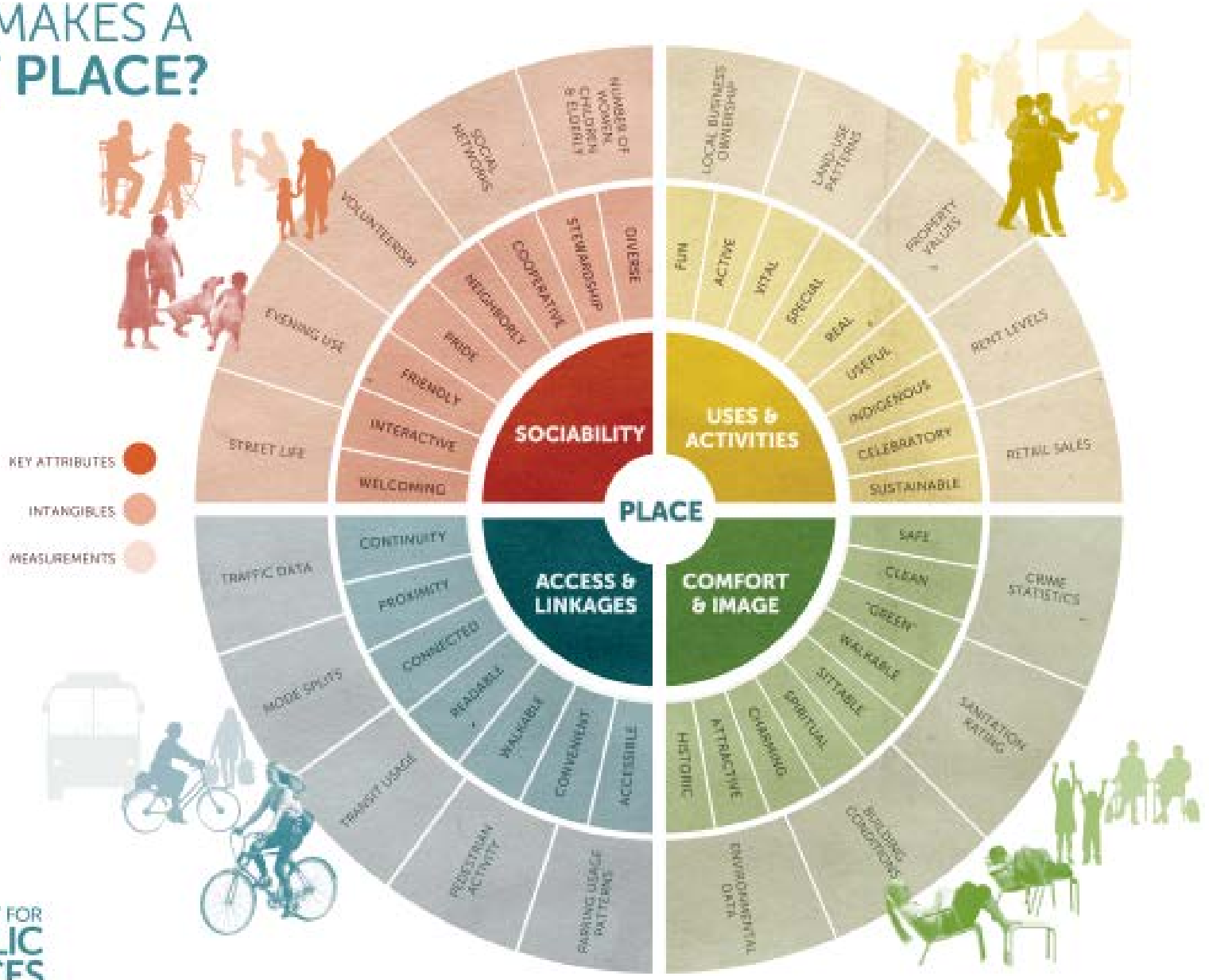
WHAT MAKES A **GREAT PLACE?**



PROJECT FOR PUBLIC SPACES

History, Cultural Identity, and Social Connections

Environmental Stewardship

Environmental Stewardship

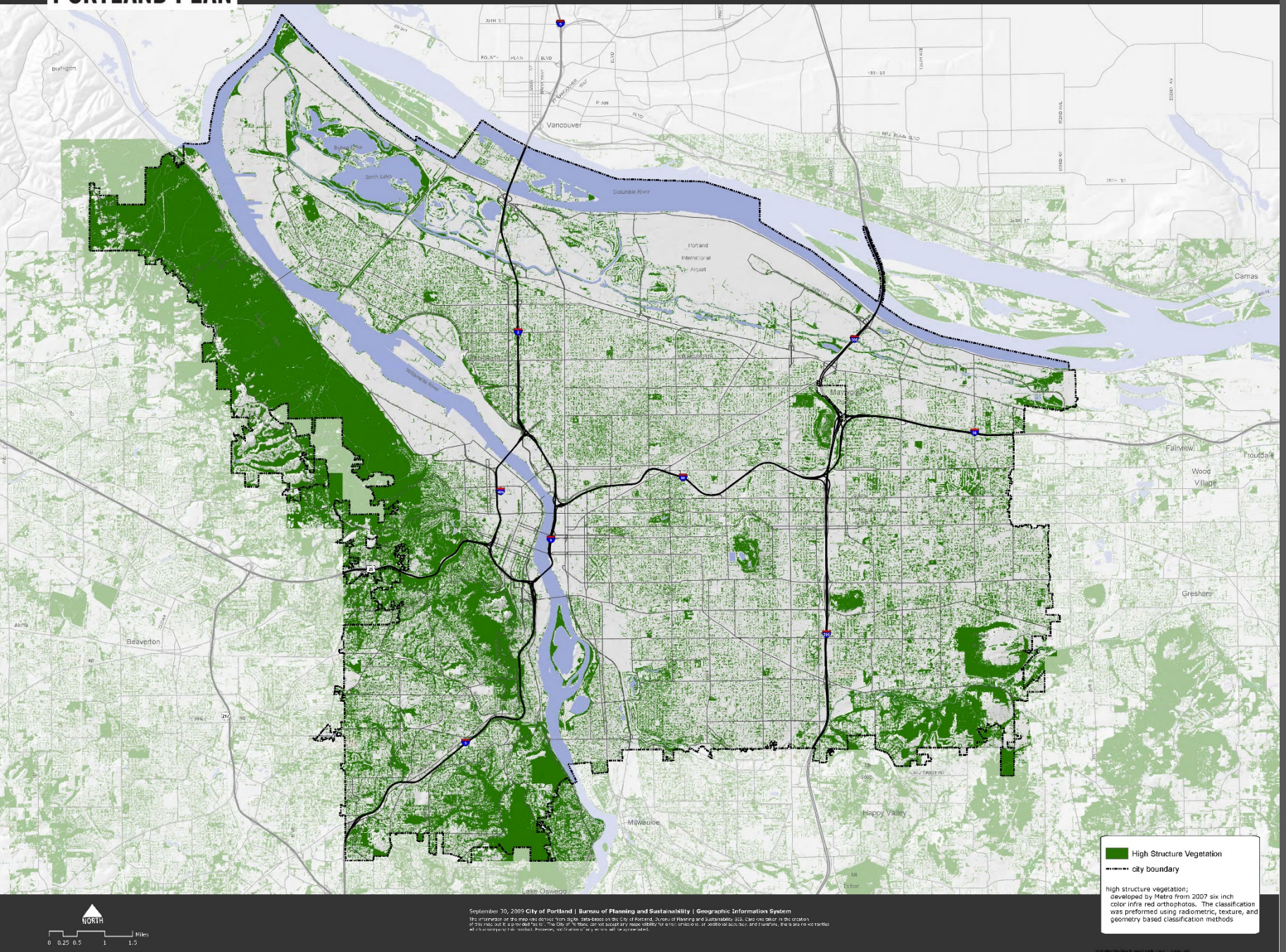
Environmental Stewardship

Environmental Stewardship

PORTLAND PLAN

Tree Canopy

URBAN FORESTRY



Portland Urban Canopy = $5 billion

Removes 25 million lbs of pollutants

Stores 1.5 billion lbs of carbon

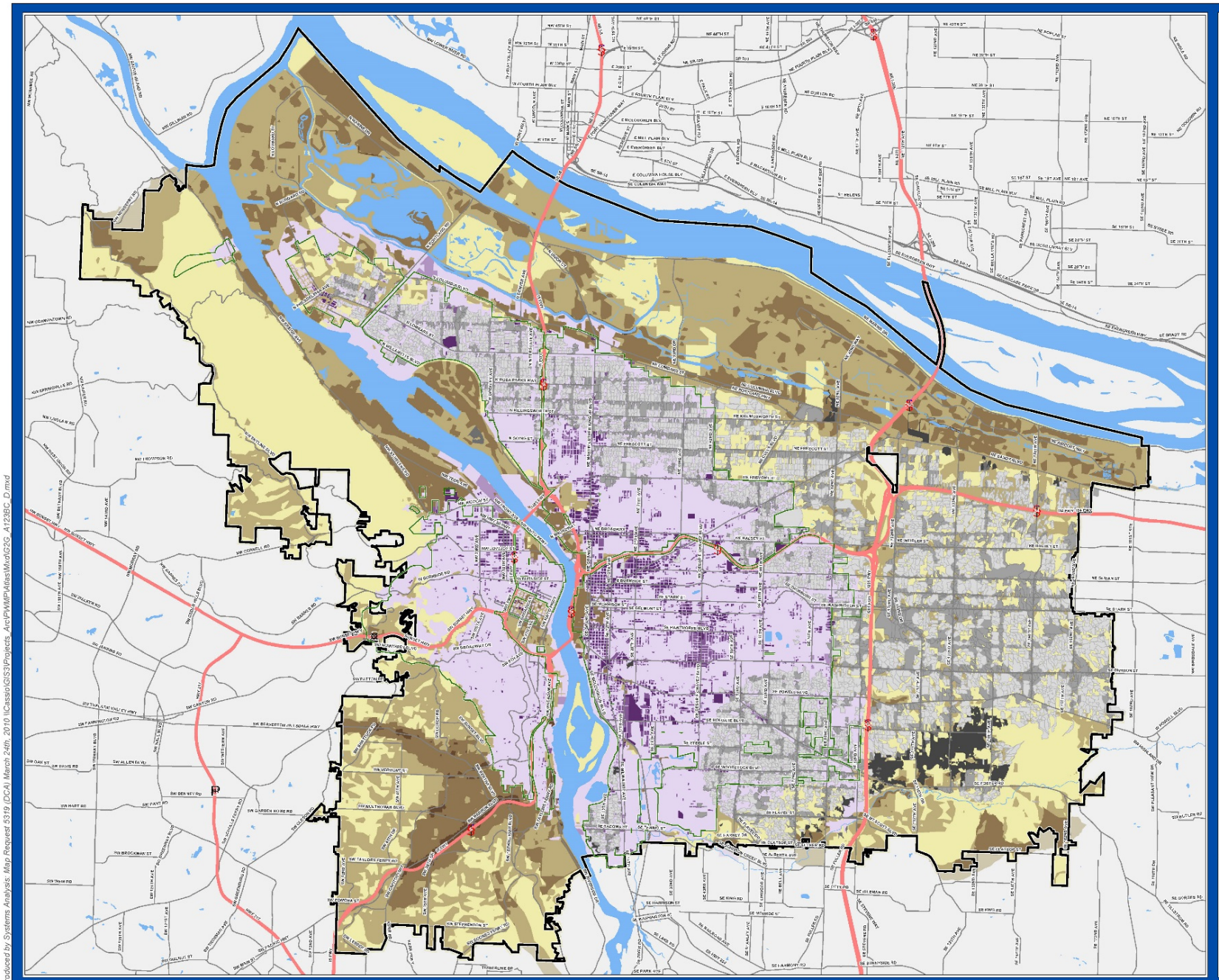
History, Cultural Identity, and Social Connections

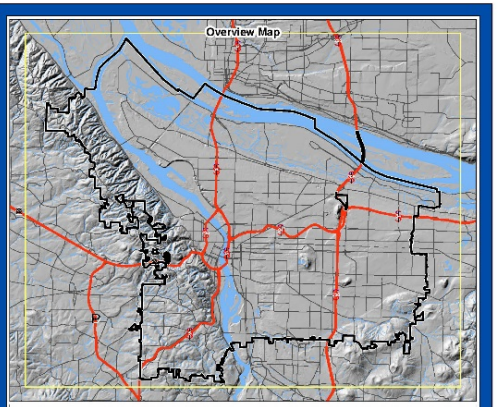
History, Cultural Identity, and Social Connections

History, Cultural Identity, and Social Connections

History, Cultural Identity, and Social Connections

History, Cultural Identity, and Social Connections





Legend

- City of Portland
- Rivers and Lakes
- CSO Boundary
- Freeways
- Arterial Streets

