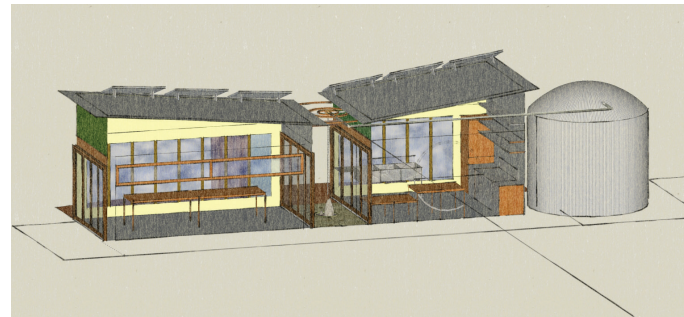
Tezuka Architect's "Roof House" offers insight into the opportunities for vertical circulation on our terraced site.

Kongjian Yu's "Rice Paddy Campus" gives inspiration for the integration of gathering and learning with productive agriculture, relevant to the mission of the project.

EARLY DESIGN EXPLORATION

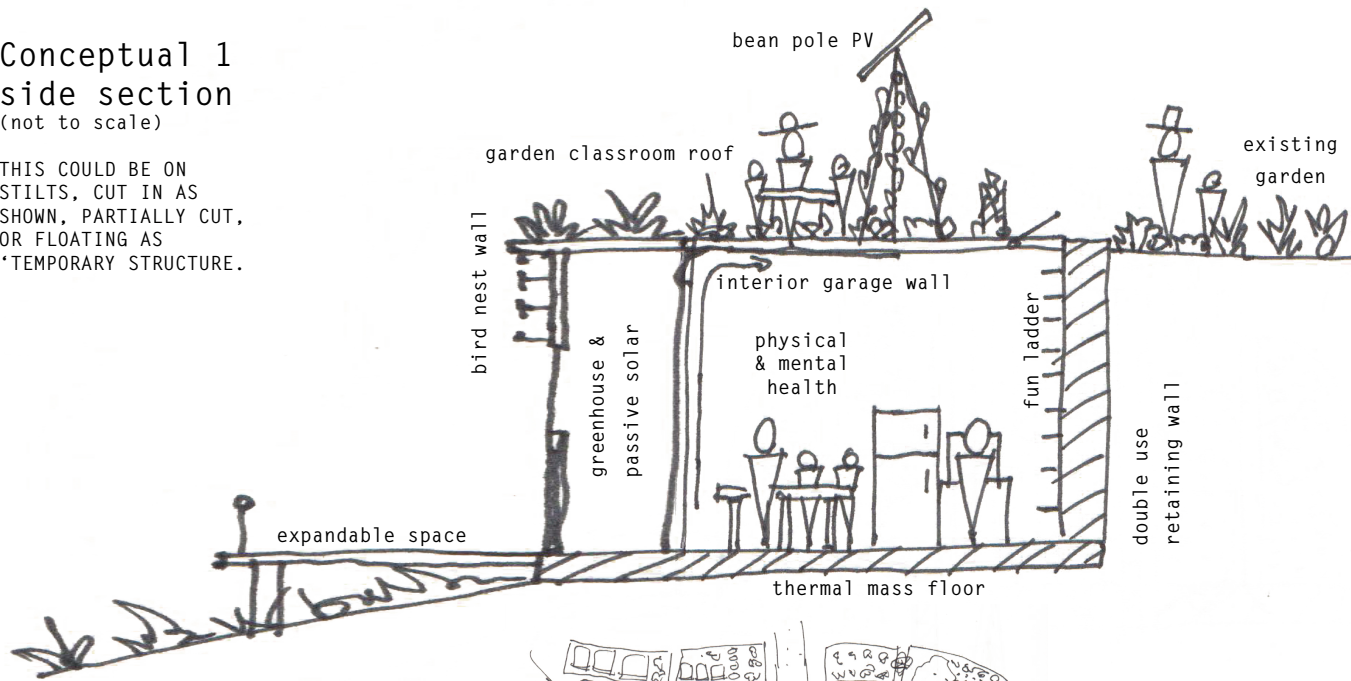
1ST DESIGN RENDERINGS IN GRANT APPLICATION | Sept.2012

These renderings were created based on initial client input to be included in the winning grant application to the City of Seattle for the Large Projects Matching Fund. It is important to note that this was an early design, and it is encouraged future designers reimagine structural possibilities.

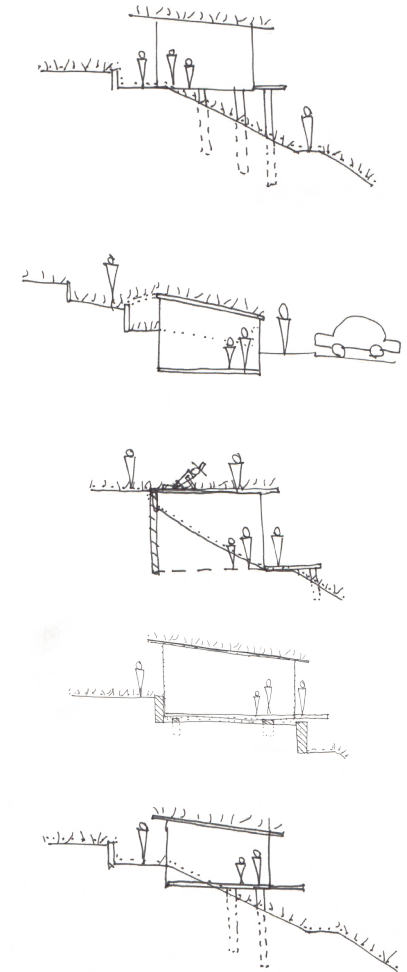


Conceptual 1
side section
(not to scale)

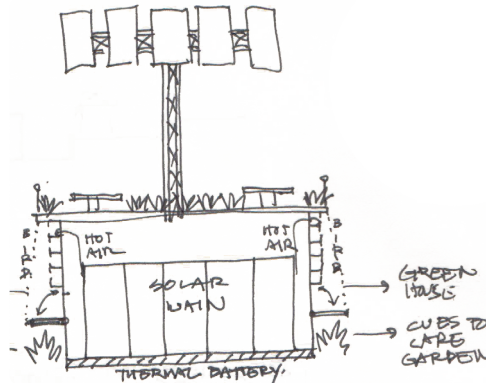
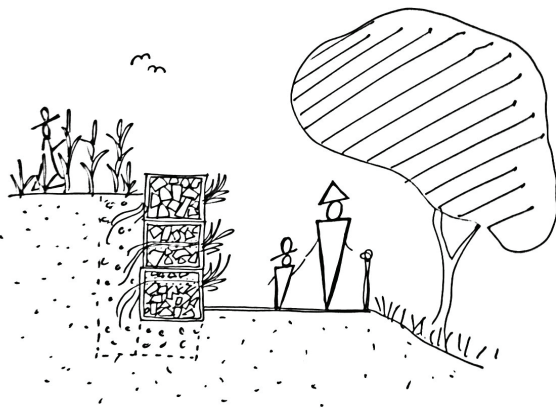
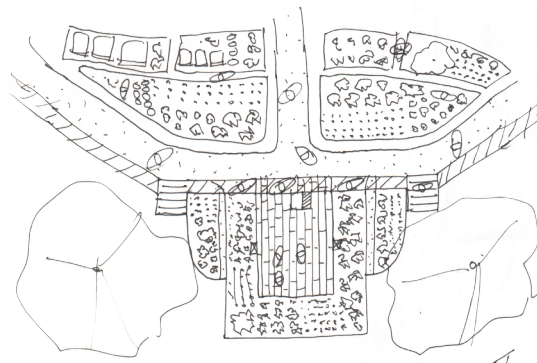
THIS COULD BE ON
STILTS, CUT IN AS
SHOWN, PARTIALLY CUT,
OR FLOATING AS
TEMPORARY STRUCTURE.



TOPOGRAPHICAL STRATEGIES.

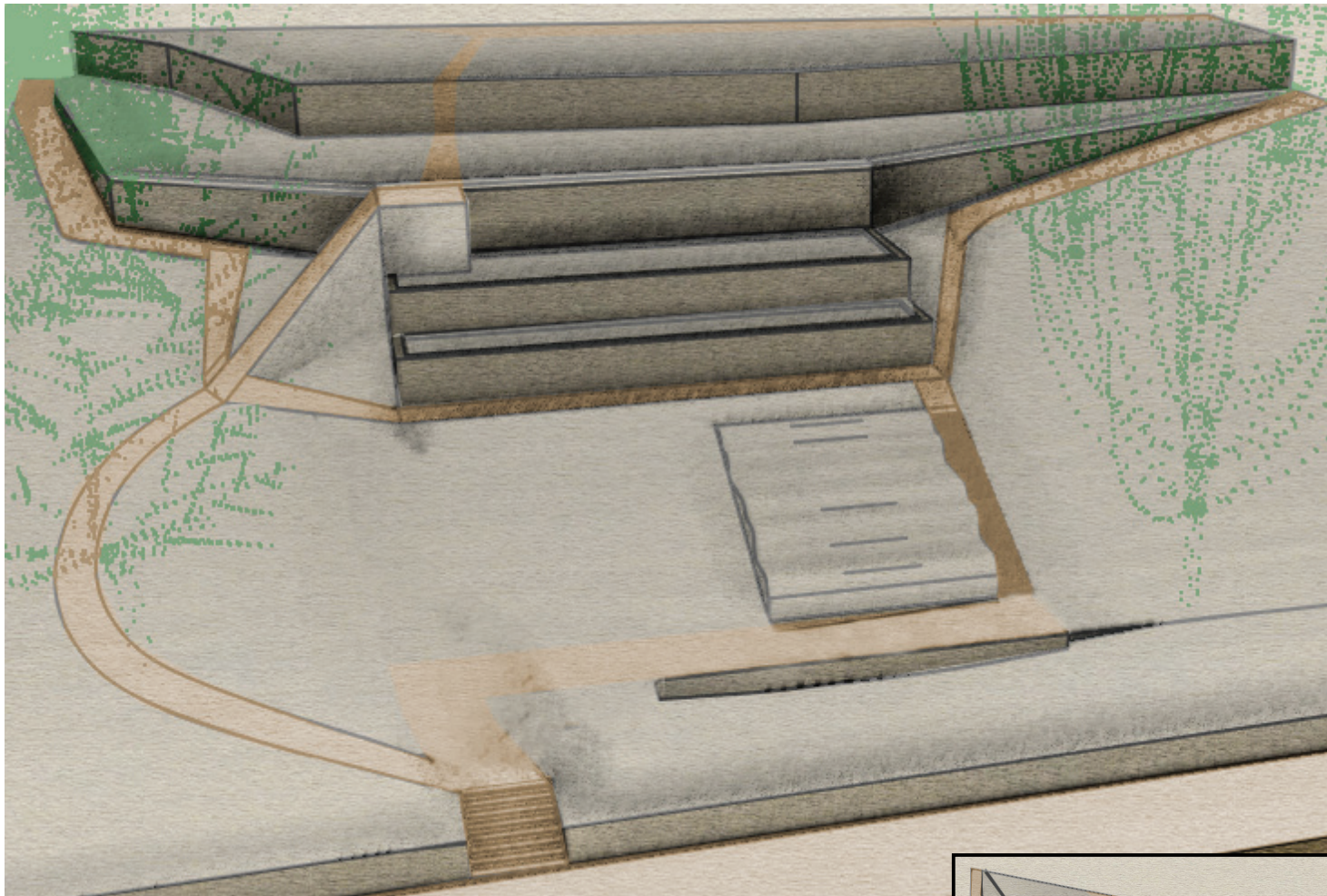


Roof plan
(not to scale)
(hilltop site)



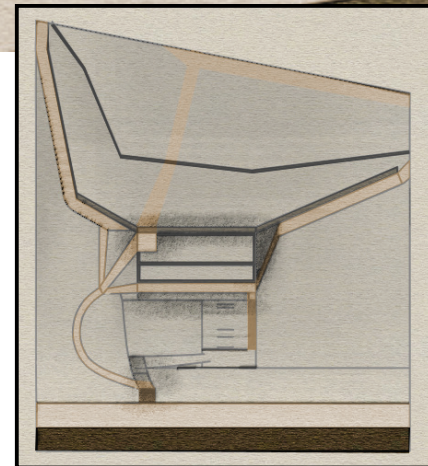
EARLY DESIGN DRAWINGS
Winter & Spring 2013

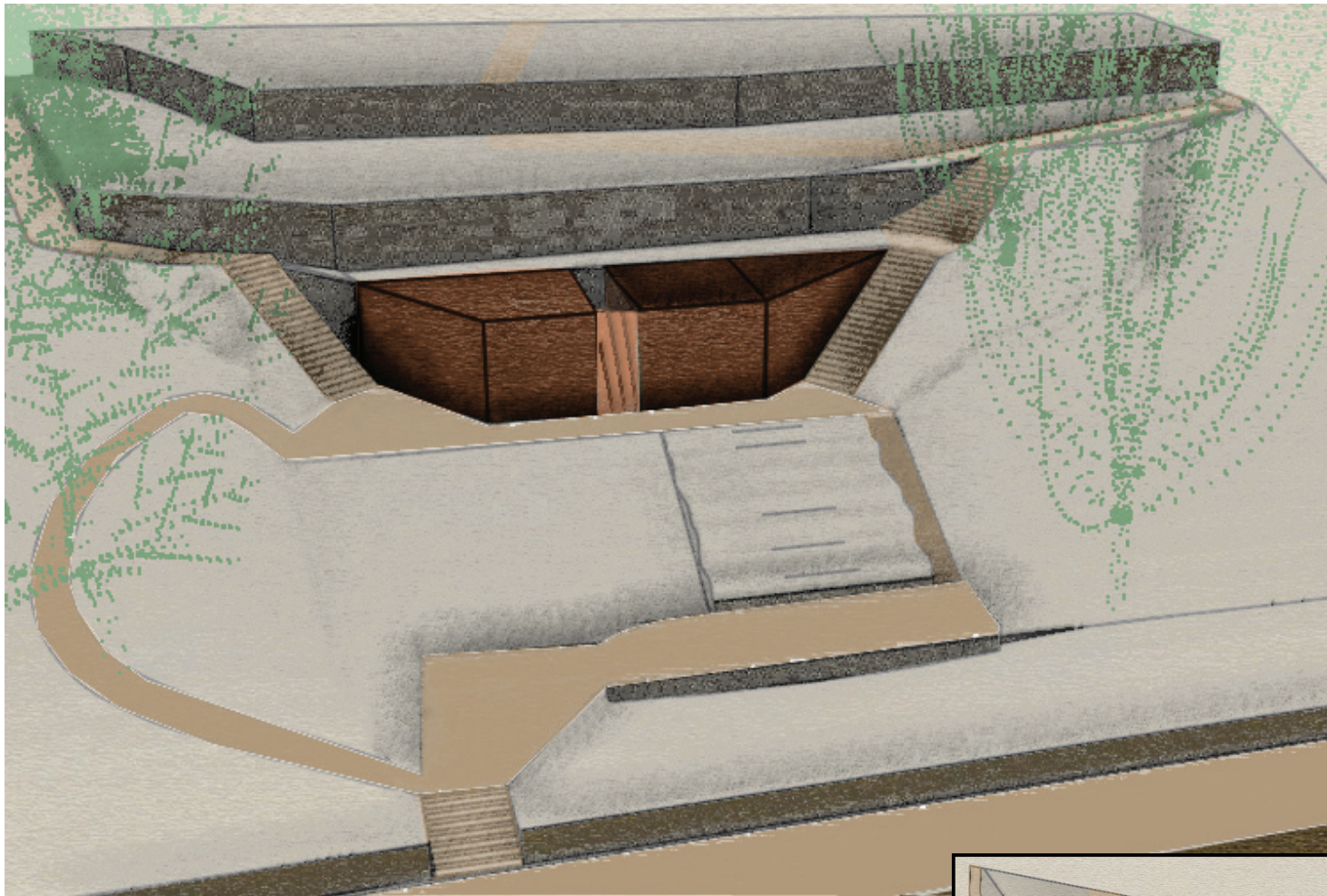
These early design drawings were shared with clients and design partners to begin to draw out opportunities, constraints, and shared visions.



