

EMERSON

GOO

LANDSCAPE

ARCHITECTURE

PORTFOLIO

2018

—

2023



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**COVER: East-West
Center, University
of Hawai'i.**

Architecture by
I.M. Pei, gardens by
Leland Miyano.

Digital painting
made for LA 436, a
traditional and dig-
ital media graphics
course.

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BETWEEN THE SCHOOLYARD AND THE PLAYGROUND

HONOLULU, HI



**URBAN
THINKSCAPE**
Transforming Cityscapes into
Opportunities for Playful Learning

Design inspired by the
Community 85th Anniversary Program Working
for Learning & Playful Learning for All

SUPPORTED BY
Hawaii's Department of Education

SPECIAL THANKS TO
Hawaii's Department of Education
for providing the space and resources for this project

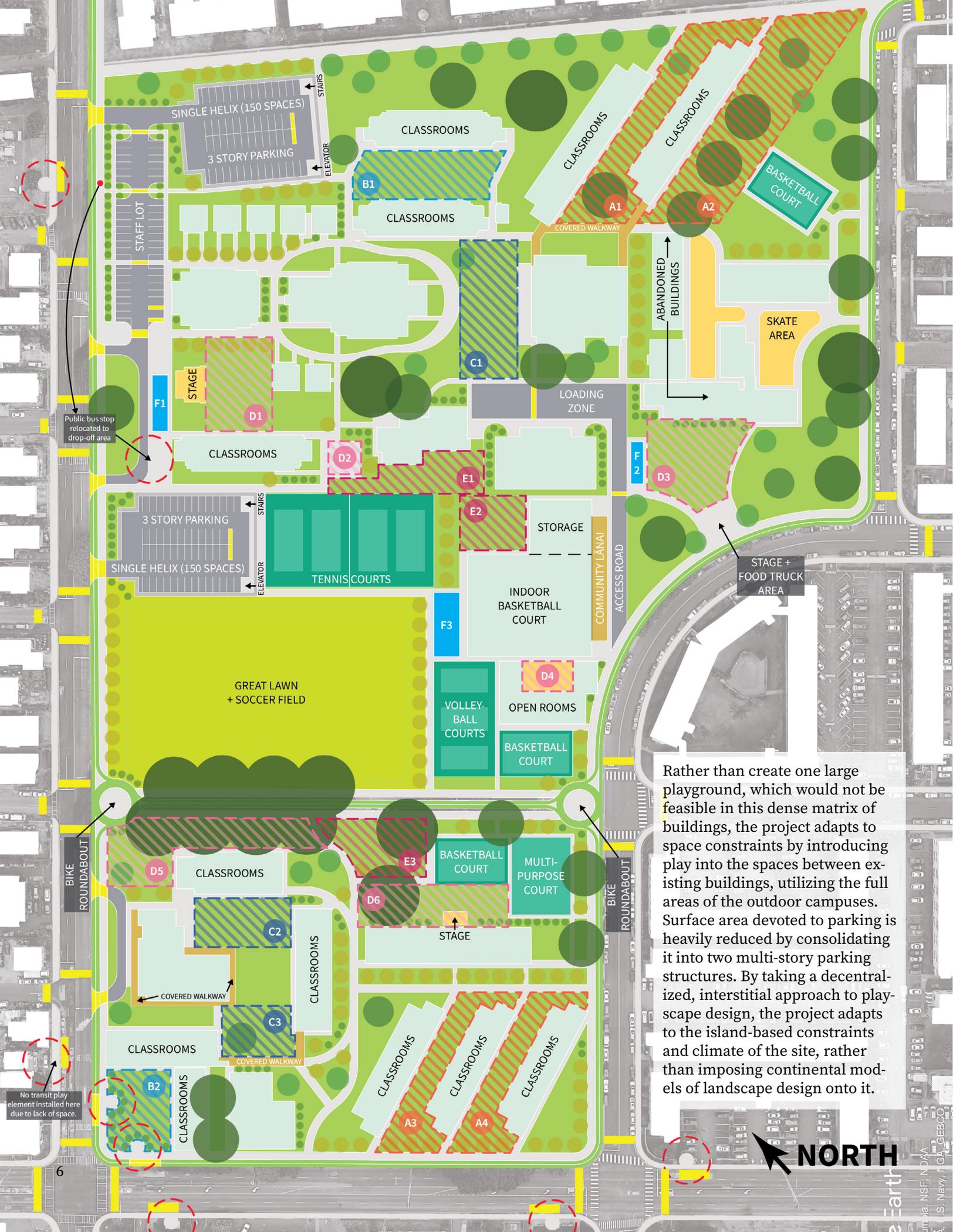
PROJECT PARTNERS
Hawaii's Department of Education
The University of Hawaii
& The City of Honolulu

PLAY
belongs to everyone

Connecting neighborhoods through a playscape spanning two schools, Kalihi Kai Elementary and Kalakaua Middle, and a park, Kalakaua District Park, in Kalihi, Honolulu, Hawai'i. The design makes the campuses and park more playful and accessible for children, while creating circular and functional connections between them.

LA 461 - WINTER 2023 - 5TH YEAR
SENIOR CAPSTONE STUDIO
CÉSAR TORRES-BUSTAMANTE

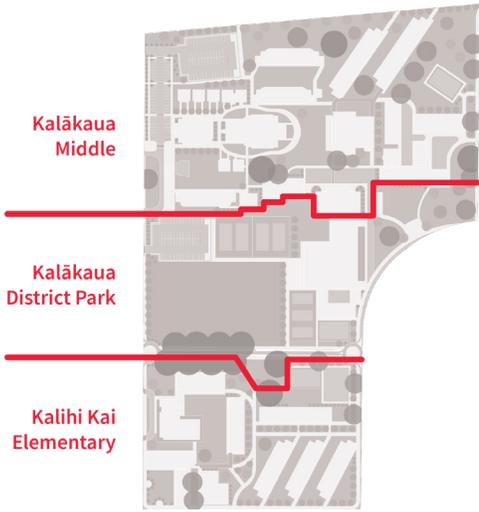




Rather than create one large playground, which would not be feasible in this dense matrix of buildings, the project adapts to space constraints by introducing play into the spaces between existing buildings, utilizing the full areas of the outdoor campuses. Surface area devoted to parking is heavily reduced by consolidating it into two multi-story parking structures. By taking a decentralized, interstitial approach to playscape design, the project adapts to the island-based constraints and climate of the site, rather than imposing continental models of landscape design onto it.

NORTH

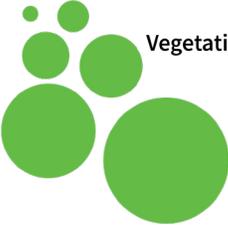
SITE BOUNDARIES

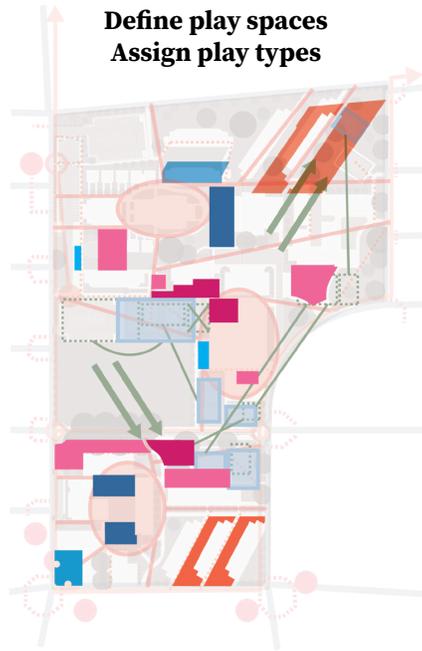
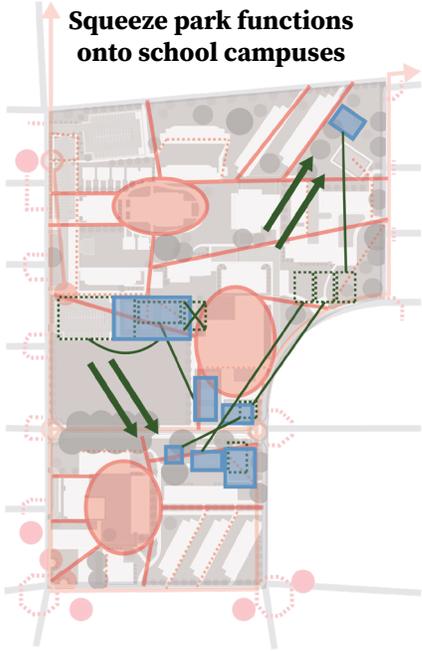
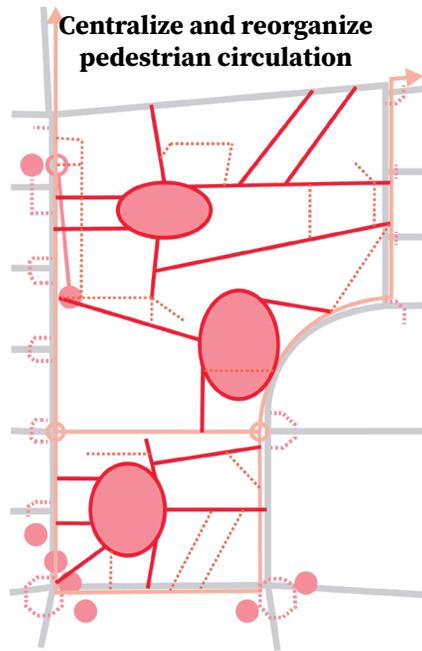
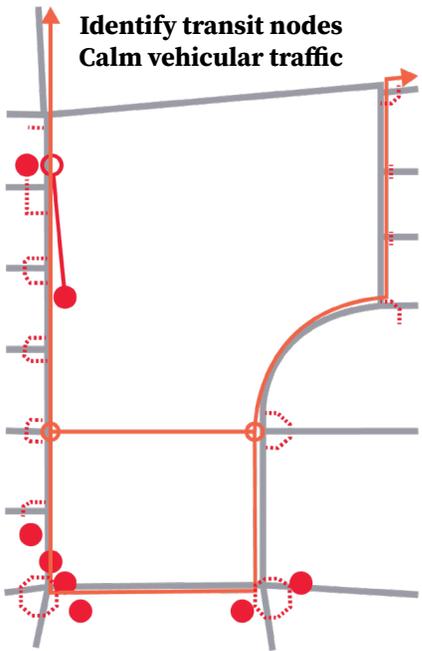


SIMPLIFIED DIAGRAM OF SPACES



LEGEND

-  Location of Transit Play Area
-  Street Crossing
-  Vegetation
- New Buildings**
 -  F1 Bus waiting area and sheltered bike rack
 -  F2 Additional public restroom
 -  F3 Playworker office and play equipment rental



ABOVE: Site plan legend.

FACING PAGE: Site plan, not to scale. Hatched color-coded areas correspond to playscape typology on following pages.

TOP LEFT: Mini-maps. Simplified maps show the new, redrawn boundaries of the schools and park, and a simplified diagram of play spaces for quick reference.

MIDDLE AND BOTTOM LEFT: Diagrams showing the process by which the final site plan was derived from schematics. The overall goal was to maximize the amount of contiguous open space for play while addressing pressing transit and circulation issues.

PLAYSCAPE TYPOLOGY



Classroom Interventions

The skinny space between large classroom buildings is filled in with whimsical or absurdist play structures. School permission required for public use.

A1 & A2 — The Unfinished School

The “skeletons” of unbuilt or demolished buildings from the history of Kalakaua Middle School are erected on a miniature scale. The framework of the buildings are constructed using reclaimed or invasive woods.

A3 & A4 — The Sinking School

Miniature scale versions of the adjacent buildings constructed of reclaimed or invasive woods are “sunken” into the ground, with climbing plants allowed to grow up around them, to mimic the look of an abandoned ruin or an archaeological dig.



Hands-on Education Spaces

Permanent or semi-permanent features enable “learn by doing” outdoor education. School permission required for public use, but may be opened up on festivals or event days.

B1 — School Garden

A school garden with plots for edible crops, ornamental plants, or science experiments. Students take responsibility for maintaining the garden with an instructor’s guidance.

B2 — Mini-Arboretum and Water Sandbox

A lush planting of natives with labeled names serves as an educational tool for plant identification. A large sandbox with a water pump can be used to teach basic water cycle and ahupua’a concepts.



Outdoor Classrooms

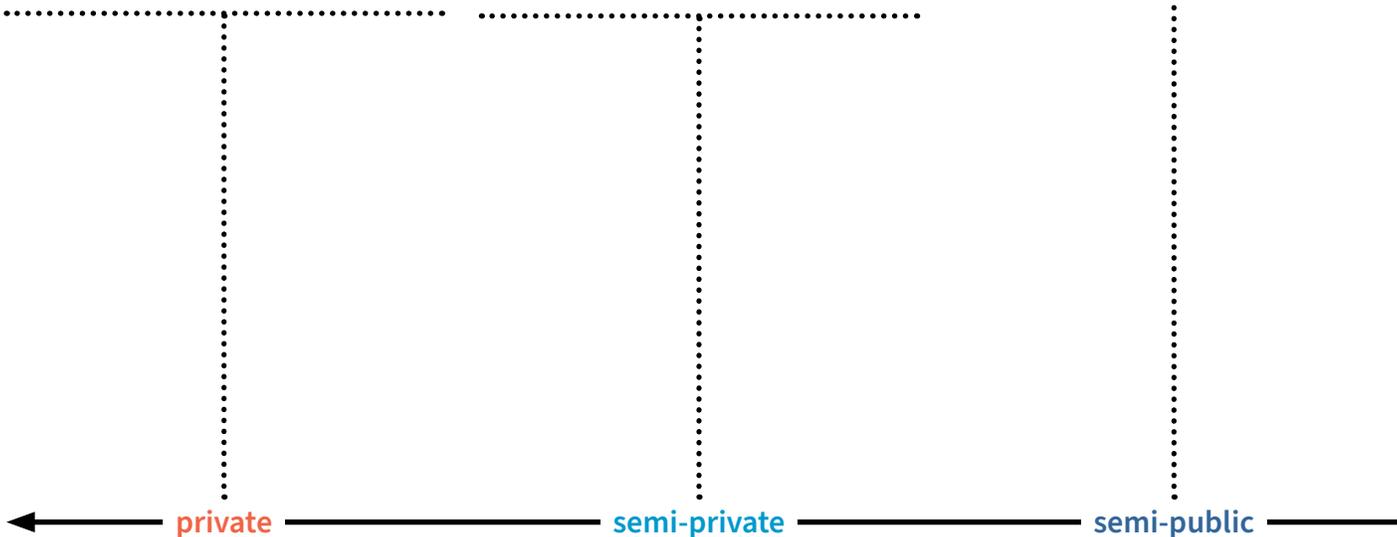
Spaces to hold class outside or simply relax and hang out. Unlike “hands-on” spaces, furnishings are minimal and movable. Accessible to the public outside of school hours.

C1 — Eating and Lounge Area

Tables with ample room and umbrella shade can be used by students to eat or do work outdoors.

C2 & C3 — Shady Areas

Trees and adjacent buildings give these areas plentiful shade. Movable seating, an outdoor podium, and outdoor chalk/pin-up boards complete these spaces.





Passive Play Spaces

Spaces for passive and low-intensity uses. Spaces not on a campus are accessible at all hours, otherwise use is restricted to after school hours.

D1 — Outdoor Stage

Outdoor stage with lawn for performances.

D2 — Student's Grove

This existing patio is blanketed in shade by large trees and boasts student art.

D3 — People's Lawn

A lawn with a baseball-diamond-like seating structure, adult exercise and play equipment, and a stage that doubles as an area for food trucks and farmer's markets.

D4 — People's Plaza

A cozy plaza for multi-purpose use. The doors of adjoining buildings are replaced with sliding doors to create a fluid transition between indoors and outdoors.

D5 — Monkeypod Promenade

Under the shade of large monkeypods, visitors can stroll around a rock garden and an ephemeral stream.

D6 — Outdoor Stage

Outdoor stage with lawn for performances.



Active Play Areas

Spaces for active, risky, vertical, and/or high-intensity play. All spaces are accessible at all hours.

E1 — Accessible Playground

This playground contains a range of accessible play equipment, in accordance with universal design principles.

E2 — Adventure Playground

This playground boasts loose parts, construction equipment, and large climbing structures. It is staffed by playworkers and can only be accessed during supervised hours.

