



Photo: Corner of SW Oak and Broadway



Photo: Existing ramp to upper level parking



Photo: Aerial plan view

### **OVERVIEW** - BUILDING AT A GLANCE

### **Current Building Name:**

Motorbank Building

### Other Names:

Addition to the US National Bank Building, US Motorbank Building

### **Street Address & City:**

650 Oak Street Portland, Oregon 97205

### **Date of Construction:**

1956

### **Architect:**

SOM (Skidmore, Owings, Merrill)
Portland Office and Pietro Bellushi

### Style:

Mid-Century Modernist, International Style

### **Historic Status:**

No formal status

### **Construction Type:**

Steel, concrete slab, tinted glazing, aluminum facade detail, granite column wraps at base, and granite sidewalk barriers

### **Footprint Size:**

100'x100' (10,000 squre feet)

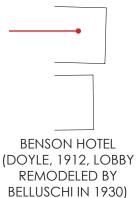
### Approximate Gross Square Footage:

50,000 sq. ft. Including basement

### MOTORBANK BUILDING | Overview

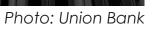


Photo: Benson Hotel



SW BROADWAY





UNION BANK BUILDING (ASHEN & ALLEN, 1969)



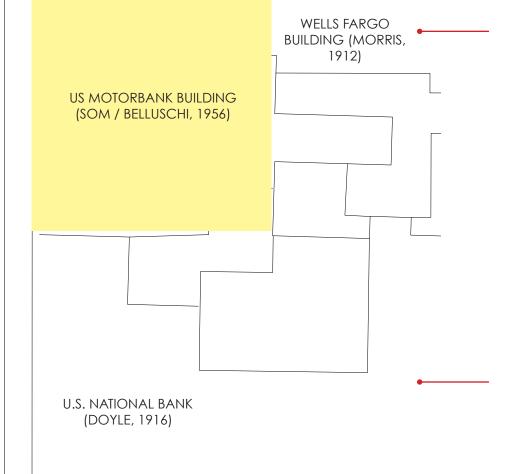




Photo: WFB Bldg.

### **BACKGROUND** | Context

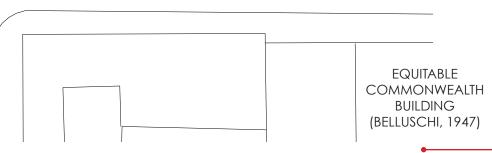
The US Motorbank Building was designed in partnership by Skidmore, Owings, Merrill (SOM) and Pietro Bellushi in 1956. It was built to serve as an addition to the US National Bank building. If was the first drive-through banking building in Oregon and possibly the United States.

The building plays an important contributing role to the historic fabric of the surrounding downtown area. It also contributes to the legacy of Pietro Belluschi's body of work in Portland.

It is surrounded on all sides by buildings that will soon achieve the 100 year mark. It occupies a special corner in Portland's urban fabric and serves as a gateway building at the beginning of Broadway's main urban artery.



Photo: US Nat. Bank



SW STARK STREET

Photo: Commonwealth Bldg.