EXISTING

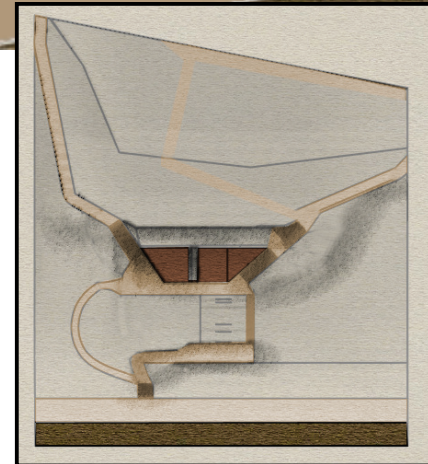
This image shows the approximate existing conditions on the site. Tan areas mark pathways while darkened gray areas mark existing retaining walls. The sidewalk and street are at the bottom.



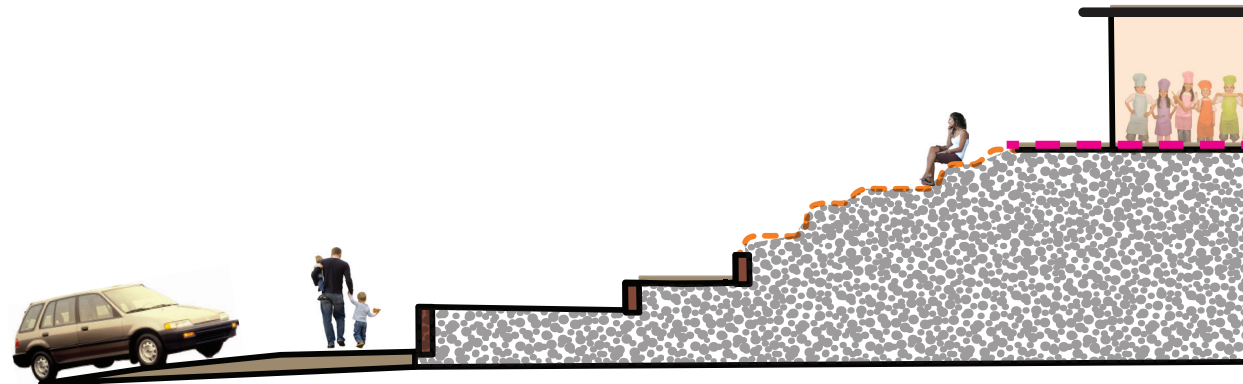
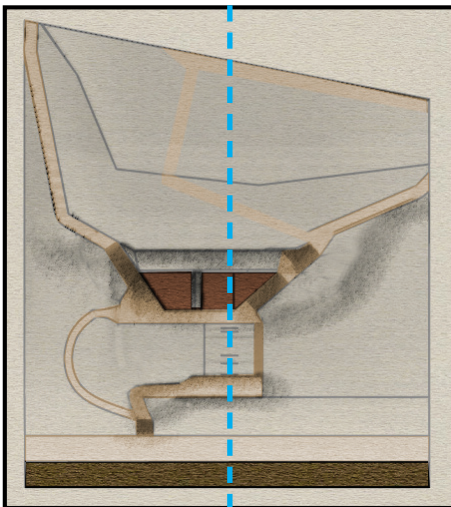
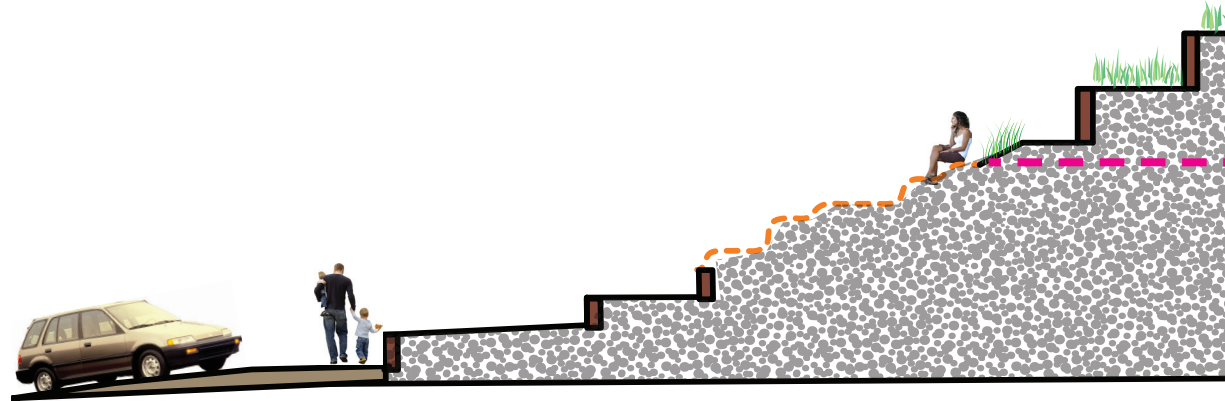
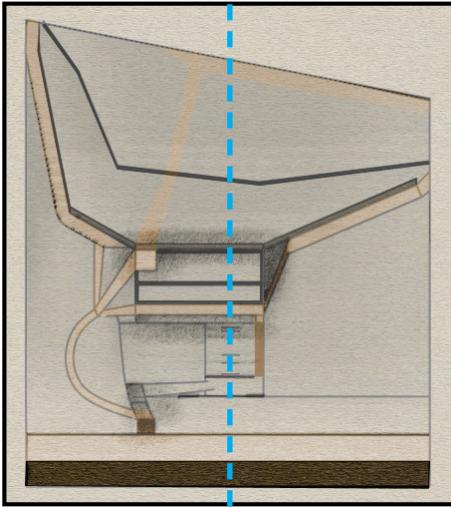


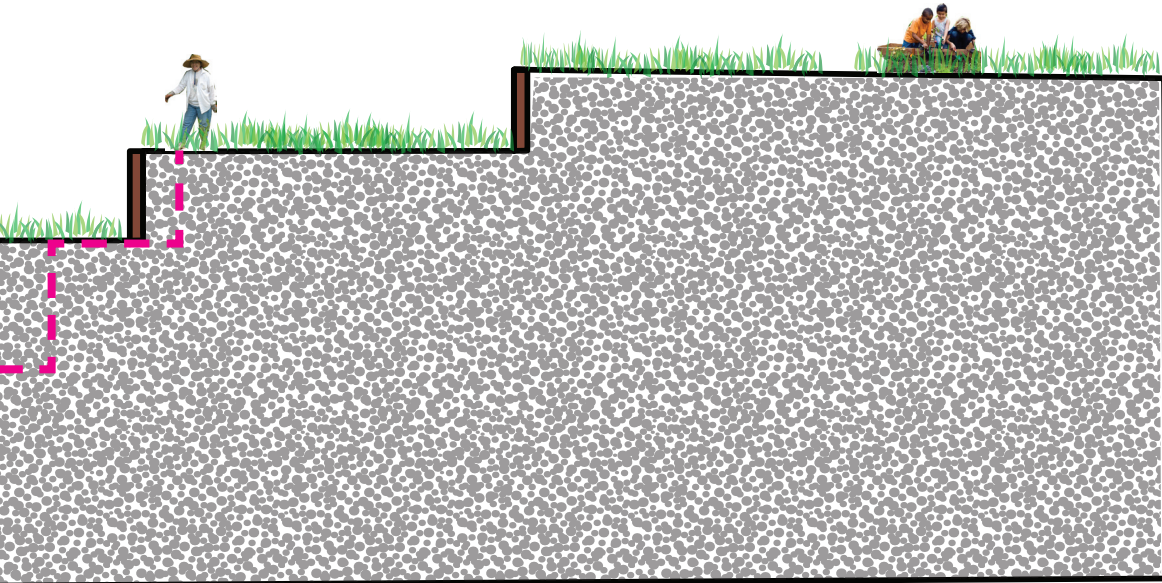
PROPOSED

This image shows the proposed schematic design on the same site. The dark brown blocks mark the structure, tan marks pathways and new paved courtyards, and darkened gray show the arrangement of new and changed retaining walls,

