



# Burnside Bridge Operator Towers & The Kiosk Design Initiative

Presented to the EQRB Consulting Parties  
Advisory Group on 9/13/2024 by:

Heather Flint Chatto, Architectural Heritage Center

# Opportunity: Burnside Bridge Replacement

## Salvage

### Operator Tower

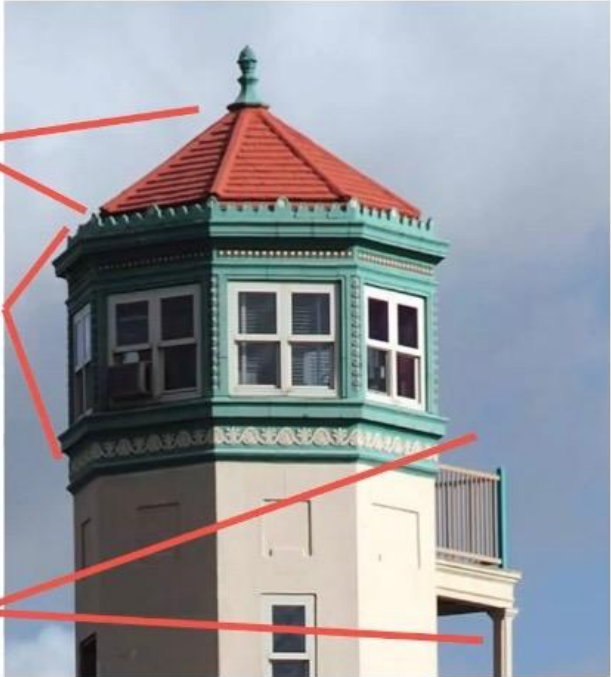


Terracotta Roof

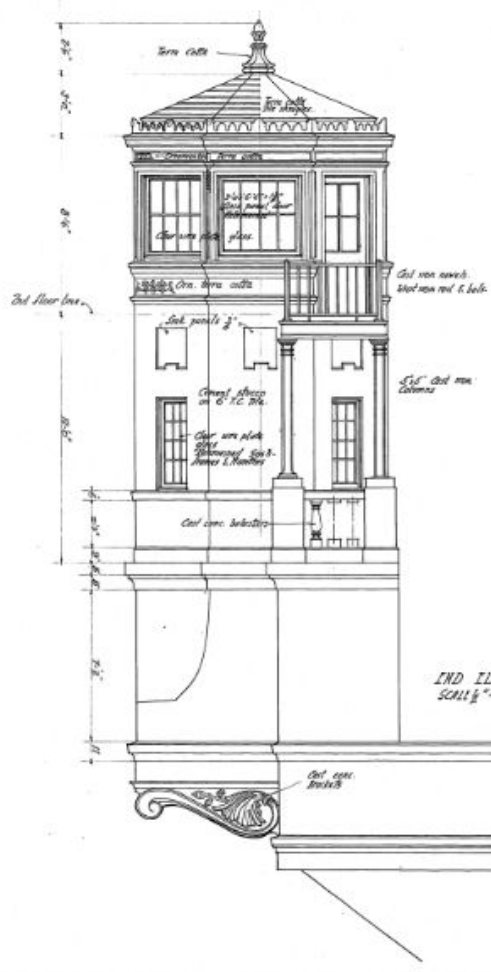
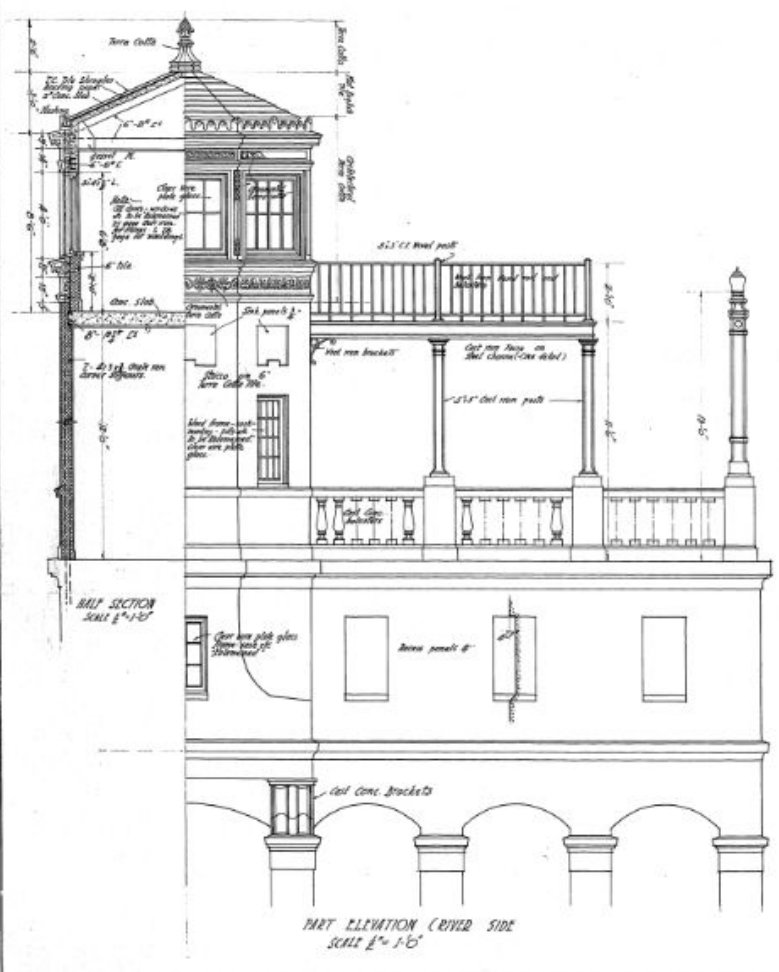
Operators Quarters

Tower

Walking Balcony



REVISED



The steel frame shown here is similar to that of structure shown on contract No. 1972, 1973, 1974, 1975, 1976 and part of new cuts by the Southern Clay Co.

END ELEVATION  
SCALE 1/8" = 1'-0"

ROVING AND JOIST DETAILS

MULTNOMAH COUNTY, OREGON

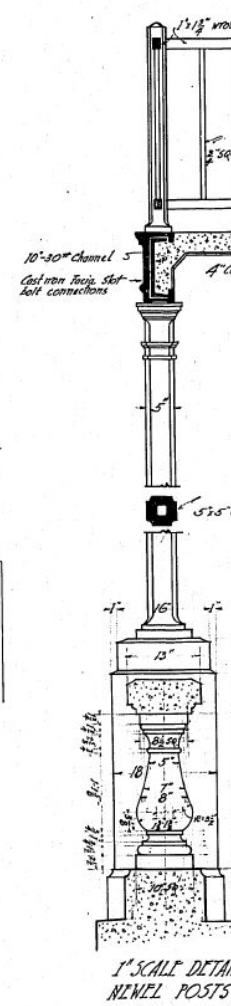
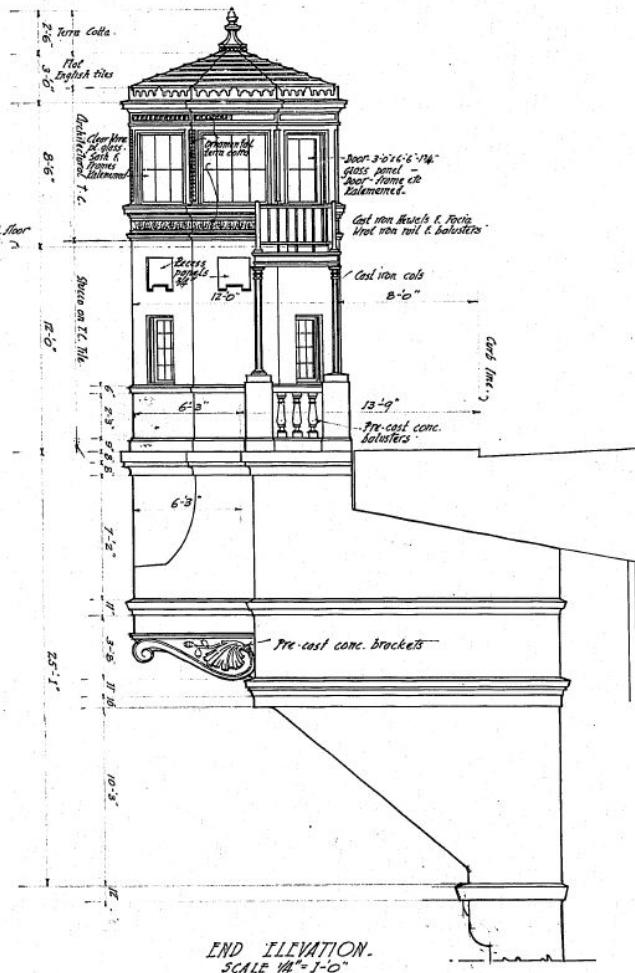
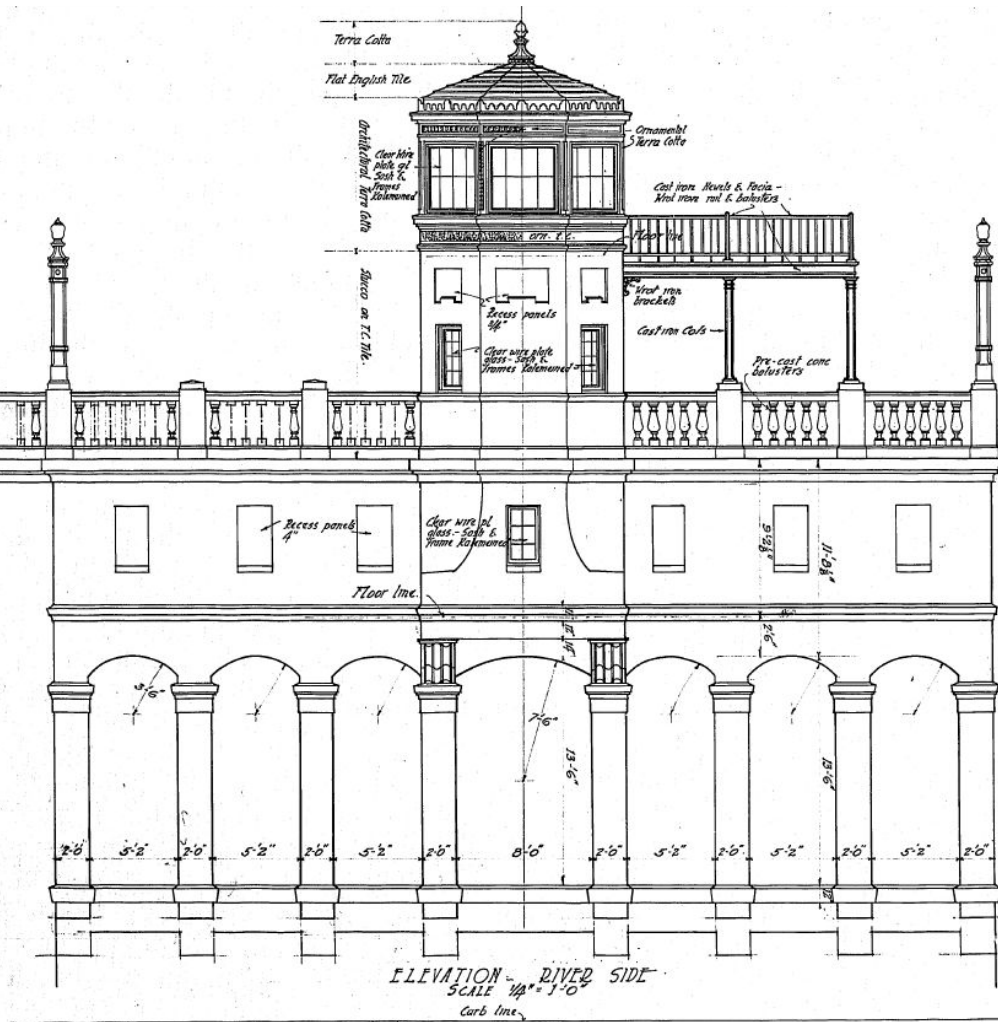
**BURNSIDE BRIDGE**  
PORTLAND, OREGON

