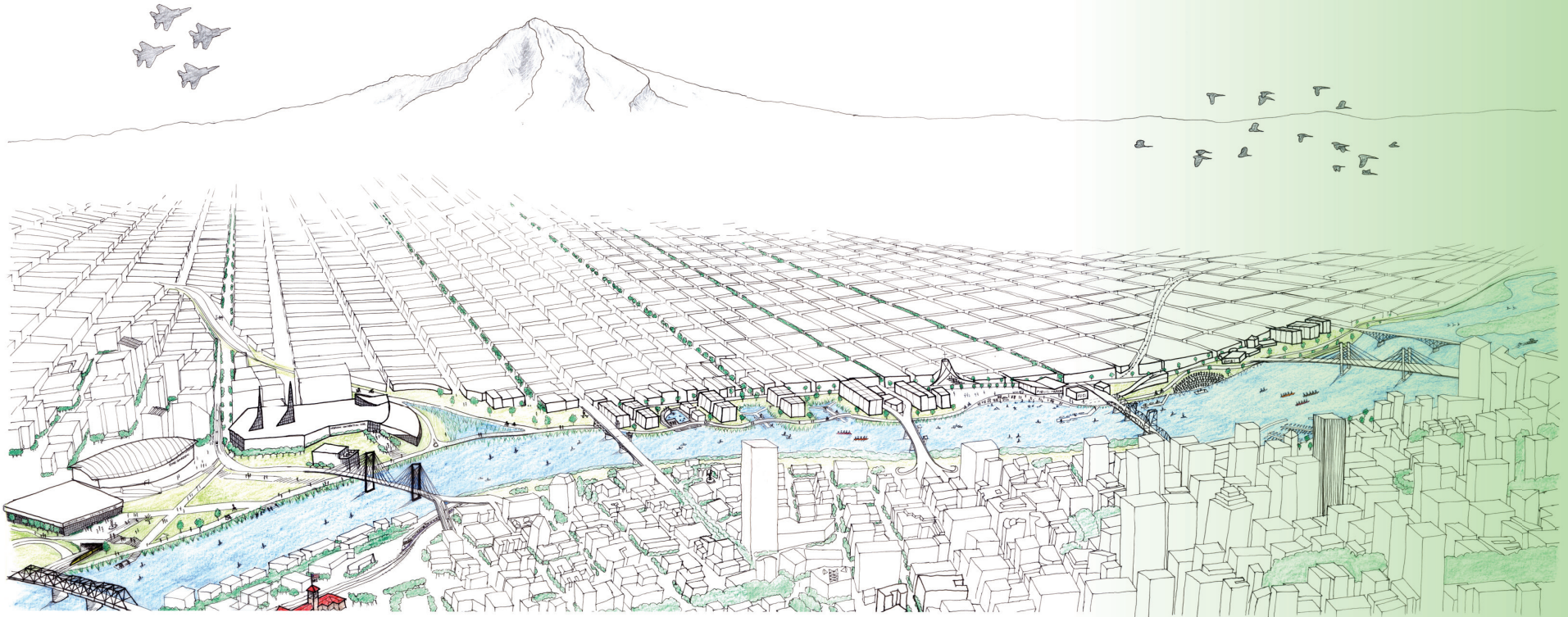


EASTBANK COMMUNITY CHURCH

MAKING & HEALING
COMMUNITY



ESPIRITO MELLER - 2014

REIMAGINING PORTLAND

THESIS DESIGN PROJECT
UNIVERSITY OF OREGON
PORTLAND URBAN ARCHITECTURE PROGRAM
MASTER OF ARCHITECTURE
2014

DEDICATION

TO THE PEOPLE OF PORTLAND...THE RIVER IS THE FACE OF OUR CITY...WE CAN MAKE A GREAT WATERFRONT...IT WILL TAKE WORK, IT WILL TAKE COURAGE, IT WILL BE A RISK...AND IT WILL BE WORTH IT.

GRATITUDE

TO MY BEST FRIEND IN LIFE, JEN MELLER. THANK YOU FOR YOUR KINDNESS, COMPASSION, COURAGE, AND DEDICATION. I LOVE YOU.

PROFESSOR GERRY GAST, THANK YOU FOR YOUR COACHING, PATIENCE, AND CLEAR COMUNICATION.

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URBAN SITUATION

THE VISION OF RECAPTURING THE BANKS OF THE WILLAMETTE RIVER FOR USE BY THE CITIZENS OF PORTLAND WAS EMBRACED IN THE 1960'S. PORTLAND HAS REMOVED HARBOR DRIVE FREEWAY, CREATED WATERFRONT PARK, AND SPENT \$1.4 BILLION CLEANSING THE RIVER UPSTREAM OF THE HARBOR, MAKING IT SAFE FOR SWIMMING FOR THE FIRST TIME IN OVER 100 YEARS. DECADES OF VISIONING, STUDYING, AND PLANNING CULMINATED IN THE 2006 RIVER CONCEPT, WHICH IDENTIFIES THE CENTRAL REACH THROUGH DOWNTOWN PORTLAND AS "THE REGION'S GATHERING PLACE," ENCOURAGES DEVELOPMENT OF "VIBRANT WATERFRONT DISTRICTS AND NEIGHBORHOODS," AND ENVISIONS A RECONFIGURATION OF THE I-5 FREEWAY.

THE BURIAL OR REMOVAL OF THE CENTRAL EASTBANK FREEWAY IS THE NEXT MAJOR INVESTMENT REQUIRED TO ACHIEVE THE VISION OF RECAPTURING THE WILLAMETTE RIVERBANKS FOR PEOPLE.

GENERATING THE COLLECTIVE WILL TO RECAPTURE THE EASTBANK WATERFRONT FOR PEOPLE REQUIRES AN EXPANSIVE VISION OF WHO WE ARE TO BECOME AS A CITY. WE NEED A NEW IMAGE THAT REPRESENTS THAT VISION.

THE CENTRAL EASTBANK WATERFRONT IS A UNIQUE OPPORTUNITY TO RESTORE A HEALTHY RIVER-BASED LIFESTYLE TO A MAJOR CITY. THE DISTRICT SHOULD BE RIVER IN CHARACTER, NOT ONLY LOCATION.

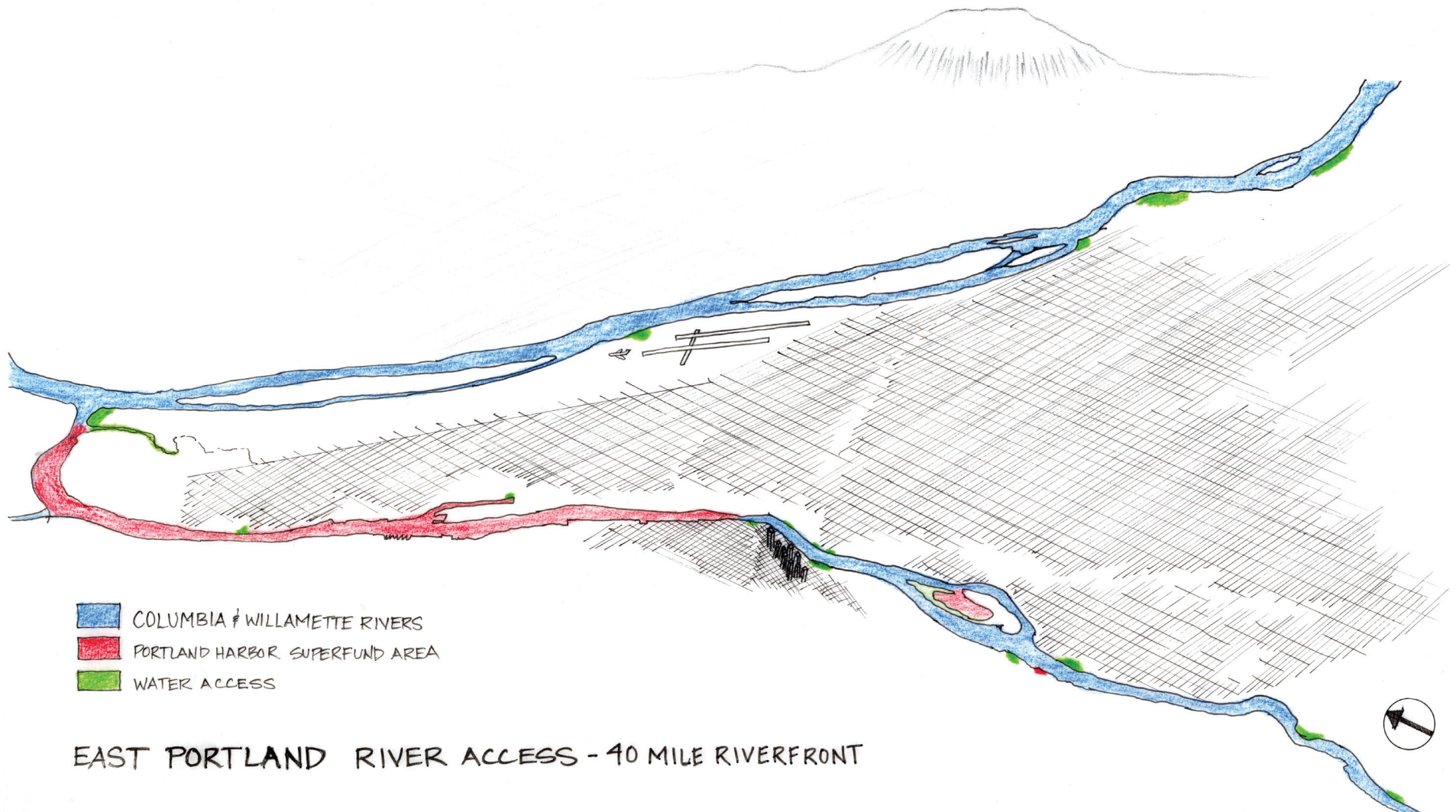
THE NEW IMAGE OF PORTLAND IS A BUSTLING, RIVERSIDE CREATIVE INDUSTRIAL DISTRICT WHERE PEOPLE LIVE, WORK, AND RECREATE; BUILT AT A HUMAN SCALE; WITH A HEALTHY WILLAMETTE RIVERBANK IN THE FOREGROUND AND MOUNT HOOD IN THE BACKGROUND.

PORTLAND'S EASTBANK DISTRICT IS AN AMAZING HEALTHY RIVERFRONT WITH ROBUST WATER RECREATION AND ACCESS, WHERE YOU CAN PLAY IN THE WATER AND CATCH A SALMON ON YOUR BIKE OR KAYAK RIDE HOME...ALL THE WHILE BEING WITHIN A STONE'S THROW OF THE DOWNTOWN COMMERCIAL CORE.

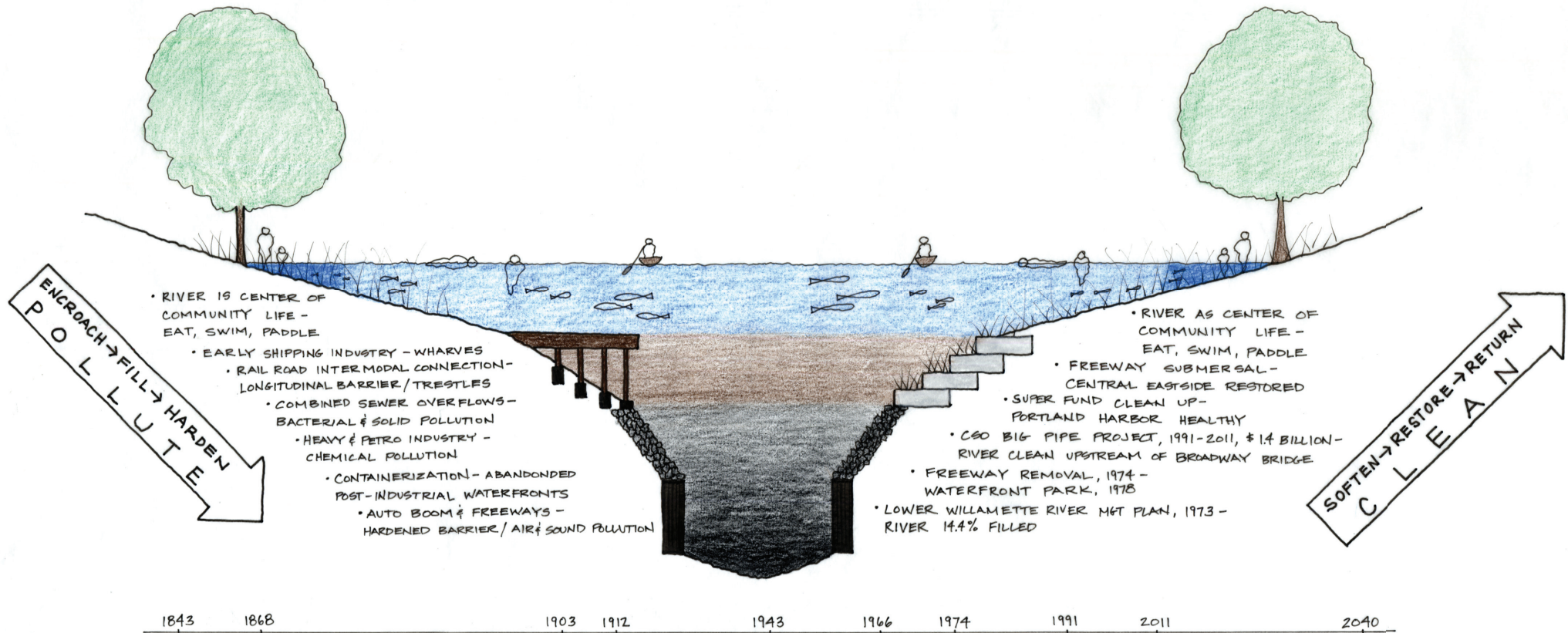
THE VISION WILL BE ENABLED BY NEW ZONING AND DEVELOPMENT POLICY THAT MAKES MEDIUM SCALE MIXED-USED (INDUSTRIAL/COMMERCIAL/RESIDENTIAL) DEVELOPMENT FINANCIALLY ACCESSIBLE AND REQUIRED.

RIVER CONTEXT

EIGHTY PERCENT OF PORTLAND LIVES EAST OF THE WILLAMETTE, SURROUNDED BY 40 MILES OF RIVER, WITH MINIMAL RIVER ACCESS.



RIVER STORY



EAST BANK, 1898



SULLIVAN'S GULCH, LOOKING WEST, 1878

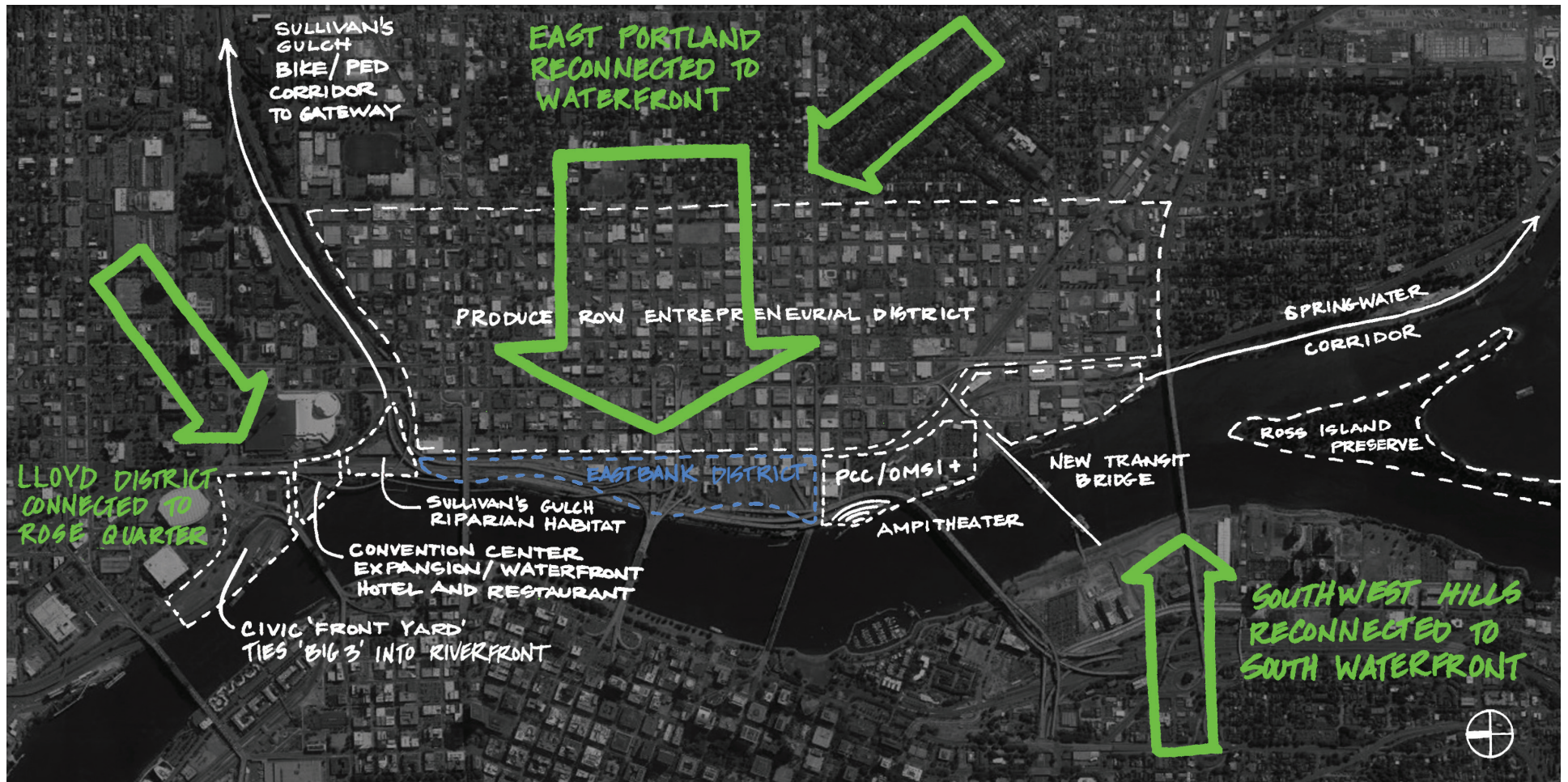


FREEWAY PLAN

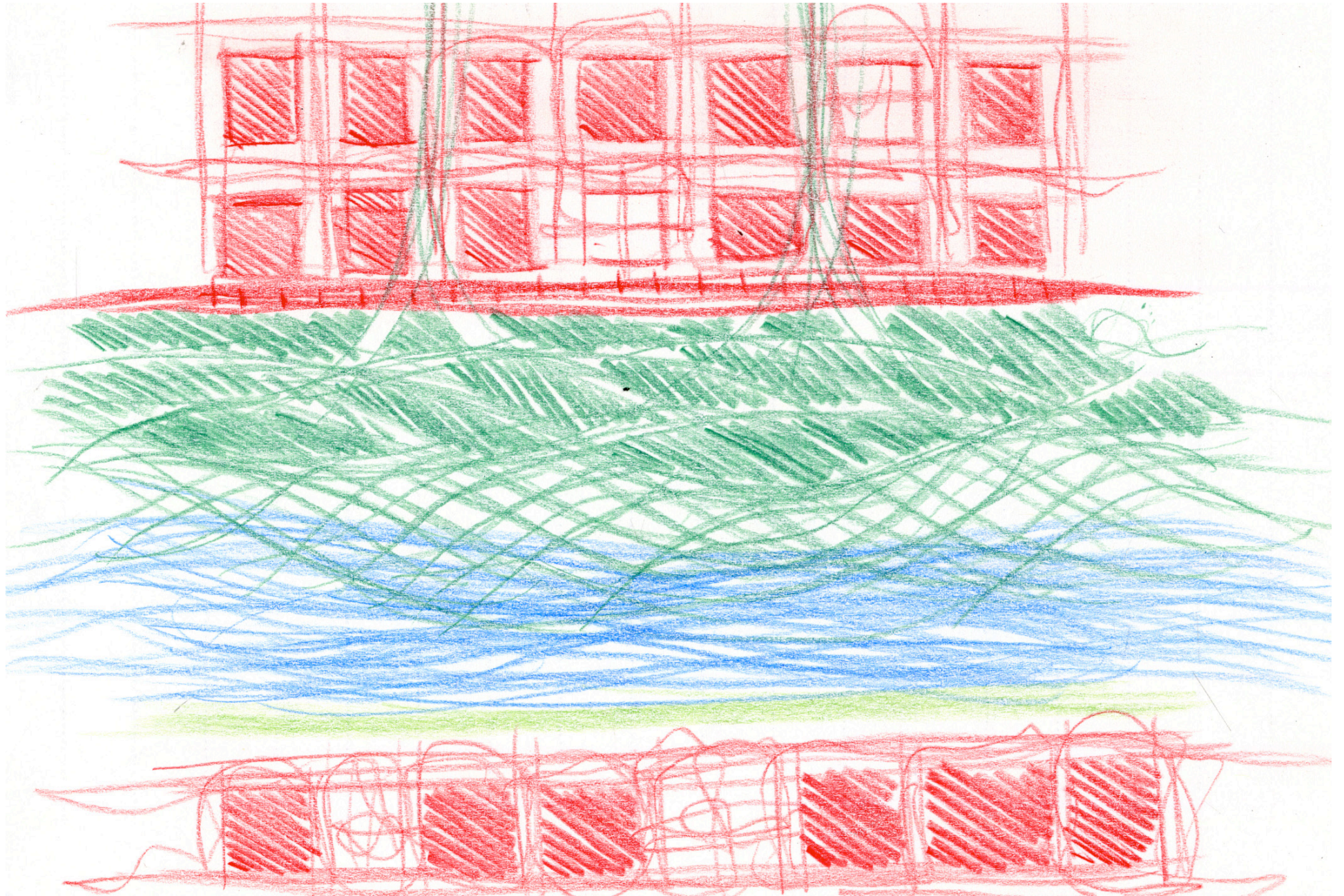


EASTBANK DISTRICT CONTEXT

ROSE QUARTER TO OMSI - PORTLAND'S OPPORTUNITY TO DEFINE ITSELF FOR THE 21ST CENTURY.



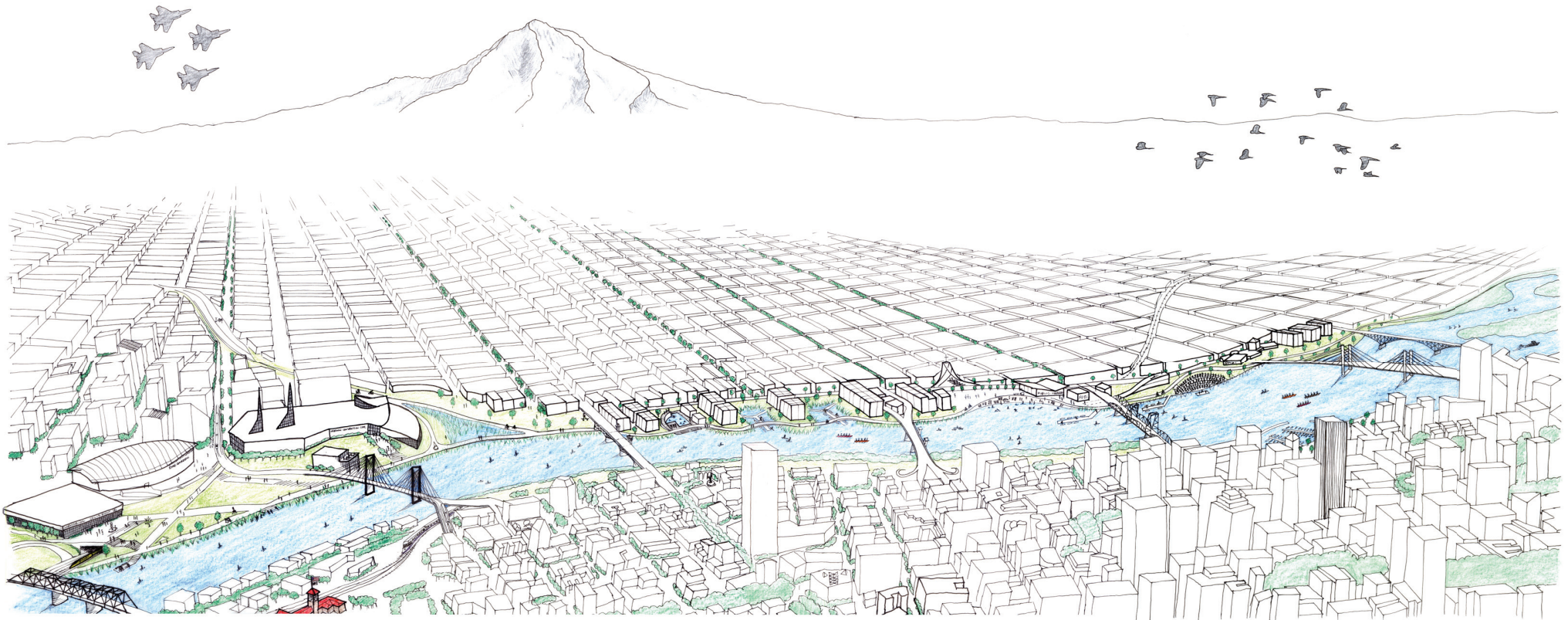
WHAT DOES THE DISTRICT WANT TO BE?



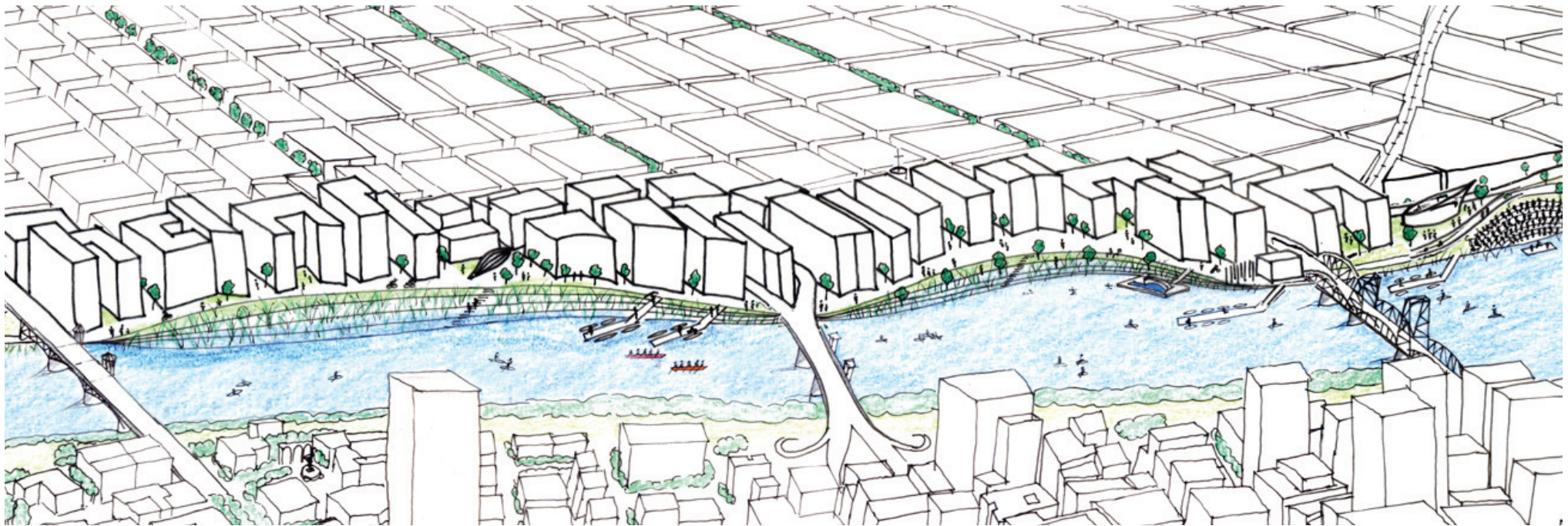
SPIRIT OF PLACE



EASTBANK VISIONING



DISTRICT CONCEPT



BUILDING THESIS

THE EASTBANK COMMUNITY CHURCH WILL GROW FROM THE CHARACTER OF RIVER LIFE, USING ITS METAPHORS, MATERIALS, AND FORMS TO ROOT IT IN THE DISTRICT AND SUPPORT THE LIFE OF THE COMMUNITY.