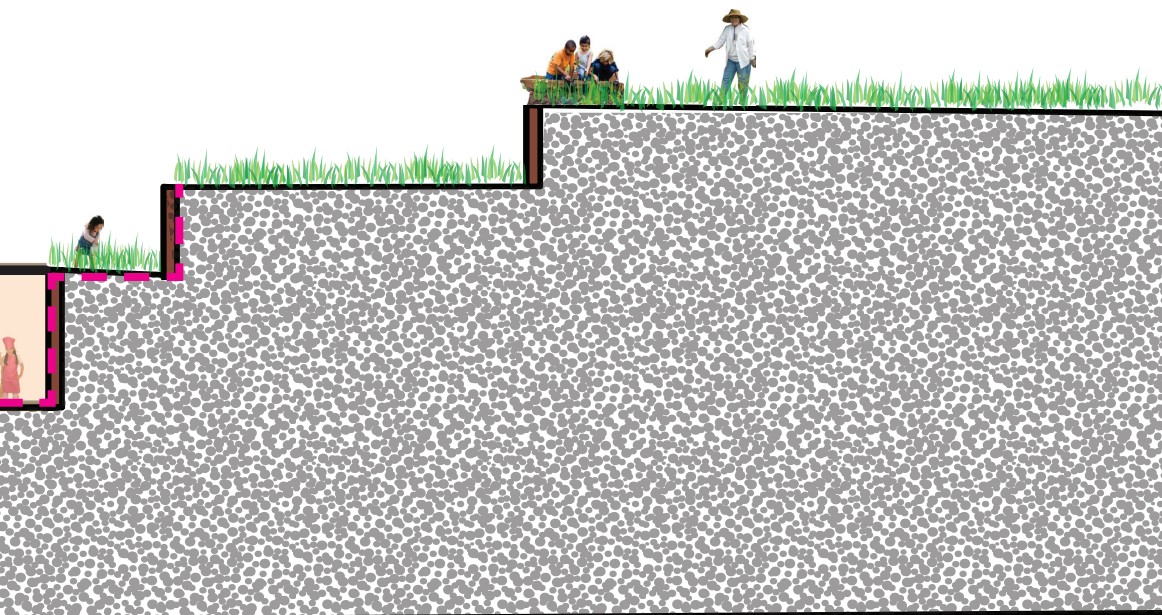


SECTIONS





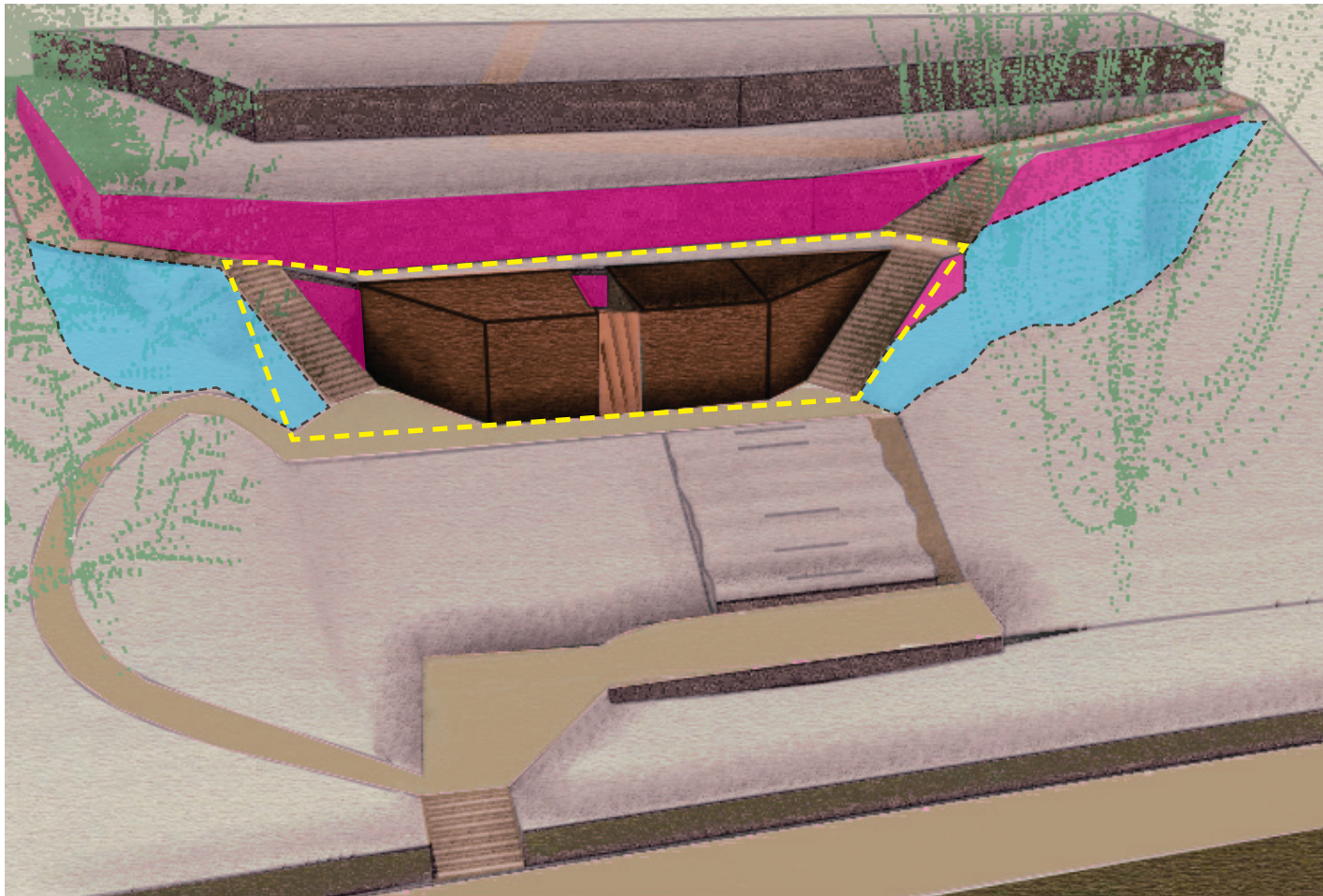
EXISTING



PROPOSED



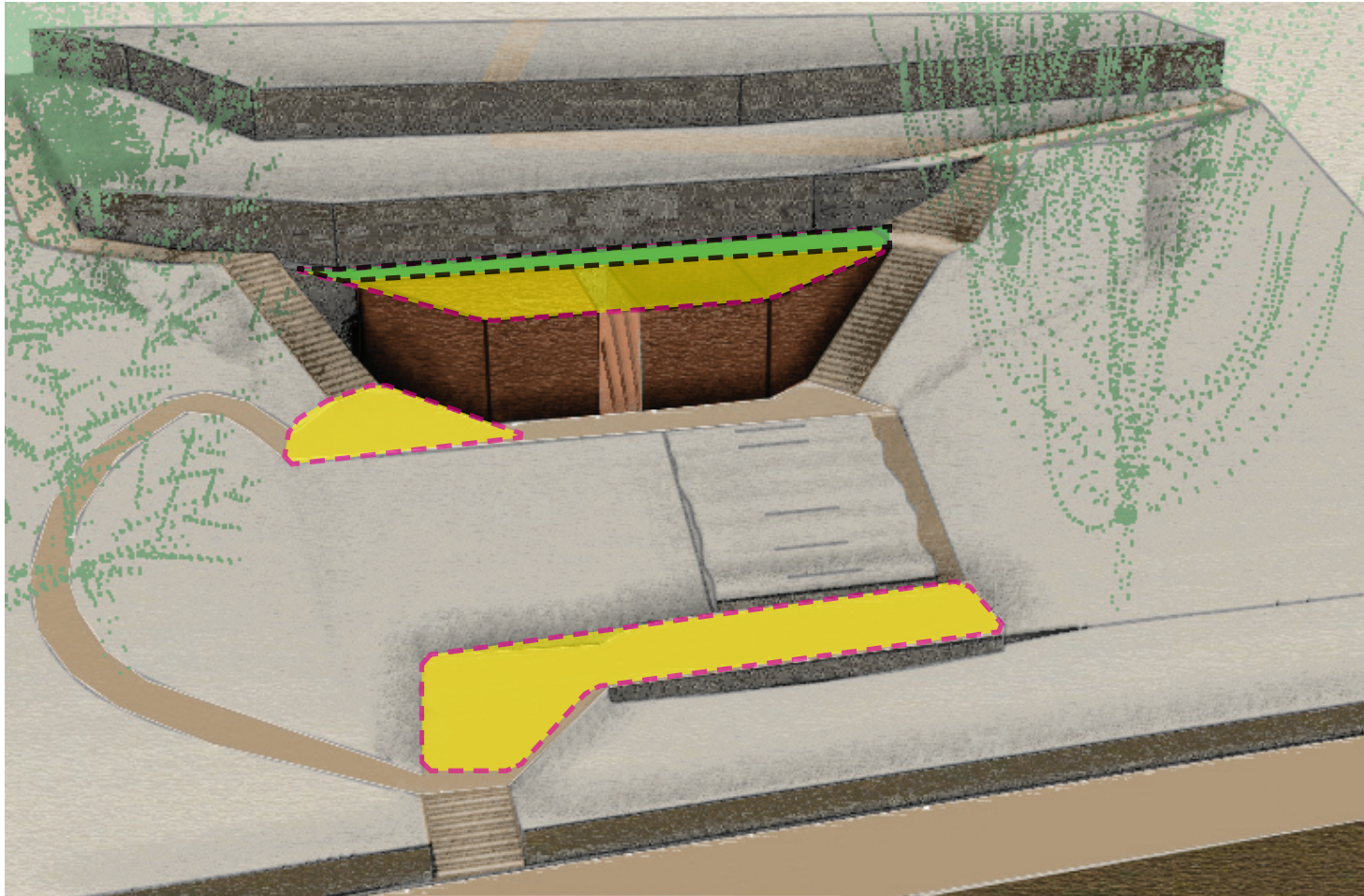
1:15 SECTIONS



RETAINING WALLS & CUT AND FILL

Sometime in the 80s these retaining walls were quickly rebuilt after a landslide (Santos, 2013). They are beginning to fail, and it is proposed they are replaced with a 100 year solution of stone/concrete. Because of the cut to place the new structure, resulting fill could be placed nearby to close problem paths and reinforce the slope.

-  NEW RETAINING WALLS
-  EXCAVATION AREA
-  EXCAVATION MATERIAL FILL AREA



OUTDOOR GATHERING & NEW GARDENS

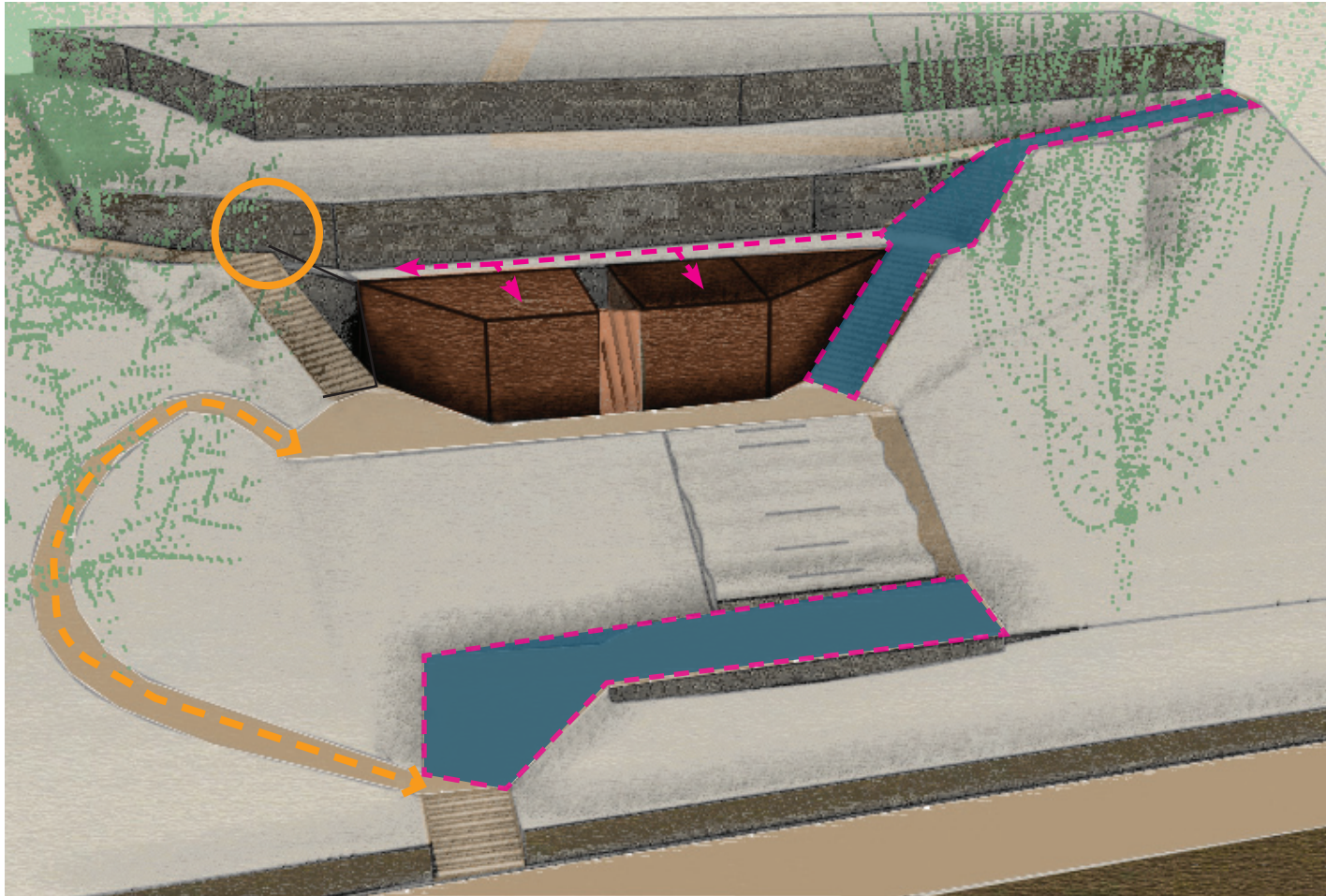
New/improved courtyard areas offer classroom space, building overflow, and more attractive public space. Hardscaping, roof gardens, and moveable seating are options. The new demonstration garden sits on a terrace with ample soil, and could be a medicinal garden, children's garden, or asian food heritage garden.



NEW COURTYARD
GATHERING AREAS







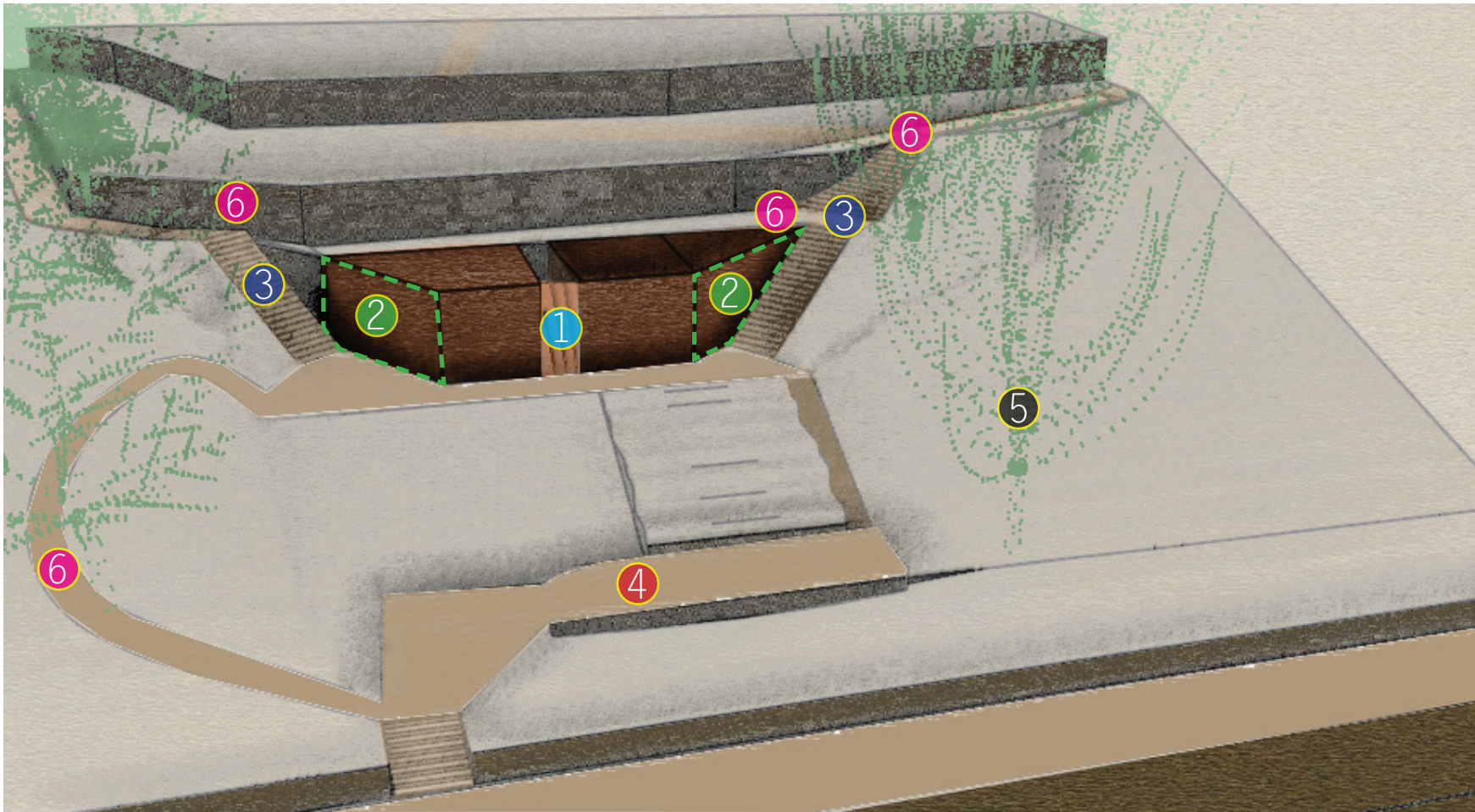
NEW DEMONSTRATION
GARDEN



CIRULATION CHANGES

Currently, circulation in this area of the garden is confusing and a public safety problem. Primary problems include: Too many pathways confuse wayfinding and give security to abusers (CP-TED); pathways are too narrow and obstructed by vegetation; pathway tread in areas is unsafe, e.g. rotting wood & slippery steep soil. This proposed plan addresses these problems by consolidating pathways, and improving visibility and tread quality.

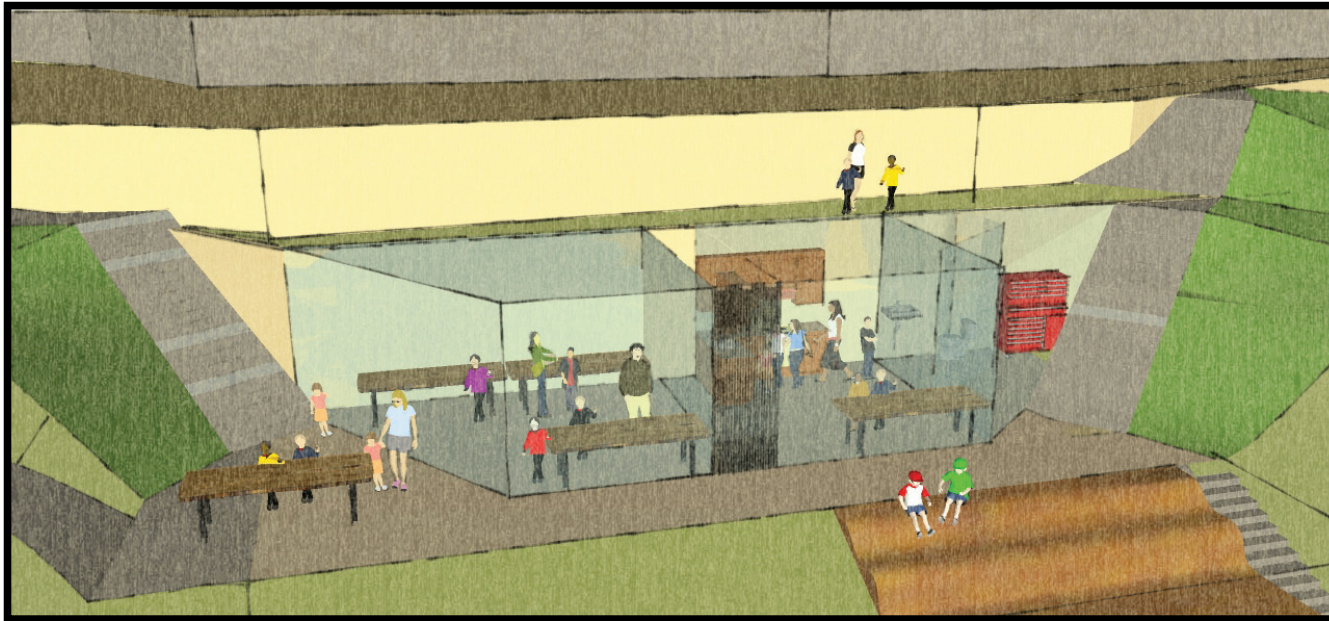
-  NEW ACCESS
-  NEW MAJOR PATHWAYS
-  STAIRCASE REMOVED
-  POSSIBLE PATH REMOVAL



DESIGN MOVES FOR SECURITY

This area of the garden is currently a major problem hot spot including: human defecation, extensive litter, and dangerous drug use and prostitution. This design seeks to actively counter these problems by combining 10 months of site-specific observation with the widespread practice, CP-TED, Crime Prevention through Environmental Design.

- ① Buildings separated, but gaps secured.
- ② Angled walls avoid blind spots.
- ③ Wide staircases provide safe clear access.
- ④ Enhanced courtyard for more people & informal surveillance.
- ⑤ Pruned tree canopy for increased informal surveillance.
- ⑥ Access concentrated for security.



Rendering 1

CHILDRENS COOKING CLASS

Rendering 1 shows 18 children with 4 adults using the new proposed structure, courtyard areas, and terrace demonstration garden. To the left is a classroom, the right the kitchen, and far right tool storage and bathroom.



Rendering 2

GARDENER MEETING OR URBAN FARMING WORKSHOP

Rendering 2 shows 30 people inside, and 6 people outside, using the proposed structure.

CLIENT IDEAS

The client and community stakeholders have shown continued interest in the following ideas:

1. Garage Door Building Envelopes

Interest in the structure being able to “open up” with garage door or barn door wall or window systems. Although 35 people is the target number for programming, the client would like to be able to host groups up to 70 by utilizing surrounding landscape through this type of opening building envelope system.

2. Greenhouse & Wet Lab

Interest in having some ability to pot plants and do wet lab experiments with users. The structure will face south, and could potentially serve this purpose with flexible design elements.

3. Showcasing Sustainability

Interest in the Farm and Nature Center to showcase leadership in sustainability.

4. Mud Room & Additional Tool Storage

Interest in having more space for tools, and a place to rest, warm up, and wash up while working with volunteers and other garden users. A space for removing muddy shoes and wet clothing would be useful, especially if it was close to additional tool storage.

5. A Bathroom

Interest in expanding the utilities from the kitchen to also include a simple bathroom to be accessed by lock and key during garden events and work parties.