DETAILS  
OF  
**TOP MAIN RIVER PIERS**

MADE BY HEDRICK & KROMERS  
CHECKED BY CONSULTING ENGINEERS  
TRANSMITTED BY PORTLAND, OREGON  
CHECKED BY DATE FEB. 21, 1924  
DRAWING NO. SHEET

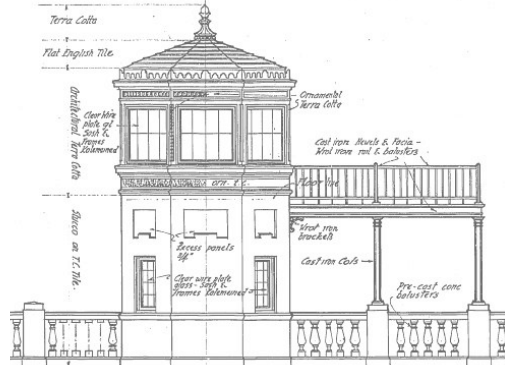
SHEET NO.

NOTICE: IF THIS DOCUMENT IS LOANED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER...



## Northern Clay Company — Auburn (1908-1932)

By James Elliot | Posted 12/07/2020 | HistoryLink.org Essay 21142



*Historic drawings refer to the "Northern Clay Company" as supplier of the terra cotta. Probably both the decorative elements as well as the clay tile wall construction.*

*You can see these clay tile all over the Northwest. It was a forerunner of concrete block and important as a resiliency strategy because it was fireproof.*

<https://www.historylink.org/File/21142>

This essay made possible by:  
King County

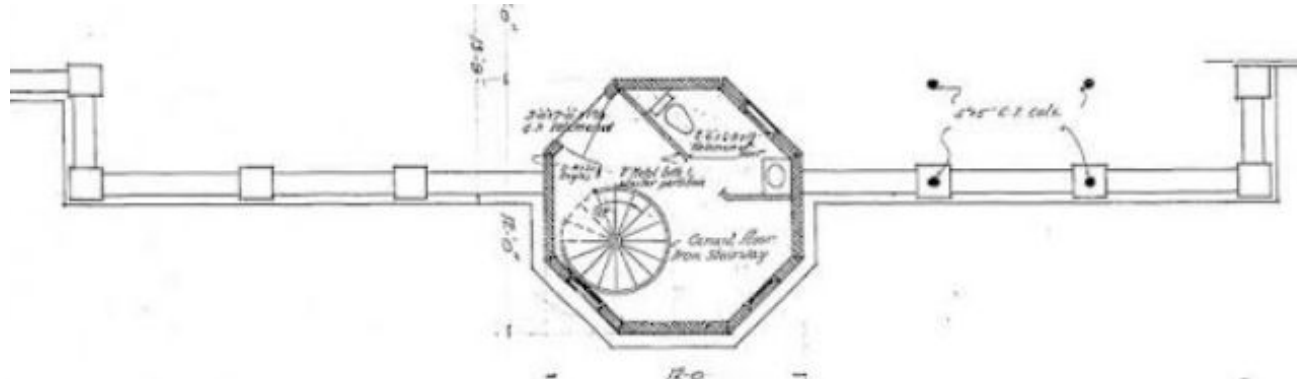
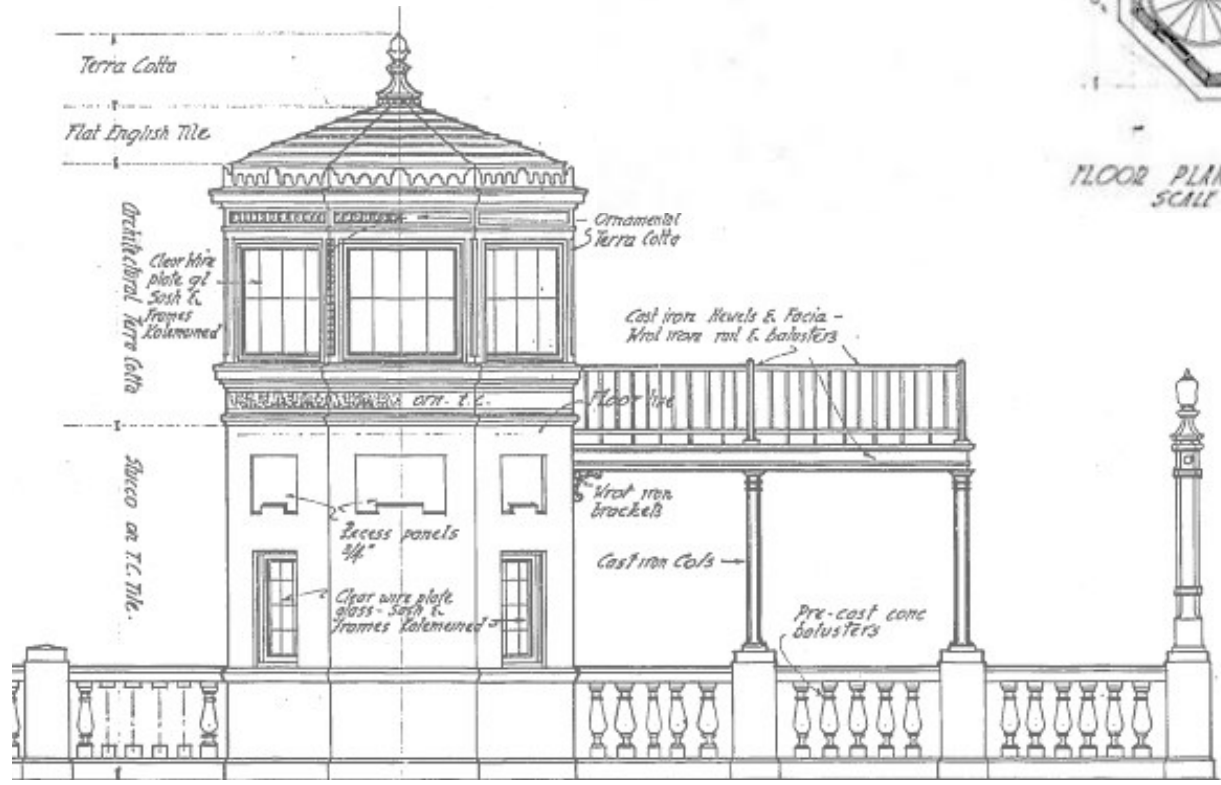


Architectural decoration (Gladding McBean, 1930) for Washington Athletic Club building

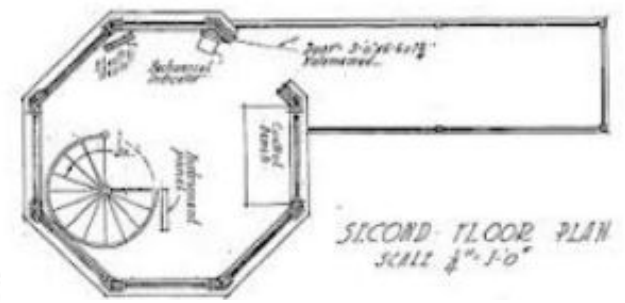
The Northern Clay Company in Auburn, later purchased and operated under the name Gladding McBean, was a major producer of architectural terra cotta for the Seattle and Pacific Northwest markets during the first decades of the twentieth century. The plant produced decorative and architectural terra cotta for many of downtown Seattle's iconic buildings -- including the Frederick & Nelson Department Store and the Coliseum Theatre -- and was among the top employers in Auburn prior to the plant's closure in 1932. The Great Depression put a stop to most major commercial construction projects, but the local terra cotta industry survived through the production of industrial ceramic products.

### Terra Cotta in the Northwest

Clay formed in molds, glazed, and fired at high temperatures becomes a product known simply as terra cotta. It is a cost-effective material used as facing for buildings and is light enough to clad a skyscraper. In the early twentieth century, it largely replaced brick and granite as a fireproof facing for buildings, something in high demand after the devastating **Great Seattle Fire** of 1889. Besides facing for buildings, clay was formed into roofing tiles, sewer pipes, and even gardenware jardinières. Glazed or unglazed, terra cotta was a backbone industry for the communities of Auburn, Renton, and Seattle, and a major force in building many cities and towns in Washington, Oregon, and British Columbia, and even produced terra cotta for construction projects in Shanghai. Prior to its production in the Pacific Northwest, clay products were transported at great cost from the East Coast.