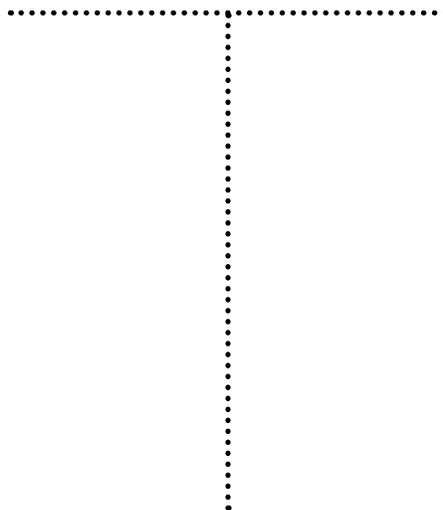
E3 — Early Childhood Playground

This playground contains active equipment suitable for use by very young children, and ample seating and comfort areas for parents.

A unique approach to programming was developed for the site. Instead of designing individual spaces, the program is grouped by actions and intensities of play, leaving the final implementation flexible. The most desired play activities for children were researched, as well as the kinds of play equipment appropriate for different age groups. Based on this research, five different categories of playscapes were developed.

Each category has a degree of access associated with it, ranging from being only accessible by students, faculty, and other school personnel (except if a use request is approved), or freely by the public at all times. Some spaces are reserved for the school during school hours and open to the public outside of school hours.

These playscape types correspond to the color-coded areas marked on the site plan (see previous page spread).



public / semi-public

public

Degree of Access

SITE CONTEXT



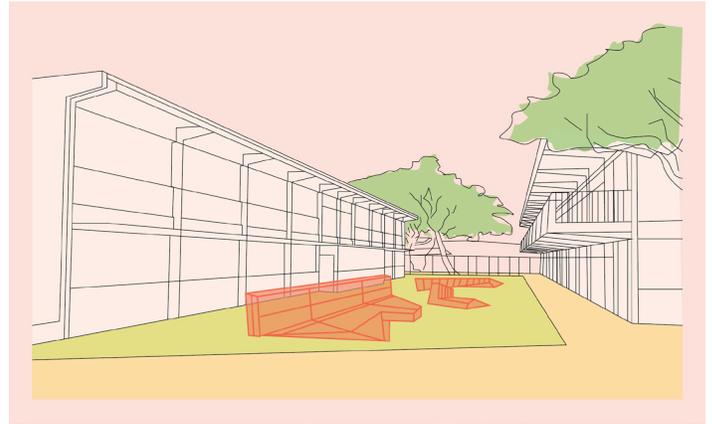
The project establishes a network of smaller play areas linked to each other: most on-site, and some off-site such as pocket parks in suburban blocks, play elements near transit stops, and temporary interventions like pop-up playgrounds. Proposed additional mini parks around the site were also incorporated from the current Kalihi Transit-Oriented Development Plan.



SELECTED PLAY ELEMENTS

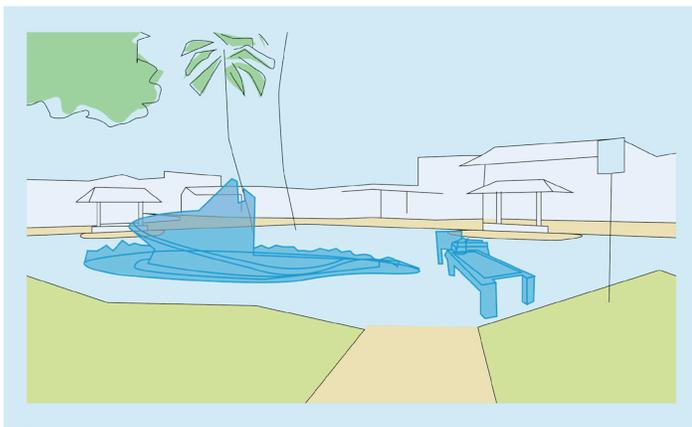
The Sinking School

A3 A4



Mini-Arb and Water Sandbox

B2



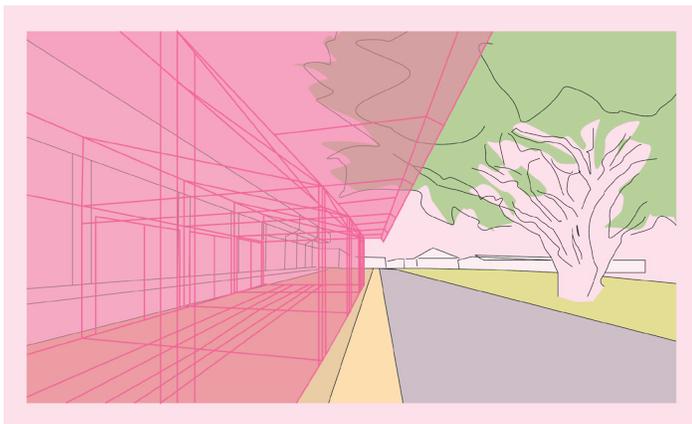
Eating and Lounge Area

C1



People's Lawn

D3



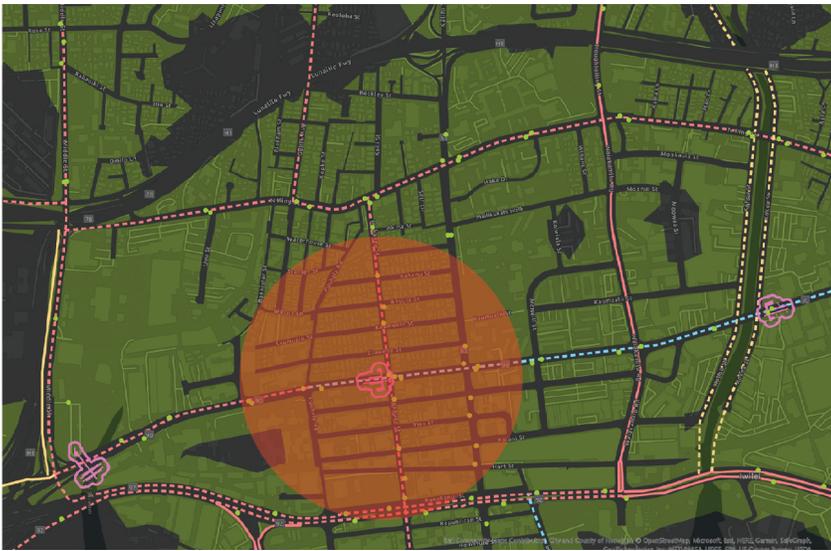
Adventure Playground

E2



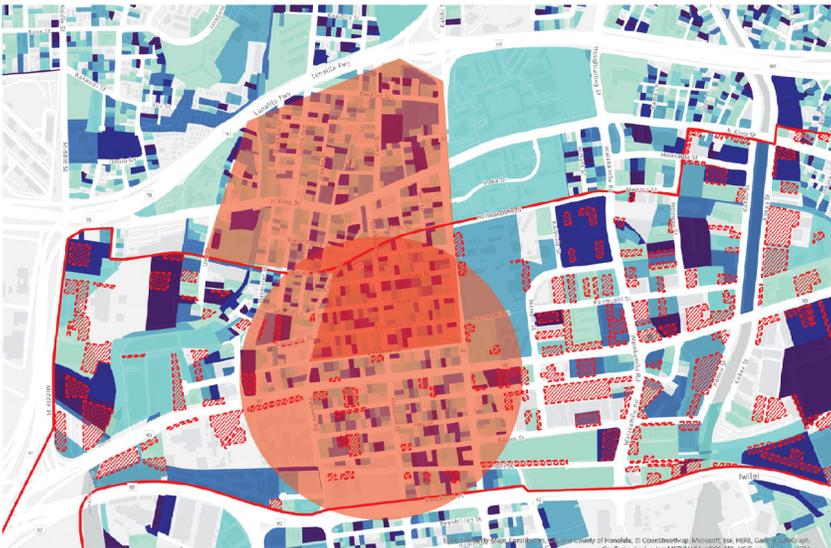
Implementing a plurality of play theories in the landscape, especially on a school campus, can unsettle the strictly regimented and standardized nature of public schooling. Play is a subversive tool, which can empower children to advocate for themselves against the authorities that control them. I drew heavily on ideas from Colin Ward, a so-called “anarchist planner” that believed in dissolving boundaries between the school and the wider community. In the end, perhaps what I am really doing with this project is not designing playgrounds, but reinventing the form and purpose of the school.

Transit



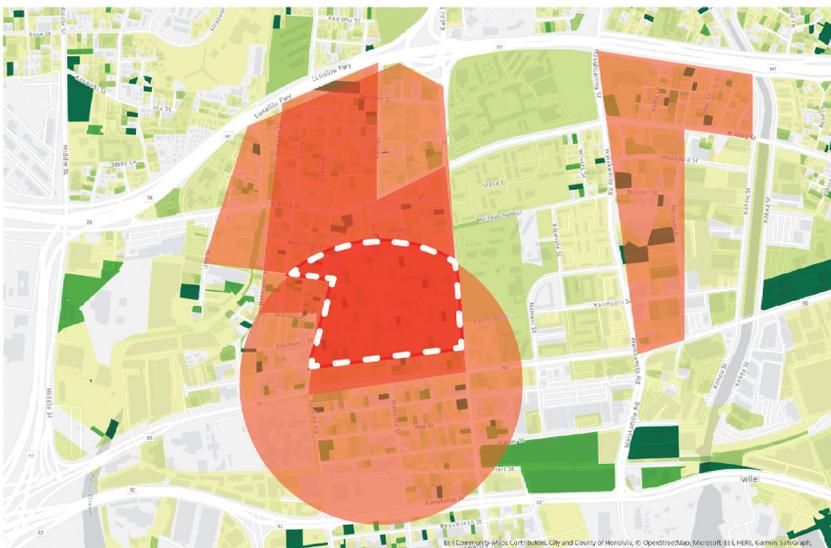
- PROPOSED BIKE FACILITIES**
- Lane
 - Path
 - Route
- EXISTING BIKE FACILITIES**
- Lane
 - Path
- OTHER SYMBOLS**
- Bus Stops
 - 1/4 mile walk to bus stop
 - Rail Transit Stations

Impervious Surfaces



- Existing Car Parking
 - TOD Plan Boundaries
- IMPERVIOUS SURFACE PERCENTAGE**
- 0 - 50
 - 50 - 60
 - 60 - 70
 - 70 - 80
 - 80 - 90
 - 90 - 100

Canopy Cover



- TREE CANOPY PERCENTAGE**
- 0 - 10
 - 10 - 20
 - 20 - 30
 - 30 - 40
 - 40 - 50
 - 50 - 100

POP-UP PLAY SITE ANALYSIS

A detailed site analysis of the surrounding neighborhoods, including proximity to transit, canopy cover, and impervious surface analysis was performed to find the most suitable place to site a pop-up playground experience.

Pop-up playgrounds should be sited by transit stations or in areas that are a short walk to transit stations, and near areas where traffic is calm. The future development of rail stations should also be observed. They should not be located in areas with poor drainage/impervious surfacing and not in areas with many parking lots. There should be ample shade near the playground, either from shade structures or large trees, which may be found on individual properties.

TRANSIT: All data sourced from O’ahu Bike Plan and Honolulu Open Geospatial Data.

IMPERVIOUS SURFACES: Impervious surface percentages for tax parcels and TOD boundary sourced from Honolulu Open Geospatial Data. Parking lot data sourced from a Penn State Geodesign project by Daniel Call, Kirsten Eaton, and Graham Mills.

CANOPY COVER: All data sourced from Honolulu Open Geospatial Data.



NORTH

juxtaposing the natural and artificial — the “old” and “new” oakland.

individual parts that work as an ensemble, like a jazz combo.

open, reconfigurable multi-use spaces - because improvisation is important.

14 SF Bay Trail (two-way bike lane)



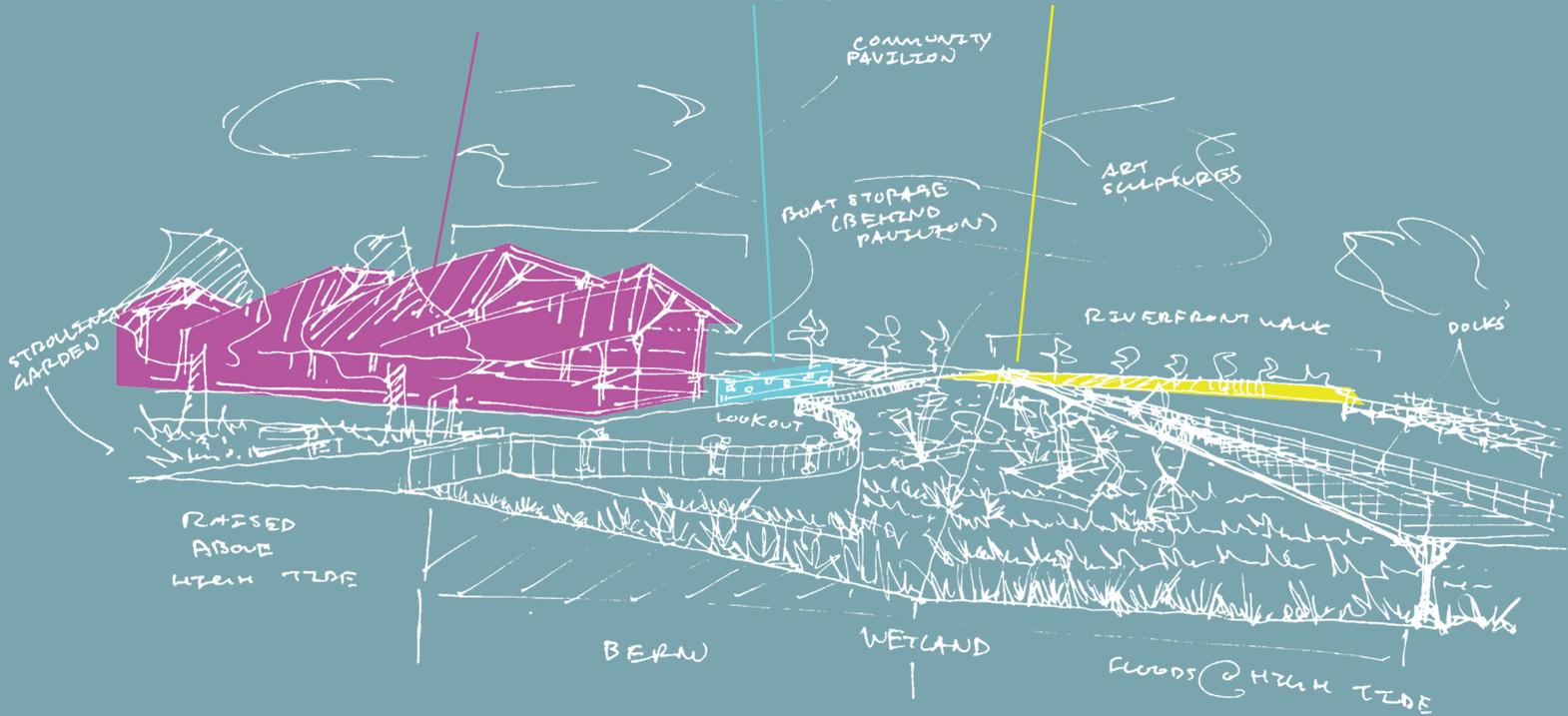
BLUESHIFT: REMEMBERING OLD OAKLAND

OAKLAND, CA

LA 404 - WINTER 2022 - 4TH YEAR
CULTURAL ENVIRONMENTS STUDIO
ELLEN BURKE

ESTUARY PARK CULTURAL CORE SIGNAGE ELEMENTS

curtain pavilion / wetland signage / riverfront history walk



Estuary Park sits on reclaimed land in the Oakland Estuary, adjacent to the biggest new developments in Oakland's recent history. Cut off from the city by the freeway that bisected its old downtown, it seems like a site that would mostly be used only by nearby residents in Brooklyn Basin. How can it engage the wider city and culture? This design does so by embracing the history of "Old Oakland", especially its heritage as a birthplace of West Coast jazz. Built up around a new multi-use pavilion and the existing Aquatic Center, it restores the wetland edge to the south end of the site. Cultural signage provides information on jazz and waterfront history. A long concrete deck serves as a main axis, and public docks are consolidated into one large dock that serves as a communal space.

ABOVE: Section-perspective showing locations of cultural signage.

FACING PAGE: Site plan, not to scale.

BOTTOM: Section of docks over wetland, overlook, and pavilion.

