

### KNIGHT CANCER RESEARCH BUILDING LAND USE REVIEW DRAWINGS LU 15-279775 DZM AD

MARCH 23, 2016

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#### PROJECT INFORMATION

ii OHSU | SRG | McCARTHY/ANDERSEN

### **PROJECT TEAM**

OWNER	OHSU Design & Construction Mail Code: CSB210 2131 SW Sam Jackson Park Rd. Portland, OR 97239-3098 (503) 418-0723	LIGHTING	Luma 522 SW 5th Avenue, Suite 1500 Portland, OR 97204 (503) 226-2930
ARCHITECT	SRG Partnership, Inc. 621 SW Morrison, Suite 200 Portland, OR 97205 (503) 222-1917	CIVIL	KPFF 111 SW 5th Avenue, Suite 2500 Portland, OR 97204 (503) 542-3860
CONSTRUCTION	McCarthy/Andersen Joint Venture 6712 N Cutter Circle Portland, OR 97217 (503)-283-6712	MEPT	PAE 522 SW 5th Avenue, Suite 1500 Portland, OR 97204 (503) 226-2921
LANDSCAPE	Mayer/Reed 319 SW Washington Street, Suite 820 Portland, OR 97204 (503) 223-5953	STRUCTURAL	Catena Consulting Engineers 1111 NE Flanders Street, Suite 206 Portland, OR 97232 (503) 467-4980

LABORATORY	Jacobs Consultancy
PLANNING	420 Stevens Avenue, Suite 150
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	(858) 847-6214

ENERGY MODELING INTEGRAL GROUP 427 13th Street Oakland, CA 94612 (510) 663-2070

COMMISSIONING	HEERY INTERNATIONAL
	9600 SW Barnes Road
	Suite 320
	Portland OR 97225

WORKPLACE STRATEGY

**B+H ARCHITECTS** 225 Terry Avenue N, Suite 101 Seattle, WA 98109

"We want to cure more people. We want to end cancer as we know it. And we won't give up until we've done that."

> Brian Druker, M.D., Director, OHSU Knight Cancer Institute



DR. BRIAN DRUKER



**6 FLOORS** 

24,400 SF/FL

## TEAM SCIENCE

The Knight Cancer Research Building will be the hub of the Knight Cancer Institute. In addition to state of the art research space, it will provide places for events as well as social space for researchers across the Institute to connect and share ideas. The project will bring a high level of engagement, commitment and awareness to the goal of curing cancer.

A primary strategy in this endeavor is the creation of a culture of collaboration, where scientists use a team approach to research. In order to provide the physical environment necessary to support this team approach, the design for the building implements several organizational and architectural strategies to foster collaboration.

#### **NEIGHBORHOODS**

The design of 'lab neighborhoods' creates relationships between offices and labs that is innovative and unique to this building and promotes interaction between team members.

#### WIDE FLOORS - LOW BUILDING

The wide floor plates, minimizing vertical circulation, creates a work environment where more scientists are in closer proximity to one another.

#### **HUBS & MEETING SPACES**

A series of collaboration hubs and smaller diverse meeting and contemplative rooms have been deployed throughout the building to promote interaction between scientists working in different neighborhoods and to further promote the crosspollination of ideas.



### **4 FLOORS** 42,000 SF/FL

(Image from DAR #1, May 21, 2015)

"Create a dynamic environment that fuels transformative cancer research by driving innovation and discovery."

- Mission Statement









## BUILDING USERS

Cancer research is evolving. Knight physicians and scientists advance our understanding of the underlying mechanisms of this disease and advance discoveries to improve detection, diagnosis, treatment and prevention of cancer.

### EXPERIMENTALISTS

Experimentalists are those researchers who use bench space for experimentation and research. This type of experimentation requires wet supply and piped gas services as well as increased air changes and/or cooling in the research space.

### COMPUTATIONALISTS

Computationalists are those researchers whose primary work is computational, or computer based. Computational research is performed at workstations, conference rooms, and alternative work sites. Requirements are not significantly different from typical office space.

#### **USER IMPACT**

At KCRB one common goal or set of goals will unite research teams. The focus will be neither on grants nor individual publications, but rather on collaboration and sharing of knowledge to achieve collective success.

The design intent for the building is to reinforce the notion of collaboration by creating opportunities for researchers to interact, socialize and work together in a highly efficient and inspired environment.





STACKING DIAGRAM

## MASSING

The base building massing is a result of zoning height restrictions and the desire for a lower stair building that promotes collaboration and connectivity.

The mission of the scientists within the building is to discover new and innovative ways to treat cancer. To emphasize the importance of this mission, the research laboratory is articulated and celebrated on the building's exterior. The 'research block' is emphasized through the use of lighter tones, larger windows, and composite metal panels - allowing it to stand out from the darker, quieter body of the building.

The ground floor façade recesses back on three sides to further emphasize the volume above, but also to better connect the public floors to the site and encourage visitors to circulate adjacent to the building and enter at one of the adjoining entries.



## **BUILDING ELEMENTS**

other building elements.

(1) Below-grade lab support has specific control requirements and requires direct access to service areas and the loading dock.

(2) The recessed ground floor provides a varied urban form, helps reduce the scale of the building and provides an opportunity for seating areas along the sidewalk.

Offices

(3) Private office are clustered on the north with shared access to daylight and views.



(4) The 'research block' is expressed as a volume that sits proud of

(5) For programmatic and functional reasons, the mechanical penthouse is centered over the lab block. The 2-level Admin Suite is located to the west and has views to OHSU's Marquam Hill Campus. The Staff Lounge (Hub) and roof terrace are located to the east and have views of the OHSU Commons, river and mountains.

(6) An articulated frame further highlights the 'research block'.

# SITE & CONTEXT



#### PROJECT LOCATION

The Knight Cancer Research Building will sit at the intersection of Moody Avenue and Meade Street, just north of the existing Skourtes Tower and CLSB. The building will be 314,000 gross square feet total on 7 above-grade levels and 2 below-grade parking/service levels. The building will be primarily comprised of research laboratory and office uses.

At the heart of the growing OHSU Schnitzer Campus, KCRB will face the future OHSU Commons to the east, giving this building a distinct urban presence and an opportunity for views and connection to the Commons, the Greenway, the Willamette River and views beyond.

SITE LOCATION



SITE LOCATION

SITE AND CONTEXTKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | XV

## SITE CONTEXT









#### ZONING

The above grade portion of KCRB sits within a CXd zone, however a portion of the below-grade lab support and the Pedestrian Promenade occur within the CXdg zone.

Despite having a portion of the site within a Greenway Overlay zone, no portion of this development is within the South Waterfront Greenway Area as defined by the Portland Zoning Code, Figure 510-2.

### SITE ACCESS

Main building entries are located along the primary pedestrian access routes along SW Moody Avenue and the Pedestrian Promenade. A secondary building entrance is located mid-block along SW Meade Street.

Parking and service vehicle access is restricted along Moody Avenue and the Pedestrian Promenade, leaving Meade Street as the primary vehicular access for the site. Bike parking, showers and locker facilities will be accessed via the Meade Street mid-block entry.

This site has convenient access to the Portland Street Car and Trimet Buses via stops located just south of the Moody Avenue - Meade Street intersection. The building's west entry and landscape elements have been inflected slightly to the southwest to acknowledge the importance of this corner as a gateway and the importance of the pedestrian traffic arriving from the Streetcar and, likewise, from the lightrail station south of CLSB.



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## SCHNITZER CAMPUS PLAN

Much of OHSU's future growth, particularly academic and outpatient facilities, will occur on approximately 26 acres that the University owns in Portland's South Waterfront District. The Schnitzer Campus Strategic Framework Plan provides a horizontal framework for the placement of streets, parking, utilities, open space, pedestrian connections, and future building sites. OHSU envisions a campus of approximately two million square feet of gross building area at full build-out.

(Schnitzer Campus & OHSU Commons, www.ohsu.edu)





PROPOSED CAMPUS PLAN

SITE AND CONTEXTKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | XXI



## FULL-BLOCK BUILDOUT

Due to the size and timing of the KCRB project, the owner has dedicated a half-block within the Schnitzer Campus for this project. Careful consideration is being given to the future expansion of this block.

The future expansion is estimated to take place in five to ten years. In the interim the north facade will be exposed to view. This has been taken into consideration in the massing, articulation and material selection for the north side of the building.