Combined
- Higher
- Lower

Sumps/ UICs
- Higher
- Lower

Separate
- Higher
- Lower

Portland Watershed Management Plan
Potential Benefit of Green Infrastructure Improvements

City of Portland
Environmental Services
Systems Analysis
Spatial Analysis and Modeling

Sheet No.	Date Printed:
	03/24/10

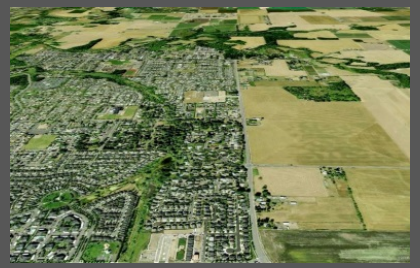
Produced by Systems Analysis: Map Request 5319 (DCA) March 24th, 2010 \\Cassio\GIS\Projects_Arc\PWMP\Atlas\Mxd\GIS_A1236C_D.mxd


EVER GREEN
RECYCLE IT
COMPOST IT
WASTE IT

1971
First State with Bottle Deposit Bill, first state with Bicycle Bill

1972
Downtown Plan

1973
First State with Urban Growth Boundary



1974
Portland removes highway and creates waterfront park

1986
MAX Light Rail system opens
Max

1993
First City in US with Climate Action Plan

1994
First City in US with a Green Infrastructure Policy

1996
First City in US with renewable fuel standard

1996
Bicycle Master Plan

2001
First City in US with green building policy

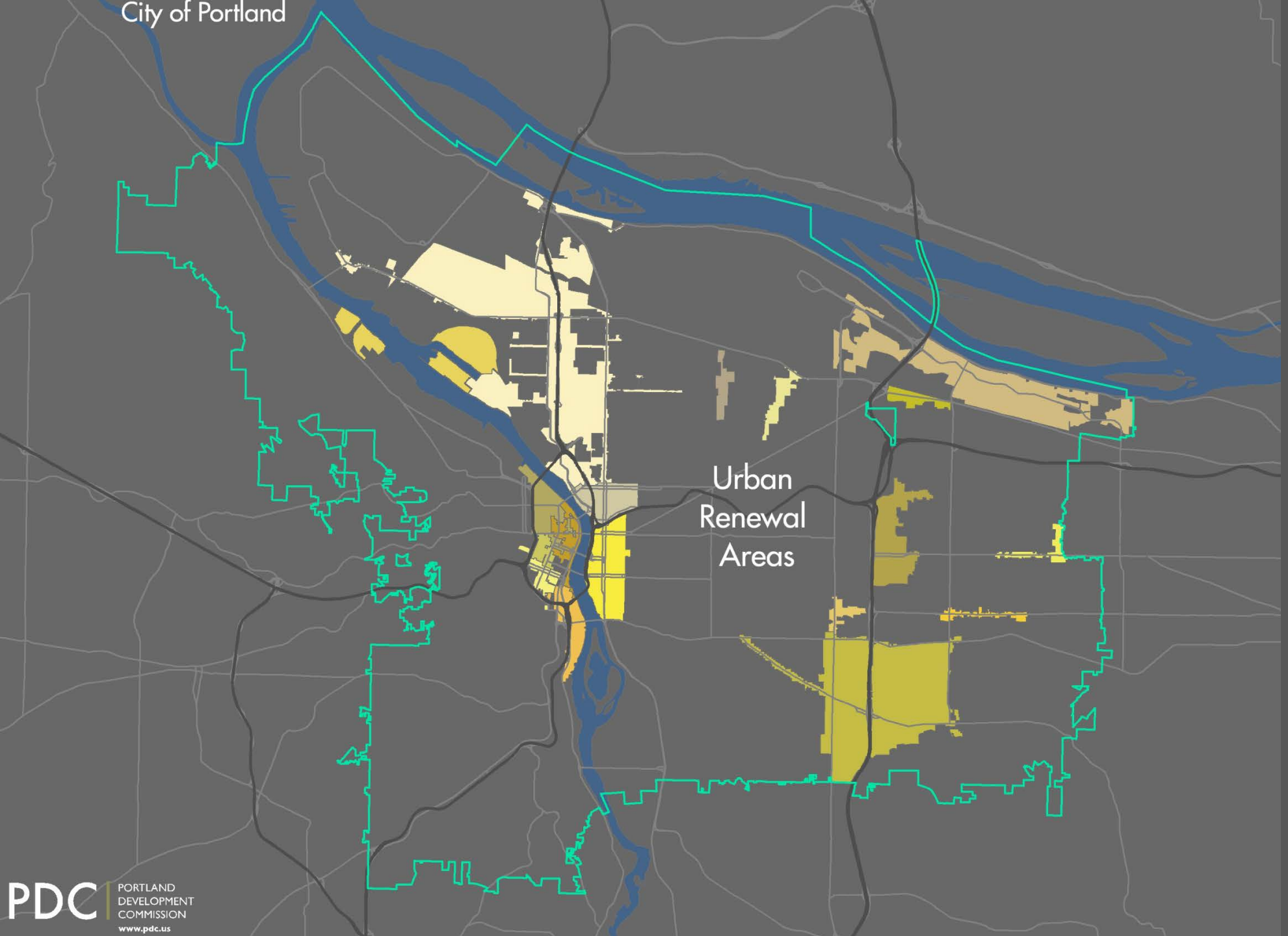
2001
First City in US with modern streetcar

Portland builds largest bridge in NA to exclude cars

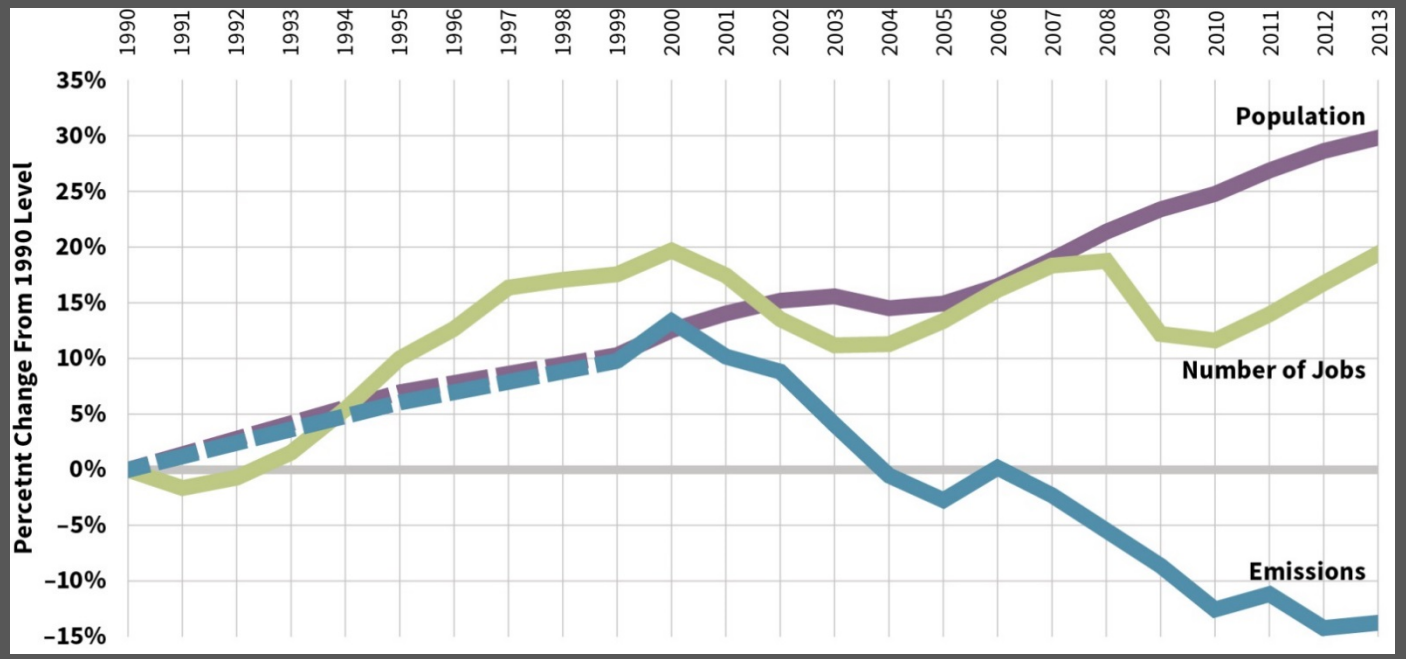
2015
Hassalo on Eighth EcoDistrict opens
Hassalo

2015

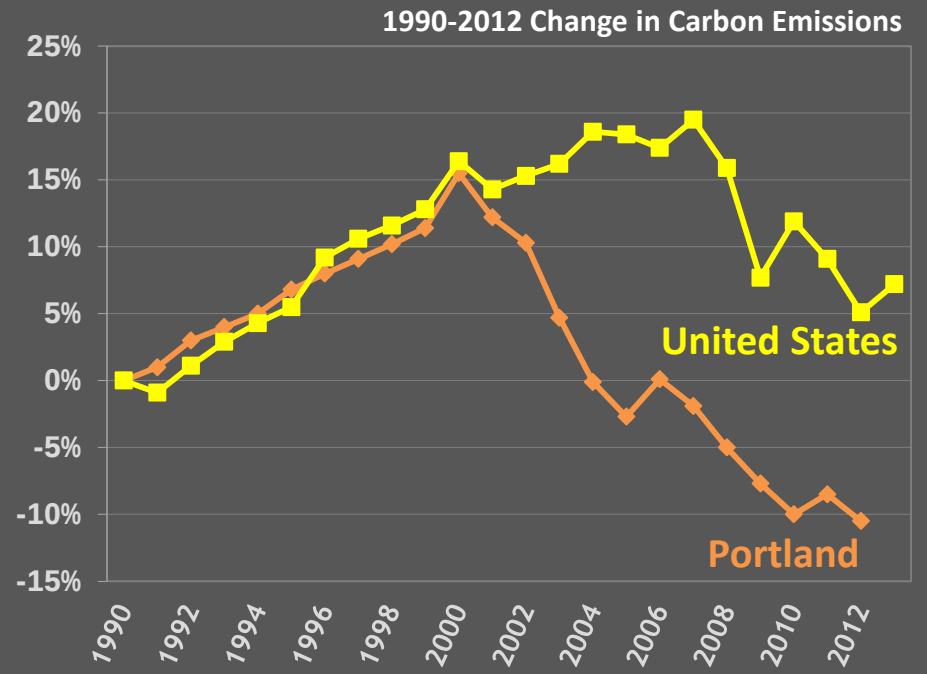
Public - Private Partnership



PDC: Urban Renewal Areas



1990-2013 change in Multnomah County carbon emissions compared to population and jobs



7% Increase in carbon emissions in U.S.

11% Decrease in carbon emissions in Portland

400% Increase in GDP 1990 - 2012

Since 1990

2030: 90% residents can walk/bike to meet basic (non-work) daily needs

Historic Plans

Olmsted Plan, 1903

Greater Portland Plan, 1912

Major Traffic Street Plan Boulevard and Park System, 1921

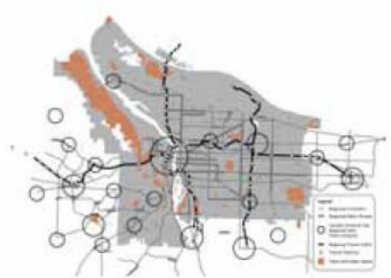
Proposed System of Major Streets and Development of Waterfront, 1932