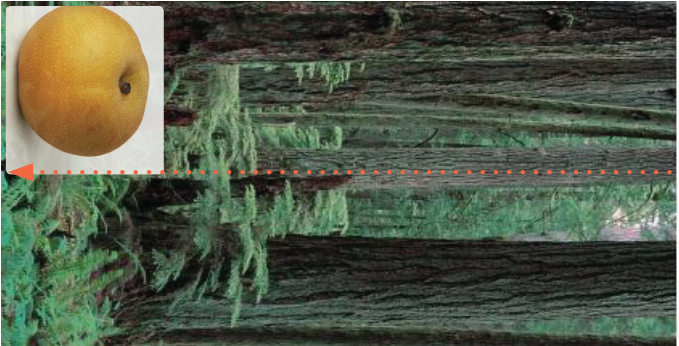
6. Garden Manager Desk

Interest in possibly having the Garden Manager & other Garden staff do office work up in the garden to be more accessible by gardeners, provide a secure presence, and more connected to the site.

7. Garden Store

Interest in possibly staffing the center to sell value-added garden products like salsa or kim-chi during limited hours to the public.

NEW SUCCESSION TARGET HYBRID ECOTYPES



(WNPS, 2013) (GFG, 2009)



(Cohan, 2013)



(Fulkerson, 2008)

Photograph by author.

PNW FOOD
FOREST

PNW GABION
BANK

VEGETABLE
PRAIRIE

CONDITIONING SPECIES



Thuja plicata

(WNPS, 2013)



Polystichum munitum

(WNPS, 2013)



Acer circinatum

(WNPS, 2013)

TARGET & KEYSTONE SPECIES



(tolweb, 2013)



(WLNA, 2013)



(CDC, 2013)

Megascops kennicottii

Sphyrapicus ruber

Peromyscus maniculatus

ECOTYPE SUCCESSION PLAN

In the course of the construction of the Farm and Nature Center, the existing urban ecologies will be disturbed or destroyed: Woods of fruit trees and invasive bamboo, wet crumbling retaining wall as rat den, and a grassland of vegetable plots and shrubs. Through native plantings, use of planted gabion walls, and invasive species suppression in the new landscapes, these old ecologies can emerge from the project improved.

EXISTING ECOTYPES



Photograph by author.



Photograph by author.



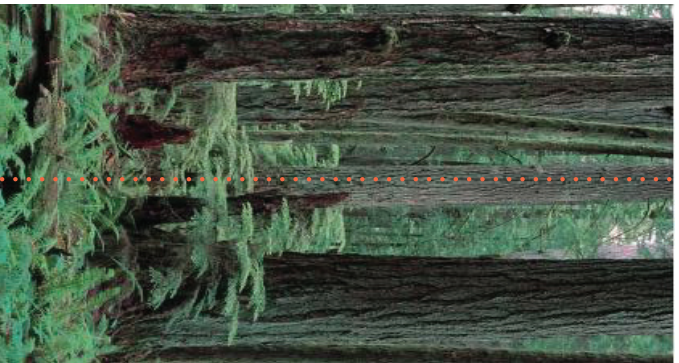
Photograph by author.

FOOD/INVASIVE
WOODS

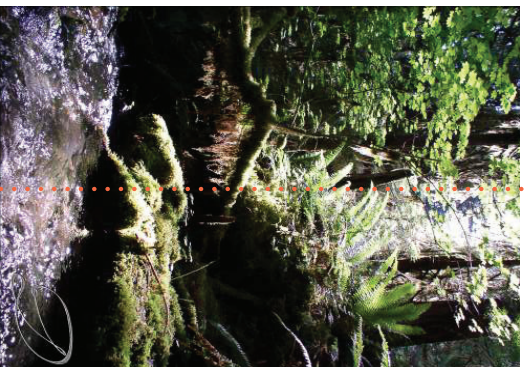
WET CRUMBLING
WALL

VEGETABLE
GRASSLAND

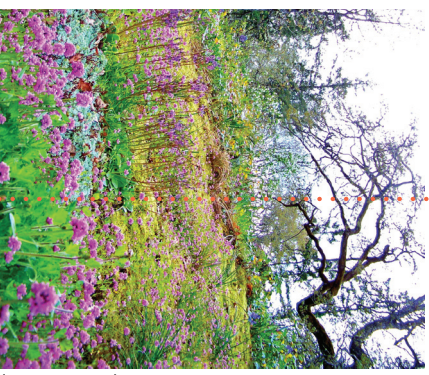
••••• HYBRIDIZATION WITH NATIVE ECOTYPES •••••



PNW FOREST



(WNPS, 2013)



(WNPS, 2013)

PNW RIVER
BANK

WESTERN WA
PRAIRIE

RETAINING WALL SYSTEMS

Surrounding the future site to east and west are (2) 70' sections of retaining wall needing replacement ranging 3-6' in height, and at the site is 45' of retaining wall that will have to hold back 12' of height. It is recommended the 12' height is split into two walls and a terrace, as prior shown. However, there are still many choices for how to construct the wall, ranging from precast concrete to gabions. In the following pages, each choice is examined. **An engineer should be consulted formally and/or informally to ensure these walls are built to last. Some walls in the garden have had great effort put into them only to start to lean and begin to fail a few years later.**



(Bell, 2013)

STANDARD CAST IN PLACE
CONCRETE WALL



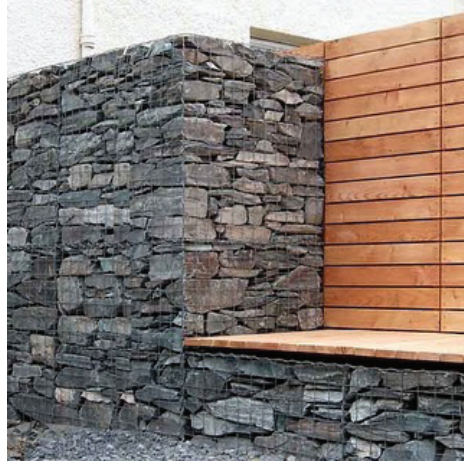
(Page Concrete, 2013)

PRECAST CONCRETE
PANEL WALL



(Apollo, 2013)

MANUFACTURED CONCRETE
BLOCK WALL



(Rocknrollproblems, 2011)

STRUCTURAL GABIIONS



(Vascosafety, 2010)

SOLDIER PILE AND LAGGING



(Ash Grove, 2013)

CONCRETE WALL ART



(G&C, 2013)

PRECAST CONCRETE PANEL WALL

Precast concrete panels come in a variety of forms, are manufactured under controlled conditions, and then installed via crane or power equipment on site.

- More expensive material.
- + Less labor & time required for install.
- + Quality higher than cast in place.
- + Many options, art, pattern, etc.
- Concrete is carbon polluter.
- + Lasts 50-100 years



(Page Concrete, 2013)



(Page Concrete, 2013)



(Page Concrete, 2013)



(Fornobravo, 2013)



(Bell, 2013)

STANDARD CONCRETE

Standard cast in place concrete walls are built by constructing formwork, mixing concrete by hand or machine, and then pouring into forms integrated with structural rebar.

- Expensive material.
- Labor intensive mixing & formwork.
- + Lasts 50-100 years
- + Many options, art, pattern, etc.
- Concrete is carbon polluter
- + Could use standard truck arm



(Solarnavigator, 2013)



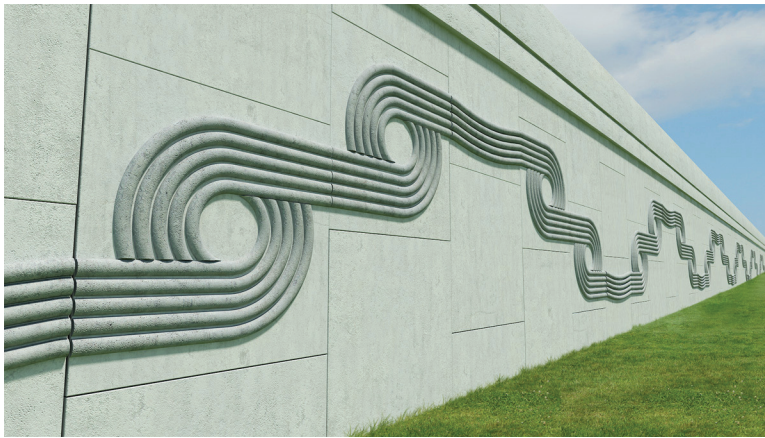
60' SPAN
within range
for trucks.

Danny Woo Community Garden Looking East.

CONCRETE WALL ART

By using ornamental formwork for concrete, either in pre-cast panels or on site, various patterns and art work can be transferred to the concrete. Additionally, mosaic paneling and other apply-after techniques are possible.

- + Lasts a long time, accepts harsh cleaning
- + Could include local artists or children
- + Adds interest and a sense of place
- Added cost
- Must be maintained of graffiti, etc.



(Ash Grove, 2013)



(Ash Grove, 2013)



(Ash Grove, 2013)



(Ash Grove, 2013)



(Lifeofanarchitect, 2013)

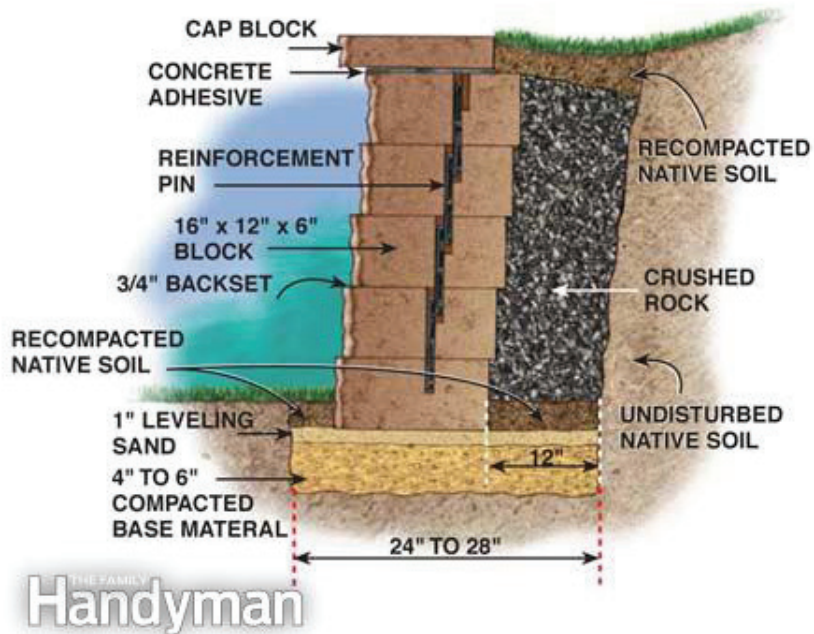


(Lifeofanarchitect, 2013)

ALLAN BLOCK

Small manufactured concrete block, 30-50lbs each, use indents and notches to create a proper wall angle. This is the material used currently in the garden.

- +Standardized, straight forward.
- +No mixing required, lasts 50-100 years.
- Must not be higher than ~4' per wall.
- Very labor intensive, blocks must be split, moved, and placed by hand.
- + Matches garden aesthetic
- Concrete is carbon polluter
- Moving blocks from street to garden is very labor intensive.



(Apollo, 2013)



(Apollo, 2013)

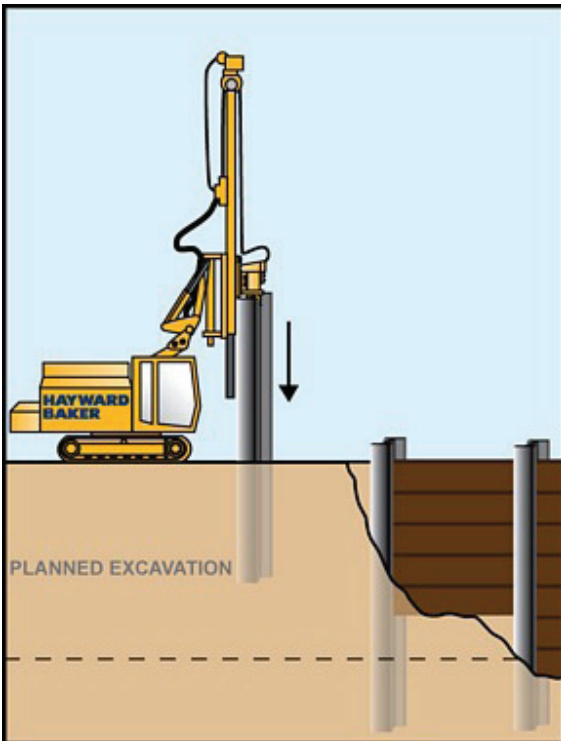
SOLDIER PILE & LAGGING

This technique uses vertical steel I-Beams driven into the ground that wood beams are placed between. Wood can be pressure treated or naturally durable. Wood then transfers loads to steel pilings.

- + Faster option, less heavy material.
- + Material is recyclable and carbon friendly.
- Requires a mechanical pile driver. They come in many options, one that may extend enough.
- Wood does not last as long as stone/concrete.



(Vascosafety, 2010)



(Haywardbaker, 2013)

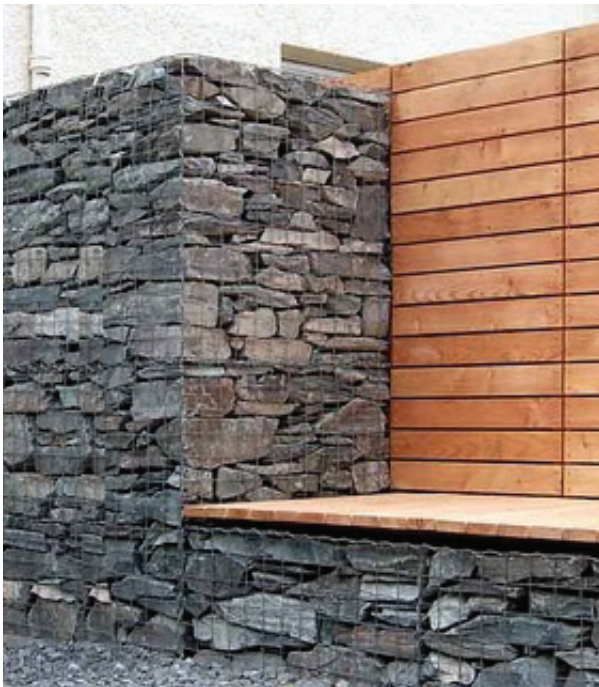


(Vascosafety, 2010)

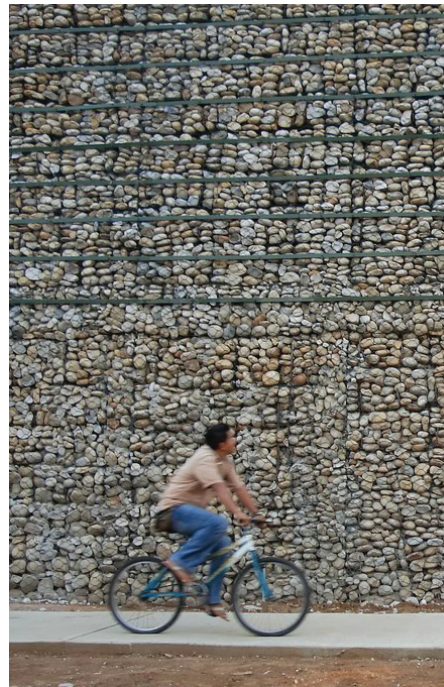
STRUCTURAL GABIONS

Gabions are typically a galvanized steel cage filled with a durable aggregate that acts as a gravity wall system, and anchors can be used. They can be filled with various materials for aesthetics and sustainability. Hydrostatic pressure can be relieved by water moving through gabions.

