BLOCK 41 + BLOCK 44 APARTMENTS

DR HEARING 02 | August 17th, 2017

GBD

JONES

PLACE STUDIO

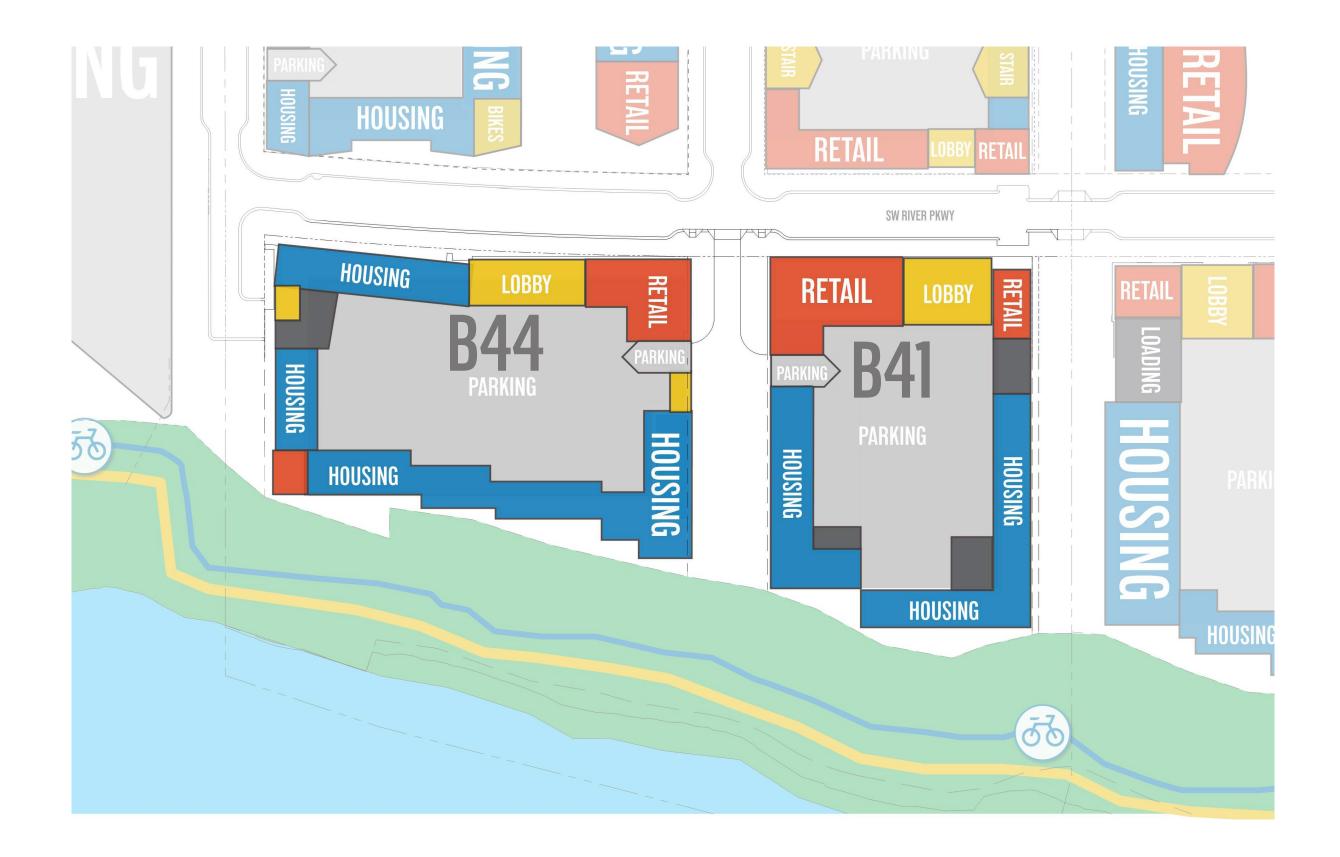
1. 2. 3.