Portland Improvement, 1943

Comprehensive Plan (Not Adopted), 1966

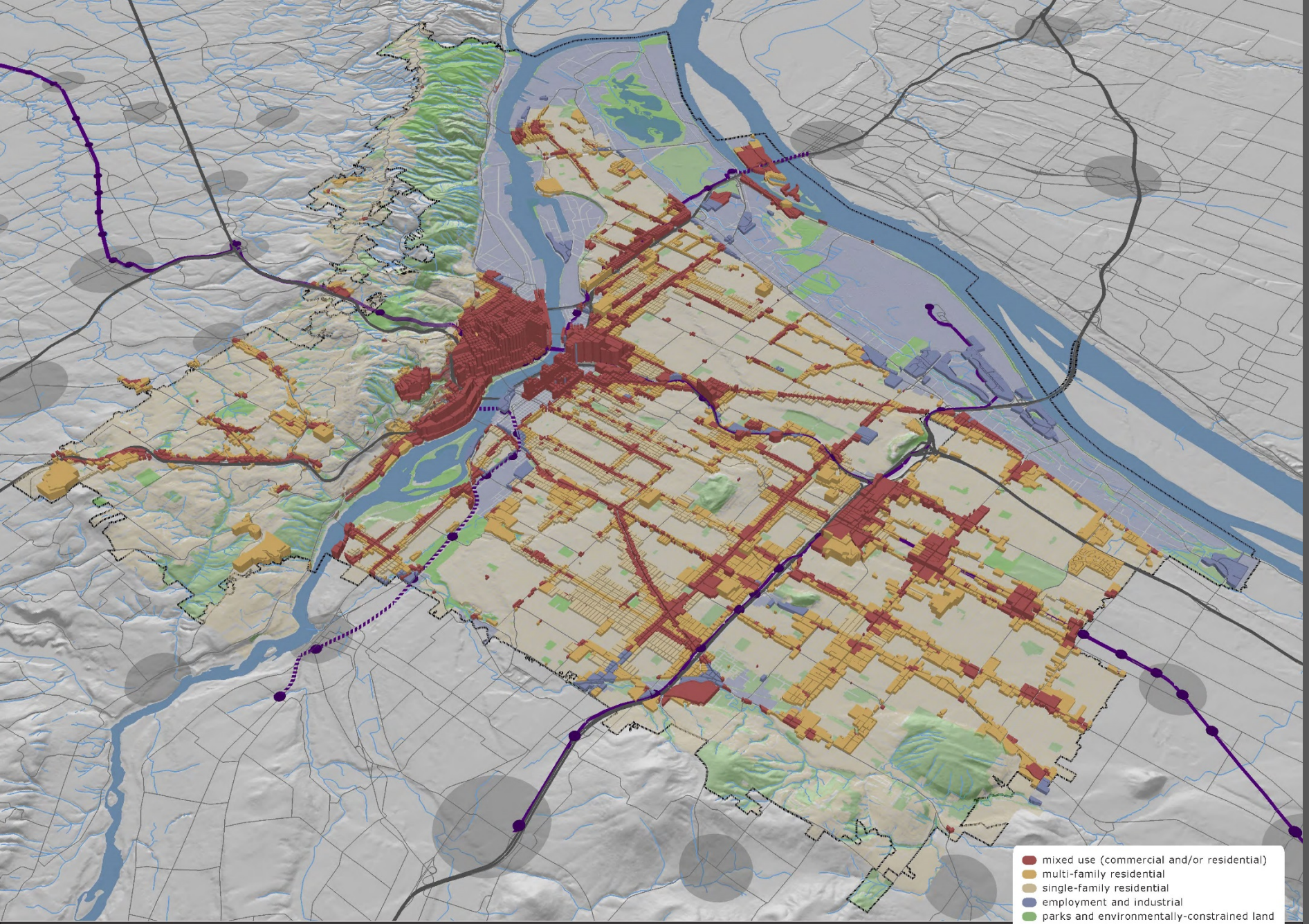
Contemporary Plans

Comprehensive Plan, 1980.



Metro Region 2040 Growth Concept, 1995

Community, Neighborhood and Area Plans, 1972–Present



urban FORM | "default map" | comp plan

june 17, 2009 **city of portland | bureau of planning & sustainability | geographic information system**

"The information on this map is derived from City of Portland GIS databases. Care was taken in the creation of this map but it is provided "as is." The City of Portland cannot accept any responsibility for errors, omissions, or positional accuracy, and therefore, there are no warranties which accompany this product. However, notification of any errors will be appreciated.

Note: that this image has been vertically exaggerated to emphasize differences in height (topography: 2X), (default map: 30).