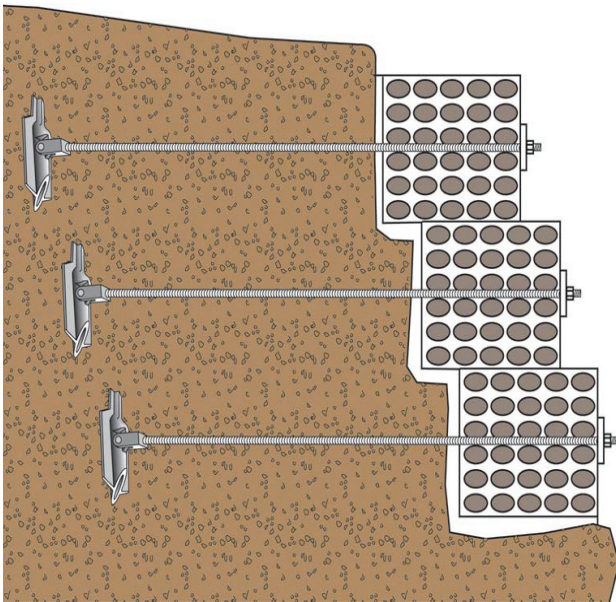
- +Interesting textures, possibilities.
- +Transformable into art, unique look.
- +Replace concrete with stone, less carbon.
- Less standardized, more research & care before and during installation.
- Relieves water pressure- permeable.



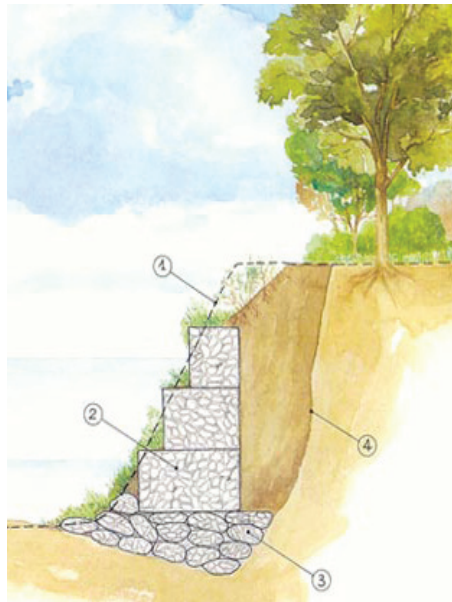
(Rocknrollproblems, 2011)



(Houzz, 2013)



(Anchorlock, 2013)



(Concrib, 2013)



(Tootoo, 2013)



(Weldmesh, 2013)



(Weldmesh, 2013)



(Hocker, 2013)

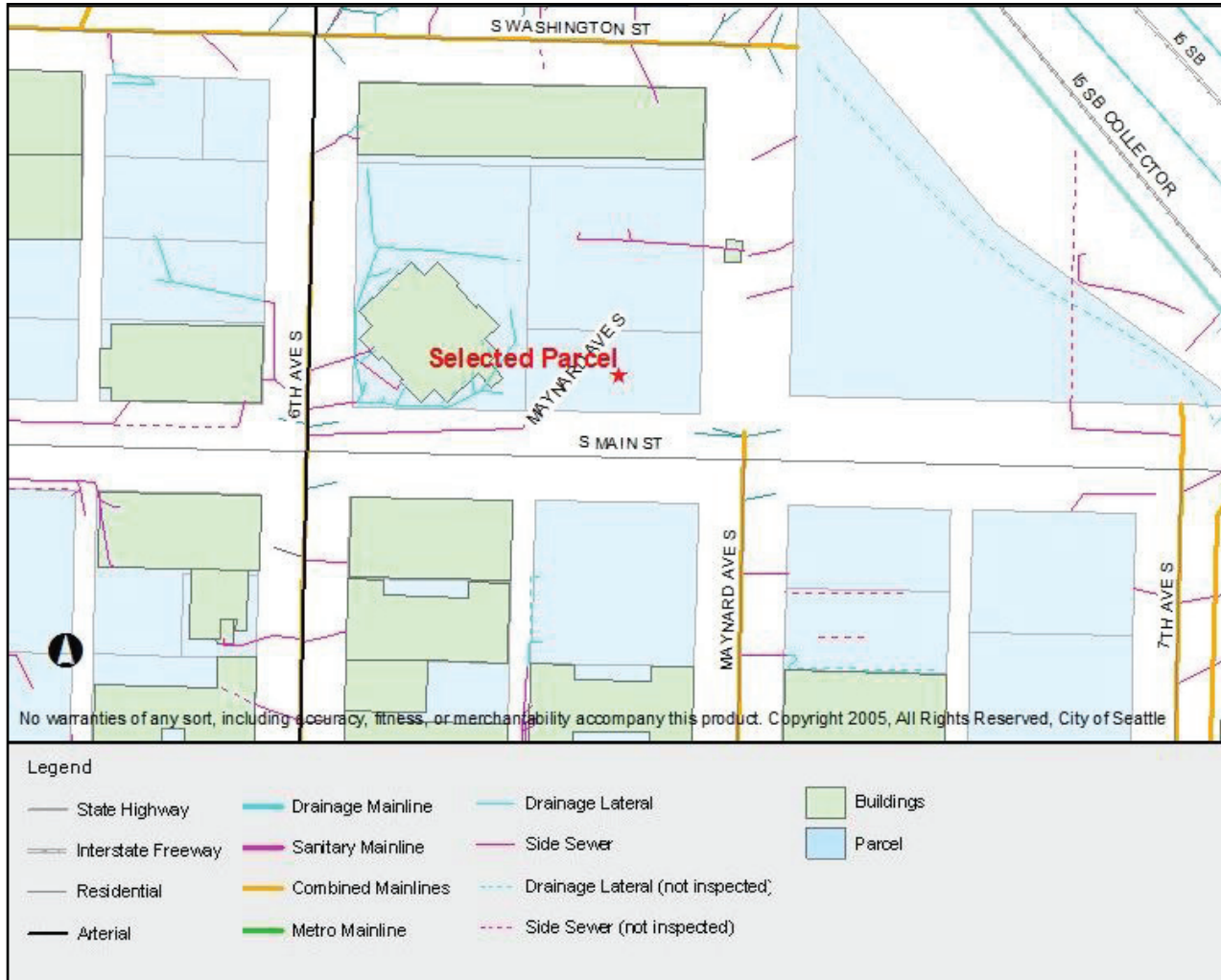
STRUCTURAL CONSIDERATIONS

The Danny Woo Community Garden has specific needs, challenges, and opportunities for the future architects designing and building the main structure. To transfer months of site research, these pages offer recommendations in the following areas:

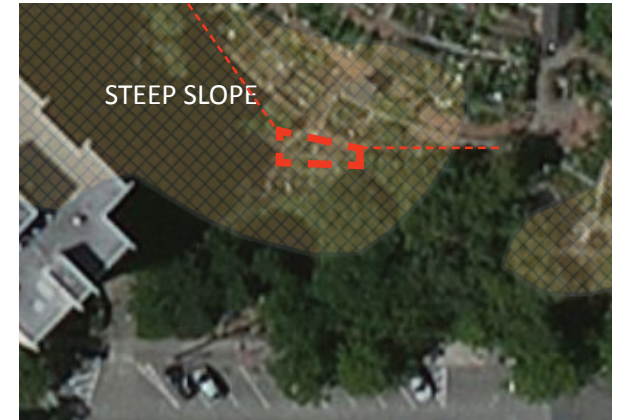
- PERMIT & SPECIALIST CONSIDERATIONS
- LONGEVITY OF DESIGN FOR LIMITED MAINTENANCE
- DESIGN FOR CRIME FREE, SAFE & WELCOMING SPACES
- DESIGN FOR FUTURE INFRASTRUCTURE CONNECTIONS
- DESIGN TO ALLOW FOR FUTURE ROOF POSSIBILITIES
- CONSTRUCTION LOGISTICS

PERMIT & SPECIALIST CONSIDERATIONS

- **ISRD (International Special Review District) Board** is a design review committee that meets twice monthly to review and give permission for any new built environment projects in the International District. The DWCG is within the district, and will have to work with the ISRD for this project.
ISRD Contact (2013) | Frestedt, Rebecca <Rebecca.Frestedt@seattle.gov>
ISRD website | <http://www.seattle.gov/neighborhoods/preservation/id.htm>
- **The retaining wall design and build** will need to be formally and informally reviewed by an engineer, and possibly the City Department of Design & Planning. Most importantly, engineers must review the design for the walls and help ensure they are constructed correctly. This is especially true for the retaining wall adjacent to the new structure, as this will be an inhabited building next to the largest potential retaining wall(s).
- **Potential connection to side sewer** present under existing courtyard by S. Main St. for a bathroom and plumbing in the kitchen part of the structure will likely need permitting and specialist help.
- **The structure permit process will need to be treated carefully** to both ensure a safe space for children, elders, and other users while not bogging the project down in unnecessary administration. The site of the structure, according to King County iMAP, is along the border between Seattle Fleets land and Danny Woo Family land, mostly within city land. The area may also be near a “Steep Slope” as defined by DPD. (DPDgis)



(web1Seattle, 2005)



(IMAP, 2013)



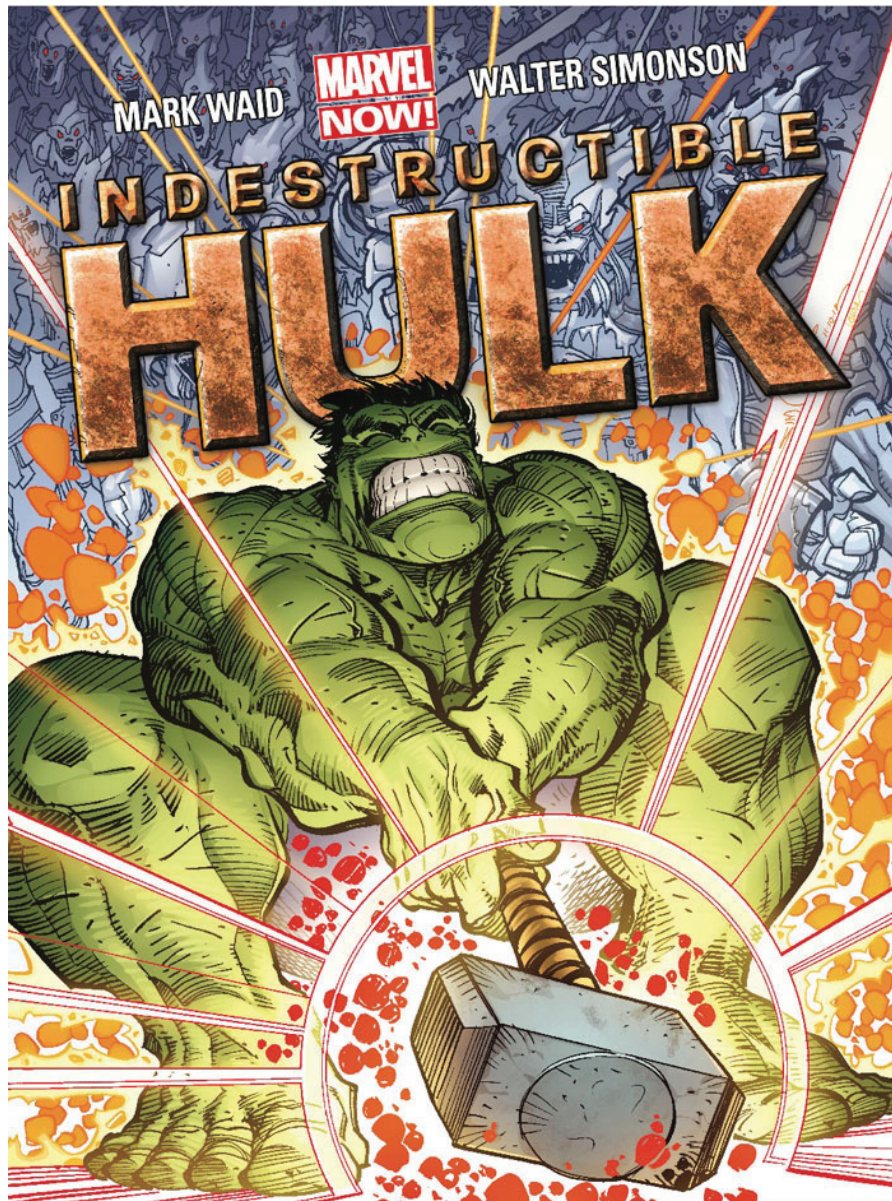
(IMAP, 2013)

DESIGN FOR LONGEVITY

The Danny Woo Community Garden is managed by a small non-profit with limited capacity for maintenance and repair costs. It is vital that the architectural design, and quality of construction, takes this into account. The DWCG does not have a regular maintenance crew, sees just as much use as a park, and always has existing infrastructure to repair.

Thus far, Design/Build work in the garden has generally performed quite well and has not put unreasonable stress on the limited operations staff and volunteer base. However, it is useful to be aware of two major consequences of not prioritizing longevity in Design and Build:

1. Operators of the garden have what could be considered a limited, “Energy Battery,” to draw from to confront everyday needs, e.g. picking up condoms, to larger projects, e.g. replacing failing walls. When a piece of your design/build fails, it demands a piece of that battery. Designing for longevity and lean operations will help keep the, “Energy Battery,” charged.
2. Areas in the garden that fall into disrepair, e.g. broken or rotten wood or overgrown plants, signal to users of the garden that the area is not cared for, unwatched, and ok to further push into entropy through litter, defecation, or other abuses. By designing and building for longevity and quality, you can help send the opposite message that will in turn attract the opposite response: A signal to care, and to help care for.



(openthefridge, 2013)

All Design Must be Kick-Proof & Easy to Repair

Custom elements of architecture from Design/Build work can be beautiful, but design so that they can be understood and repaired by people with little construction or design experience. **Better yet, design and build all elements so someone can literally kick them and they will not break.** Energetic children, and people intoxicated on drugs/alcohol may pull, kick, climb, vandalize, or heavily lean on structures in the garden.

Use Materials that will last for 30+ years.

The entire garden is in a constant state of repairing crucial infrastructure: terraces, steps, and pathways. The non-profit struggles to keep up with these pre-existing repairs, so build especially to avoid repair and failure.

- Use Stone or metal-based materials for exteriors whenever possible.
- When using wood, make sure it is MATURE rot-resistant wood or PT.
- Use pieces of wood 2x4 or thicker, and proper corrosion resistant fasteners, e.g. stainless steel with cedar.
- If you have moveable walls, tables, etc. overbuild hinges and fastenings.
- Exterior wooden decking is too maintenance intensive, try to use other decking or groundplane solutions.
- All surfaces should withstand powerwashing or graffiti removal.
- Avoid using surface treatments, like paint, that will require maintenance more than every 10 years.

Crime Prevention through Environmental Design (CPTED): Designing for Safe & Welcoming Spaces

Currently, nearly every area in the garden that is even partially hidden from everyday natural surveillance, i.e. from gardeners or commuters, is a hotspot for drug use, litter, and abusive behaviors. If partially hidden areas are designed in, they will almost certainly create problems for InterImCDA and the community.

SIMPLE WAYS TO DESIGN FOR SAFE & WELCOME SPACES FROM CPTED:
(<http://www.seattle.gov/police/prevention/neighborhood/cpted.htm>)

- **NATURAL SURVEILLANCE**

CPTED does not promote the “fortressing” of properties, quite the contrary. The ability to see what is going on in and around a property should be your first priority. Perpetrators of crime are attracted to areas and residences with low visibility. Keep visibility especially clear between 3’ and 8’.

- **NATURAL ACCESS CONTROL**

Generally crime perpetrators will avoid areas that only allow them with one way to enter and exit, and that have high visibility and/or have a high volume of user traffic.

- **TERRITORIALITY/DEFENSIBLE SPACE**

Territoriality means showing that your community “owns” your neighborhood. While this includes removing graffiti and keeping buildings and yards maintained, it also refers to small personal touches like kept up flower boxes.

Design for Future Infrastructure Connections

This project is one step in a staircase of visions for the garden. Design to support the future.