The main entries at KCRB are located towards the north side of the site to provide an east-west mid-block circulation spine through the entire building. This is intended to deminish the scale of the super-block into one that is more pedestrian friendly. The future expansion's ground floor will link into this circulation and the ground floor will act as one building. It is anticipated that KCRB's 18 foot wide courtyard will be expanded in the future phase.

The parking garage has been designed in anticipation of expansion. The future half-block will include a ramp to connect the two levels of parking. This will allow the current parking access on Meade Street to be the entry and exit in the future for the full block, eliminating the impact to future Arthur Street.

FUTURE BUILDOUT

#### **FUTURE BUILDOUT & CONNECTIVITY**



### **SEE APPENDIX I - PARKING & LOADING DOCK CONFIGURATION** FOR MORE DETAIL

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# LANDSCAPE

KCRB LU 15-279775 DZM AD MARCH 23, 2016

## LANDSCAPE /GROUND FLOOR

The landscape design continues the district vocabulary as implemented on the existing property to the south. Extending the campus promenade and continuing the use of warm, fine grain materials throughout the site helps to provide and establish elements of distinction and continuity throughout the site and the developing OSHU Schnitzer Campus.



SITE PLAN LANDSCAPE KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.1





A - ELEVATION - SW MOODY AVE



B - SECTION - SW MOODY AVE



STREET LIGHTS - SWF STANDARD



C - ELEVATION - PROMENADE



D - SECTION - PROMENADE



**E - SECTION - PROMENADE** 

ENLARGED SITE PLAN- PROMENADE LANDSCAPE KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.3



PLAN - SW MEADE ST - WEST



PLAN - SW MEADE ST - EAST

1	PROPERTY LINE	1	C.I
2	BUILDING OVERHANG	12	4"
3	PRECAST CONCRETE PLINTH WITH WOOD SEATING SURFACE AND INTEGRADED LED LIGHTS	₿	SV 4″ PF
4	12″ X 24″ PRECAST SAND SET PAVERS		VE ST
5	SS BIKE RACKS - SWF STANDARD	<b>E</b>	л ст
6	WEATHERING STEEL WALL		51
7	CANTILEVER IPE BENCH		
8	FREE STANDING BENCH	•	
9	REMOVABLE BOLLARDS		
10	4" X 4" SAND SET PAVERS SWE STANDARD	19 20	EX CA

.P. SIDEWALK - SWF STANDARD

' X 8" SAND SET PAVERS AT ROW -WF STANDARD - VEHICLE RATED

' X 8" SAND SET PAVERS AT ROMENADE - SWF STANDARD -EHICLE RATED

TORMWATER PLANTER

REET LIGHT - SWF STANDARD

XISTING SIDEWALK

(ISTING STORMWATER PLANTER

XISTING STREET LIGHT

KISTING AT GRADE VAULTS

AFE RAIL



F - SECTION - SW MEADE ST.

G - SECTION - SW MEADE ST.



H - ELEVATION - SW MEADE ST.

SITE SECTIONS - MEADE STLANDSCAPEKCRB LU 15-279775 DZM AD MARCH 23, 2016 |EXHIBIT C.5

#### PRUNUS X YEDOENSIS

YOSHINO CHERRY



### **PAXISTIMA MYRSINITES**

OREGON BOX LEAF



#### **CORNUS SERICEA 'KELSEYI'**

KELSEY'S REDTWIG DOGWOOD



#### TRACHELOSPERMUM ASIATICUM

ASIAN STAR JASMINE



**IRIS SIBIRICA** 

SIBERIAN IRIS



#### VACCINIUM OVATUM

EVERGREEN HUCKLEBERRY

### POLYSTICHUM MUNITUM

WESTERN SWORD FERN

LIRIOPE MUSCARI LILY TURF

FEATHER REED GRASS

**ZELKOVA SERRATA** JAPANESE ZELKOVA



LANDSCAPESITE PLANTING PALETTEEXHIBIT C.6I OHSU | SRG | McCARTHY/ANDERSEN







#### CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'



#### WEATHERING STEEL PLANTER WALL



**CAFE RAIL** 



### PROMENADE PAVERS



#### SWF STANDARD BIKE RACK



SITE LIGHTING



12" x 24" PRECAST PAVERS





### **CONCRETE PLINTH**



### SWF STANDARD TRASH RECEPTACLE



SITE MATERIALS AND FURNISHINGSLANDSCAPEKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 |EXHIBIT C.7









4

4:4

4



CAFE RAIL WITH CANTILEVER BENCH



PLANTER WITH SEATWALL

PRECAST CONCRETE PLINTH



SITE MATERIALS PLAN LANDSCAPE

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.9



_	PLANT SCHEDU	JLE					
ę	SYMBOL		BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING	NOTES
	TREES						
	$\overset{\frown}{\otimes}$	AC	ACER CIRCINATUM	VINE MAPLE	7-8' HT. B&B	AS SHOWN	MULTI-STEM, 3 TRUNK, NURSERY GROWN (NO EXCEPTIONS), HAND SELECTED BY LANDSCAPE ARCHITECT
(	At	AR	ACER RUBRUM ARMSTRONG	ARMSTRONG RED MAPLE	3ª CAL, B&B	AS SHOWN	
	Mar ()	Ĵ₿J	BETULA JACQUEMONTI	WHITEBARK HIMALAYAN BIRCH	2 CAL., B&B	AS SHOWN	
Mr		CD	CALOCEDRUS DECURRENS	INCENSE CEDAR	6-7' HT., B&B	AS SHOWN	
my	MMAL .	) <sub>FP</sub>	FRAXINUS PENNSYLVANICA PRAIRIE SPIRE	PRAIRIE SPIRE GREEN ASH	3-1/2" CAL. B&B	AS SHOWN	
×	$\mathbb{X}$	PY	PRUNUS X YEDOENSIS 'AKEBONO'	AKEBONO YOSHINO CHERRY	2-2 1/2 CAL B&B	AS SHOWN	BRANCHING HEIGHT AT 6' FROM BASE
$\searrow$	∞( .`	ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2º CAL., B&B	AS SHOWN	
_	SHRUBS						
	$\oslash$	CEV	CEANOTHUS VELUTINUS	SNOWBRUSH CEANOTHUS	2 GAL. CONT.	36° O.C.	
		COS	CORNUS SERICEA KELSEY	KELSEY'S REDTWIG DOGWOOD	1 GAL. CONT.	24 O.C.	
	$\bigcirc$	PAM	PAXISTIMA MYRSINITES	OREGON BOX LEAF	2 GAL. CONT.	24 O.C.	
	$\bigcirc$	POF	POTENTILLA FRUTICOSA 'PRIMROSE BEAUTY'	SHRUBBY QUINQUEFOIL	2 GAL. CONT.	24' O.C.	
	$\bigcirc$	POM	POLYSTICHUM MUNITUM	WEATERN SWORD FERN	1 GAL. CONT.	24º O.C.	

PERENNIALS/GROUNDCOVERS					ECO-ROOF SHRUBS/PERENNIALS/GROUNDCOVERS							
	ARCU	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL. CONT.	12° O.C.		CEV	CEANOTHUS VELUTINUS	SNOWBUSH CEANOTHUS	2 GAL. CONT.	36 O.C.	
$\odot$	CALA	CALAMAGROSTIS ACUTIFLORA KARL FORESTER	FEATHER REED GRASS	1 GAL CONT.	30° O.C.		COS	CORNUS SERICEA 'KELSEY!	KELSEY'S REDTWIG DOGWOOD	1 GAL. CONT.	24 O.C.	
$\bigcirc$	CEGL	CEANOTHUS GLORIOSUS PT. REYES	PT. REYES CEANOTHUS	1 GAL. CONT.	30° O.C.		NAD	NANDINA DOMESTICA 'BURGUNDY WINE'	BURGUNDY WINE NANDINA	5 GAL. CONT.	30 O.C.	
•	LIRS	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL. CONT.	AS SHOWN		POF	PRIMROSE BEAUTY	SHRUBBY QUINQUEFOIL	2 GAL. CONT.	24° O.C.	
0	LIRM	LIRIOPE MUSCARI	ULY TURF	1 GAL. CONT.	AS SHOWN		CALA	CALAMAGROSTIS ACUTIFLORA	FEATHER REED GRASS	2 GAL. CONT.	30" O.C.	
$\odot$	TRAA	TRACHELOSPERMUM ASIATICUM	STAR JASMINE	1 GAL. CONT.	AS SHOWN		0501	KARL FOERSTER		1.011.001/7		
STORM WATER PLANTERS						CEGL	CEANOTHUS GLORIOSUS	P1. HEYES CEANOTHUS	1 GAL CONT. 'PT. REYES'	30° O.C.		
•	IRIS	IRIS SIBERICA SIBERI	AN IRIS 1 GAL.	CONT. 12 O.C.			MAHN	MAHONIA NERVOSA	LOW OREGON GRAPE	1 GAL. CONT.	15" O.C.	
٢	DESC DESCHAMPSIA CAESPITOSA TUFTED HAIR GRASS 1 GAL CONT. 12 O.C.						ECO-ROOF SEDUM PLANTING MIX- PLUGS @ 8' O.C.					
STOPAMWATER PLANTER MK 41: EVENLY DISTRIBUTED 5050 MIX OF THE FOLLOWING:   IPIG IRIS SIBERICA SIBERIAN IRIS 1 GAL. CONT. 12".O.C.   DESC DESCHAMPSIA CAESPITIOSA TUFTED HAIR GRASS 1 GAL. CONT. 12".O.C.						+ + + + + + + + + + + + + + + + + + +	LEWISI SEDUN SEDUN SEDUN SEDUN SEDUN	A COLUMBIANA I ACRE I DIVERGENS I LANCEOLATUM I OREGANIUM I SPATHULIFOLIUM ' CAPE BLANCI	5% 20% 30% 5% 20% 20%			