PDX Urban Form

Civic Engagement

Civic Engagement

Civic Engagement

Civic Engagement

Civic Engagement

Civic Engagement

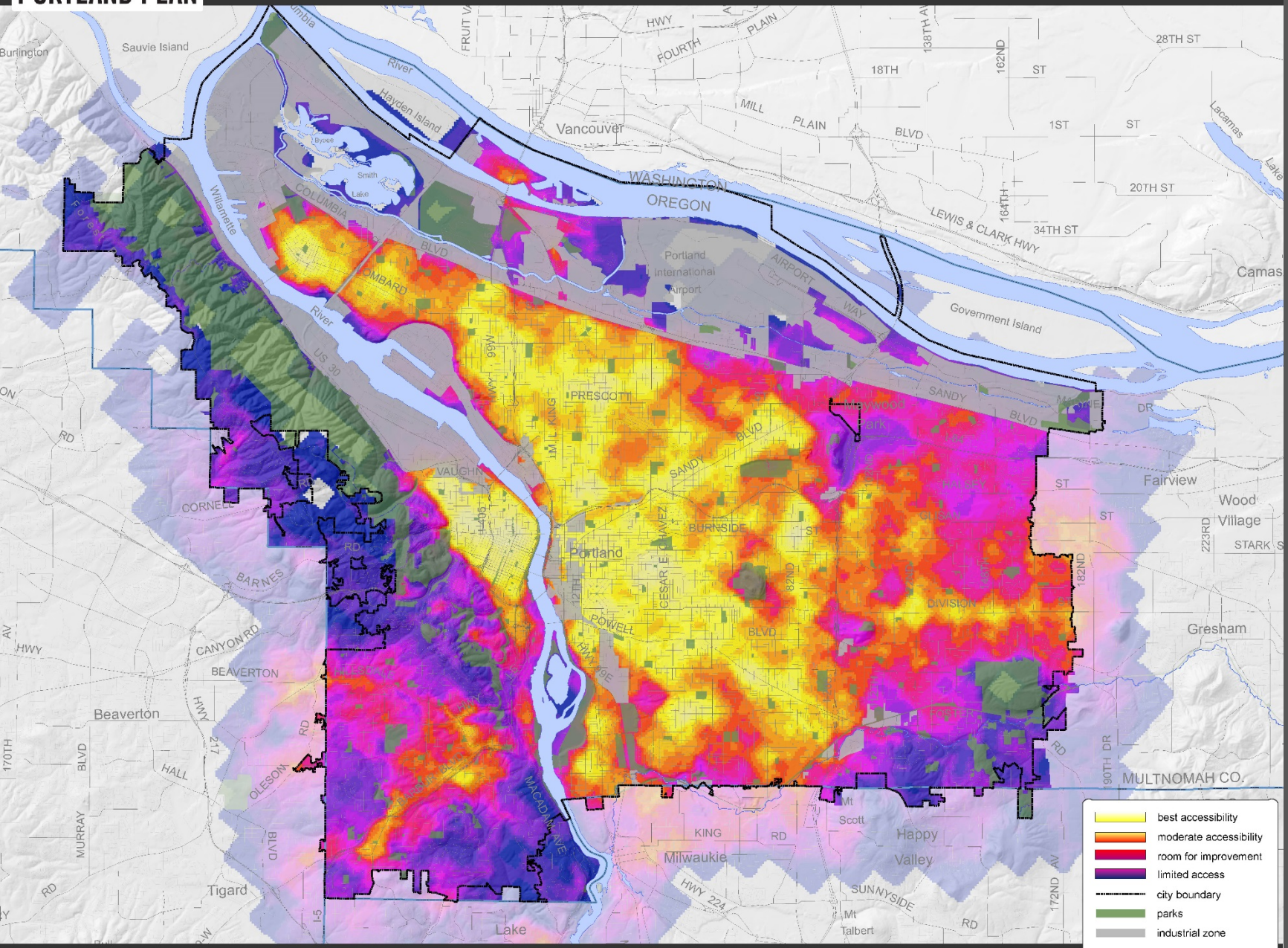
Civic Engagement

Civic Engagement

Civic Engagement

PORTLAND PLAN

20-minute neighborhood concept analysis



Better use of existing infrastructure

Neighborhood Main Street w/Retail

Outdoor Comfort

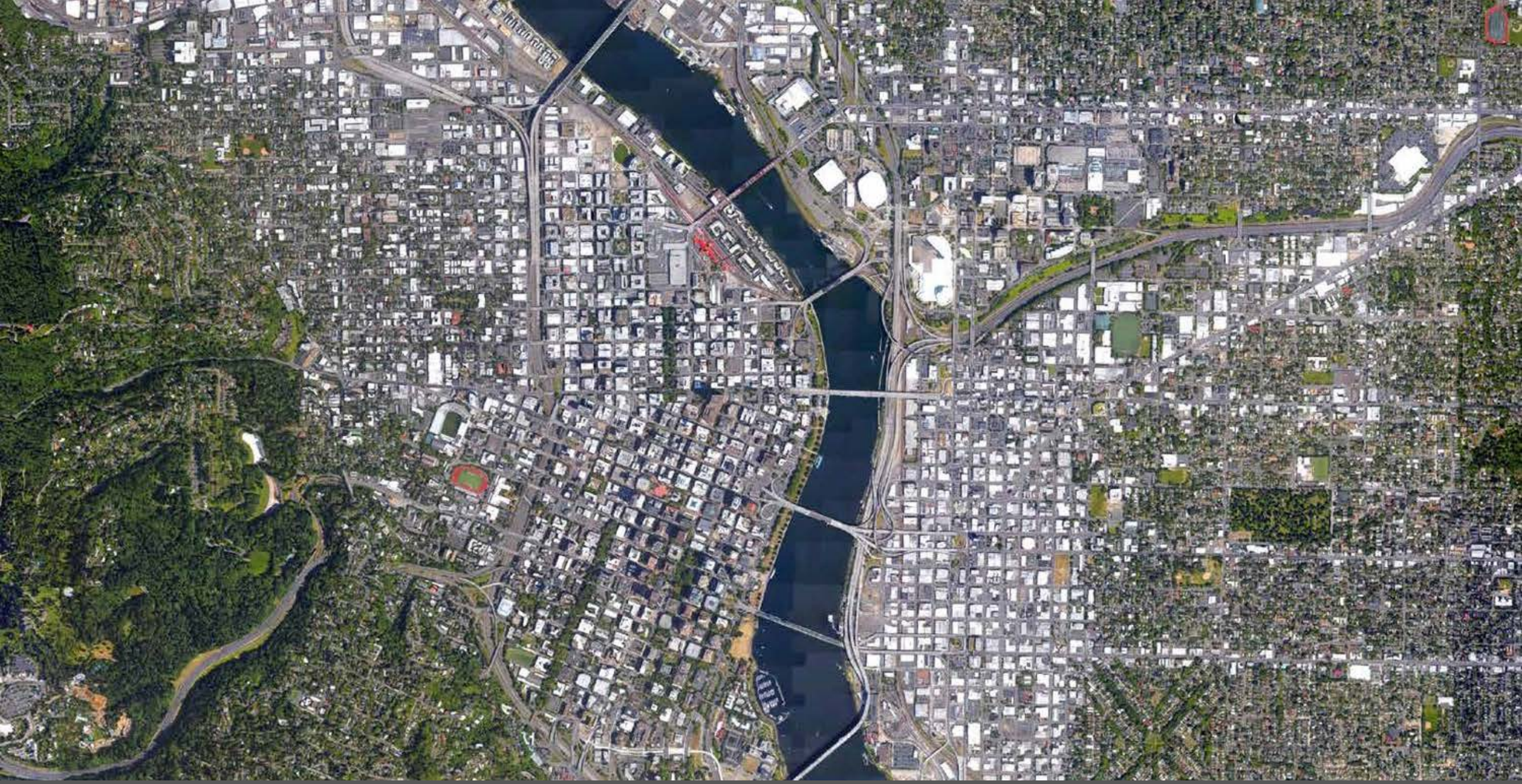
Climate Proofing Infrastructure

Permeability/Water Management

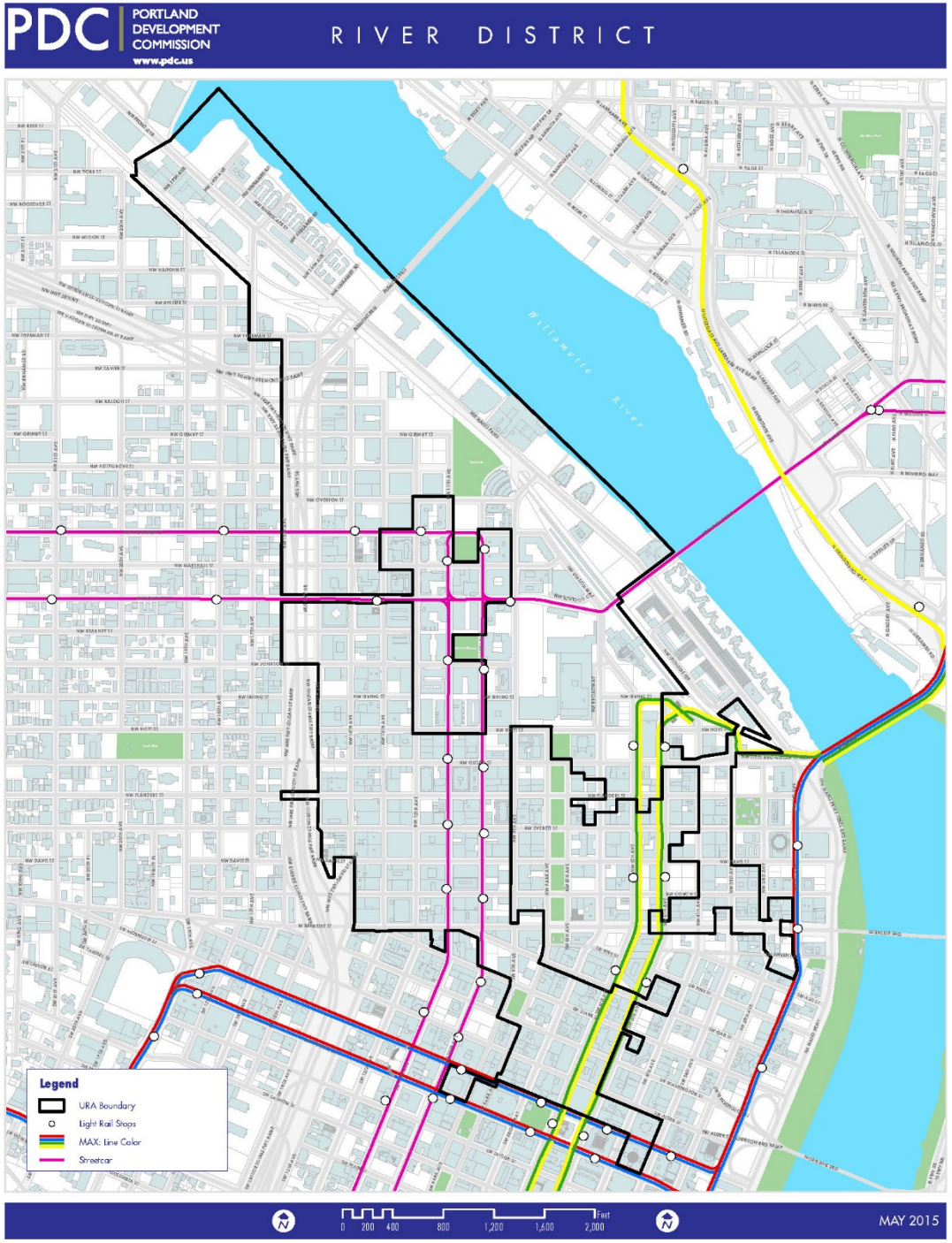
Walkability/Connectivity

Mixed Housing

Networks



Public-Private Partnership: The Pearl District



Public-Private Partnership: The Pearl District

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Public-Private Partnership: The Pearl District

Public-Private Partnership: The Pearl District

Public-Private Partnership: The Pearl District

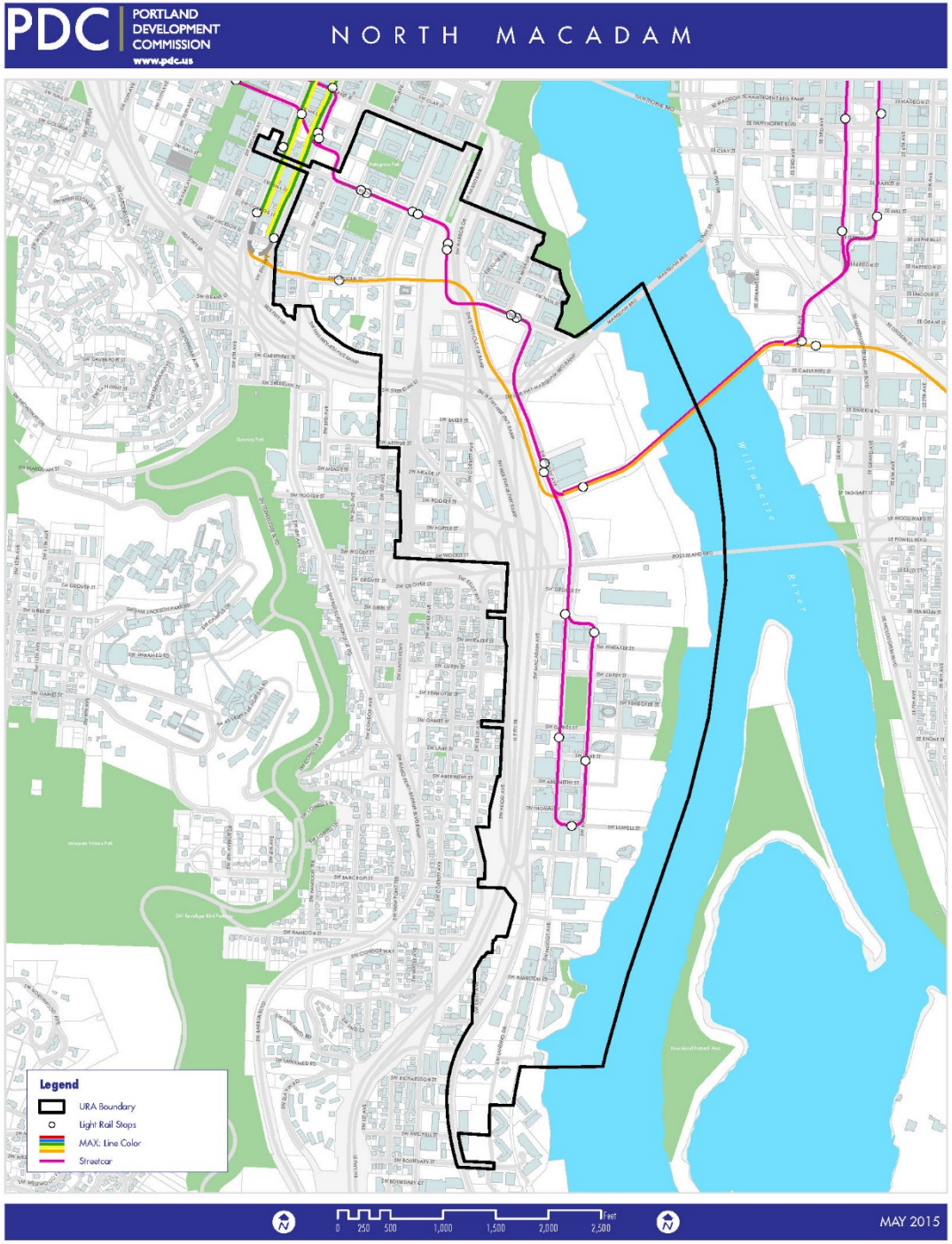
Public-Private Partnership: The Pearl District

Growth of Area : Tama Plaza

<the 1960s>

<present>

Next Generation City Community Development Project
(photos courtesy of City of Yokohama and Tokyu Corporation)



PDC: North Macadam URA – South Waterfront District

PDC: North Macadam URA – South Waterfront District

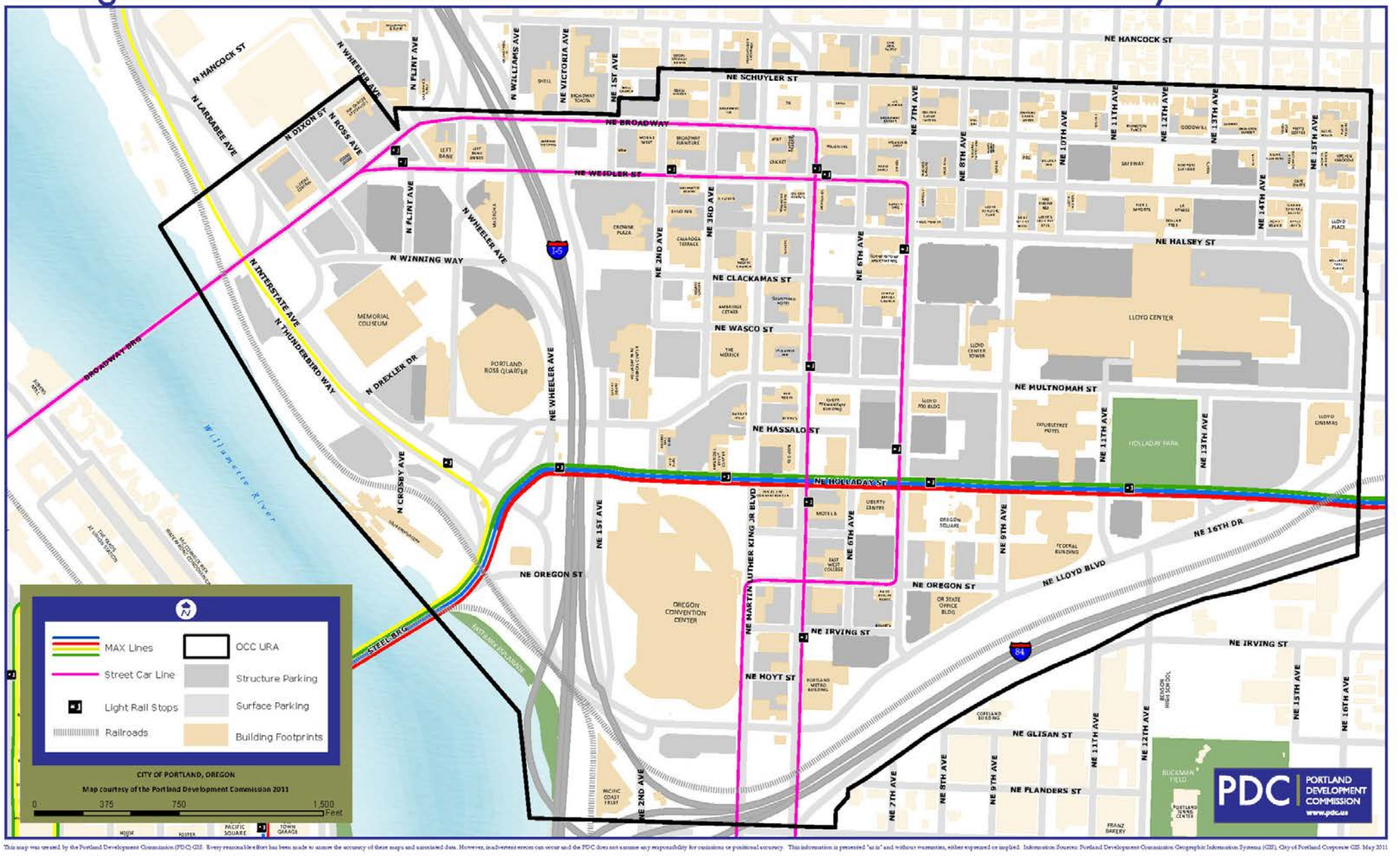
PDC: North Macadam URA – South Waterfront District – Zidell Yards

PDC: North Macadam URA – South Waterfront District – Zidell Yards

PDC: North Macadam URA – South Waterfront District – Zidell Yards

PDC: North Macadam URA – South Waterfront District – Zidell Yards

Oregon Convention Center Urban Renewal Area Lloyd District



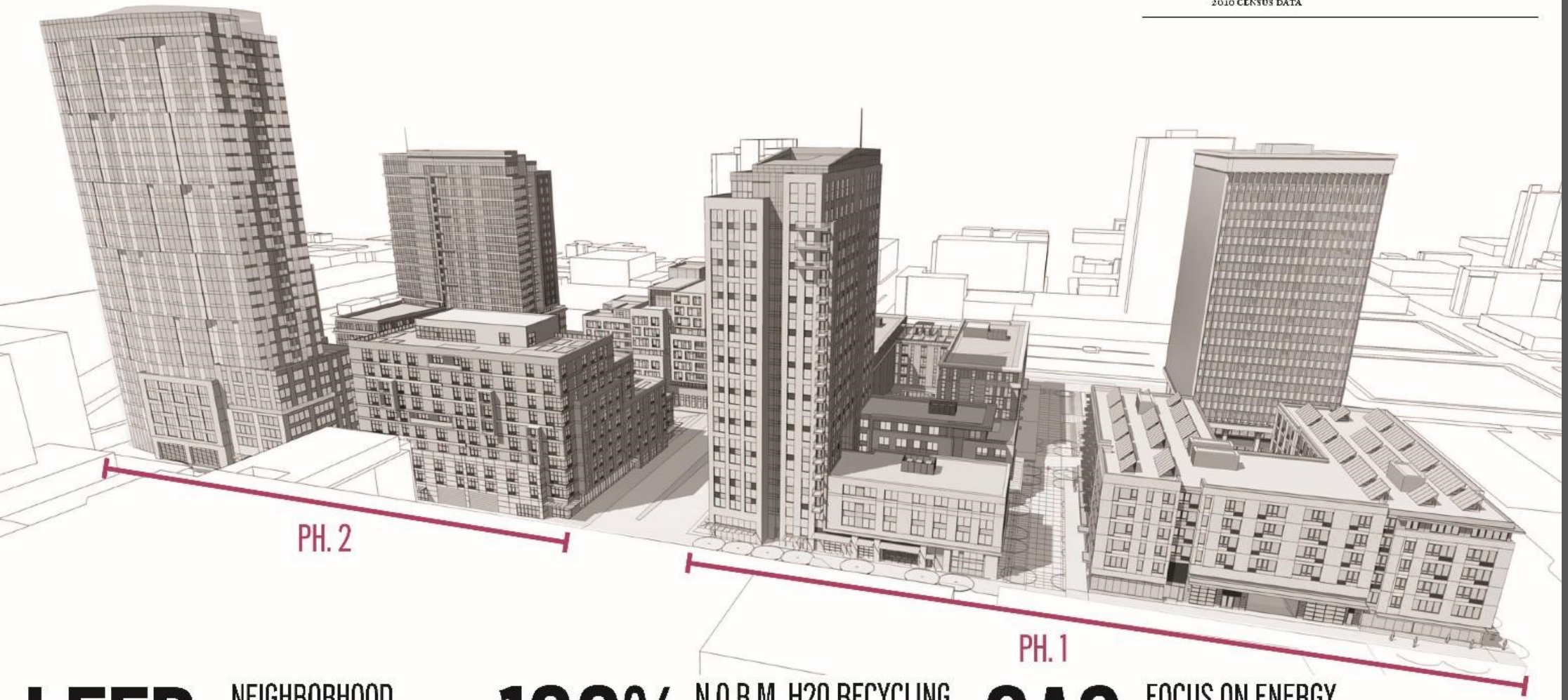
PDC: Oregon Convention Center URA – Lloyd District

HASSALO NEIGHBORHOOD

1,657 RESIDENTIAL UNITS

About 3,800 in the Pearl
2010 CENSUS DATA

The Hassalo Neighborhood is set to become the next destination spot in Portland. The vicinity and accessibility of Hassalo, and the mixed zoning make it a hub for live / work culture.