- **ADA PATH FROM THE EASTERN EDGE OF THE GARDEN**

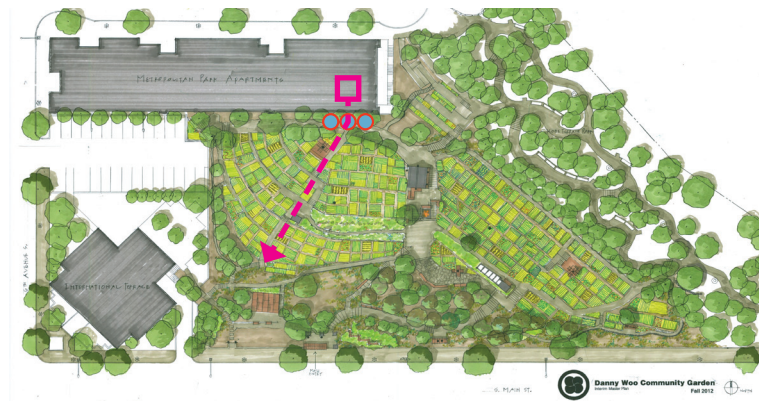
There has been discussion of developing an ADA grade pathway from the Kobe Terrace Edge of DWCG perhaps to the new center.

- **SEWER, WATER, AND ELECTRICITY FROM S. MAIN ST.**

The client is interested in a kitchen facility including on-grid amenities, and a securable restroom for the garden.

- **GRAY WATER CISTERN BY METROPOLITAN APARTMENTS**

There has been discussion about constructing a cistern to collect rain water off the roof of the Metropolitan Apartments on the north edge of the garden. Water from the cistern could be used in the center for flushing, washing tools, etc.

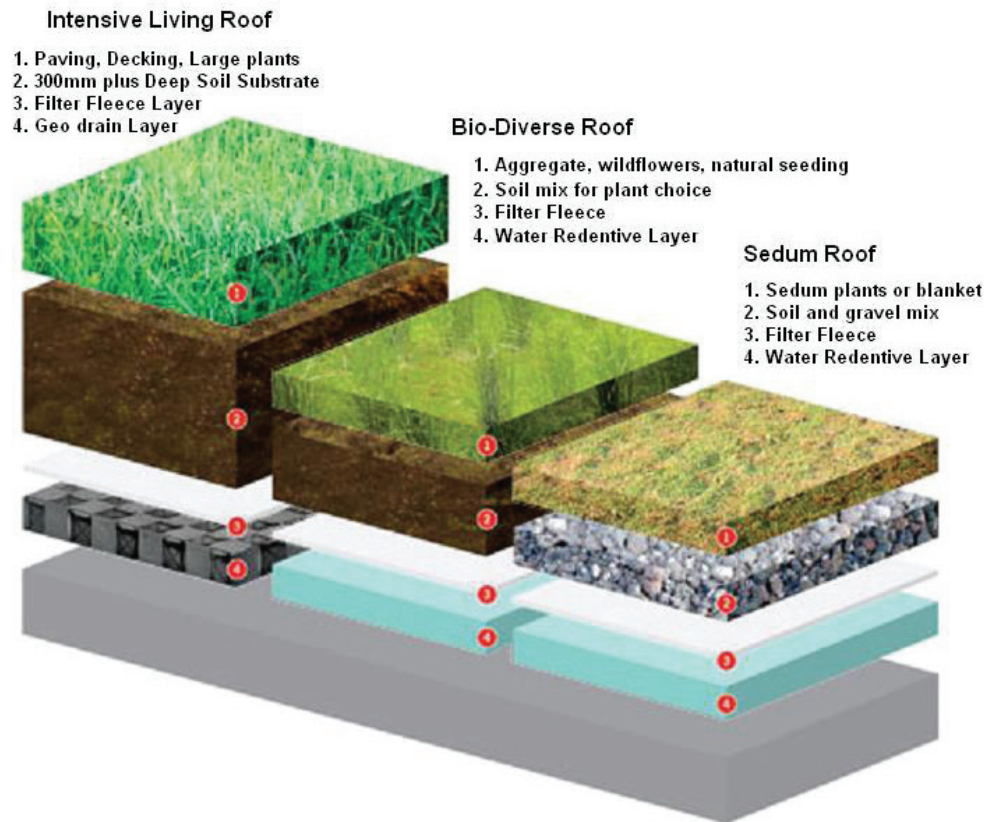


Design for Future Roof Possibilities

1. **Living Roof:** Intensive, Bio-Diverse, or Sedum, among other options. Each adds a particular additional dead and live load.

2. **A Second-Story Addition:** Space is limited in the DWCG, and there may be a time when InterImCDA wants to add an additional story on to the Farm and Nature Center. Consider these loads.

3. **Classroom & Gatherings on Roof:** Because of the way the building will be nested into the retaining wall, its roof is available for use and flush with the ground. Live loads must be considered.



(superhomes, 2012)

CONSTRUCTION TARGETS

June '12-March '13 // Foundation/Retaining Wall Construction

April-June '13 // Structure Construction.

July-Sept '13 // Utilities & Finish Work.

COMPLETION FOR SUMMER SEASON 2014.

The Future // Maintenance, Enjoyment & Expansion.

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RIPPLES

Essays inspired by work on the
InterImCDA Farm & Nature Center

MAY 2013

Written by George R. Lee, MLA

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Thesis Advisor: **Steve Badanes**

InterImCDA & the Federal Work Study Program for this opportunity.

My Classmates, Friends, and Family.

My wife, Caitlin M. Cotter, for her enduring support.

1. A New Operations Framework: Human Energy as the Ultimate Spatially Defining Force

Danny Woo Community Garden is a public space primarily determined by a semi-chaotic, grassroots conglomeration of people. No strong unilateral force, e.g. municipality or developer, has ever held control and ownership over the space. The space was colonized from blackberry bushes by local resident activists partnering with volunteer architects. The land was leased from local to local for \$1 over a drink at a local bar, and the initial design “bones”: trees, pathways, and terrace walls, were donated or built by volunteers of salvaged railroad ties. Now, the space is technically managed by neighborhood nonprofit InterImCDA, but it is a light management more fitting of the term, “Assistant,” to the main conglomerate, informal management force of the 70 or so elderly gardeners.

The reason this informality of the Danny Woo Garden is important is that it highlights the roles of human energy in determining the existence of the space. The majority of public parks and gardens like the DWCG are operated by a municipality, e.g. Seattle Parks and Recreation. They pick up trash, keep up the plants, and own the land; thus, they also have the most power over these spaces. They may partner with volunteers from the neighborhood, or community gardeners, but in the end they have the last word because they control the basics: trash collection, water, property ownership, etc. This is not necessarily bad, but it is fundamentally different than the DWCG. The DWCG technically is managed by one agency, but after a year of observation and work it is clear this agency is more one piece in this aforementioned semi-chaotic, grassroots conglomeration.

There are many groups in the garden, human and non, that determine its particular character at a moment in time and a “moment” in space: E.g. a senior gardener keeps 100 ft² neat, tidy and growing greens while a colony of brown rats, *Rattus norvegicus*, maintain a massive subsurface tunnel complex and provide food for a local sharp-shinned hawk, *Accipiter striatus*. Individual groups like these have their own fluctuations, and do not necessarily have any attachment to a centralized direction for DWCG. This is unlike a typical park where a municipality would keep all individual forces and rhythms, “energies,” pruned to their vision for the space: E.g. a rat nest would be eradicated with chemicals, thus losing the hawk while the well-kept garden plot would be allowed (as long it stayed within its bounds, which does not always happen in the DWCG.)

Contemporary discourse is growing on issues relating to these informal forces of urban space organization. In *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*, Jeffrey Hou writes about, “the making of insurgent public space,” where, “the instances of self-help and defiance are best characterized as a practice of guerrilla urbanism that recognizes both the ability of citizens and opportunities in the existing urban condition for radical everyday changes against the dominant forces of the city.” (Hou, 2010). In *Loose Space: Possibility and Diversity in Urban Life*, Karen Franck and Quentin Stevens write about the, “applied tightness and looseness to urban public spaces,” defining tight space as allowing only for a particular type of planned use, and loose space offering possibilities for different activities to occur at the same time (Franck, 2007). Also of note is the work, *Everyday Urbanism*, by John Chase, Margaret Crawford, and John Kaliski, where they write about

the everyday elements of a city, “that remain elusive: ephemerality, cacophony, multiplicity and simultaneity,” that are, “a product of the intricate social, political, economic, and aesthetic forces at work in the contemporary urban environment. (Chase, 2008)

It is most important to realize that the determination of urban spaces can be largely characterized by the degree of human imposition and control: Forces towards order, aka “ectropy,” in the presence of an omnipotent wild order, defined by “entropy” and the 2nd law of thermodynamics, in which human ends have no special place. The DWCG is a mix of the two, walking the line between, and it was crucial I brought this understanding to my design consulting for the garden by using what I’ve termed, “The Energy Method of Design and Operations.”

The Energy Method of Design & Operations

As a design consultant for the DWCG, I was charged with assisting InterImCDA build the design foundation for a \$100,000 grant to design and build a Food & Nature Center in the garden. The center loosely was to provide classroom assistance for a children’s program, and offer community activities support. Having worked in the garden the previous summer for several months, and continuing to work in the garden on a staircase project, I knew the garden fairly well, and began work to develop Program Guidelines, a Design Protoform, and a Site Location. More than ever though, considering the semi-anarchic nature of the garden, I was aware that this project needed to work *with* what I began to call the “Energies of the Garden.”

For better or for worse, energy flows hold great sway in the garden’s semi-anarchy. High-quality spaces, i.e. welcoming (trash-free), healthy, and fertile, spaces are mainly found within and around the private garden plots of individuals or in areas of programming or projects, while much of the public space disconnected from those forces tend towards being run down and dotted with litter; some of which are especially unwelcoming: e.g. needles, crack pipe pens, and condoms.

Individual gardeners have effective ownership over their plots and obtain physical and mental health benefits from their work there. In the winter, their energy lessens in the plots, but in the more popular gardening seasons their energy is high and mostly in full control of the plots. Thus, the plots keep entropy in control or at bay, and forces of ectropy dominate.

The public spaces in the garden that are of a high quality usually reflect proximity to plots, or ephemeral programming or projects: E.g. The children’s program “keeps up” about 100’ of terrace gardens and a paved courtyard while an influx of money from a city grant is responsible for a new 100’ wall and 47’ staircase. In the winter, energy from the children’s program is not present and their plots collect a bit of trash, while built project energy comes and goes with funding rhythms. These projects and programs tip the balance of an area towards ectropy.

The public spaces in the garden that are of a low quality, i.e. threatening to most, unhealthy, sterile, and unproductive, are where there is an absence of the aforementioned forces of ectropy and order: gardeners, programming, and projects. With high predictability and constancy, these areas without forces of ectropy attracts dangerous prostitution, intense addictive drug use, associated problems of repulsive litter, and a higher incidence of angry, schizophrenic, or schizophrenic-like people. In a clear way, this lack of ectropy and forces of order is an attractant for disadvantaged populations. Though, it is important to note some activities are abusive while others are merely activities not welcome elsewhere, e.g. to shoot heroin and litter the dirty needle on the ground vs. to sleep un-harassed by the police somewhere.

As I began to discuss the design goals with the client, and develop concepts and plans, it was important to take into account these predictable patterns and fields of energy in the garden. Further though, I became interested in the patterns of energy expenditure and replenishment I saw over my year there of responses to these forces of entropy.

Operations & Design Cooperating with Energies of Entropy & Ectropy

Operations are crucial in determining the characteristics of a public space, especially a highly used park or plaza. Operations are most often not flashy or of great interest to designers, but in a majority of ways are more important than the design of a space in space determination. For instance, a well-designed public park without a crew to pick up trash, make repairs, or perhaps keep a tennis court in good condition will quickly (in a few days or weeks) stop functioning in the ways it was designed to.

Traditionally, designers make impacts to a space in “moments.” Let us consider the hypothetical redesign and rebuild of a playground in 2008. The designer may be involved with the project with 6-18 months, while operators will make impacts regularly on a longer time scale with the upkeep and adjustments to that playground from 2008 thru, let’s say, 2038 when another designer is hired. Not too delve in too much, but ideally, a design supports and considers operations; and operations support and consider the design. This is also stated as a most basic law of physics in the 2nd Law of Thermodynamics: the general direction of things is towards entropy without the insertion of an external source of energy. A traditional design is an imposed order, but operators are responsible to maintain that order with forces of ectropy versus constant forces of entropy.

So how does this all relate to the DWCG? To begin with entropy: it is not uncommon that the disadvantaged populations that use the garden are those that public space managers generally give lip service to, but then treat similarly to rats within the restrictions of civil rights. Usually disadvantaged populations are creatively excluded from one public space to another, while in a few better design and operation models they are more incorporated into a balance with the rest of the public. Mike Davis is one scholar who speaks to this reality in his provocative article, “Fortress Los Angeles: The Militarization of Urban Space.” (Davis, 1992)

However, it is important to point out that some in these disadvantaged populations are so hurt from abuse or oppression in some form or another that they become abusers, agents of entropy. The DWCG, because of its location and operation model, has a large regular presence of this abuser population. This population does things in public space that overwhelm entropy and ruin it: E.g. Coming upon a young woman high on crack having sex with a sober, much older man in the middle of the garden; knowing she is likely being exploited; and that they will leave dirty condoms and crack pipes on the ground afterwards is a real, entropic, energy-demanding encounter. The presence of this in a public garden excludes most people from the garden, it is unhealthy to the abusers, and it strains longer term “Entropic Batteries” of those operating the garden.

Even though the majority of disadvantaged people struggling with the many real symptoms of oppression do not end up abusing public space, some of these people definitely do. And when they do, their fault or not, it demands the expenditure of energy from those more able to care for those spaces. And that energy, to pick up human feces or ask someone to please stop using crack, comes from someone or some energy system that is not limitless or purely fertile, but one that must somehow keep replenishing itself to make up for these expenditures. Simply, this could be called the operator’s “Entropic Battery.”

A theoretical breakdown:

1. Condom is laying on major walkway.
2. Garden worker sees it, picks it up, and is annoyed someone would disrespect the garden.
 - a. Garden worker’s entropy battery is used up a bit.
3. The next day there is another condom nearby.
4. Garden worker sees it and is too resigned to pick it up this time. Especially because their energy is already being maxed out to run a children’s class.
5. Two days later, two more condoms show up in a different area of the garden.
6. The Garden worker notice them, feels overwhelmed, none are picked up.
7. Etc.

Here is where a Designer can assist and cooperate with an Operator. There are two major ways that this aforementioned entropic energy is managed in the garden: One is a direct expenditure of energy by an Operator to rebalance the negative energy of an abusing person: E.g. the garden manager picks up a condom. The second is preventative using design and/or tactical operations to create zones, or fields, of entropy that prevent the entropy from ever being generated: E.g. the children’s educational program frequents the courtyard and less abusive activity

happens there. Or, in my case, the site chosen for a new Food & Nature Center, a source of ectropy, could be located to best neutralize spaces of entropy. This can easily work for non-human forces: E.g. shading out reed canary grass with conifers vs. trying to pull them all out.

These sorts of preventative models have been discussed and worked on by many in the last 50 years: Jane Jacobs with “eyes on the street” (Jacobs, 1961); William Whyte, Jan Gehl, and Randolph Hester with the strategies of creating human habitat and problem solving with, “people populating” (Gehl, 2010) (Hester, 2006) (Whyte, 1980); C. Ray Jeffery and Oscar Newman with “defensible space” and “crime prevention through environmental design” (CPTED) (Jeffery, 1971) (Newman, 1972); and James Q. Wilson and George L. Kelling with the “broken windows” theory (Kelling, 1982). However many came before: Olmsted’s efforts in the 19th century to design for “civilizing the populace”; Rudolph Steiner’s theory of Biodynamic farming to “see the farm as an organism”¹; and to antiquity with Feng Shui, Chinese design to balance Qi and Wu Xing, forces and energies at a site (Werner, 1922).