THE DESIGN WILL SUPPORT AND ENABLE THE CONGREGATION'S DESIRE TO WORSHIP GOD BY ENGAGING AND BEING PART OF THE COMMUNITY LIFE AROUND IT.

THE DESIGN WILL EXPLORE CONCEPTS OF SPACE, LIGHT, AND MATERIAL THAT CAN TOUCH THE HUMAN SPIRIT, WHILE SUPPORTING THE FELLOWSHIP OF BELIEVERS, AND DRAWING THEM BACK OUT INTO THE COMMUNITY TO LOVE OTHERS.

CLIENT VALUES

THE CHURCH LOVES ITS CURRENT FACILITY BECAUSE IT IS APPROACHABLE AND HUMBLE. THE CHURCH APPRECIATES BEAUTY, BUT WOULD BE UNCOMFORTABLE IN AN EXTRAVAGANT BUILDING. THE CHURCH DESIRES A FACILITY THAT WILL SUPPORT THEIR WORK REFLECTING THE LIFE AND POWER OF CHRIST AS A COMMUNITY. THE CYCLE OF CHURCH LIFE INVOLVES REPEATED GATHERING AND DISPERSING. GATHERING FOR TEACHING, WORSHIP, FELLOWSHIP, AND SERVICE. DISPERSING TO LIVE OUT THEIR LIVES AND CALLINGS IN THE LOCAL COMMUNITY. THE FACILITY MUST SUPPORT THE INTERNAL LIFE OF THE CONGREGATION AS WELL AS WELCOME THE NEW AND THE CURIOUS. A NEW BUILDING WOULD HAVE TO COMMUNICATE THESE VALUES STRONGLY:

RECONCILIATION AND RESTORATION – RELATIONALLY AND ENVIRONMENTALLY

BEAUTY – ECHOES OF THE HOLY

COMMUNITY – INTERNAL AND EXTERNAL

LIFE – ENCOURAGING AND EQUIPPING INDIVIDUALS TO PURSUE PERSONAL VISION AND CALLING

PROGRAM

SANCTUARY

350 SEATS

4,800 SF

CLASSROOMS

SIX (550-850 SF)

3,800 SF

+OUTDOOR SPACES

OUTDOOR

SOCIAL/CIRC.

PLAY

MEDITATIVE/

GARDEN

SUPPORT

KITCHEN

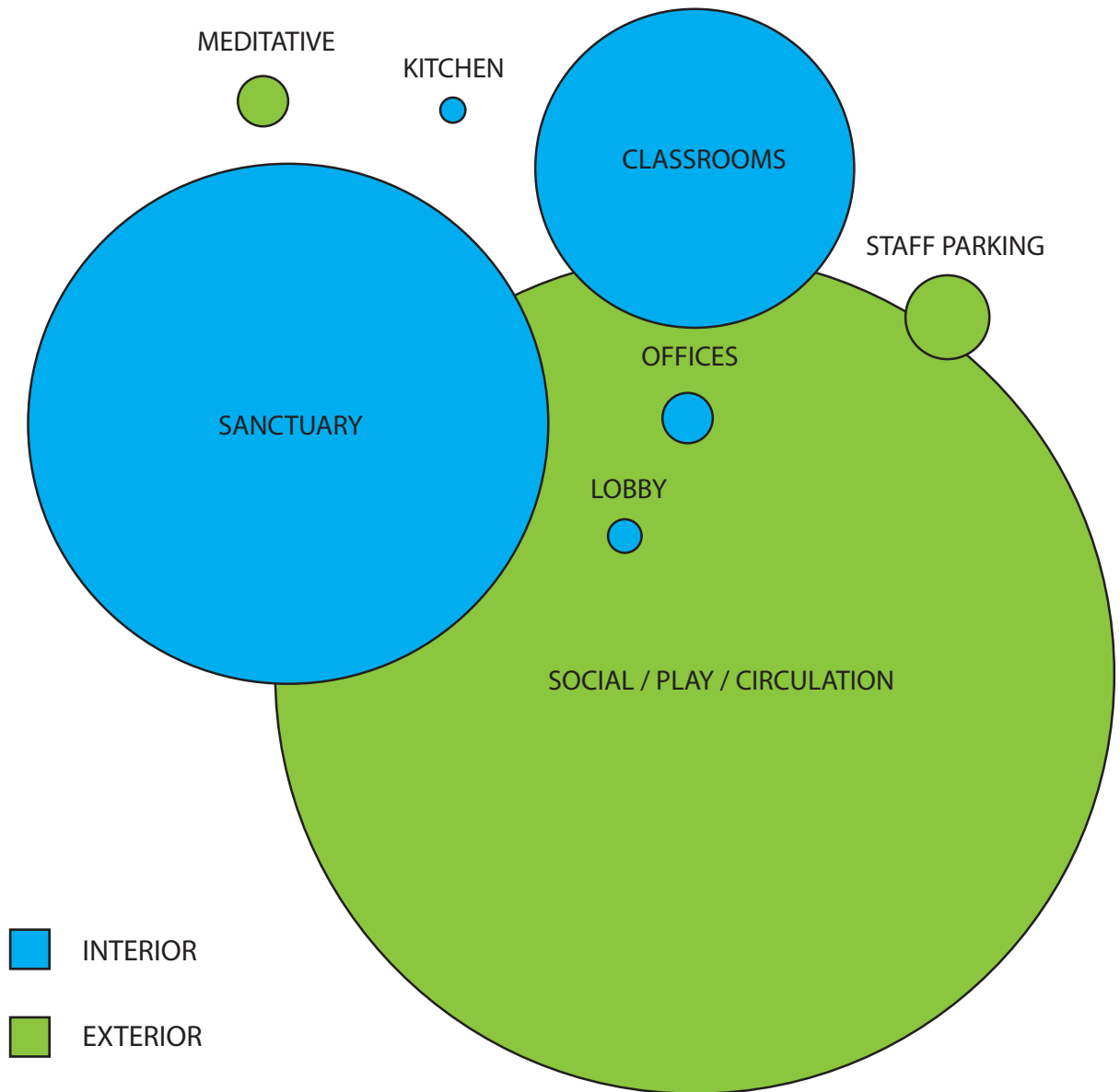
OFFICES

COUNSELING

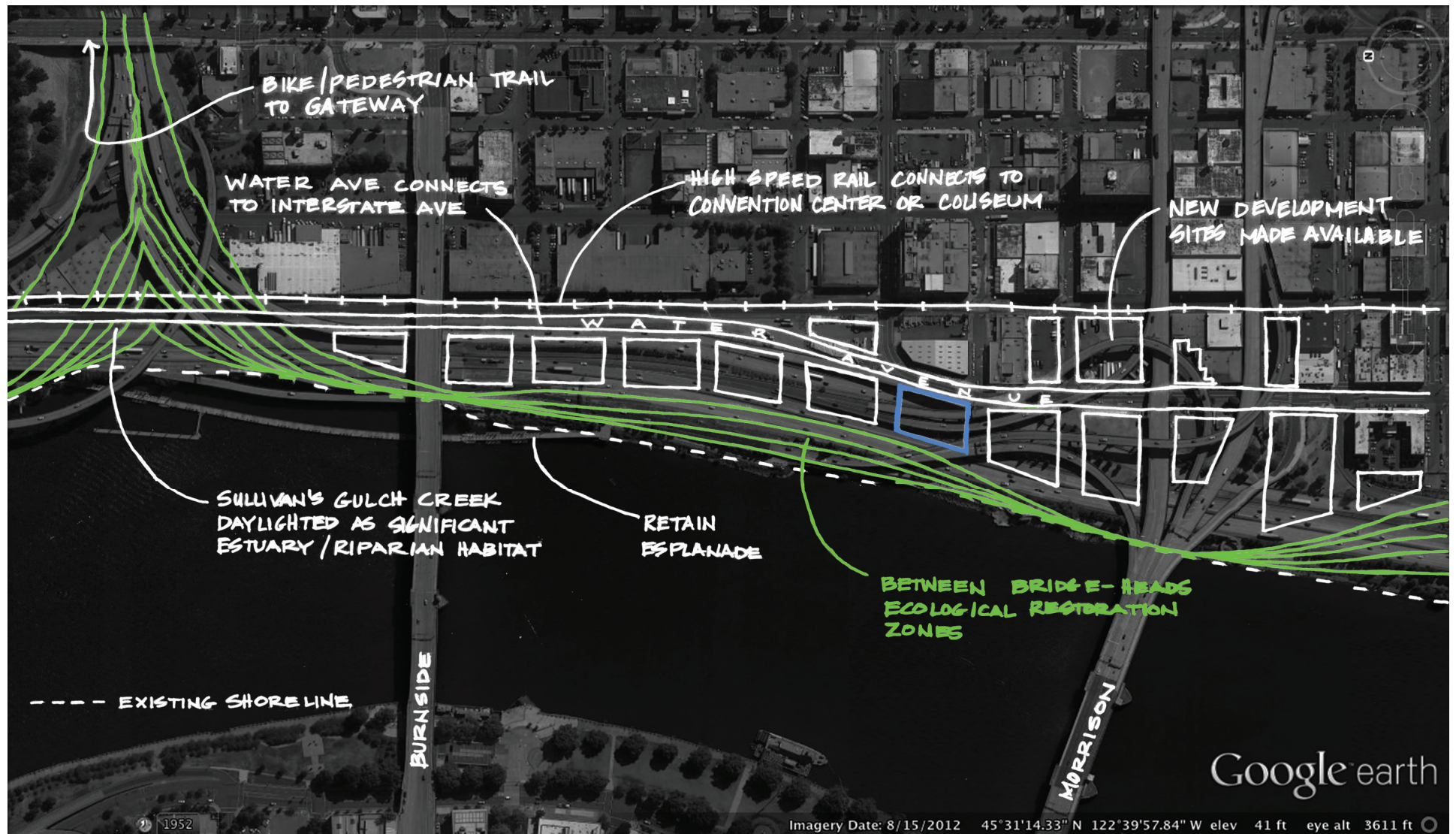
LIBRARY

RESTROOM/SHOWER

MISC.

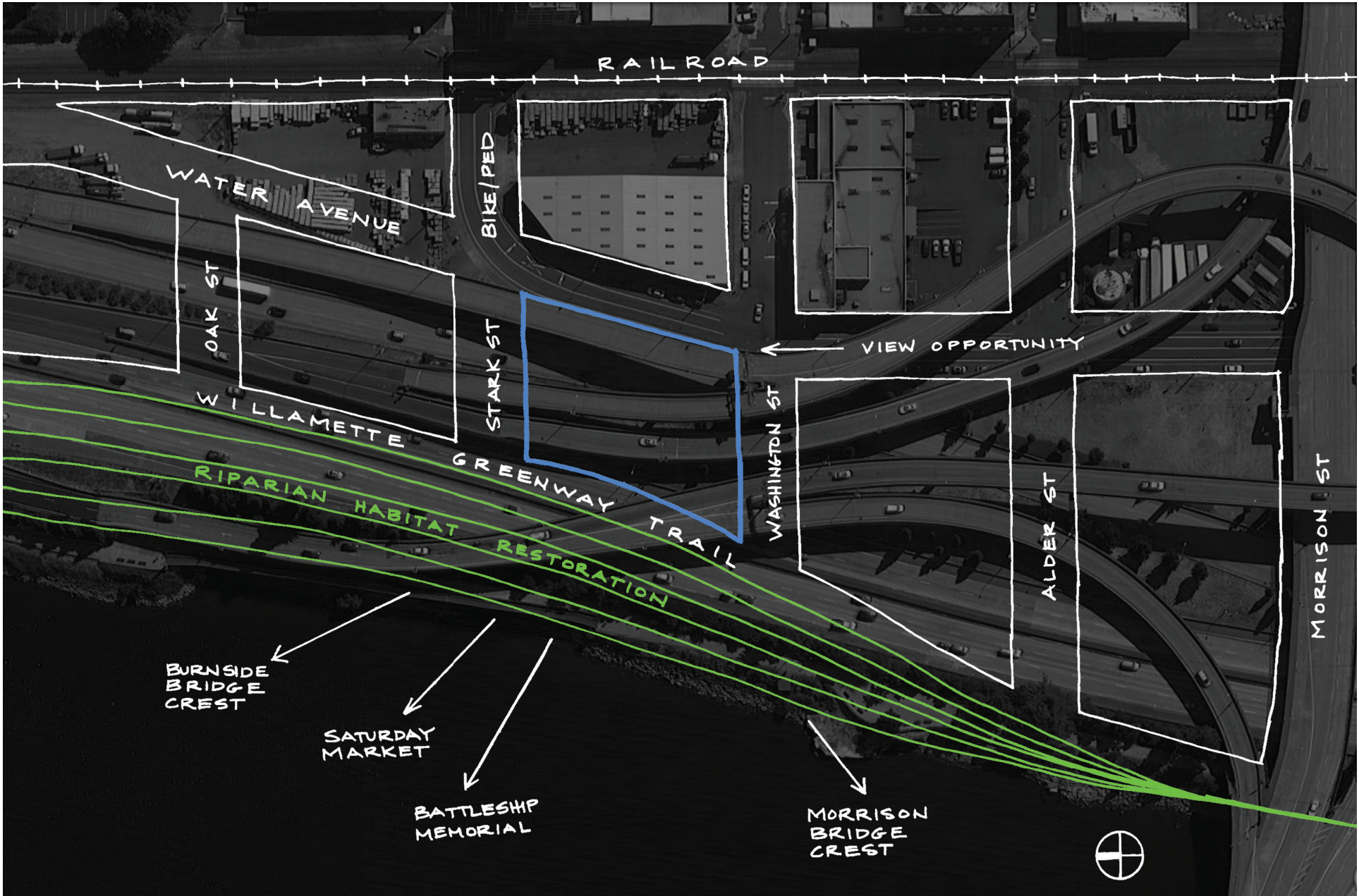


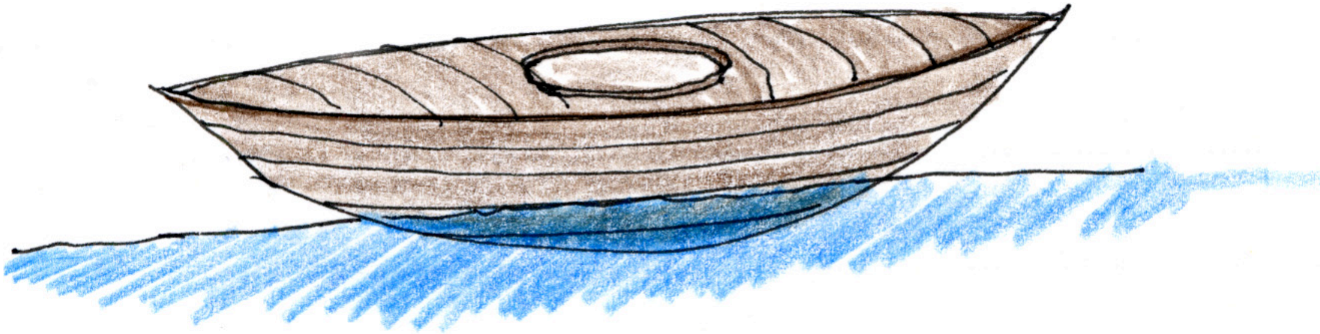
SITE CONTEXT





SITE ANALYSIS

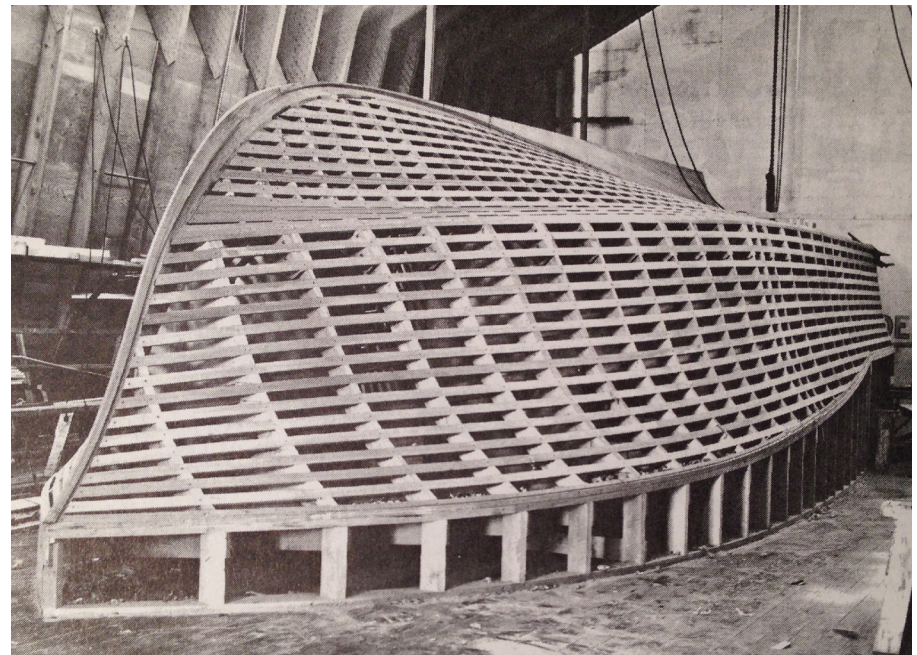
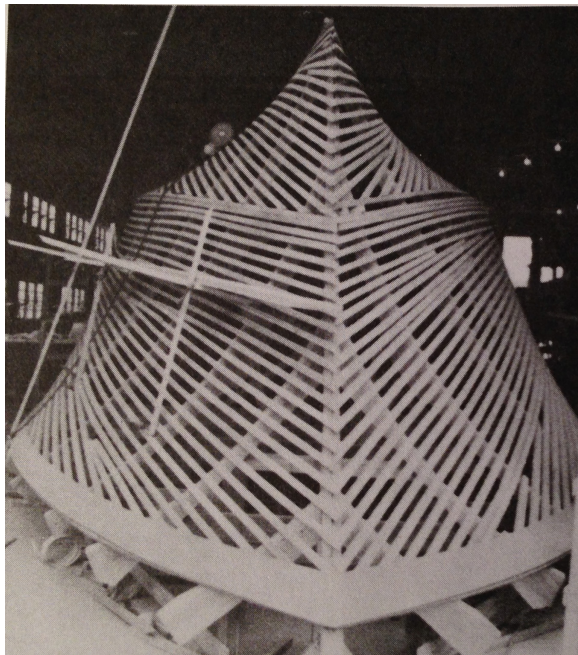
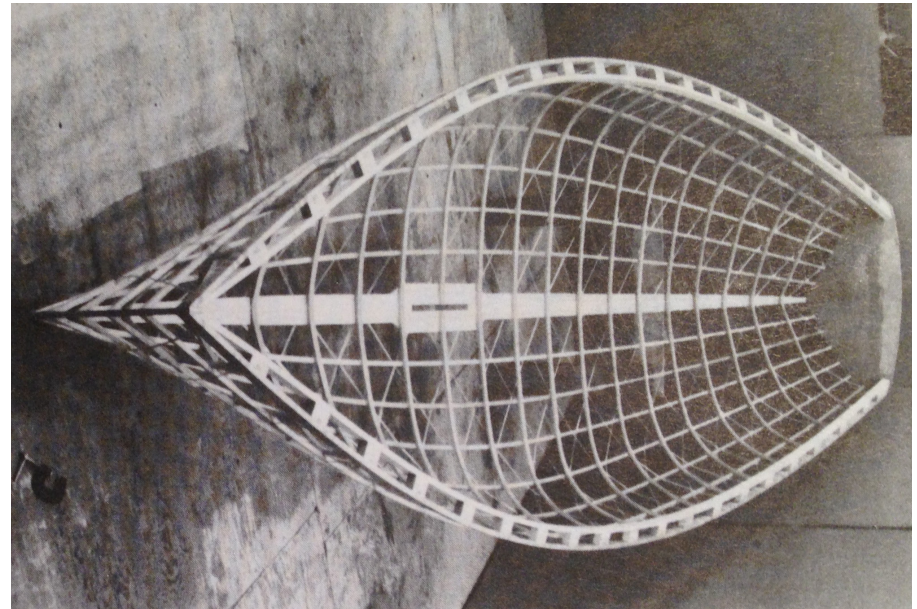
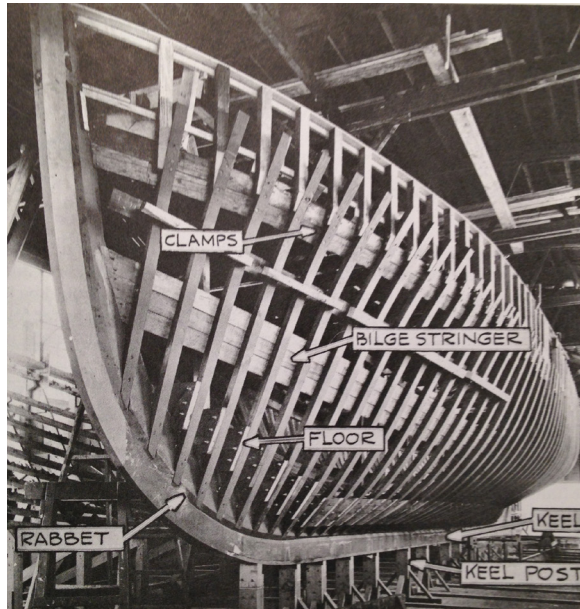




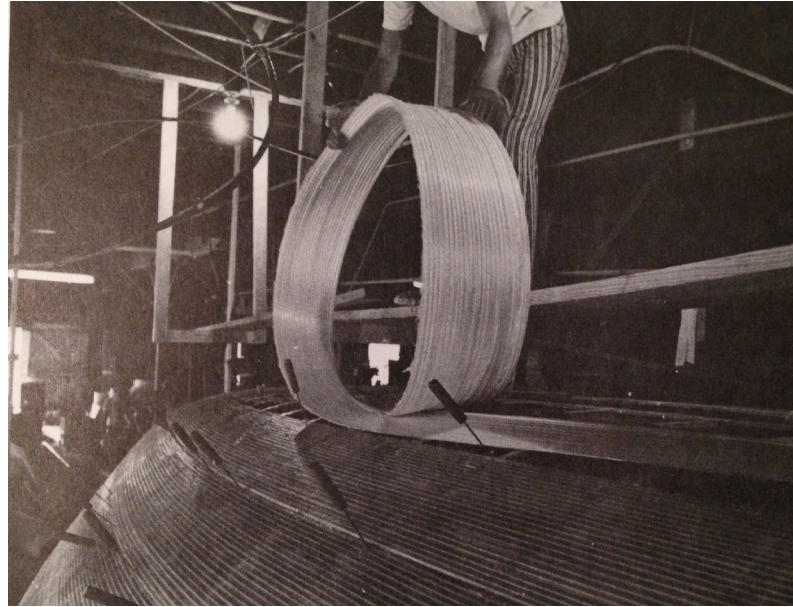
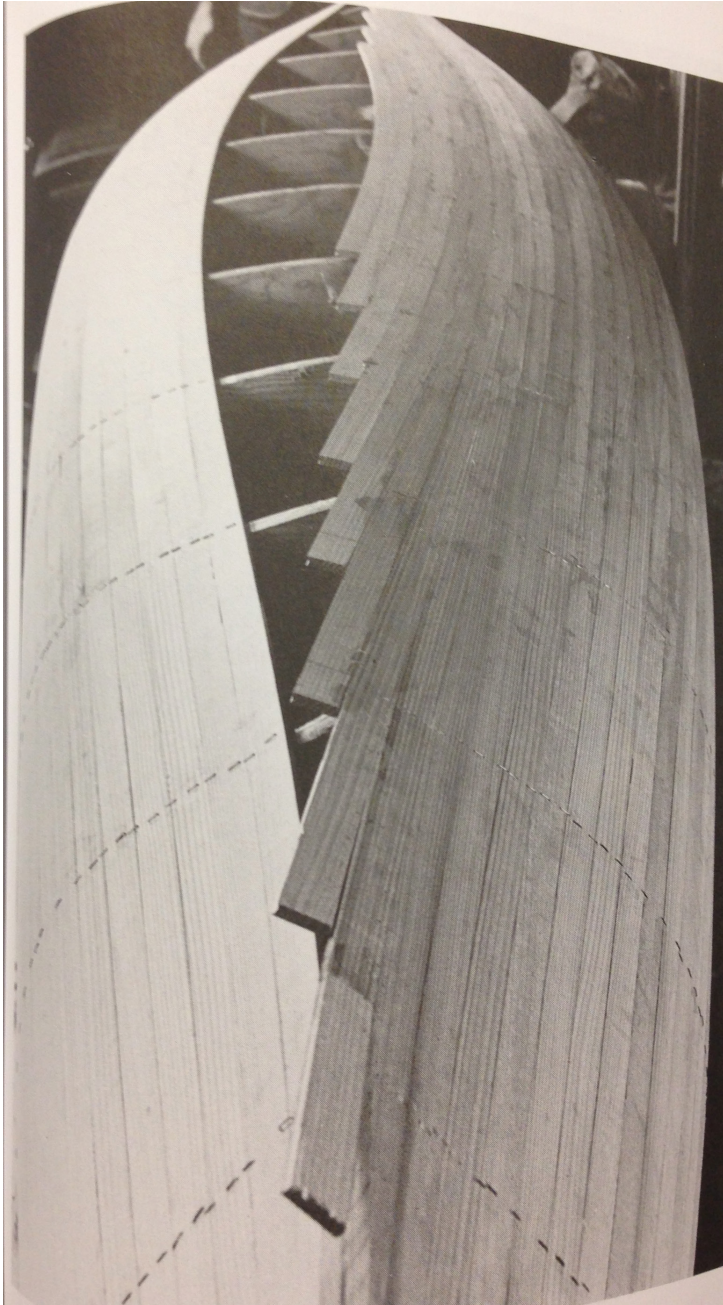
WOODEN WATERCRAFT