MOTORBANK BUILDING | Historic Block Context

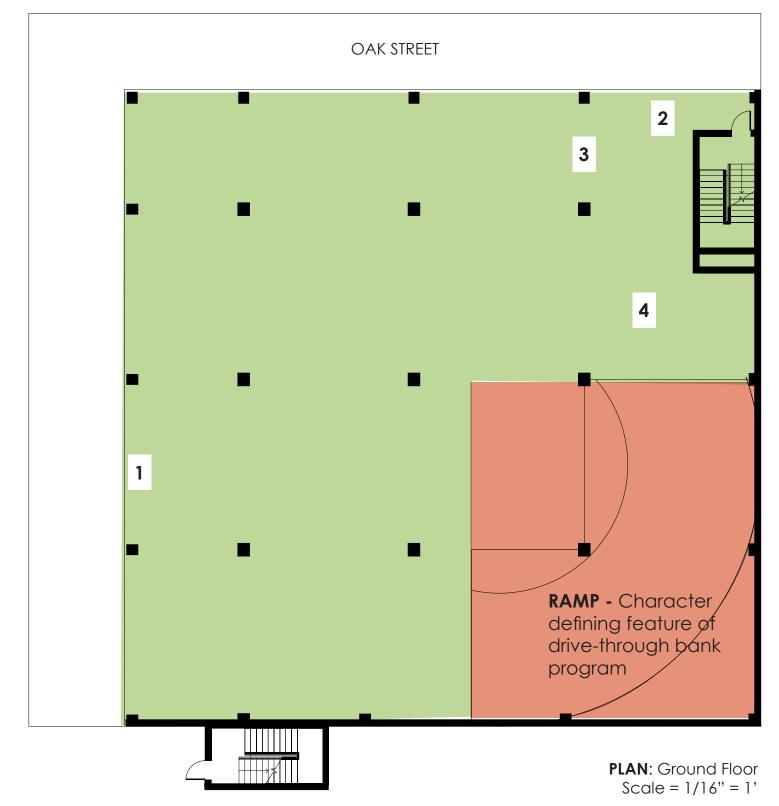




Photo: Broadway Car Exit



Photo: Oak St Ramp Entrance



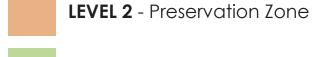
Photo: Oak St Parking Kiosk



Photo: Oak St view of Ramp

### **LEGEND**





**LEVEL 3** - Rehabilitation



**Level 1** - most sensitive area based on architectural character and integrity of historic fabric.

**Level 2** - sensitive area with important character-defining features and spaces to be retained.

**Level 3** - rehabilitation zones to retain important character elements while accommodating new contemporary needs.

**Level 4**-'free' zone, where more extensive changes can take place (seismic upgrades, new HVAC, etc.).

### **NOTES:**

The ground floor is entirely open to the exterior and operates today as the entry point for drive-through banking services. Cars enter from Oak Street and exit onto Broadway. Car have the option of driving through and using the banking drop off box or parking and entering the U.S. National Bank from a side entrance. There is a small coffee kiosk on the Broadway side.