SECTION A - A'

MULTI-USE PAVILION
(shown with interior curtain drawn)

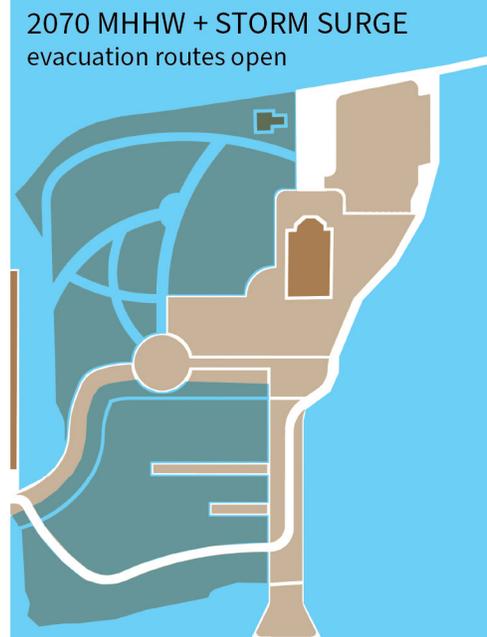
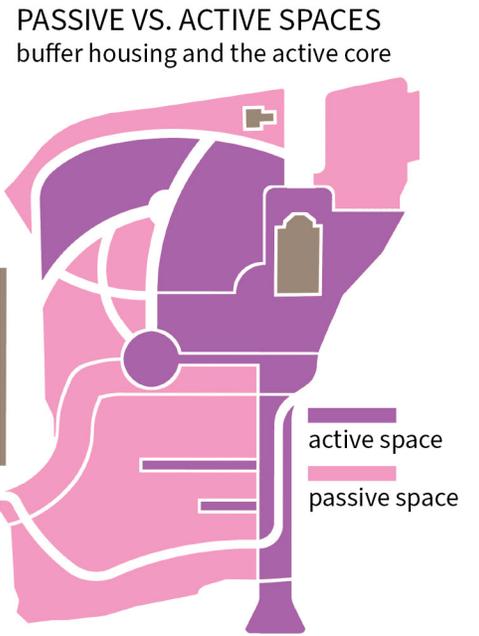
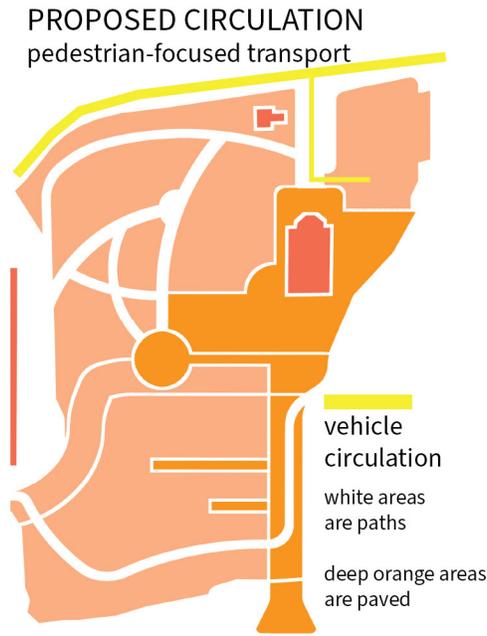
concrete deck above grade
(level with FFE of JLAC)

15

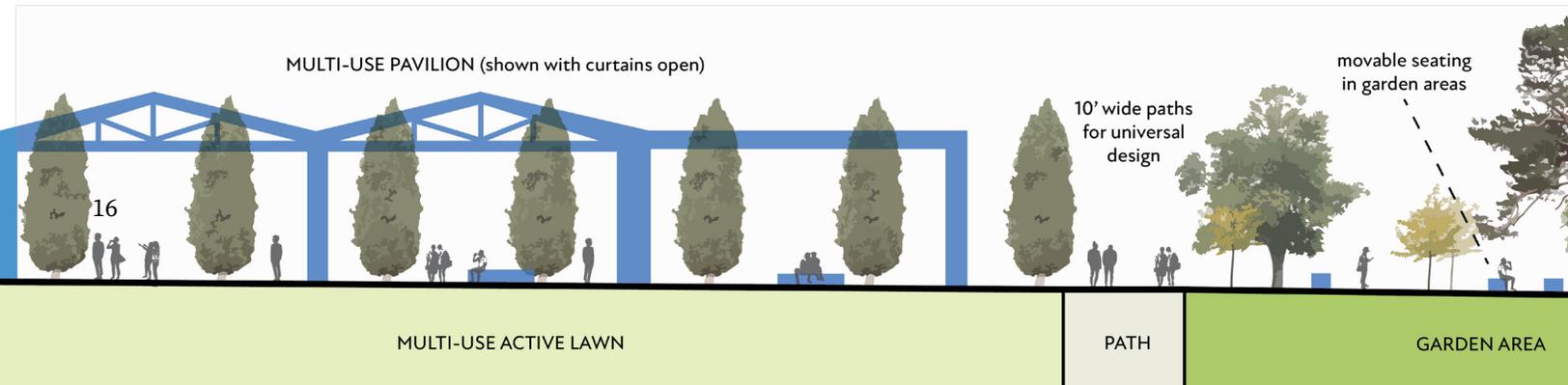


scrap sculpture
created by
local artist

GENERATIVE DIAGRAMS



SECTION B - B' Section from condos to active multi-use lawn.

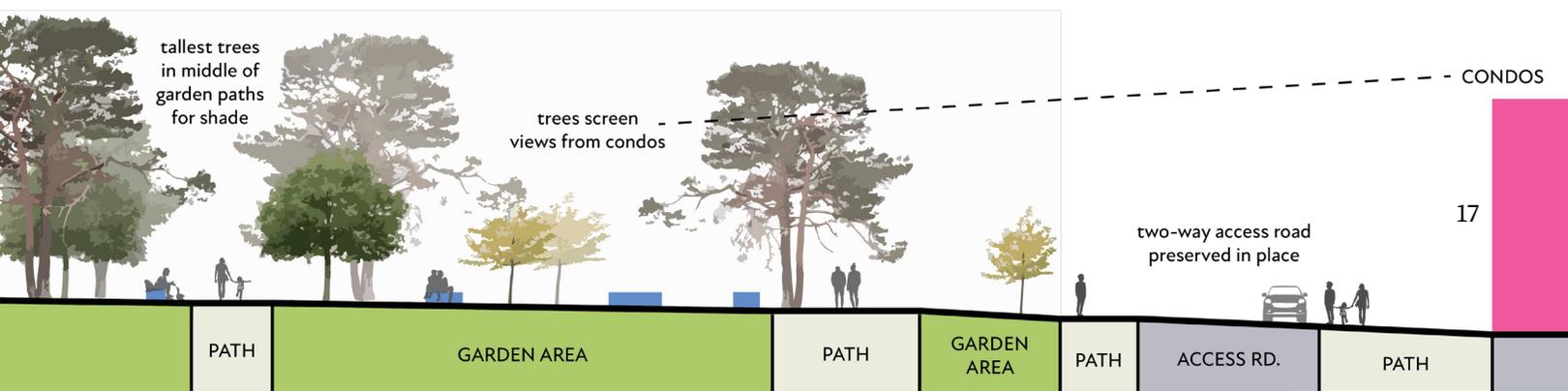
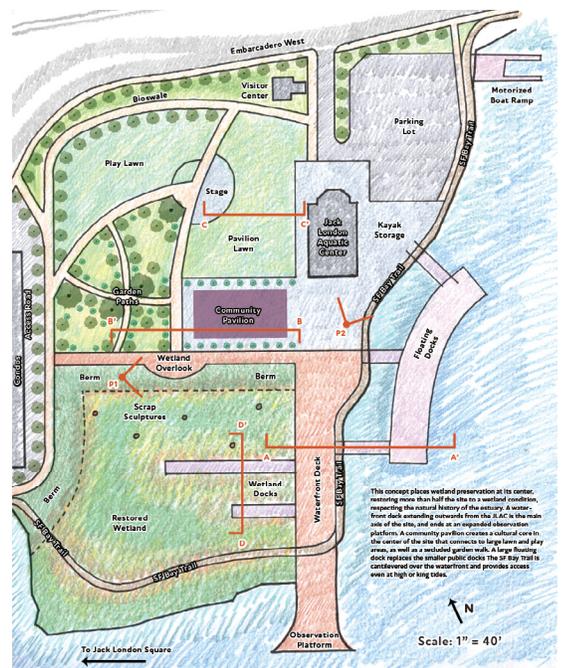
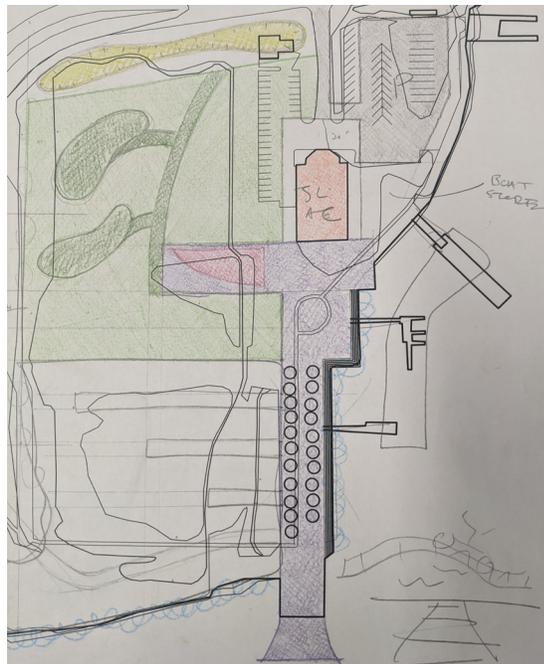


Estuary Park will be underwater in the future, so this design has long-term sustainability in mind. A berm raises the largest paved areas of the park above an estimated 2070 storm surge so that it can continue to be used as a public dock, even as lawn areas eventually succumb to saltwater intrusion. The SF Bay Trail is raised above grade and routed over the wetland, and can serve as an evacuation route in case of flooding.

The southernmost end of the site is inundated year-round, whereas the tidal marsh will initially start off partially flooded and gradually transition to fully flooded over 50 years. Existing properties not built with sea level rise in mind will eventually need to be abandoned during managed retreat from the shoreline in the future.

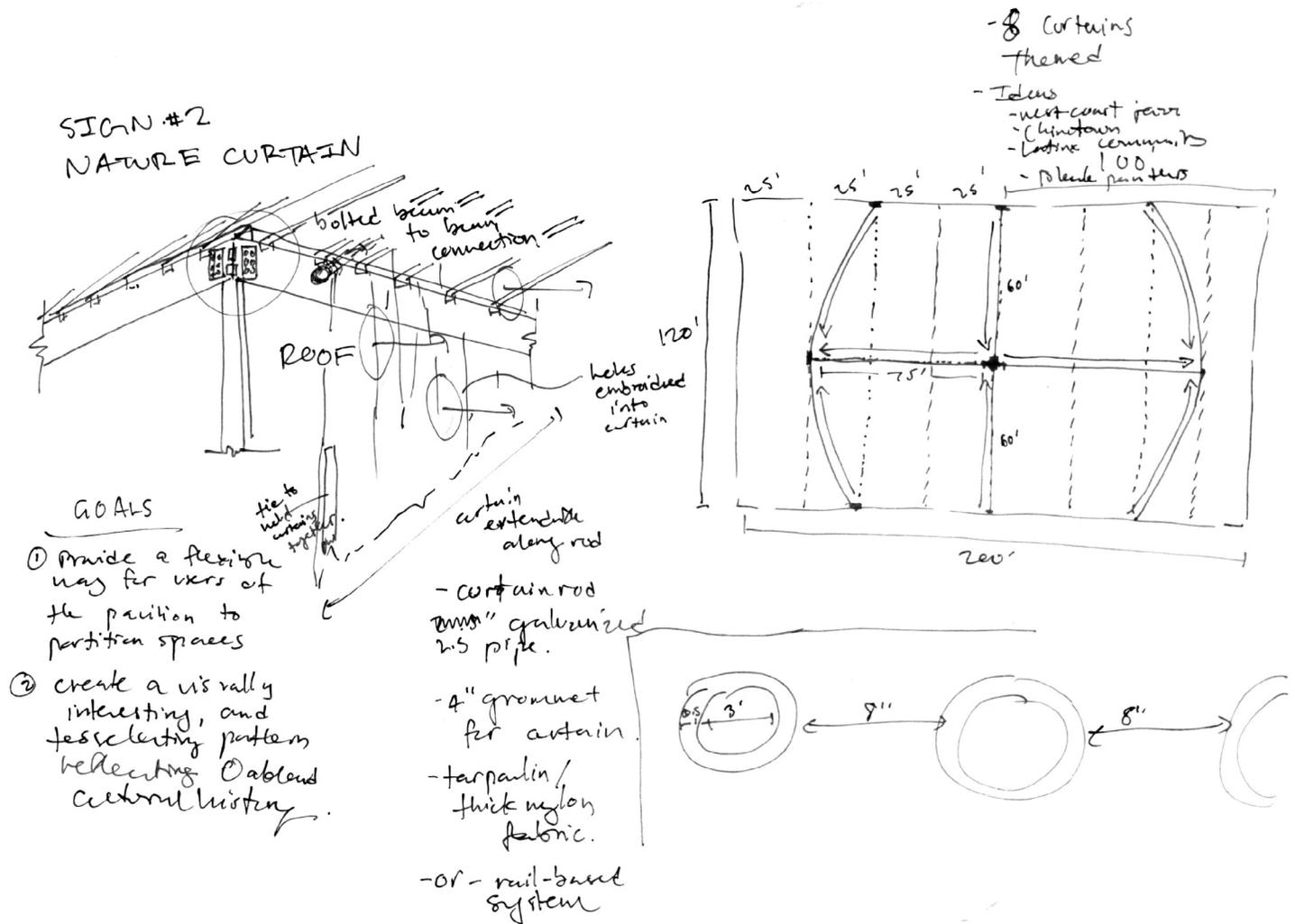
PROCESS DRAWINGS

Left drawing shows an early sketch, with major areas of site identified. Right drawing shows schematic site plan.

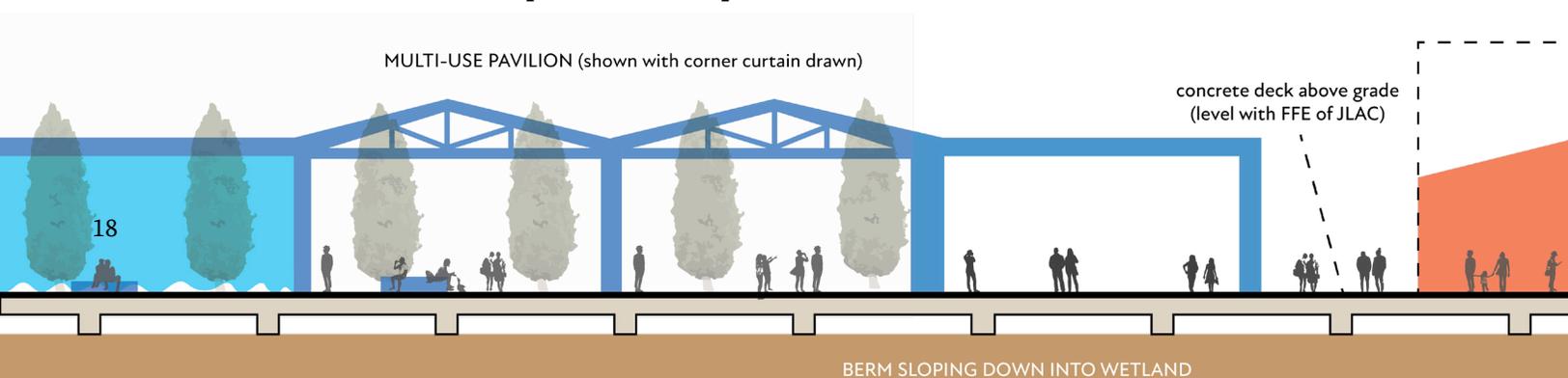


CURTAIN FABRICATION

I designed a curtain installation for the multi-use pavilion to divide the space in a flexible and interactive way. The pavilion can be reconfigured for multiple uses by different groups occupying the space. In addition to designing the curtain layout, I created a spec sheet and conducted research into how the curtains would be constructed and installed. I had to figure out how the curtain would mount to the steel trusses, the type of track and length of track needed, the fabric and its yardage and weight, the pulley system, and the graphic design of the curtains themselves.