## LANDSCAPESITE PLANTING PLANEXHIBIT C.10OHSU | SRG | McCARTHY/ANDERSEN



LANDSCAPE SITE PLANTING PLAN
NOT USEDLANDSCAPEKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | EXHIBIT C.11

# LANDSCAPE / ROOF TERRACE

The 6th Floor Roof Terrace is an extension of the Staff Lounge and social hub. It is situated on the east end of the lower roof to take advantage of views of the OHSU Commons, River and mountains.

The terrace is mostly covered to allow year-round use. It is surrounded by an intensive greenroof of various depths and plant species, and is bordered by reclaimed timber benches.

The terrace extends to the south in order to capture a view of the OHSU Marquam Hill Campus to the west. The southern portion of the terrace transitions from precast pavers to flagstone and is highlighted by a gas fireplace on a stone plinth



LEVEL 6 TERRACE PLANLANDSCAPEKCRB LU 15-279775 DZM AD MARCH 23, 2016EXHIBIT C.12







ENLARGED TERRACE PLAN - FIREPLACE



ENLARGED TERRACE PLAN - BENCHES



I - SECTION - FIREPLACE



J - SECTION BENCHES

ENLARGED LEVEL 6 TERRACE PLANSLANDSCAPEKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | EXHIBIT C.14

#### ACER CIRCINATUM

VINE MAPE



MAHONIA NERVOSA OREGON GRAPE



#### POLYSTICHUM MUNITUM

WESTERN SWORD FERN

### NANDINA DOMESTICA 'BURGUNDY WINE'

BURGUNDY WINE NANDINA



#### **CORNUS SERICEA 'KELSEY'**

KELSEY DOGWOOD



#### SEDUM GREENROOF







#### PRECAST PAVERS

PRECAST



### PLANTER WALLS

WEATHERING STEEL



**RECLAIMED TIMBER SEATING** 



#### **FLAGSTONE PAVING**



### **SCULPTURAL VESSELS**



#### **DECORATIVE STONE**



# LEVEL 6 TERRACE MATERIALS PALETTELANDSCAPEKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | EXHIBIT C.16



0' 5' 10'

LANDSCAPELEVEL 6 TERRACE MATERIALS PLANEXHIBIT C.17I OHSU | SRG | McCARTHY/ANDERSEN

RECLAIMED TIMBER SEATIN WALLS, 18" HT. TYP.

PAVING OVER RAT SLAB

MORTAR SET FLAGSTONE PAVING OVER RAT SLAB

LOOSE SEATING THROUGHOUT INTENSIVE PLANTING, 18" DEPTH, TYP. GAS FIREPLACE SET IN PRE-CAST CONCRETE (OR NATURAL STONE PLINTH

RECLAIMED TIMBER SEAT WALLS, 18" HT. TYP.

VEATHERING STEEL PLA PLANTER WALLS, TYP.

WEATHERING STEEL PLATE

12" x 36" PRE-CAST CONCRETE PAVER SLABS SET ON PEDESTALS (TYP.) INTENSIVE PLANTING, 36" DEPTH AT TREES, TYP.

 INTENSIVE PLANTING, 18" DEPTH TYP, 36" DEPTH AT TREES
RECLAIMED TIMBER SEATING WALLS, 18" HT. TYP.
CANOPY, REF. ARCH.

- 2

INTENSIVE PLANTING, 36' DEPTH, TYP.



1 PLANTING PLAN - LEVEL 6

LANT SCHEDULE						PLANT SCHEDULE						
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING	SYM	IBOL		BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING	
TREES					SHRU	JBS/PERENNIALS/G	GROUND	COVERS				
$(\cdot)$	AC ACER CIRCINATUM	VINE MAPLE	7-8' HT., B&B	AS SHOWN		<b>XXX</b>	CEV	CEANOTHUS VELUTINUS	SNOWBUSH CEANOTHUS	2 GAL. CONT.	35° O.C	
$\sim$							COS	CORNUS SERICEA KELSEYF	KELSEY'S REDTWIG DOGWOOD	1 GAL. CONT.	24° O.	
	KP KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	2" CAL, B&B	AS SHOWN			NAD	NANDINA DOMESTICA 'BURGUNDY WINE'	BURGUNDY WINE NANDINA	5 GAL CONT.	30° O.(	
							POF	POTENTILLA FRUTICOSA PRIMROSE BEAUTY	SHRUBBY QUINQUEFOIL	2 GAL. CONT.	24" 0.	
JOUM PLANTING MIX-	PLUGS @ 8" O.C.	5%					CALA	CALAMAGROSTIS ACUTIFLORA KARL FOERSTER'	FEATHER REED GRASS	2 GAL. CONT.	30° O.C.	
	SEDUM ACRE SEDUM DIVERGENS SEDUM LANCEOLATUM	20% 30% 5%					CEGL	CEANOTHUS GLORIOSUS PT. REYES'	PT. REYES CEANOTHUS	1 GAL. CONT.	30° O.C.	
	SEDUM OREGANIUM SEDUM SPATHULIFOLIUM ' CAPE BLA	20% NCO 20%					MAHN	MAHONIA NERVOSA	LOW OREGON GRAPE	1 GAL CONT.	15° O.C	

LEVEL 6 TERRACE PLANTING PLANLANDSCAPEKCRB | LU 15-279775 DZM AD | MARCH 23, 2016 | EXHIBIT C.18

# BUILDING DESIGN

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016



# FLOOR PLANS

The floor plan organization is an outgrowth of the lab floor programatic requirements. Placing the heavily used lab spaces on the south wall to provide ample daylight means that we are relying on a circulation spine (pink) along the north edge of the lab spaces for access to and between the labs.

This organization is emulated on the ground floor, as well as, on the 6th and 7th floors. This allows the areas within the building to be stitched together vertically via double height spaces, stairs and elevators.

Furthermore, the large programmatic elements have been located to the east and west ends of the building in order to take advantage of views and daylight, and to allow views of the science uses within.



NOTE: PARKING LEVELS NOT SHOWN







CIRCULATION

CONFERENCE/MTG

RETAIL

LAB SUPPORT

SERVICE/SUPPORT





C.28









SERVICE/SUPPORT









BUILDING DESIGN KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.27

# **ELEVATIONS**



EAST ELEVATION











RC	OF
19'-6"	<u>L7</u>
15'	L6
15'	15
15'	L <sup>3</sup> @
15'	L3 0
15'	L2
20'	v
9	L1 📀
-9"	P1 _
10'-0"	P2





# <u>SECTIONS</u>













WEST VIEW



EAST VIEW

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# MOODY AVENUE

The frontage along Moody Avenue is unique in that it encompasses a 25 foot 'special landscape zone' prescribed by the South Waterfront Street Plan. This zone will extend the existing landscape vocabulary established by the CLSB. The design elements are composed to create a highly permeable public plaza, encouraging pedestrian movement to and around the building.