- CRAFT INDUSTRY
- TIMBER INDUSTRY
- RIVER LIFE & CULTURE
- COMMUNITY VESSEL
- JOURNEY

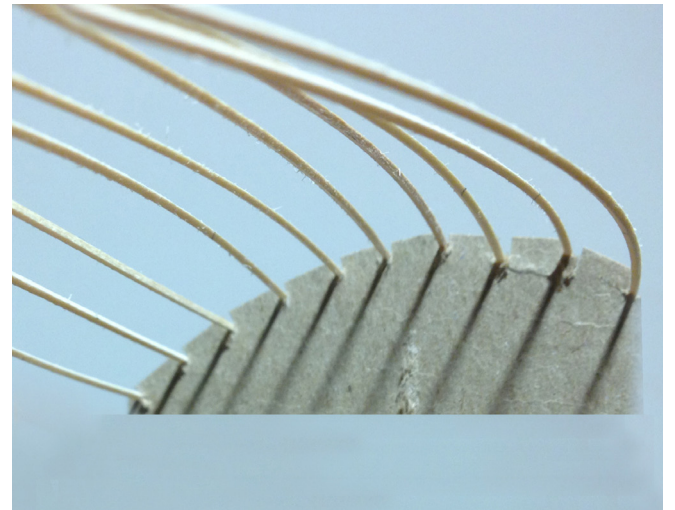
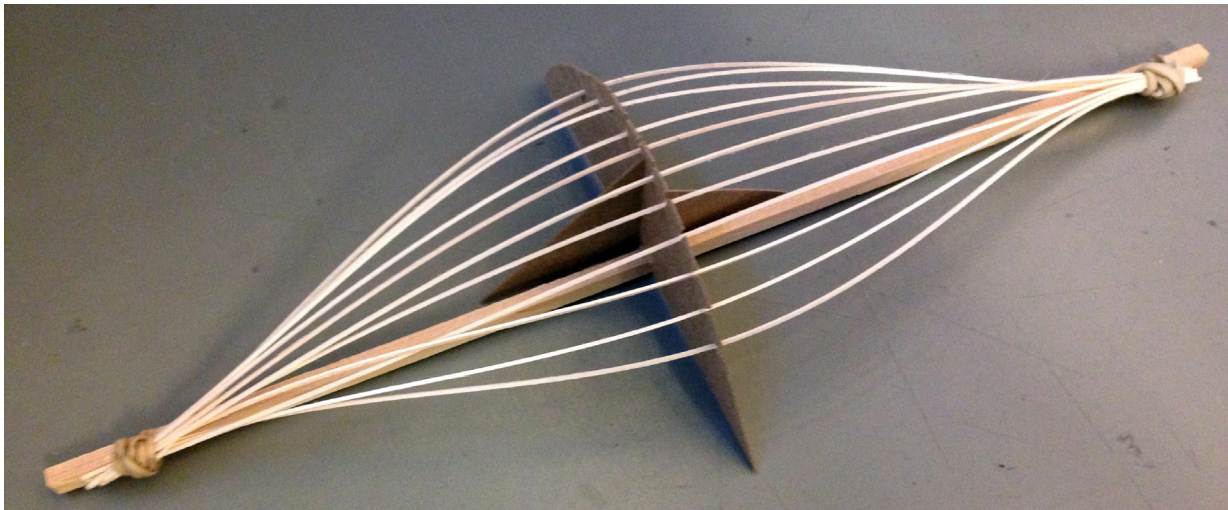
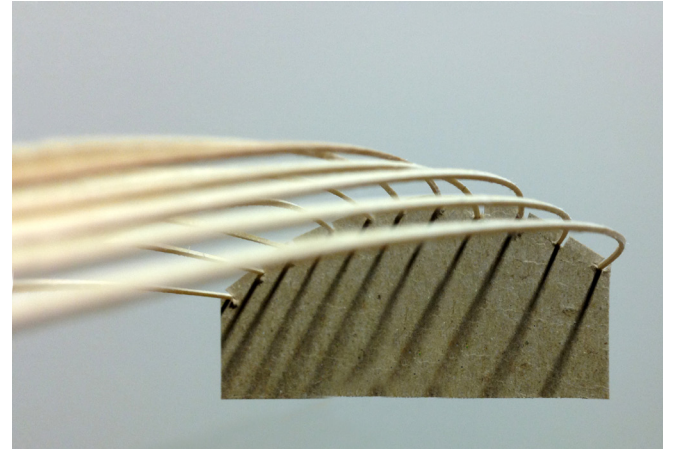
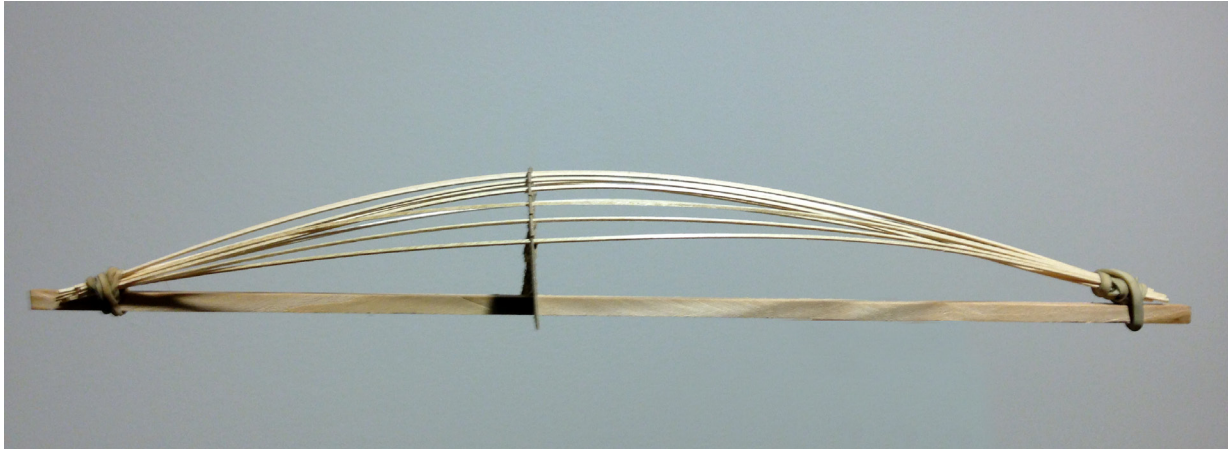
STRUCTURE METHODS



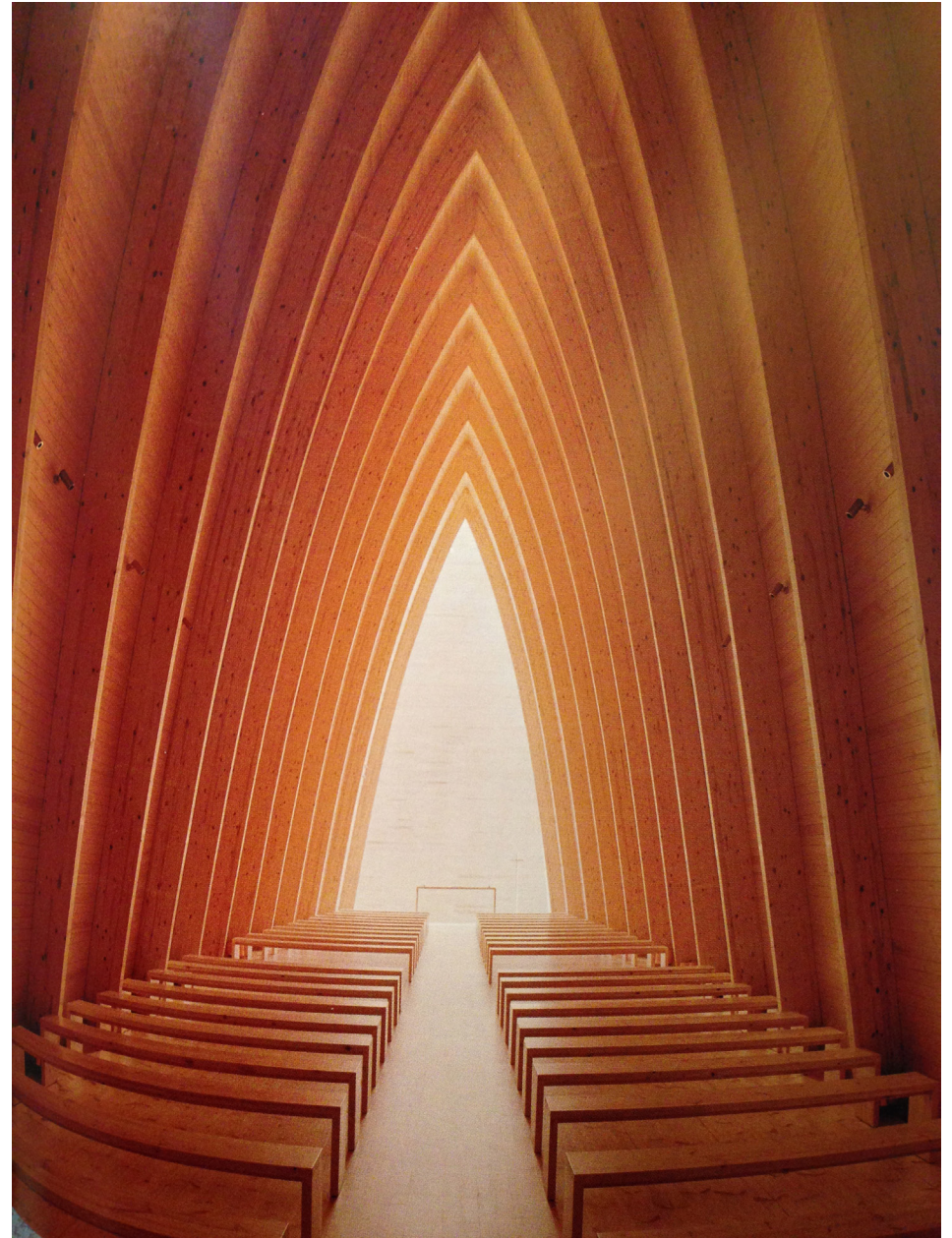
CLADDING METHODS



STUDY MODEL



ST HENRY'S ART CHAPEL, TURKU, FINLAND



MAKING A PLACE OF WORSHIP... EASTBANK COMMUNITY CHURCH

Much church precedent is built within belief-hegemonic societies. Portland is a belief-diverse city. Making a sacred building authentic to the beliefs of its hosting congregation, accessible and inspirational for all citizens, significant within its context, but not dominant in the urban form of a pluralistic society is a challenging design task. In this case the client's values enabled a synthesis that achieves these goals.

The client values the horizontal axis as much as the vertical axis mundi. They believe that an authentic vertical relationship with God is expressed horizontally by loving others. This intersection of axes is expressed architecturally in the form of the building. Longitudinal curved roof beams turn up and converge, drawing the eye and spirit up and forward. This rivercraft-inspired roof form floats over the sanctuary by the light of a concealed clerestory. The sides of the sanctuary establish the horizontal connections to city and garden, placing the congregation figuratively between Eden and the world, meeting under the covering of a skyward vessel to worship and fellowship. The form and materiality of the church are derived from river life in order to support the identity and character of the Eastbank District. The design is inspired by light, wooden rivercraft: canoes, kayaks, and small paddleboats.

Site

The form and siting of the building are designed to help the congregation engage with the community around it. The contemporary trend toward campus-based church designs generates inherently isolationist destinations that are disconnected from their surroundings. This project breaks the trend towards growth-based, mega-church designs and focuses on a relationship-based community design. The site is located on a bend in Water Ave enabling a view corridor, increasing the presence of the building within the community. The waterfront site connects the church to the riverfront paths and visually to the west side Tom McCall Waterfront Park as well.

The site and building are envisioned as community assets, husbanded for the community by the congregation. The building lies diagonally across the site, making two zones: one quiet and contemplative, the other for active engagement. The carefully planted contemplative prayer garden provides seclusion in the city, as well as gathering spots for small groups. Though not obvious upon entering, in plan the garden is an abstraction of the Body of Christ designed to be discovered by the studios. Water is collected from the building's roof and poured into the garden as a metaphor of the Blood of Christ, pooling around Richard Serra corten steel sculptures representing nails and spearhead. Iron oxide permanently stains crushed white granite. The active zone on the site includes a recreational lawn and an amphitheater form that allows the sanctuary to expand into an indoor-outdoor waterfront venue to support community events. The site is connected to the river by two intersecting arc paths that enable public water baptism at varying water levels, while providing public access to the river across the riparian habitat.

Spatial Form

The building is shaped in plan by two smaller intersecting arcs, with the main entry and support spaces located toward Water Ave. Procession through the lobby compresses congregants in plan and section through the entrance and into the sanctuary. The roof form flies overhead, drawing congregants out from under the balcony form, while the floor falls away toward the altar opening the space. The experience is tripartite: roof form converging and rising overhead, horizontal connection to garden on right, and horizontal connection to city on left. There is tension. There is balance. There is Father, Son, and Holy Spirit.

Structure, Enclosure, Materials

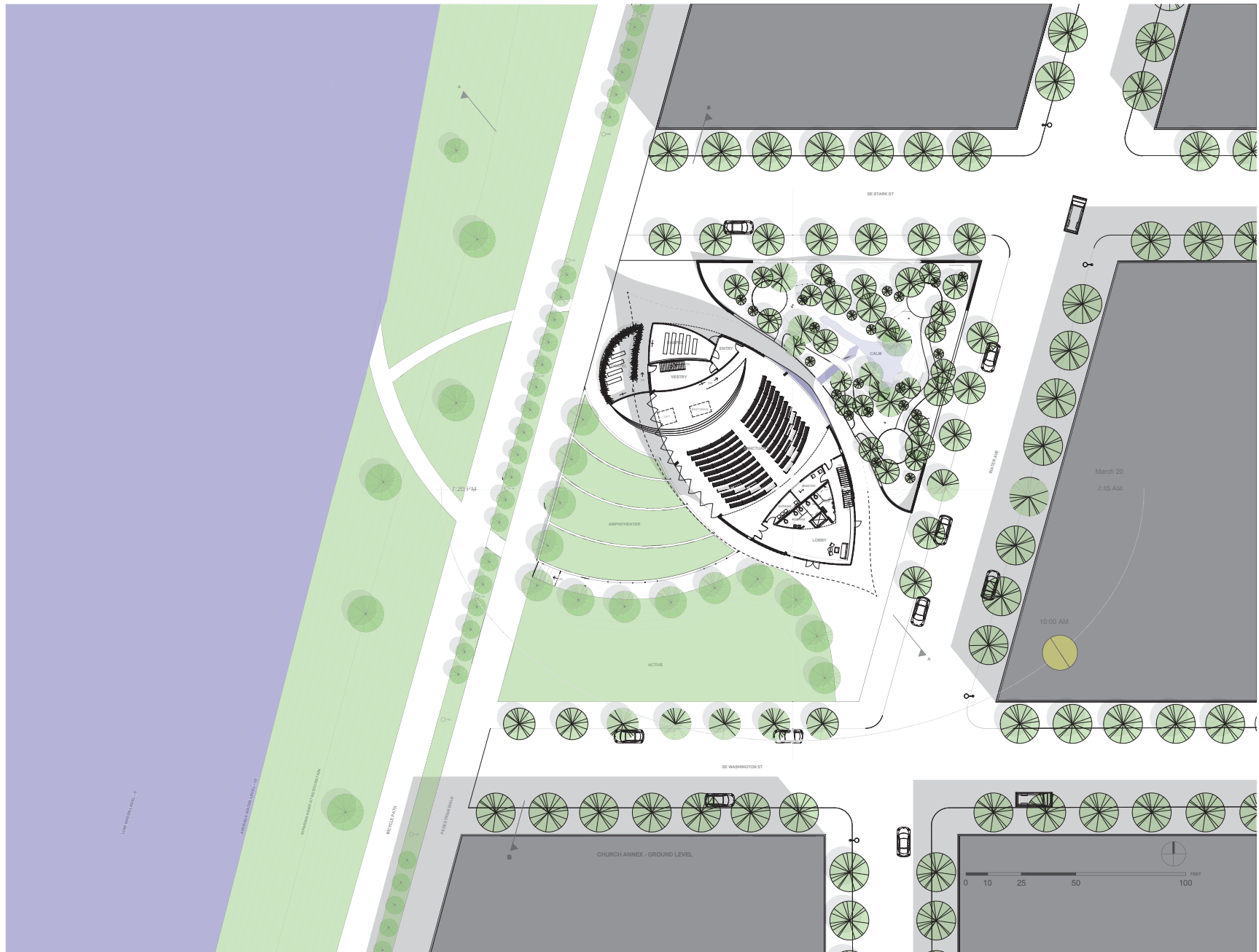
The roof form is shaped by a series of longitudinal, double compound curve glulam beams hung from concealed transverse glulam arches. A plank wood deck rests on the beam system. The sensuous curves generated over the sanctuary converge into an apex rising over and beyond the altar, leading the eye and spirit up and forward. An unseen clerestory at the perimeter creates a diffuse light along a curved line that gently floats the roof form over the sanctuary: a figurative mandorla aureole around the congregation and an iconic curved line that identifies the church in the night skyline.

The wood arches are supported by a series curved concrete columns that read in the walls of the sanctuary. Solid zones are infilled with white translucent stained horizontal wood planks. The north wall of the sanctuary is glazed to visually bring the garden and reflecting pool inside. The south wall's translucent glazed door system connects worshippers horizontally to the city and expands the sanctuary into the outdoor amphitheater. The ends of the building are glazed up to the apex of the roof. The roof is clad in weathered copper. The exterior walls are clad in horizontal, weathered wood planks, accentuating the watercraft metaphor and giving a sense of the passage of water, people, and time along the hull.

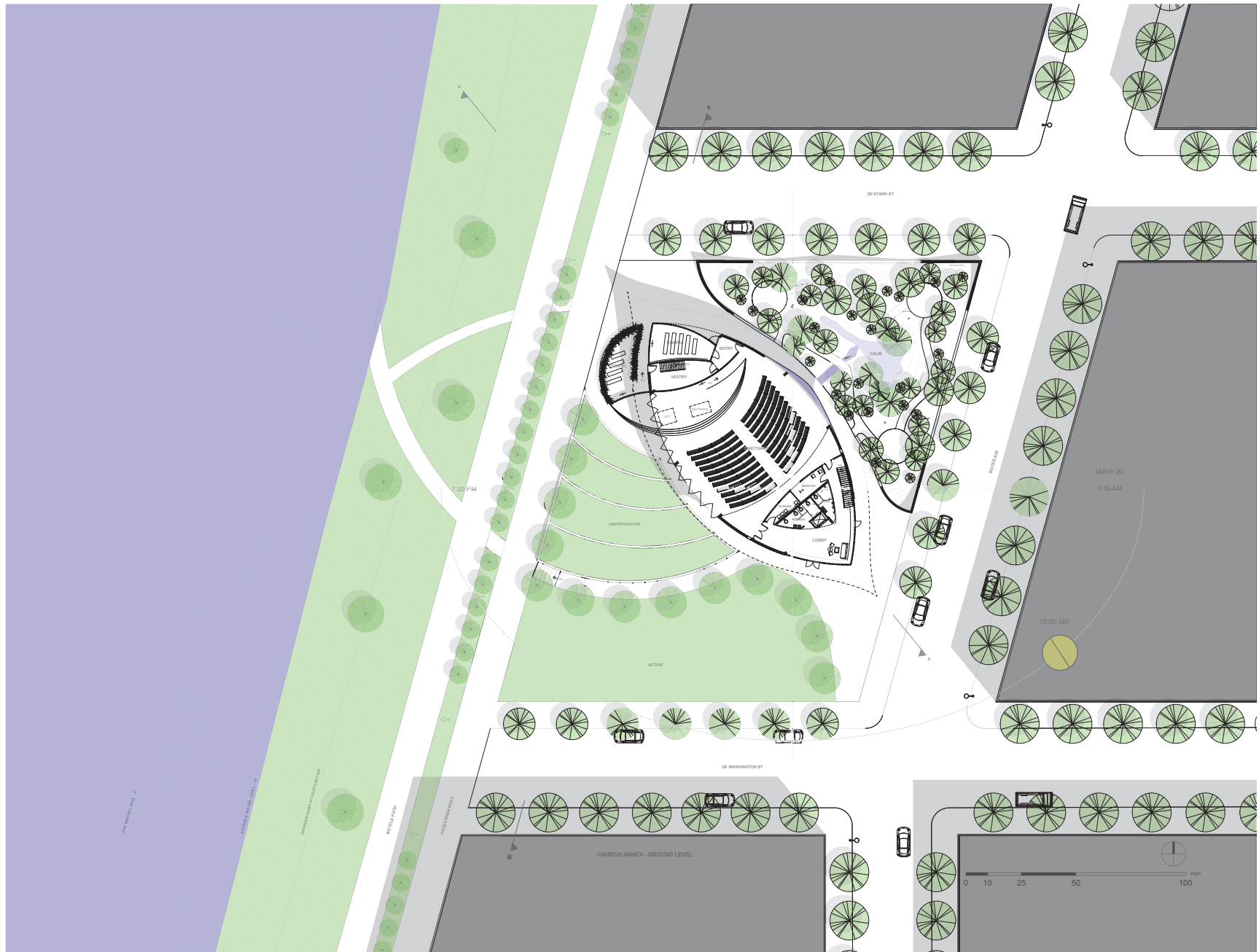
Sustainability

Sustainability is first about making things people want to keep. The craft, beauty, and durable materials of the building are intended to make it a beloved sacred site that gives the community a sense of root, heritage, and identity. Both the district and the church are intended to achieve Living Building Challenge™ (LBC) certification. The seven petals of LBC drive a holistic approach to sustainability that this project is designed to achieve. On a technical level, the building form protects it from hot summer sun while bringing in low winter sun to heat the polished concrete radiant floor. Passive stack and cross ventilation are used in the summer, while advanced energy recovery ventilator wall panels are used in winter to provide fresh air exchange. The high wood content and local Northwest timber sourcing give the project a very low embodied energy carbon footprint.