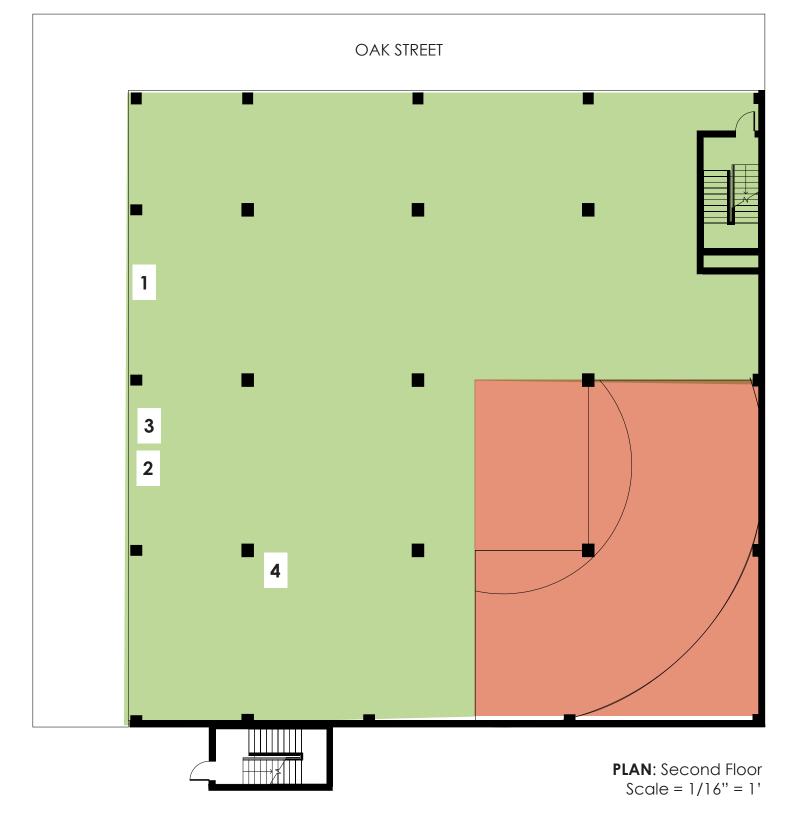






Photo: Visible spandrel section

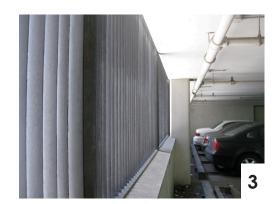
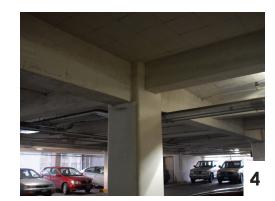
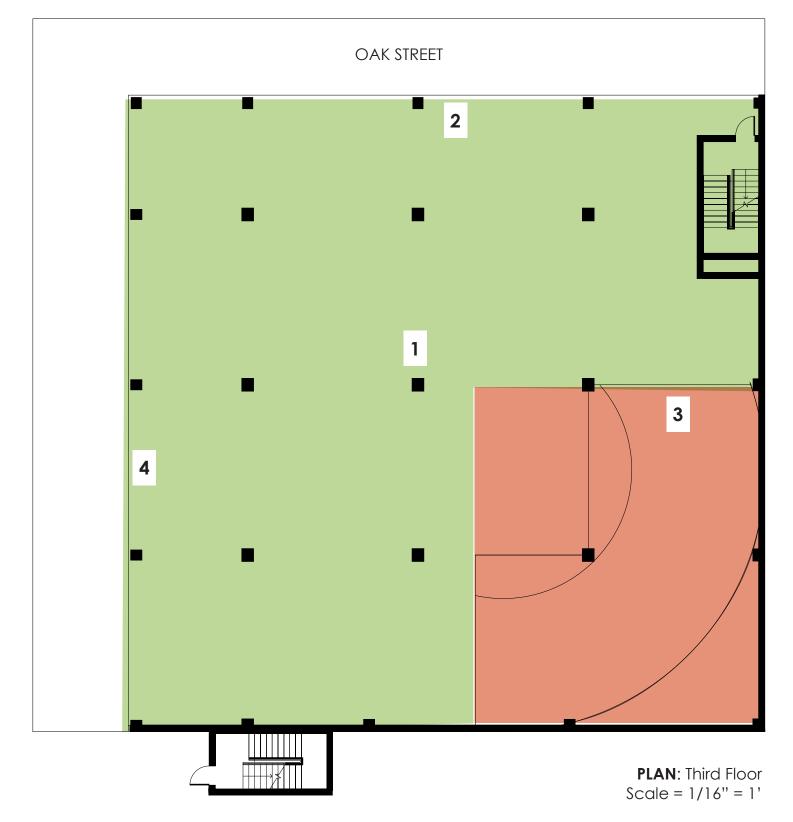


Photo: Steel screen



The second floor has a very low ceiling height since it is programmed for car parking only. The second floor is still completely exposed to the exterior. Steel slats form a facade screen to block the view of parked cars from the outside. On the second floor, the steel slats do not go to the floor and show the spandrel of the facade expressed.



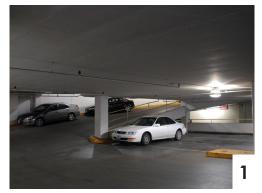


Photo: Low ceiling

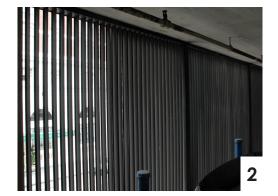


Photo: Steel screen

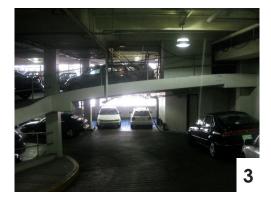


Photo: Ramp structure



Photo: Steel screen

The third floor like the floor below is still completely exposed to the exterior and has a low floor to ceiling height. On the third level, the steel slats go from floor to ceiling and there is no spandrel expressed.