LEED

Platinum neighborhood developement (ND)

NEIGHBORHOOD

The Hassalo Neighborhood is on track to become one of the first LEED Certified Neighborhoods in the country. All buildings will be LEED Certified. they share a common water treatment and mechanical system working together to use less.

100%

sewer discharge reduction

N.O.R.M. H2O RECYCLING

The Natural Organic Recycling Machine (NORM) uses a series of tidal cells to allow biological waste water treatment to almost drinkable quality. The final stage tanks and vegetation are incorporated into dramatic water features that enhance green spaces.

GAS

powered applications

FOCUS ON ENERGY

Heat pumps allow excess heat from spaces to be transferred to other uses balancing demands. Phase Two will also include Gas Powered Fuel Cells, these fuel cells generate on site energy and reduce demand and cost of transportation of energy. Waste heat will be used to supplement the hot water demand, one of the highest end-uses in residential buildings.

HASSALO NEIGHBORHOOD

ECO-DISTRICT OREGON SQUARE

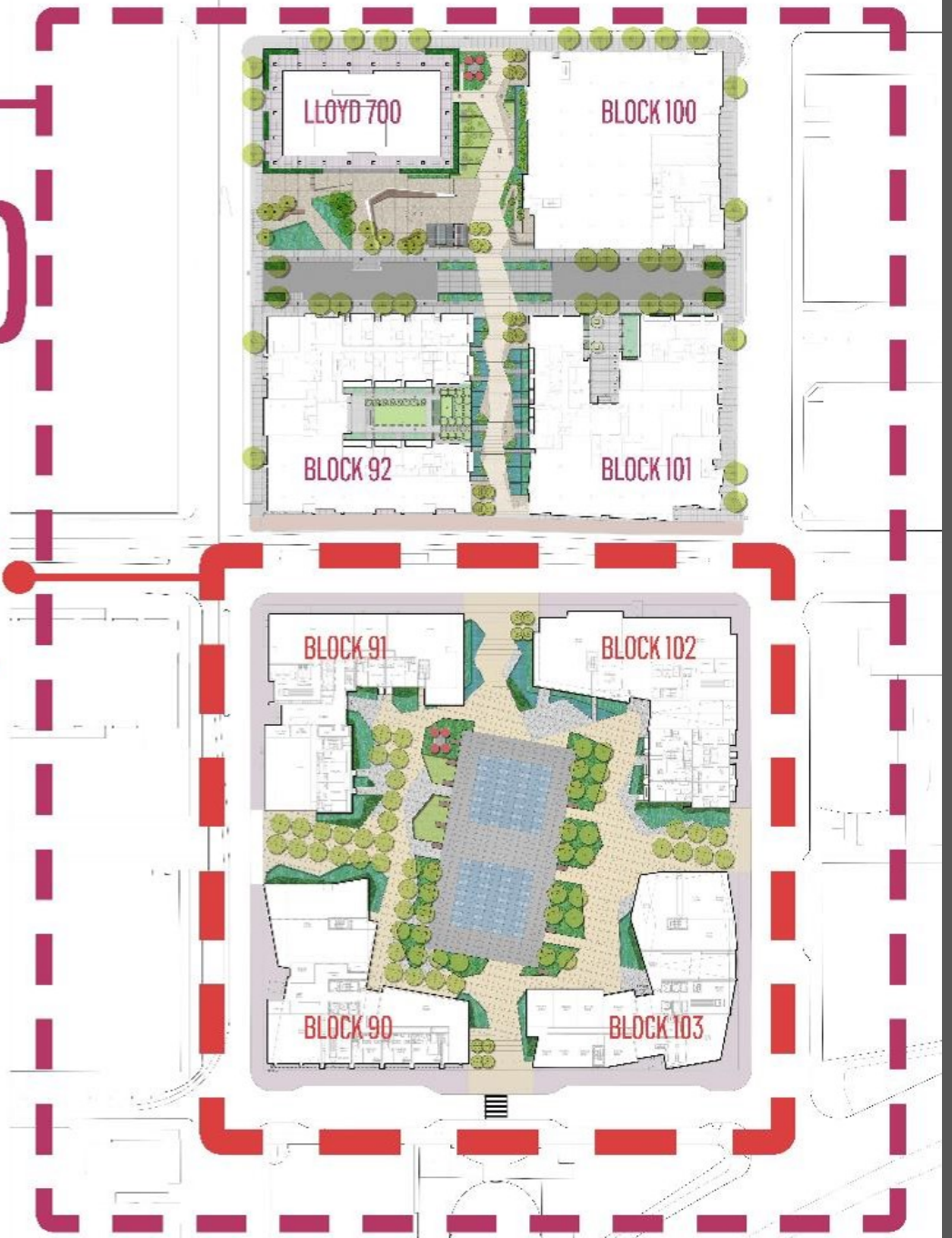
COMMUNITY

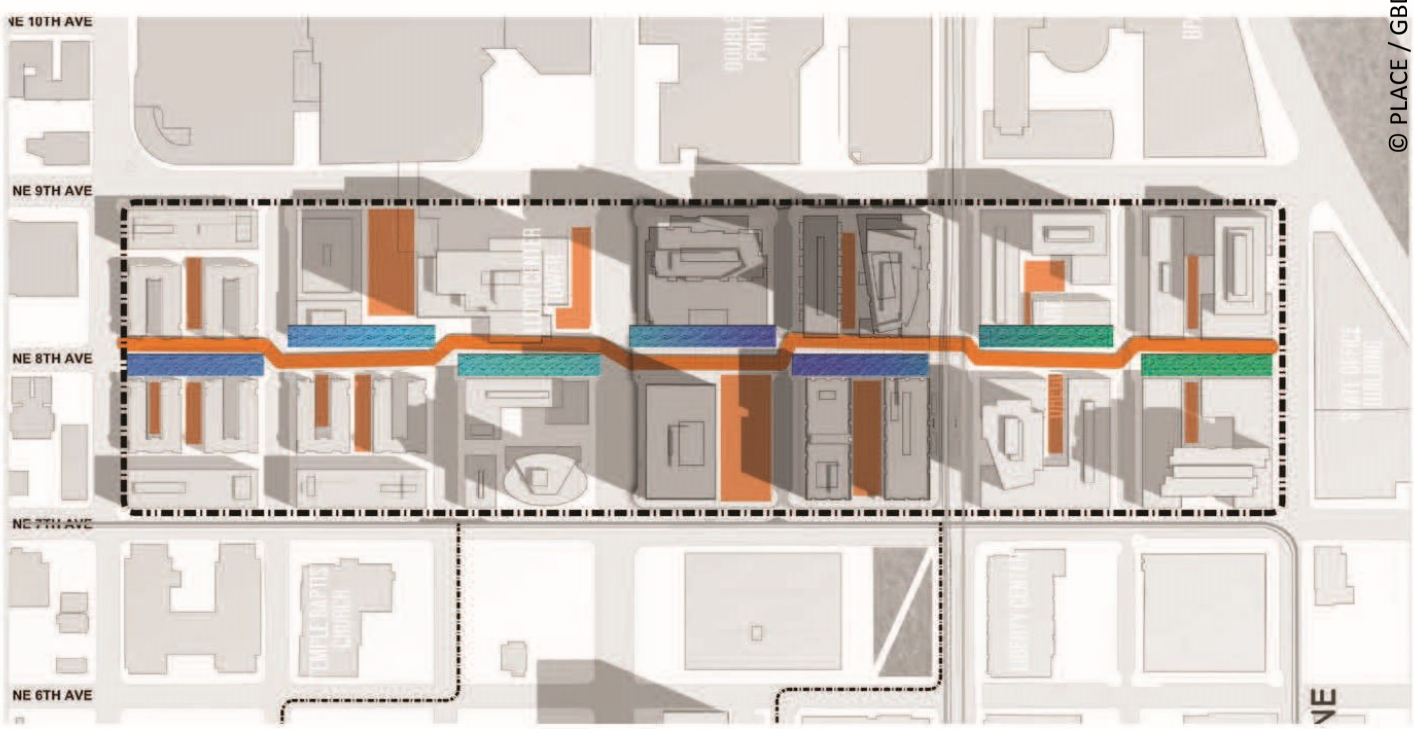
WATER

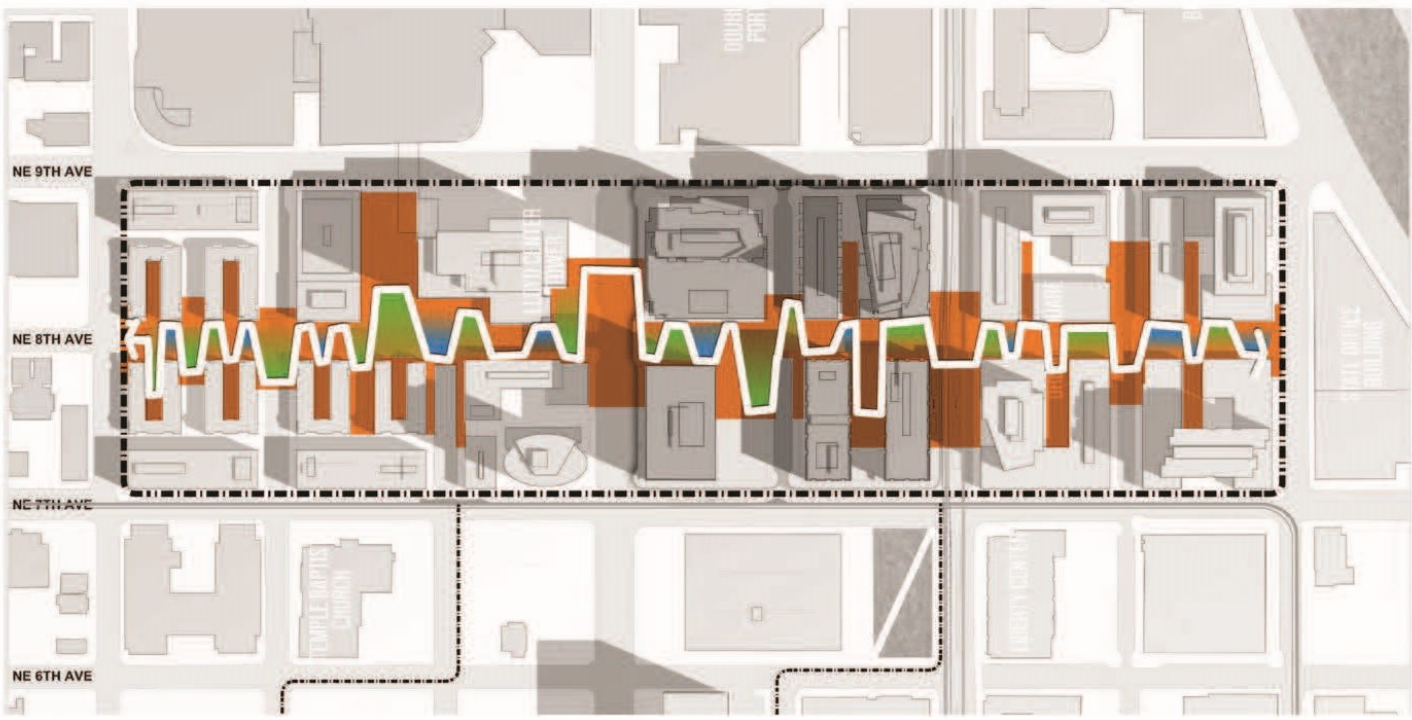
AIR

TRANSPORTATION

ENERGY




NE 10TH AVE
NE 9TH AVE
NE 8TH AVE
NE 7TH AVE
NE 6TH AVE
TEMPLE BAPTIST CHURCH


NE 9TH AVE
NE 8TH AVE
NE 7TH AVE
NE 6TH AVE
TEMPLE BAPTIST CHURCH

ECO-DISTRICT STRATEGY FOR

HASSALO NEIGHBORHOOD

MIX USE

A live / work community

OFFICE/HOUSING/PARKING/PARKS

Phase 1 of Hassalo on Eighth encompases four Portland city blocks, two mid-rise residential buildings, the existing Lloyd 700 office tower and a 21 story apartment tower. The projects main focus is on the treatment of all black and grey water on site and placemaking.