The ground floor building frontage along Moody Avenue is comprised of a double-height main building entry and a leasable tenant space. In addition, the conference center at the upper lobby will be visible from the exterior. These uses will promote an active and dynamic building frontage.









- 1 FLAT COMPOSITE MTL PNL, PT-1
- (2) FLAT COMPOSITE MTL PNL, PT-2
- (3) BOX RIB MTL PNL, PT-1
- (4) BOX RIB MTL PNL, PT-3
- 5 STICK-FRAMED CURTAIN WALL, PT-1
- 6 STICK-FRAMED CURTAIN WALL, PT-2
- (7) UNITIZED CURTAIN WALL, PT-1

- 8 PUNCHED WDW SYS, PT-2
- 9 SPANDREL GLASS
- 10 GUARD RAIL W/ WOOD CAP
- (1) THIN LINE ARCHITECTURAL LOUVER
- 12 MECHANICAL LOUVER
- 13 CONCRETE COLUMN
- (14) SEALED CONCRETE WALL

- (15) CONCRETE WALL W/ WATER REPELLANT COATING, GRAY
- 16 PERFORATED BOX RIB MTL PNL SCREEN
- 17 WOOD SOFFIT W/ WOOD FASCIA
- 18 OVERHEAD COILING DOOR
- (19) OVERHEAD COILING GRILLE
- 20 SLIDING GLASS WALL
- 21 VERTICAL ALUM SUN SHADE, PT-1











2 - SECTION AT ACTIVE USE

4 - PLAN AT ACTIVE USE





# <u>MEADE STREET</u>

Meade Street is designated as an Enhanced Pedestrian Street and is an accessway from the transit-oriented Moody Avenue to the Pedestrian Promenade, the future OHSU Commons, the greenway and the Willamette River.

The building frontage along Meade Street is set-back 8 feet to give the building facade a varied urban form and to help reduce the overall scale of the building. This provides an opportunity for seating areas and pedestrian amenities along the sidewalk.

Leasable space is located at either end of the ground floor along Meade Street. A mid-block entry provides convenient access to and from CLSB and to the bike parking, showers and lockers. Due to parking and service vehicle access restrictions the parking entry and loading dock are located along Meade Street.







- 1 FLAT COMPOSITE MTL PNL, PT-1
- 2 FLAT COMPOSITE MTL PNL, PT-2
- (3) BOX RIB MTL PNL, PT-1
- (4) BOX RIB MTL PNL, PT-3
- 5 STICK-FRAMED CURTAIN WALL, PT-1
- 6 STICK-FRAMED CURTAIN WALL, PT-2
- (7) UNITIZED CURTAIN WALL, PT-1

- 8 PUNCHED WDW SYS, PT-2
- 9 SPANDREL GLASS
- 10 GUARD RAIL W/ WOOD CAP
- (11) THIN LINE ARCHITECTURAL LOUVER
- 12 MECHANICAL LOUVER
- (13) CONCRETE COLUMN
- (14) SEALED CONCRETE WALL

- (15) CONCRETE WALL W/ WATER REPELLANT COATING, GRAY
- 16 PERFORATED BOX RIB MTL PNL SCREEN
- 17 WOOD SOFFIT W/ WOOD FASCIA
- 18 OVERHEAD COILING DOOR
- 19 OVERHEAD COILING DOOR, PERFORATED
- 20 SLIDING GLASS WALL
- 21) VERTICAL ALUM SUN SHADE, PT-1

EXHIBIT C.42 | OHSU | SRG | McCARTHY/ANDERSEN

22) CAST CONCRETE


6 - PLAN AT MID-BLOCK ENTRY





#### **BUILDING DESIGN** EXHIBIT C.44 | OHSU | SRG | McCARTHY/ANDERSEN







1 - SECTION AT LOADING DOCK



0′



2 - SECTION AT RETAIL / CAFE

 $( \Gamma$ 16′ 32′ 8′ **BUILDING DESIGN** KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.45



# <u>PROMENADE</u>

The Pedestrian Promenade has prominence within the Schnitzer Campus as it is consistently at the highest grade elevation - providing opportunities for vistas down streets and views across the future OHSU Commons to the greenway and Willamette River.

The promenade landscape vocabulary will be extended from the existing CLSB. At KCRB a variety of seating areas and raised planters will be located on either side of the promenade.

The ground floor has a leasable space at the SE corner and a secondary main building entrance and seating area. These spaces will face the promenade and will have large operable glass doors which will allow direct access and connectivity to the outdoor plaza and promenade.





- 1 FLAT COMPOSITE MTL PNL, PT-1
- (2) FLAT COMPOSITE MTL PNL, PT-2
- 3 BOX RIB MTL PNL, PT-1
- (4) BOX RIB MTL PNL, PT-3
- 5 STICK-FRAMED CURTAIN WALL, PT-1
- 6 STICK-FRAMED CURTAIN WALL, PT-2
- 7 UNITIZED CURTAIN WALL, PT-1

- 8 PUNCHED WDW SYS, PT-2
- 9 SPANDREL GLASS
- (10) GUARD RAIL W/ WOOD CAP
- (1) THIN LINE ARCHITECTURAL LOUVER
- 12 MECHANICAL LOUVER
- (13) CONCRETE COLUMN
- (14) SEALED CONCRETE WALL
- 15 CONCRETE WALL W/ WATER REPELLANT COATING, GRAY (16) PERFORATED BOX RIB MTL PNL SCREEN 17 WOOD SOFFIT W/ WOOD FASCIA 18 OVERHEAD COILING DOOR (19) OVERHEAD COILING GRILLE 20 SLIDING GLASS WALL 21) VERTICAL ALUM SUN SHADE, PT-1





1 - PARTIAL EAST ELEVATION







# ENTRIES





1 - WEST ENTRY





5 - MID-BLOCK ENTRY PLAN

2 - MID-BLOCK ENTRY

## **BUILDING DESIGN**

EXHIBIT C.50 | OHSU | SRG | McCARTHY/ANDERSEN



S - EAST ENTRY EAST LOBBY 14'-11" ENTRY VESTIBULE

6 - EAST ENTRY PLAN



1 - COLORED ENTRY REFERENCE



3 - ENTRY SIGNAGE REFERENCE







## **BUILDING DESIGN**

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.51

# PARKING ENTRY SOUTH



1 - PARKING ENTRY ENLARGED ELEVATION



2 - PARKING ENTRY 3D



6 - PERF PATTERN REFERENCE

PT CONC FLOOR SLAB RIGID INSULATION ARCHITECTURAL CONC

ALUM PL MTL CANOPY RECESSED DOWNLIGHT OVERHEAD CLEARANCE BAR CIP CONC WALL BEYOND

> MEADE STREET

16'

## SEE APPENDIX I - PARKING & LOADING DOCK CONFIGURATION FOR MORE DETAIL



1 - LOADING DOCK 3D





4 - COILING DOOR REFERENCE



5 - CONCRETE WALL REFERENCE



# LOADING DOCK



SOUTHWEST CORNER AT MOODY AVE & MEADE ST



VIEW LOOKING WEST DOWN MEADE

# LAB & LAB SUPPORT

The south elevation of the research block has been tuned to optimize lighting and working conditions. The large continuous clerestory allows daylight to penetrate deep into the space. Automated roller shades at the clerestory window will regulate light levels and limit glare. The window to wall ratio has been balanced to limit the peak cooling loads in the late summer with the need for views and connectivity to the exterior. This resulted in 3 foot wide view windows at the ends of the laboratory bench aisles. (See Daylighting Studies Appendix for additional information)

The saw-tooth oriel windows act to articulate the lab bays and neighborhoods on the façade and introduce multiple scales of form which diminish the overall scale of the research block. They provide views and a connection to the rich urban landscape from the interior and reinforce the buildings relation to the river and west hills.

Balconies are located on the east and west to further provide views and connectivity to the outside environment. The balconies, in concert with vertical fins, help regulate the daylight and minimize glare when the sun is at low angles in the morning and afternoon. The lab support spaces at the ends of the building have been articulated with angled metal wall panels to add visual interest and texture to the exterior wall.