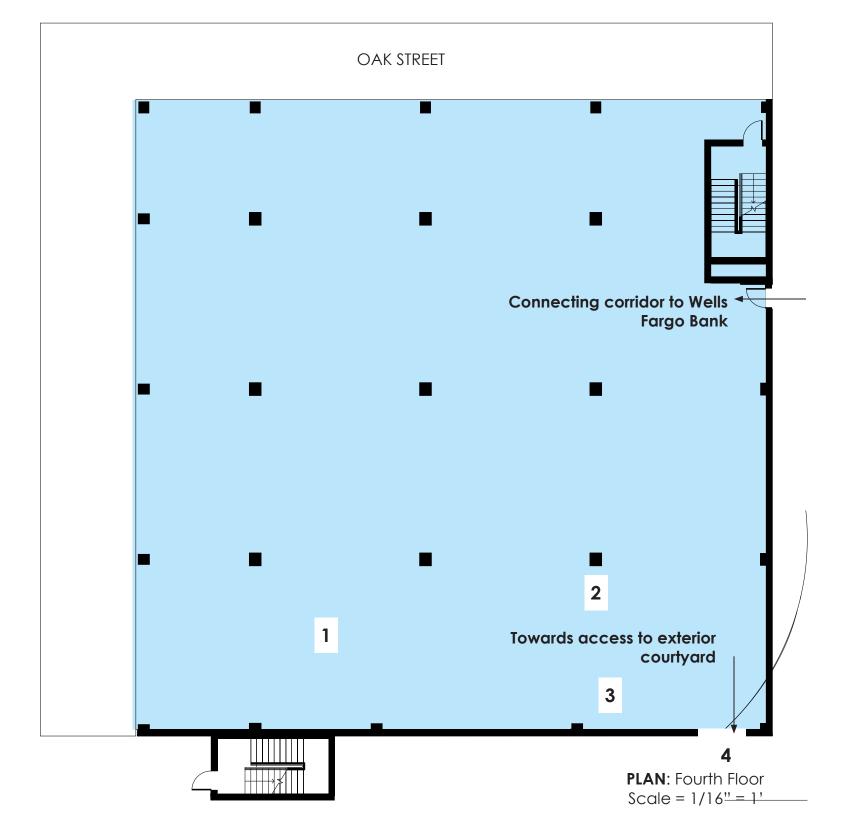




Photo: Typical Conference Rm.



Photo: Wood paneled column



Photo: Employee break room



Photo: Shared courtyard

The fourth floor is the first floor that is enclosed and separated from the exterior by glazing. It has a connection on the east wall into the adjacent Wells Fargo Bank. It also has an open adjacency on the South wall to a common kitchen and shared exterior courtyard. The floor is leasable office space. Elevator access is from the adjacent Wells Fargo Bank.