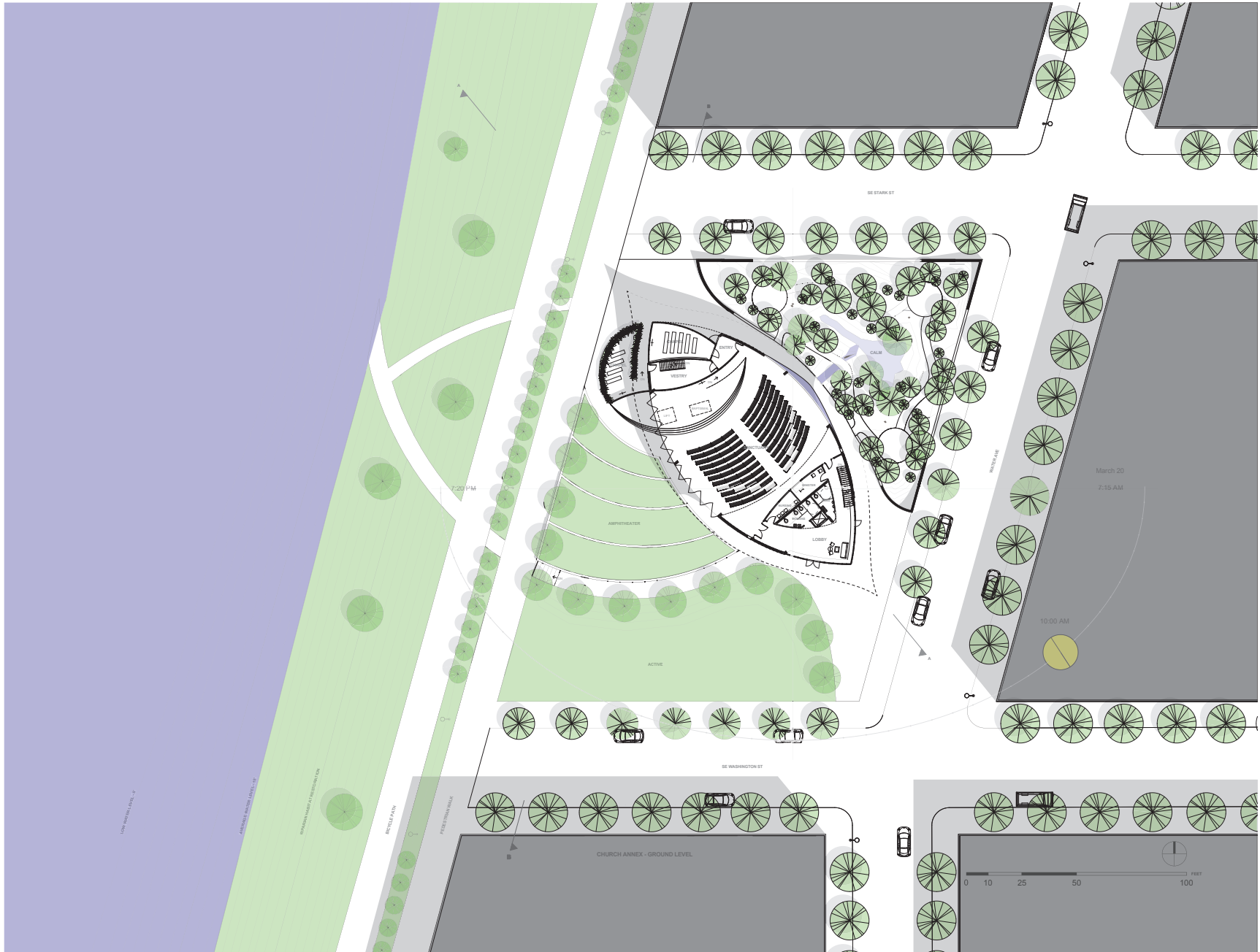
SITING THE BUILDING - SOLAR ORIENTATION



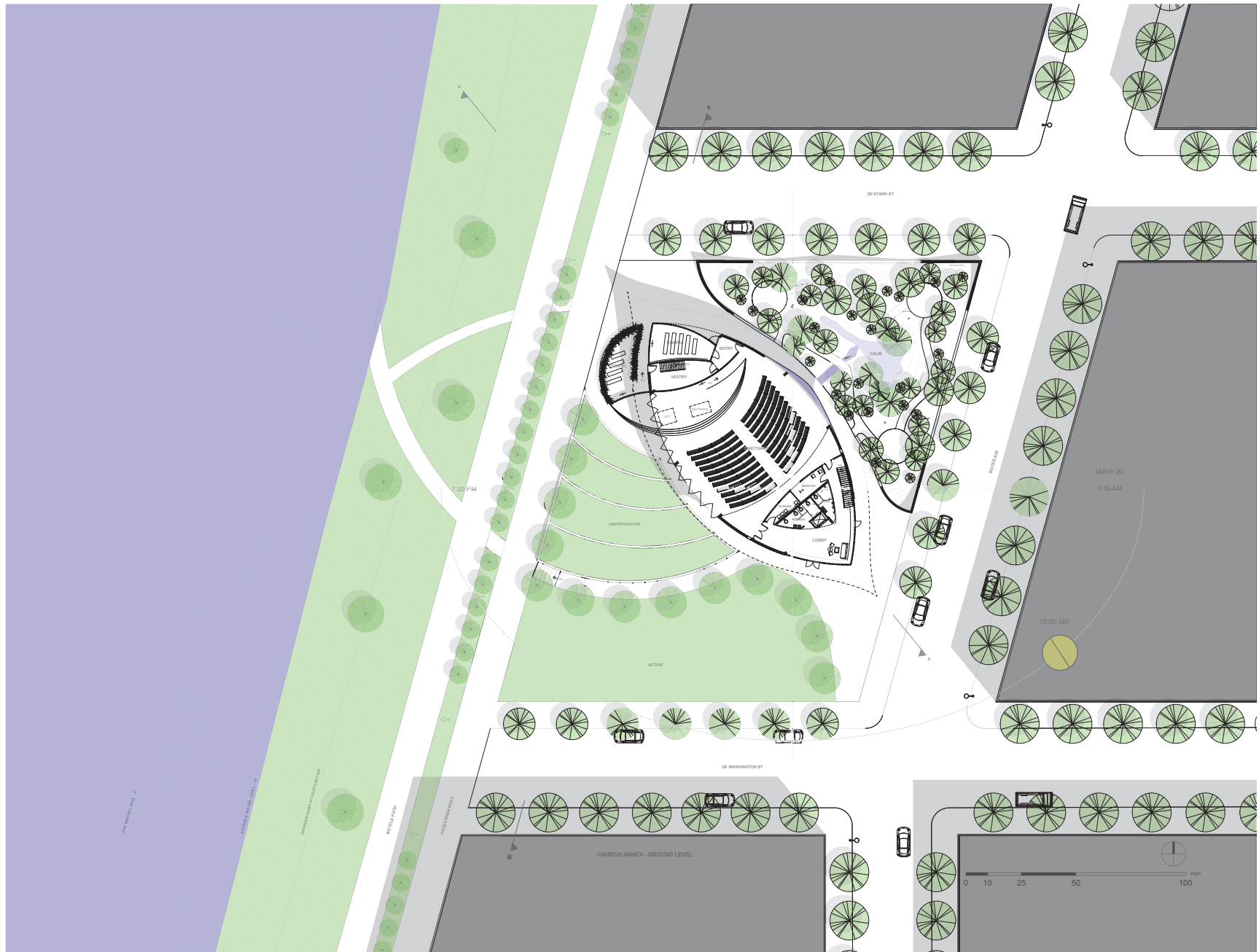
DEVELOPING THE SITE - ACTIVE & CALM



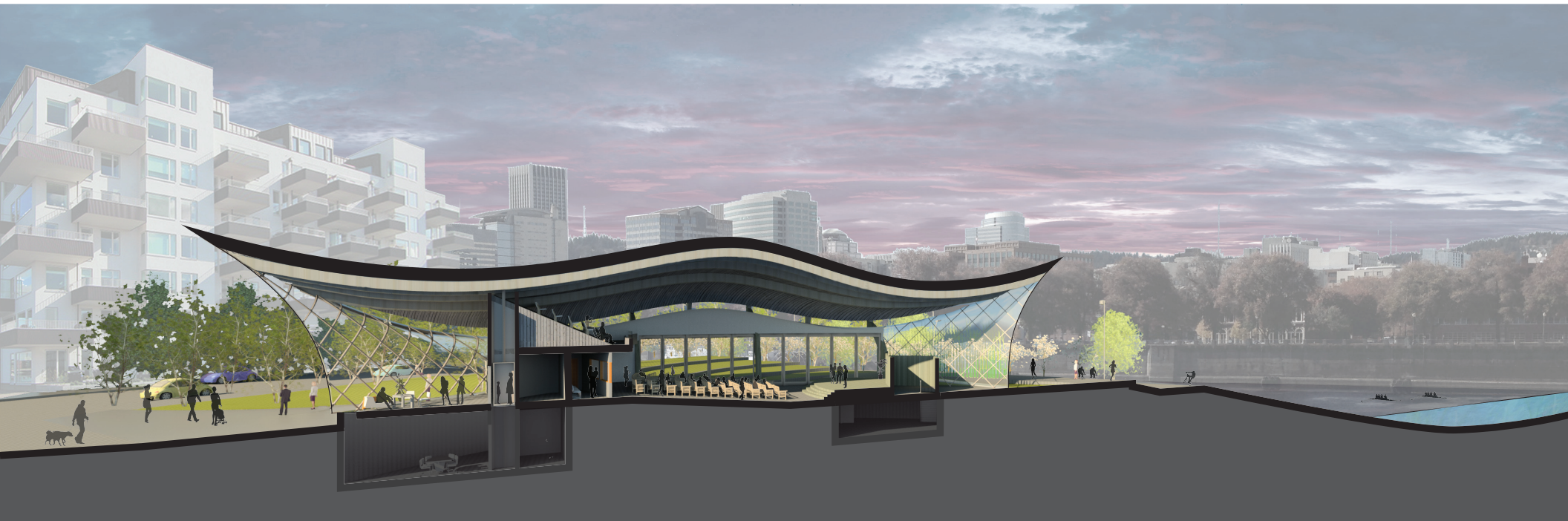
DEVELOPING THE SITE - WATER ACCESS



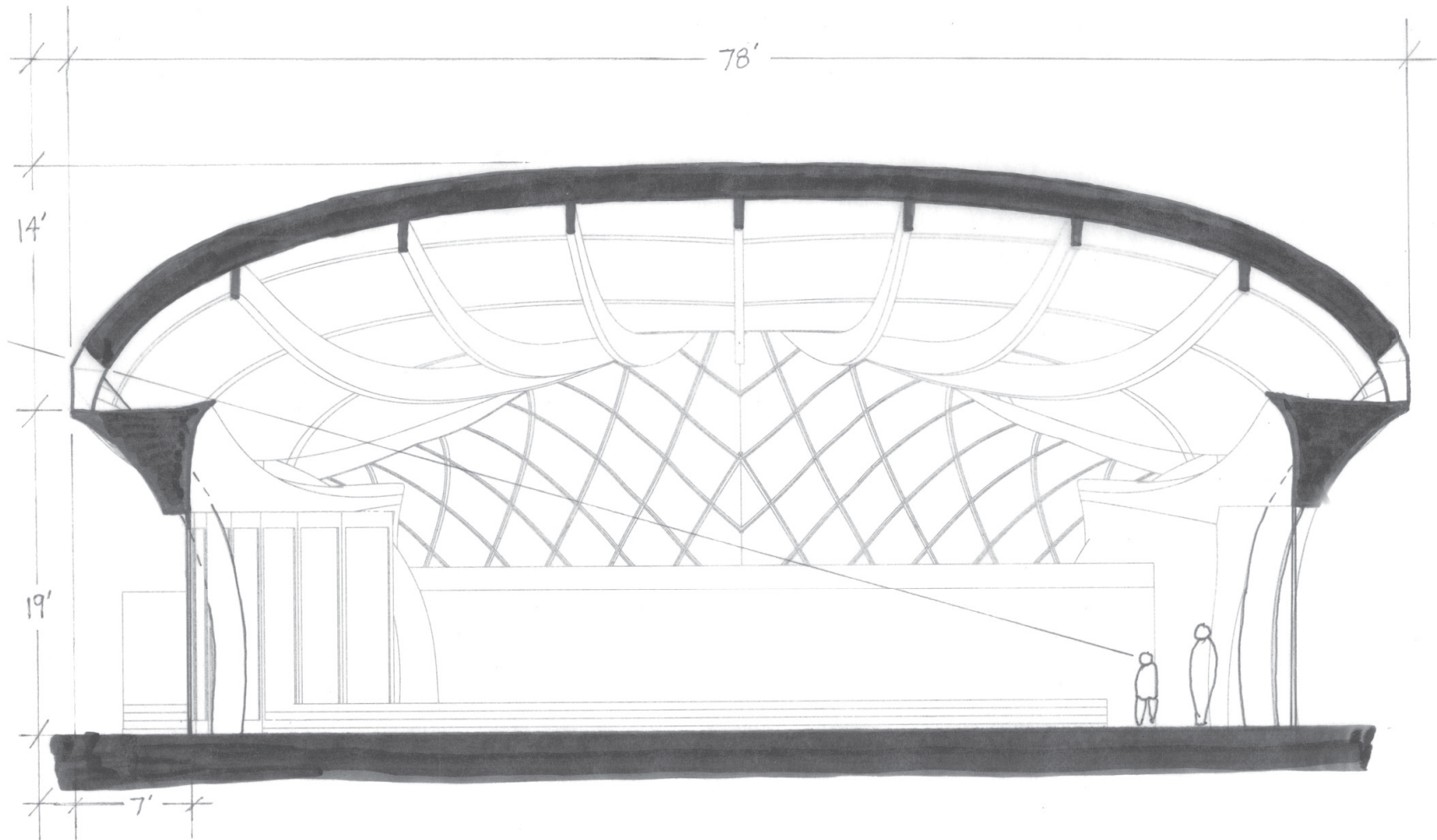
DEVELOPING THE SITE - CHURCH ANNEX



SITE SECTION

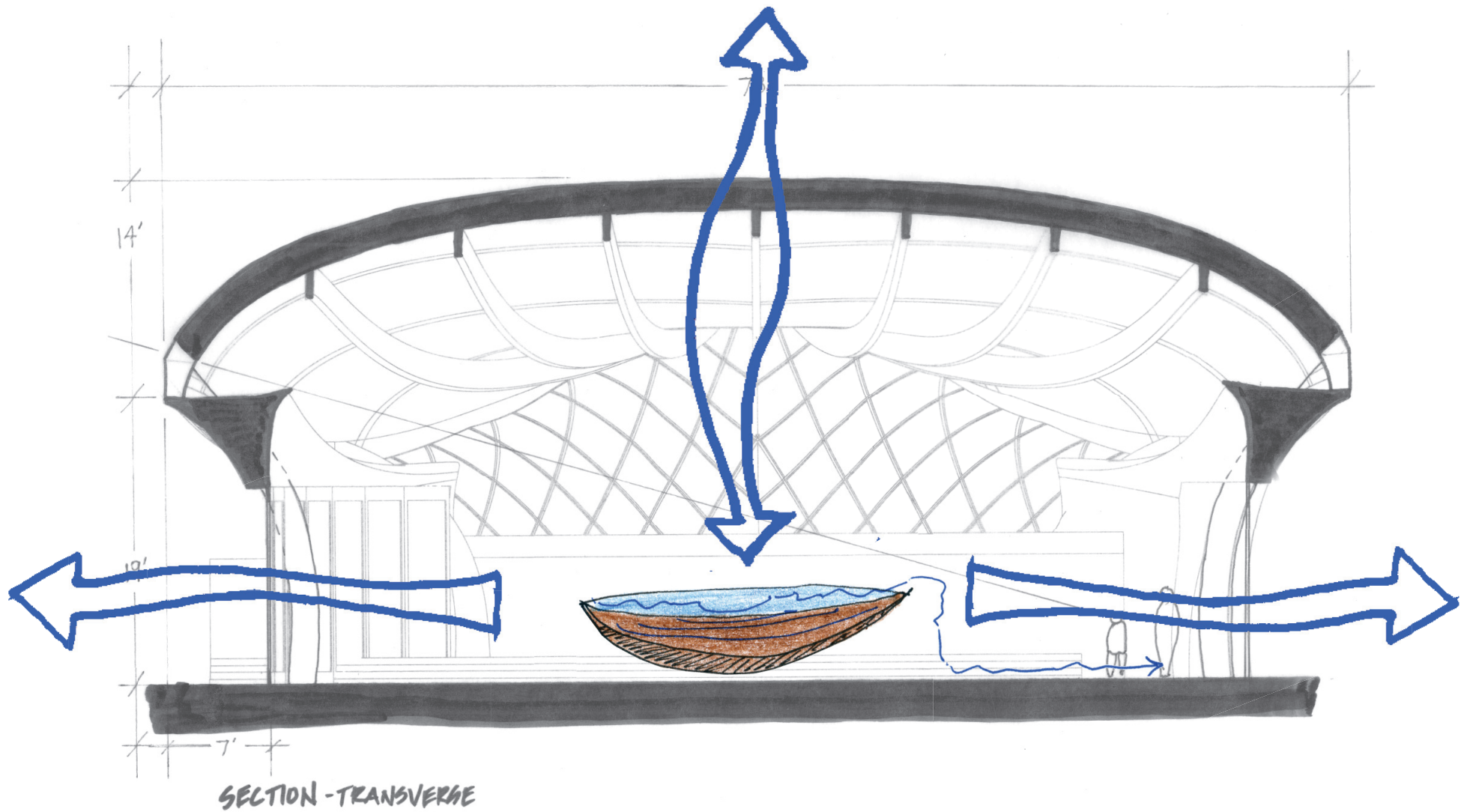
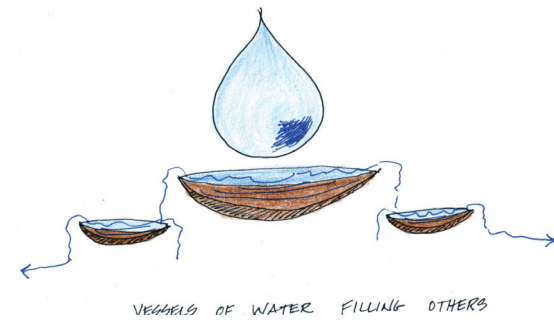


SECTION

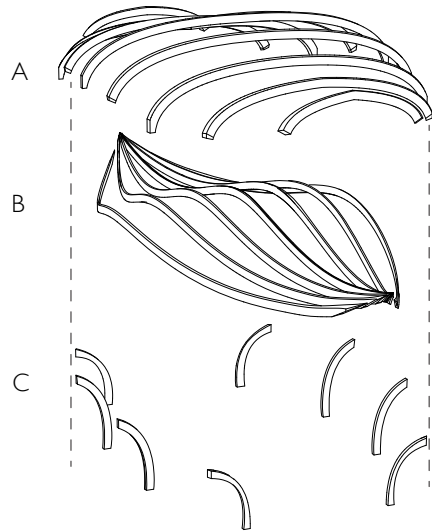


SECTION - TRANSVERSE

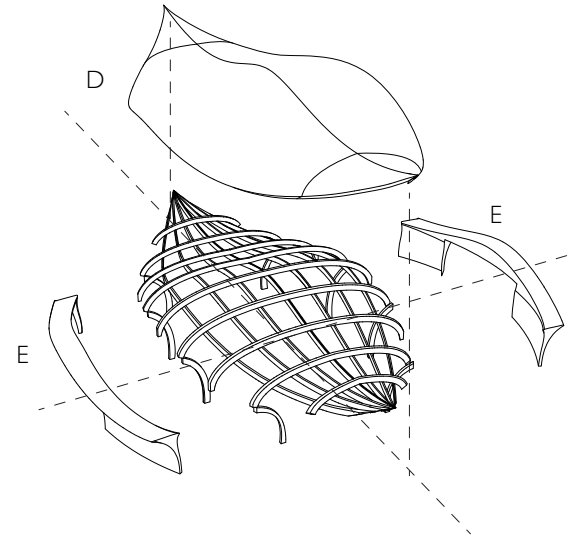
VERTICAL & HORIZONTAL AXES



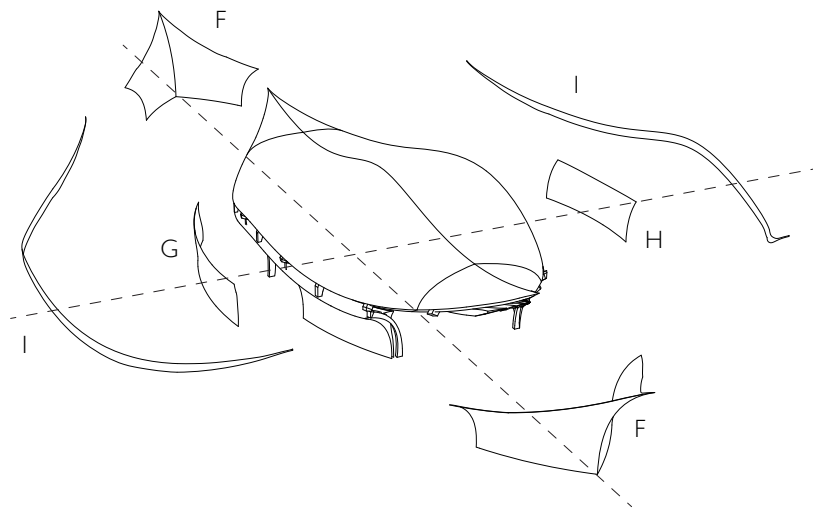
STRUCTURE & CLADDING



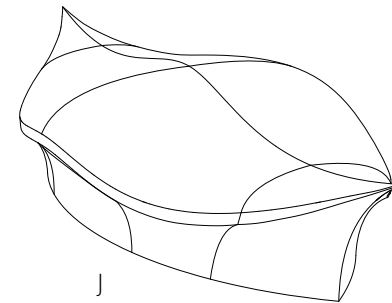
A. Glulam arch beams - 12"x24"
B. Glulam longitudinal beams - 6"x24"
C. Concrete columns - 12"x24"



D. Roof Assembly - 3"x8" T&G deck, insulation, vent space, 5/8" plywood sheathing, copper shingle roofing
E. Infill shear walls - CNC stud framed & sheathed

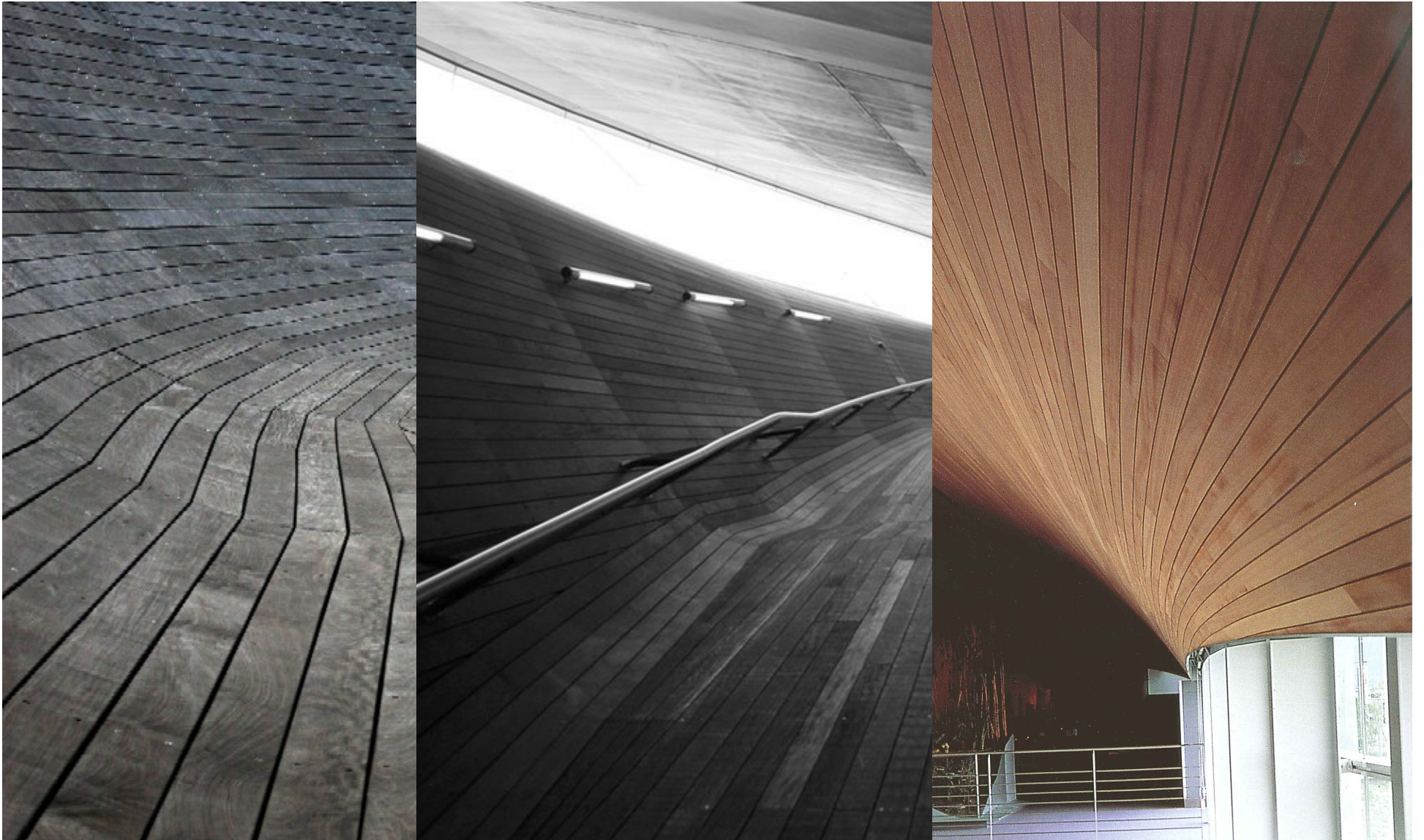


F. Curtain wall - aluminum mullion lattice grid
G. Folding glazed door track system
H. Window system - butt glazed
I. Clerestory band - butt glazed