SITE COMMENTS
SITE RESPONSE

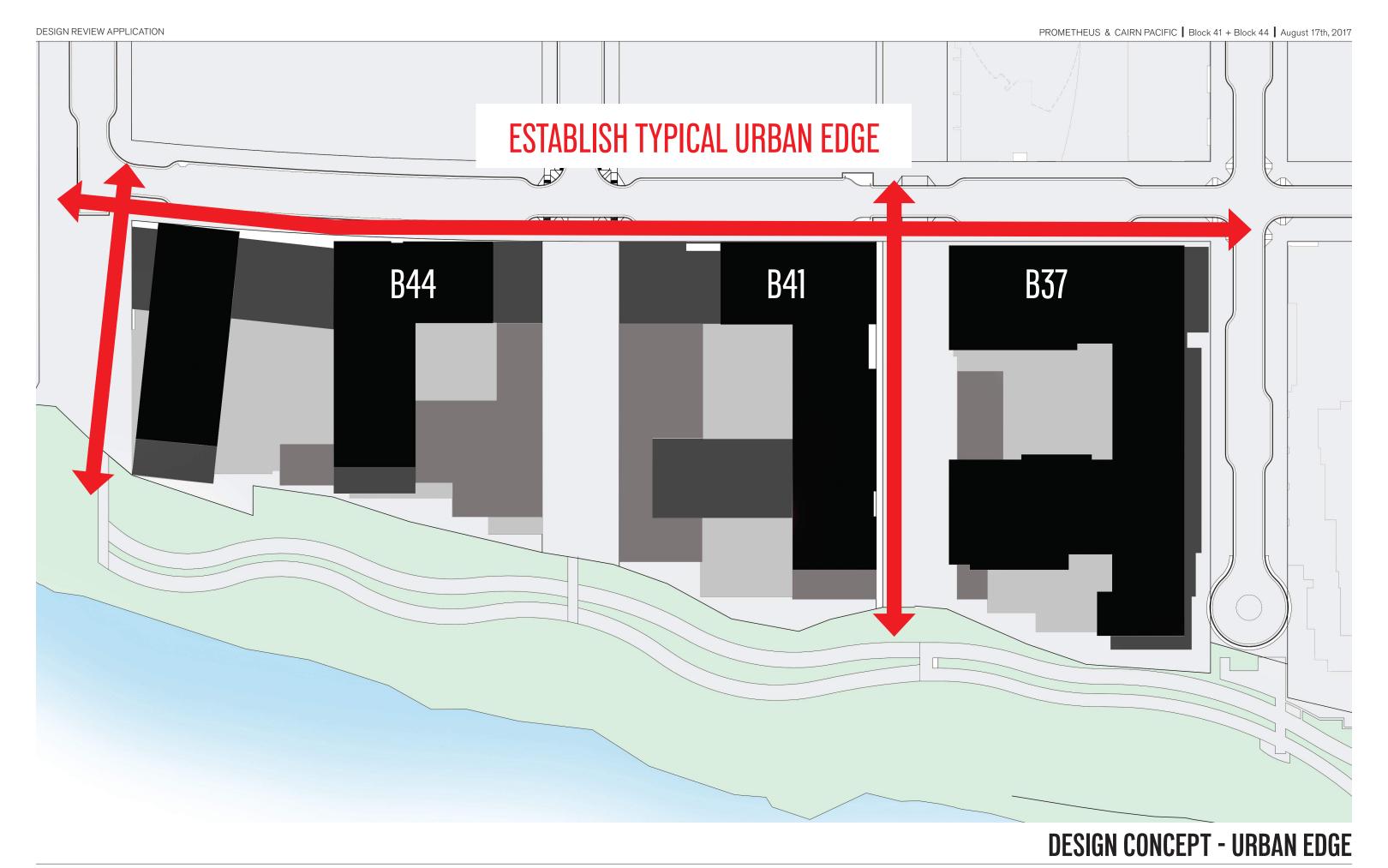
BLOCK 41 COMMENTS
BLOCK 41 RESPONSE

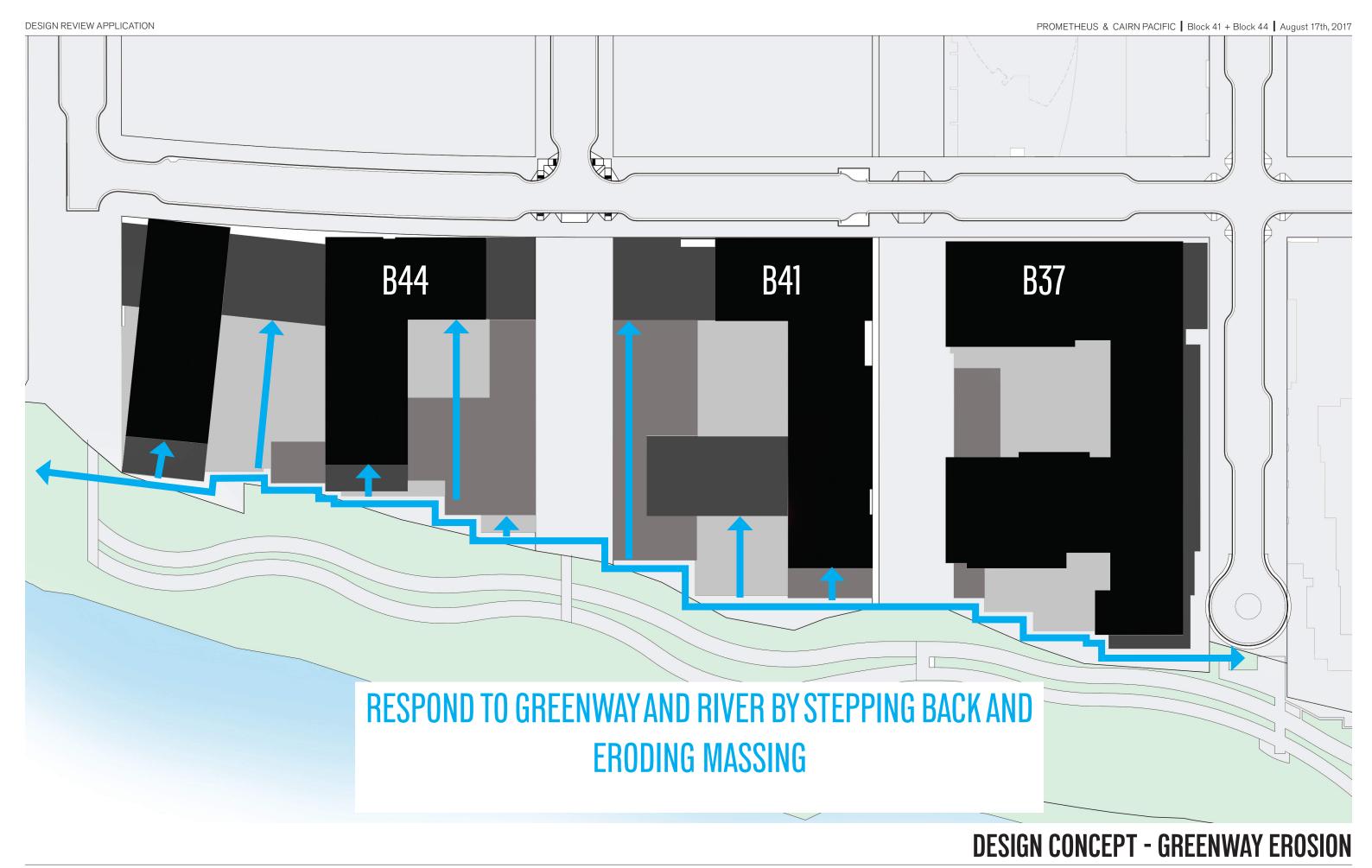
BLOCK 44 RESPONSE

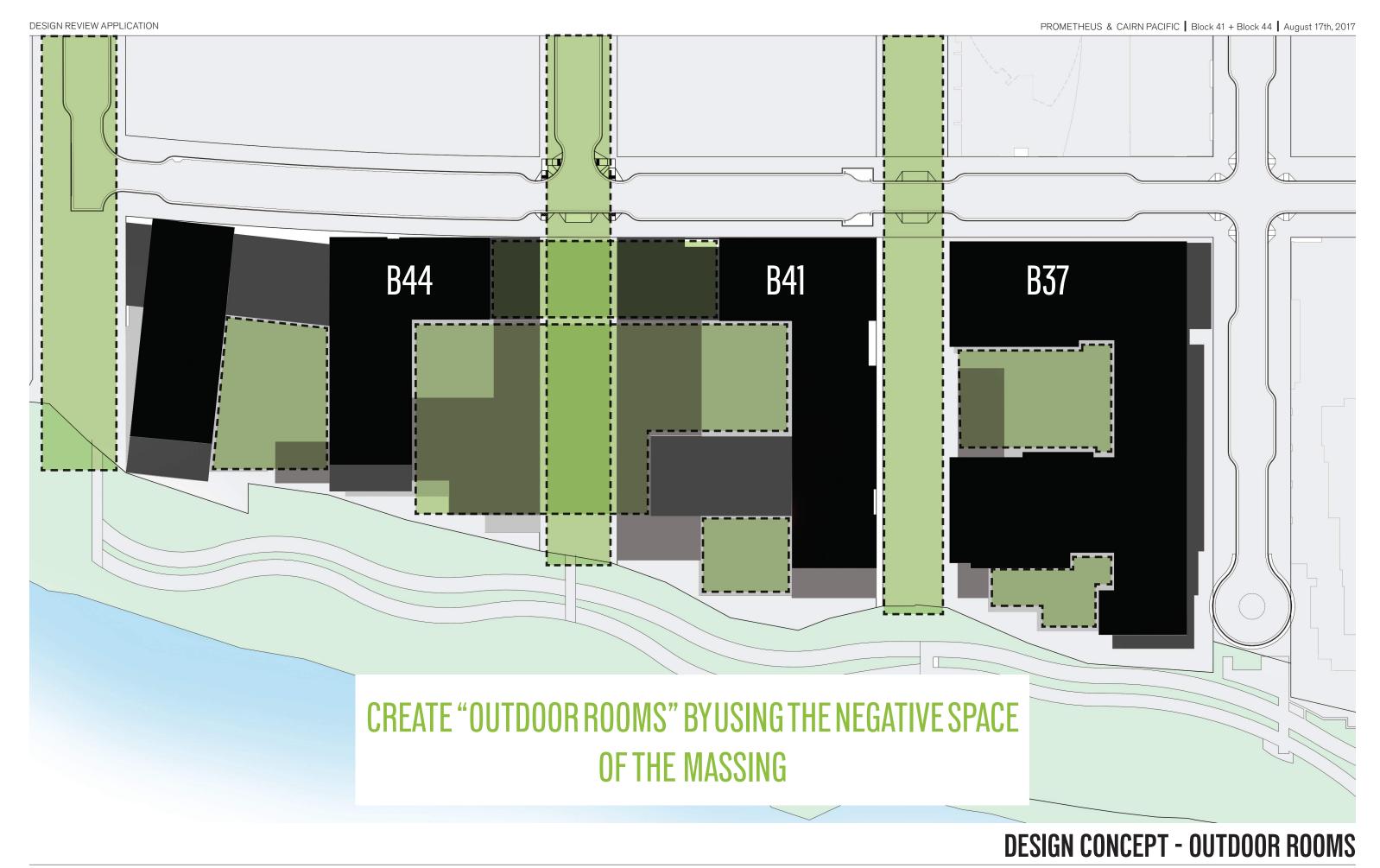
BLOCK 44 RESPONSE



GROUND FLOOR USES







SITE

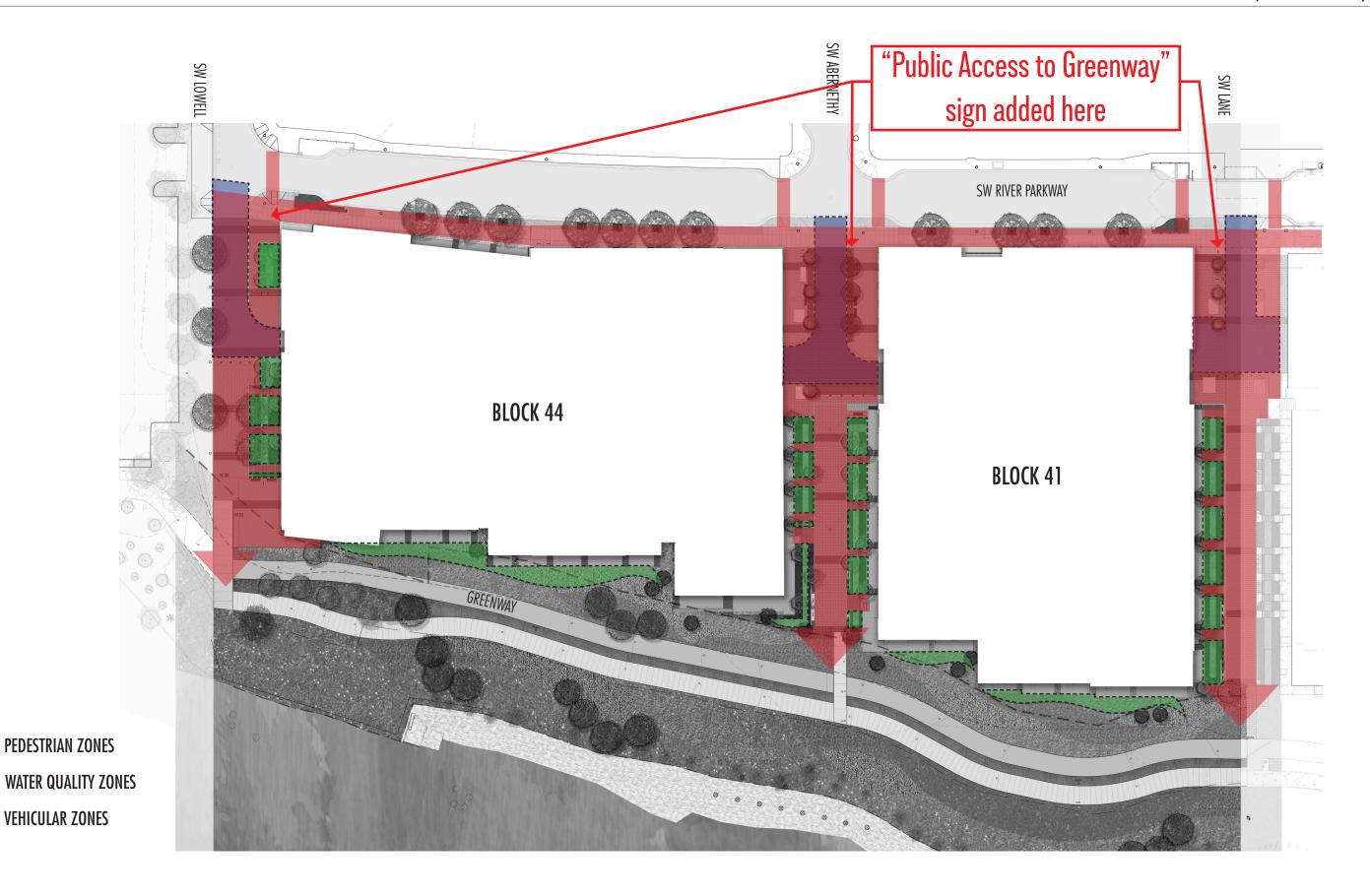
DR HEARING 01 COMMISSION COMMENTS

- 1. Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety
- 2. Add Benches within Pedestrian Accessway on Abernethy
- 3. Add Signs on Pedestrian Accessways to Indicate Public Access to Willamette Greenway Trail
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters
- 6. Study Upper Roof Treatment on Both Blocks

DR HEARING 01 COMMISSION COMMENTS

SITE

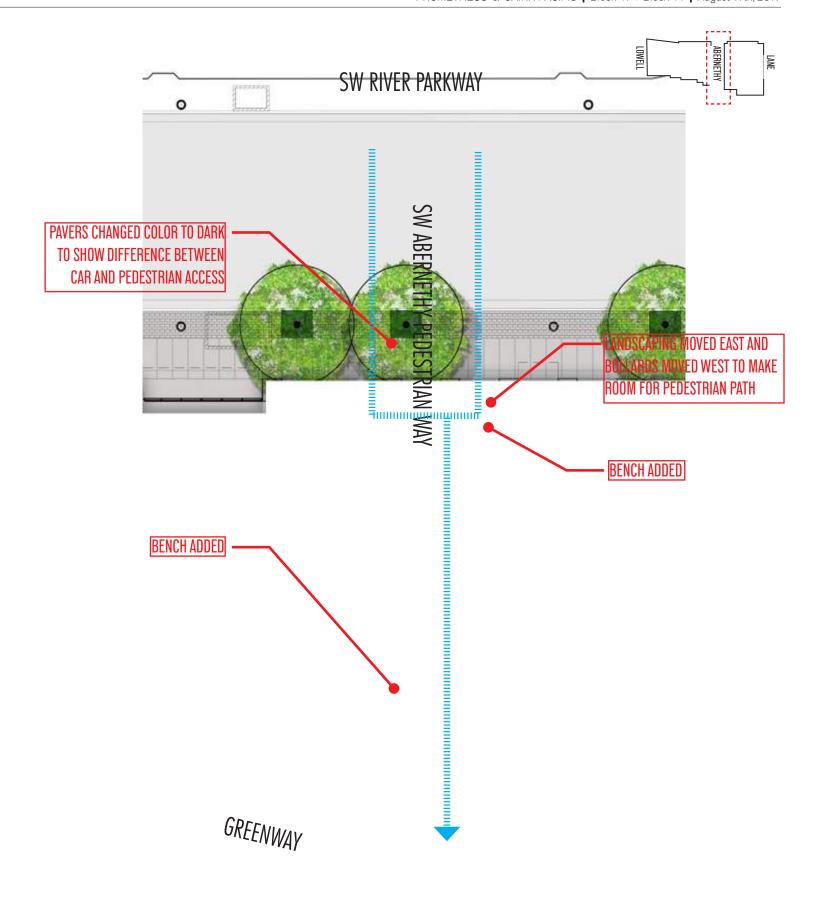
- 1. Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety
- 2. Add Benches within Pedestrian Accessway on Abernethy
- 3. Add Signs on Pedestrian Accessways to Indicate Public Access to Willamette Greenway Trail
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters
- 6. Study Upper Roof Treatment on Both Blocks



PEDESTRIAN ACCESS DIAGRAM



DR HEARING 01: ABERNETHY ST.