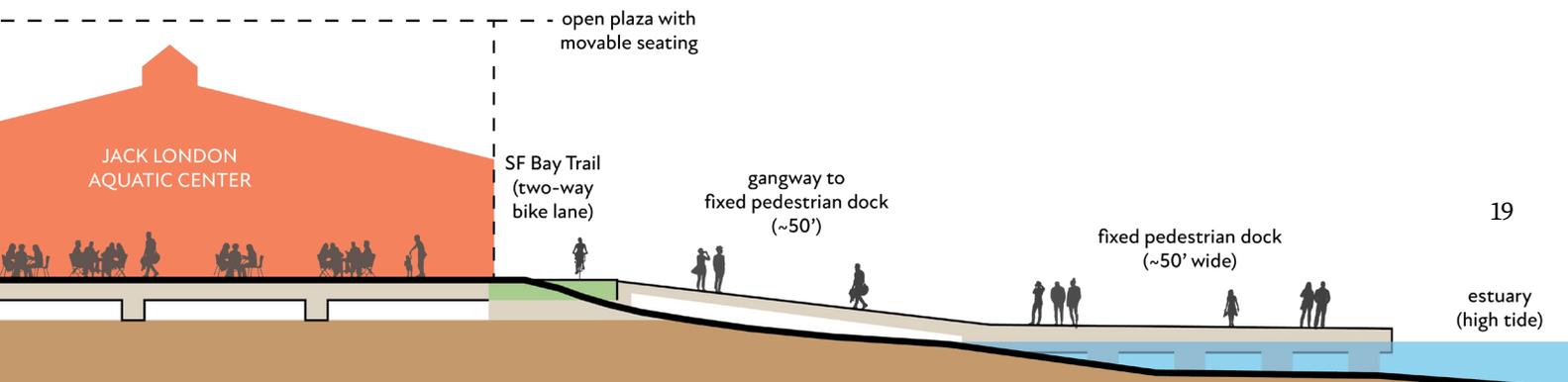
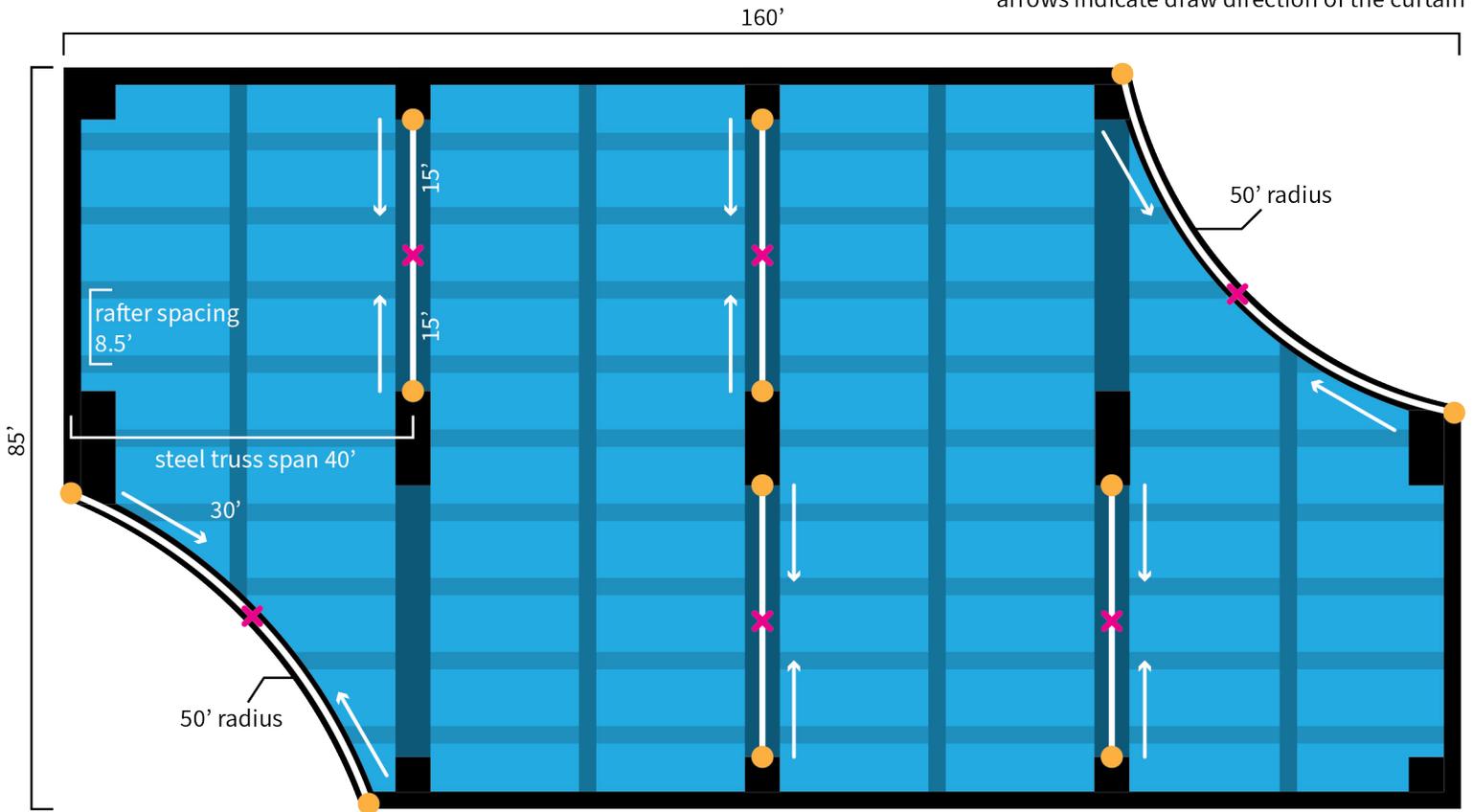


SECTION C - C' Section from pavilion to fixed pedestrian dock.



CURTAIN INSTALLATION PLAN AND ELEVATION

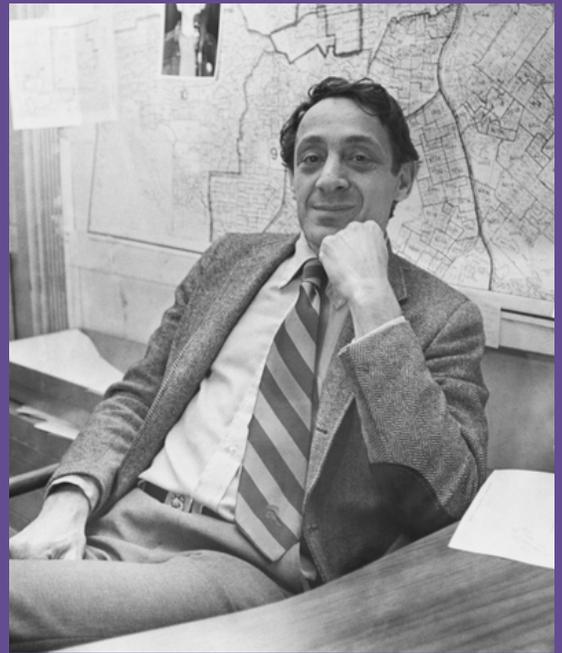
white lines indicate curtain track
 orange dots indicate connections to columns
 magenta Xs show terminal end of track
 arrows indicate draw direction of the curtain



UNREELING THE PAST: HARVEY MILK PLAZA

SAN FRANCISCO, CA

Harvey Milk's premature death turned him into a political icon who fought fearlessly for LGBTQ+ rights, but also froze him in time as an image. Today, we remember him for what he stood for, but do we really know the person he is? My redesign of Harvey Milk Plaza in San Francisco's Castro District considers the question of what it means to embody Harvey's life in a landscape design without resorting to images of him. Challenging the perception that a public monument should be unproblematically about visibility, this design speaks louder for what it does not show.



LA 404 - FALL 2021 - 4TH YEAR
CULTURAL ENVIRONMENTS STUDIO
GRETCHEN STRANZL MCCANN



SITE ANALYSIS

NOT TO SCALE

TOP LEFT: Harvey Milk. How can we honor him without cheapening his image? Photo courtest of the Bettmann Archive/Getty Images.

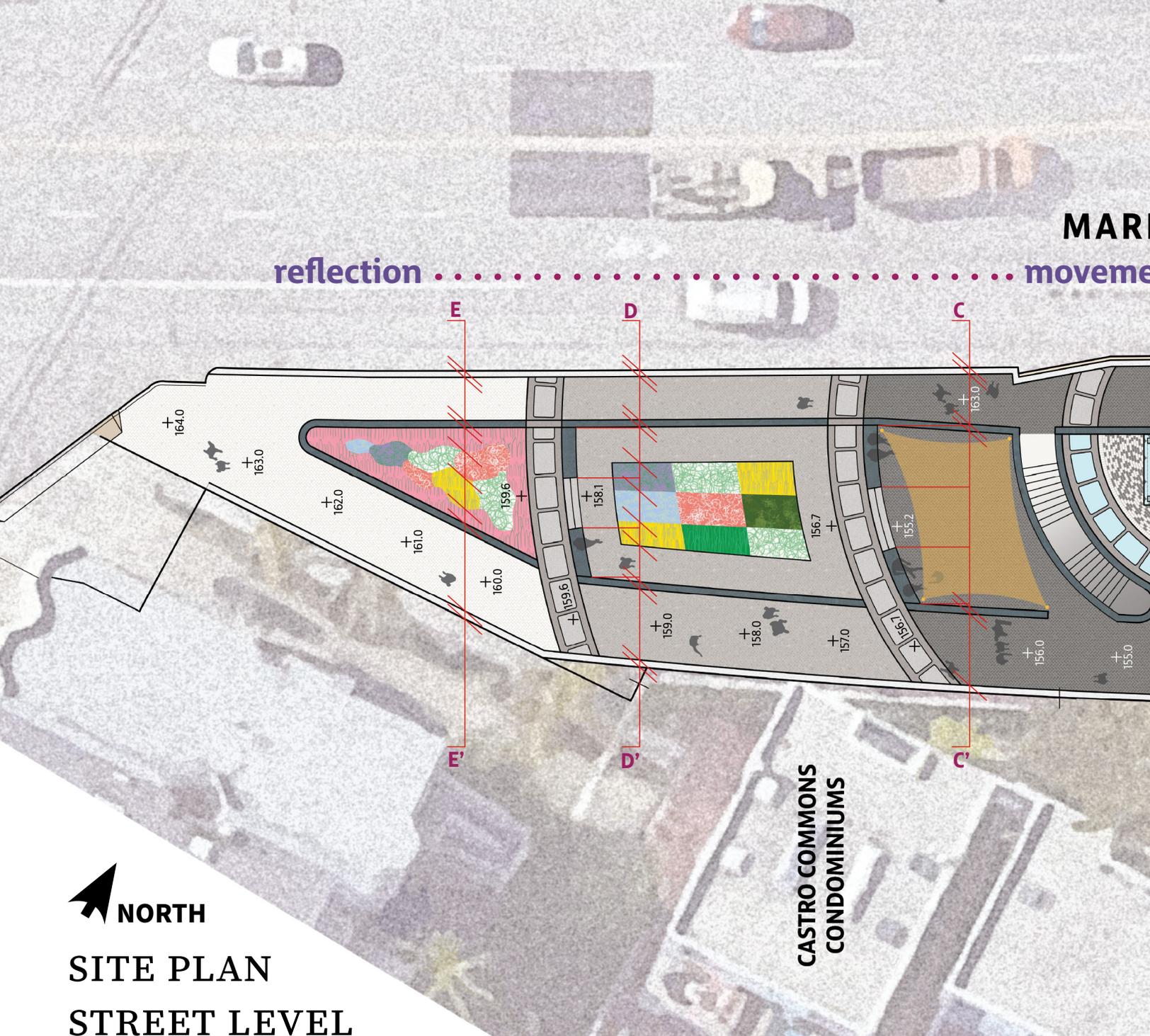
BOTTOM LEFT: Perspective rendering. Shows the central elevators and iconic flag.

RIGHT: Composite site analysis. Recommendations were based on four composite factors: light/wind/slope, existing vegetation, existing utilities and cultural elements, and circulation.

RECOMMENDATIONS FOR HARVEY MILK PLAZA

- 1. WIDEN** the narrow path along the north edge of HMP leading to the bus stop
- 2. PRESERVE** the flagpole in place and do not overuse the flag motif; **RETAIN** historic streetlights on site
- 3. AVOID** full sun plants along the shaded south edge and at the concourse level
- 4. ACTIVATE** the west side for active users moving through the plaza, and the east side for passive users staying in the plaza
- 5. PLANT** tall shrubs, climbing vines, or trees at concourse level to soften concrete edges at street level
- 6. OPEN** space near entrances to condominiums to avoid crowding
- 7. REMOVE** escalator and group stairs around proposed elevator





NORTH

SITE PLAN

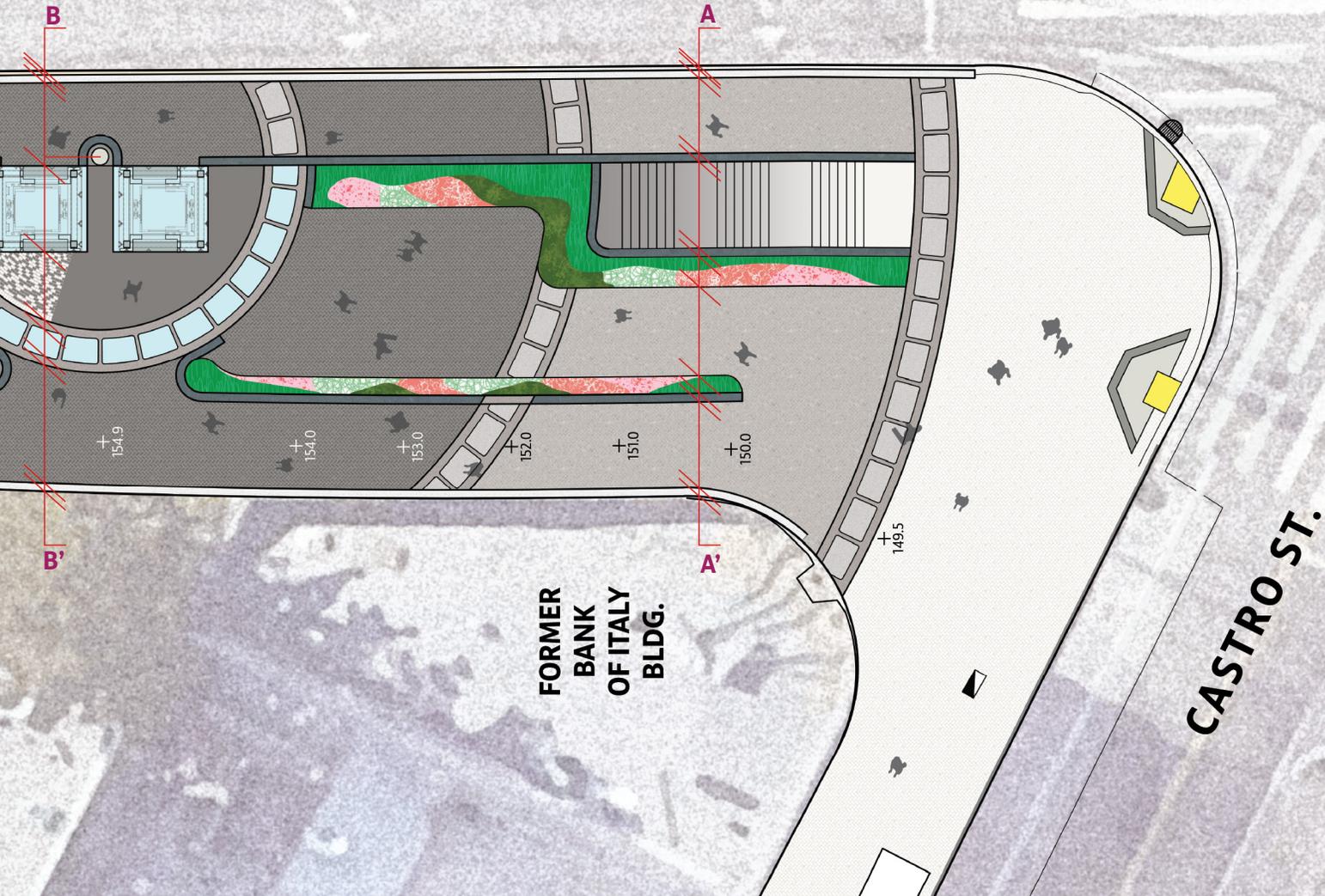
STREET LEVEL

“Unreeling the Past” pays homage to Milk’s love of film photography and his former occupation as a camera shop owner. Concentric rings of concrete “film strip” pavers, etched with artwork representing Harvey’s life, ring the center of the plaza, which contains double glass elevators to all levels of the plaza. At the concourse level, the circular motif is repeated in rainbow-colored terrazzo paving. Sunken terraces with seat walls on the west end create outdoor rooms that represent the Castro’s gay culture and history.