J. Complete enclosed structure

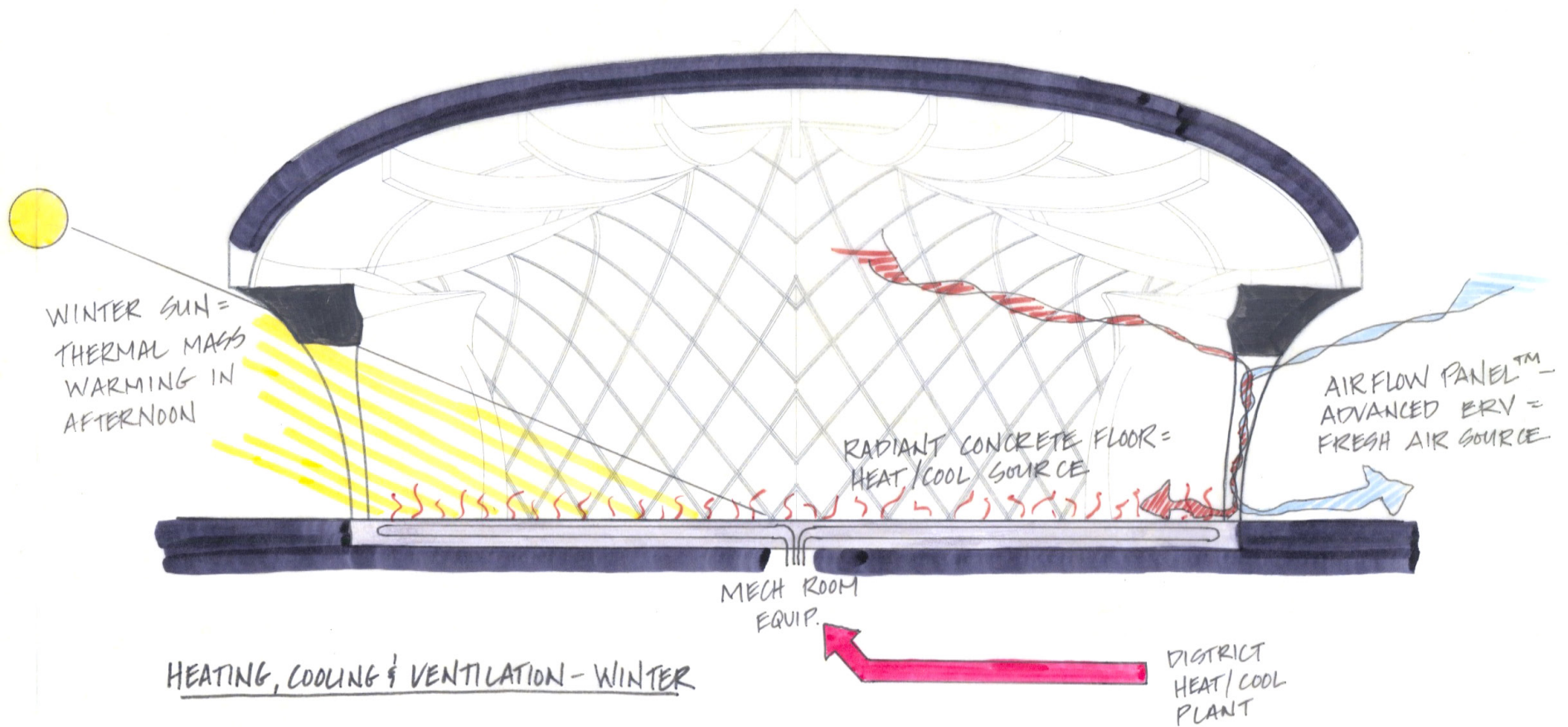
EXTERIOR MATERIALITY



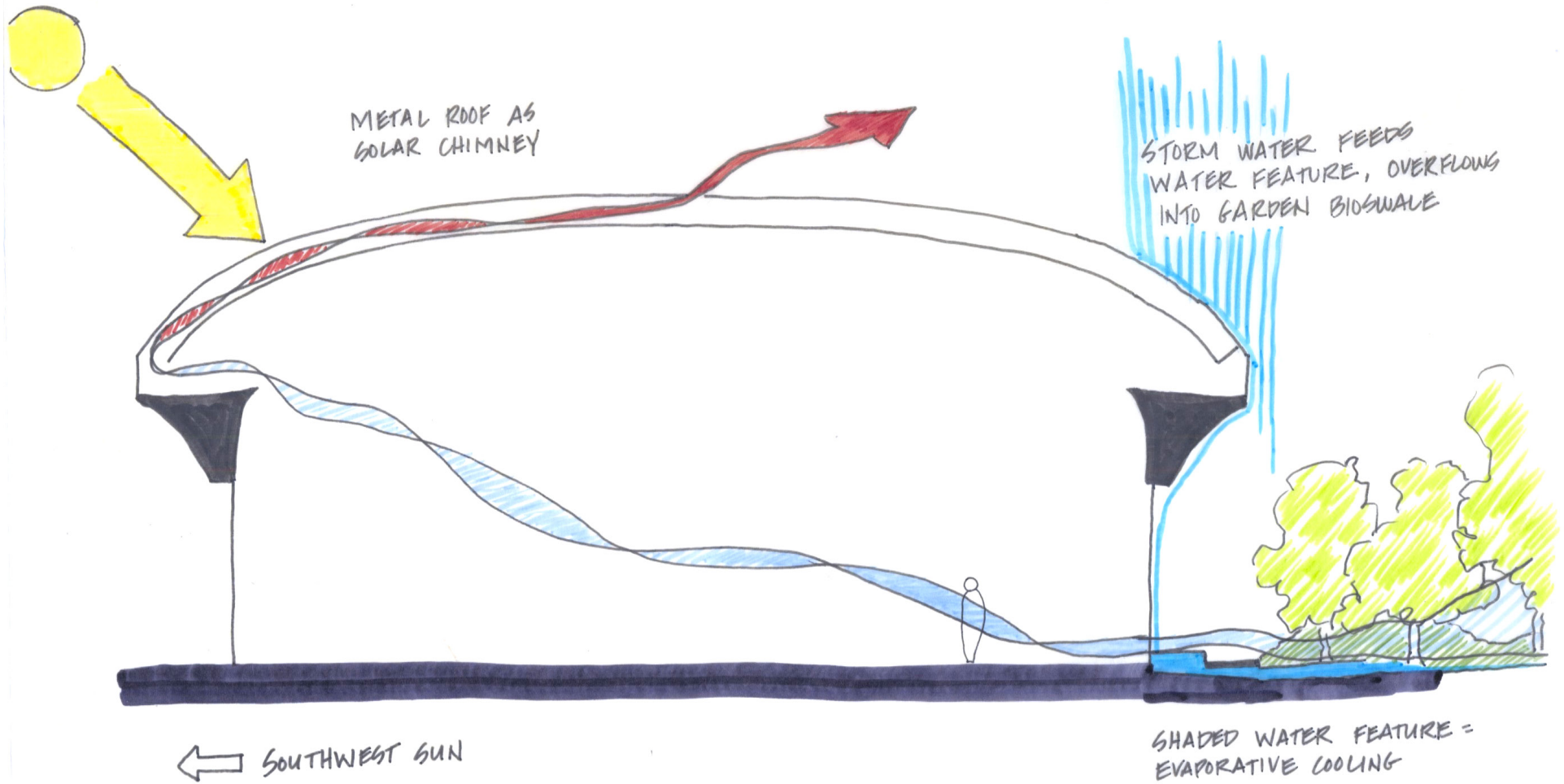
EXTERIOR MATERIALITY



HVAC - WINTER



PASSIVE VENTILATION - SUMMER

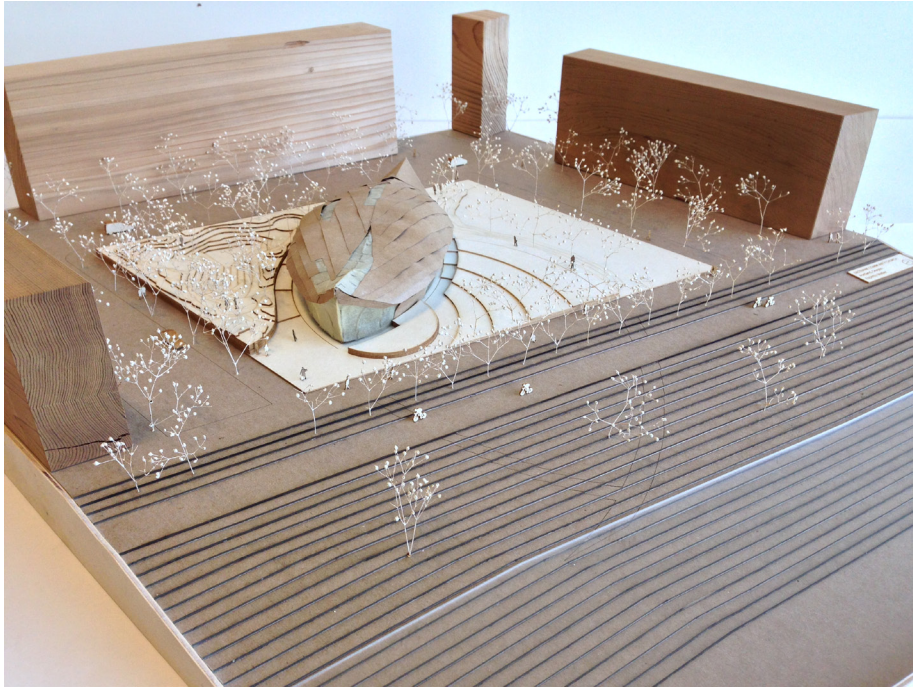


PASSIVE VENTILATION - SUMMER

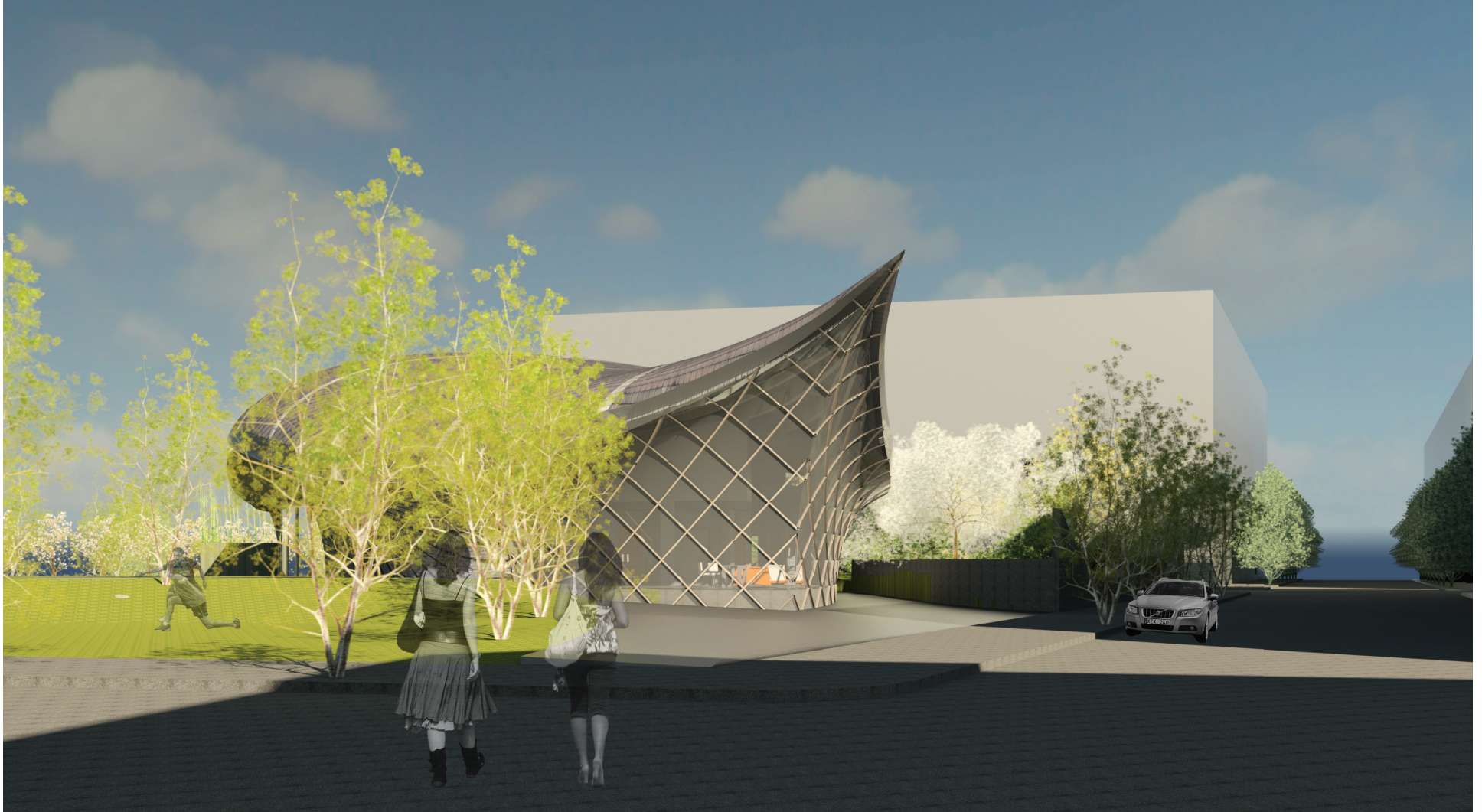
TECTONIC MODEL



SITE MODEL



MAIN ENTRY AT WATER AVE



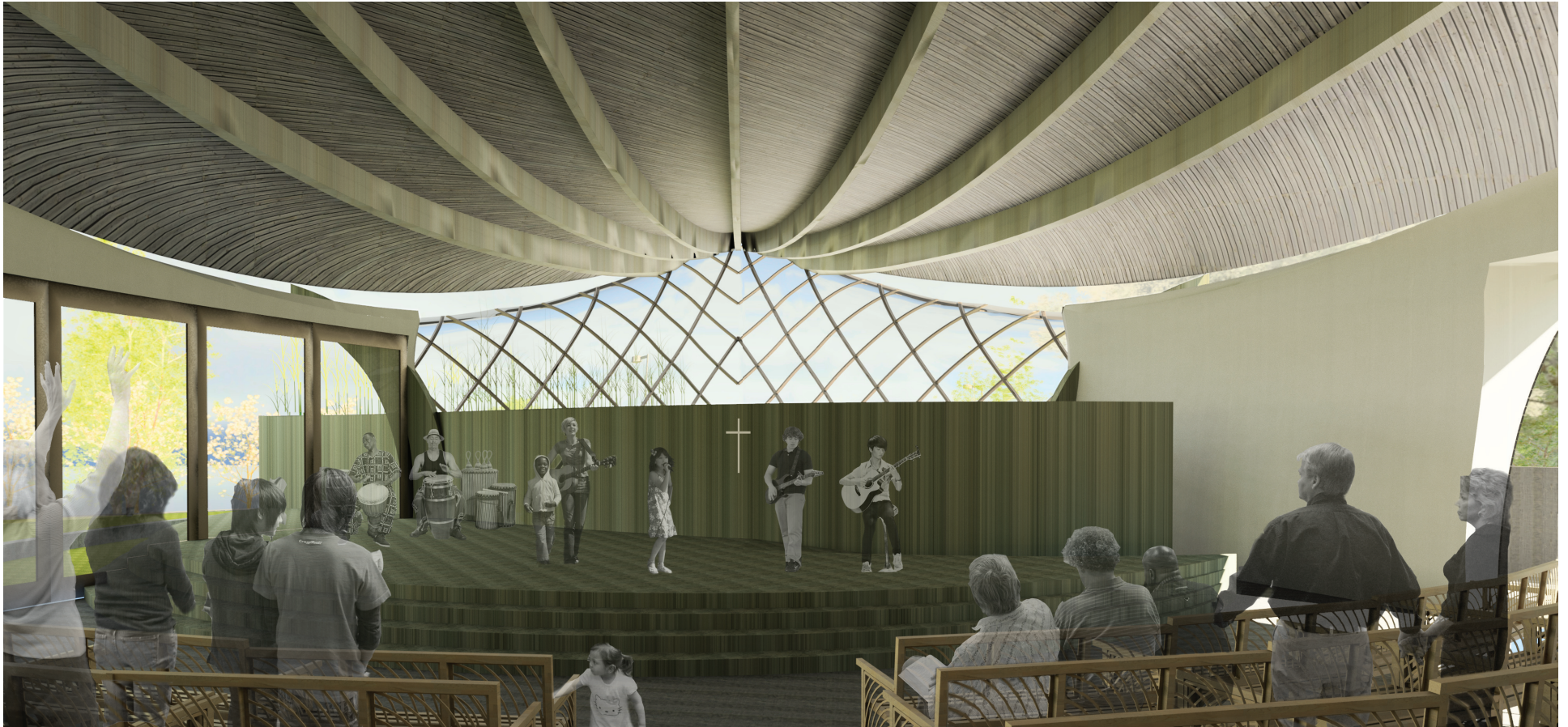
AMPITHEATER EXPANSION



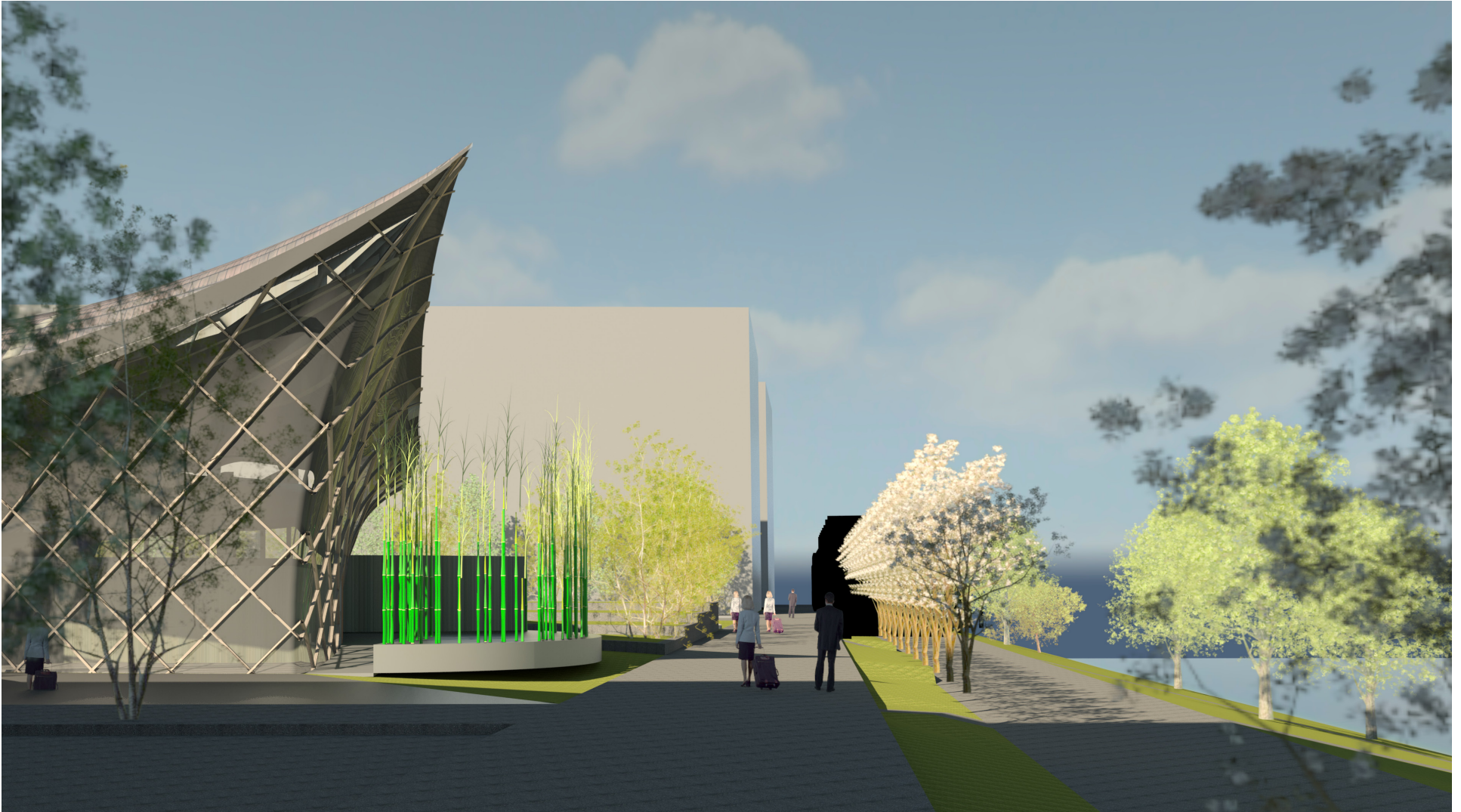
SANCTUARY ENTRY



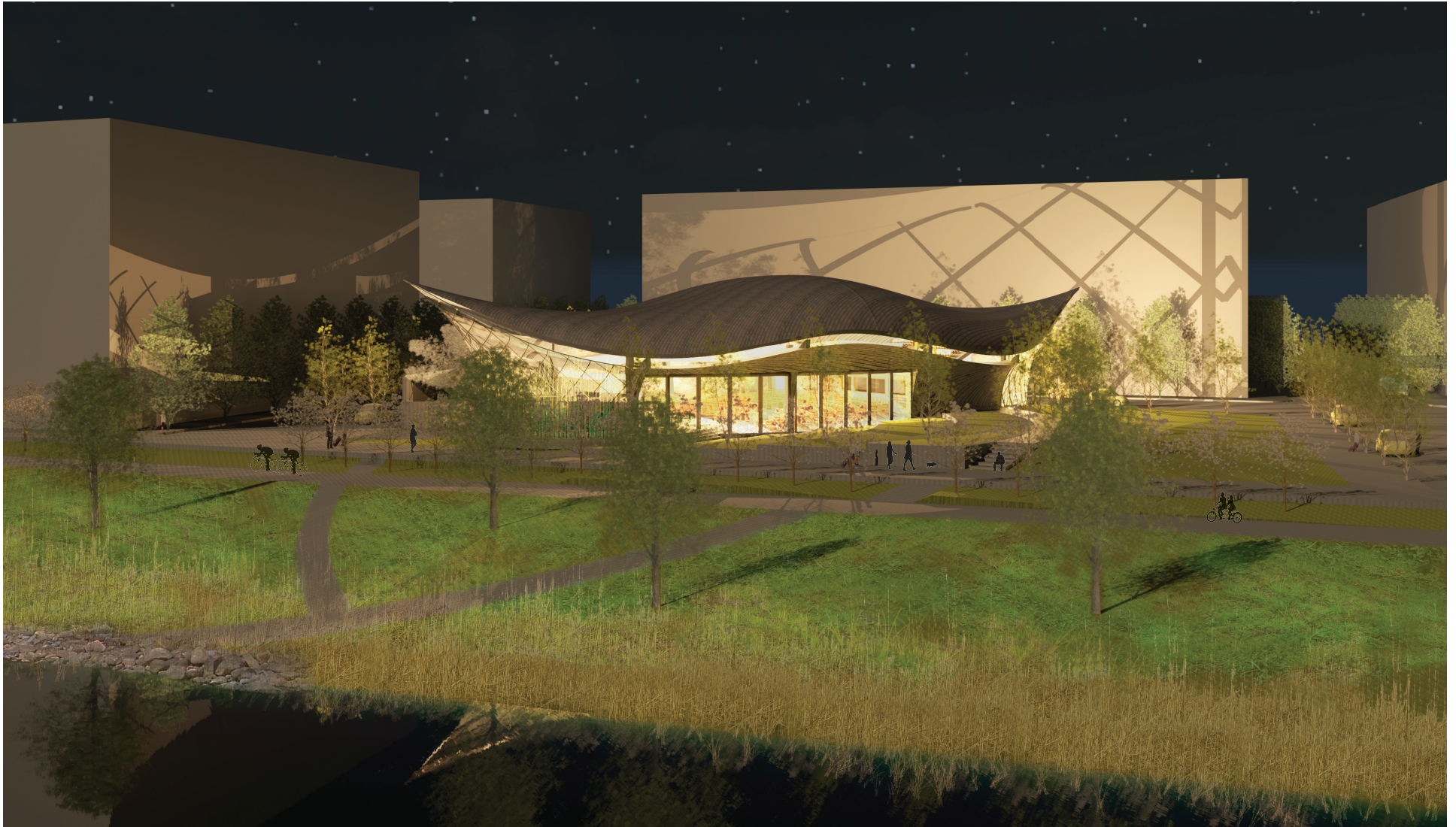
SANCTUARY



WATERFRONT APPROACH

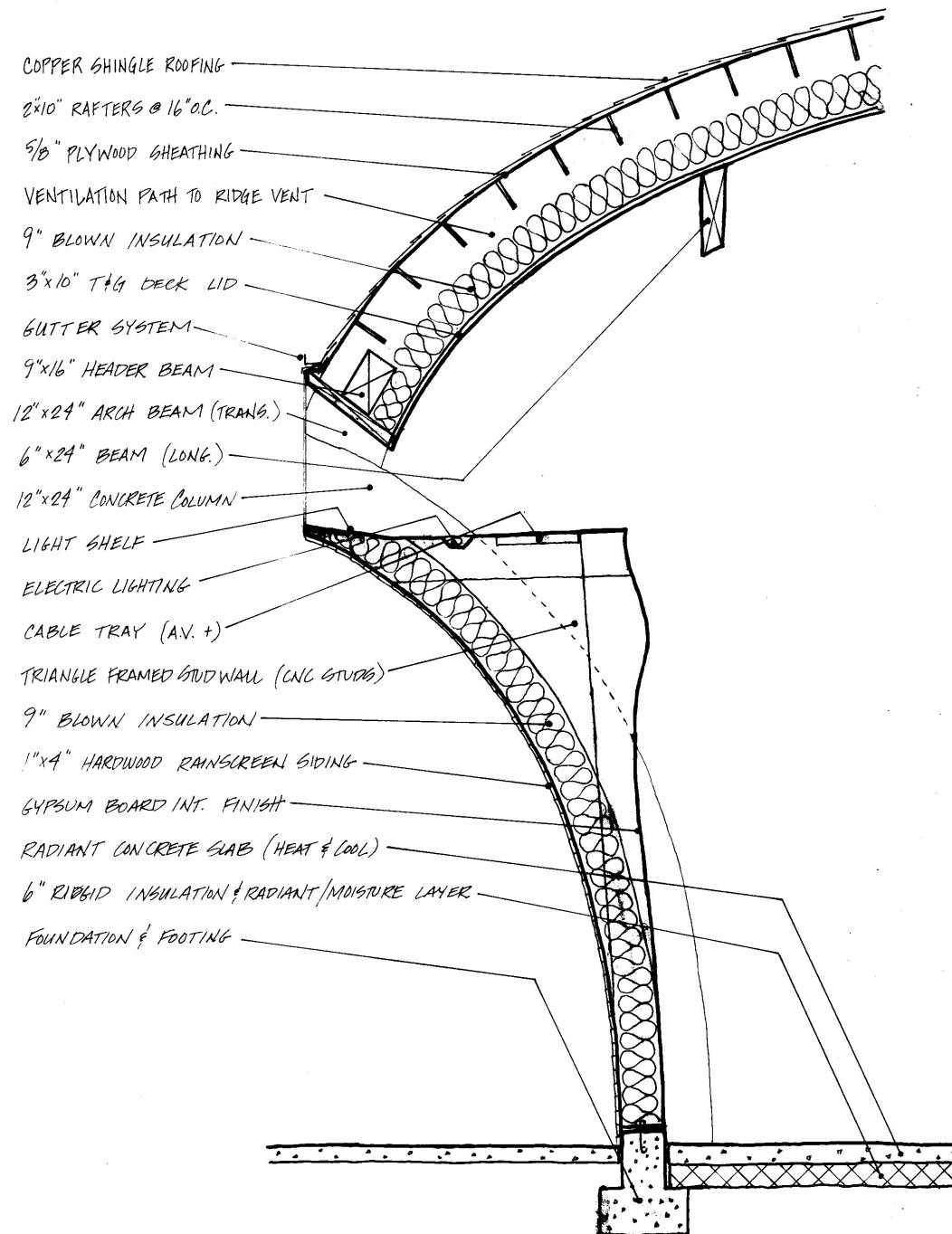


NIGHT ACROSS RIVER



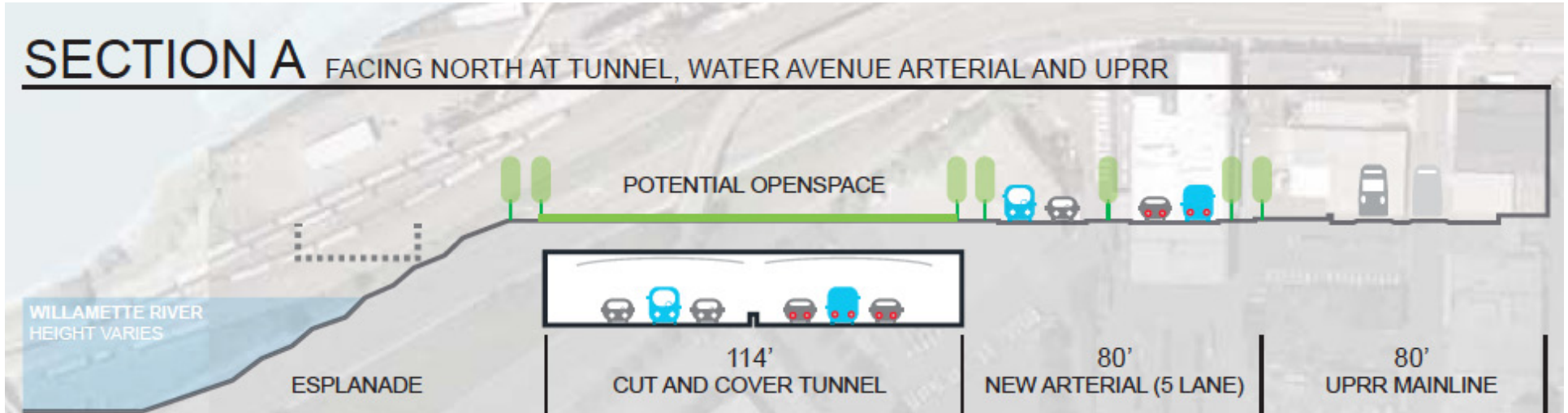
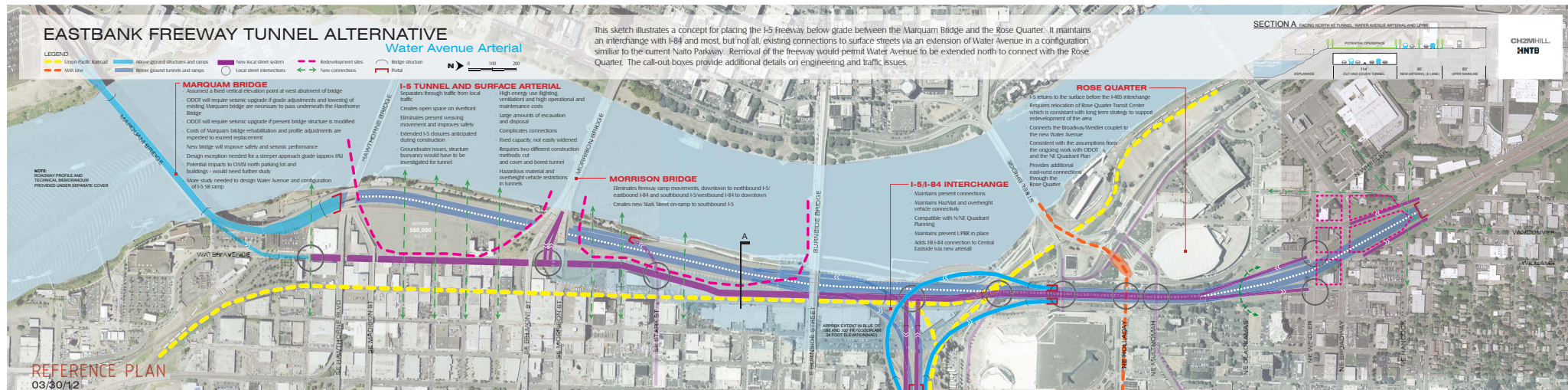
ADDENDA