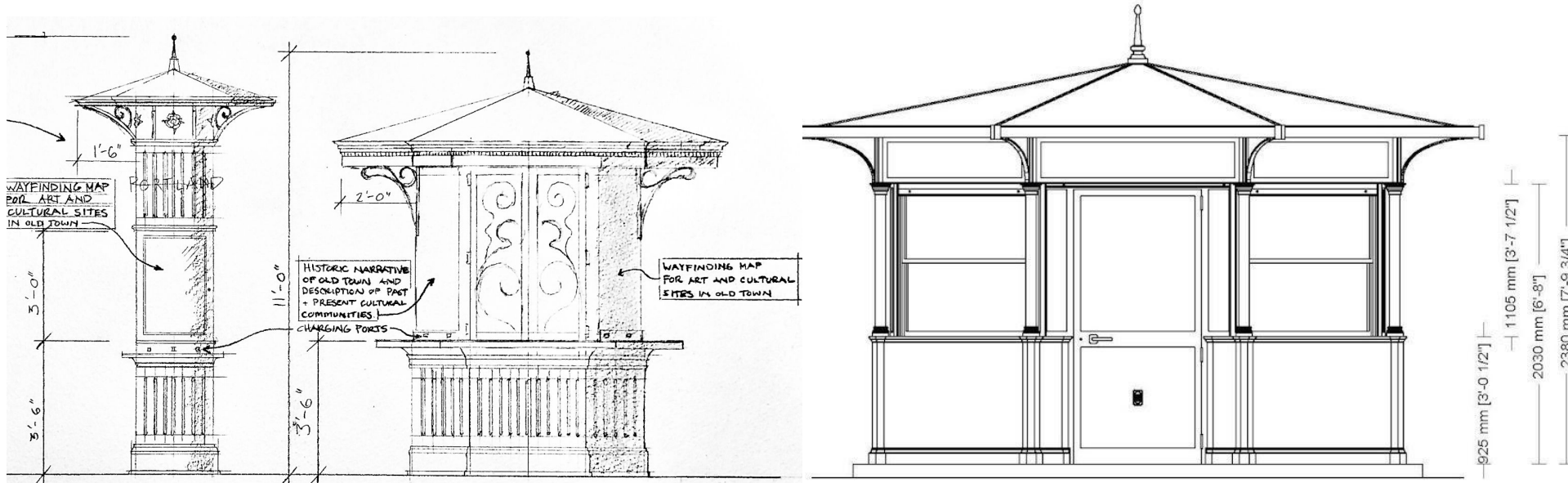
FLOOR PLAN AT SIDEWALK LEVEL  
SCALE 1/4" = 1'-0"



SECOND FLOOR PLAN  
SCALE 1/8" = 1'-0"

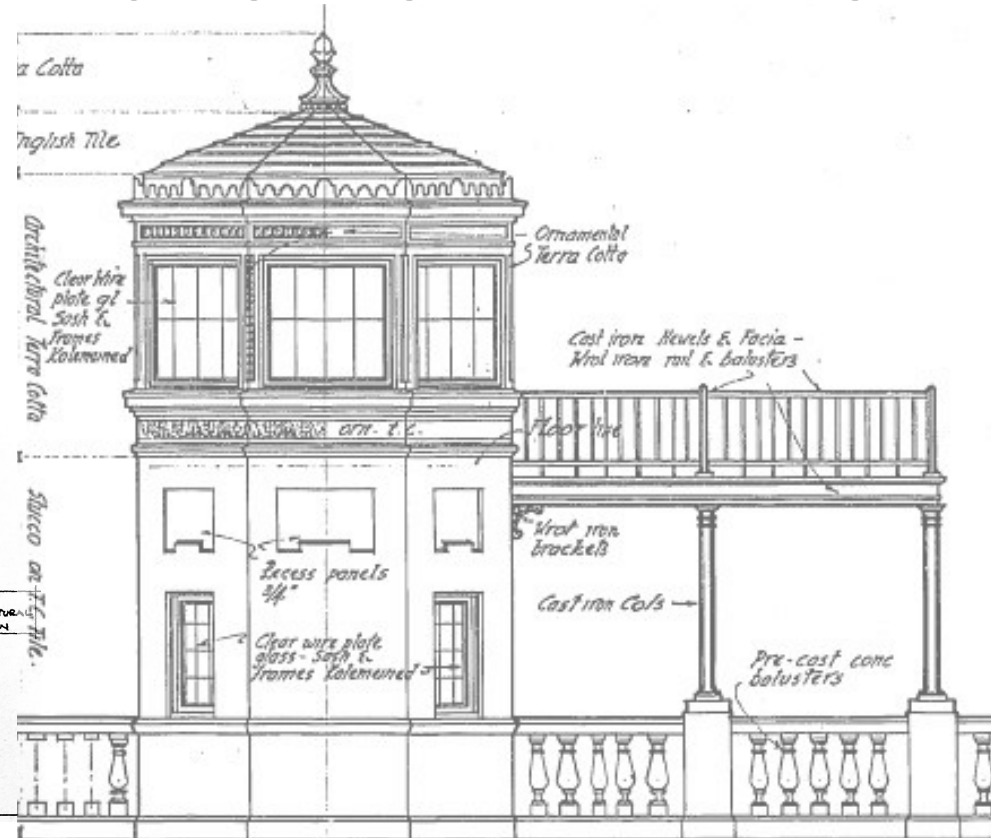
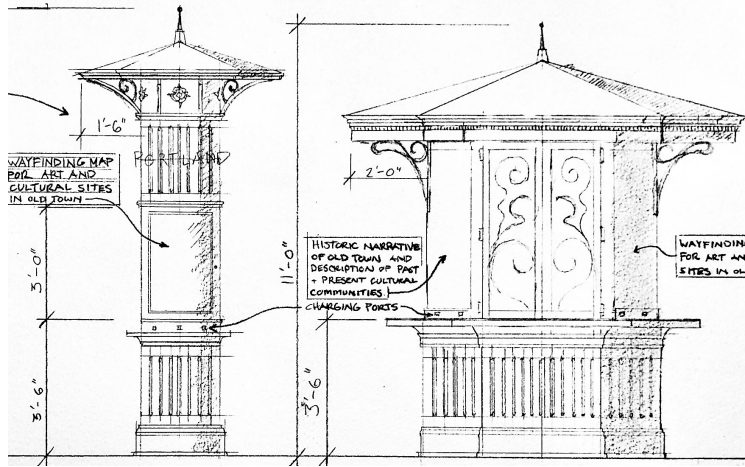
# The Kiosk Project

Multi-functional solar hubs for wayfinding, community services, and healthier gathering spaces for all.



Images: Left - Illustration by Patrick Hilton. © Heather Flint Chatto, FORAGE DESIGN | Images: Right - NERI Kiosk diagram

# Could the Operator Tower tie in with the Kiosk initiative?



Images: Left - Illustration by Patrick Hilton. © Heather Flint Chatto, FORAGE DESIGN | Images: Right - Burnside Bridge Operator Tower Plans



[pdxmainstreets.org/kioskdesign](http://pdxmainstreets.org/kioskdesign)



# The Kiosk Project

## Opportunities:

- Small Business Incubation
- Wayfinding + Cultural Education
- Tourism Industry Information
- Social Services Amenities & Houseless Services
- Disaster Resilience Support
- Optional Environmental, Transit, & Safety Data



# The Kiosk Project

- **Series of small scale solar structures that work for a variety of uses and locations** creating urban design amenities and a common design language within a city at large
- **Easily customizable to suit diverse cultural communities** and meet needs of different populations (varied by color, decorative motif, size, use)
- **Resiliency: Off-grid solar systems and battery storage** uncommon in other urban kiosks. Off-grid options adds resiliency and decreases installation and maintenance cost.
- **Small-medium flexible designs for diverse needs and audiences** (incubators for small businesses, wayfinding for tourists, houseless hygiene amenities, emergency services)
- **Potential application to include smart displays** providing real time weather, and public transit information, provide wifi access.

**Park/Plaza Cafe with integrated restroom | Lisbon, Portugal**

# THE KIOSK PROJECT:

**Multi-functional solar hubs for wayfinding, community services, and healthier gathering spaces for all.**



## Wayfinding & Gateways

Compact urban kiosks provide navigation and wayfinding markers that help orient locals and visitors to area history and culture, as well as nearby art and amenities. With integrated solar panels and battery storage, these can be installed off-grid while also offering power for lighting, informational displays, and cell phone charging serving locals, tourists, and homeless. Distributable emergency solar systems can provide everyday electricity with minimal installation cost.



## Community Placemaking

American urban cores have become less safe, accessible, enticing and vibrant. Efforts to restore “downtowns” have resulted in disenfranchisement. Need for socially active, safe and healthy outdoor dining and gathering spaces has grown.

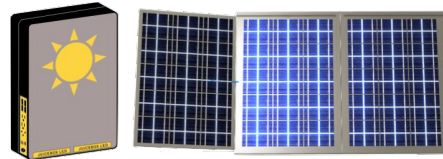
Kiosks will incubate small businesses, support new social distancing practices, and activate urban parks and plazas, creating “eyes on the street” while adding essential amenities.



## Emergency Response

Major US cities are more vulnerable to disasters than ever. Major disasters can cripple electricity grids, plunging millions into darkness — sometimes for weeks. Without power, comfort, communication and public safety are limited.

SHINE's JuiceBox solar units power our grid-independent kiosks. Depending on size, each kiosk contains 6-24 modular JuiceBox 3.0 units that can be deployed by authorities to give emergency power.



## Homeless Services

Basic hygiene, food, electricity & internet will support individuals and families experiencing homelessness with access that enhances their self-care and services. Most homeless people have cell phones, but cannot charge them. Lighting improves safety and comfort. Urban street kiosks will provide a localized source of energy that enables vulnerable residents to access hygiene amenities and retain dignity, health, well-being, and accelerate recovery.

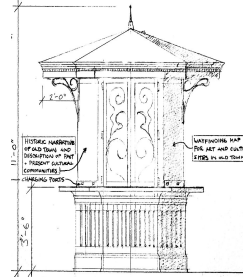


# Solar Urban Amenity Hubs: Multiple Scales & Functions



## MEDIUM | Info/Help Desk Single Vendor Kiosk

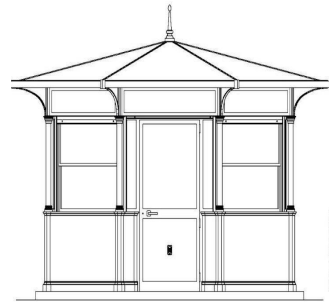
Mid-size kiosk accommodates a coffee shop or artisan business and includes surrounding digital panels for wayfinding, public services, and cultural content sharing. Perfect for a wide avenue, privately-owned public space, or office building entrance, this kiosk brings energy into any urban space.



3

## LARGE | Concessionaire + Bathroom

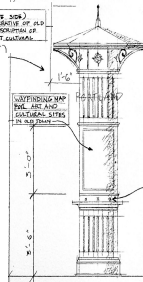
This solar urban hub includes a cafe or bar, bathroom, and wayfinding and/or interpretive panels with local content. Perfect for urban plazas and parks, as a hub for social services in houseless communities, and for disaster response applications to provide cooking, hygiene and power.



1

## SMALL | Wayfinding/News Kiosk

Perfect for a busy downtown corner, neighborhood gateway or iconic marker. This compact placemaking landmark serves locals, visitors, tourists, and homeless with wifi and cell phone charging, as well as specialized content for wayfinding and interpretive narratives about the local history culture and features of the district. Distributable emergency solar systems provide everyday power and crisis support.



2

# The Return of Kiosks as Urban Amenities

The kiosk has a long history as a community-serving urban design feature and is making a resurgence as an innovative placemaking element. More and more cities are recognizing their value and are bringing them back in force.

Kiosks in a variety of functions and sizes have been used for centuries as newsstands, information booths, cafe stands, wayfinding posts and more. We have drawn inspiration from kiosks locally and internationally including in Portland, San Francisco, Seattle, Lisbon, Paris, New York, and across Scandinavia and Italy. Several examples can be seen in our precedents for our proposed kiosk project in Portland, Oregon.