DR HEARING 02: ABERNETHY ST.

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



BY BOLLARDS

PUBLIC ACCESS SIGN





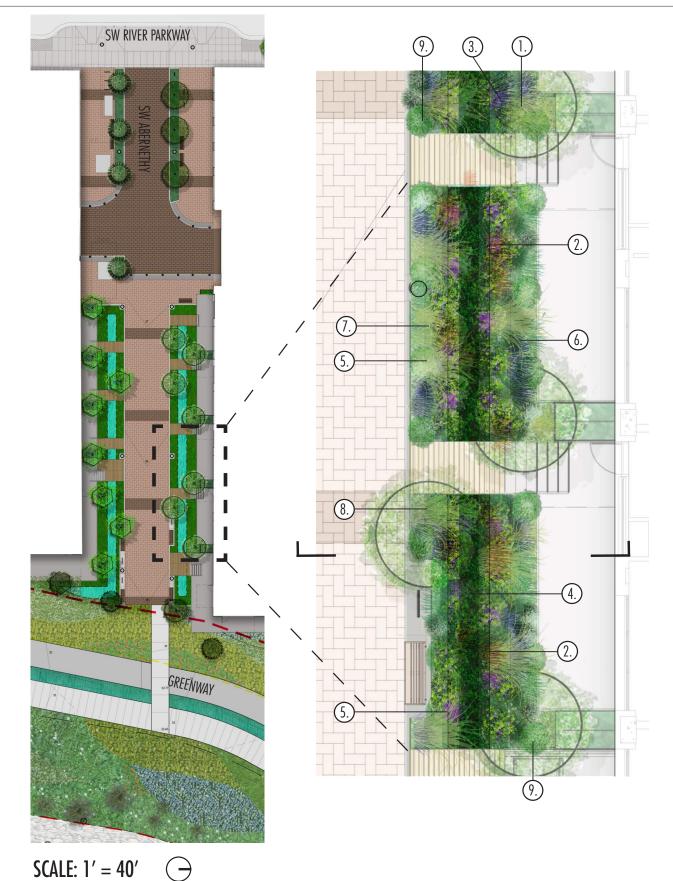
SITE

DR HEARING 01 COMMISSION COMMENTS

- 1. Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety
- 2. Add Benches within Pedestrian Accessway on Abernethy
- 3. Add Signs on Pedestrian Accessways to Indicate Public Access to Willamette Greenway Trail
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters
- 6. Study Upper Roof Treatment on Both Blocks



STORMWATER PLANTER DIAGRAM





1. Japanese Maple



2. Redtwig Dogwood



3. Siberian Iris



4. Common Rush



5. Birch Leaf Spirea



Vihurnum Davidii



7. Liriope



8. Sword Fern



9. Green Island Ilex



SWALE GARDEN AT ABERNETHY

RENDERED PLANTING PLAN

SITE

DR HEARING 01 COMMISSION COMMENTS

- 1. Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety
- 2. Add Benches within Pedestrian Accessway on Abernethy
- 3. Add Signs on Pedestrian Accessways to Indicate Public Access to Willamette Greenway Trail
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters

6.Study Upper Roof Treatment on Both Blocks

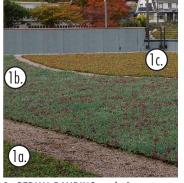




DR HEARING 01 DR HEARING 02

ROOF PLAN

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017





1. SEDUM BANDING: a, b & c





2. JAPANESE MAPLE



6. SWEETBOX

3. MAHONIA AQUIFOLIUM 'COMPACTUM' 7. WESTERN SWORD FERN



4. FLAX AND SUCCULENTS IN POTS

Images of representative species see plant schedule for additional plant information



SCALE: 1' = 40'



BLOCK 41 ROOF GARDEN PLANTING





Images of representative species see plant schedule for additional plant information

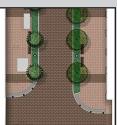
SCALE: 1' = 40'



DR HEARING 01 COMMISSION COMMENTS

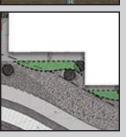
SITE

- 1. Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety.
 - •Vehicular portion uses darker paving to contract with lighter paving at pedestrian areas. Added more space at crossings.
- 2. Add Benches within Pedestrian Accessway on Abernethy
 - Added benches at beginning and terminus of accessway.
- 3. Add "Public Access to Greenway" signs within Pedestrian Accessways
 - Added signs at west end of pedestrian accessway streets
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
 - More diversity in plant types within typical swales. Swales and color added along greenway.
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters
 - More color and diversity added to landscape throughout.
- 6. Study Upper Roof Treatment on Both Blocks
 - •Pattern from gardens is added to top most level -creates a pattern as a contrinuation. Combo of light and dark grey to mitigate glare (no longer qualified for LEED point b/c of lower SRI















BLOCK 41

DR HEARING 01 COMMISSION COMMENTS

BLOCK 41

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.

BLOCK 41

DR HEARING 01 COMMISSION COMMENTS

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.



DR HEARING 01



DR HEARING 02

- CHANGED CEMBRIT LANGUAGE TO BRICK
- INCREASED GLAZING AT NEW BRICK LOCATION

DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 01

B41 - PERSPECTIVE LOOKING SW FROM GREENWAY

DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 02

B41 - PERSPECTIVE LOOKING SW FROM GREENWAY

BLOCK 41

DR HEARING 01 COMMISSION COMMENTS

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.

GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

27



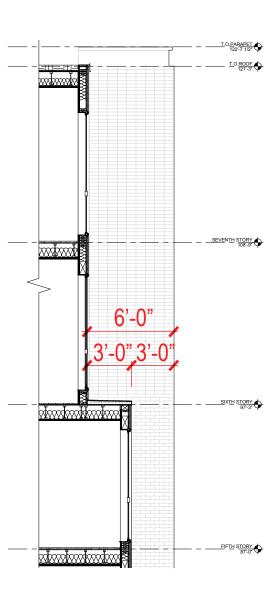
WEST ELEVATION



NORTH ELEVATION







DR HEARING 01

DR HEARING 02

• INCREASED DEPTH OF CEMBRIT GASKET LANGUAGE FROM 1'-0" TO 3'-0" AT LOWER FLOORS.

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 01

B41 - PERSPECTIVE LOOKING EAST DOWN ABERNETHY

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 02

B41 - PERSPECTIVE LOOKING EAST DOWN ABERNETHY

DR HEARING 01 COMMISSION COMMENTS

BLOCK 41

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.



GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 01

DR HEARING 02

- ENLARGED CANOPY TO FULL LENGTH OF GASKET LANGUAGE
- RAISED CANOPY TO 10'-0"

GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 01

B41 - PERSPECTIVE LOOKING EAST FROM RIVER PARKWAY

DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 02

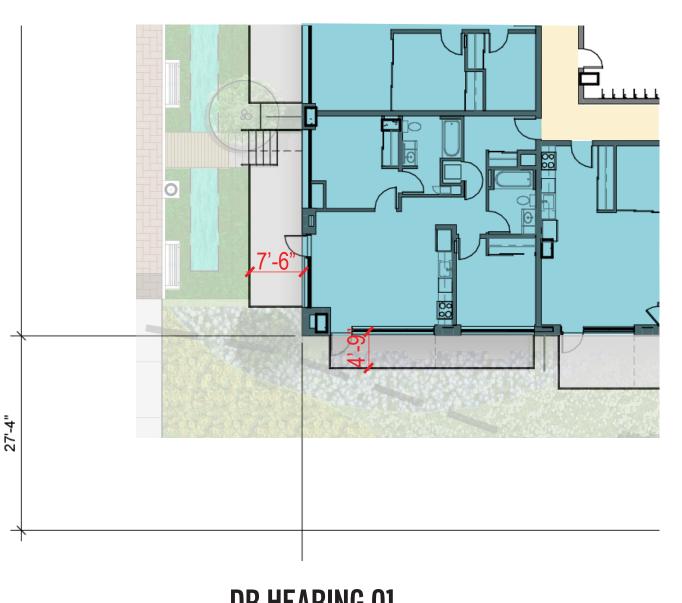
B41 - PERSPECTIVE LOOKING EAST FROM RIVER PARKWAY

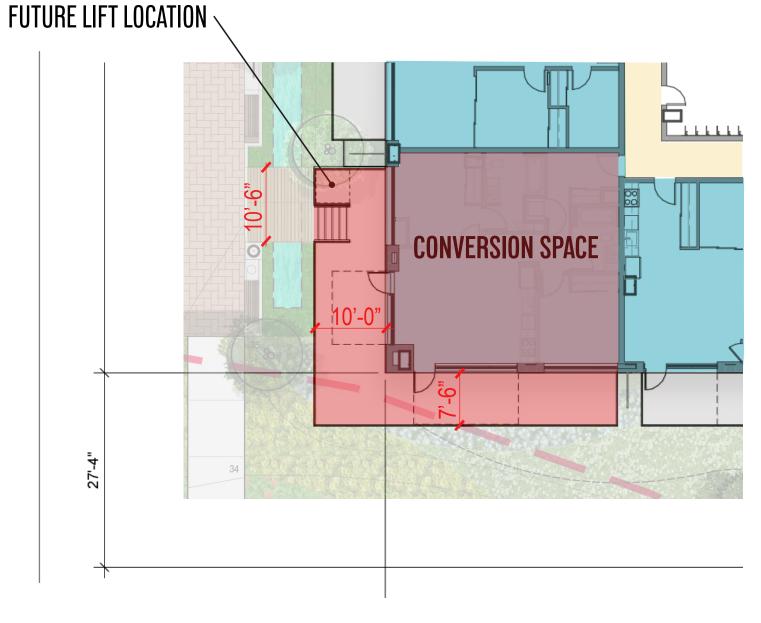
36

DR HEARING 01 COMMISSION COMMENTS

BLOCK 41

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.