As users move inwards, the plaza shifts from a more reflective space to a more active one, populated mainly by transit riders. At the far west end of the plaza is a satellite pink triangle garden, meant to complement the larger Pink Triangle plaza across Market Street. The middle terrace contains a rectangular planting bed reminiscent of AIDS quilts, to be used and maintained as a community garden space.

MARKET ST.

ent / active passive



The lowest plaza is bordered by a tall wall which houses the spiral stairs from Market St. down to the concourse level, and can serve as a community theater or projection space for films. A removable shade sail can be unfurled when this space is being used for events. At the concourse level, a homeless help center is proposed that will contain a community fridge, medical supplies, and health checkup and harm reduction services at scheduled times.

The very center of the plaza is also bordered by a film strip paving pattern, but the images are etched in translucent glass that lets in light to the concourse level. The paving detail contains a speech by Harvey encoded in Morse code, a homage to his service in the navy, and a way of incorporating his speech into the site itself. As LGBTQ+ individuals still face oppression and remain closeted, this message hidden in plain sight serves as a subtle reminder of hope.

SECTIONS



Looking towards Jane Warner, showing elevator, central hub, and glass film strip detail



Looking towards Jane Warner, showing stairs from plaza to concourse



Looking towards Collingwood St, showing lowest sunken terrace and retractable shade sail



Looking towards Collingwood St, showing middle sunken terrace with green wall and AIDS quilt garden



Looking towards Collingwood St, showing top sunken terrace with Pink Triangle garden

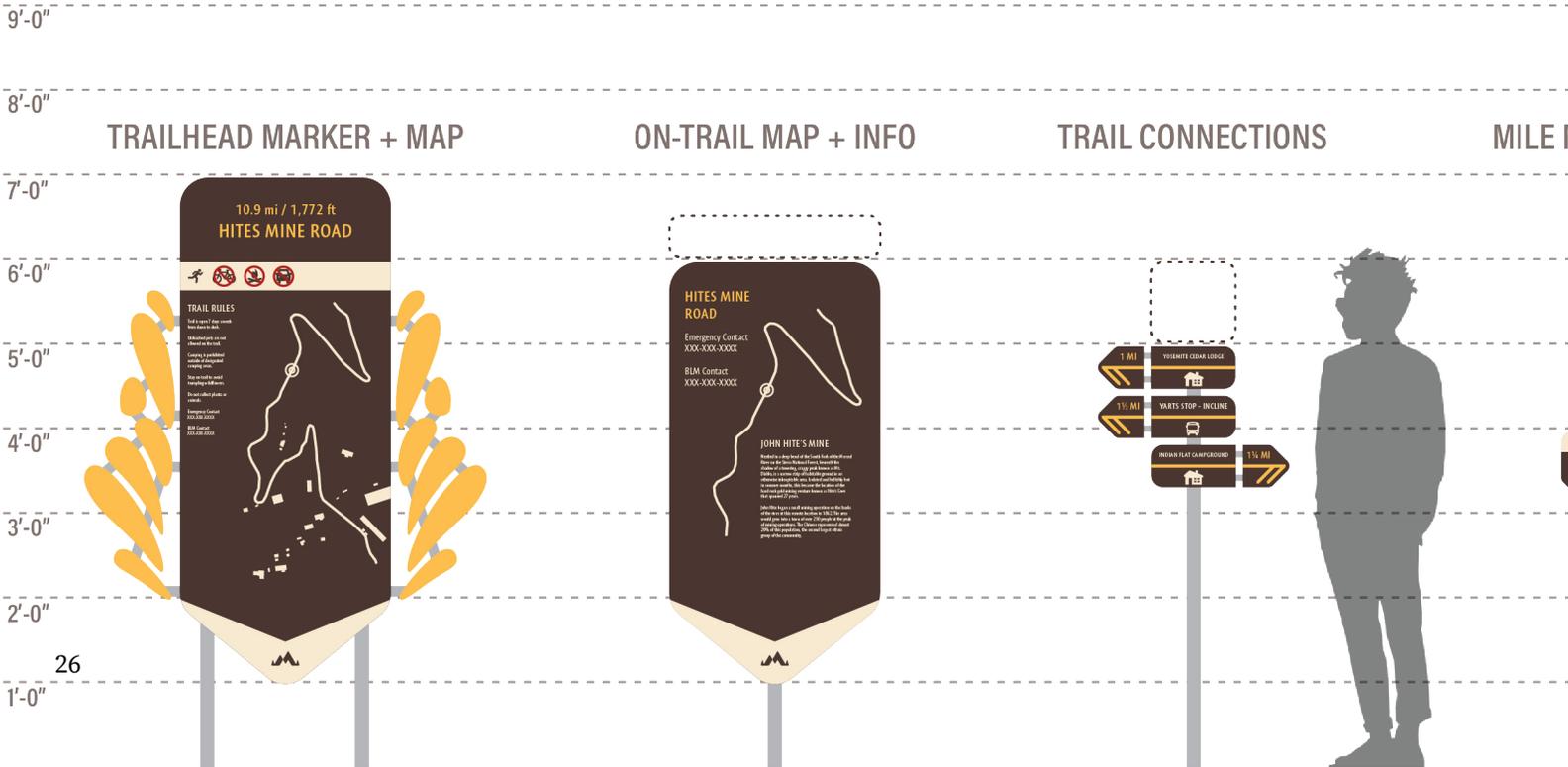
SIGNS OF LIFE ALONG THE MERCED

MARIPOSA COUNTY, CA

The Merced River Trail runs from Yosemite National Park to destinations all over Mariposa County. As a Wild and Scenic River, the Merced should be a valuable asset for Mariposa County, but sees little use due to poor maintenance and a lack of creative placemaking to draw visitors and residents alike to the many trails and recreational experiences it has to offer. Residents of Mariposa County want to see spaces that highlight the diversity of cultural programming in the county, from arts and crafts to historical exhibits to performances and festivals.

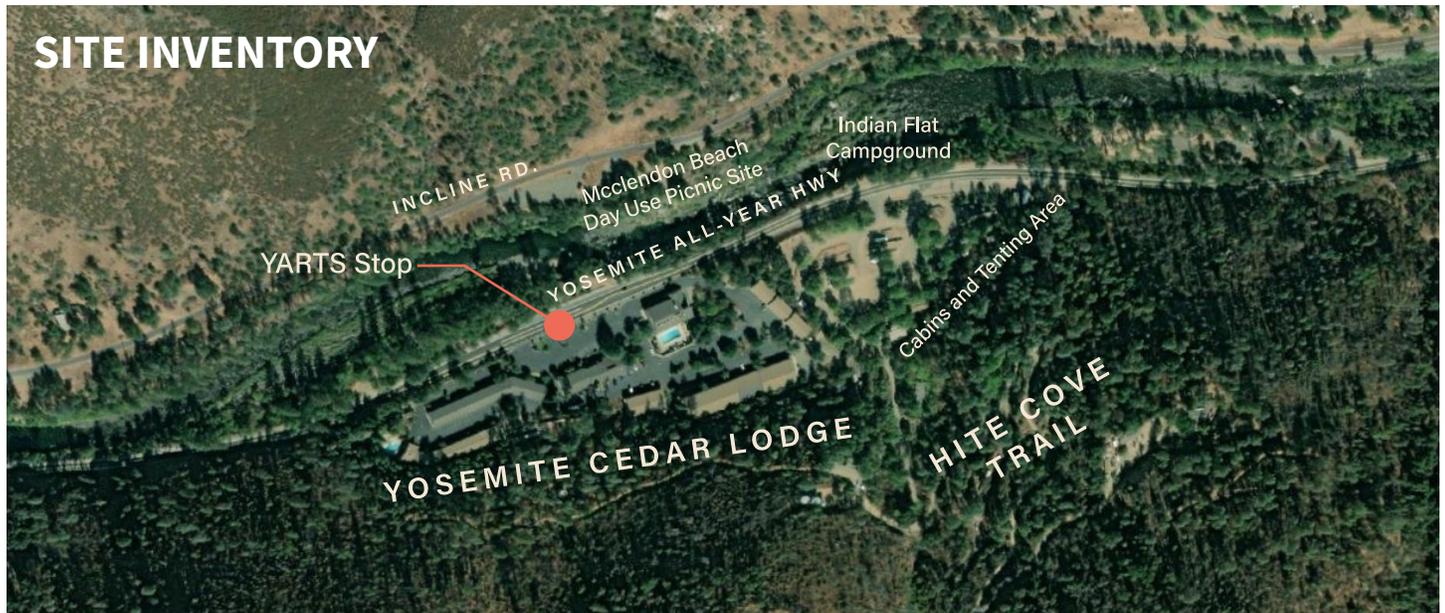
As part of a contribution to the Green New Deal Superstudio, I created a plan for a new trailhead at Hite Cove, and a system of signage to give the Merced River Trail a unique graphic identity. I worked with representatives from the Mariposa Arts Council and Planning Department to align the graphic design with their future outlook for the community. The new site plan integrates public and private space on the grounds of the Yosemite Cedar Lodge, and can serve as a case study for further signage implementations at other sites along the Trail.

LA 403 - SPRING 2021 - 3RD YEAR
NATURAL ENVIRONMENTS STUDIO
MIRAN JUNG DAY



Recommendations for Site:

Connectivity between the lodge and the trail should be improved. Circulation should be added between the YARTS Stop and the trailhead which bypasses the lodge so that pedestrian and vehicle traffic are kept separate. Signs which orient visitors to various lodge amenities should be added in visible locations.



Yosemite Cedar Lodge
 Bus Parking
 Free Parking
 Outdoor Lounge
 Outdoor Pool
 YARTS Stop

McClendon Beach Day Use
 This beach is not accessible from the other side of the river, and should be left alone as it is reserved for locals of El Portal.

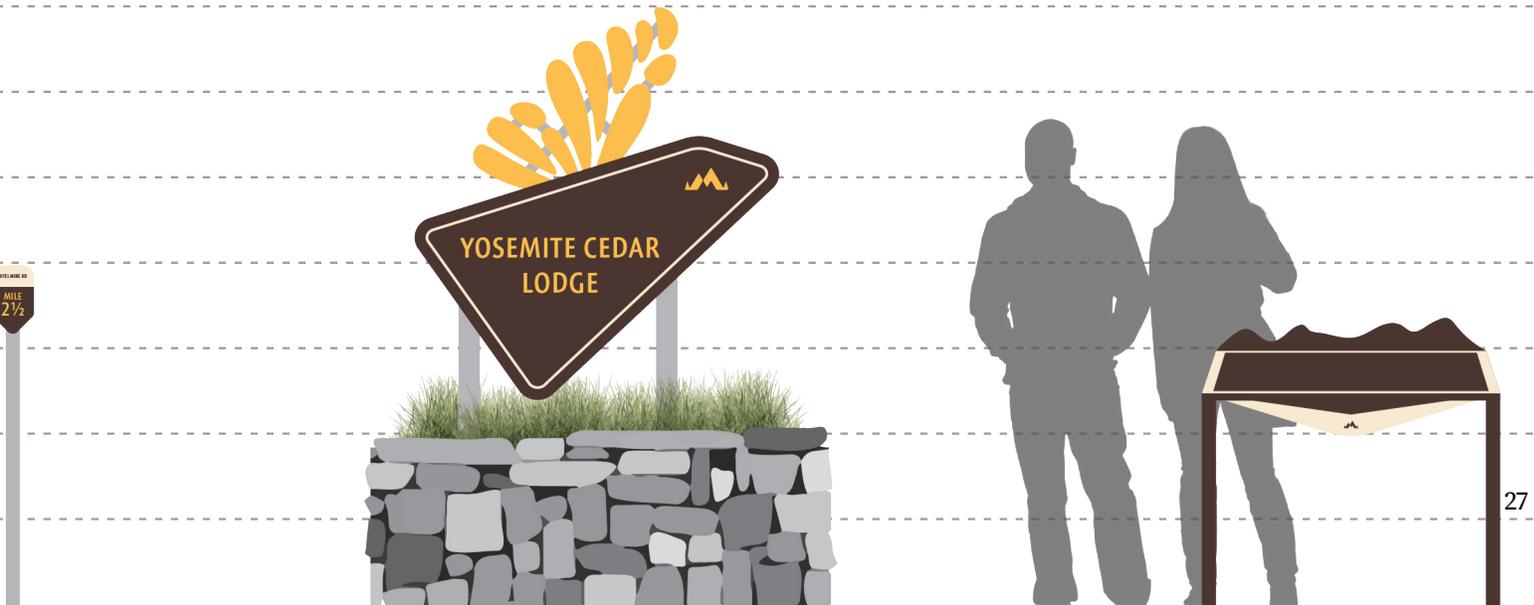
Indian Flat Campground
 25 RV Sites
 25 Tent Sites
 One tent cabin
 Two wood cabins
 Pool (shared with YCL)

Hite Cove Trail
 The trail terminates at Redbud Lodge near Briceburg. There are spectacular wildflower displays in spring. The meeting of the south and central forks of the river is visible from the trail. It is moderately strenuous. The total elevation gain is 100 feet and the trail is around 4 miles long for a round trip (if the entire length is hiked). It is single-track only and can be dangerous if crowded.