**42%** GLAZING AREA (07.08.15)

**38%** GLAZING AREA (08.12.15)

**44%** GLAZING AREA (DAR #2 09.24.15)

## **57%** GLAZING AREA (CURRENT)





IVI





0′



1 - SOUTH WALL DETAIL

### **BUILDING DESIGN**

**3" MINERAL-WOOL INSULATION** PT CONC FLOOR SLAB, PER STRUCT ROLL SHADE SYS WDW SYS WDW SYS PT CONC FLOOR SLAB, PER STRUCT **3" MINERAL-WOOL INSULATION** ALUM COMP MTL PNL ROLLER SHADE SYS WDW SYS PT CONC FLOOR SLAB, PER STRUCT **3" MINERAL-WOOL INSULATION GYP SHEATHING** - ALUM COMP MTL PNL - MTL FRAMING 2'-0" 1'-0"

2-PIECE MTL FLASHING W/

ALUM BOX-RIBBED MTL PNL

DRIP EDGE

BATT INSULATION MTL FRAMING

1/2" GYP SHEATHING

ALUM COMP MTL PNL

ő 'n

# <u>COMPUTATIONALISTS</u>

1 FLAT COMPOSITE MTL PNL, PT-1 (7) UNITIZED CURTAIN WALL, PT-1 2 C.61 (7) •----1 3 C.61 41'-3" PROMENADE 1 - PARTIAL SOUTH ELEVATION  $\bigcirc$ 

32′



16′ BUILDING DESIGN0'8'16'EXHIBIT C.60OHSUSRGMcCARTHY/ANDERSEN

2 - PARTIAL EAST ELEVATION

<u>P1</u>





1 - VIEW FROM SOUTHEAST



WDW SYS PT CONC FLOOR SLAB, PER STRUCT 3" MINERAL WOOL INSULATION

ALUM COMP MTL PNL

ROLLER SHADE SYS

2 - DETAIL

#### **BUILDING DESIGN**

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.61

# EAST & WEST FACADES





<sup>5 -</sup> FIN DETAIL



3 - BENT METAL PANELS



6 - BENT METAL PANELS DETAIL



# BOOKENDS



## 2-PIECE MTL FLASHING

- **GYP SHEATHING**
- ROOFING MEMBRANE
- GREEN ROOF ASSEMBLY PER LANDSCAPE,
- TAPERED INSULATION



6 - BOOKEND SLAB EDGE DETAIL





7 - BOOKEND BASE WALL DETAIL







1 - WEST BOOKEND 3D



3 - METAL PANEL REFERENCE

2 -CONCRETE BASE REFERENCE

ALUM BOX-RIBBED MTL PNLON MTL FURRING

3" MINERAL-WOOL INSULATION GYP SHEATHING MTL FRAMING

ALUM BOX-RIBBED MTL PNLON MTL FURRING

3" MINERAL-WOOL INSULATION GYP SHEATHING MTL FRAMING

PUNCHED WDW SYS

ROLLER SHADE SYS



# NORTH COURTYARD





2 - VIEW OF COURTYARD



3 - VIEW IN COURTYARD



PT CONC FLOOR SLAB,

MTL PNL ON MTL FURRING 20GA ALUM CORNER TRIM

**BUILDING DESIGN** 

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.67

## PARKING ENTRY NORTH

(4) BOX RIB MTL PNL, PT-3

(15) CONCRETE WALL W/ WATER REPELLANT COATING, GRAY

(19) OVERHEAD COILING DOOR, PERFORATED



1 - PARKING ENTRY ENLARGED ELEVATION







5 - PERF PATTERN REFERENCE

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4. 4

3'-0"

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4 - 、

EXHIBIT C.68 | OHSU | SRG | McCARTHY/ANDERSEN

CABLE GUARDRAIL

- CONCRETE PAVERS

CONCRETE STRUCTURE

BOLTED CONNECTION TO STEEL EMBED, PT-2

HORIZONTAL STEEL SUPPORT , BOLTED TO VERTICAL STEEL SUPPORT, PT-2

CONCRETE COLUMN BEYOND

STAINLESS STEEL CABLE VEHICLE BARRIER

VERTICAL STEEL SUPPORT, PT-2

CORRUGATED PERFORATED PANEL, FASTEN TO HORIZONTAL STEEL SUPPORT BEAM, PT-2

HORIZONTAL STEEL SUPPORT, BOLTED TO VERTICAL STEEL SUPPORT, PT-2

BOLTED CONNECTION TO CONCRETE STRUCTURE, PT-2 CONCRETE STRUCTURE



CONCRETE COLUMN BEYOND

HORIZONTAL STEEL SUPPORT , BOLTED TO VERTICAL STEEL SUPPORT, PT-2

BOLTED CONNECTION TO STEEL EMBED, PT-2

CONCRETE STRUCTURE

3 - SECTION AT PARKING







4 - PARKING SCREEN PERF PATTERN/ PANEL PROFILE

# PARKING GARAGE SCREEN

1 - PARTIAL NORTH ELEVATION





BUILDING CIRCULATION SPINE ALONG NORTH ELEVATION



HUB ARTICULATION



BUILDING DESIGN EXHIBIT C.70 | OHSU | SRG | McCARTHY/ANDERSEN



NORTH VIEW

FLOORS 6&7







BUILDING DESIGN EXHIBIT C.72 | OHSU | SRG | McCARTHY/ANDERSEN

- (3) BOX RIB MTL PNL, PT-2
- (4) BOX RIB MTL PNL, PT-3
- 8 PUNCHED WDW SYS, PT-2
- 12 MECHANICAL LOUVER

1 - PARTIAL NORTH ELEVATION



2 - PARTIAL SOUTH ELEVATION

<u>114'-6"</u>

<u>114'-6"</u>

17

6 - TERRACE CANOPY DETAIL

# FLOORS <u>6 & 7</u>



(4) BOX RIB MTL PNL, PT-3

(8) PUNCHED WDW SYS, PT-2

(12) MECHANICAL LOUVER

BUILDING DESIGN EXHIBIT C.74 | OHSU | SRG | McCARTHY/ANDERSEN



2 - SIGNAGE DETAIL





4 - METAL PANEL REFERENCE

5 - LOUVER REFERENCE



1 - ROOF TERRACE

## MATERIALS



#### MP-2

BOD: Metal Sales T16-L-WALL



Rib Height: 3/4" Rib Features: 2" width, vertical box ribs on 4" centers Material: Aluminum Finish: Kynar

**PT-2** 

### CONC



#### Cast-in-place concrete Vertical score orientation Small tie holes Medium grain texture

LV-1 THIN LINE LOUVER

### LV-2 MECHANICAL LOUVER

### **BUILDING DESIGN**

EXHIBIT C.76 | OHSU | SRG | McCARTHY/ANDERSEN

Curtain wall window system Material: Aluminum Mullion Profile: 2 1/2"

Window system Material: Aluminum Mullion Profile: 17/8"



Thin Line Aluminum Louver Product: Industrial Louvers, Model 1516

Profile: 1 3/8" Free area: 62.5%

Location: Ground Floor

#### PT-2

Drainable Fixed Mullion Aluminum Louver Product: Airolite K6746

Profile: 6" Free area: 58.8%

Location: 6th & 7th Floors

PT-2





SOUTH ELEVATION SCALE 1/16" = 1'-0"





WEST ELEVATION SCALE 1/16" = 1'-0"

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### **BUILDING DESIGN**

OHSU | SRG | McCARTHY/ANDERSEN


VIEW FROM TILIKUM CROSSING

BUILDING DESIGN KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.78

# ZONING SUMMARY & DESIGN MODIFICATIONS

### **DESIGN MODIFICATIONS / EXCEPTIONS / ADJUSTMENTS**

The following diagrams support the Land Use Review Narrative. Please see Section 3 – Applicable Development Standards and Section 4 – Design Modifications, Adjustments & Exceptions for additional information.





MODIFICATION, ADJUSTMENT, & EXCEPTIONS MASTER DIAGRAM

ZONING SUMMARY / DESIGN MODIFICATIONS KCRB LU 15-279775 DZM AD MARCH 23, 2016 | EXHIBIT C.79



NADE	NORTH ELEV. INTERIM)
	N/A

See Section 4 Design Modifications, Adjustments & Exceptions Narrative



#### MOD 3

33.510.225.C Ground Floor Active Use

The ground floor active use standards are intended to reinforce the continuity of pedistrian- active ground-level building uses. Active uses maintain a healthy urban district and include but are not limited to: lobbies, retail, residential, commercial, and office spaces.

Standard. At least 50 percent of the ground floor that fronts on to public open space must contain windows and doors, be at least 25 feet deep from the street facing facade, and 12 feet in height from finish floor to bottom of structure.

with the required 25 foot depth.