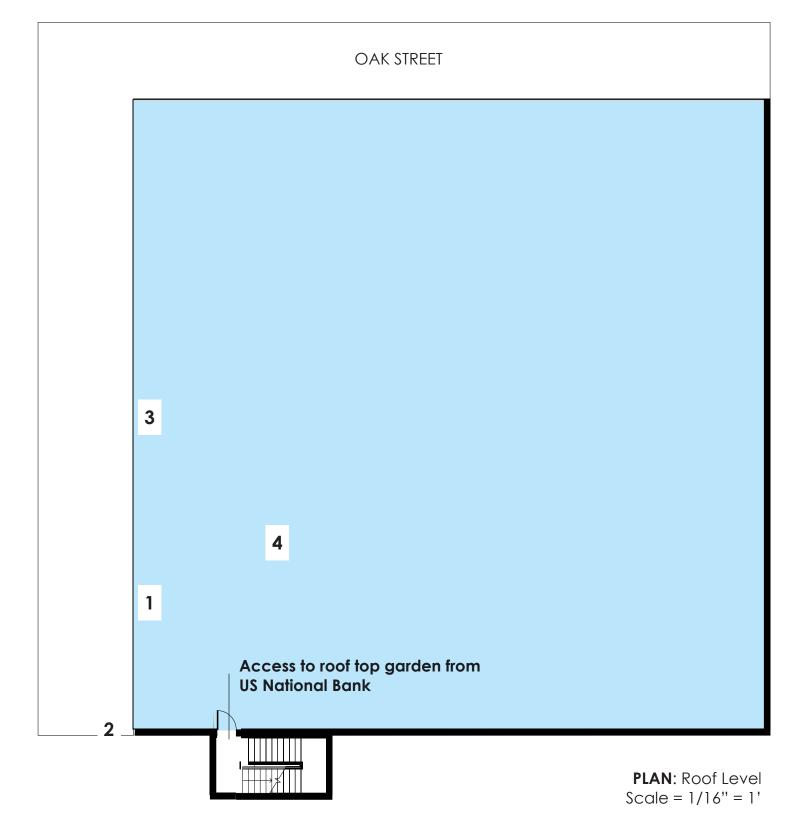




Photo: Roof detail of aluminum



Photo: Cornice of U.S. Bank



Photo: Condition of parapet



Photo: Roof Terrace

The roof is accessed via an elevator and stairwell that are apart of the US National Bank. A small rooftop terrace with table and chairs exists. The roof provides a close up view of the cornice detailed of the US National Bank.

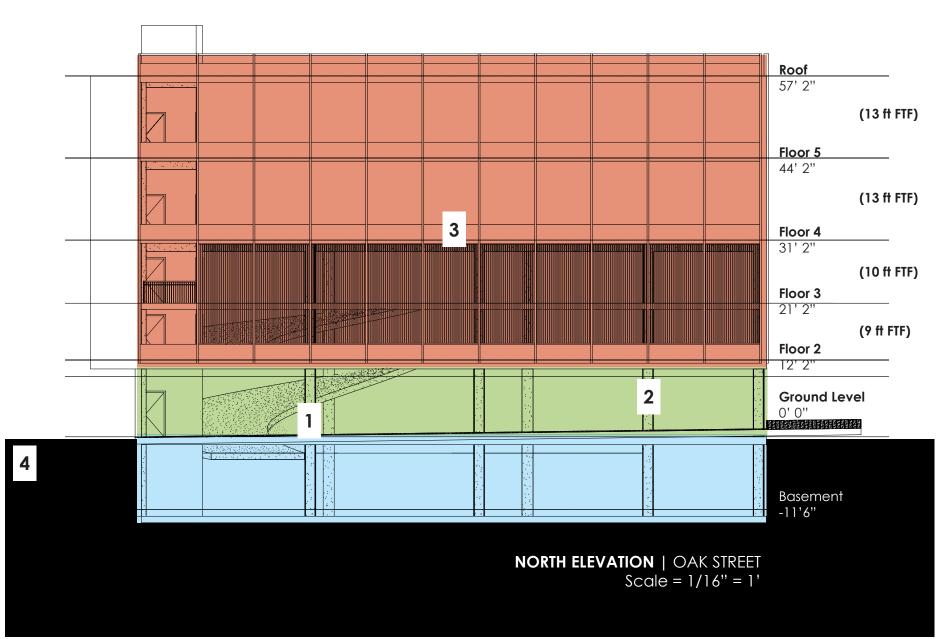




Photo: Oak St Facade



Photo: Granite column cover



Photo: Oak St facade



Photo: View from Big Pink Plaza

## MOTORBANK BUILDING | Architectural Character - Exterior

University of Oregon Eco-Preservation (Falsetto) Spring 2009 Masaye Harrison

Oak Street is a minor artery compared to Broadway. The North facade along Oak Street seams with the Wells Fargo Bank and provides the primary entrance for cars into the Motorbank structure. Due to the low height of Big Pink's podium, the North facade receives excellent morning sunlight. The facade is broken down into a 27' primary structural grid with 9' module increments.