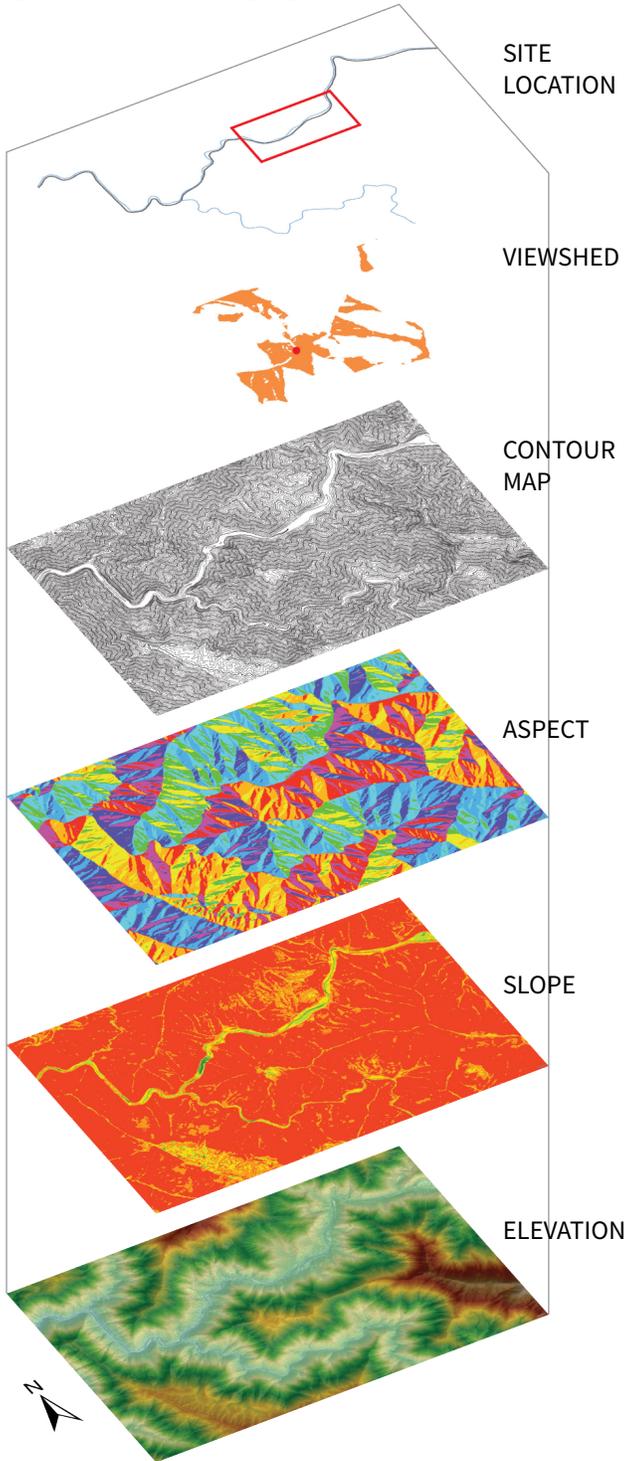
MARKER

YARTS STOP SIGN

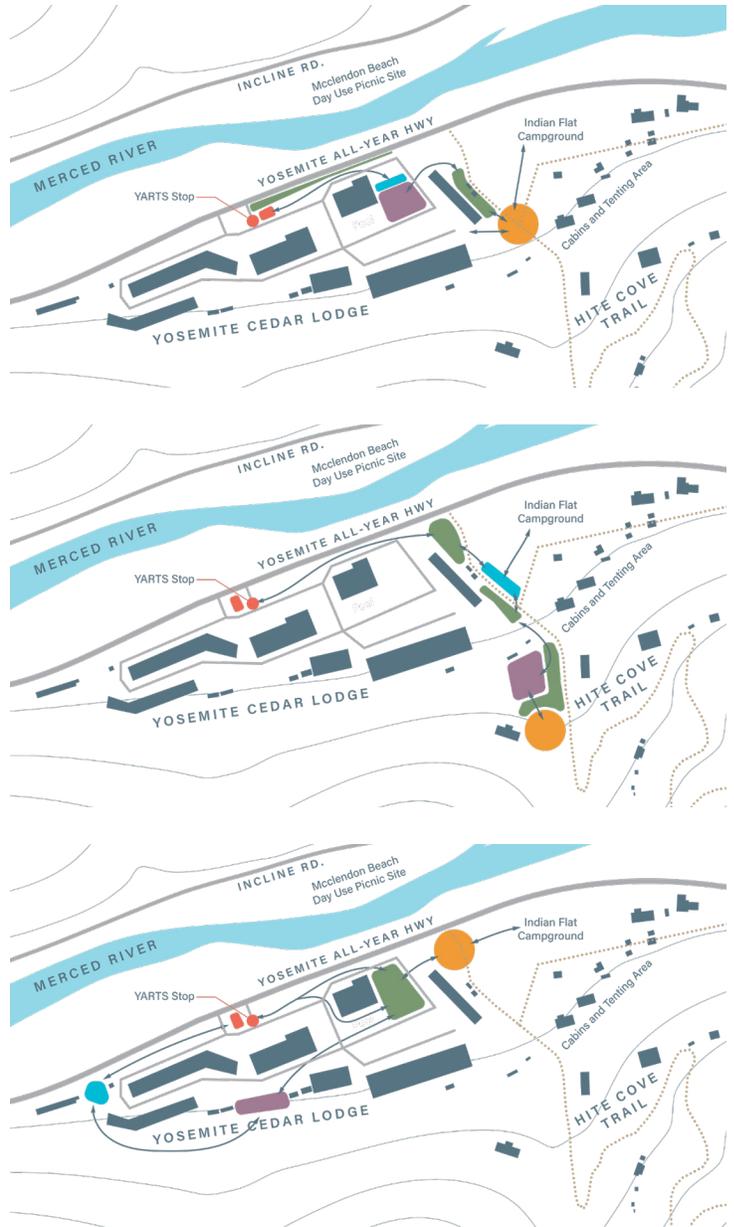
INTERPRETIVE SIGN



SITE ANALYSIS



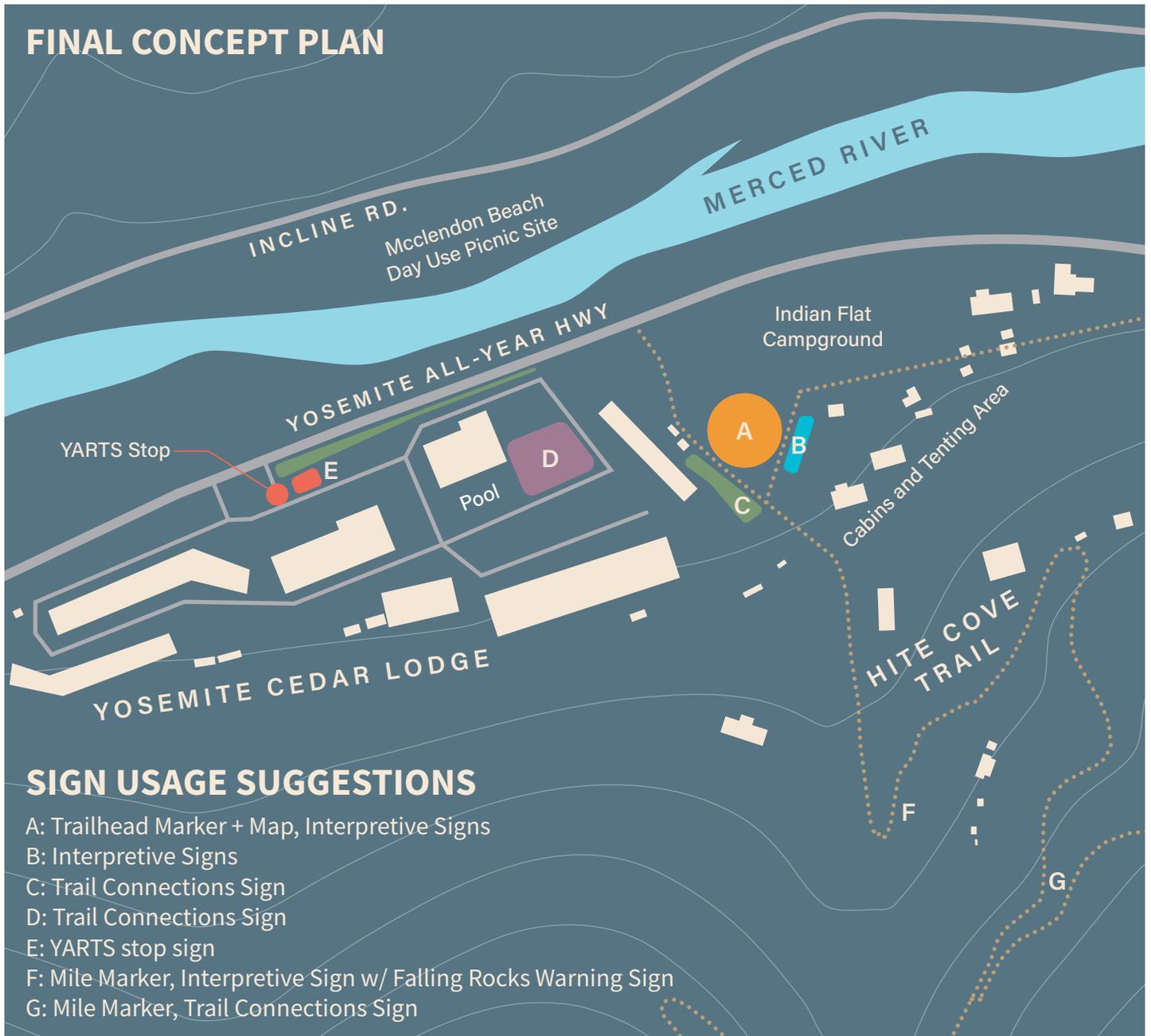
CONCEPT DIAGRAMS



LEGEND

- | | |
|--|---|
|  Hite Cove Trailhead |  Wildflower Garden |
|  Small Outdoor Stage |  YARTS Stop Marker |
|  Arts and Crafts Pavilion | |

FINAL CONCEPT PLAN



PERSPECTIVE



JULIA MORGAN BY THE BEACH

SAN SIMEON, CA

This historic Julia Morgan-designed house near Hearst Beach is currently occupied by employees of Hearst Ranch. The employees and their families requested a redesign of the plantings in front of the house as well as the back lawn, which is not well-used due to being wet and waterlogged throughout the winter.

This redesign harmonizes with the existing Mission revival style architecture and uses plantings historically found on the Hearst Ranch properties. However, a contemporary touch is added through the use of modern landscape furnishings, a deck addition to the house, and a semi-wild planting design that breaks with the formalism of plantings at Hearst Castle. The resulting design is low water use, provides for erosion control on site, and creates areas for entertainment and play for a small family and pets. A full set of design documents was created in this class, including a planting plan, grading plan, layout plan, material spec sheet, and construction details.

LA 405 - WINTER 2021 - 3RD YEAR
PROJECT IMPLEMENTATION STUDIO
CHRISTINE O'HARA

BOTTOM: View to Hearst Beach and the Pacific Ocean.

FACING PAGE: Site plan, not to scale. A pea gravel path resembling the shape of Julia Morgan's pool designs rings the main lawn. Large and lush plantings hug smaller areas for grilling, cooking, and relaxing. An edible planter is provided to grow herbs and small crops. A fenced dog run is created for the client's pets.





DRIVEWAY

COURTYARD

FFE: 34

DOG RUN

DECK

PLAY SPACE

MAIN LAWN

EDIBLE
PLANTER

GRILL AREA

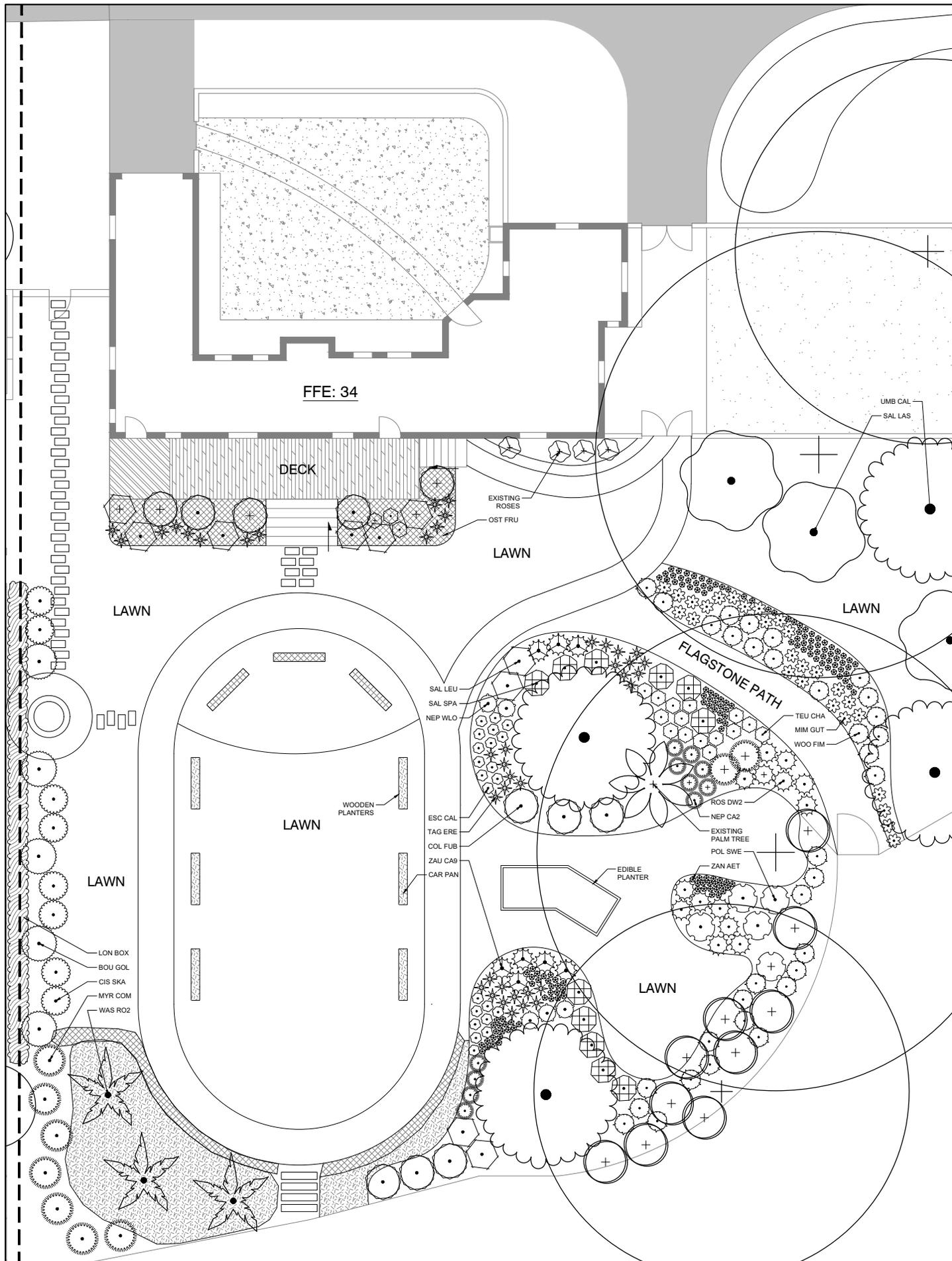
SIDE GATE

PEA GRAVEL PATH



NORTH

W. R. H. MEMORIAL BEACH



PLANTING NOTES

WOODEN LAWN PLANTERS: Wooden planters on lawn are to be filled with groundcover plants as specified.

EDIBLE PLANTER: Plants to be selected by client.

EXISTING PLANTS: Plants that exist on site and which shall be preserved in the planting plan are marked with a plus sign (+) in the center. Unless otherwise specified, symbols in the plant schedule also apply to existing plants.

PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	REMARKS	
	SAL LAS	Salix lasiolepis	Arroyo Willow	15 gal.	3		
	UMB CAL	Umbellularia californica	Bay Laurel	15 gal.	4		
	WAS RO2	Washingtonia robusta	Mexican Fan Palm	15 gal.	3		
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY	REMARKS	
	BOU GOL	Bougainvillea x 'California Gold'	California Gold Bougainvillea	5 gal.	5	train onto trellis	
	CIS SKA	Cistus x skanbergii	Coral Rockrose	5 gal.	8		
	COL FUB	Coleonema pulchellum 'Sunset Gold'	Sunset Gold Breath of Heaven	5 gal.	8		
	ESC CAL	Eschscholzia californica	California Poppy	4"	22		
	MIM GUT	Mimulus guttatus	Seep Monkeyflower	1 gal.	27		
	MYR COM	Myrtus communis	Common Myrtle	5 gal.	7		
	NEP CA2	Nepeta cataria	Catnip	4"	9		
	NEP WLO	Nepeta x 'Walker's Low'	Walker's Low Catmint	4"	5		
	POL SWE	Polygala x dalmatisiana	Sweet Pea Shrub	5 gal.	4		
	ROS DW2	Rosmarinus officinalis 'Prostratus'	Dwarf Rosemary	4"	13		
	SAL LEU	Salvia leucantha	Mexican Bush Sage	1 gal.	8		
	SAL SPA	Salvia spathacea	Hummingbird Sage	4"	11		
	TAG ERE	Tagetes erecta	Marigold	4"	41		
	TEU CHA	Teucrium chamaedrys	Germander	1 gal.	17		
	WOO FIM	Woodwardia fimbriata	Giant Chain Fern	5 gal.	34		
	ZAN AET	Zantedeschia aethiopica	Common Calla Lily	1 gal.	147		
	ZAU CA9	Zauschneria californica	California Fuchsia	5 gal.	8		
SHRUB AREAS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	REMARKS
	LON BOX	Lonicera nitida	Box Leaf Honeysuckle	5 gal.	2' o.c.	---	train onto trellis
GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	REMARKS
	CAR PAN	Carex pansa	Sanddune Sedge	2" plug	12" o.c.	---	
	OST FRU	Osteospermum fruticosum	African Daisy	flat of 36	15" o.c.	8	

PLANTING PLAN - BACK OF HOUSE Beach House 3 - San Simeon, CA

Emerson Goo
LA 439
Christine O'Hara
Fall 2021



Project
Beach House 3

Sheet

Date
12/02/21

Scale
1/8" = 1'-0"

L1

HHF PLANNERS

HONOLULU, HI

During my internship at HHF Planners, I prepared irrigation plans and construction documents, shadowed site visits, and also contributed research to a Complete Streets planning project in Kahului, Maui. [Click to view a blog post on HHF's website that I wrote about my experience.](#)