DR HEARING 01

DR HEARING 02

- ENLARGED PORCH AND WRAPPED IT AROUND CORNER
- INCREADED SIZE OF BRIDGE ACCESS
- ADDED FUTURE LOCATION FOR ADA LIFT



DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 01

B41 - PERSPECTIVE LOOKING NW FROM GREENWAY

DESIGN REVIEW APPLICATION

PROMETHEUS & CAIRN PACIFIC | Block 41 + Block 44 | August 17th, 2017



DR HEARING 02

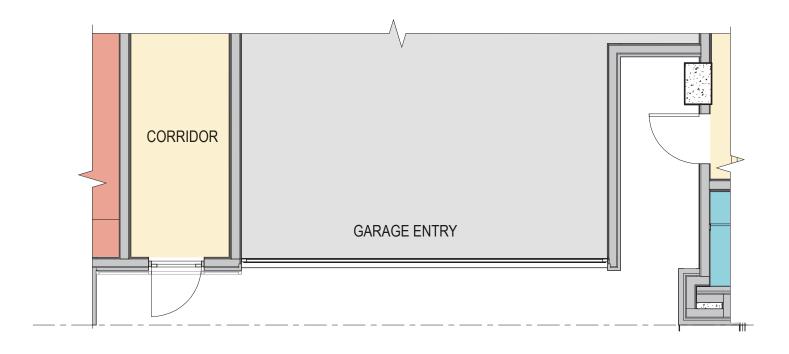
B41 - PERSPECTIVE LOOKING NW FROM GREENWAY

BLOCK 41

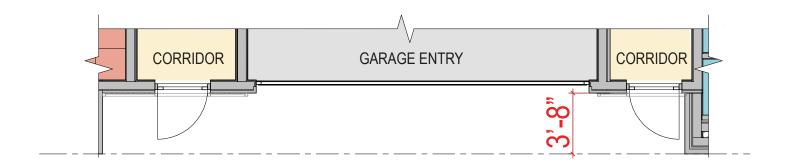
DR HEARING 01 COMMISSION COMMENTS

- 1. Study East Facade Change Material from Cement Panel to Brick.
- 2. Study North & West Gasket Condition.
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
- 4. Add More Commercial or Conversion Space Along River.
- 5. Remove Alcove Condition at South Egress Exit Door.

GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

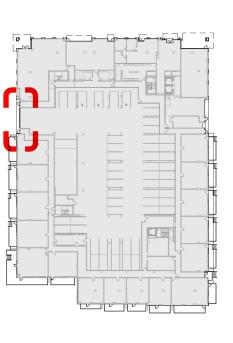


DR HEARING 01



DR HEARING 02

• REMOVED ALCOVE CONDITION.
RELOCATED EXIT DOOR TO SOUTH FACADE.



- 1. Study East Facade Change Material from Cement Panel to Brick.
 - Change Cembrit to Brick and Increased Amount of Glass
- 2. Study North & West Gasket Condtion.
 - Gasket Set Back 3'-0" below and 6'-0" above
- 3. Add Full Length Canopy at "Gasket" on River Parkway.
 - A Full Length Canopy at the Gasket has been Added
- 4. Add More Commercial or Conversion Space Along River.
 - The Northeast Space has Wrap Around Porch with Block Out for Future Lift
- 5. Remove Alcove Condition at South Egress Exit Door.
 - •The Alcove has been Removed by Relocating the Exit Door to the South Facade









- 1. Simplify Massing, Especially Along River Parkway
- 2. Ribbon Language Along River Seems Incongruent with other Building Vocabulary
- 3. Simplify Window Patterning in Brick Masses
- 4. Add More Commercial or Live/Work Conversion Space

- 1. Simplify Massing, Especially Along River Parkway
- 2. Ribbon Language Along River Seems Incongruent with other Building Vocabulary
- 3. Simplify Window Patterning in Brick Masses
- 4. Add More Commercial or Live/Work Conversion Space

46



DR HEARING 01 - WEST ELEVATION



DR HEARING 02 - WEST ELEVATION

47





DR HEARING 01 - WEST ELEVATION



DR HEARING 02 - WEST ELEVATION



DR HEARING 01 - WEST ELEVATION





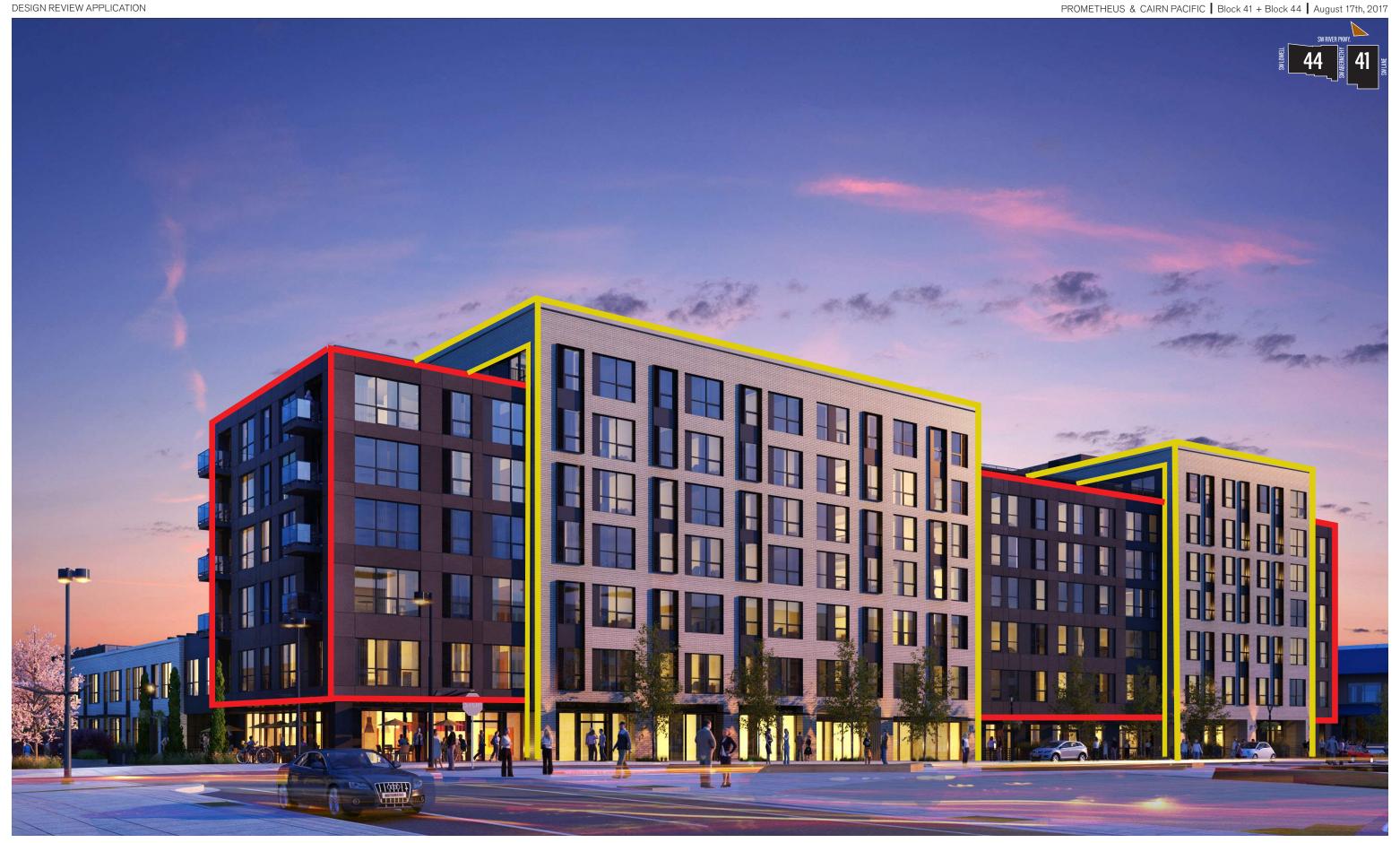
RENDERING ALONG RIVER PARKWAY

DESIGN REVIEW APPLICATION



DESIGN REVIEW APPLICATION

RENDERING ALONG RIVER PARKWAY



RENDERING ALONG RIVER PARKWAY

- 1. Simplify Massing, Especially Along River Parkway
- 2. Ribbon Language Along River Seem Incongruent with other Building Vocabulary
- 3. Simplify Window Patterning in Brick Masses
- 4. Add More Commercial or Live/Work Conversion Space Along River



DR HEARING 01



DR HEARING 02





B44 - PERSPECTIVE LOOKING WEST FROM GREENWAY



DESIGN REVIEW APPLICATION

B44 - PERSPECTIVE LOOKING WEST FROM GREENWAY



B44 - PERSPECTIVE LOOKING WEST FROM GREENWAY



B44 - PERSPECTIVE LOOKING WEST FROM GREENWAY

- 1. Simplify Massing, Especially Along River Parkway
- 2. Ribbon Language Along River Seem Incongruent with other Building Vocabulary
- **3. Simplify Window Patterning in Brick Masses**
- 4. Add More Commercial or Live/Work Conversion Space Along River