Modification Requested. See Section 4 Design Modifications, Adjustments & Exceptions Narrative

PROMENADE	NORTH ELEV. INTERIM)
122' (100%)	N/A

#### **RESPONSE:** The mid-block lobby, which has been included in the Active Use calculation, measures 14.5 feet at its shallowest point and does not comply

#### **ZONING SUMMARY / DESIGN MODIFICATIONS**

KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.81





#### MOD 4



View from Terwilliger Boulevard

33.510.252.A.2 South Waterfront Standards: Special Building Heights The portion of a building that is within 50 feet of the centerline of a street or accessway designated as a special building height corridor on Map 510-15 may be no more than 50 feet in height.

33.510.252.A.3 South Waterfront Standards: Maximum North-South Dimension The north-south dimensions of buildings are limited as follows: The portion of a building that is at least 75 feet in height may have a north-south dimension up to 125 feet in width

View from Arthur Street at SW Water Ave







**RESPONSE:** 

Due to the realignment of the street grid (South Waterfront Plan) and view obstructions (Interstate 5 elevated ramps and SW Naito Parkway elevated street) views aligned with Meade Street from areas east and west of this site are minimal or non-existent. It is proposed that the building maximize its floor plate dimensions in order to minimize the number of stories and overall height of the building. This will result in a much larger view aperture above the building and a building form that is more visually permeable than would otherwise be allowed by this code.

**Modification Requested** See Section 4 Design Modifications, Alterations & Exceptions Narrative

View from East Bank (Image from DAR #1, May 21, 2015)

ZONING SUMMARY / DESIGN MODIFICATIONS KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.83



#### ADJ 1

33.266.310 Loading - Number & Size of Loading Spaces Two loading spaces meeting Standard A are required for buildings with more than 50,000 square feet of net building area in uses other than Household Living.

**RESPONSE:** One loading space is provided (Standard B) dedicated primarily to special lab support requirements.

General building deliveries and loading will be accommodated within the existing loading dock directly across Meade Street at the base of Skourtes *Tower/CLSB.* The existing dock is sized to function as a district dock in tandem with a future district dock along SW Sheridan Street.

#### Adjustment Requested See Section 4 Design Modifications, Adjustments & Exceptions Narrative



#### EXC 1

#### OSSC/32/#1 Window Projections into Public Right-of-Way

For all oriel windows projecting into the public right-of-way, a maximum 12 foot width is allowed. When approved through design review, width may vary provided the area of all projecting windows does not exceed 40 percent of the wall's area and the width of any single projecting window does not exceed 50 percent of the building wall's length.

**RESPONSE:** The south-facing saw-toothed oriel windows are typically 42 feet wide, with the western most oriel window being 20 feet wide. 23.5 feet of the oriel window projects into the right-of-way by 2.5 feet. The total area of windows projecting into the right-of-way does not exceed the 40 percent maximum. Relief from the allowed maximum oriel width of 12 feet is requested.

**Exception Requested.** See Section 4 Design Modifications, Adjustments & Exceptions Narrative





**ENLARGED PARTIAL FLOOR PLAN** 

**ZONING SUMMARY / DESIGN MODIFICATIONS** KCRB|LU 15-279775 DZM AD|MARCH 23, 2016 | EXHIBIT C.85

### APPLICABLE DEVELOPMENT STANDARDS/ ZONING SUMMARY



			MOODY	MEADE
(	GLAZED AREA TOTAL AREA	LINEAR AMOUNT OF GROUND FLOOR WINDOWS W/IN 9'-0" (50% REQUIRED)	89' (73%)	181' (63%)
		AREA OF GROUND FLOOR WINDOWS W/IN 9'-0" (25% REQUIRED)	GLAZED AREA = 746 SF (68%) TOTAL AREA= 1098 SF	GLAZED AREA = 1301 SF (5 TOTAL AREA= 2610 SF

#### COMPLIES

#### 33.510.220 Required Ground Floor Windows

In the Central City plan district, the regulation applies to ground floor portions of the building which interface with public open space. The purpose of these windows is to provide a rich pedestrian experience by connecting activities occurring within the structure to adjacent sidewalk areas.

Standard. Windows must cover at least 50 percent of the linear dimension of street-facing facades. Windows must cover at least 25 percent of the area below 9 feet above the finished grade of street-facing facades.

**RESPONSE:** Along Moody Avenue, Meade Street, and the Schnitzer Campus Promenade, the ground floor windows comply both in the required linear amount as well as the required area.

See Section 3 Applicable Development Standards Narrative



101' (87%)

50%)

GLAZED AREA = 859 SF (82%) TOTAL AREA= 1044 SF



#### COMPLIES

33.510.221 Required Windows Above the Ground Floor

In the South Waterfront Subdistrict, the regulation applies to the portion of a site within 200 feet of a streetcar alignment. The regulation also applies to the portion of a site within 200 feet of a proposed streetcar alignment, as shown on the street plan for the area that has been accepted by City Council. The street plan is maintained by the Portland Office of Transportation.

Standard. Windows must cover at least 15 percent of the area of street-facing facades above the ground floor windows. Ground level wall areas include all exterior wall areas up to 9 feet above the finished grade.

**RESPONSE:** Moody Avenue contains a streetcar alignment. The West Elevation and a portion of the South Elevation comply with this standard.

See Section 3 Applicable Development Standards Narrative

**ZONING SUMMARY / DESIGN MODIFICATIONS** 

KCRBILU 15-279775 DZM ADIMARCH 23, 2016 | EXHIBIT C.87



#### **COMPLIES**

**33.510.253** Greenway Overlay Zone in South Waterfront Subdistrict

In the South Waterfront Subdistrict, the Greenway Overlay Zone is intended to protect land and wildlife, support development, enhance pedestrian experience, and improve stormwater management along the Willamette River.

The regulations apply to any portion of a site within the Greenway Overlay Zone as shown on the official zoning map 510-17 and figure 510-2. **RESPONSE:** No portion of this development is within the South Waterfront Greenway Overlay Zone.

See Section 3 Applicable Development Standards Narrative

- **III** ZONING & SITE
- V BIKE PARKING
- VI PUBLIC ART

# **APPENDIX**

I PARKING & LOADING DOCK CONFIGURATION

II MASSING & ARTICULATION

IV DAYLIGHT ANALYSIS

## I. PARKING & LOADING DOCK CONFIGURATION

Service vehicle access is restricted on several streets within the Schnitzer Campus due to Light Rail, Streetcar and Pedestrian designated right-of-ways. In addition, parking access for both CLSB (existing) and KCRB (proposed) are limited to SW Meade Street for the same reasons listed above, as well as the designation of Moody Avenue and Porter Street as Parking Access Restricted Streets per the Portland Zoning Code (Map 510-9).

For these reasons, and as discussed at our first Design Advice Request, it has been proposed that Meade Street and Sheridan Street provide the much needed parking and service access to the Schnitzer Campus. This relieves Porter Street and Arthur Street from these service requirements and provides the pair of pedestrian streets prescribed by the South Waterfront District Street Plan.







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## CAMPUS LOADING DOCK DEVELOPMENT

DAR #1 comments questioned a loading dock's impact on Meade Street and on campus development. OHSU and the design team explored several scenarios for implementing a campus loading dock approach to the Schnitzer Campus. These scenarios included utilizing CLSB's existing loading dock as a campus dock for the south half of the campus and a plan to connect to an additional future campus dock along Sheridan Street. The challenge is to develop a plan to incrementally provide required loading and service access as the campus incrementally grows.

An analysis of the existing dock facility at CLSB determined space, capacity and pathway exists to serve support functions for CLSB, KCRB and the future SCB4 project. This approach includes all general building support services - material supply, package deliveries and refuse/recycling removal. Special laboratory support functions need to be separated to avoid conflicts of use and function. This specialty function cannot be shared with the CLSB dock because of these conflicts. This requires an alternate approach to provide support of laboratory research functions with a secure dock and direct route for deliveries. The two options studied were, one, providing a temporary dock with eventual secure access at the north campus dock; and two, a permanent single-stall lab dock at KCRB.

### **TEMPORARY KCRB LAB DOCK**

This loading approach studied the elimination of the loading dock from Meade Street and deployment of temporary docks to serve the incremental growth of the campus until a permanent north campus dock is established. This approach was determined to be infeasible due to the lab support's need for daily dock access uninterrupted for the duration of 12-month or longer lab experiments; as well as the heightened risk to lab operations.