657 RESIDENTIAL UNITS

OFFICE SPACE

GROUND FLOOR RETAIL

1,200 PARKING SPACES

FOCUS ON WATER

ECO-ROOFS

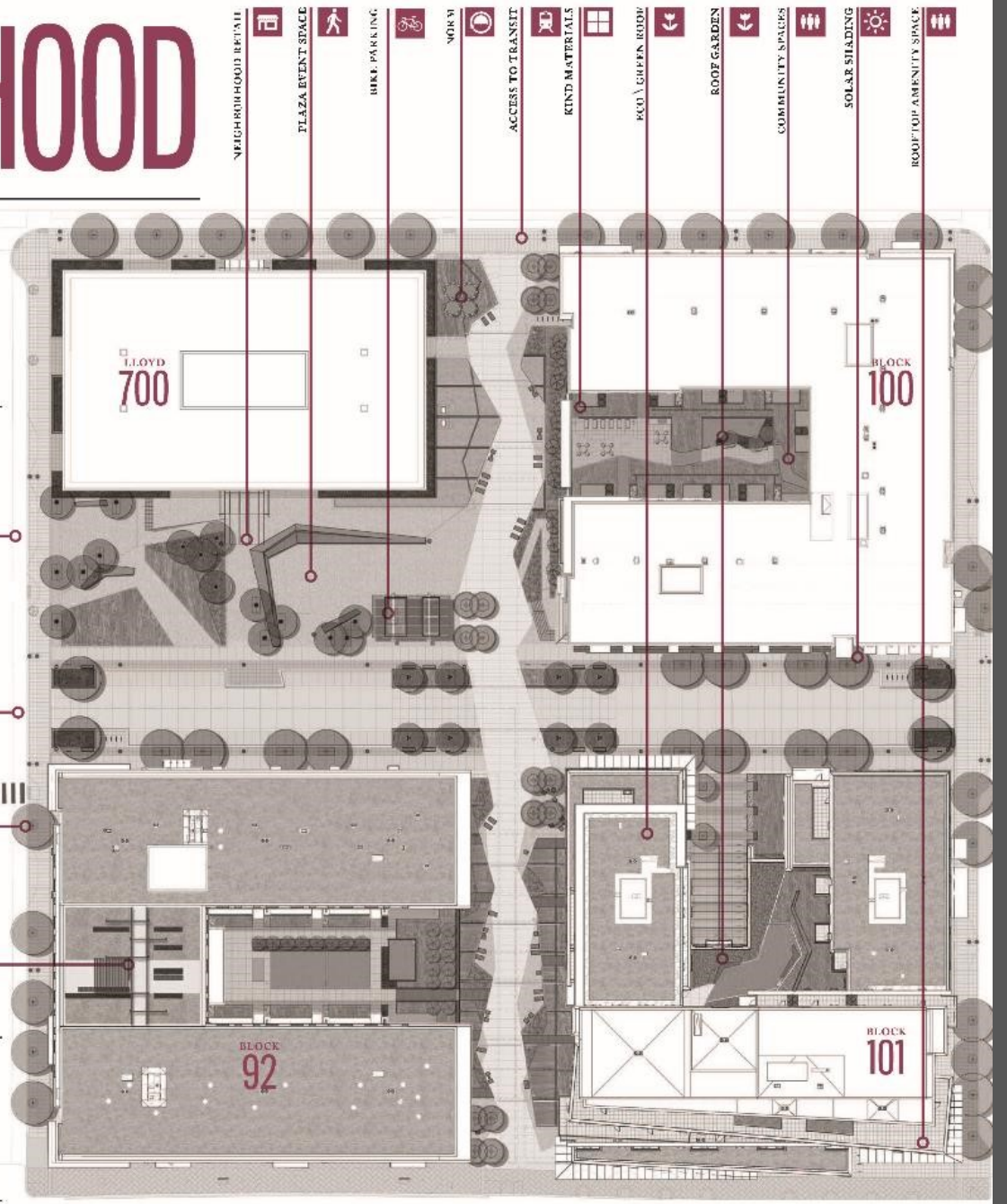
ROOFTOP AMENITIES

CLOSE TO EVERYTHING

TRANSPORTATION OPTIONS

WALKABILITY

SITE AMENITIES



1,200

Bike Parking Stalls

A BIKER'S PARADISE

Hassalo on Eighth has over 1,200 bike parking stalls, including a bike hub with wash station and locker rooms, bike parking stalls in each individual building and some apartments also feature bike parking spots. Oregon Square will exceed that number by adding an additional 1,500 bike parking spots!

COMMUNITY

TRANSIT ACCESS

SOLAR SHADING

KIND MATERIALS

SOLAR ENERGY

NATURAL VENTILATION

INFO FEEDBACK

NEIGHBORHOOD RETAIL

BIKE STORAGE

NORM

ROOF GARDEN

COMMUNITY SPACES

FITNESS

2,700
Bike Parking Stalls

A BIKER'S PARADISE

Hassalo on Eighth has over 1,200 bike parking stalls, including a bike hub with wash station and locker rooms. Oregon Square will exceed that number by adding an additional 1,500 bike parking spots!

OREGON SQUARE
"PORTLAND'S FAMILY ROOM"

VISITORS/YR:	X
EVENTS/YR:	X
ACREAGE:	2.24 ACRES

PIONEER SQUARE
"PORTLAND'S BELOVED LIVING ROOM"

VISITORS/YR:	10,000,000
EVENTS/YR:	300
ACREAGE:	1.55 ACRES

DIRECTOR'S PARK
"THE GRANITE PIAZZA"

VISITORS/YR:	24,000
EVENTS/YR:	114
ACREAGE:	.46 ACRES

JAMISON SQUARE
"PORTLAND'S BIGGEST KID MAGNET"

ACREAGE: .91 ACRES

TANNER SPRINGS
"BEAUTIFUL LITTLE OASIS"

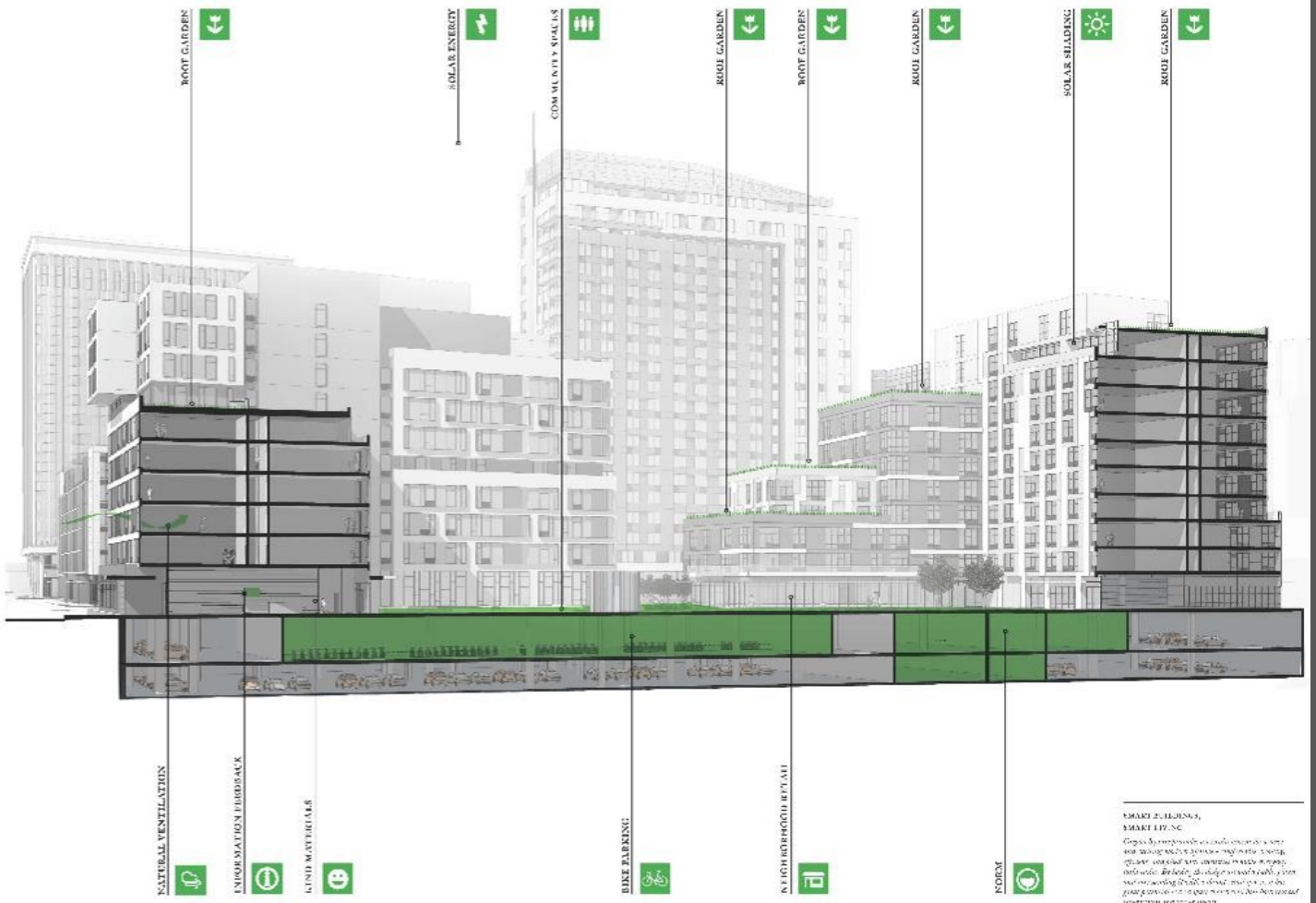
ACREAGE: .92 ACRES

ELIZABETH CARUTHERS PARK
"HEART OF THE SW WATERFRONT"

ACREAGE: 2 ACRES

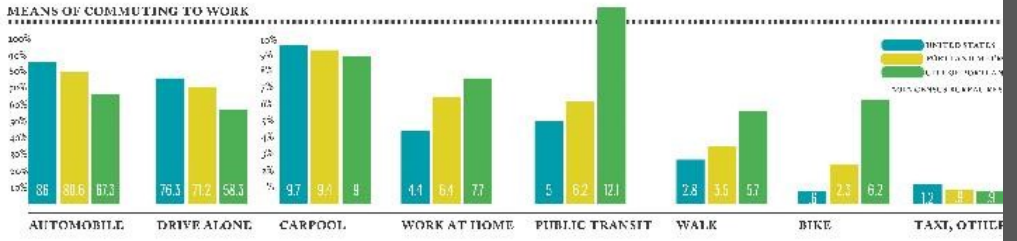
ESTHER SHORT PARK
"THE CITY'S BACKYARD"