To continue with an east and west theme, the aforementioned direct method is analogous to western medicine: treating symptoms directly for quick, visible results. While the second, preventative method is alike eastern medicine: seeing symptoms as indicative of systemic problems requiring holistic treatments for slow, more complete and lasting recovery.

All the aforementioned scholars and practices, from Jane Jacobs to Feng Shui, are based on the belief that the first method of direct expenditure of energy to rebalance single acts of abuse or negative energy is an incomplete design and operations method: E.g. Jacobs wrote about how the single management acts in conglomeration and concentration create a system called, “eyes on the street,” that is more effective as a whole (Jacobs, 1961); whereas Feng Shui looks at many factors, including the Qi, movable positive and negative life forces³ (local microclimates, the slope of the land, vegetation, soil quality, etc.), and Wu Xing, metaphors of forces essential to human life as metal, earth, fire, water and wood to create an auspicious design for buildings or a space (Werner, 1922). Especially relevant to DWCG is Biodynamic agriculture, a method of organic farming that emphasizes the holistic development and interrelationships of the soil, plants, farmers, and animals as a self-sustaining system (Lorand, 1996). I agree with these conclusions, and sought to design to support and consider operations in light of this understanding of entropy, ectropy, and their interaction in a context of space.

¹ Biodynamic agriculture is a method of organic farming that emphasizes the holistic development and interrelationships of the soil, plants and animals as a self-sustaining system,

Design Recommendations

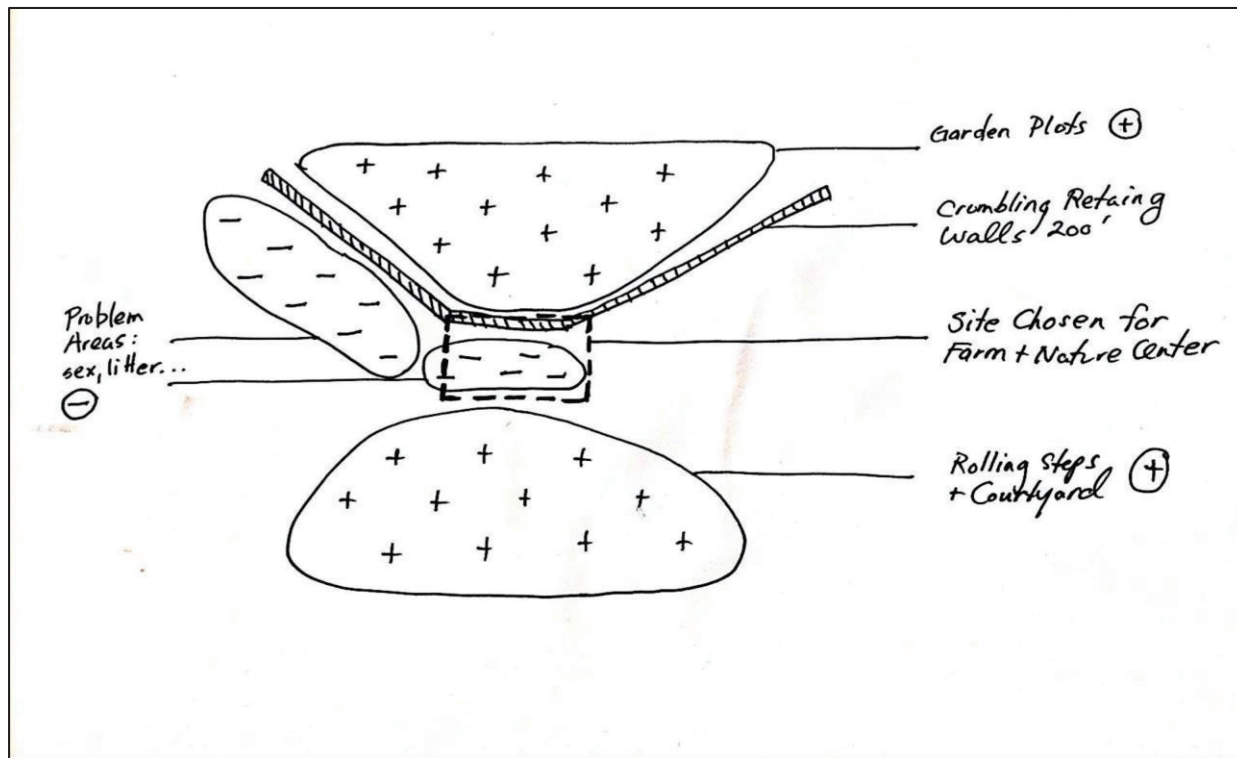
In the context of this discussion, it is important to now describe how I designed using aforementioned concepts at the DWCG with the Farm and Nature Center project.

From the start, this energy model was in my mind, parts developing along the way. Initially in September 2012, I was pushing for an idea to develop an “energy corridor” of private plots from the upslope fertile garden plots down through the “wood” to connect to the streetscape. This was to neutralize adjacent areas of entropy by bringing in the energy of increased street pedestrian foot traffic; and to further spread the fertile energy of the plots. Eventually this idea was rejected, but it reflects how early the garden pushed me into this mode of thinking.

In the end, I calibrated the project for “auspicious energy” in two major ways: 1, site location and 2, the building of a strong team to continue to project through community design tactics.

Energy Calibration 1 : Site Location

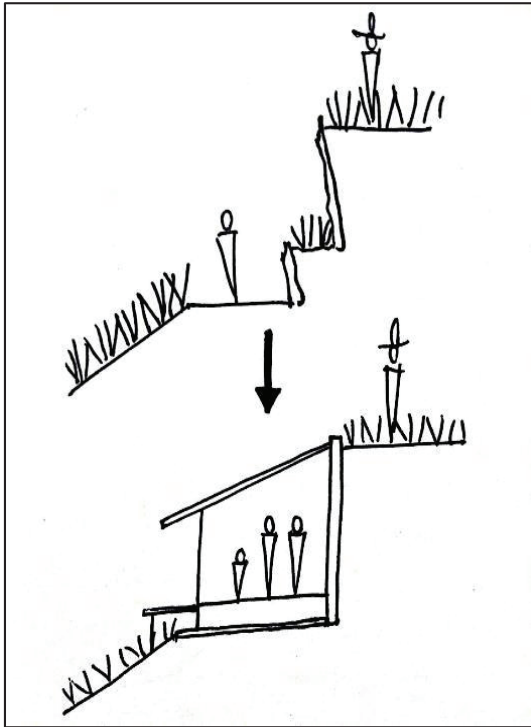
Because the garden has clear distinctions in entropic and ectropic spaces, and major challenges in maintaining a healthy balance towards order and fertility, site was of the utmost importance. This new project was not just a piece of infrastructure, but a center that could be a source of ectropic energy for years to come. The center will bring bringing an immediate moment of resources in the form of \$100,000, but could create a long-lasting energy shift for the better if sited correctly in the garden. Like a game of chess, this center could be sited in an area that would alter the balance of the “game” between the garden operators and those abusing the garden. The garden and I had no interest in excluding people, but rather their threatening and abusive behaviors hurting the garden. In the end, a site was chosen unanimously that met many requirements using subtractive site analysis, community discussion, and relevant to this discussion: a tactical energy move.



Ectropic & Entropic Space (Diagram 1)

As seen above in Diagram 1, not all spaces are strongly one “polarity” while other are. This site would allow the project to not disturb any existing ectropic space, rather connecting them while also breaking up stagnant problem entropic spaces. These entropic areas are major problems for the garden, and areas that have been mostly taken over by abusive activities. In practice, these spaces are to a great extent considered lost causes by garden staff and allowed to be used exclusively by abusers.

This also is a site of crucial infrastructural importance to the garden. The 200’ of retaining walls here peak at 10’ high at the future building site and taper off to 2-3’ at the ends to the east and west. These walls failed in the 1980s and were rebuilt, and they are crumbling and fixed to fail again soon. Replacing them is necessary to keep senior gardening possible above, and replacing them will take a large expenditure of energy to the “Ectropic Battery” in human and fiscal terms. Aware that the garden was having trouble maintaining their existing spaces; that their ectropic



energy was already quite limited; and acknowledging that money and energy comes to the garden in bursts, sometimes unpredictably: I saw a possibility to integrate the repair of the walls into this project.

Others did as well. Garden staff, community advisors, and the future design/builders agreeing in the value of this “remove two weeds with one pull” tactic. This is shown in Diagram 2.

The grant of \$100,000 was awarded for the construction of a Food and Nature Center in the garden. Further, many people, staff, and volunteers will bring a spike of ectropic energy to this project from 2013 to 2014 to see it done. By integrating the wall into the project in a fundamental way, those fiscal and human ectropic energies will be funneled into this retaining wall infrastructure project that is just as crucial as the center itself. Further, working on a center and wall together will be more fun and rewarding than just an infrastructure replacement project. This is important to keeping the overall garden “Ectropic Battery” charged up.

In closing, this site choice made sense to everyone. It made a tactical energy move to retake some space lost to abusive behaviors and folded in a major infrastructure project, getting it done and making it more rewarding and palatable for the limited human resources available to the garden.

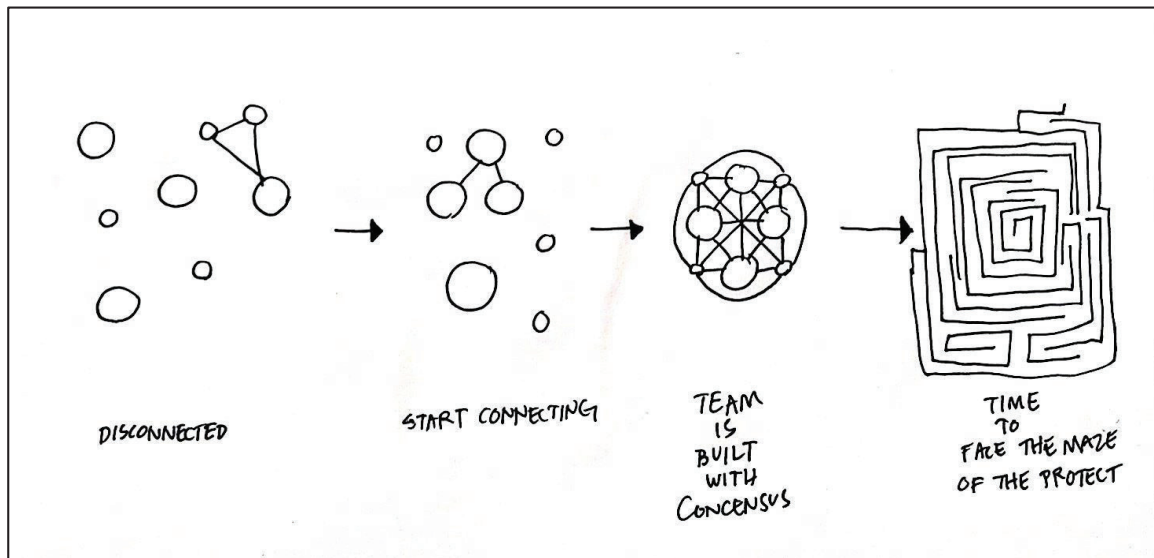
(Diagram 2)

The execution of this \$100,000 grant to design and build a Farm and Nature Center will be the biggest single project the garden will have taken on since its creation in the 1970s. It is a great opportunity, but also will be great challenge and strain on existing garden human resources. Furthermore, having worked for the garden on a grant of \$20,000 to replace infrastructure, I had become aware of the potential for projects to strain and erode human resources when they were not properly managed: E.g. the overburdening of one person, or breakdowns in communications under stress. Further, big ticket items could sink a project fiscally and it would be important the team was well-coordinated: E.g. pouring concrete into the 200’ of wall would be too expensive to redo if done incorrectly. Thus, I sought to “start the project on a good foot” by working strictly within a collaborative, community-led design process.

In the beginning, I was working at the site as a work-study contractor and was able to regularly discuss site options and other design topics with garden staff and community members informally. As things progressed this initial pattern of trust and listening set good footing as our

relationships transformed slowly into more of a client and consultant relationship where I was asking the client to do “homework” E.g. programming lists, site ideas, etc. To avoid the many problems with bringing a stakeholder in late to the process, early on I reached out to the future Design/Build Architect, Steve Badanes, who would be designing and building the structure with his students.

By the time of our final community design meeting to discuss hard choices of site, construction timelines and responsibilities, design criteria, etc. all parties had been in contact for a several months and were able to navigate a successful meeting. Even with this solid building of trust and communication leading up to that final meeting, the meeting still was almost scuttled in an argument over programming. Fortunately, all parties came to consensus on the basics of the project: Site, Program, Timeline, Responsibility, Permitting and Basic Form of Structure. With this robust consensus, the project begins with a strong ectropic team, ready to take on a messy year ahead trying to bring order to a project that currently does not exist, I.e. is currently in a completed state of entropy. This process is shown below in Diagram 3.



Building an Ectropic Team for an Uncertain Future (Diagram 3)

Conclusion

In conclusion, the Danny Woo Community Garden is an especially anarchic space without the classic unilateral agency management structure. Consequently, it is a semi-anarchic public space managed officially by InterImCDA, but more importantly managed by the informal conglomerate of the 70 or so senior Asian-American gardeners. Also, the garden, located at the crux of Pioneer Square and the International District, is one of the most urban public spaces in the city and attracts a population of disadvantaged peoples, some of which are abusive to the space. In approaching the DWCG it became clear the garden was especially affected by ephemeral and changing forces, fields, and rhythms of ectropic and entropic energies which inspired me to approach a design consultation project for a Food & Nature Center using a, “Energy Method of Design and Operations.” This method called for a design that is calibrated to site conditions of “energy pockets” and the particular patterns of Operations and their “Ectropic Battery.”

Finally, design was carried out in light of the energy method by calibrating to the site to tactically retake an area of the garden lost to the abusive population while also building team consensus, and a full robust team “Ectropic Battery,” for the challenging future project ahead. Lastly, this method has great compatibility with the general work of Landscape Architecture and Urban Design because Design happens in moments while Operations happen for the decades between. Further, a moment in Design is completely vulnerable to the human and non-human energies that will inhabit the design for the long term. Design considering the Energy Method is not new, as many scholars have worked with it before, but in short, all these paths of scholarship point to the importance of a systemic consideration of energies surrounding a site.

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HUMAN ENERGY,
in relationship to
BUILT FORM

CAN BE...

(Feisal Omar, 2012)

TRANSCENDENT, CHAOTIC, or HOSTILE

Human energy transcending built form, ultimately the most important of spatial determination. Also, human energy disconnect, energy chaos, or hostile energy active negative to built forms. *Lido Beach, Mogadishu, Somalia : People enjoy raw shoreline amidst built form in rubble.*

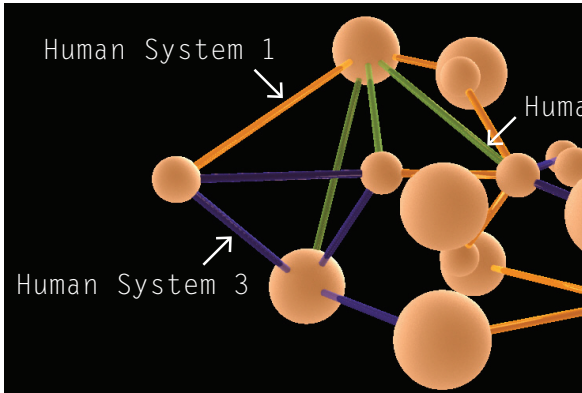


IN A POSITIVE FEEDBACK LOOP

Positive feedback loop between human energy & built form. *Amish Barn Raising Party: Barns build communities, communities build barns.*

HUMAN ENERGY DESIGN.