Photo Credit: John Seymour by permission to Forage Design & PDX Main Streets



# Kiosk Precedents



## Precedent: “Quiosques em Lisboa”

Lisbon has **revived** their traditional art nouveau small horchata/coffee kiosks and added 50+ new cafe kiosks as permanent city park food stands.

Each new or refurbished structure hosts small businesses and can provide incubator space for new startups similar to Portland food carts.

The “Kiosk Strategy” has transformed previously underused and unsafe parks into dynamic, vibrant urban spaces.

“Quiosques” are now iconic symbols of Lisbon’s colorful personality.



The “Quiosque Lisboa Bar” | Lisbon, Portugal | Inspires Café/Info Desk/Tiny Retail Kiosk

## Precedent: Pop-up Retail in Paris

In 2017, more than 58,000 Parisians signed a petition to save kiosks that have become an integral part of the city's historic architecture. In 2019, 360 19th century-inspired new kiosks were created, and 40 existing kiosks were renovated. Newly built kiosks also offer online ticketing sales, charging ports for smartphones, digital screens, and bathrooms.







## Precedent: Game Library Kiosks in Paris. L'R du Jeux

Begun as a mayoral initiative to activate an underused plaza when a sidestreet was closed to only bikes and buses, Paris open air “game libraries” have now become an ongoing nonprofit with large- and small-scale yard and board games, free and accessible to all. Vibrant red kiosks feature a game library with pop-up play areas, tables, chairs, umbrellas, and staffed monitors for childcare.



The Game Library is open three days a week all year with a varying theme monthly to keep the program inviting for individuals and families in an ongoing creative approach to public play.



## Precedent: San Francisco's Kiosks & Restrooms

The City of San Francisco arranged for 113 French Kiosks in the 1990's to be installed around the San Francisco Financial District and Union Square. Through a collaborative effort with an architectural firm and kiosk manufacturer JCDecaux. Community Arts International had five of the kiosk around Union Square modified for mini street museums (as shown at left).



Since 1995, San Francisco's 25 public toilets have helped provide street hygiene services to tourists, natives, and especially the city's burgeoning homeless population. They also feature transit information and other wayfinding content. The bathrooms are "self cleaning", and the kiosks are maintained by physical advertising infrastructure giant JCDecaux, which contracts them to the City in exchange for advertising real estate spread in 70 locations throughout the city.



## Precedent: Portland's Dawson Park

PDX's Dawson Park Gazebo, in a historically African American neighborhood that has undergone significant gentrification and urban blight removal since the 1970s. The gazebo is formed from the dome of a 120-year-old African American-run community retail building that was destroyed during redevelopment of the area, and preserves the memory of the once-thriving Black community now buried underneath several major infrastructure projects.

Dawson Park Gazebo | Portland, OR | Inspires Cultural Preservation and Placemaking Objectives



**The Portland Loo | Portland, Oregon, USA | Inspires Full Restaurant/Toilet Typology**

## Precedent: Portland Loo Street Restrooms for All

PDX's take on the street restroom shows how a consultant-designed kiosk can be deployed at scale with government support. The system is sparsely furnished, intentionally making using it uncomfortable to limit use for non-hygiene activities. Each structure is cleaned routinely by city officials and they are typically found in public parks and other high traffic areas that are also home to many people living on the streets. Begun as a single pilot, initiated by Portland's Bureau of Transportation with Madden fabricators, Portland now has 20 Loo's and the fabricator has more than 100 across the US.



## Precedent: Portland's Bus Kiosk

Portland's 1978 downtown bus mall resulted in a new benchmark for transit environments in America — and the quirky, iconic bus shelters were the stars. When the mall was due for a complete overhaul to integrate light rail, Hennebery Eddy recommended the preservation of the last shelter through adaptive reuse. Original features of the shelter were preserved, with subtle additions designed to have minimal visual impact. Sliding glass doors on each side of the shelter maintain the transparency and openness of the original design while allowing it to be secured after hours. Steel and glass countertops on both the sidewalk and street sides provide a place for customers to enjoy their coffee and conversation while under the protection of the shelter's iconic curved glass roof. The shelter café has become a small but potent urban engine, energizing both the streetscape and pedestrians, while preserving a chapter of Portland's history.



**Precedent: Portland Kiosks**

Portland's vintage kiosks still remain in front of Pioneer Courthouse Square. Originally designed as "comfort stations", these remain as elegant yet underused remnants of our cast iron building architecture. A similar nod to the past is the coffee shop in Pioneer Square with cast metal columns, arbor, and cast metal waste bins.

# PDX MAIN ST. PILOT #1: Kiosk de Resilience

## Solar Kiosk Resiliency Hub

WeShine Houseless Village

Little Sunshine is a repurposed kiosk under construction to become a solar powered phone charging bench for formerly houseless residents.

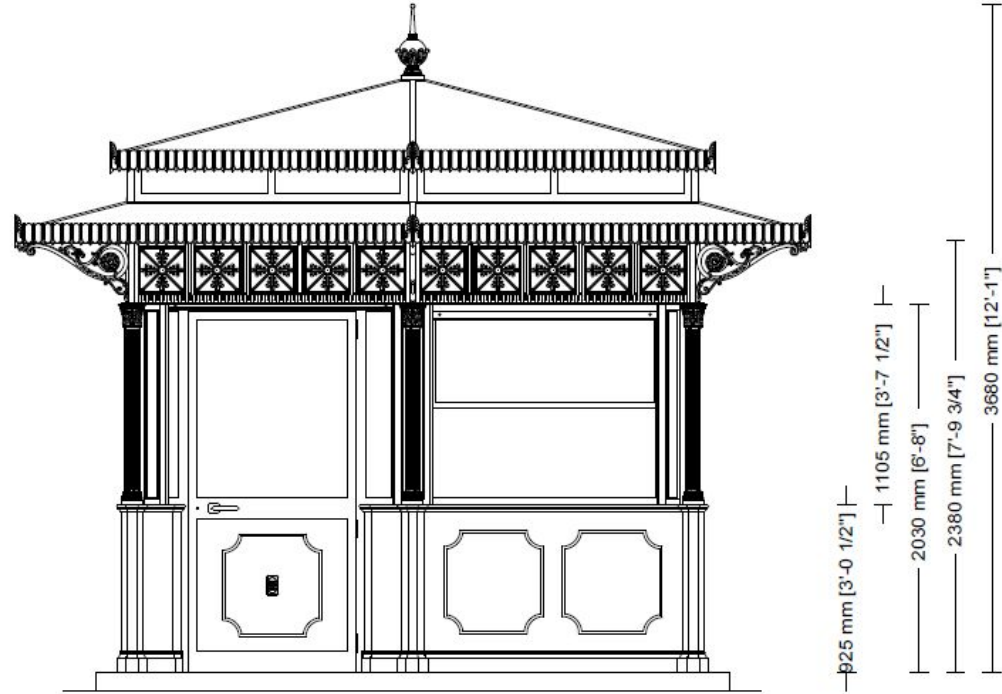
A recent PCEF grant provided funding for the new solar panels, battery, inverter, phone charging ports, lighting and four information display cases. We are working to demonstrate how these small scale urban hubs can foster greater climate and emergency response education, access to wifi, phone charging and emergency batteries.



# PDX MAIN ST. PILOT #2: Hawthorne Kiosk Project

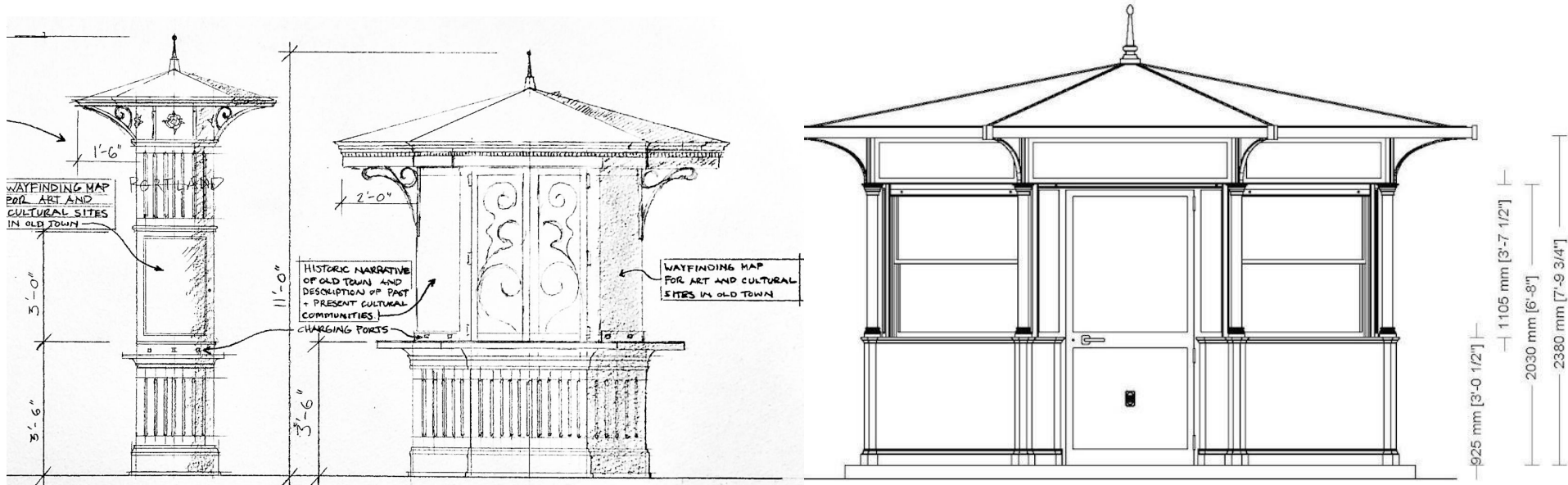
**Venture Portland**  
**\$46k Grant for a**  
**Kiosk on Hawthorne**

Planning for SE 37th  
Plaza near the  
Bagdad





# Design Concepts



# 1 | SMALL: Wayfinding/Gateway/News Kiosk

**Description** | This compact placemaking landmark engages locals, tourists, & homeless with specialized content, and supports community resilience and cultural preservation.