ACREAGE: 5.4 ACRES



OREGON SQUARE ECO-DISTRICT STRATEGY FOR

TRANSPORTATION



OREGON SQUARE TRANSIT

WALKABILITY

BIKABILITY

STREETCAR

MAX LIGHTRAIL

BUS

CAR

MORE THAN 17,000 PEOPLE COMMUTE BY BIKE TO WORK EACH DAY

80% OF PEOPLE WEAR HELMETS

PORTLAND HAS MORE THAN 319 MILES OF DEDICATED BIKEWAYS

100 MILLION TRIPS ARE TAKEN ON TRIMET EACH YEAR

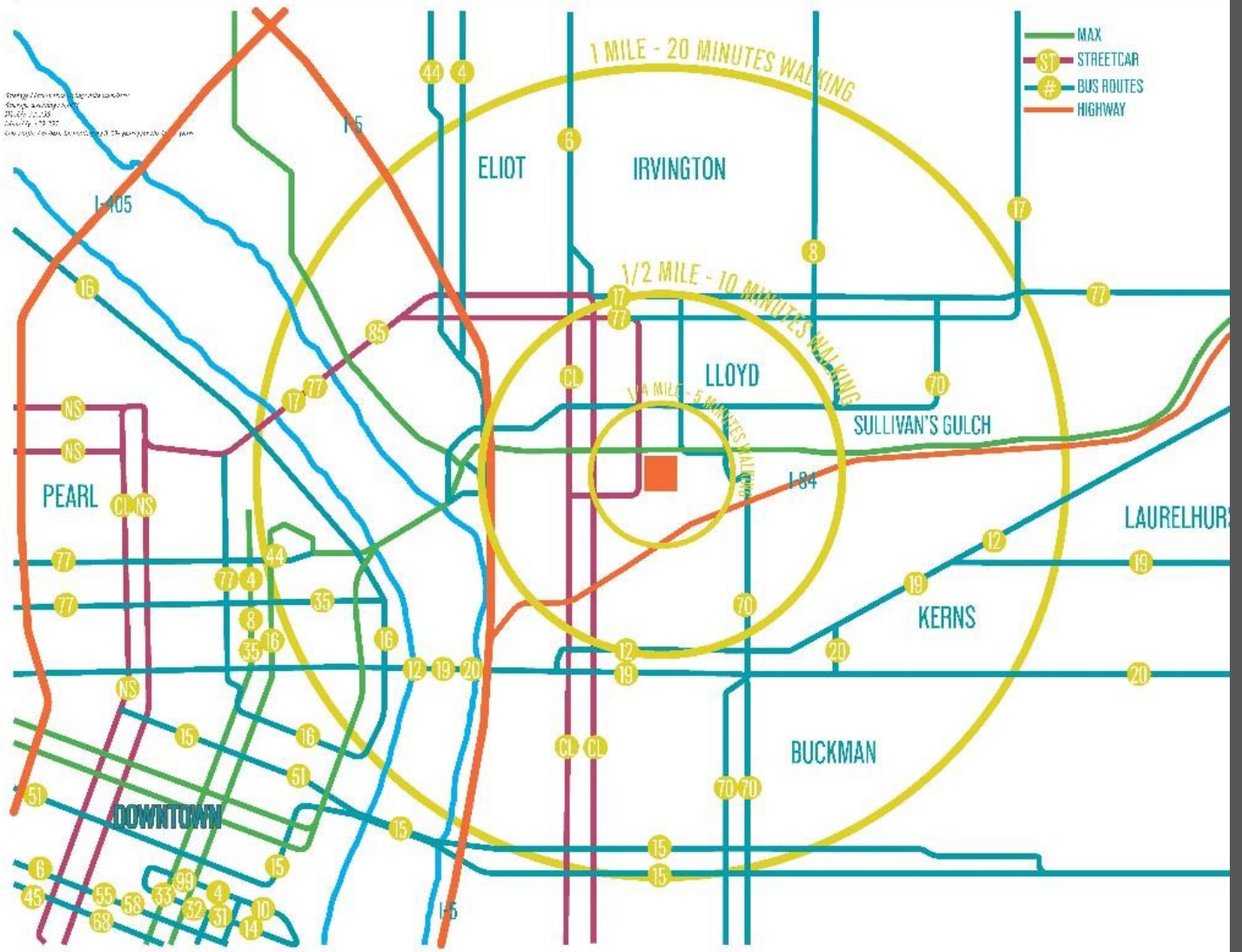
45% OF PORTLAND STATE STUDENTS TAKE TRANSIT TO CLASS

TRIMET ELIMINATES 207,750 CAR TRIPS DAILY

45% OF RUSH HOUR COMMUTERS TO DOWNTOWN TAKE TRANSIT

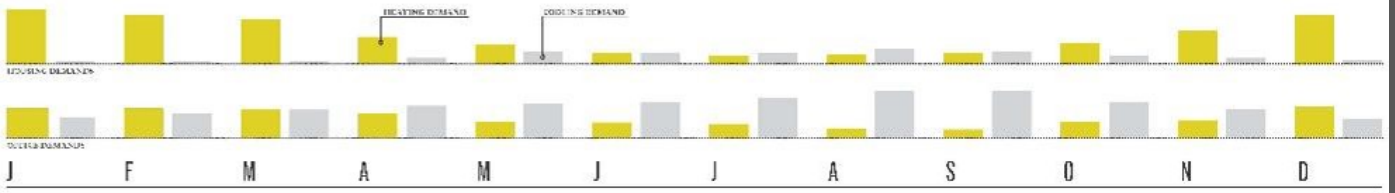
35% OF BIKE COMMUTERS ARE FEMALE

EVERY WEEKDAY TRIMET HAS MORE THAN 316,700 TRIPS



ENERGY

AVERAGE HEATING & COOLING DEMAND FOR HOUSING & OFFICE USES



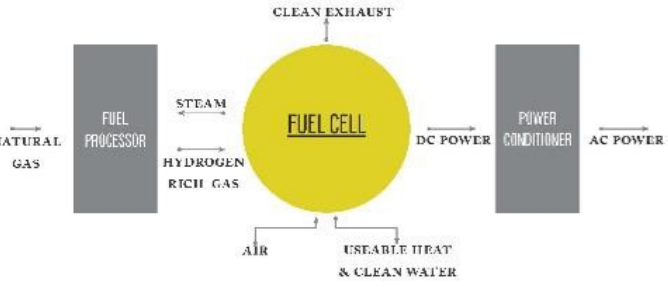
CLEAN

energy production on-site

FUEL CELL

The fuel cell converts chemical energy from natural gas to electricity through a chemical reaction, resulting in a highly clean and efficient energy generation process.

FUEL CELL



FUEL CELL

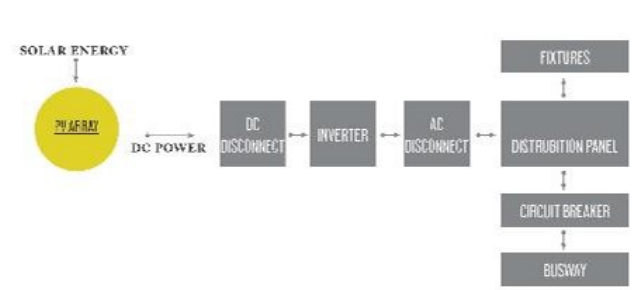
RENEW

power from the sun

PV PANEL ARRAY

Photovoltaic arrays consist of solar panels which convert sunlight into electricity and a solar inverters which change electrical current from DC to AC so that it can be used in household scenarios.

PV PANELS



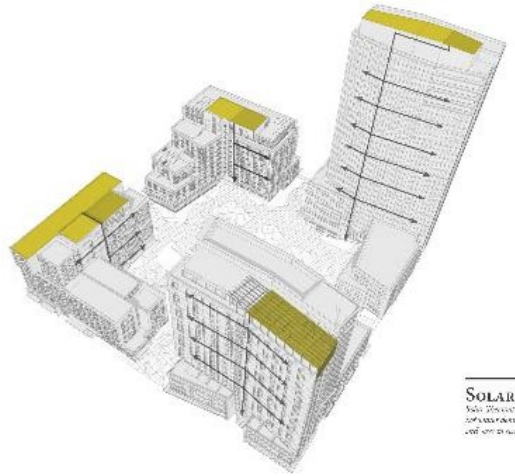
PHOTOVOLTAIC PANELS

THERM

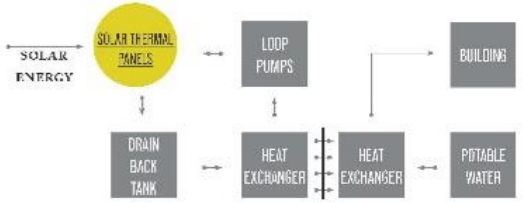
solar-powered hot water

SOLAR THERMAL

Solar hot water systems offset hot wate demand by storing heat from the sun i a freeze-resistant liquid and exchangin this heat to potable water to be distributed throughout the buildings.

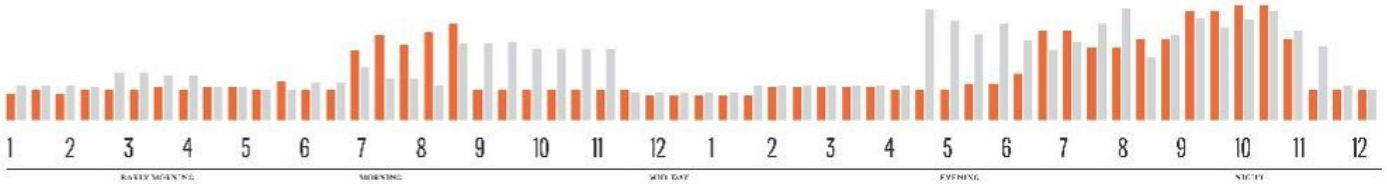


SOLAR THERMAL



SOLAR THERMAL PANELS

AIR

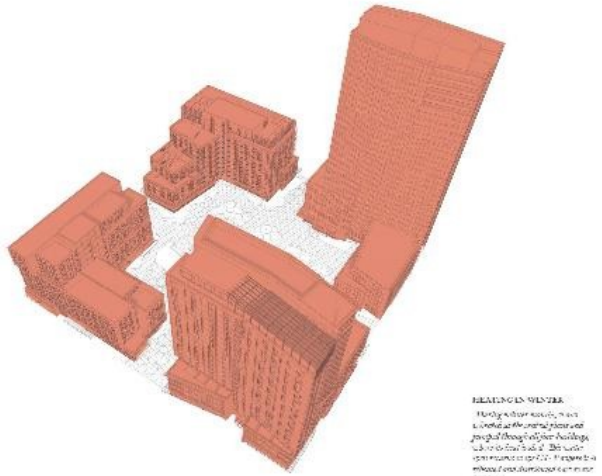


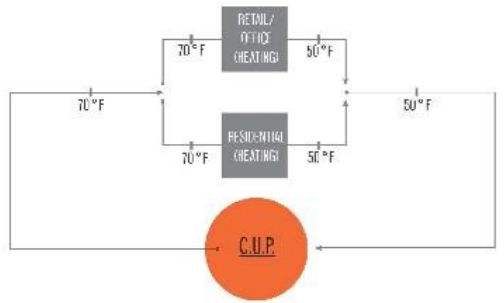
HEAT

production is necessary

WINTER DEMAND

Water from a central utility plant (CUP) is used to meet the heating needs of both residential spaces and office spaces in winter months.





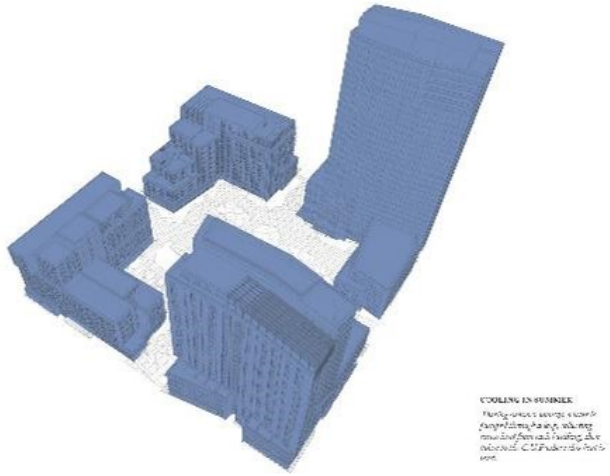
WATER SOURCE HEAT PUMP: WINTER

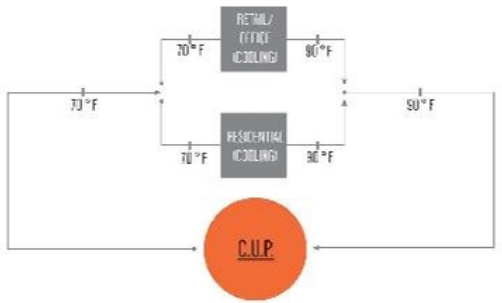
COOL

need to get rid of heat

SUMMER DEMAND

Since office and retail spaces produce more heat in summer months than is necessary, water is used as a medium by which to deliver excess heat from these retail/office spaces to heat residential spaces.