**NOTES:** 

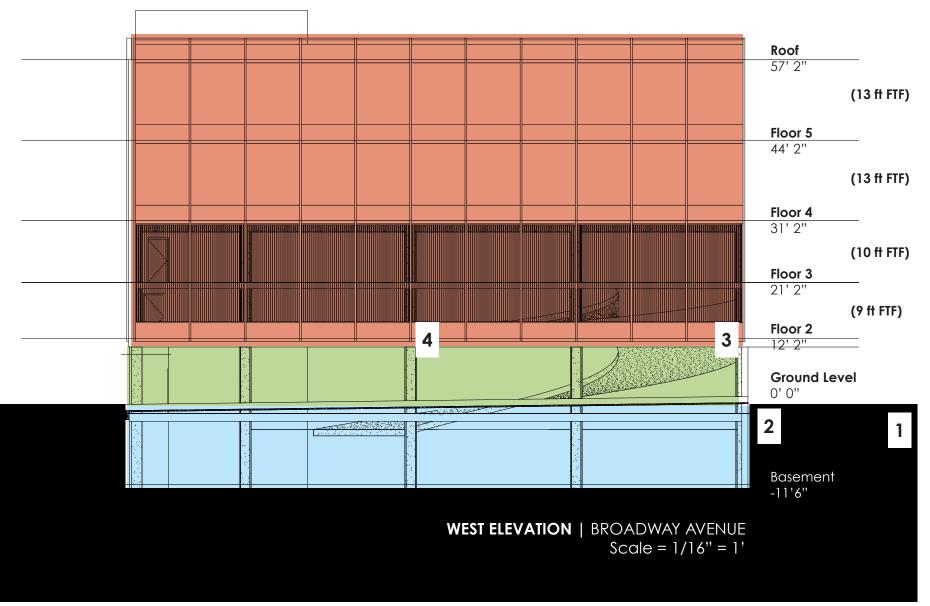




Photo: Broadway facade



Photo: Seam with US Nat. Bank

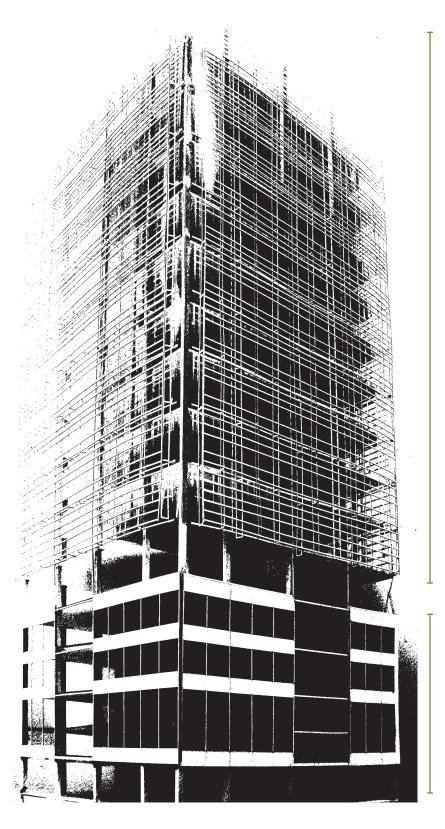


Photo: Aluminum acade detail



Photo: Aluminum facade detail

The West facade is along the dominant urban artery of Broadway and provides the primary exit for cars leaving the Motorbank structure. It seams with the US National Bank building. The regulating line of the façade line up with key lines of the US National Bank building. The cornice of the US National Bank building slightly protrudes towards the north over the Motorbank building structure.



Proposed new addition of class A office space inserts itself into the historic podium of the U.S. Motorbank building and expresses new technologies in the form of a double skin.

Existing Motorbank building adaptive to serve as urban hub for bike storage and supporting facilities with retail and resturant opportunities at the ground floor.