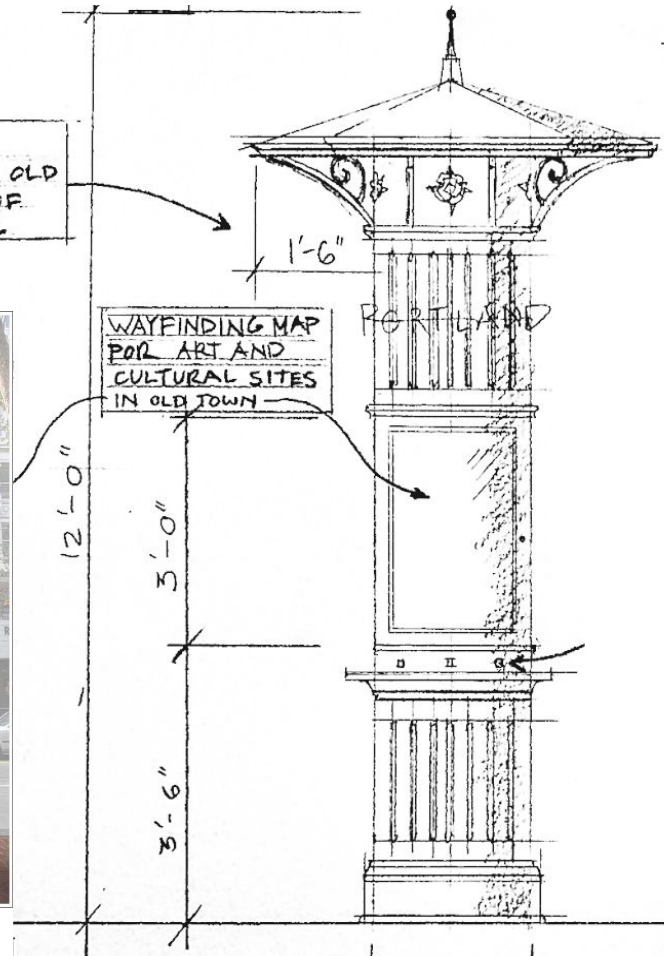
**Locations** | Perfect for a busy downtown corner, inside a cramped airport hallway, at transit hubs, in urban or suburban malls or commercial developments, as gateway markers for a neighborhood district, or along urban-periphery trails and parks.

**Specifications** | Estimated base cost: \$ 20-30,000 | Includes solar, lighting, cell phone charging, display panels for cultural/historical/interpretive content, and wayfinding information to art and cultural locations, trails and other navigation. Offers phone charging and a WiFi hotspot with innovative built-in UI. Option to include e-ink screens with transit information. 10 modular solar electrical batteries can be stockpiled and deployed in emergencies for back-up power. Customizable with little to no cost by color or subtle motif.



(OPPOSITE SIDE)  
HISTORIC NARRATIVE OF OLD  
TOWN AND DESCRIPTION OF  
PAST + PRESENT CULTURAL  
COMMUNITIES.

WAYFINDING MAP  
POP ART AND  
CULTURAL SITES  
IN OLD TOWN

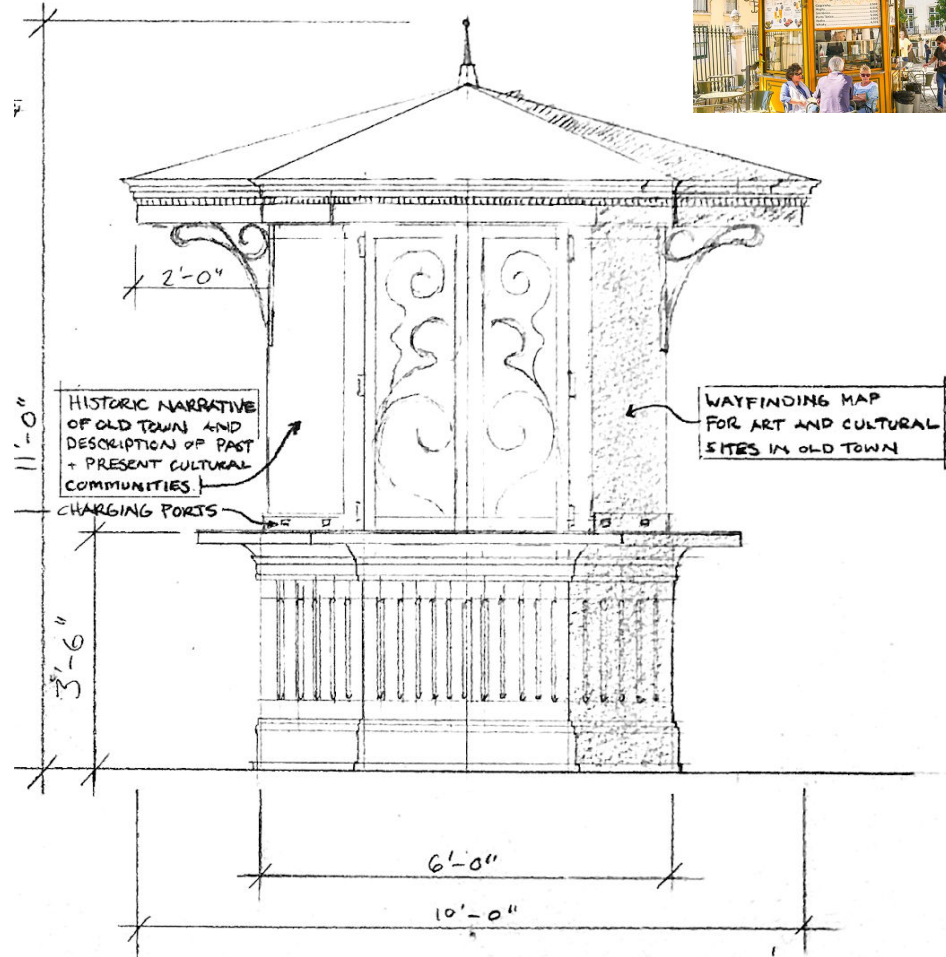


## 2 | MEDIUM: Info/Help Desk/Coffee Kiosk

**Description** | This small staffed kiosk can support a variety of services including: information/help booth, a coffee stand/juice bar, micro retail shop (e.g. phone shop or cash exchange) engages locals, tourists, and homeless with specialized content, and supports community resilience.

**Locations** | Perfect for a wide avenue or urban plaza, office building entrance, transportation hub, mall, mixed-use development or other medium-sized space.

**Specifications** | Estimated base cost: \$50,000 . This could Include power-saving e-ink screens with transit information, cultural/historical content, and/or advertising. Offers phone charging and a WiFi hotspot with innovative built-in UI. 20 modular solar electrical systems deployable in emergencies for backup power. Environmental and foot traffic data collection built in. Solar system can accommodate a coffee stand, micro retail shop, or info stand.

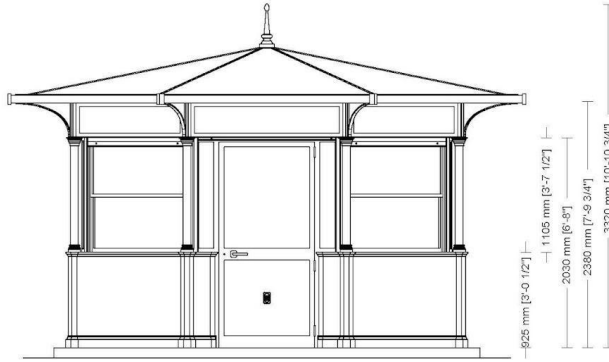
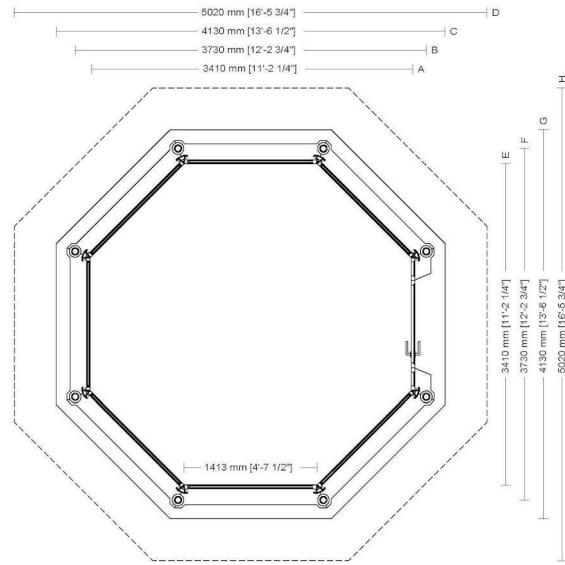


# 3 | LARGE: Solar Kiosk with Services + Restroom

**Description:** This large staffed kiosk is a hub of city life. It includes a takeout restaurant or bar, wayfinding stations with customizable content, and comfortable, accessible restrooms. The public's hub for food, hygiene, and connectivity.

**Locations** | Perfect for large privately owned public spaces, parks, and central plazas where outdoor seating can be spread out surrounding the kiosk. Also ideal for open footprint airports and transit hubs with heavy foot traffic.

**Specifications** | Comparable in cost to Portland Loo. | Includes power-saving lighting, counterspace for small concessionaire or market stall, optional storage or ADA washroom. Rooftop solar system provides power for retail uses, small scale cooking facilities, safety lighting and amenity displays. 30 modular solar electrical systems with integrated batteries stockpiled and deployable by local agencies in emergencies for backup power.





# Public Kiosk Program

## Selection Process, Rules & Guidelines



### Overview

The Department of City Planning, Office of Housing and Community Development (OHCD) provides oversight and management of the City's public kiosk program. The program includes activities relating to **17 city-owned kiosks** in the public right-of-way in downtown Atlanta.

Prior to this application process, these kiosks were authorized under the public vending code whereby operators were selected through an annual lottery. The OHCD is providing prospective kiosk operators with the opportunity to enter into agreements with the City to operate current vacant, unpermitted kiosks.

Kiosk operators selected through this application process will enter into agreements with the City to operate their business at up to two kiosk locations for a period of two years with a one-year renewal option.

At present, 9 kiosks located in the downtown area (see map of locations) are available to prospective kiosk operators participating in this application process.



[CLICK HERE FOR INTERACTIVE MAP](#)

### Atlanta Kiosk | Source: Atlanta Kiosk Program website

“The Public Kiosk Program from the City of Atlanta Department of City Planning supports the growth and success of Atlanta’s small businesses, microenterprises, and entrepreneurs, by providing affordable small footprint commercial space within green brick-and-mortar kiosks located along downtown sidewalks. Additionally, the program encourages pedestrian activity and strengthens the character and vibrancy of our public spaces.”

- **Kiosk Program Website:** [www.atlantaga.gov/kiosks](http://www.atlantaga.gov/kiosks)
- **Kiosk Program Guidelines:** [www.atlantaga.gov/home/showpublisheddocument/61371/638432640050730000](http://www.atlantaga.gov/home/showpublisheddocument/61371/638432640050730000)

# KIOSK STRATEGY - PHASE 1 | Pilot

1

**Design & Prototyping/Proof of Concept.** Finalize 3D computer models, partner with local organizations to develop full scale proof of concept of information/coffee stand.