WALL SECTION



2012 DIAGRAM ADDED TO CENTRAL CITY PLAN

DIAGRAM IS CONSIDERED AN “ALTERNATE” FOR FUTURE CONSIDERATION

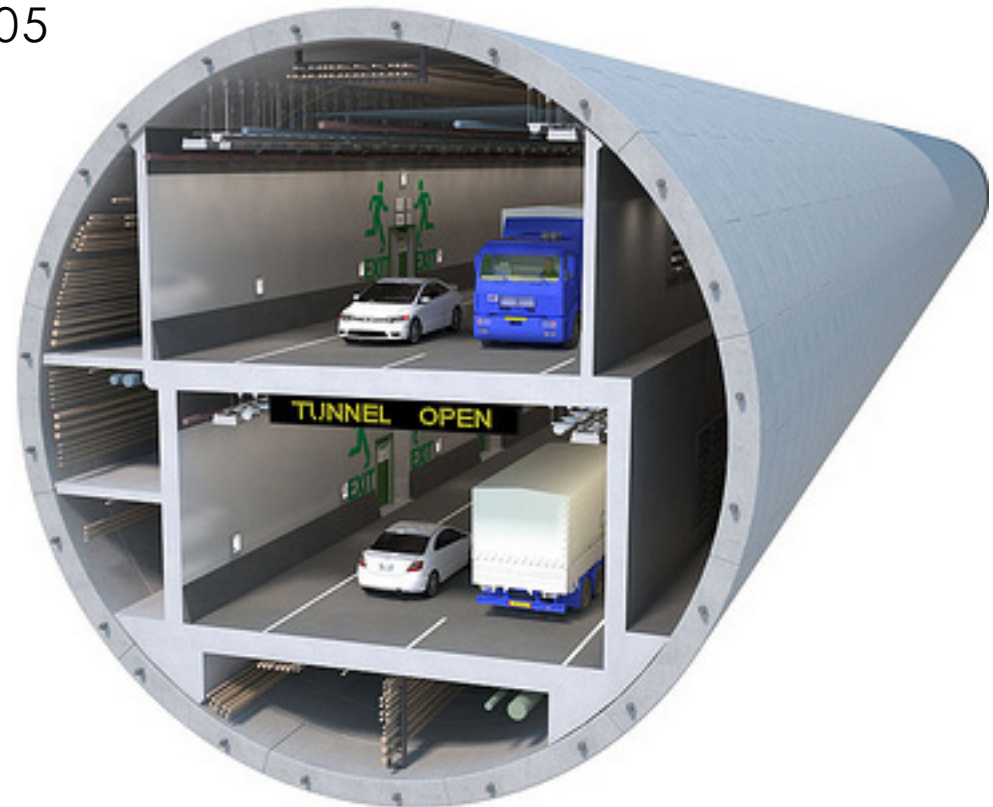


PHASED FREEWAY BORE PLAN

UP TO 90% FEDERAL FUNDING, 10% STATE AND LOCAL...~50-70% SPENT LOCALLY

NEITHER SIDE OF FREEWAY LOOP EVER CLOSED

1. MODEST CAPACITY IMPROVEMENTS CONDUCTED ON I-405
2. EAST SIDE BORE COMPLETED FROM SOUTH WATERFRONT TO ROSE QUARTER WITH I-84 CONNECTION (3 MILES, 4 LANES)
3. RIBBON CUTTING
I-405 REDESIGNATED AS I-5
EAST SIDE BORE DESIGNATED AS I-405
4. LEGACY I-5 AND MARQUAM BRIDGE DECONSTRUCTED



APPENDIX

EASTBANK DISTRICT & COMMUNITY CHURCH
RESEARCH & PROGRAMMING

ESPIRITO MELLER

THESIS DESIGN PROJECT
UNIVERSITY OF OREGON
PORTLAND URBAN ARCHITECTURE PROGRAM
MASTER OF ARCHITECTURE
2014

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Values

Requirements

APPENDIX

Precedents

Urban Precedents

Church Precedents

Previous Planning and Investments

Planning History

Hargreaves Eastbank Riverfront Park Master Plan

Goff-Karman Eastbank 2040 Master Plan

References

RIVER RENAISSANCE



VISION
JANUARY 2001



DOCUMENT DESIGN AND ILLUSTRATION

Jim Ann Carter, Graphic Illustrator II
Jim Longstrech, Illustrator/Consultant
Vickie Nissen, Illustrator/Consultant
Gary Odenthal, GIS Coordinator



Printed on Recycled Paper
Second Edition



THESIS

URBAN SCALE

We need an expansive vision of who we are to become as a city. And we need a new image that represents that vision. What is the image of Portland's future? This project proposes a vision of Portland as the Best Place to Live in America. A place that is physically and ecologically healthy. A place that is alive with community-based action and entrepreneurial, job-creating, local businesses. A place where small industry can thrive, where creative risk-takers can still succeed, where opportunity can still exist, a place where you can still "Go West" to determine your fate. A place where public and private leaders actively partner to make an amazing urban stage on which life is lived. Sounds like a "city that works." This project proposes that the new image of that city is a bustling, riverside creative industrial district where people live and work, built at a human scale with a healthy Willamette Riverbank "front yard" in the foreground and Mount Hood in the background.

The project envisions Portland's Front Yard as the image of the Best Place to Live in America...an amazing healthy riverfront where you can play in the water and catch a salmon on your bike or kayak ride home...all the while being within a stone's throw of the downtown commercial core.

The project proposes to bring life to that vision by refining a portion of the 1998 Goff-Karman Eastbank Masterplan in a manner that provides robust water recreation and access. The vision will be supported by a new kind of zoning and development policy that makes smaller scale mixed-used (industrial/residential) development financially accessible and required.

BUILDING SCALE

The project designs a community church within the district. The design will explore how to site and design a church within the urban form of a belief-diverse city and how the form and design of a church can help its congregation engage with the community around it. The trend toward campus-based church designs generates inherently isolationist destinations that are disconnected from their surroundings. This project breaks the trend towards growth-based mega-church designs and focuses on a relationship-based community design.

The design will explore whether the church should be a "stand-out" icon building, a background building, or a confident, moderate image of a church. The design must also explore concepts of space that support fellowship (humanity) versus space that supports focused worship of God. Spiritual metaphors of water and light will play important roles in the design language.

May 1964 - Minnesota Freeway from Morrison Bridge

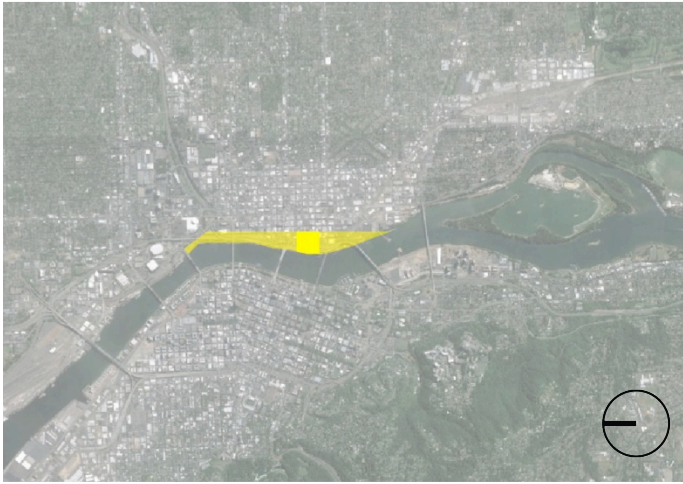


SITUATION

The vision of recapturing the banks of the Willamette River for use by the citizens of Portland began in the 1960's. In the 1970's Portland removed the Harbor Drive Freeway and created the Waterfront Park. In the 1980's the Willamette Greenway Plan was created and the MAX system was launched. In the 1990s and 2000s the city spent \$1.4 billion of city money preventing sewage from entering the Willamette River. The River now has the cleanest water in over 100 years and it is safe for recreation. The 2001 River Renaissance Vision document has progressed into the Strategy of 2004, the Concept of 2006, and is now being integrated into the Central City 2035 and River Plans.

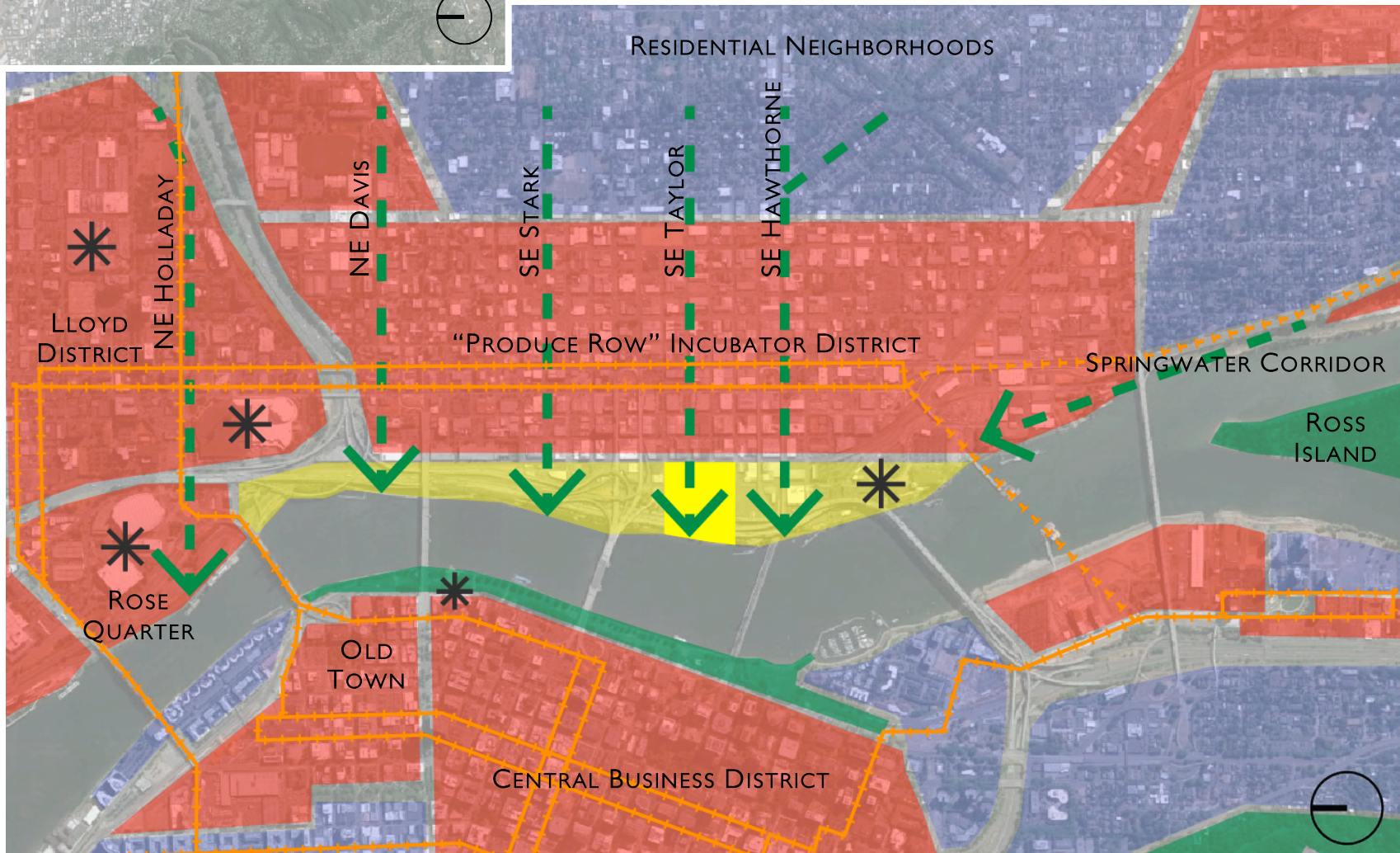
Two of the River Renaissance themes are “**Embrace the River as Portland’s Front Yard**” and “**Create Vibrant Waterfront Districts and Neighborhoods.**” The River Concept identifies the central reach of the River through downtown Portland as “**The Region’s Gathering Place.**” All of these documents identify the central eastside freeway (I-5) as an expensive and difficult barrier to the aspirations of Portland’s citizens for River access and refer to its eventual reconfiguration. In 1993 Hargreaves Associates developed a masterplan of the Eastbank Riverfront Park for the City of Portland, which accommodated the existing freeway. In 1998 two post-professional graduate architecture students developed the Goff-Karman masterplan of the Eastbank District removing the freeway and reclaiming 55 acres of land.

The burial or removal of the central eastbank freeway is the next major investment required to achieve the vision of recapturing the Willamette Riverbanks for people. The project has been a proposal for over 30 years. What can be contributed to quicken this action? What will build political will? What will energize people?



SITE CONTEXT

The Eastbank Waterfront District will be bounded east of Water Ave by the newly branded “Produce Row” incubator district that is identified as an industrial sanctuary jobs district by the city. It is anchored on the north by the Rose Quarter and Oregon Convention Center and the south by OMSI and PCC. The district will be fed from the south by the Springwater Corridor and from the east by pedestrian-oriented streets that connect east side neighborhoods to Portland’s “front yard.” The district is served by MAX rail at the north and south ends and Streetcar on the Martin Luther King/Grand Blvd couplet.





SITE

The site between the Morrison and Hawthorne Bridges encompasses eleven blocks around a Goff-Karman proposed marina. There is an assortment of older industrial buildings and warehouses around the site. Most of the site is vacant, with the exception of a few low quality, single-story structures east of Water Ave and the new Fire Station 21 currently under construction under the elevated I-5 freeway. The vacant land is currently being used as surface parking and to recycle concrete. The Portland Development Commission has solicited developer interest for the 4.3 acres west of Water Ave.



PROGRAM

PROPOSED CLIENT

The Well Community Church is a local Christian congregation that meets in the historic Mt Olivet Baptist Church building near NE 1st and Broadway. The diverse congregation has weekend attendance of 350-400. The congregation has a number of internal ministry programs as well as external service ministries to a number of underserved communities, including the HIV+/AIDS community and the developmentally disabled community. The design will be developed to support their needs, values, and vision as a congregation.

CLIENT VALUES

Truth – the teaching and application of it in large and small gatherings

Community – for the growth and encouragement of believers

Mission – deploying individual gifts in service to others

The church loves its current facility because it is approachable and humble, even though the 1907 facility presents numerous challenges to the life of the congregation (inadequate classrooms, kitchen, circulation, lobby/information, social, restroom, and outdoor spaces). The church appreciates beauty, but would be uncomfortable in an ostentatious or extravagant building. The church desires a facility that will support their work reflecting the life and power of Christ as a community, both internally and externally. The cycle of church life involves repeated gathering and dispersing. Gathering for teaching, worship, fellowship, and service. Dispersing to live out their lives and callings in the local community. The facility must support the internal life of the congregation as well as welcome the new and the curious in the local community. To make such an investment in a new facility, the design would have to communicate strongly the values below.

Reconciliation and Restoration – relationally and environmentally

Beauty – echoes of the Holy

Community – internal and external

Life – encouraging and equipping individuals to pursue personal vision and calling

SITE

The church's site will be in the master-planned Eastbank District with some connection to water. This will allow some public expression of the spiritual metaphors of water as a symbol of life, cleansing, and death.

REQUIREMENTS

ACTIVITY SPACE	AREA SQ FT	OCCUPANCY	DESCRIPTION	ECS REQUIREMENTS	SPATIAL RELATIONSHIPS
Lobby/Entrance	400	30	Transition zone, socializing, circulation node.	Buffer zone for climate controls and light adjustment.	Between front door and sanctuary. Connection to classrooms and office helpful.
Sanctuary	6255	550	Ambience that supports corporate and individual spiritual experience, teaching, music, prayer.	High lighting control. Daylight and ambience very high importance. AV system.	Awareness of both vertical and horizontal axes (both of procession and lateral dispersion).
Seating	4830 4660		Seating for 550.	Conditioned space.	Visual connection to stage.
Seating ADA	80	10	Wheelchair accessible seating as part of the congregation.	Conditioned space.	Some on main level--able to use without elevator.
Nursing	90	5	Privacy and peace for nursing mothers during service.	Visual connection and privacy. Audio connection to sanctuary.	Connected/near sanctuary.
Stage	1150 480	30	Viewable by congregation.	Stage lighting and AV projection.	Minimum perceived barrier between stage and seating.
Storage	400		Sound equipment, musical instruments, communion supplies.	Conditioned space.	Unobtrusive connection to stage.
Altar zone	240	30	Where communion and prayer are usually administered.	Conditioned space.	Support the experience of leaving the mundane and moving toward the holy.
Baptismal	30	4	Waist deep water for public submergence--visible by a large group.	Water temperature control.	Possibly outside.
Information	100	15	Poster/video viewing, literature pickup, sign-up lists.	Electric and ethernet connection.	In lobby.
Beverages	100	20	Beverage service.	Possible sink/electric service.	In lobby. Near kitchen a bonus.
AudioVisual	75	3	Control booth for sound board, etc.	ECS, sound, and lighting controls located here. Internet access.	In sanctuary, best at audiological center.
Classrooms	3830		Age appropriate rooms for instruction, praise, and fellowship.	Conditioned and daylit.	Varies.
Nursing	30	3	Privacy and peace for nursing mothers.	Sound insulation. Daylight.	Near nursery.
Nursery	550	20	12 months and under.	Sound insulation. Daylight.	Near toddlers rooms.
Toddlers	550	35	1-3 years old (pre-school).	Sound insulation. Daylight.	Near nursery and kids rooms.
Kids 1	550	35	K-2nd grade.	Sound insulation. Daylight.	Near kids and toddlers rooms. Connection to outdoor play space.
Kids 2	550	35	3-5th grade.	Sound insulation. Daylight.	Near kids and toddlers rooms. Connection to outdoor play space.
Middle School	750	35	6-8th grade.	Sound insulation. Daylight.	Some separation from kids rooms. Connection to outdoor lounge or gym.
High School	850	35	9-12th grade.	Sound insulation. Daylight.	Some separation from kids rooms. Connection to outdoor lounge or gym.

REQUIREMENTS (CONTINUED)

Kitchen	275	10	Meal preparation for up to 100.	Exhaust fan. Heat source. Hot water. 240V electric appliances.	Best near service entrance for deliveries and refuse pickup.
Offices	570		Administrative area.	Internet access.	Near library. Bonus if near lobby.
Staff	150	3	Administrator; teaching pastor; bookkeeping.	Daylight. Internet. Phone. Sound insulation.	In office cluster.
Counseling	100	4	Rooms for counseling individuals or couples.	Conditioned. Sound insulation.	In office cluster. Semi-private approach/waiting area.
Meeting	120	12	Small group meetings.	Conditioned. Sound insulation.	In office cluster.
Library/Bookstore	200	15	Supply literature and materials.	Conditioned.	Near lobby and office cluster.

Subtotal - Activity 11330

SUPPORT SPACE	AREA SQ FT	OCCUPANCY	DESCRIPTION	ECS REQUIREMENTS	SPATIAL RELATIONSHIPS
Restrooms/Shower	250		Single shower for staff.	Exhaust fan. Hot water.	Near sanctuary and classrooms.
Janitor	50		Supplies storage and mop sink.	Hot water.	Near bathroom, kitchen or service entrance.
Storage (distributed)	300		Classroom supplies, chairs, dishes.	Conditioned.	Varies.
Electrical	10		Circuit breaker box, service entry.	N/A	N/A
Mechanical	75		HVAC equipment.	N/A	Based on distribution strategy.

Subtotal - Support 685

TOTAL 12015

Divided between 2 levels 6008

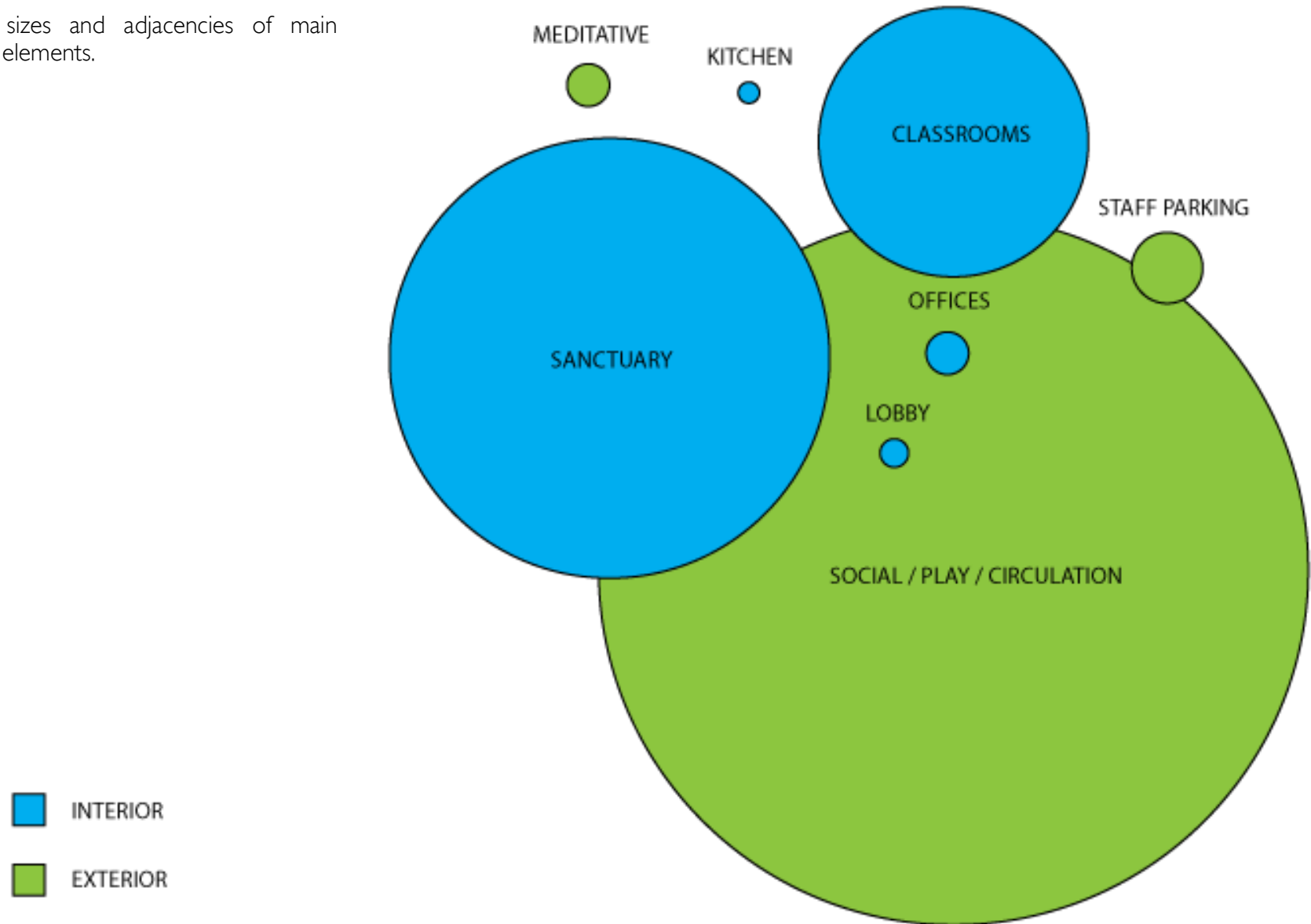
Divided between 3 levels 4005

OUTDOOR SPACE	AREA SQ FT	OCCUPANCY	DESCRIPTION	ECS REQUIREMENTS	SPATIAL RELATIONSHIPS
Lounging	1200		A comfortable place to sit and socialize.	Consider solar access, shading, rain cover.	Ability to supervise children playing.
Social / Play	10000		A plaza for mixing, running, playing.	N/A	Dual use as entry forecourt. Connection to lounging area and protection from vehicle traffic.
Meditative	600		Contemplative garden setting for quiet reflection/prayer.	N/A	Buffered from play area.
Parking	918 6 spots		Staff parking. Others off-site.	N/A	Near entrance/offices.
Circulation	500		Site circulation.	N/A	N/A
Other					

Total - Outdoor 13218

PROGRAM DIAGRAM

Relative sizes and adjacencies of main program elements.



APPENDIX

URBAN PRECEDENTS

Hammarby, Stockholm – Eco-District, transit, government-owned land

Bilboa, Spain – Large vision of future of city, economic niche, regional hinge point, city image making

Riverwalk - Milwaukee, Wisconsin – Riverfront industrial district revitalization

Westhafen, Frankfurt, Germany – Waterfront reuse, marinas

Hafencity, Hamburg, Germany – Waterfront development

Sluseholmen, Copenhagen, Denmark

Thea Foss Waterway, Tacoma, Washington – Industrial waterfront revitalization

Copenhagen Harbor Baths, Denmark – Public water recreation

FREEWAY REMOVAL / SUBMERSAL PRECEDENTS

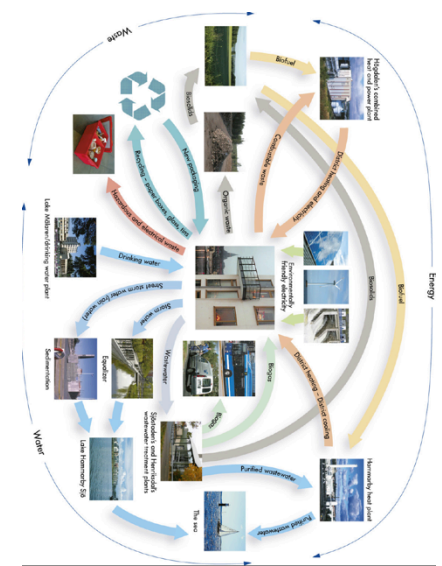
Alaskan Way Viaduct, Seattle

Cheonggyecheon River Restoration, Seoul

Harbor Drive Freeway, Portland

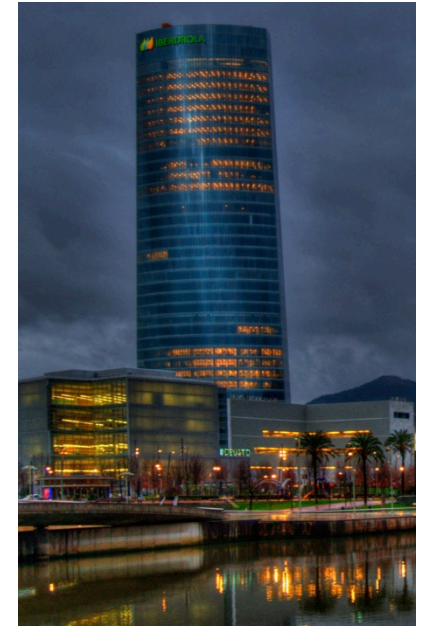
Embarcadero Freeway, San Francisco

Big Dig, Boston



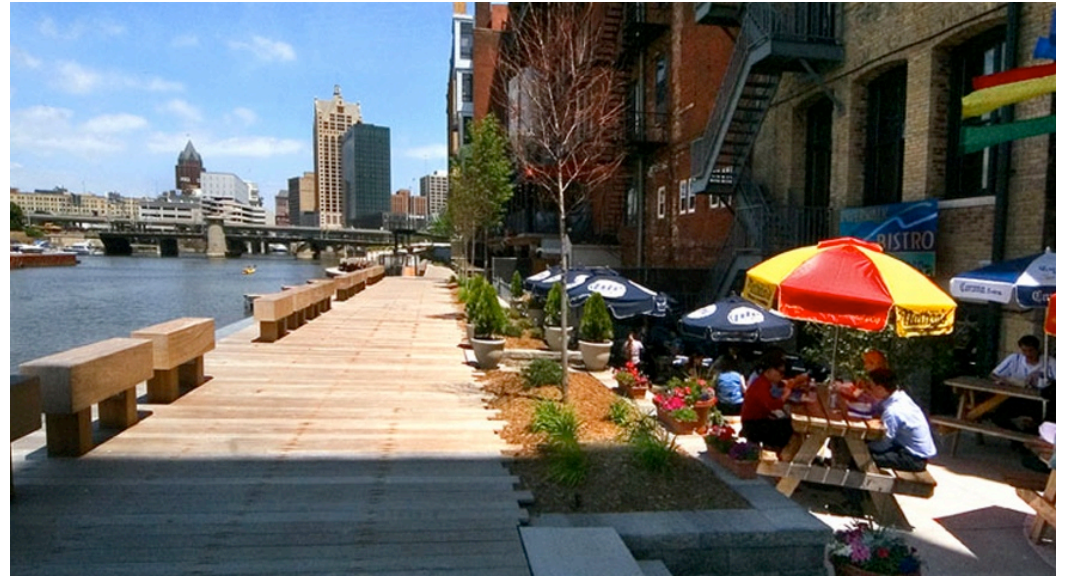
HAMMARBY, STOCKHOLM – 1990 TO PRESENT (ECO-DISTRICT)

The lakefront eco-district was formerly an industrial harbor district. The city-led redevelopment was intensely focused on achieving high urban environmental sustainability through district-level utilities, high-density housing, mass transit connectivity. The city was able to exercise a high degree of control over the development plan and design code because most of the land was government-owned. The city also applied life-cycle cost analysis to investment decisions rather than typical pro forma ROI requirements.