JULY - AUG. 2021

SUPERVISORS: TOMOKO NAKA, RICK QUINN, JOHN HAGIHARA

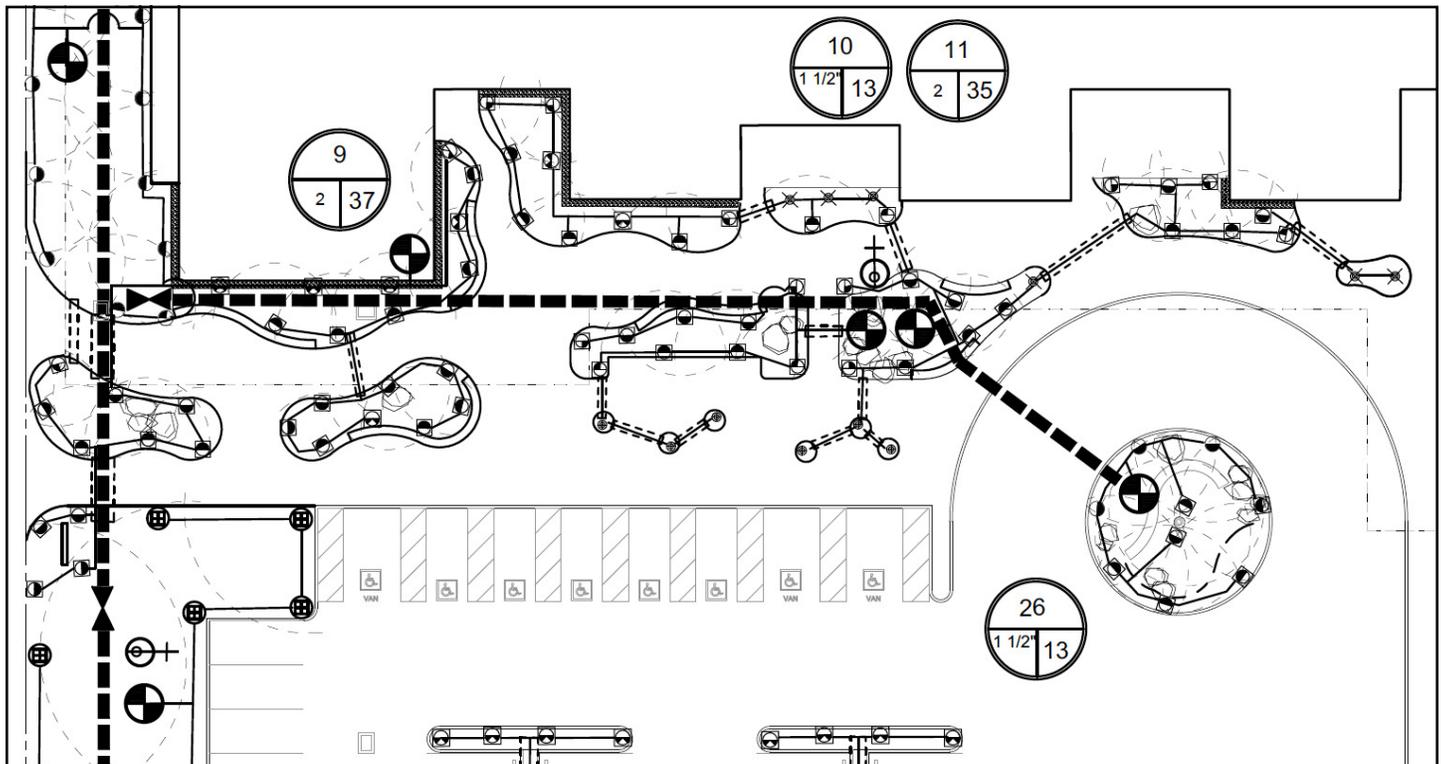
BOTTOM & RIGHT: Cropped portion of irrigation plan and schedule for a 89,000-square ft. veteran's clinic. I completed pipe layout and irrigation head selection under supervision and calculated and compiled the irrigation schedule.

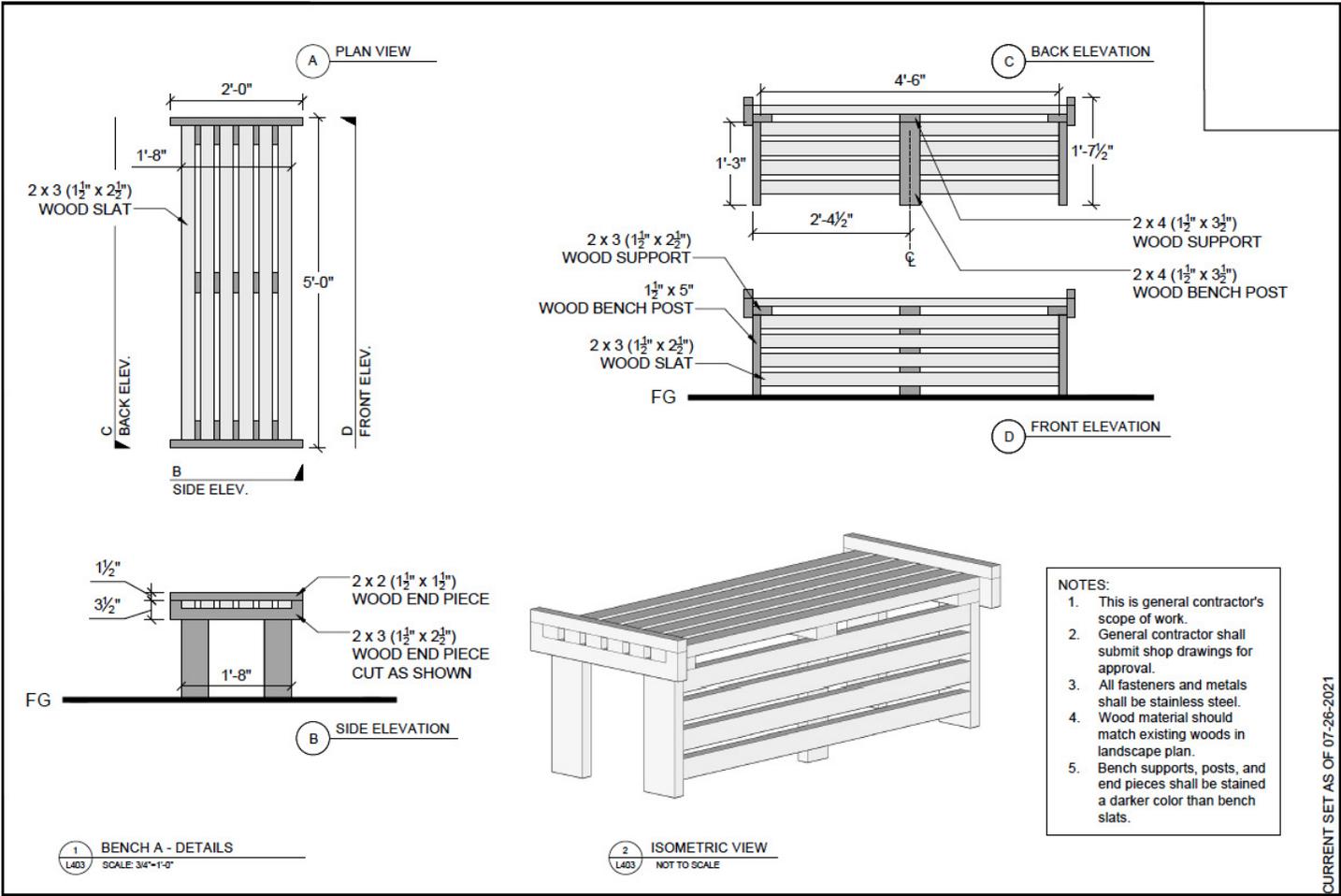
FACING PAGE TOP: Construction details for a custom bench. This was designed for a private residence.

FACING PAGE BOTTOM: Booklet design for a Complete Streets implementation project in Kahului, Maui.

IRRIGATION SCHEDULE

Station	System	GPM	Runtime	DAYS/WK	AVE.GPD
1	ROTAR	25	18	3	193
2	Spray Head	26	8	3	89
3	Spray Head	34	8	3	117
4	Spray Head	39	8	3	134
5	Spray Head	33	8	3	113
6	Spray Head	29	8	3	99
7	ROTAR	21	18	3	162
8	Spray Head	31	8	3	106
9	Spray Head	37	8	3	127
10	Spray / Bubblers	13	8	3	45
11	Spray / Bubblers	35	8	3	120
12	ROTAR	37	18	3	285
13	Spray Head	28	8	3	96
14	Spray Head	40	8	3	137
15	Spray Head	33	8	3	113
16	Spray Head	24	8	3	82
17	Spray / Bubblers	40	8	3	137
18	Spray Head	40	8	3	137
19	Spray / Bubblers	6	8	3	21
20	Spray / Bubblers	34	8	3	117
21	Spray / Bubblers	11	8	3	38
22	Spray Head	30	8	3	103
23	Spray Head	36	8	2	123
24	Spray Head	30	8	2	69
25	Spray / Bubblers	38	8	3	87
26	Spray Head	13	8	3	45
Total Average GPD					2,894
Total Average Gals Per Year					1,056,310





CURRENT SET AS OF 07-26-2021

INTRODUCTION

INTRODUCTION

Booklet Scope and Overview

This booklet compiles general research on Kahului, Maui, with emphasis on information that may assist in the design of signage for the Hele Kākou Kahului Complete Streets Implementation Project. Research was undertaken into the history, ecology, charismatic flora and fauna, and arts and culture of Kahului and its surroundings. Design recommendations for signage are provided at the end of this booklet.

While this booklet is designed to serve the Kahului community, it sets out general design guidelines that can be used for other bicycle and pedestrian route development and wayfinding projects across Maui County.

Project Summary

Kahului is a census-designated place within the ahupua'a of Wailuku, which stretches around Kahului Bay from Paukalo to Kapukaula. It includes Iao Valley and the northern half of the Kahului Isthmus. It is part of a larger area known as Nā Wai Ehi, "The Four Waters" (so named after the four major streams that fed the taro-growing areas of Waikapū, Wailuku, Waiehu, and Waihe'e).¹

Originally planned as a railroad and port town for the growing sugar industry on Maui, today Kahului is known as a retail center and transportation hub for Maui residents, due to its concentration of malls and big-box stores, light industry, and the nearby harbor and airport.

Hele Kākou Kahului aims to increase rates of walking, biking, and transit ridership within the project area in Kahului (see map on adjacent page) by implementing Complete Streets design principles. Objectives include:

¹ Fredericksen, E. & Fredericksen, D. (2004). Archaeological Assessment Report for the Proposed Central Maui Senior Housing Project. Xanarek Researches.



- Develop a signage and wayfinding manual with criteria for key destinations, signage types and templates, and standards and guidance for signage placement
- Identify safety improvements along priority routes
- Empower community partners to provide input and participate in project roll-out²

Thus far, initial public engagement with community members and stakeholders has been carried out through a variety of formats (virtual workshops, design charrettes, web mapping). The most recent stakeholder workshop took place on June 30, 2021. Key routes and destinations, and issues facing keiki and kūpuna user groups were identified. Signage concepts and proposals for physical improvements were presented for feedback. Further research and consultation with the local community and cultural experts is needed to develop signage that is readable, distinctive, and reflective of Kahului.

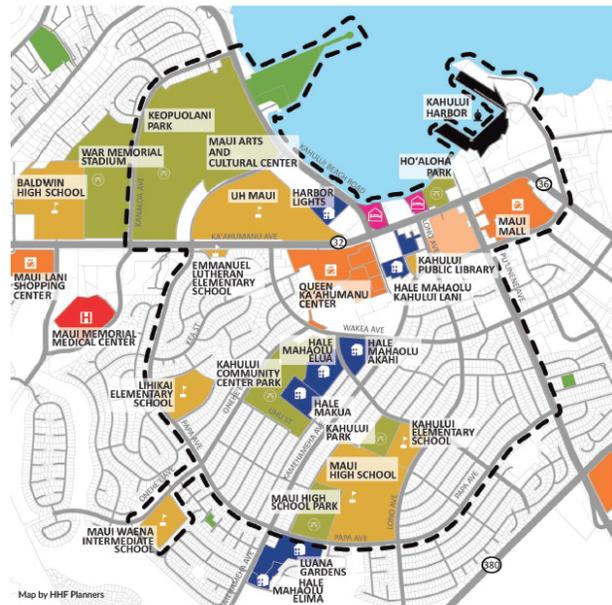
² HHF Planners. (2021). Hele Kākou Kahului Wayfinding and Signage Workshop (Online presentation).

Project Area Quick Facts (2018 ACS data)

	US Census Tract 311.02 (~Project Area)	Maui County
Population #	6,115	165,281
Keiki	22% of pop.	22% of pop.
Kūpuna	23% of pop.	17% of pop.
Household Size	3.59	2.99
Commute	95% drive	87% drive
No Vehicles	12% of pop.	5% of pop.
One Vehicle	30% of pop.	31% of pop.

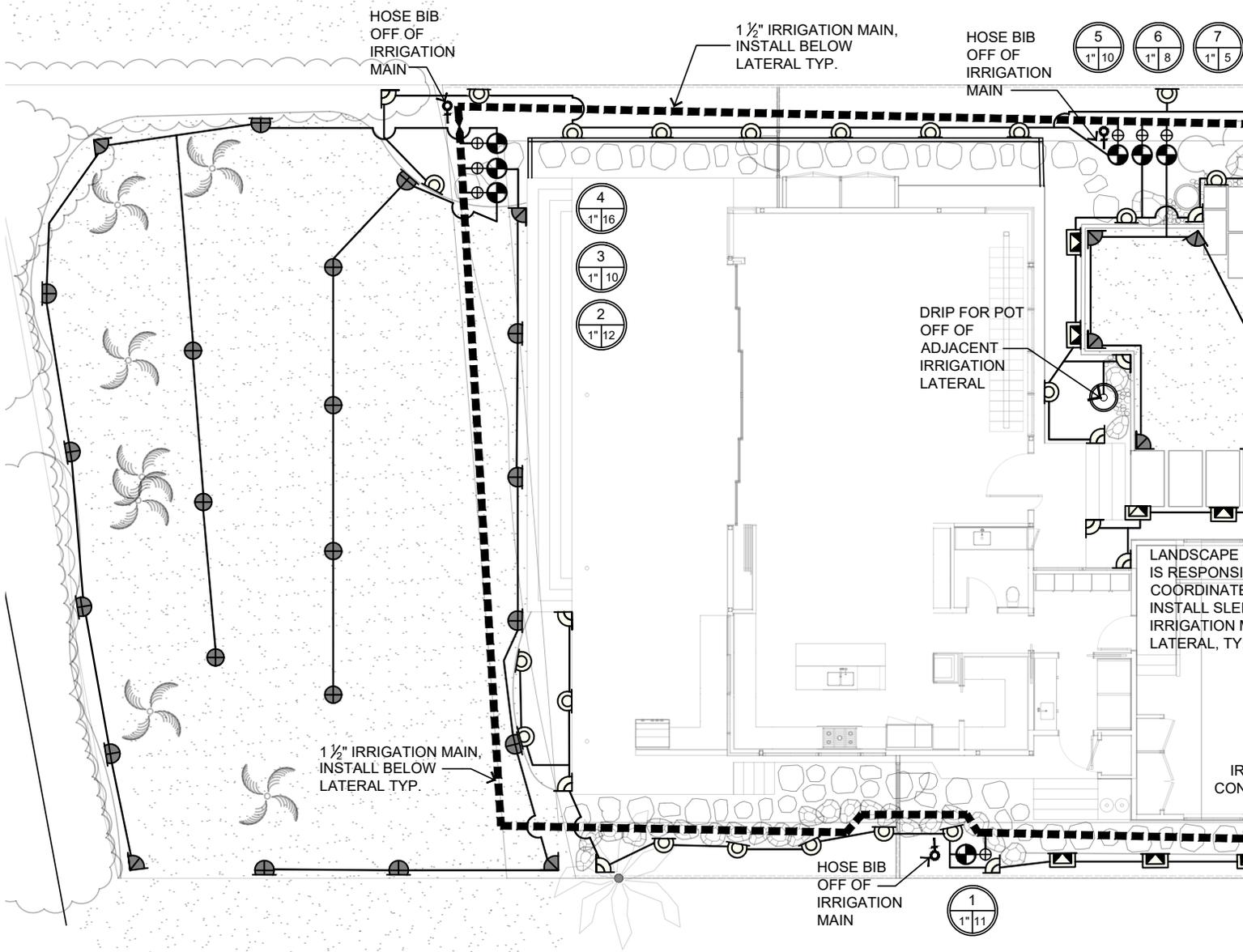
INTRODUCTION

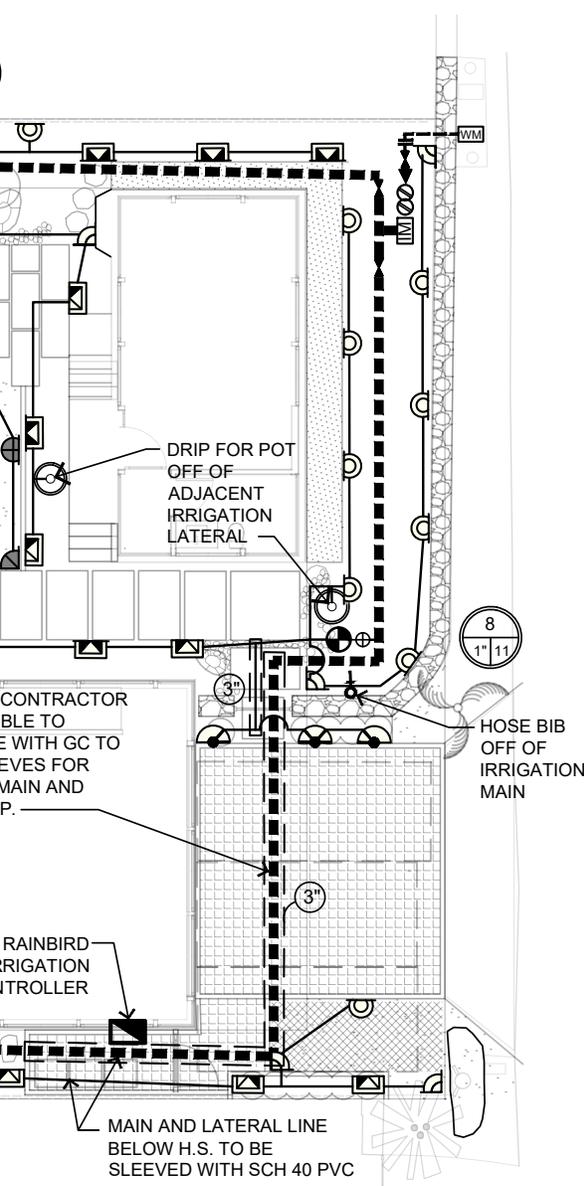
Hele Kākou Kahului Project Area - Key Destinations
June 30, 2021 Stakeholder Workshop



- Commercial
- Schools
- Housing
- Parks and Recreation
- Hospital
- Transportation
- Hotels

After completing the veteran's clinic, I was able to work more independently on irrigation plans. I completed this smaller residential irrigation plan almost entirely on my own. Since irrigation design is not a subject that is covered in-depth in my curriculum, the experience of working on these two plans was invaluable and made me much more conscious of water use as a designer.