2

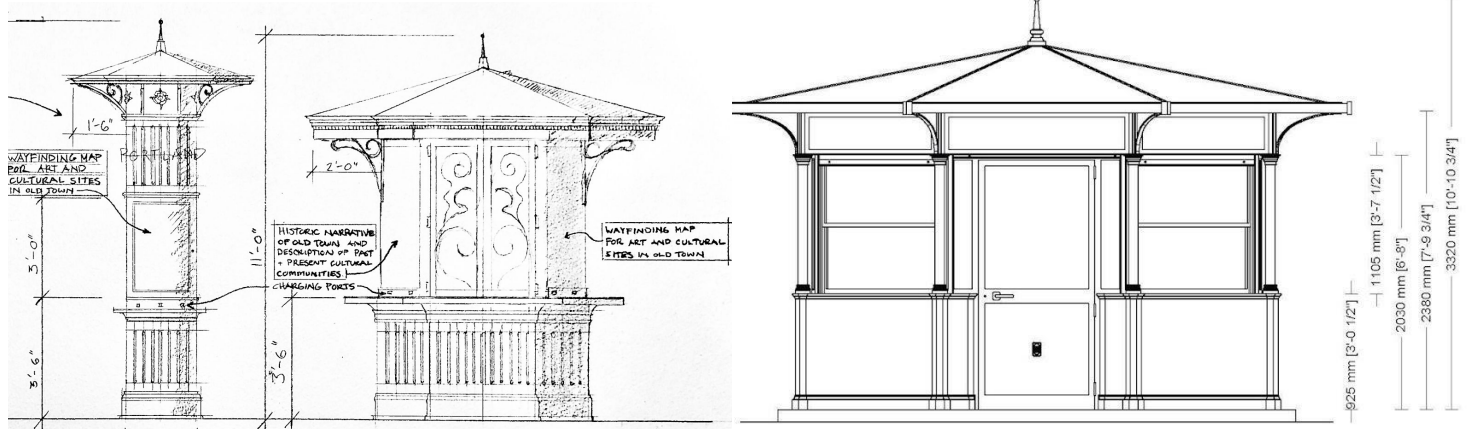
**Funding + Pilot Partnerships.** Secure public and private funding through grants, competitions, and capital investments. Secure committed pilot partners and test proof of concept and initial production units.

3

**Fabrication & Customization.** Determine customer interest in customization, secure partners for US-based manufacturing. Identify areas for cost reduction and positive economic/community impact during manufacturing process.

4

**Installation & Maintenance.** Work with city officials, permitting offices, master planning initiatives, developers, and existing kiosk producers to develop comprehensive installation and maintenance plans at minimal cost.

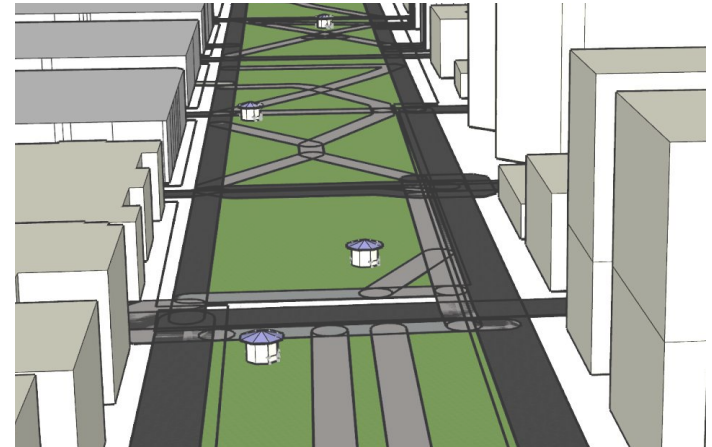


# KIOSK LOCATION IDEAS - DOWNTOWN PORTLAND

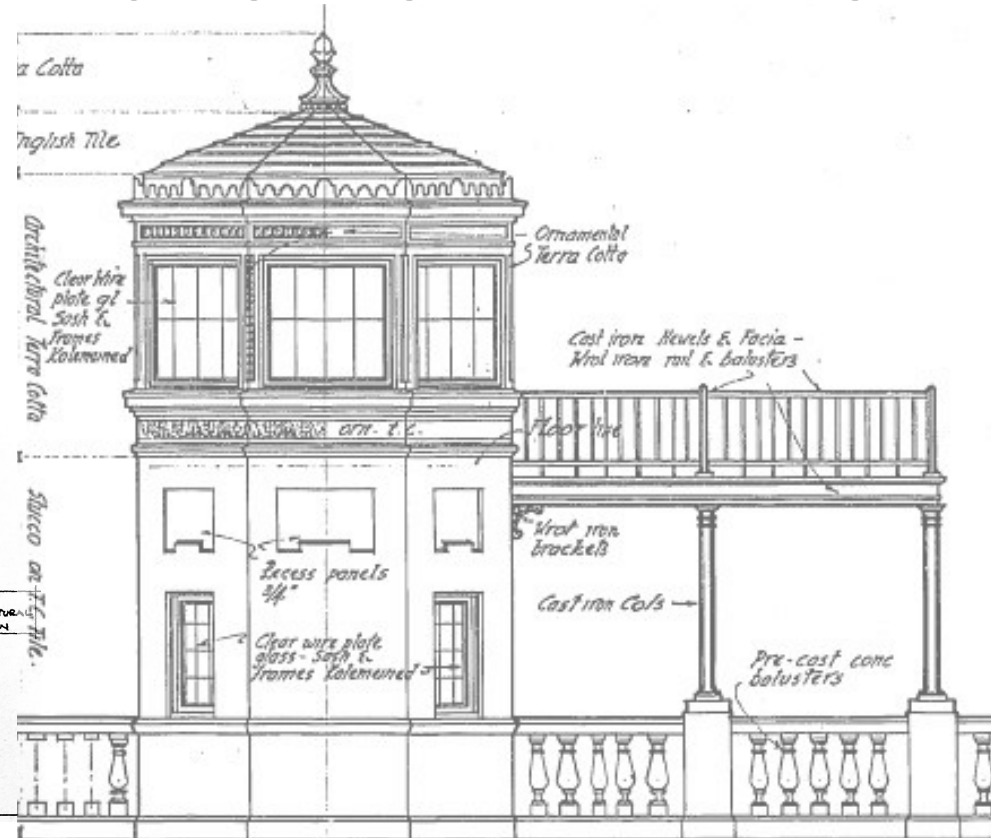
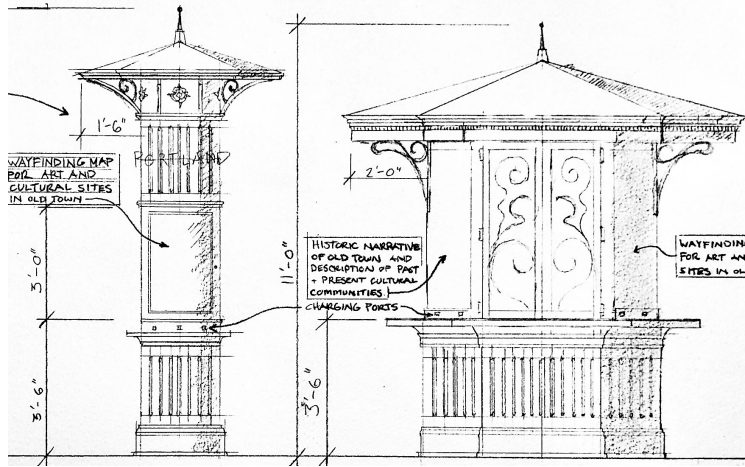
**Uses:** Placemaking, incubator spaces for BIPOC and local startup businesses, cultural interpretive signage, wayfinding maps, restrooms and cafes, newsstands, enhanced safety and gathering spaces, wifi, phone charging, emergency power, and solar powered batteries hubs.

## Location Ideas

- Portland Train Station Entry Triangle
- Waterfront near Maritime Museum
- North Park Blocks near playground
- S. Park Blocks near Farmers Market & PSU
- S. Park Blocks at the Oregon Historical Society
- Paired with Zero Energy/Green Buildings
- Broadway Corridor
- Transit Mall
- Where else???

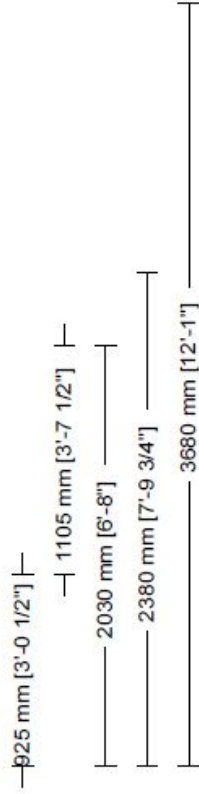
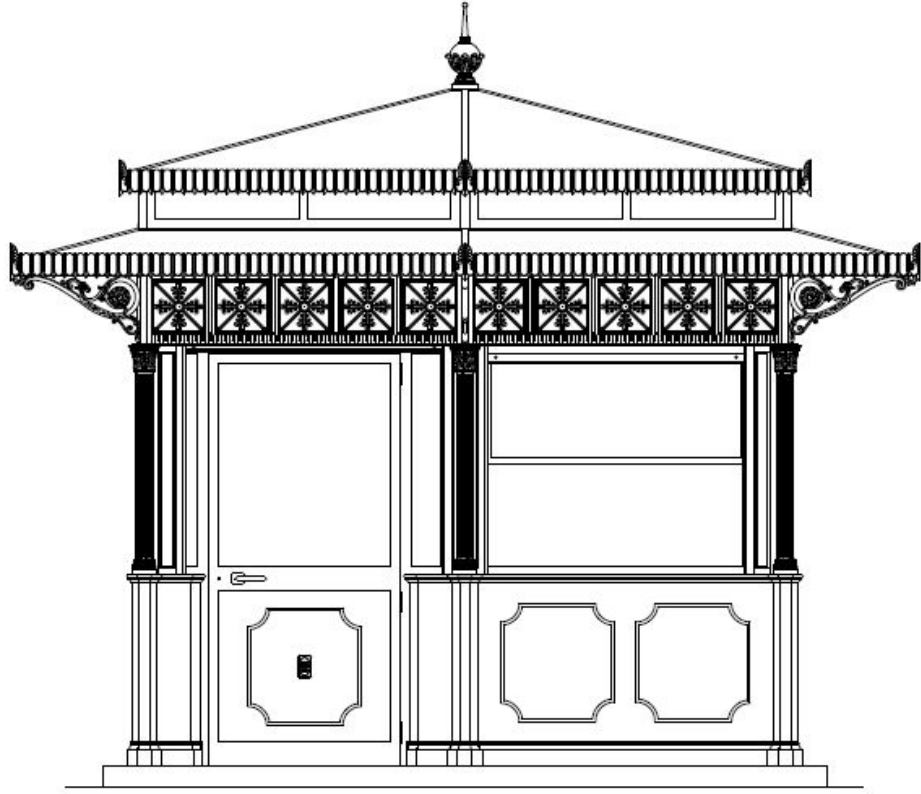