BILBAO, SPAIN – 1980's TO PRESENT (ECONOMIC REVITALIZATION & CITY IMAGE MAKING)

A former industrial powerhouse, the city experienced harsh economic decline in the 1960s and 1970s. In the 1980s the city began strategic planning to reestablish economic vitality. Uniquely, its leaders were able to cast a common vision across multiple levels of government from neighborhood to regional. This teamwork bore much fruit, including the redevelopment of an industrial river harbor into the new image of a gleaming, tourist attracting city center. It has also become a center of the European tech economy. It also used a starchitect strategy, investing in high-profile iconic buildings and urban design.



THIRD WARD RIVERWALK, MILWAUKEE – 1990s TO PRESENT (LINEAR PUBLIC RIVERFRONT & BUSINESS INVOLVEMENT)

A former industrial harbor and warehouse district, the Third Ward was isolated from the city by the river and freeway system and crime ridden. In the 1980s business leaders banded together and formed a Business Improvement District to lobby and levy taxes. The district was placed on the National Register of Historic Places and the Milwaukee Institute of Art and Design relocated to the district. In the 1990s the River Walk was extended into the district with a 1.5-mile long concept by artist Mary Miss. Nearly every building in the district has been renovated and converted to mixed uses. The Milwaukee Public Market opened in the district in 2005.



CHEONGGYECHEON FREEWAY, SEOUL – 2001-2005 (FREEWAY REMOVAL & RIVER DAYLIGHTING/RESTORATION)

In 2001 a transportation planner shopped a study on this freeway removal to mayoral candidates. The study said removal of the freeway with a few modest improvements to surface streets and transit would improve traffic flow in the city core. One candidate made it his platform, won election, completed the project, and was elected President of South Korea. The project did improve traffic. But its real success lies in restoring the soul of Seoul. The Cheonggyecheon River had a glorious past in the city's history and its restoration has sparked an urban renaissance.

BUILDING PRECEDENTS – PRESENTED

Jubilee Church, Rome

Saint Francois de Molitor Church, Paris

Temple Beth Shalom, Elkins Park, Pennsylvania

Brasilia Cathedral, Brasilia

BUILDING PRECEDENTS – NOT PRESENTED

Bagsværd Church, Copenhagen

Church of Light, Ibaraki, Japan

Church on the Water, Tomanu, Japan

Oakland Cathedral, Oakland

Unity Temple, Oak Park, Illinois

USAF Academy Cadet Chapel, Colorado

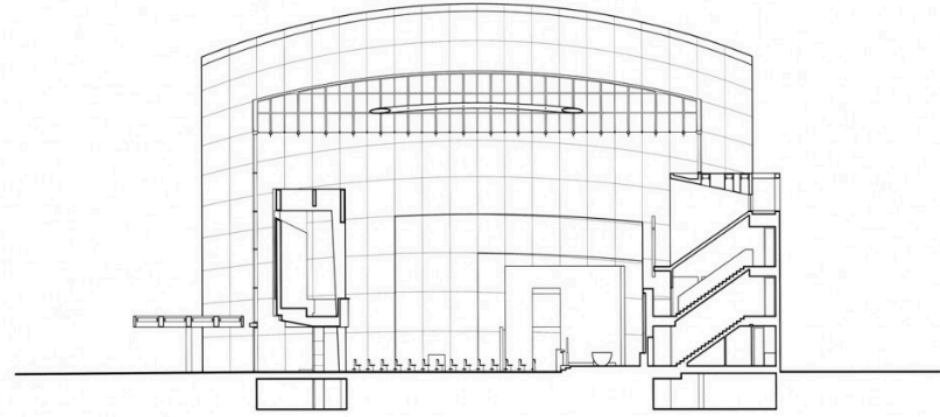
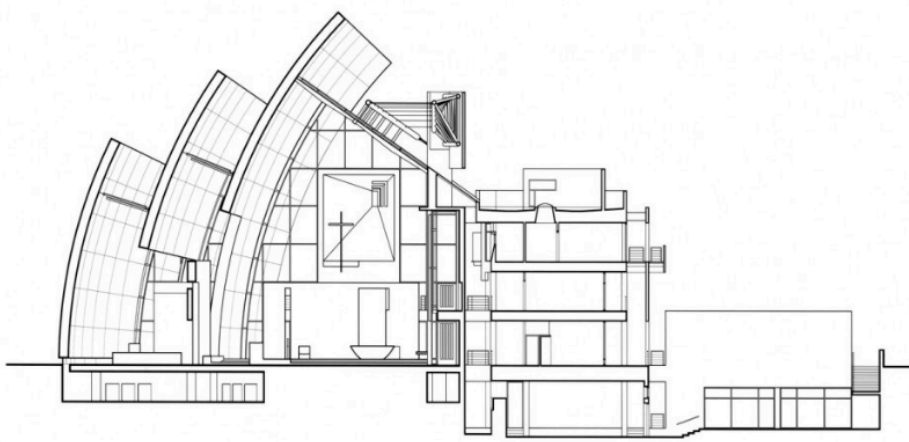
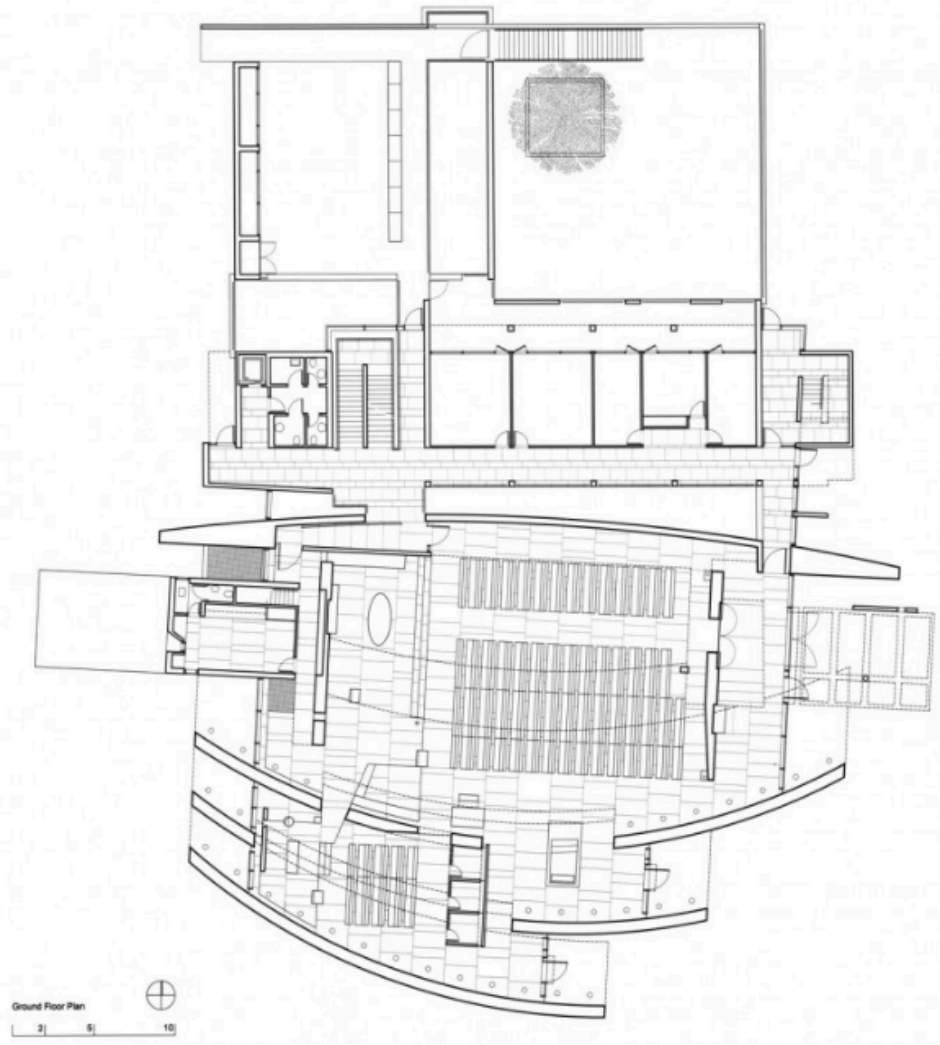
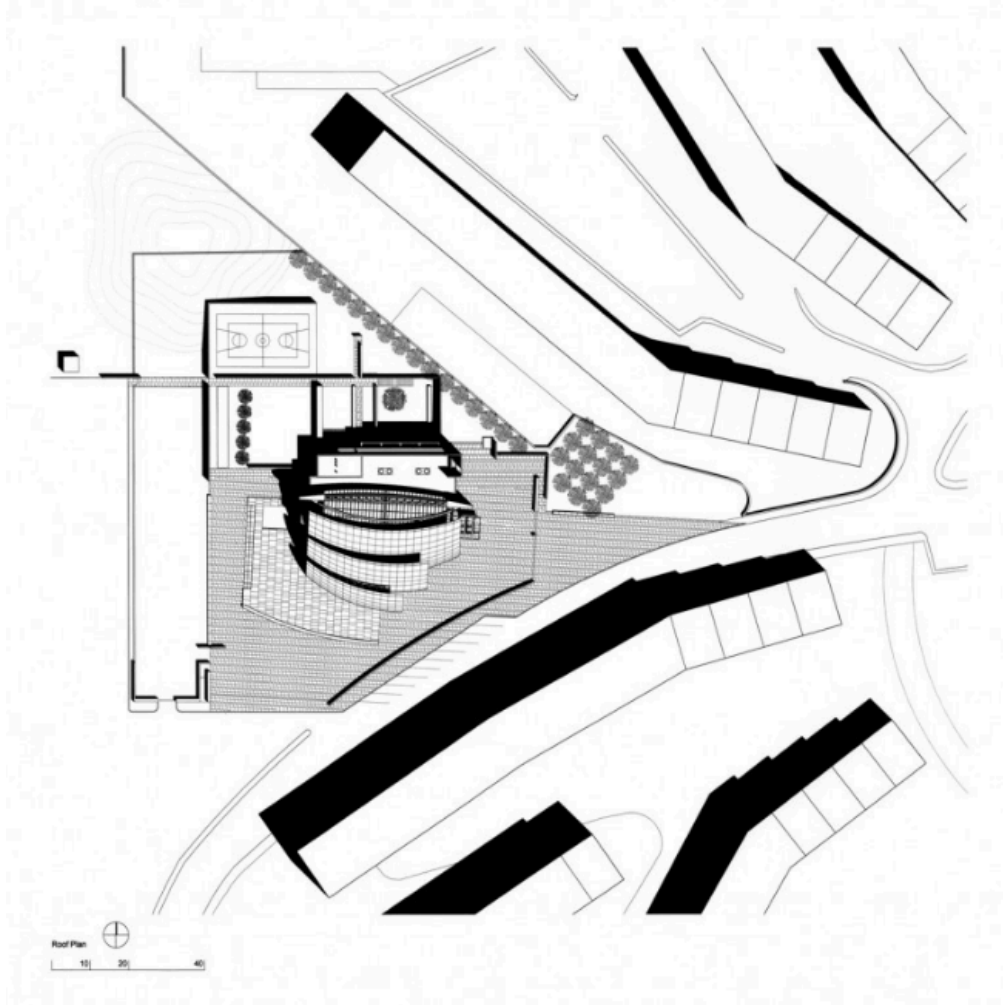
USAF Academy Center for Character and Leadership Development, Colorado

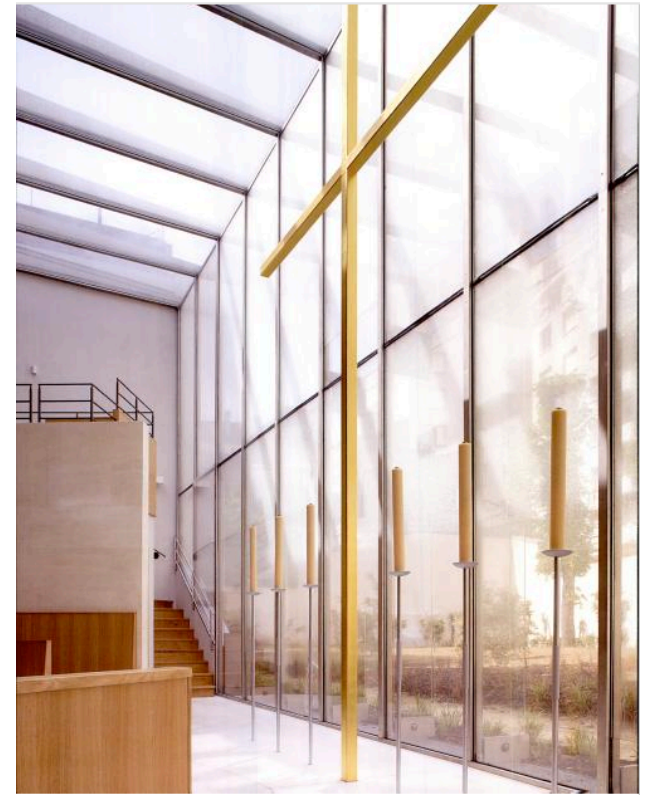
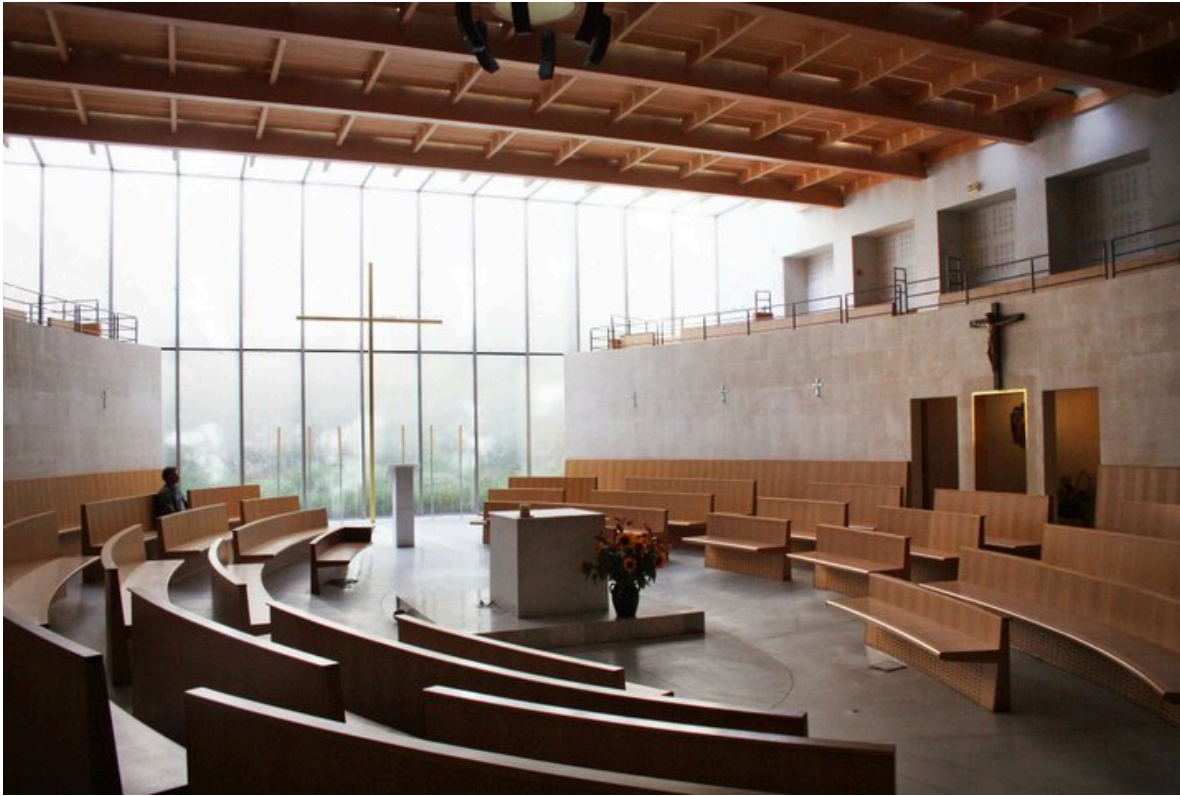
Water Temple, Hompukuji, Awaji, Japan



JUBILEE CHURCH, Rome, Richard Meier, 1993-2006

A small parish church in a neighborhood of apartment buildings, yet sited with room to be an icon of community gathering. Superb daylighting from above combined with large, white surfaces creates a light-filled ambience day and night. At night interior lighting beckons through the glazing making the church a lantern in the community. Three freestanding, concentric concrete sphere fragments make a unique and delightful form.

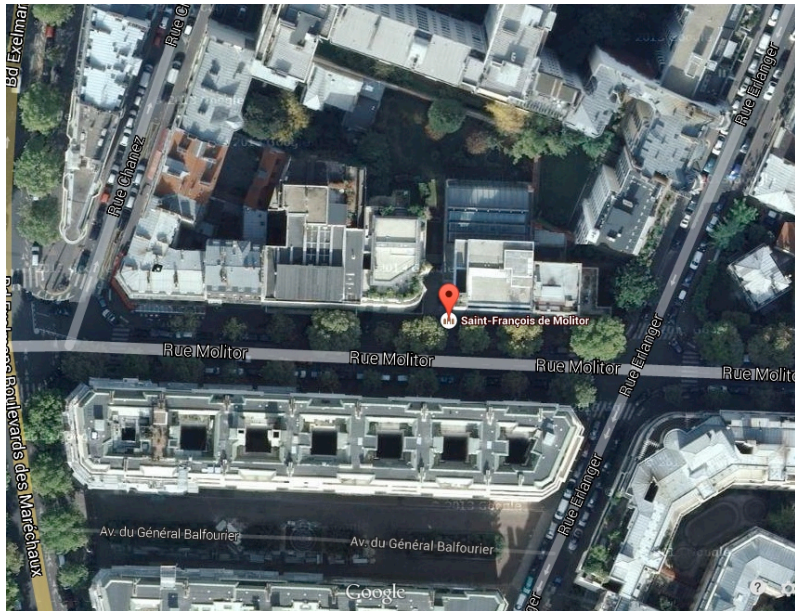
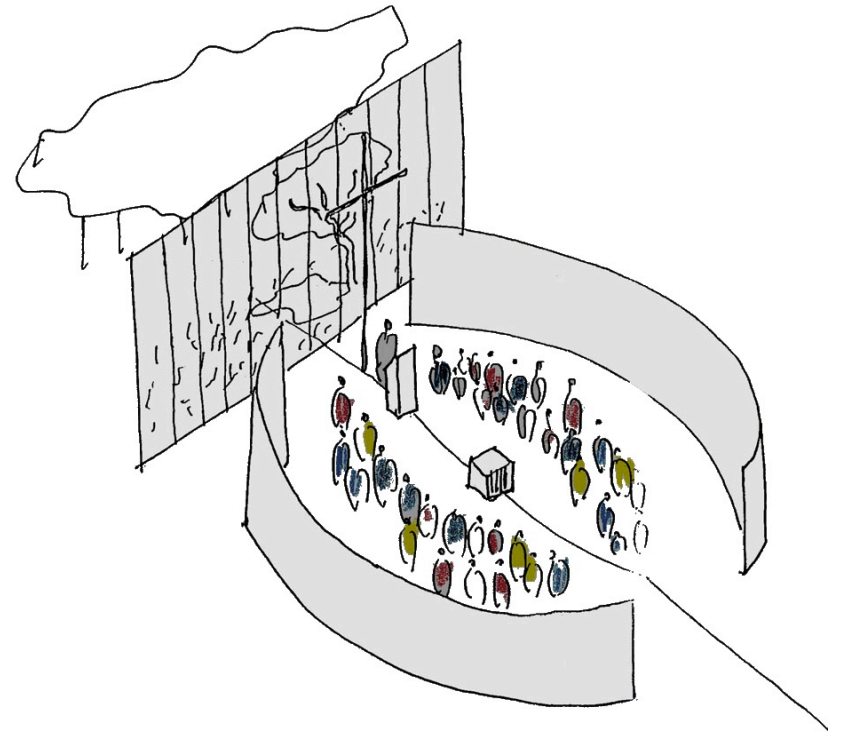
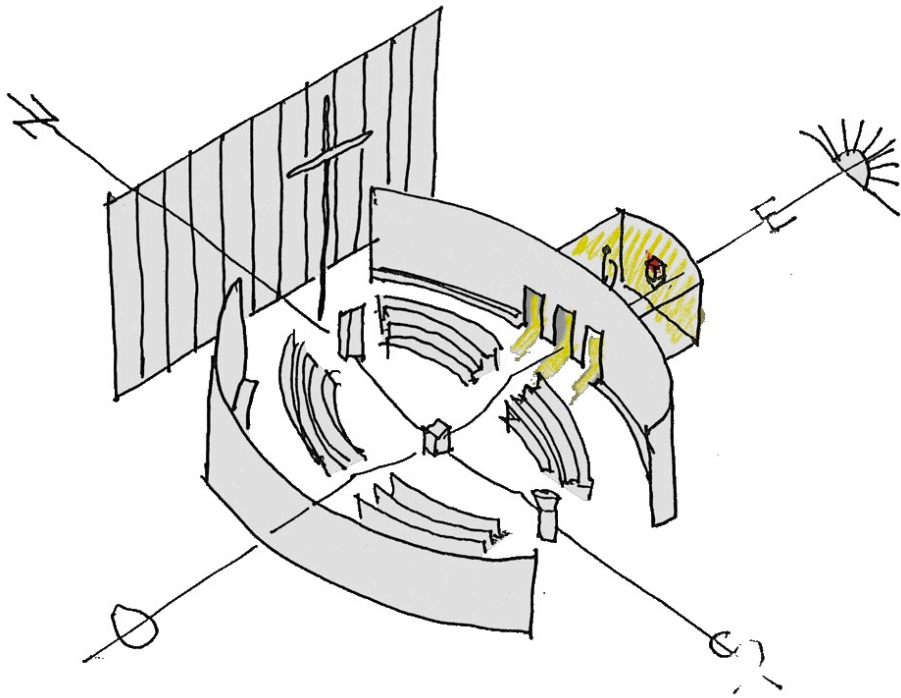




SAINT FRANÇOIS DE MOLITOR CHURCH, Paris, AREP, 2005

A small parish church tucked into a dense, mixed-used residential neighborhood. Respects established building heights at street. Sanctuary is placed on an axis between garden and city, and strongly day lit from the garden and from above. Congregants face each other across the axis from entry to garden, with the communion altar at center. Glazing is fritted in a vertical gradient to diffuse light and provide privacy from upper levels of neighboring apartment buildings.



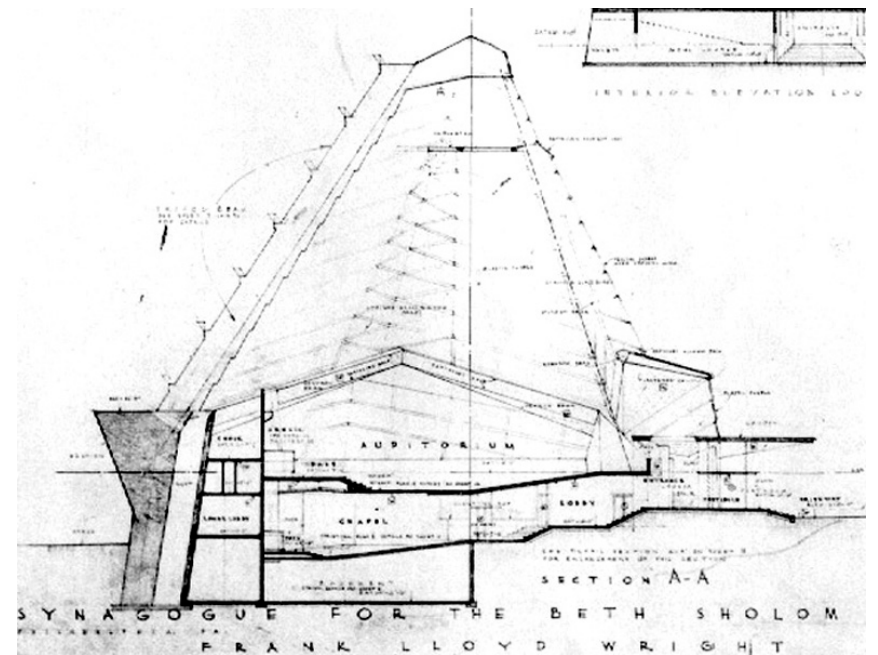
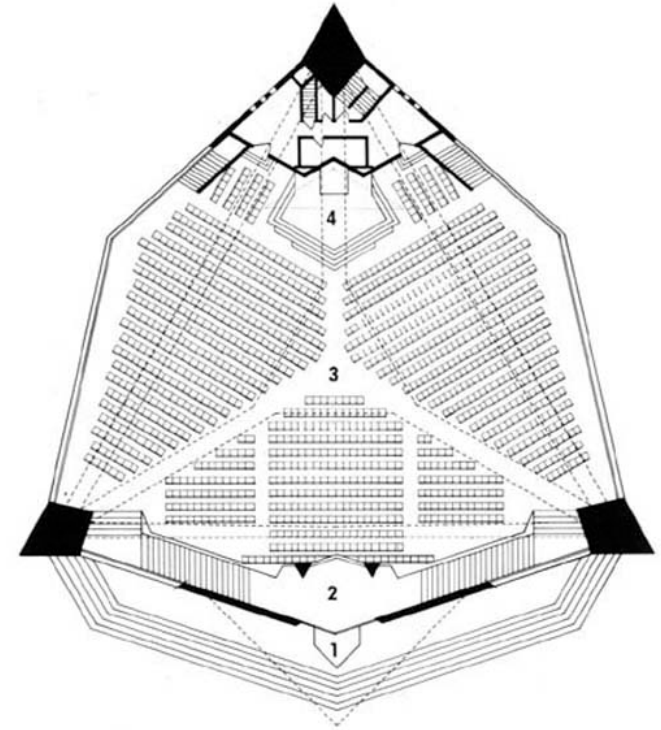
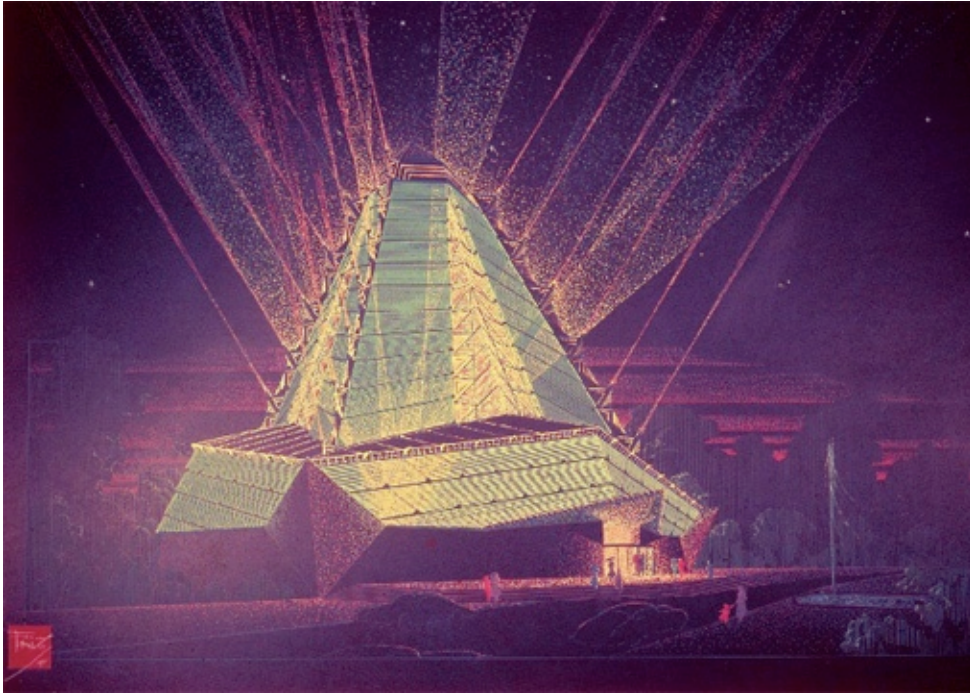




TEMPLE BETH SHALOM, Elkins Park, Pennsylvania,
Frank Lloyd Wright, 1953-1959

The building embodies a rich, layered depth of religious symbology. Wright's primary metaphor is Mount Sinai, where Israel watched Moses enter the glory of God. This can be seen in the building's form and in multiple sketches showing light (glory) emanating from the building. Wright achieved this through a two-layer, translucent corrugated fiberglass roof and some exterior lighting. The roof provides strong daylighting to the sanctuary. In plan the building and roof form are only a slight modification of the Star of David. The roof form provides a strong *axis mundi* drawing the eye skyward. The sanctuary utilizes almost the complete main level, with support spaces tucked below on a split-level site. Wright used the triangle symbol prolifically throughout the design and ornament.