#### KCRB HALF-BLOCK SERVICE & LOADING ACCESS

- TEMPORARY DOCK AND SERVICE CORRIDOR NOT PART OF CURRENT BUILDING SCOPE
- CAMPUS EXPANSION DISRUPTS THE FUTURE DOCK SERVICE DURING CONSTRUCTION
- ACCESS TO TEMPORARY LAB DOCK CONFLICTS WITH EXISTING SCHNITZER PARKING LOT
- NO DOCK ON MEADE STREET
- TEMPORARY DOCK HAS DIRECT ACCESS TO LAB SUPPORT AREA •





#### **FULL-BLOCK SERVICE & LOADING ACCESS**

- EXPANSION OF SERVICE CORRIDOR PROVIDES ACCESS TO THE SOUTH CAMPUS DOCK FROM ALL BUILDINGS
- TEMPORARY DOCK HAS DIRECT ACCESS TO LAB SUPPORT AREA WITH MODERATE RISK TO LAB OPERATIONS
- CAMPUS EXPANSION DISRUPTS THE FUTURE DOCK SERVICE DURING CONSTRUCTION
- CONFLICT WITH FUTURE ARTHUR STREET CONSTRUCTION

#### **FUTURE CAMPUS SERVICE & LOADING ACCESS**

- REQUIREMENTS.

 SERVICE CORRIDOR LINKS ACCESS TO NORTH AND SOUTH CAMPUS DOCKS TO PROVIDE ENTIRE CAMPUS ACCESS DISTANCE FROM NORTH CAMPUS DOCK TO LAB SUPPORT AREAS CREATES HIGH RISK TO LAB OPERATIONS AND PROGRAMMATIC

This loading approach provides incremental build-out of a service corridor to a future permanent campus dock and provides a permanent lab dock in KCRB to support special service support for KCRB and SCB4. In response to the concern for the pedestrian experience along Meade Street, the design team has expanded the active and pedestrian attractors on either side of the dock while reducing the presence of the dock on the building's façade.

FUTURE

DEVELOPMENT

PROMENADE

1ST FL PUBLIC CORRIDOR

FXISTING

CLSB

CROSSING

FUTURE

BLDG

CAMPUS

DOCK

 $\leq$ 

SCHOOL OF

PUBLIC HEALTH



#### KCRB HALF-BLOCK SERVICE & LOADING ACCESS

- LAB DOCK HAS DIRECT ACCESS TO KCRB LAB SUPPORT
- CLSB CAMPUS DOCK HAS ACCESS TO CAMPUS SERVICE CORRIDOR FOR BUILDING SUPPLY AND MATERIAL REMOVAL FOR CLSB, KCRB AND FUTURE BUILDINGS.

#### **FULL-BLOCK SERVICE & LOADING ACCESS**

٨S

FUTURE

DEVELOPMENT

 SERVICE CORRIDOR PROVIDES ACCESS THROUGHOUT SOUTH CAMPUS DEVELOPMENT

SW BOND AVE

FUTURE

LAB SUPPORT

(PHASE 2)

FUTURE

SCB4

BLDG

SW MOODY AVE

DEV.

FUTURE

CAMPUS

COMMONS

ARSINESOF

роск

<u>ار ا</u>

KCRB

FUTURE

DEVELOPMENT

- INCREMENTAL CONSTRUCTION OF SERVICE CORRIDOR WITH CAMPUS EXPANSION
- LAB DOCK PROVIDES SPECIAL LAB SUPPORT TO SCB4 IF REQUIRED
- MULTIPLE CONNECTION OPTIONS FOR FUTURE SERVICE



#### **FUTURE CAMPUS SERVICE & LOADING ACCESS**

#### **PERMANENT KCRB LAB DOCK**

 SERVICE COORIDOR LINKS NORTH AND SOUTH CAMPUS DOCKS TO SERVE ENTIRE CAMPUS ALLOWS SUPPORT FOR ALL NECESSARY USES THROUGHOUT **INCREMENTAL CAMPUS BUILDOUT**  REDUCES KCRB CODE REQUIRED LOADING SPACES FROM (2) STANDARD A TO (1) STANDARD B



#### **REQUIRED BY ZONING CODE**







DAR #2 - PLAN





**CURRENT - PLAN** 

I		
01/2		

**CURRENT - ELEVATION** 







## LOADING DOCK SIZE & LOCATION STUDY

The loading dock has gone through much adaptation through the design process. From the initial ambitious program we reduced the size in half for DAR #1 and then in half again for DAR #2. The current KCRB loading facility is 3 feet wider and 6 inches longer than what is required by the Portland Zoning Code.

In addition the facade articulation of the service zone adjacent to the loading dock has been developed since DAR #2 to minimize the presence of the dock on Meade Street (from 65 feet to 26 feet).

Finally, as requested in DAR #2, we looked at alternate locations for the dock along Meade Street. Moving the dock east reduces the ground floor active use to less than the minimum required by the Portland Zoning Code. Moving the dock to the west created an undesirable circulation path and puts the KCRB mid-block entry across from the CLSB campus-sized loading facility.

#### LOADING DOCK LOCATION STUDY - MOVED EAST



#### LOADING DOCK LOCATION STUDY - MOVED WEST

### PROPOSED LOADING DOCK LOCATION

CONF

CTR

ENTRY



### PARKING ENTRY & LOADING DOCK LOCATION









#### **DAR #2 PARKING SCHEME** LEVEL P1 FULL BUILDOUT PHASE



**CURRENT PARKING SCHEME** LEVEL P1 PARTIAL BUILDOUT



#### **CURRENT PARKING SCHEME** LEVEL P1 FULL BUILDOUT PHASE

### PARKING DEVELOPMENT

In attempting to minimize the service impact on Meade Street, the team studied a variety of schemes that took advantage of the CLSB loading dock and the future half-block development.

Given the programatic necessity of a small loading dock (see Pages I.2 & I.3) the team has endeavored to utilize the CLSB dock to the fullest extent possible and minimize the impact of the KCRB dock on Meade Street (see Pages I.4 & I.5).

In looking for an efficient, sustainable and aesthedically desirable solution to the parking layout, it was determined that a parking entry on Meade Street with a future ramp on the north half-block is the most appropriate. This strategy has the additional benefit of eliminating all service requirements from Arthur Street.







WEST ELEVATION



PARTIAL SOUTH ELEVATION

DAR #2 (9.24.2015)

#### HORIZONTAL ARTICULATION:

DECREASES PERCEIVED

REMOVING MECHANICAL DOGHOUSE: LOWERS OVERALL BUILDING HEIGHT BY

LOWER BUILDING HEIGHT \_ \_ \_ \_ \_

**INCREASE PENTHOUSE** 

SETBACK

LUR (CURRENT)



#### DAR #2 (9.24.2015)

### **MASSING & ARTICULATION CONCEPT**

The building organization and massing is driven by the desire to emphasize collaboration by providing fewer, wider floor plates for the research levels. In addition, the concept for the building's outward expression is to highlight the research area of the building through the aforementioned massing, variations of color and tone and the proportion and pattern of the architectural elements.

Through several design iterations the articulation of the research area has continually developed, but has maintained a unique character in order to celebrate its prominent function within the building's programmatic mission. In support of this concept the ground floor, the north office suites, and the 6th and 7th floors have developed a vocabulary that enhances the continuity between these elements and establishes a simple yet elegant counterpoint to the research area articulation.

#### **INCREASED PENTHOUSE SETBACK:**

REDUCES PERCEIVED BUILDING HEIGHT ALONG MOODY AVE, SIMPLIFIES BUILDING FORM & **INCREASES PROMINENCE OF LAB BLOCK** 

## III. ZONING & SITE





FLOOR PLAN - LEVEL 1

FLOOR PLAN - LEVEL 2

FLOOR PLAN - LEVEL 3





.