# Could the Operator Tower tie in with the Kiosk initiative?

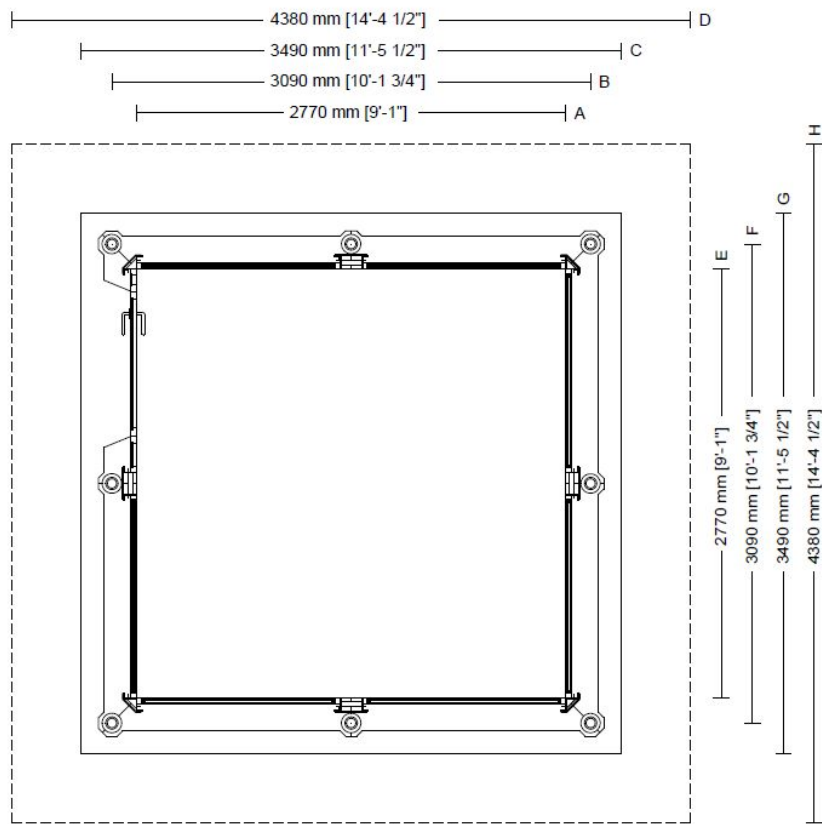


Images: Left - Illustration by Patrick Hilton. © Heather Flint Chatto, FORAGE DESIGN | Images: Right - Burnside Bridge Operator Tower Plans

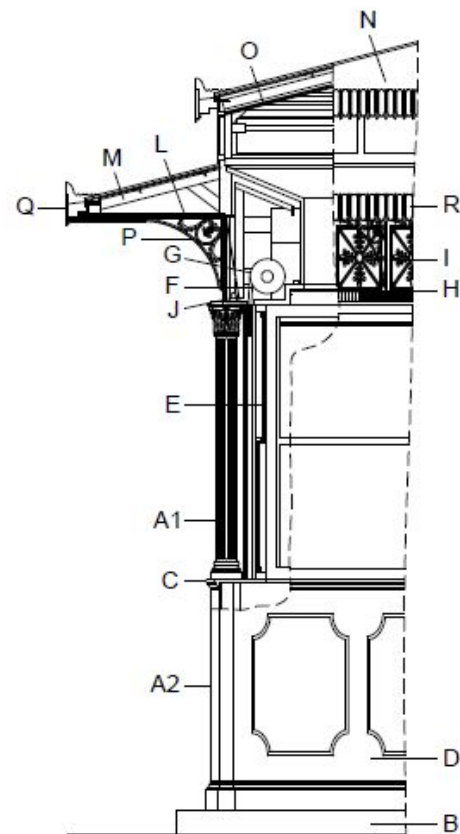


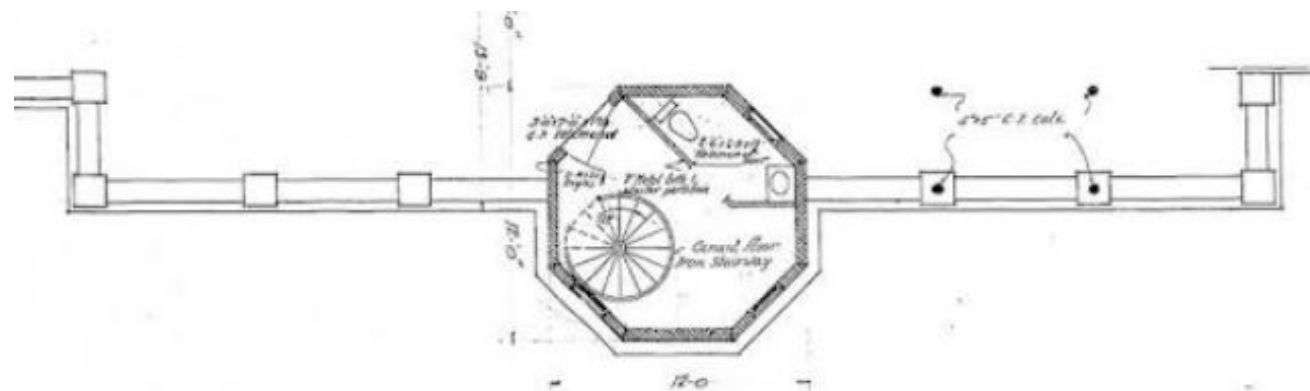
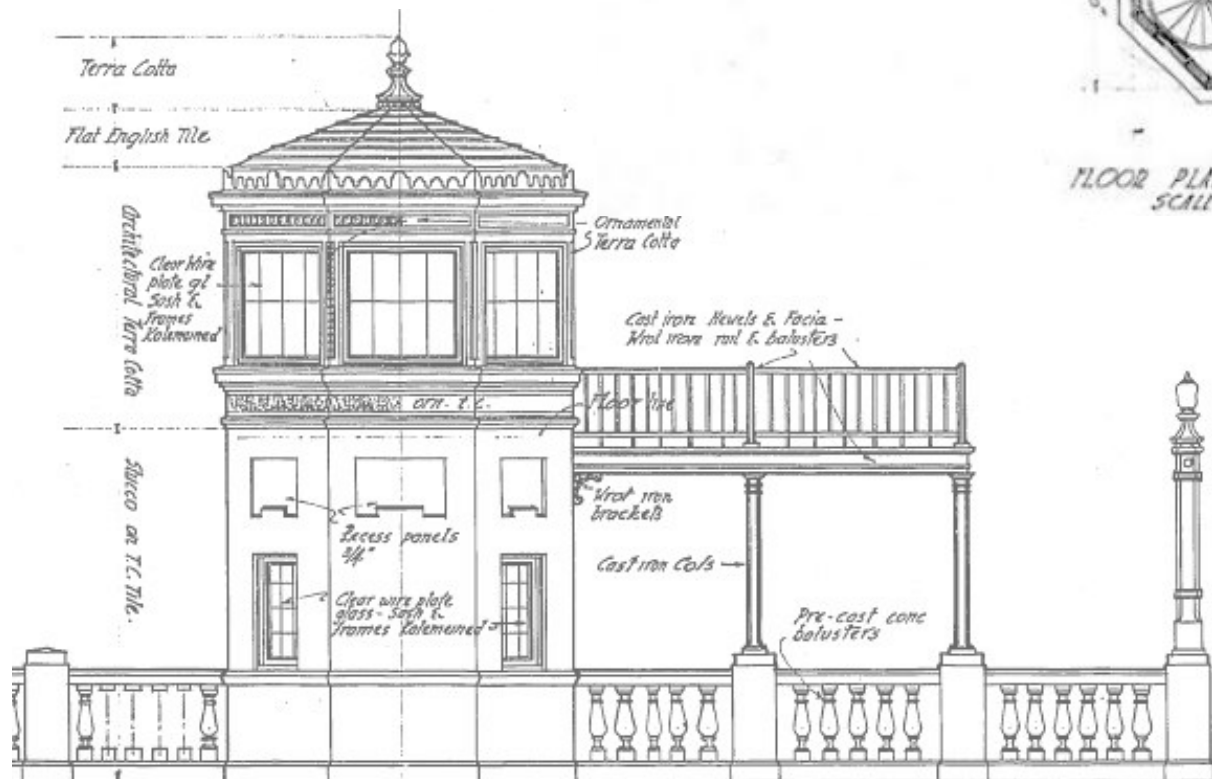


# NERI KIOSK

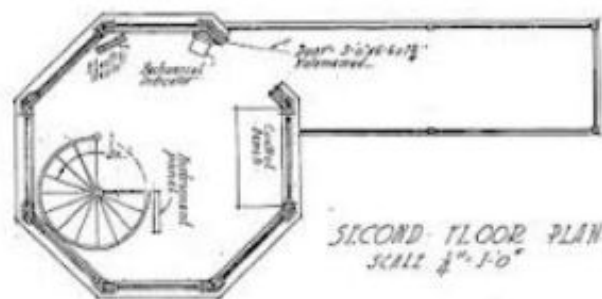


Standard height





FLOOR PLAN AT SIDEWALK LEVEL  
SCALE 1/4" = 1'-0"



SECOND FLOOR PLAN  
SCALE 1/4" = 1'-0"

# Emergency Preparedness & Resiliency



## Solar Kiosk Resiliency Hubs

- **Energy Generation:** On or off-grid solar systems and battery storage.
- **Central place to meet in an emergency**
- **Communications:** A place to charge phones, access wifi and access emergency information
- **Education & Signage:** Emergency resources on who to call, how to prepare, evacuation routes, etc.
- **Essential Sanitation Services:** Accessible toilet and handwashing facilities
- **Backup Power:** kiosks can include a stockpile of re-deployable batteries for NET workers and be part of a micro-grid that helps when the grid is down.