DR HEARING 01



DR HEARING 01

60



DR HEARING 01



DR HEARING 02

BLOCK 44 WEST ELEVATION

61



DR HEARING 01



DR HEARING 02

BLOCK 44 WEST ELEVATION



DR HEARING 01



BLOCK 44 NORTH ELEVATION

DR HEARING 02



DR HEARING 01



DR HEARING 02

BLOCK 44 SOUTH ELEVATION



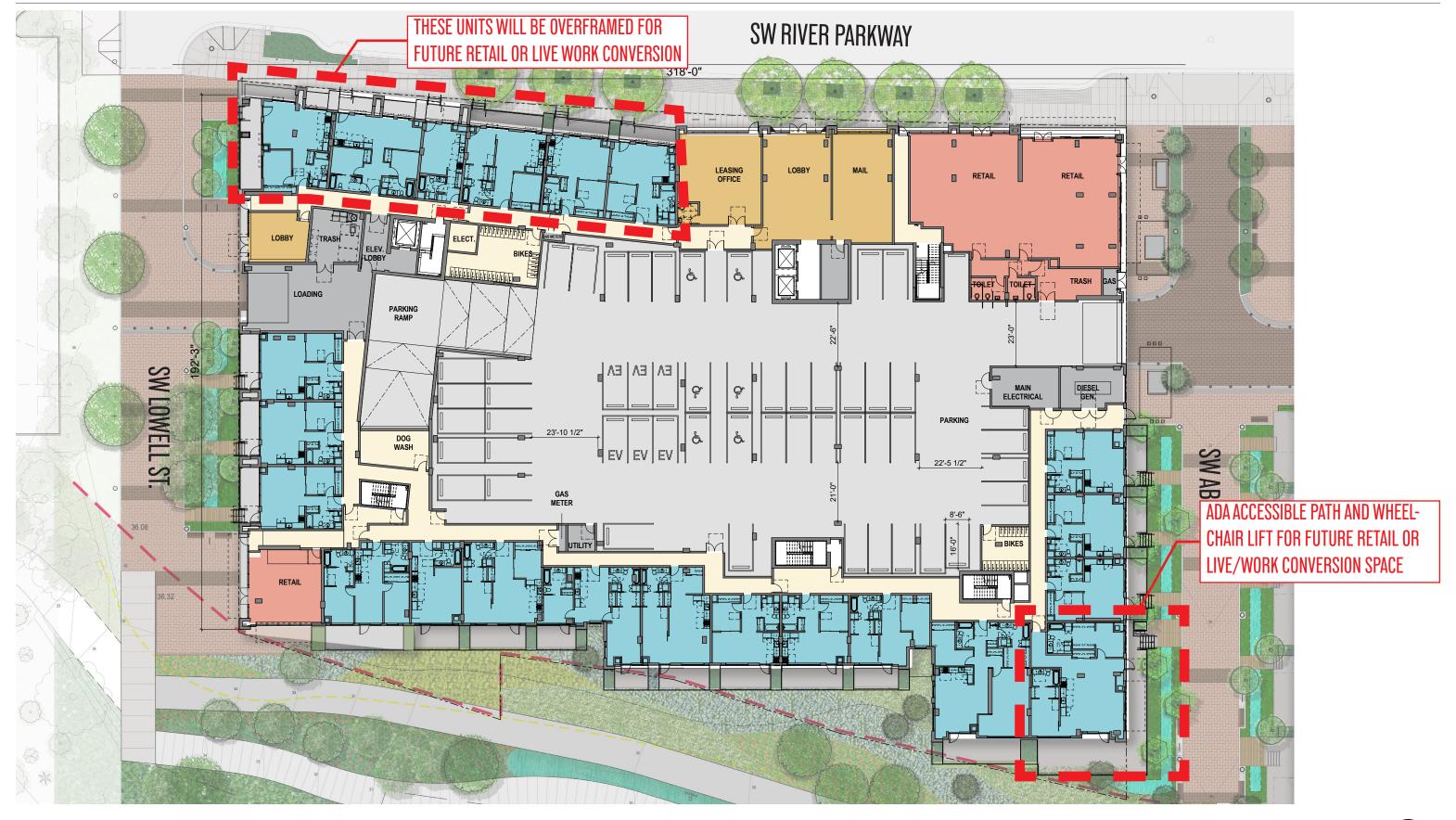
B44 - RENDERING LOOKING DOWN RIVER PARKWAY

GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio



B44 - RENDERING LOOKING DOWN RIVER PARKWAY

- 1. Simplify Massing, Especially Along River Parkway
- 2. Ribbon Language Along River Seem Incongruent with other Building Vocabulary
- 3. Simplify Window Patterning in Brick Masses
- 4. Add More Commercial or Live/Work Conversion Space Along River



CONVERSION SPACE FOR RETAIL AND LIVE/WORK

PARKING

SERVICE

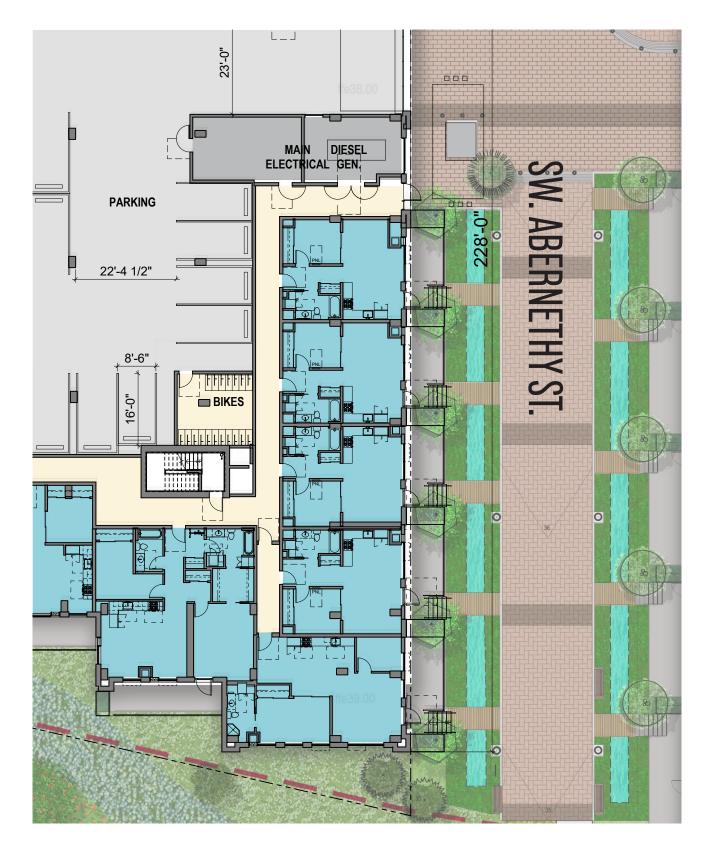
RETAIL

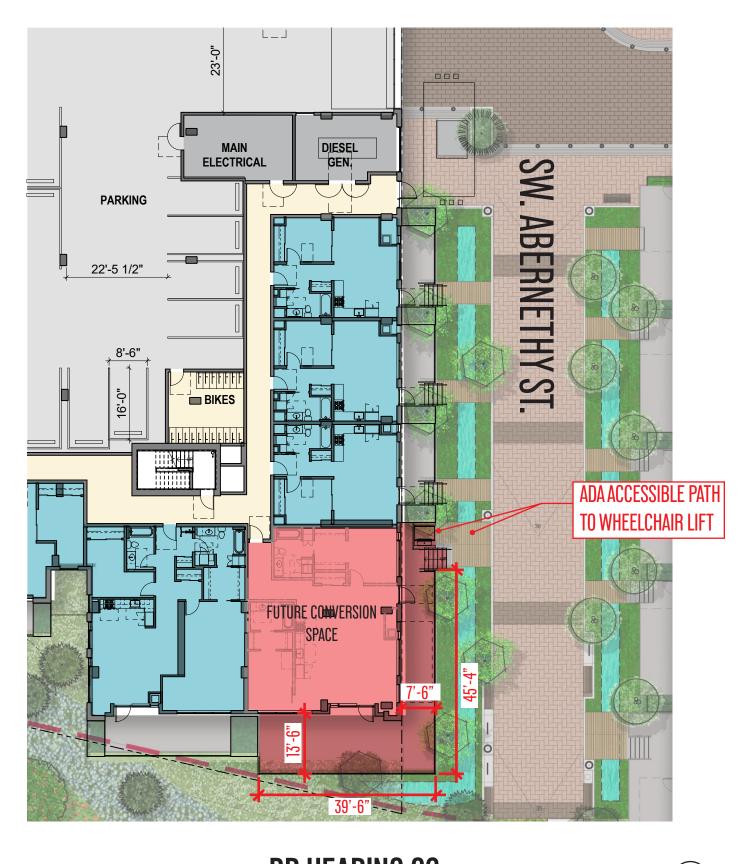
CIRC./SUPPORT

AMENITY

LANDSCAPING

HOUSING





DR HEARING 01

PARKING

DR HEARING 02 **NE FUTURE CONVERSION SPACE**

LANDSCAPING

AMENITY

CASE NO. LU 2016-283375 DZM GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

CIRC./SUPPORT

- 1. Simplify Massing, Especially on River Parkway
 - Removed Red Accent Reveal
 - Combined Brick Massings on River Parkway and Carried Cembrit Massing through Brick Massing to Match Language Throughout Building
 - Simplified Base and Pilaster on all Street Frontages





- 3. Simplify Window Patterning in Brick Masses
 - •Regularized Pattern of Two Story Window Surrounds by Lining-Up Window Bays Vertically and Horizontally instead of Staggering Pattern.
- 4. Add More Commercial or Live/Work Conversion Space Along River
 - •Wrap Around Dock/Porch at NE Corner with Block-out for Future Wheelchair Lift. Units along River Parkway are Over-Framed and can be Removed for Future Conversion.











DR HEARING 01 COMMISSION COMMENTS AND RESPONSES

RECAP

SITE

- Address Paving Pattern and Pedestrian Circulation at Abernethy Street for Pedestrian Safety.
 - •Vehicular portion uses darker paving to contrast with lighter paving at pedest trian areas. Added more space at crossings.
- 2. Add Benches within Pedestrian Accessway on Abernethy
 - •Added benches at beginning and terminus of accessway.
- 3. Add "Public Access to Greenway" signs within Pedestrian Accessways
 - •Added signs at west end of pedestrian accessway streets
- 4. Add Gardens along East Side of Buildings in Lieu of Stormwater Planters
 - •Stormwater diagram has been provided to show extent of stormwater gardens along pedestrian accessways and east greenway.
- 5. Add More Garden Like Landscaping Species of Plants in Stormwater Planters
 - •Stormwater planting plan blow-up and section has been provided to show diversity of species including colorful flowers.
- 6. Study Upper Roof Treatment on Both Blocks
 - •A roofing pattern of light grey and dark grey has been added to the top most roofs to continue the undulating design concept that is present on lower roofs. (no longer qualified for LEED point b/c of lower SRI)

BLOCK 41

- 1. Study East Facade Change Material from Cement Panel to Brick
 - Changed Cembrit to Brick and Increased Amount of Glass
- 2. Study North & West Gasket Condition
 - •Gasket Set Back 3'-0" below and 6'-0" Above
- 3. Add Full Length Canopy at "Gasket" on River Parkway
 - A Full Length Canopy at the Gasket has been Added
- 4. Add More Commercial or Conversion Space Along River
 - •The Northeast Space has Wrap Around Porch with Block Out for Future Lift
- 5. Remove Alcove Condition at South Egress Exit Door
 - •The Alcove has been Removed by Relocating the Exit Door to the South Facade.