New Addition



Source: Web, designer N/A

Open Office
Layout to
support
daylighting
strategies
(Image source:
web)

Creating large

Urban bike

storage and

supporting

and retail

facilities.

shower, rental

Source. Web, designer IV/A



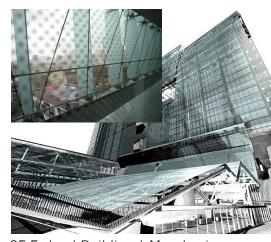
NY Times Building | FXFowler & Renzo Piano





Bike Storage, photo web.

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SF Federal Building | Morphosis

NY Times Building unitized curtain wall system with ceramic rod screen was constructed by local Portland, OR company Benson Global

NY Times Building | FXFowler & Renzo Piano



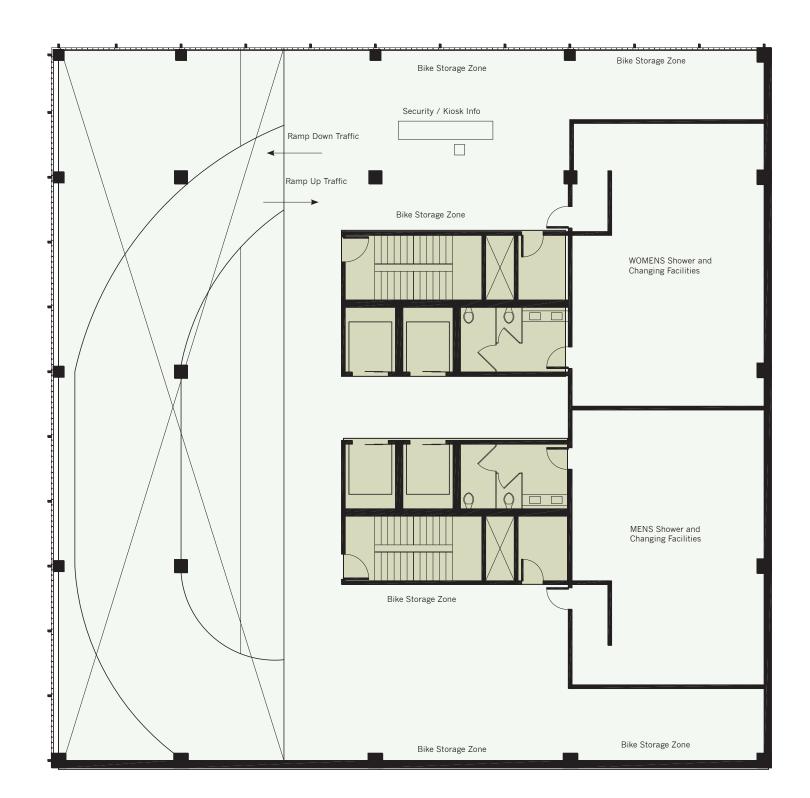
Exterior

Interior



Main entrance for cyclists off of Oak St
Urban Bike Storage Center
Main entrance for office workers off of Broadway
Business Lobby
Restaurant and Retail lease opportunities
Rainwater collection tank located (under ramp)
Grey water recyling mechanical room
Trash and recyling storage
2 Reserved Flex car parking spaces along Oak Street
2 Security / Kiosk info points

Core:
Restrooms
Vertical circulation
IT Closet
Mechanical shaft



Urban Bike Facilities
Users: Building occupants, downtown commuters

Size: 4000 square feet (minus core)

Program:

Bike Storage with 24 hour access Shower and Changing Rooms 2 small seminar rooms for 20 ppl.