# NERI KIOSK

(Section with proposed features)

## SOLAR KIOSK FEATURES:

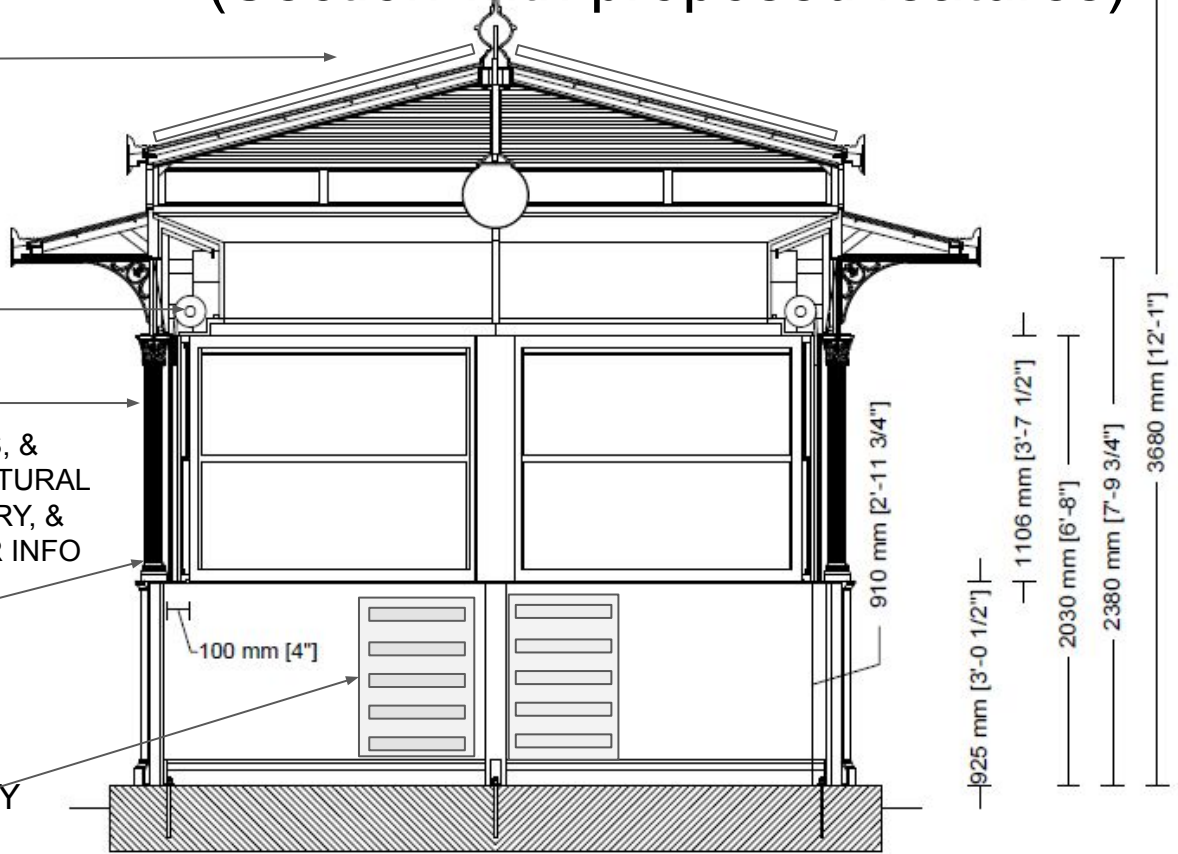
MADE-IN-OREGON  
SOLAR PANELS

ROLL DOWN METAL PANELS  
FOR SECURITY AT NIGHT

INTERPRETIVE PANELS  
WITH DISTRICT WAYFINDING MAPS, &  
INFO ON LOCAL BUSINESSES, CULTURAL  
& HISTORIC NARRATIVES & IMAGERY, &  
SUSTAINABILITY & CLIMATE/SOLAR INFO

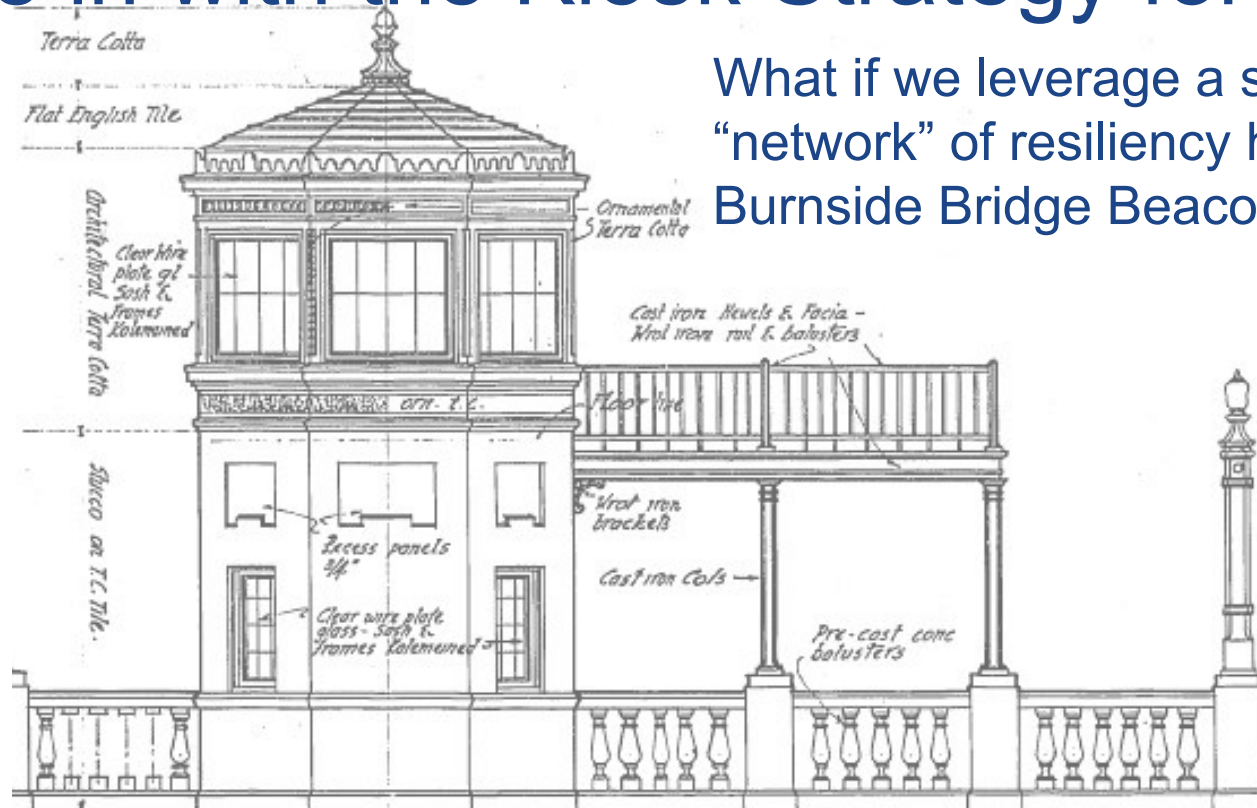
PHONE CHARGING PORTS

(10) MADE-IN-OREGON  
RE-DEPLOYABLE EMERGENCY  
SOLAR BATTERIES

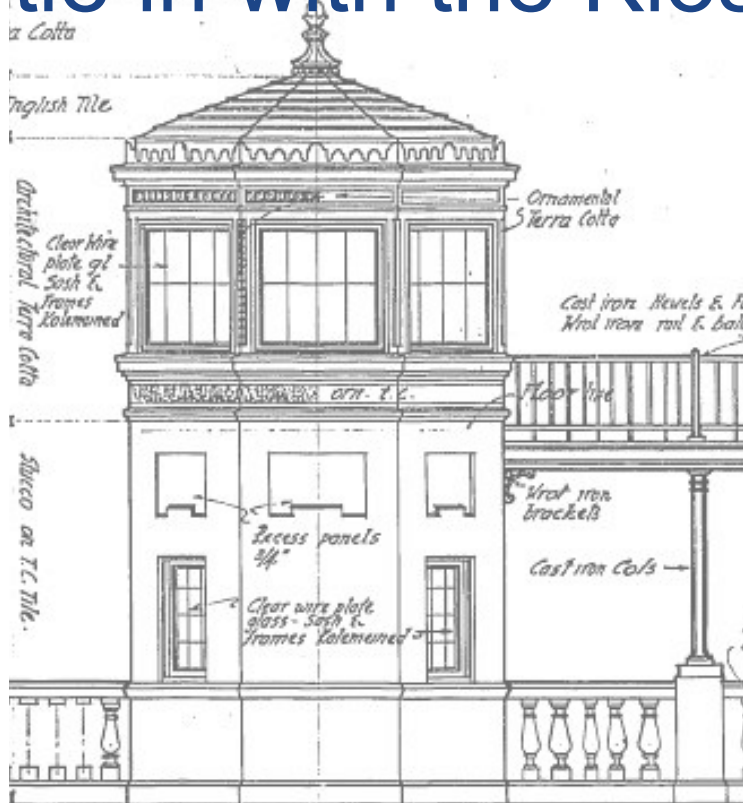


# How might the Burnside Operator Tower tie in with the Kiosk Strategy for Portland?

What if we leverage a shared goal of a “network” of resiliency hubs with a resilient Burnside Bridge Beacon of Resiliency?

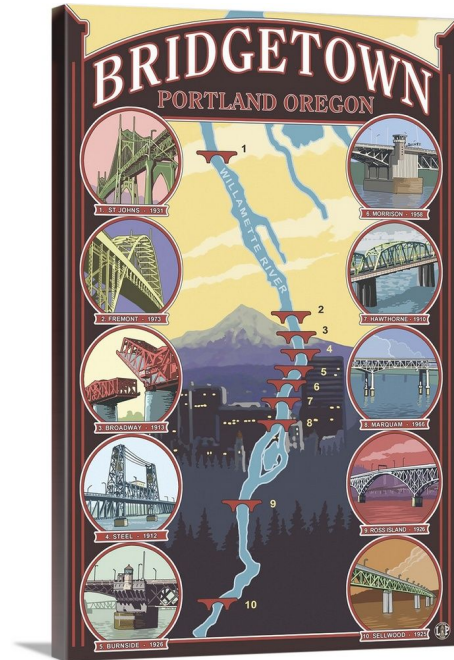


# How might the Burnside Operator Tower tie in with the Kiosk Strategy for Portland?



## Mini Bridge Interpretive Museum?

- Showcase our Bridges
- Education around our diverse and special functions and features
- Attraction for locals and tourism
- Provide unique views
- Tell the Burnside Bridge Resiliency Story



## In addition to a “mini-bridge museum” might it also serve as...

- Welcome/info booth with Travel Portland?
- Ticket Booth for the Maritime Museum?
- Bathroom?
- Resiliency Hub Demonstration for Education?
- All of the above?





# Discussion

- **Do we like these ideas?**
  - Retaining Cultural History, Identity, Education, Tourism, Amenities, Resiliency, Kiosk Strategy
- **If we could, how would we?**
  - Cut at the deck and move it
  - Because of how small it is, it seems feasible for partial disassembly and re-assembly
  - Where is the \$ from? Community Benefits Request?
  - If we wanted to re-install...Where? What does the City Require? Water, approval from Parks & PBOT, new foundation
- **Recommendation: Small working group to explore further**



# For More Information:

- **Website:** <https://www.pdxmainstreets.org/kioskdesign>
- **News:** [www.kptv.com/2023/09/06/movement-build-community-kiosks-portland-gaining-momentum/](http://www.kptv.com/2023/09/06/movement-build-community-kiosks-portland-gaining-momentum/)
- **Lisbon Kiosk Strategy:**  
[www.npr.org/sections/thesalt/2016/08/01/485228299/history-horchata-and-hope-how-classic-kiosks-are-boosting-lisbons-public-life](http://www.npr.org/sections/thesalt/2016/08/01/485228299/history-horchata-and-hope-how-classic-kiosks-are-boosting-lisbons-public-life)
- **Atlanta Kiosk Program Website:** [www.atlantaga.gov/kiosks](http://www.atlantaga.gov/kiosks)
- **Kiosk Program Guidelines:** [www.atlantaga.gov/home/showpublisheddocument/61371/638433640050730000](http://www.atlantaga.gov/home/showpublisheddocument/61371/638433640050730000)
- **Contact:** Heather Flint Chatto, Urban Designer | Kiosk Design Initiative Founder | Director, Architectural Heritage Center  
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