BRASILIA CATHEDRAL, Brasilia, Oscar Niemeyer, 1959-1970

This modernist utopian cathedral embodies several core ideas in its simple composition. The building and sanctuary are circular in plan and sunk into the ground. The sunken plan allows the bulk of the building to be hidden from view while requiring that congregants descend into the earth (grave) and through the waters of baptism (death) to humbly enter a magnificent, light filled sanctuary with such a strong *axis mundi* that there are angels ascending and descending on Jacob's Ladder over the congregation. In this automobile utopia vehicles arrive and park on a long submersing circle drive. Pedestrians arriving at the ground plane are encouraged and exhorted by statues of the Four Evangelists.





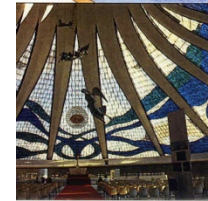
de Janeiro into the country's empty end of his first term. This was achieved by tens of thousands of workers purpose-built city from an area of scrubland public buildings which include the work of monumental sculpture. Kubitschek's ambition to develop to create a monument both to modern the country's economic potential.

JK Memorial
Inaugurated in 1981, this monument was built to honour the former Brazilian President Juscelino Kubitschek, whose tomb resides here.



View of Brasília
From the air or from one of the many view points around the city, the true aeroplane or bird shape of this unique, symmetrical city becomes clear.

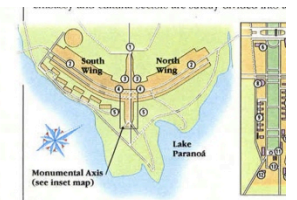
is an unusually
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solves the Host.



BRASILIA CATHEDRAL
The striking, yet simplistic form of the cathedral, provides Brasília with an instant and recognizable identity. An illusion of space is created in the interior by the circular floor being set

In Brasília celebrates the anniversary of his dream.

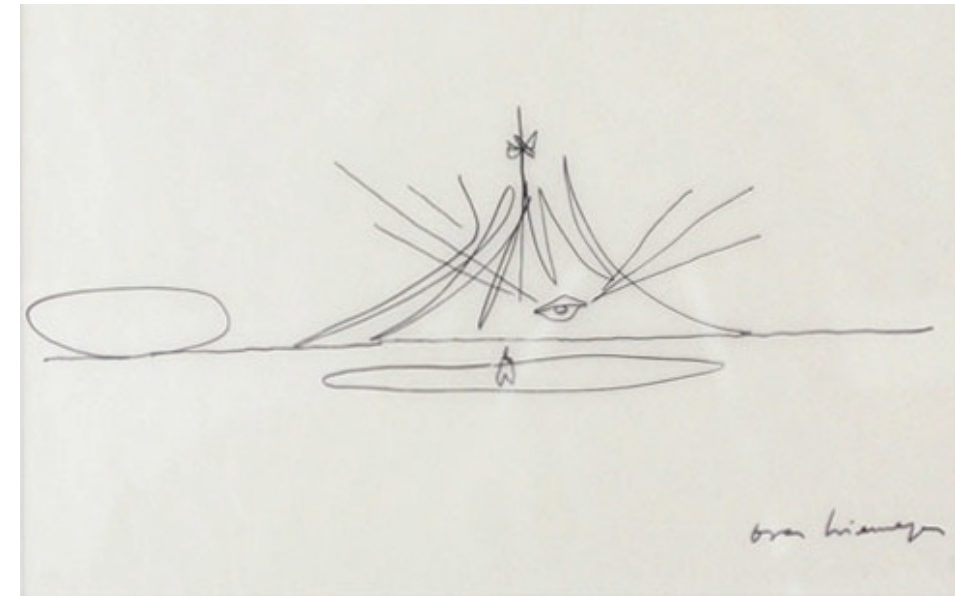
The façade was painted white in 1989 and the windows replaced with some coloured panes designed by Antonia Marianne Peretti.



KEY
① JK Memorial
② Residential Axis
③ Hotel sectors
④ Commercial sectors
⑤ Embassy sectors
⑥ Cultural sectors
⑦ National Theatre
⑧ Brasilia Cathedral
⑨ Ministry buildings
⑩ Palace of Justice
⑪ Congress Complex
⑫ Supreme Court
⑬ Plaza of the Three Powers
⑭ Planalto Palace

Water surrounds the cathedral reflecting the almost always blue sky in contrast to the cathedral.

Palace of Justice
The low-rise, unimposing Palace of Justice, features water cascading between its delicate white arches. Near



PREVIOUS PLANNING & INVESTMENTS

1973 Lower Willamette River Management Plan – In 1972 the State received applications to fill 53 acres of the river and cover another 35 acres downstream of the Sellwood Bridge to create land for industrial and other uses. Since 1853 approximately 14% of the study area river had been filled. In the face of accelerating fill requests the State Land Board chartered this study to look at the lower river and Portland Harbor as a system and involve all stakeholders. Among other items, the plan identified beneficial uses by zone, including recreation and preservation. The central eastside waterfront (freeway footprint) was designated for recreational use.

1987 Willamette Greenway Plan (Part of 1988 Central City Plan) – In response to a Statewide Planning Goal, this plan was developed to “protect, conserve, maintain, and enhance the scenic, natural, historical, economic, and recreational qualities of lands along the Willamette River.” The objectives include:

- Restore the river and its banks as a central axis and focus for the City and its neighborhoods and residents...that maximize public use and appreciation of this diverse urban waterway.
- To increase public access to and along the river...a continuous recreational trail extending the full length on both sides.
- To provide an attractive quality environment along the Willamette River.
- To reserve land within the Greenway for river-dependent and river-related recreational uses.

The plan identified the central eastside freeway as transitional and focused on encouraging “natural, recreational, housing, retail, and office land use activities.” The plan included design guidelines for the greenway.

1991-2011 Portland Big Pipe Project – A 20-year investment of \$1.4 billion Portland ratepayer funds has achieved 95-99% reduction in combined sewer overflows into the Willamette River. 2011 was the first summer the bacteria levels in the water tested safe for recreational use, sparking a big river float event each summer since to increase awareness of the river’s newly achieved health.

1994-2001 Eastbank Riverfront Park Master Plan – The Hargreaves Associates plan was commissioned by the city to implement the Greenway Plan and improve public access to the riverfront. The plan was made in a manner that accommodated the waterfront freeway, while allowing for its eventual removal. The trail portion and a small dock were implemented between 1998-2001.

1998 Eastbank 2040 Masterplan – Produced by two post-professional graduate architecture students at the University of Oregon’s Portland campus. A thorough study and proposal based on the removal of the eastbank waterfront freeway. Reclaims 55 acres.

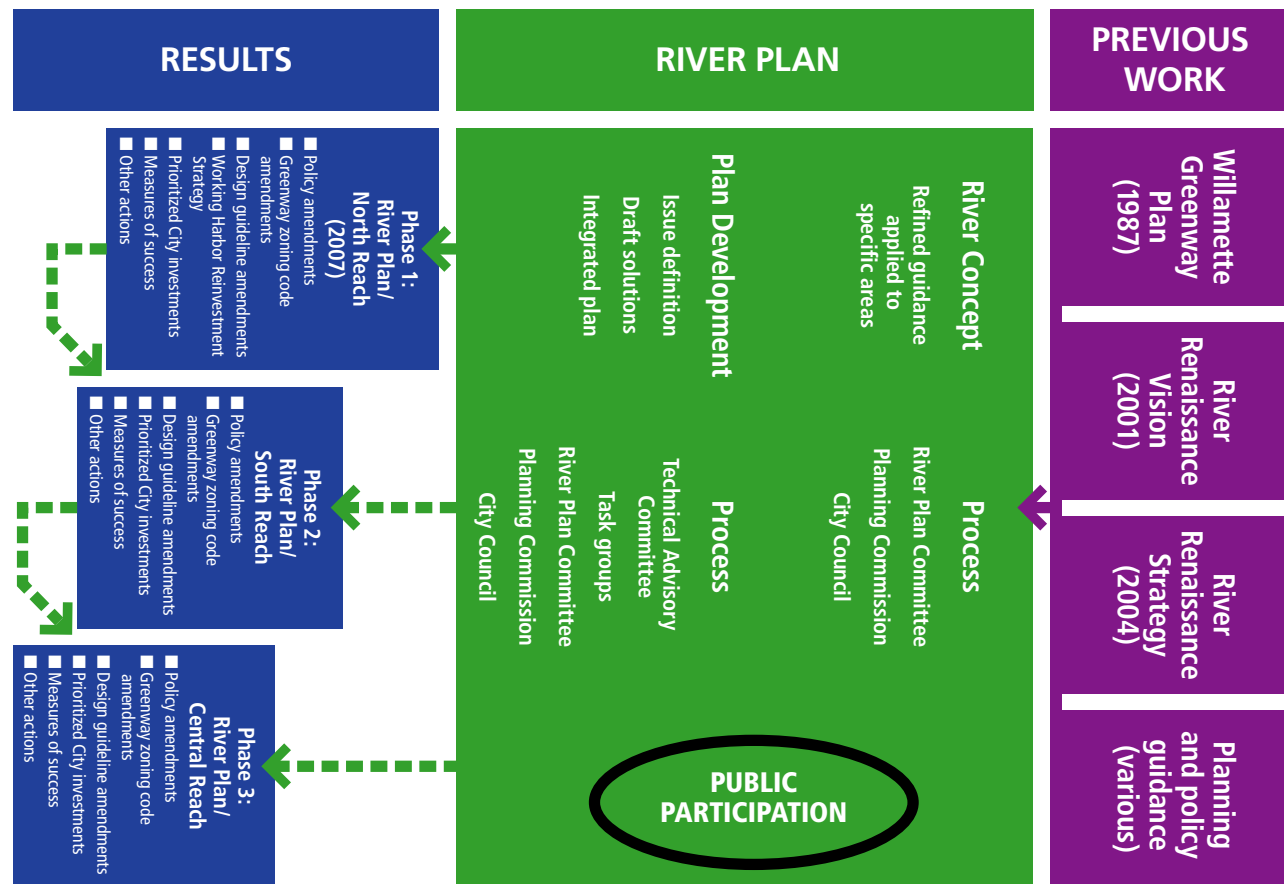
2001 River Renaissance Vision – a powerful 50-year visioning document created with public input. The citizens envision the Willamette River as Portland’s “front yard,” with robust water access and water recreation, including reconfiguring the I-5 freeway to bring together both sides of the Central City and to revitalize the central eastside waterfront.

2004 River Renaissance Strategy – a 120-page strategy execution plan, which included two action items to continue to study the reconfiguration of the I-5 central eastside waterfront freeway.

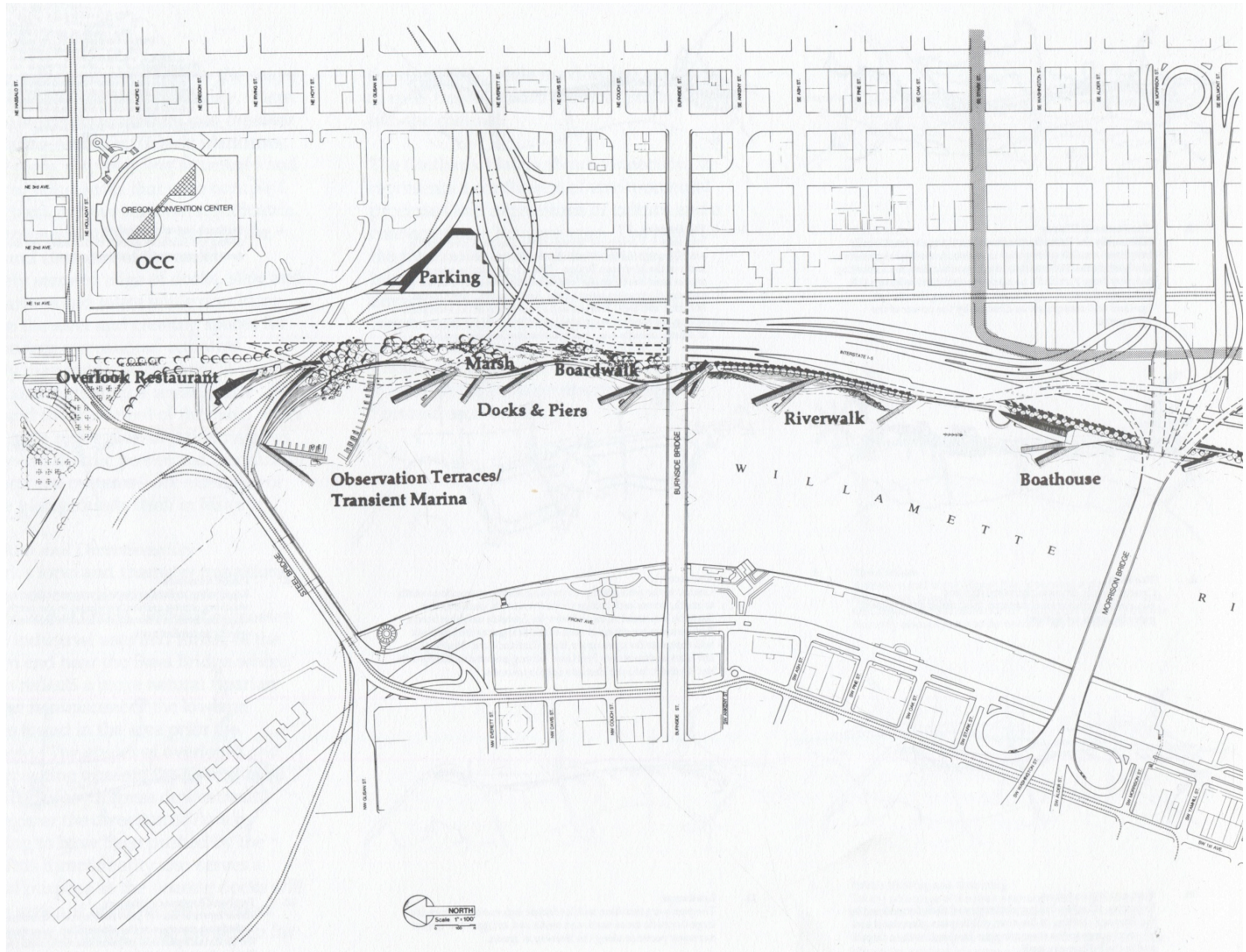
2007 to Present Central City Plan 2035 – The process is ongoing, and divided into three segments (North reach, South reach, Central reach), the latter that just began in 2013. Thus far, the process seems to be ignoring the imperative to reconfigure the central eastside waterfront freeway.

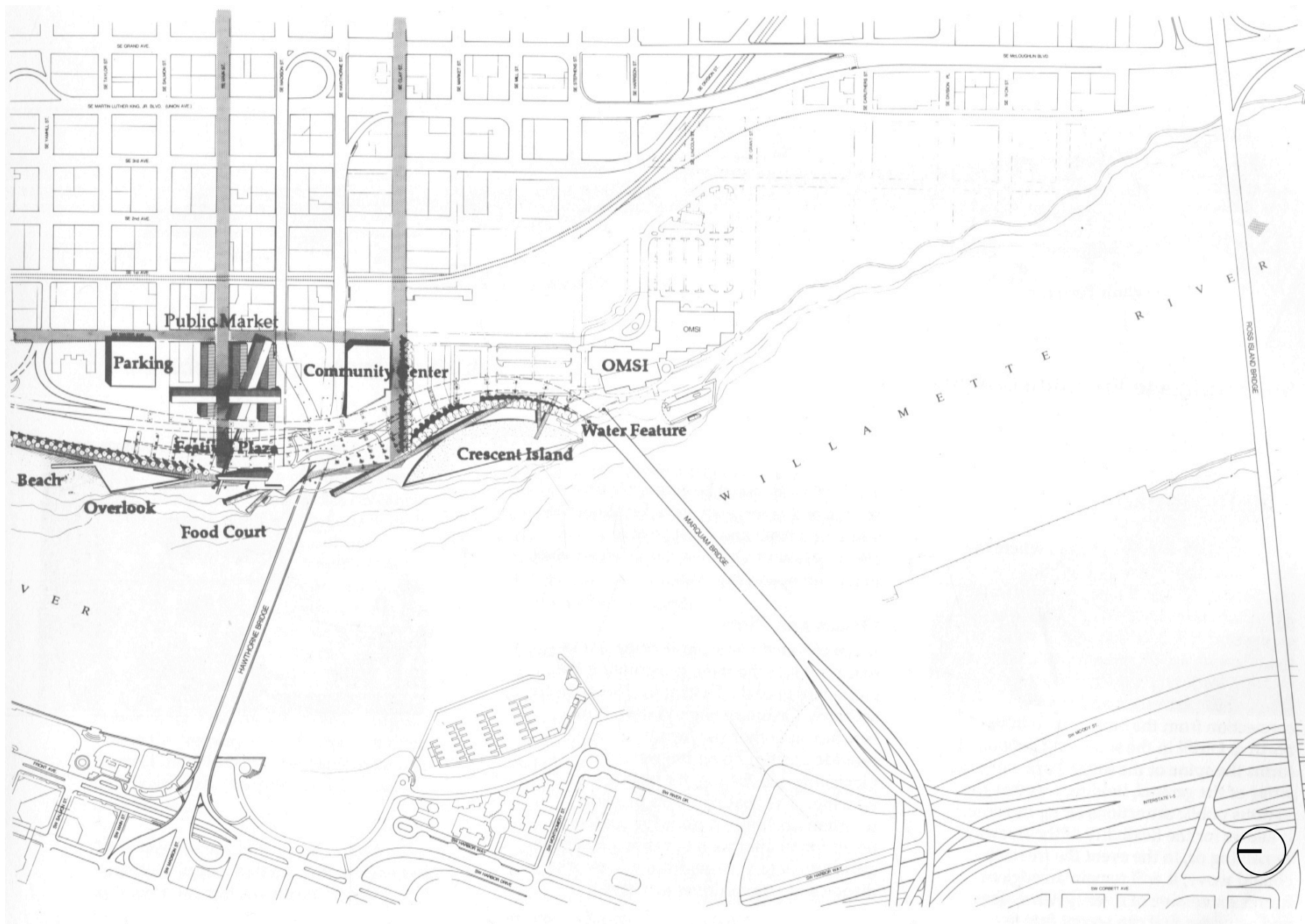
2012 Eastside Streetcar Line – The new line crosses the Broadway Bridge and loops down Martin Luther King and Grand Boulevards to the Oregon Museum of Science and Industry (OMSI).

2015 Portland-Milwaukie Light Rail Bridge – The new cable-stayed bridge is under construction and will connect rail, bus, bicycle, and pedestrian traffic from the South Waterfront to OMSI.



1993 EASTBANK RIVERFRONT PARK MASTER PLAN BY HARGREAVES ASSOCIATES

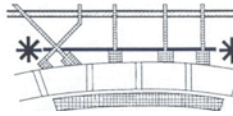
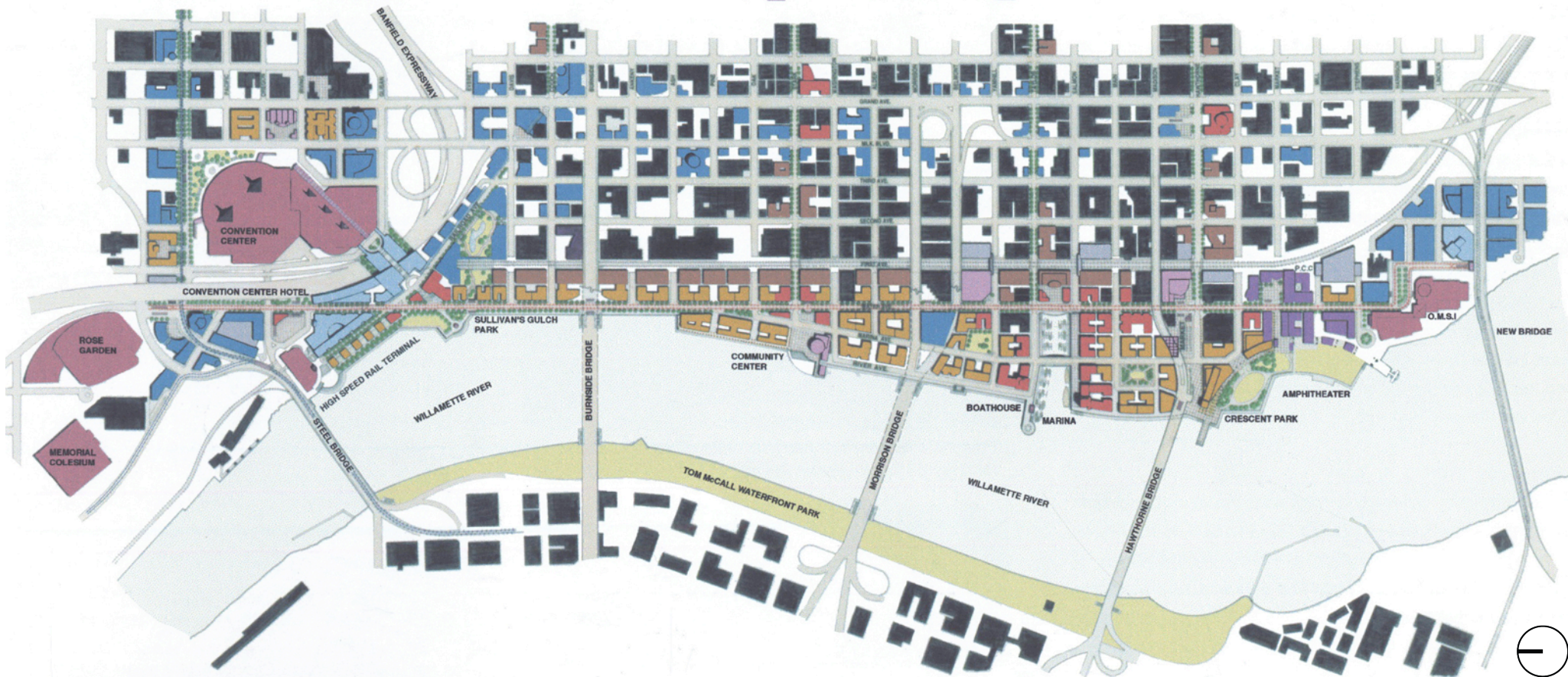




PROPOSED EAST BANK 2040 PLAN

LEGEND

MIXED USE HOUSING/RETAIL	PARKING FACILITY	EXISTING BUILDING
COMMERCIAL OFFICE/RETAIL	LIVE/ WORK	LIGHT RAIL LINE
HOTEL	HIGH DENSITY HOUSING	FREIGHT/ HIGH SPEED RAIL
REGIONAL ATTRACTOR	GREENSPACE/PARK	STREETCAR LINE
NEIGHBORHOOD ATTRACTOR	INSTITUTIONAL	



EASTBANK 2040 MASTERPLAN BY PHILLIP GOFF & JOSEPH KARMAN (1998)

The plan is well researched and presents a strong case for developing the central eastbank of the Willamette River. It provides visualization of what could be if the freeway were removed from its at- and above-grade condition. A model of this master plan was placed in City Hall by then-Commissioner Charlie Hales (now Mayor). The plan reclaims 55 acres of land for development from the I-5 footprint and vastly improves the development potential of an additional 50 acres. A similar footprint of land on the west side of the river was assessed as 137 times more valuable (\$25.5 million vs. \$3.5 billion), potentially generating incredible property tax revenues.

The plan leans toward intensive development around civic amenities over riparian habitat restoration. It includes 6,000 residential units, a community center and plaza, a 3+ acre marina and boathouse, a large crescent park (from the Hargreaves park master plan), an expansion of the Portland Community College (PCC) campus, a expansion to the Oregon Convention Center (OCC) with hotel, a high speed rail station, a daylighting of the spring fed Sullivan's Gulch Creek into a riparian wetland park, a public market, a grocery store, a theater, and a church. It envisions Water Ave as a north-south commercial retail street with streetcar (although this has been overcome by the streetcar loop that opened in 2012 on the Grand/Martin Luther King Jr. Boulevards) crossed by five pedestrian friendly streets connecting the east side neighborhoods to the river front (Holladay, Couch, Stark, Taylor, and Hawthorne).

The plan includes a long-proposed transit bridge that is now under construction and scheduled to open in 2015. It connects the South Waterfront district to OMSI and will support streetcar, bus, pedestrian, bicycle, and the Milwaukie MAX line.

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