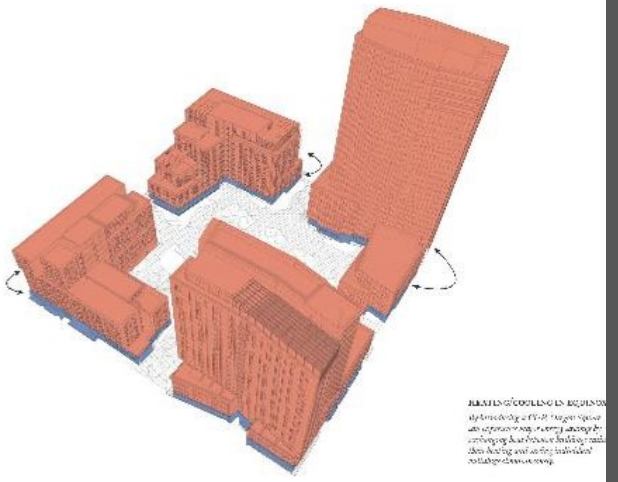
WATER SOURCE HEAT PUMP: SUMMER

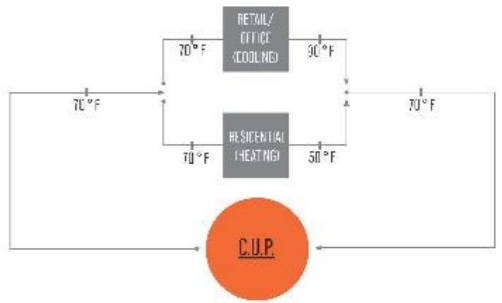
EQUIL

htg demand = cooling

SPRING / FALL

Heat pumps in apartments draw energy from a Condenser Water Loop and deliver only the amount of heating needed where it is needed. The loop uses water, not air, to move heat.



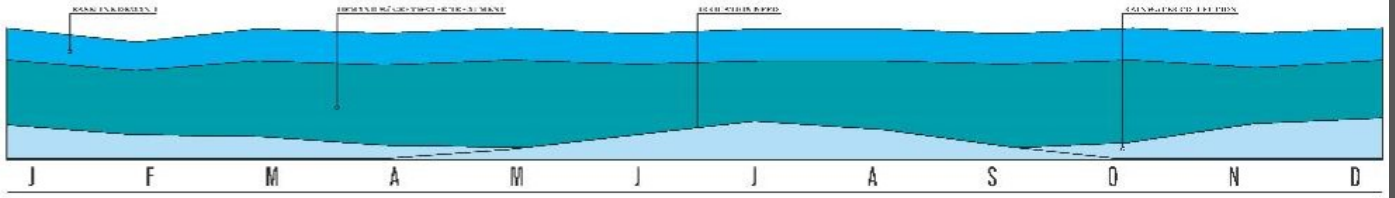


WATER SOURCE HEAT PUMP: SPRING/FALL

OREGON SQUARE STRATEGY FOR

WATER

WATER & IRRIGATION DEMAND; RAIN WATER COLLECTION



$2.3

million dollars saved

SYST. DEV. CHARGES

Combined Sewer Overflow (CSO) is over capacity. Infiltration on-site is limited, and storage is expensive. The result is overflow into the CSO, resulting in fees. These fees cam be mitigated with several strategies, including the infiltration of excess water into aquifers.

100%

sewer discharge reduction

N.O.R.M

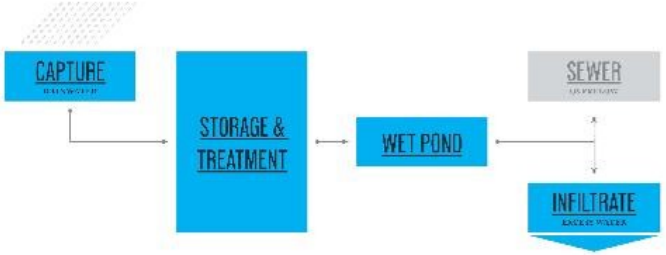
Treating all waste water on site with N.O.R.M. could reduce sewer discharge by almost 100%, and justify $2.3m SDC reduction, and up to $80,000 annual sewer bill savings.

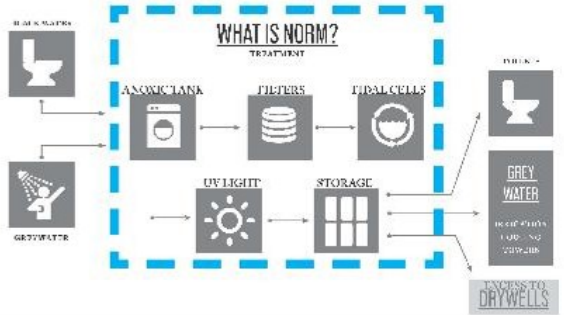
100%

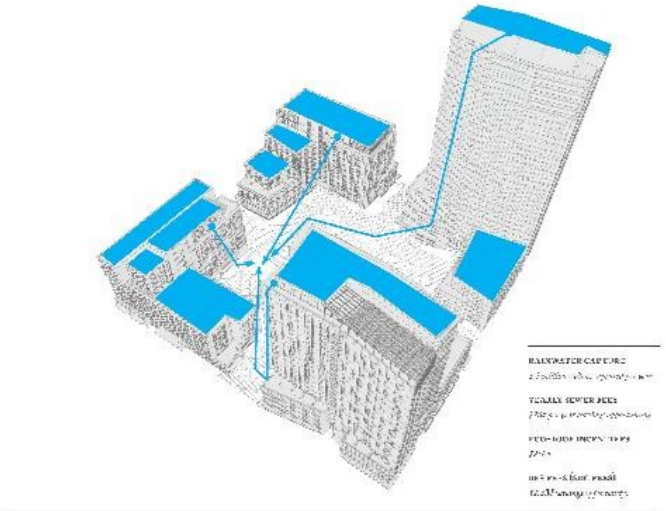
user interaction

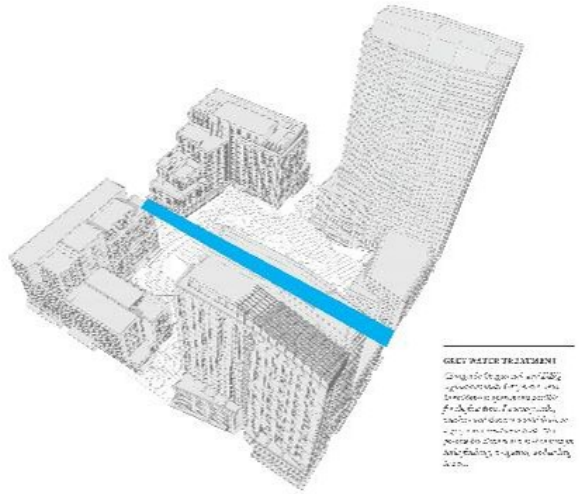
FEEDBACK

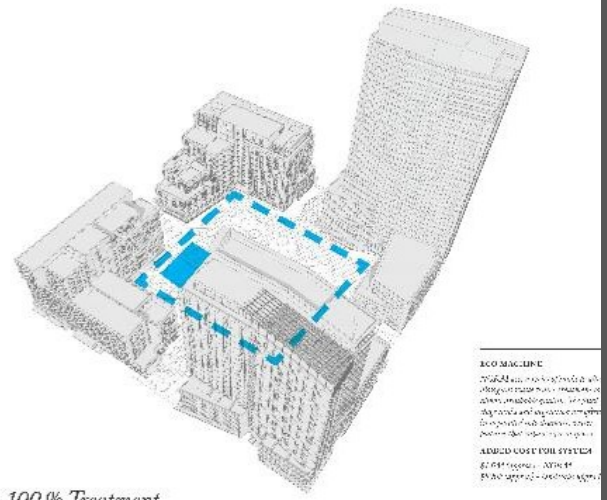
The "Prius" Effect has proven that when people know the effects of what they are doing they use less. NORM is an on-site visible example of users actions.











100% Treatment

Hassalo on Eighth, Lloyd District

Hassalo on Eighth, Lloyd District

Hassalo on Eighth, Lloyd District

Hassalo on Eighth, Lloyd District

ECO-DISTRICT STRATEGY FOR

OREGON SQUARE

4/1

= More Green Space!

HIGH RISE BUILDINGS = 1 PLAZA

Creating four high rise buildings allows them to take up a smaller footprint and thus create a huge inviting plaza for events. Two buildings will be 10 stories, One will be 22 and the last will be 32 stories. All buildings will have many retail spaces on the ground floor to help activate the plaza.

1,000 RESIDENTIAL UNITS

FOCUS ON ENERGY

GROUND FLOOR RETAIL

HUGE EVENT PLAZA

FOCUS ON WATER

ECO-ROOFS AND GARDENS

ROOFTOP AMENITIES

CLOSE TO EVERYTHING

TRANSPORTATION OPTIONS

WALKABILITY

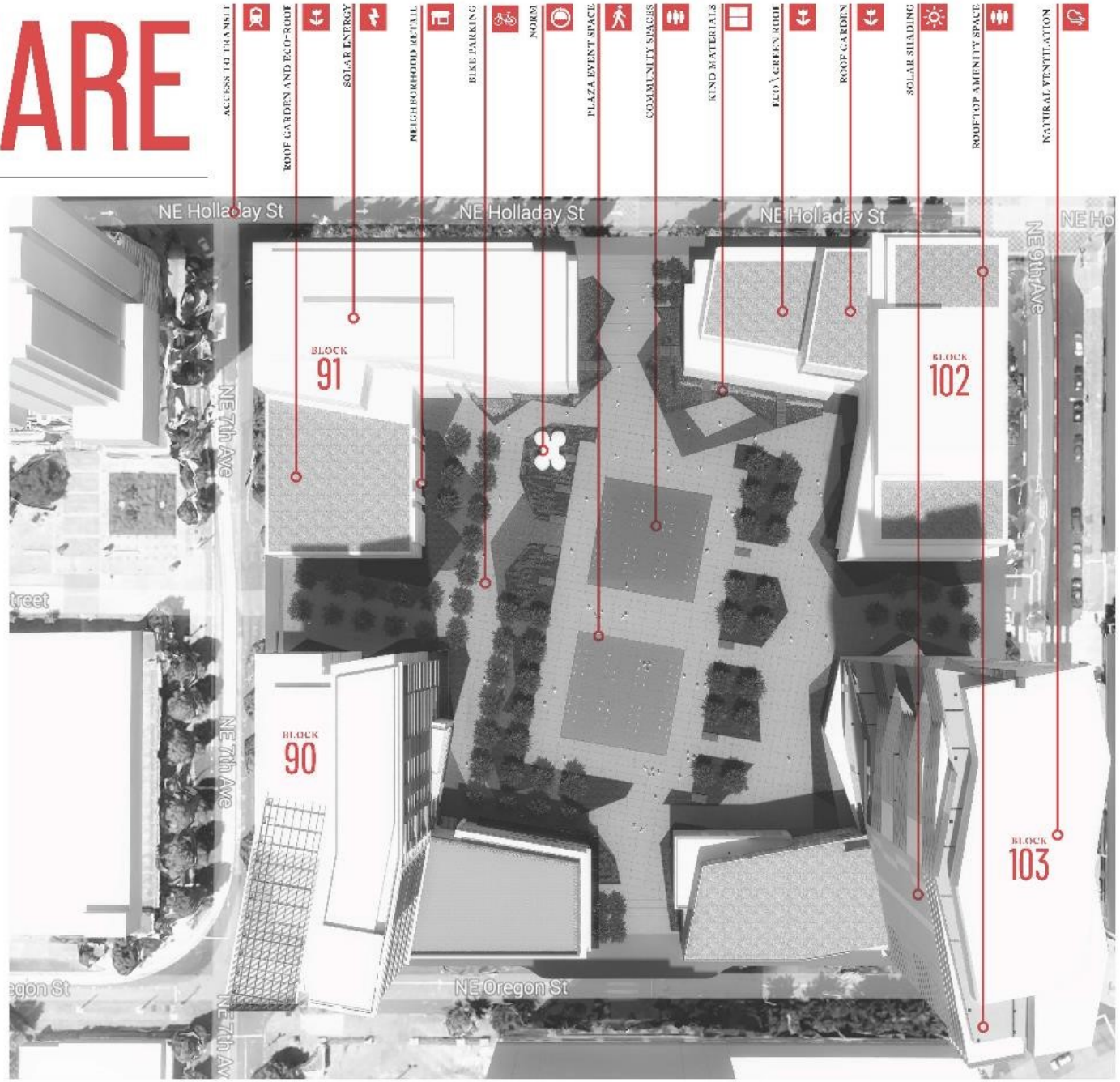
2,700

Bike Parking Stalls

A BIKER'S PARADISE

Hassalo on Eighth has over 1,200 bike parking stalls, including a bike hub with wash station and locker rooms. Oregon Square will exceed that number by adding an additional 1,500 bike parking spots!

SITE AMENITIES



Oregon Square, Lloyd District

Oregon Square, Lloyd District


Education
Public Health
Housing
Lifestyles
Public/Private Partnership
Civic Engagement
Resilience Planning
Technology
Creative Financing
Demographics
Mobility
Equity
Green Infrastructure
Natural Resources
STRATEGIES
CHALLENGES

PDC *We Build Green Cities*

PDC *We Build Green Cities* , Japan

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What kind of *place* shall we leave for future generations?

PDC *We Build Green Cities*