#### FAR FLOOR AREA DIAGRAMS

#### **FLOOR AREA ANALYSIS**



4.8/1
TYPE IA
7 STORY FULLY SPRINKLERED
114'-6"
312,637 GSF

#### **FLOOR AREA CALCULATIONS**

LEVEL	SF TOWARDS FAR	<b>GROSS BUILDING AREA</b>
P2	0	49,676
P1	6,336	30,227
1	33,423	33,423
2	40,115	40,115
3	39,885	39,885
4	39,885	39,885
5	39,513	39,513
6	24,076	24,076
7	15,837	15,837
TOTAL	239,070 SF	312,637 GSF



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FLOOR PLAN - LEVEL 4



FLOOR PLAN - LEVEL 5

FLOOR PLAN - LEVEL 6

FLOOR PLAN - LEVEL 7

### EXISTING SITE



EXISTING SITE CONDITIONS

## STREET PLAN: VAULT LOCATIONS

The plan, below, indicates all existing vaults within the rights-of-way adjacent to the KCRB site. Two additional vaults are proposed. One, a water meter vault and manhole within Meade Street near the proposed mid-block curb extensions. And two, a four-foot diameter cistern access manhole within the KCRB site at the southwest corner of the building.





SCALE: 1/32" = 1'-0" 0' 16' 32'

EXISTING SITE PLAN

### **IV**. DAYLIGHT ANALYSIS

The Knight Cancer Research Building is currently on an energy pathway to be one of the lowest energy use research centers of its kind. The design team set an aggressive performance goal early, recognizing the challenge would be aligned with the original Knight Operating Principles for the project.

Through an iterative process a wide variety of façade designs, aperture moves, shading strategies, massing options, and material specifications to maximize the daylighting performance of KCRB were studied. Guiding design concepts emerged for daylighting performance around the long south facade design, shading strategies at the east and west façade, visual comfort for levels 3 and 4 computationalists, and overall daylight penetration into the deep floor plates.

#### **Daylighting Design Concepts** South Façade Design

The south façade is the primary daylight aperture for the majority of the laboratory spaces, and while the programmatic requirements result in a deep floorplate, the facade was tuned for daylight to saturate as much of the laboratory space as possible.

As the design moved toward a staggered saw-tooth façade scheme, the windows fell into two categories; vision glass at the end of lab bench walkways to visually connect occupants to the exterior, and high clerestory glass to drive daylight.

The modest vision glass was designed in tandem with thermal requirements to minimize solar heat gain in the summer and excessive heat loss in the winter. Each view window is linked with interior programming and lab bench layouts. By providing each bench aisle with a view window, the façade and interior design respond to each other and organize the space with equitable views for all lab occupants.

### Annual Sky Conditions for Portland

TMY3 Data for PDX + Daylight Hours Overlay



### **Annual Insolation Maps**

Total Annual Irradiation From Sun and Sky Falling on Building Skin and Surroundings



	Overcast				Inte	rmedi	ate		(	Clear	6	
v	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	De
r.	23%	30%	31%	28%	32%	43%	56%	54%	52%	34%	12%	21
∋:	4%	8%	11%	10%	14%	10%	9%	9%	12%	11%	12%	69
t	73%	62%	58%	62%	54%	48%	36%	36%	34%	55%	76%	73



#### SUMMER SOLSTICE

KCRB LU 15-279775 DZM AD MARCH 23, 2016 APPENDIX IV.2

### **Thermal Comfort (Winter)**



#### Inside Glass Surface Temperature, Fins and Overhang





### **Typical Daylighting Conditions / Illumination Levels**

Uniform Overcast Sky on December 21, 12:00pm

Daylight Distribution Without Future Building to the North



- 48" sill height
- 60% glazing in occupied zone
- Neutral grey floors, Ref. = 0.35
- Clear facade glass, Tvis = 0.50

The clerestory glass is continuous across the lab zone of the façade, and is generously sized to be 4'-0" high. The clerestory window head meets the ceiling, cleanly washing the ceiling surface with ambient daylight. An interior light shelf helps balance the scene by subtly lowering daylight illuminance levels at the perimeter, contributing to a perception of evenness and deeper daylight penetration.

Key to visual comfort and the clerestory glass is the inclusion of interior automated fabric shades, controlled by an astronomical time clock according to the position of the sun in the sky, with override protocols for overcast conditions and site shading from the adjacent CLSB tower. The intent is for the interior fabric shades to only cover the clerestory glass when a beam of direct sun could strike an occupant work surface. All other times, the shades will be open.

Additionally, the vision glass may include a manually operated interior shade or shutter, allowing the occupants to modulate daylight at the view level with sliding wooden shutters or rotating louvers.





Note the model shows illumination patterns assuming no interior partitions to understand daylighting potential across the floor plate. The ghosted plan lines are included to show scale.

### Typical Daylighting Conditions, Computationalist Area Luminance and Perception

Clear Facade Glass :: September 21, 12:00pm, Clear Sunny Skies



### **Typical Daylighting Conditions / Illuminance, Luminance, Perception**

July 21 12:00pm, Clear Sunny Skies :: Level 02

Plan View Iso-Lux Illuminance Contours



### **East and West Facade Shading Strategies**

While the east and west are similarly exposed to a few hours of sun each day, the thermal stresses on the west are far more significant than the east. Additionally, due to the building orientation relative to north, direct sun striking the east glass generally dissipates before the building is occupied each morning by 9am, minimizing any potential visual discomfort from direct sun on the east.

For both solar and thermal control, the west façade significantly benefits from the inclusion of exterior vertical fin shading elements. Without these, occupant thermal and visual discomfort is likely.

#### **Computationalist Area Visual Comfort**

One of the most challenging visual conditions stems from the coupling of computationalist users with the southeast zones of levels 3 and 4 where the façade transitions to an aesthetic of expansive glass. Not only is careful attention required to ensure direct sun will not strike work surfaces, but overall scene brightness requires mitigation for comfortable digital screen viewing, and contrast control is necessary to avoid reflected glare on computer screens and field of view conditions where a user focuses on a digital screen with a view of bright exterior sky beyond.

### **Overall Daylight Penetration**

The programmatic requirements of the facility coupled with the building height limitations yield a floorplate that is quite deep, and challenging to daylight across its entirety. From a performance standpoint, our approach is to ensure daylight is utilized wherever possible, and supplemented only where daylight penetration is unrealistic. Our goal is to take advantage of this passive asset, and through smart electric lighting controls with zoned dimming protocols minimize the annual hours where electric lighting is necessary.

> Excerpt from: Knight Cancer Research Building, Criteria Design Report Building Performance: Energy, Daylighting, Comfort and HVAC Modeling Prepared by: Integral Group, Inc. (December 3, 2015)

Rendered Perspective, Tone Mapped for Human Visual Acuity

### V. BIKE PARKING




1 - BIKE ROOM PLAN

#### SHORT-TERM PARKING SPACES

QUANTITY
10
6
8
24
(8)

## LONG-TERM PARKING SPACES

AREA	QUANTITY
INDOOR PARKING	100
ROOM	
TOTAL	100
(TOTAL REQUIRED)	(26)
TOTAL (TOTAL REQUIRED)	100 (26)



2 - BIKE ROOM SECTION



### **3 - DERO MANUFACTURER BIKE RACK DIMENSIONS**







Single Sided



# **VI.** PUBLIC ART

- Building and art together should inspire hope
- Art should have a cancer connection

The Knight mission is to end cancer as we know it. Through commitment to basic science, high-tech collaborations, and hard work the Knight is delivering hope to cancer patients and their families. To many the Knight Cancer Research Building, in the center of what the City of Portland is calling the Innovation District, will be a physical beacon of that hope. The public art that will complement the building should represent that optimism.

The installation site should be such that the scientists will be inspired by the art at their workplace and the public is able to interact with it easily in a meaningful way. Only the outside and lobby floor of the building will be accessible to the public, the floors above will house cancer research. As per the Knight Institute goals and Phil and Penny Knight's endorsement, the science within the walls will not be business as usual, but instead a large scale team approach to tackling cancer differently.

It is desirable for there to be a cancer connection for the artist and their work though how the connection is made is not prescribed. An example might be an artist in remission whose piece represents his journey or the daughter who wishes to give back through art to the researchers whose discoveries changed the outcome for her parent. A strong connection would be ideal.

The intent is for the work to be forward looking and lift the soul instilling a sense of hope. It should not be grand or ostentatious but instead reflect the dedication and courage of the people who fight cancer in their work and in their families.

### SCHEDULE:

May 2016 - Call for artists July 2016 - Short-list of artists Sept 2016 - Artist selection Mar 2017 - Design & Coordination Aug 2017 - Mock ups and submittals May 2018 - Installation





Installment site should be central for researchers and public both

### **BUDGET:**

\$270,000 for one commissioned art piece inclusive of all overhead and installation costs.

Budget for additional purchased art pieces will be preserved. Locations for these pieces will be throughout the building.