1. BUILD TEAM CONSENSUS FOR THE CHALLENGES AHEAD.
2. SITE CENTER TO RECLAIM NEGATIVE ENERGY SPACES.



CONGLOMERATE SYSTEMS

A variety of human elements keep built form resilient. *E.g. Volunteers, Non-profits, and Municipalities.*



(en.wikipedia.org, 2007)

BACK LOOP

form.
old barns.



(Panini, 2013)

EPHEMERAL & CAUSE DECLINE

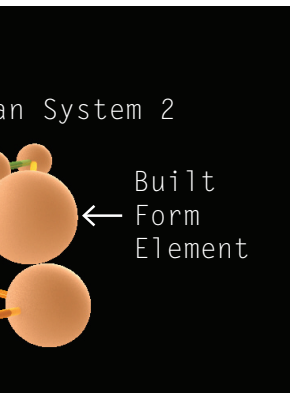
Ephemerality of built form without original human energy system.
A space is determined ultimately by human value.
Roman Forum filled with sediment used as Cow Pasture in 15th century AD.



(en.wikipedia.org, 2007)

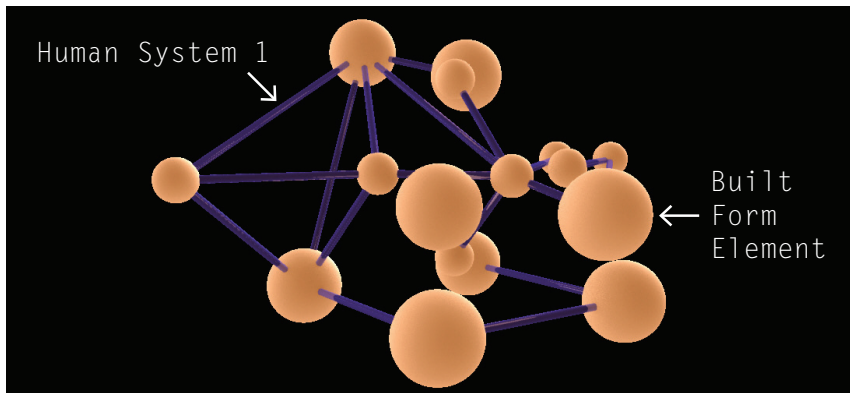
EVERYDAY PARTNERS

Complex ecological design of built form in semi-ordered calibration to human systems.
Danny Woo Community Garden today, 2013.



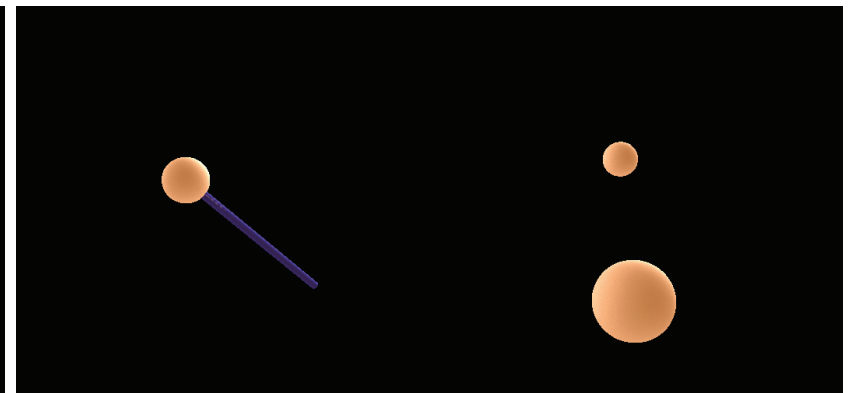
SYSTEM

form design functioning.
stability.



UNILATERAL SYSTEM

One human element keeps built form design functioning.
E.g. Municipal Parks & Recreation Department.



DEFICIENT

Human energy deficient for a variety of reasons.
E.g. Municipality underfunded, lets a park deteriorate.

2. Time for Changes?

A Critical Look at Management Structures



As aforementioned in *An Energy Method for Design and Operations*, Operators are just as, or more, influential of the long-term determination of a public space. At the Danny Woo Community Garden there is a semi-anarchic model of operation and management, while next door is Kobe Terrace Park, a strictly ordered park managed and owned by Seattle Parks and Recreation. After a year of time working in or nearby these spaces, I began to analyze how each was managed.

Initially, I was drawn to the weird, unkempt characteristics of the DWCG. I loved the rundown side paths, the crumbling walls with the rat dens, and the mosaic of garden plots. It seemed like a hidden urban picturesque oasis, a public space that had somehow escaped modernist clean lines and CP-TED sterilization. Kobe Terrace Park was always less interesting to me with its predictable curving pathways among predictable ornamental plantings, including the great flag of predictability: the *Nandina domestica*.

As time passed though, my perception slowly changed. In the summer of 2012 I spent 5 days a week, 10 hours a day, building a 100' retaining wall in the garden and got to know the DWCG and Kobe much better. Elderly gardeners would give me Pepsi and sugar cookies day after day without my asking for them, and some would show me their gardens. I realized the anarchic nature to the plot holders, noticing that even within my 100' there was no singular order or operator. A Korean lady held sway over her feudal domain of about 200 ft² below me while an elderly Chinese man quietly worked his plot above, never interacting much. Over the summer, I also got to know the abusers of the garden.¹ People regularly would use unkempt parts of the garden to go to the bathroom or engage in dangerous prostitution, and I began to understand the degree of use by disadvantaged people living nearby or passing through.

¹ Abusers is too simply used here. It is meant to refer to a complex system of disadvantaged populations, oppression and legacies of abuse. A greater discussion can be found in "Energy Methods of Operations and Design."

In Kobe Terrace, I began to notice how clean it was despite the same or larger population using it. In the mornings, maybe 50 people or more would pass through to do walking exercise or something resembling Tai Chi, and during the day many would come to sit, eat, or drink beers. I started to notice that the littered beer cans went away within a day or two at Kobe while beer cans in the DWCG might sit around for weeks if one didn't pick them up. This difference, seen in the, "lifetime of litter," really began to open up my eyes to the differences in management.

Then the winter came, and I started the design/build of the staircase replacement project. This time while doing construction I was more invested in the garden than the summer before, and was also helping design the more, "macro-level," future Food and Nature Center using the aforementioned "Energy Method of Design and Operations." This is the period when my view began to change to be more critical of the semi-anarchic management style at the DWCG, and consider the possible benefits of SPR's more unilateral style next door.

Waste and Resources

DWCG has the equivalent of three full-time employees managing the garden: a planner, a garden manager, and an Americorps children's program coordinator. In addition, a PT work-study student, a PT volunteer coordinator, and a large pool of volunteers from local colleges, communities, and corporations assist in keeping up the garden. They also have 70 or so senior Asian-American gardeners who skillfully manage their own plots, and share in the upkeep of 12 or so hens.

Kobe Terrace Park has a PT head gardener and grounds keeper, a daily trash collector who works on a batch of other parks, a seasonal rhythm of their professional crew doing work days to mulch and weed, and access to other city resources, e.g. a landscape architect and an arborist.

A Management Breakdown²
<i>Danny Woo Community Garden: 122 h/wk.</i>
112 hours per week of skilled FT employees
280 hours per week by skilled private plot holders (seasonal)
10 hours per week on average of unskilled volunteers
Volunteer Community Experts, InterImCDA, Funds from City-Grants & General Operations Fund
<i>Kobe Terrace Park : 20 h/wk.</i>
15 hours a week by professional ground keeping staff
5 hours a week (estimate) by professional planning and coordination staff
City expert network and Seattle Department of Parks and Recreation

² Data based on author's observation and experience working for InterImCDA in 2012-2013

I began to put these numbers together during my time building the staircase in the winter of 2013. I had invested in the improvement of the garden with my design and build work, but was starting to feel frustrated in light of the never ending presence of litter, trash, and uncompleted maintenance projects. Next door, Kobe Terrace stayed clean and maintained.

I had previously held ideas the DWCG was trashed because it was an underfunded community garden, not valued by the capitalist system, or because of historical, systemic racism against Asian-Americans. While all of those factors are definitely true, and add to the management challenges at the DWCG, it became clear to me that the DWCG's management and operations style was not working to its potential. Further, by comparing Kobe and DWCG it could be deduced that management structures were a major reason why the garden was in a perpetual state of disrepair and conflict with abusive urban populations. Kobe Terrace is kept clean and welcoming to all, disadvantaged alcoholics and Tai-Chi grandmothers alike, with less devoted staff time by approximately a factor of 20 seasonally, or 6 year-round.

Distilling Meaning

Distilling meaning from this apparent management & operations problem at DWCG is both simple and complex. Simply, it exists and cannot be ignored: InterImCDA spends around 6 to 20 times as much staff time as SPR to manage a similar amount of square footage; but, the DWCG is more complicated to manage. It includes 70 private garden plots for seniors, a children's program in the summer, employs and organizes volunteer labor, and has hens. Yet the senior gardeners are incredibly independent, independently managing their plots and assisting with hen operation. On the other hand, Kobe Terrace keeps their public spaces at a higher quality, and maintains higher complexity and more demanding ornamental gardens. Thus conservatively, one could say the DWCG is 2 to 3 times as complicated as Kobe Terrace Park. Even so, this would still mean the DWCG was using 2 to 7 times more staff time for the same area. A bit less of a difference.

One clear problem the garden has is with the concept of "Economies of Scale." In microeconomics, economies of scale are the cost advantages that enterprises obtain due to size, with cost per unit of output generally decreasing with increasing scale as fixed costs are spread out over more units of output. Often operational efficiency is also greater with increasing scale, leading to lower variable cost as well.³ The DWCG has great duplication of skills and resources with SPR, and must spend money to retain these duplicate resources: I.e. human resources, tools, and funding development. SPR has one department that shares these responsibilities and resources for a large quantity of public parks and spaces, thus more efficiently using their resources.

In light of these observations, it is clear greater cooperation between InterImCDA and Seattle Parks and Recreation would be beneficial for both parties. SPR continues to have concerns about the garden as a haven for dangerous and criminal behaviors that in turn, repulse people from

³ Sullivan, arthur; Steven M. Sheffrin (2003). *Economics: Principles in action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall. p. 157. ISBN 0-13-063085-3.

using Kobe Terrace or their land within the garden. SPR also carries liability for infrastructure, e.g. staircases, on their land within the garden, and continue to have a disorganized and sometimes problematic relationship with InterImCDA in ensuring infrastructure is maintained. InterImCDA on the other hand, continues to be unable to adequately keep the DWCG litter-free, maintained for basic CP-TED to decrease problematic activities, and duplicates human and equipment resources. In the spring of 2013, Parks has begun cooperating more with DWCG to help haul away compost material, provide design/build specifications, and assist in garbage control measures. This trend is welcomed by both parties, and should continue to expand to reach the ultimate goal of quality public spaces at Kobe and DWCG.

Implications of Continued Ineffective Operations

The DWCG began in 1975, spearheaded by local activists, and an early activist version of InterIm. SPR did not help or spearhead the DWCG then, and it was absolutely vital that DWCG was initiated independently of the city. Without independent grassroots management and initiative, the DWCG would never have come into existence under city leadership. Indeed, the creation of DWCG was only possible through grassroots independent organizing. However, it has been almost 40 years since the garden was created, and it is established and protected in the community informally through community value, and formally through the International Special District Review Board. Currently, the biggest threats to the continuity of the garden are related to the continued presence of trash, public safety hazards, liability, and infrastructural decline. The City of Seattle clearly supports the garden, awarding \$120,000 for its upkeep in the last 2 years. Also it is important to note that the DWCG is owned by several entities, none of which is InterImCDA, and all of which could decide to stop leasing/cooperating with InterImCDA. The keystone owner being the Danny Woo family who leases the land for \$1 a year on a short-term lease cycle.

It may be unlikely that the family would ever revoke the lease, but it is important to note that there is historic development occurring all around the garden. A new streetcar is being installed one block away, Yesler Terrace is developing across I-5, and the International District is up and coming with real-estate development pushing in on all fronts. The property value of the DWCG is likely to increase quickly in the coming decade, and with the right cocktail of persistent crime, litter, and impending infrastructural problems in the DWCG there is a real, though admittedly modest, possibility that the Woo family or City may want to change things up or sell.

The DWCG needed to initiate as a grassroots activist space with InterIm in 1975, yet 40 years later that need has been replaced by a need for maintenance and operations. InterImCDA, as an Asian-American activist and community development organization, could continue serving its activist mission roots by both sharing more management with SPR, while focusing freed up resources on other emerging activist projects in the neighborhood: E.g. there has been a guerilla garden expansion forming to the south of the garden across S. Main for several years, and InterImCDA has had little to no involvement in advocating or trying to legitimize and protect this garden.

3. Designing the Intermediary

Landscape Architecture in an Intermediary Role

With the Danny Woo Community Garden, as aforementioned, I was brought on as a student design consultant to assist with the design foundations for the Food & Nature Center grant of \$100,000. I initially began work on the project's grant proposal with conceptual design and renderings in August of 2012, and ultimately ended my work on the project in June 2013. In total during my consultation I have completed the following actions:

August 2012

Conceptual Design & Renderings assisting with the successful grant application of \$100,000.

September 2012 – December 2012

Community brainstorming on design, build, and programming questions.

January 2013 – February 2013

Schematic design report, coalescing of stakeholders, initial design consensus on site, program, structure type, construction & permitting timeline, and stakeholder responsibility delegation.

March 2013 – June 2013

Compiling design report document, including new section on general design considerations.

Overall, I was surprised by how much of my design services were under the umbrella of translation and facilitation. The design work done in a typical academic studio, designing with computers, pencils, etc., was perhaps 20-30% of my work. The rest was basically offering other design services: of spatial sense, site analysis, construction feasibility, process frameworks, and translation between non-designer and designer: E.g. it was infinitely helpful for me to help the staff of InterImCDA just understand what 300 ft² looked and felt like; or recognize and point out crucial site elements, like the option to integrate the replacement of a failing retaining wall.

Because the project was going to require a team of people: I.e. InterImCDA staff & volunteers, Steve Badanes Design/Build Studio, Americorps, Engineers, etc., it was important someone was looking out for InterImCDA in this sea of teammates, sometimes who spoke a different language or had their own working parameters. Reminiscent of my time in social work, I realized that because I had worked at InterImCDA on other projects, had no financial stake in the Farm and Nature Center project, and was a designer, I was an ideal advocate and facilitator for InterImCDA when they interfaced with design teammates. This was especially important during the final meeting where I felt uninvolved enough in the future of the project to focus on finding the best solutions during disagreements, facilitating between client and teammates.

After the final meeting, a robust consensus on all the basics of pre-design were complete. Although it was clear to me that the final design would be in the hands of the Badanes Design/Build studio in light of the DB studio being an educational, architectural design studio, I still felt I had not done a good job because I had not completed the design. In the end, I recognized this, accepted my role as “Designing the Intermediary”, and compiled the report. Reflecting, I realized that this pre-design focusing on systems, site and programming would ultimately be quite invisible, and likely to receive much less attention than the finished design. However, I felt the pre-design had been incredibly important to the overall, long-term outcome of the project and that the architects would do a better job with structure and detailing the building. It was a moment of dropping the ego, or dropping the urge as mountain climbers would say, “To bag the peak.”

I felt proud to be a Landscape Architect during the process, comfortable with systems work and site work. But even though Steve Badanes was excellent to work with, and deeply values the importance of site, I became more aware of the potential for friction between Landscape Architects/Planners and Architects. For some reason, the building is valued in an isolated context where in reality, especially in site-integrated cases like at DWCG, it is one part of a long process of design and planning: E.g. the fungal fruit of a vast system of mycelium. Personally, I believe that society still struggles to value the invisible, and thus planning and landscape architecture will continue to struggle to be valued. It is important to better market and quantify the benefits of our work, bring visibility to it, and claim credit where credit is due. Though, I enjoyed my ultimately invisible work, and believe that although undervalued, I enjoy immense reward and value in it myself.