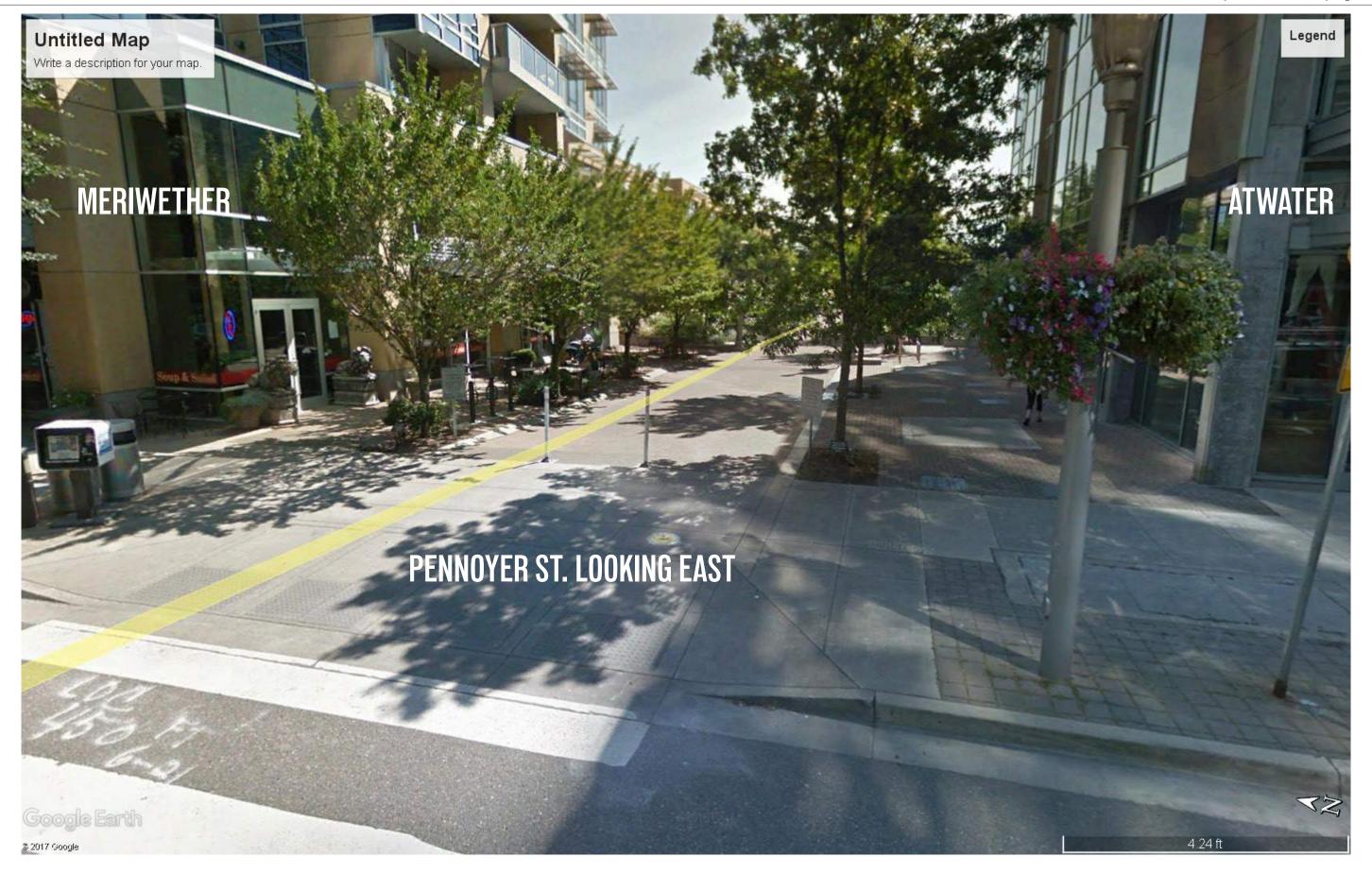
- 1. Simplify Massing, Especially on River Parkway
 - •Removed Red Accent Reveal
 - Combined Brick Massings on River Parkway and Carried Cembrit Massing through Brick Massing to Match Language Throughout Building
 - •Simplified Base and Pilaster on all Street Frontages
- 2. Ribbon Language along River seem Incongruent with other Builidng Vocabulary
 - River Elevations has Consistent Vocabulary of Push-Through or In-Fill within End of Brick Frames.
- 3. Simplify Window Patterning in Brick Masses
 - Regularized Pattern of Two Story Window Surrounds by Lining-Up Window Bays Vertically and Horizontally instead of Staggering Pattern.
- 4. Add More Commercial or Live/Work Conversion Space Along River
 - Wrap Around Dock/Porch at NE Corner with Block-out for Future Wheelchair Lift. Units along River Parkway are Over-Framed and can be Removed for Future Conversion.