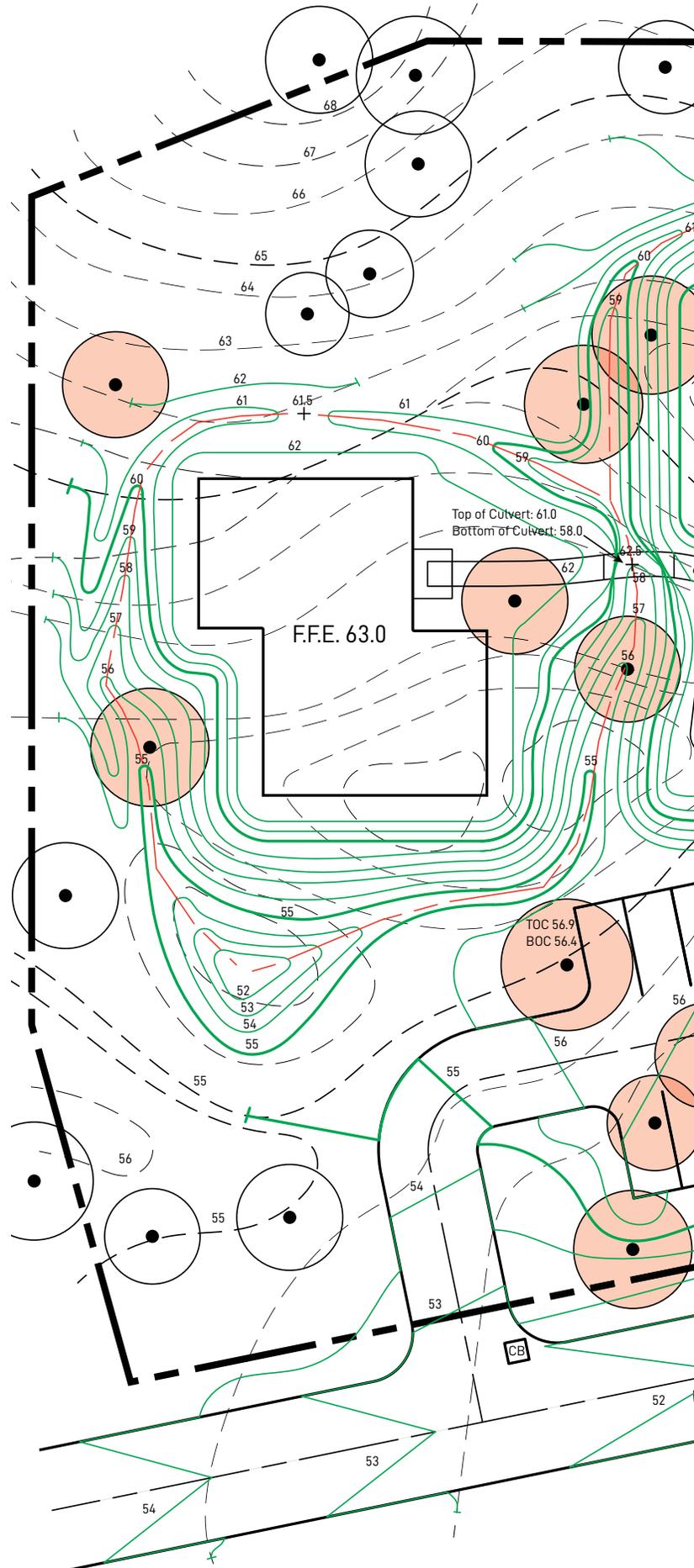
IRRIGATION LEGEND

SYMBOL	DESCRIPTION	RADIUS	NOZZLE	PSI	GPM
	4" POP-UP HEAD QUARTER CIRCLE - RAINBIRD 1804-SAM-PRS	12 FT	U-SERIES - 90DEG	30 PSI	.7 GPM
	4" POP-UP HEAD HALF CIRCLE - RAINBIRD 1804-SAM-PRS	12 FT	U-SERIES-180 DEG	30 PSI	1.3 GPM
	4" POP-UP HEAD FULL CIRCLE - RAINBIRD 1804-SAM-PRS	12 FT	U-SERIES-360 DEG	30 PSI	2.6 GPM
	12" POP-UP HEAD QUARTER CIRCLE - RAINBIRD 1812-SAM-PRS	8 FT	U-SERIES - 90DEG	30 PSI	0.3 GPM
	12" POP-UP HEAD HALF CIRCLE - RAINBIRD 1812-SAM-PRS	8 FT	U-SERIES-180 DEG	30 PSI	0.5 GPM
	12" POP-UP HEAD END STRIP - RAINBIRD 1812-SAM-PRS, 15 RCS OR 15LCS	4x15 FT	15RCS OR 15LCS	30 PSI	0.5 GPM
	12" POP-UP HEAD SIDE STRIP - RAINBIRD 1812-SAM-PRS, 15 SST	4x30 FT	15 SST	30 PSI	1.2 GPM
	12" POP-UP HEAD STREAM BUBBLER-RAINBIRD 1812-SAM-PRS, MPR-5Q-B	5 FT	MPR-5Q-B	30 PSI	0.5 GPM
	12" POP-UP HEAD STREAM BUBBLER-RAINBIRD 1812-SAM-PRS, MPR-5H-B	5 FT	MPR-5H-B	30 PSI	0.5 GPM
	ELECTRIC VALVE WITH PRESSURE REGULATOR - 1" RAINBIRD RAINBIRD PESB WITH PRS-DIAL				
	1 1/2" PVC BALL VALVE, NIBCO 4660-T OR EQUAL FOR SERVICING AT VAVLE				
	1 1/2" BRASS BALL VALVE - NIBCO T585-70 (THREADED WITH LEVER HANDLE)				
	WATER METER - EXISTING 1" METER NO. 02320913				
	IRRIGATION SUB-METER 1" BADGER M55 (BWS APPROVED MODEL)				
	REDUCED PRESSURE BACKFLOW PREVENTER WILKINS RP (975XL) 1" OR EQUAL, PRESSURE REGULATOR, WILKINS MODEL 600 (VERIFY PRESSURE PRIOR TO INSTALLATION)				
	RAINBIRD CONTROLLER ESP-ME				
	IRRIGATION MAIN LINE, 1 1/2" SCH. 40 PVC				
	IRRIGATION LATERAL LINE SCH 40 PVC TYP.				
	IRRIGATION SLEEVE SCH 40 PVC, SIZE AS NOTED				
	DRIP FOR POTS				
	DRIP IRRIGATION FOR POTS: (2 EACH) .9 gph XERI-BUG EMITTER PER POT				
	STATION NO.				
	FLOW (G.P.M)				
	ELECTRIC VALVE SIZE				

OTHER WORK

GRADING AND DRAINAGE PLAN

A grading plan for LA 241, a technical site engineering studio. We were tasked with locating all buildings and the parking lot on site, and grading to minimize disruption, limit the number of trees killed, ensure positive drainage away from all buildings, and maintain required F.F.E.s.

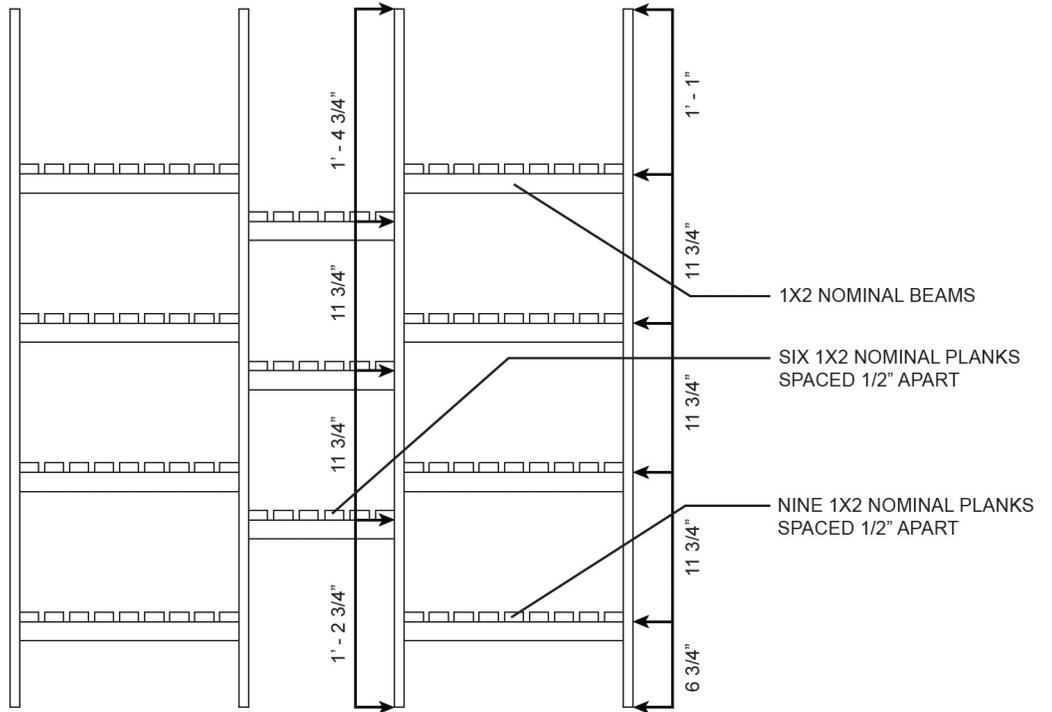




DESIGN-BUILD PROJECTS

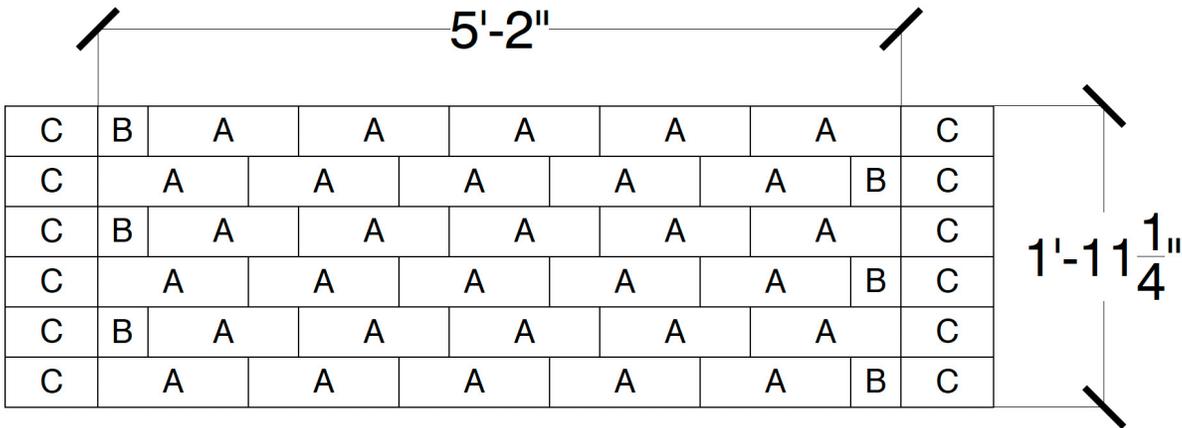
Plant Stand — LA 242

Made for my mom's succulents in an implementation strategies course. Modeled in SketchUp, built in my garage.

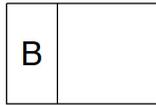
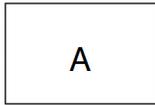


Cal Poly Arboretum Dry-Stack Wall – LA 350

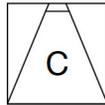
Built for an advanced landscape construction course.



WALL ELEVATION



cut A to make B



use leftover piece to make C

This project was a team effort to beautify the arboretum, of which the wall was only one part. Benches, an arbor, a mosaic, and a planting design were also created. I was responsible for drawing design documentation for the wall and participating in all stages of its construction. [Click to see a video of the whole process by Cal Poly student John Ty.](#)



PHOTOGRAPHY



**Lili'uokalani
Botanical Garden**
Honolulu, HI



**Sweet Springs
Nature Preserve**
Los Osos, CA

I am an avid photographer with experience in analog and digital mediums.
I tend to gravitate towards landscape subjects.

Gasworks Park
Seattle, WA



**Pu'unui
Community Park**
Honolulu, HI



WRITING AND SPEAKING

My writing portfolio:

<https://emersongoo.blot.im/writing>

I have 4+ years of experience as a freelance art, film, and design critic, with bylines in publications such as Film Comment, Cinema Scope, Design Museum Everywhere, and the New York Review of Architecture. I was a 2022 Documentary Magazine Editorial Fellow with the International Documentary Association. As a film programmer, I have organized events and screenings in Hawai'i and California, and moderated and participated in panels for the Honolulu Museum of Art and the Film Comment Podcast.



At the HMOA Doris Duke Theatre with Anderson Le (Hawai'i Intl. Film Festival) and Vincent Bercasio (cinematographer/editor).

Nails for an Invisible City

This essay won a national competition to be included in a print issue of Design Magazine.

[Click to read this essay.](#)

NAILS FOR AN INVISIBLE CITY
EMERSON GOO
Essay

Nothing about my appearance immediately reveals that I'm profoundly deaf. I have what some would call an "invisible disability," but that is perhaps a misnomer.

LAY OF THE LAND

CAMBRIDGE, MA — While some at the two-day Olmsted Bicentennial Perspectives conference, organized by the Harvard Graduate School of Design and the Arnold Arboretum, invoked Frederick Law Olmsted's many facets—designer, writer, progressive reformer, protoenvironmentalist—others cast scrutiny on the landscape architectural field he helped to found. Two presentations stood out: ALEXANDER MANEVITZ used court depositions, government reports, and newspaper articles to uncover how the destruction of Seneca Village, which paved the way for Olmsted's arguably greatest design, Central Park, was legitimized in the public imagination. SARA ZEWDÉ foregrounded Olmsted's journalistic work, much of which was produced during the fourteen months from 1853 to 1854 he traveled through the Southern slave states as a correspondent for the New York Daily Times. Inspired by the antislavery slant of these writings, Zewde quit her day job and retraced Olmsted's path. While economic hardships continue to stalk the region, "the physical evidence of slavery and presence of Indigenous people have been wiped away," she said, noting the irony "that in many of those cases it was landscape architecture that was the tool for recasting and obscuring those traces." —E.G.

A TWEET FROM AN ARCHITECTURE STUDENT

minimal (1978)

it is only the simple sunlight

on a fence post

out of the snow.

and I come to set it upright

at the cost

of a single blow.

then I leave them to the sunlight.

one straight post,

trodden snow.