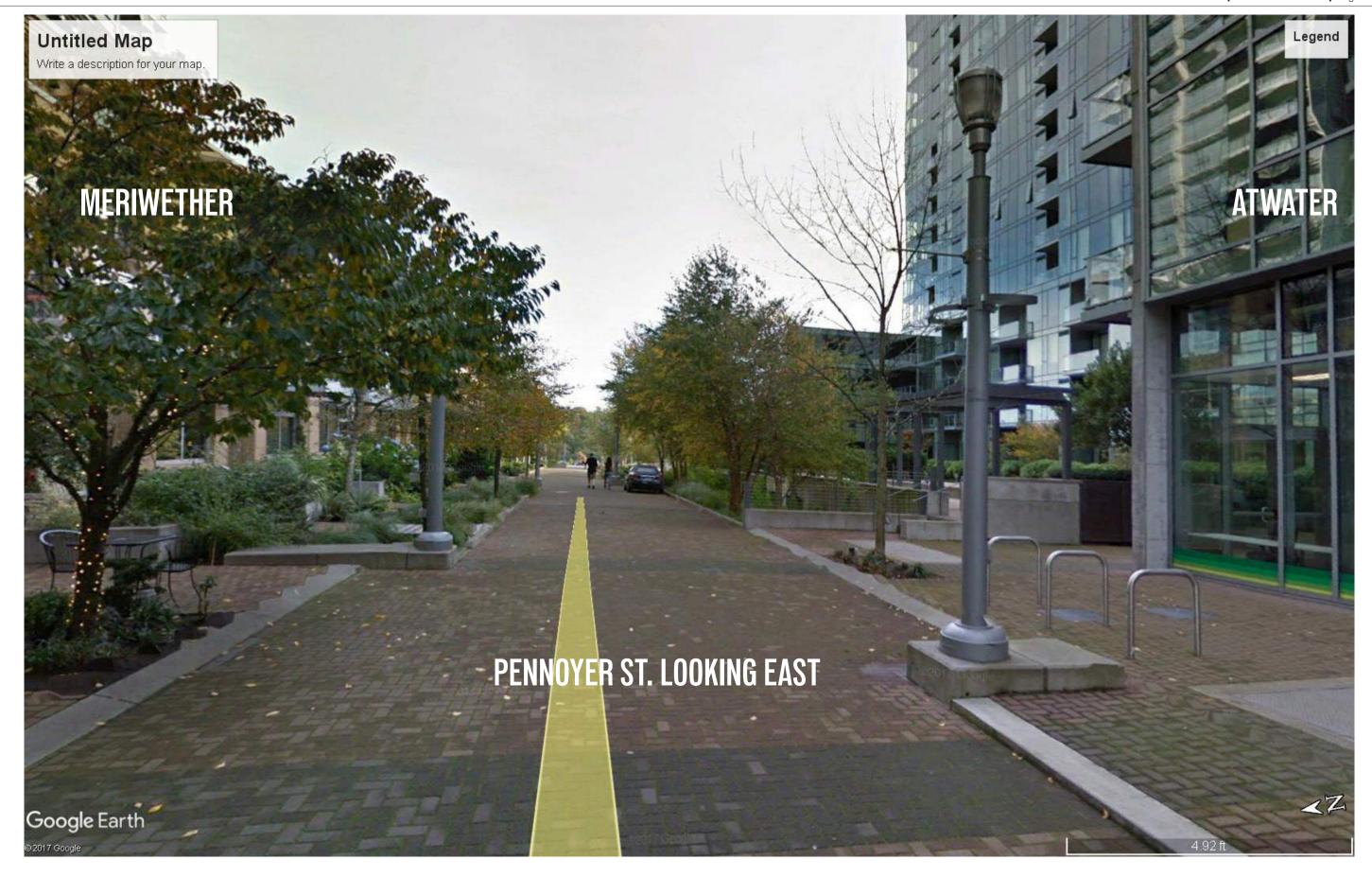


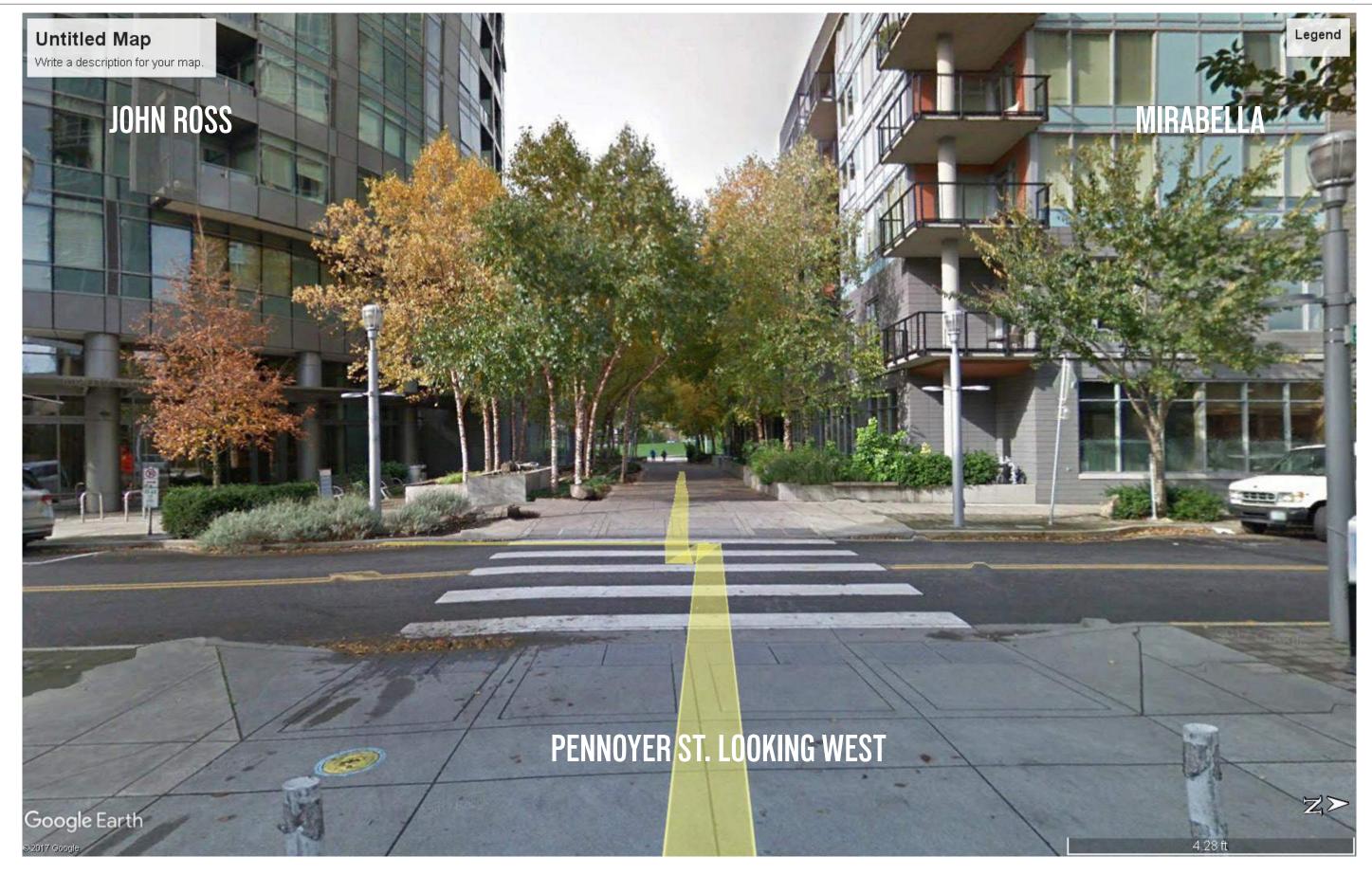
DESIGN REVIEW APPLICATION

GBD Architects Incorporated JONES ARCHITECTURE | PLACE Studio

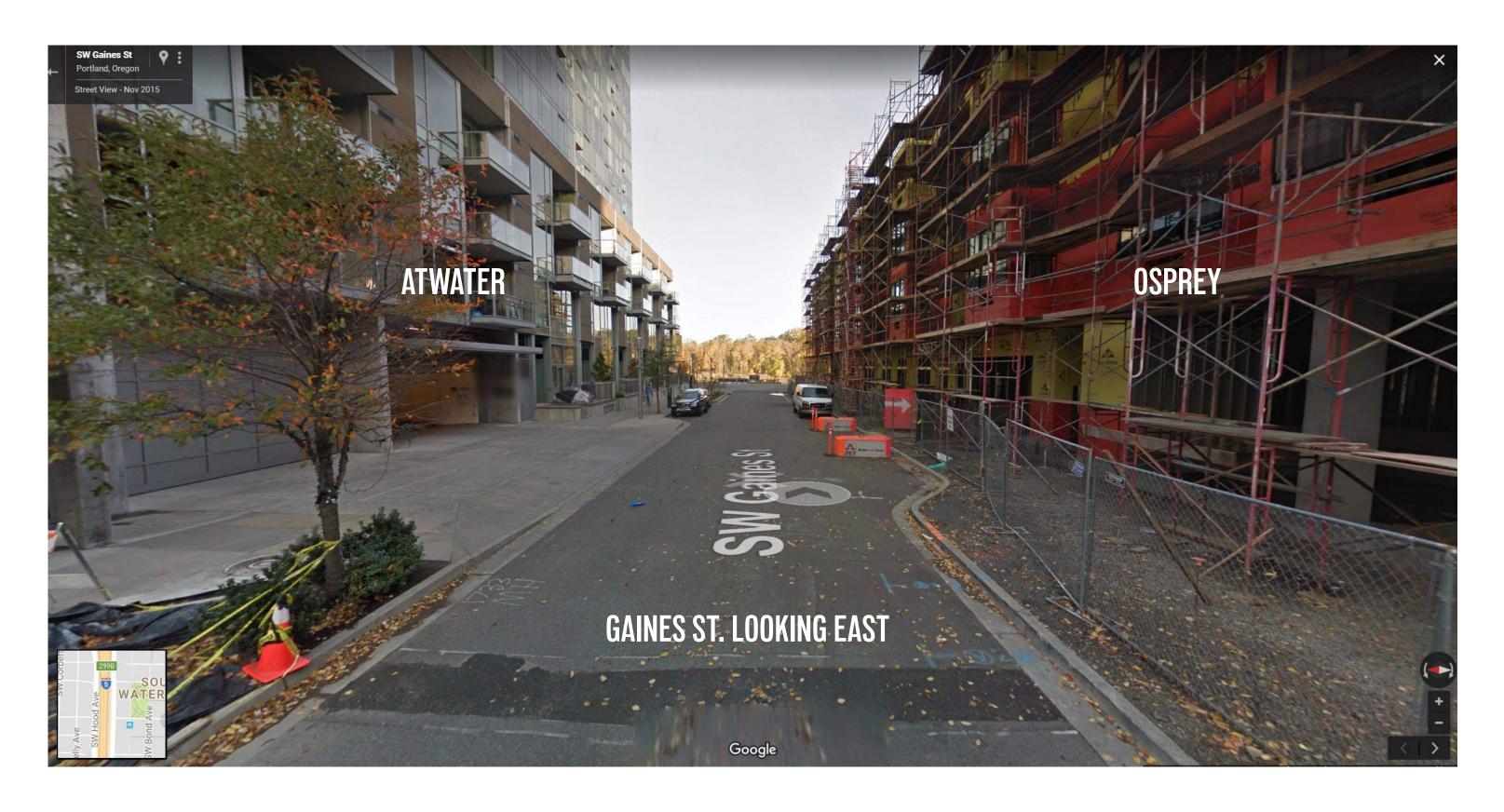
ADDITIONALS





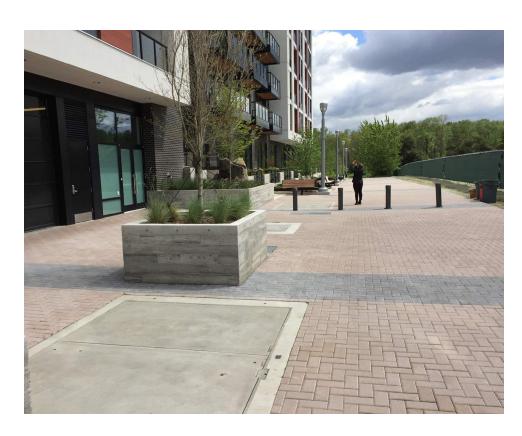








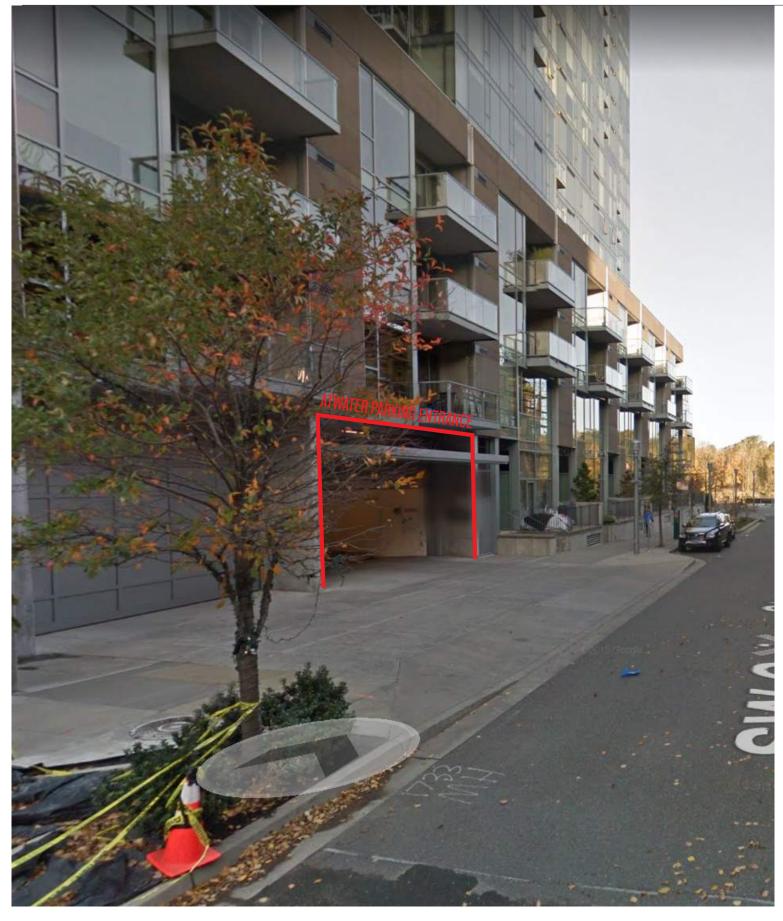
LANE ST. BOLLARDS

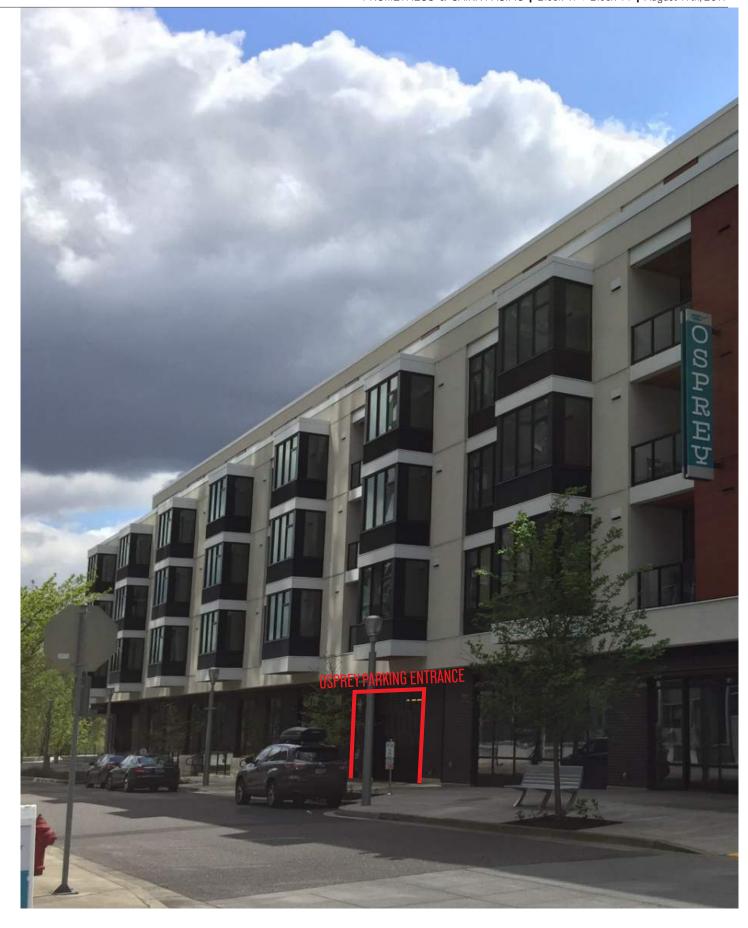


LANE ST. STREETSCAPE



LANE ST. STREETSCAPE





BACK TO BACK PARKING GARAGE PRECEDENT IN SOWA

0 8' 16' 32' CASE NO. LU 2016-283375 DZM





BLOCK 44 LOBBY ENTRANCE BLOW-UP



B44 OVERALL ROOF PLAN AREA FROM ABOVE: 63,245 SF

GREEN ROOF: 19,410 SF (30.7%)
PAVED ROOF:12,568 SF (19.9%)

TPO ROOF: 21,626 (34.2%)

MECHANICAL AREAS: 3,240 SF (5%) CANOPY ROOFS: 3,634 SF (5.7%) PARAPETS: 2,821 SF (4.5%) B41 OVERALL ROOF PLAN AREA FROM ABOVE: 53,542 SF

GREEN ROOF: 21,176 SF (39.5%) PAVED ROOF: 10,194 SF (19%) TPO ROOF: 18,306 SF (34.2%)

MECHANICAL AREAS: 1,330 SF (2.5%)

CANOPY ROOFS: 366 SF (0.7%)
PARAPETS: 2,170 SF (4.1%)

ROOF TAKEOFFS



PRODUCT DATA SHEET

DURO-LAST® 60-MIL MEMBRANE

Advantages:

Duro-Last 60-Mil (DL60) membrane is an excellent choice for projects requiring a long lasting, energy efficient roofing membrane. The membrane is available in prefabricated sections or as roll goods. A complete line of custom prefabricated accessories is available for the DL60 membrane.

Description:

DL60 membrane is composed of PVC film laminated to both sides of a reinforcement fabric (weft-inserted scrim).

Duro-Last membranes must not be used with Duro-Last EV membranes.

PVC Film - Proprietary thermoplastic PVC formulation of resins, plasticizers, stabilizers, biocides, flame retardants, and U.V. absorbents.

• PVC film above weft-inserted scrim - 28 mil

Weft-Inserted Scrim - An 18 x 14 polyester fabric construction with weft insertion, composed of 840 x 1000 denier threads, provides superior tear and puncture resistance. The polyester thread is treated to prevent wicking.

Total Thickness - 60 mil, nominal.

Weight - 0.36 lb. per square foot.

Colors - White, tan, gray and dark gray.

R-Value – 0.1 ft²·°F·hr/Btu.

Available Configurations:

Prefabricated Sections – DL60 is available in prefabricated sections up to 1,500 sq. ft. and is rolled on a carpet tube (maximum 65 ft. wide x 23 ft. long).

Roll Good - Typical Dimensions

Width	Length (max.)	Roll Area	Approx. Weight	Approx. Coverage ¹
64 inches	100 ft.	533 sq. ft.	192 lb.	483 sq. ft.
48 inches	100 ft.	400 sq. ft.	144 lb.	350 sq. ft.
32 inches	100 ft.	267 sq. ft.	96 lb.	217 sq. ft.
16 inches	100 ft.	133 sq. ft.	48 lb.	83 sq. ft.

¹ Assuming 6-inch overlap

Energy Efficiency:

White DL60 membrane is an excellent product for complying with California Title 24, LEED® and other energy efficiency programs requiring the use of a highly reflective roof membrane. It is an ENERGY STAR® qualified product.



Cool Roof Rating Council (CRRC)¹

	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
	Initial	3-yr	Initial	3-yr	Initial	3-yr
White	0.88	0.68	0.87	0.84	111	82
Tan	0.39	0.33	0.89	0.89	43	35
Gray	0.47	0.40	0.89	0.89	54	45
Dark Gray	0.26	0.25	0.88	0.89	26	25

¹ Duro-Last's CRRC Product ID: 0610.

LEED & LEED-EB Credits - White DL60 membrane alone can obtain 1 credit in either U.S. Green Building Council's LEED or LEED-EB programs. In combination with other design criteria the membrane may help attain other credits.

-		
ſ	LEED Credit Category	Duro-Last Attribute
	Sustainable Sites Credit 7.2 Heat Island Effect: Roof	Solar Reflective Index (SRI) SRI = 111
ĺ	LEED-EB Credit Category	Duro-Last Attribute
ſ	Sustainable Sites Credit 6.2	ENERGY STAR Qualified

Thermal Emittance = 0.87

Warranty:

The following warranties are available for projects utilizing DL60 membrane. Contact Duro-Last for warranty details.

	Available Warranties				
Supreme	15-YR NDL	15 + 5 Material Only ² 1		15 + 5 ²	
Ultra	15-YR Hail ¹	15-YR Hail & High Wind ¹	15-YR High Wind ¹	20-YR High Wind ¹	
Basic	15-YR NDL ¹		20-YR NDL ¹		
Residential	15-YR Material Only ¹		20-YR Material Only ¹		

¹ Excludes consequential damage coverage

Heat Island Effect: Roof

DURO-LAST® 60-MIL MEMBRANE

Codes and Standards:

Underwriters Laboratories (US & Canada), FM Approvals, ICC-ES (ESR-1660), Canadian Construction Materials Centre (CCMC 13299-L), State of Florida, Miami-Dade County, Texas Department of Insurance.

Storage:

BLOCK 41 AND 44 ROOFING COLORS

Store rolls lengthwise on pallets. Use tarps to keep rolls dry.

Membrane Attachment

Mechanically Fastened – DL60 membrane may be mechanically attached to a variety of roof deck and wall materials. An appropriate slip sheet or cover board may be required. Refer to the Duro-Last Mechanically Fastened Systems Specification for prefabricated system requirements. If using roll goods, refer to the Roll Good Mechanically Fastened Systems Specification.

Duro-Bond® System – The Duro-Bond system (induction weld) may be used to attach DL60 membrane. Refer to the Duro-Last Duro-Bond System Specification for system requirements.

Adhered – DL60 membrane may be adhered to a variety of properly prepared roof decks, walls, cover boards and insulations. Refer to the Duro-Last Adhered Systems Specification for system requirements.

Physical Properties:

DL60 membrane has been subjected to the tests required by ASTM 4434 "Standard Specification for Poly (Vinyl Chloride) Sheet Roofing" and has been classified as a Type III, internally reinforced sheet. The results of each test are listed below. ASTM's Overall Thickness requirements for the membrane are plus or minus 10% (nominal) of the listed Typical Value.

Physical Property	Test Method	ASTM D4434 Requirement	Result	Typical Value
Overall Thickness	ASTM D751	≥ 0.054 and ≤ 0.066 in. (≥ 54 and ≤ 66 mil)	PASS	0.060 in. (60 mil), nominal
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	PASS	0.028 in. (28 mil)
Breaking Strength ¹	ASTM D751 Grab Method	≥ 200 lbf./in.	PASS	390 x 438 lbf./in.
Elongation ¹	ASTM D751 Grab Method	≥ 15%	PASS	31% x 31%
Seam Strength	ASTM D751 Grab Method	≥ 328 lbf. (75% of Breaking Strength.)	PASS	431 lbf.
Tear Strength ¹	ASTM D751 Procedure B	≥ 45 lbf.	PASS	132 x 163 lbf.
Low Temp. Bend	ASTM D2136	Must pass at -40° F.	PASS	PASS
Heat Aging	ASTM D3045	Conditioned for 56 days in oven maintained at 176° F.	PASS	PASS
Accelerated Aging	ASTM G154 (Formerly G53)	5,000 hours total test time. Irradiance level of 0.68 W/m2-nm. Cycle: 8 hours at 145° F, 4 hours condensation at 122° F	PASS	PASS
Dimensional Stability ¹	ASTM D1204	Conditioned for 6 hours in oven maintained at 176° F. Allowable change: ≤ 0.5%	PASS	-0.45% x -0.20%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	PASS	2.6%
Static Puncture	ASTM D5602	≥ 33 lbf.	PASS	56 lbf.
Dynamic Puncture	ASTM D5635	≥ 14.7 ft-lbf. (20 J)	PASS	≥ 14.7 ft-lbf. (20 J)

¹ Typical values are shown for both machine and cross machine directions. The machine direction results are listed first.

Additional Tests

Fungi Resistance	ASTM G21	No sustained growth or discoloration
Moisture Vapor Transmission	ASTM E96, Proc. B, Method A	< 0.35 U.S. perms

















www.duro-last.com 1 of 2 800-248-0280

Duro-Last, "World's Best Roof", and Duro-Bond are registered trademarks owned by Duro-Last, Inc.

LEED is a registered trademark owned by the U.S. Green Building Council. ENERGY STAR is a registered trademark owned by the U.S. Environmental Protection Agency.

Created: 09/01/2012 Revised: 11/13/2013, 05/28/2014, 06/05/2014, 01/23/2015, 05/18/2015, 01/22/2016, 02/15/2016

www.duro-last.com

2 of 2

800-248-0280

Duro-Last, "World's Best Roof", and Duro-Bond are registered trademarks owned by Duro-Last, Inc.

LEED is a registered trademark owned by the U.S. Green Building Council. ENERGY STAR is a registered trademark owned by the U.S. Environmental Protection Agency.

Created: 09/01/2012 Revised: 11/13/2013, 05/28/2014, 06/05/2014, 01/23/2015, 05/18/2015, 01/22/2016, 02/15/2016

BLOCK 44 ROOFING MATERIALS

² Excludes consequential damage coverage for last 5 years.