Core: Restrooms Vertical circulation IT Closet Mechanical shaft

PLAN: FLOOR 3 | BIKE STORAGE AND SHOWER FACILITIES

**SCALE:** 1/16TH" = 1'



Rentable Business / Meeting Rooms Renters: Downtown seminars, offsites, company meetings

Size: 6000 square feet (minus core)

### Program:

- 1 community staircase/seating for lounging and presentations
- 2 large conference rooms
- 2 small seminar rooms for 20 ppl.
- 1 large seminar room for 30 ppl.

copy/printer/fax room kitchen / catering room

Core:

Restrooms Vertical circulation IT Closet Mechanical shaft

PLAN: FLOOR 7 | SHARED BUSINESS / MEETING CENTER

**SCALE:** 1/16TH" = 1'



Half Floor Traditional Office Layout Leasee: Small law firm with need for closed offices

Size: 3000 square feet (minus core)

Program:

1 receptionist plus greeting area

6 support cubicles

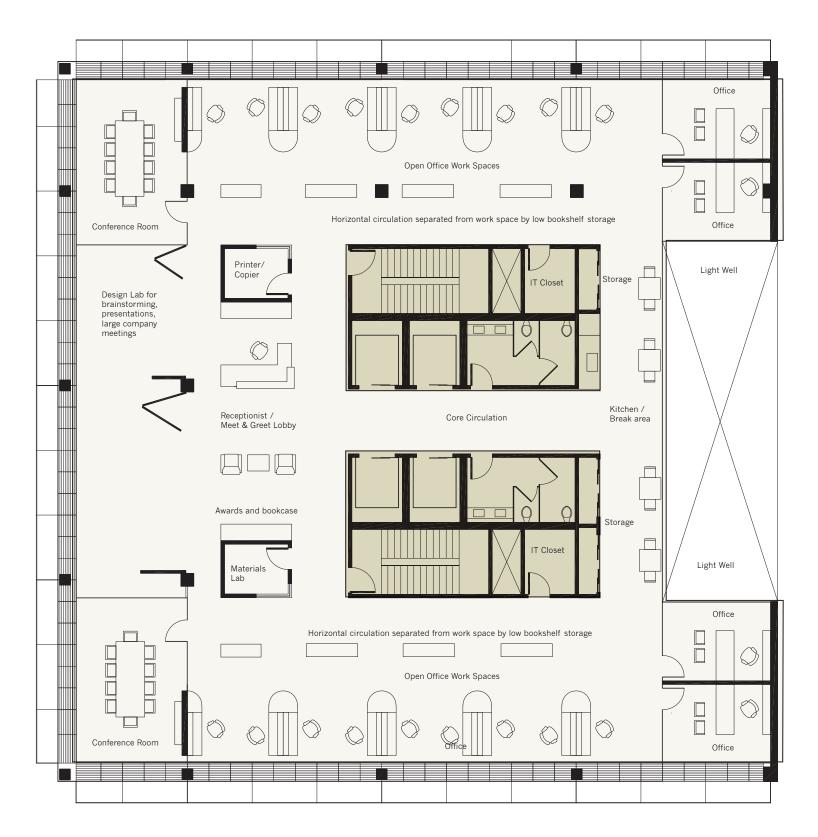
4 closed offices

2 large conference rooms copy/printer/fax room kitchen / breakroom storage

Core: Restrooms Vertical circulation IT Closet

Mechanical shaft

**PLAN:** FLOOR 8 | TYPICAL HALF OFFICE LAYOUT **SCALE:** 1/16TH" = 1'



Full Floor Open Office Layout Leasee: Small architecture with 20-40 ppl.

Size: ~6000 square feet (minus core)

#### Program:

1 receptionist plus greetings area copy/printer/fax room

18 open desk units with room for 18 more

4 closed offices

2 large conference rooms

1 large design lab space materials lab kitchen / breakroom

storage

Core:

Restrooms

Vertical circulation

IT Closet

Mechanical shaft

**PLAN:** FLOOR 14| TYPICAL OPEN OFFICE LAYOUT **SCALE:** 1/16TH" = 1'



**NORTH SECTION:** SW Oak Street & Main Cyclist Entry **SCALE:** 1/10TH" = 1'

**WEST SECTION:** Broadway and Main Business Lobby Entrance **SCALE:** 1/10TH" = 1'



Horizontal Brise Soleil to manage direct sun exposure

Mesh fins to manage side solar exposure

Opening in facade slats at eye level to maximize views and daylighting

Photovotalic shelves on southern facade to generate energy and mitigate high sun angle exposure

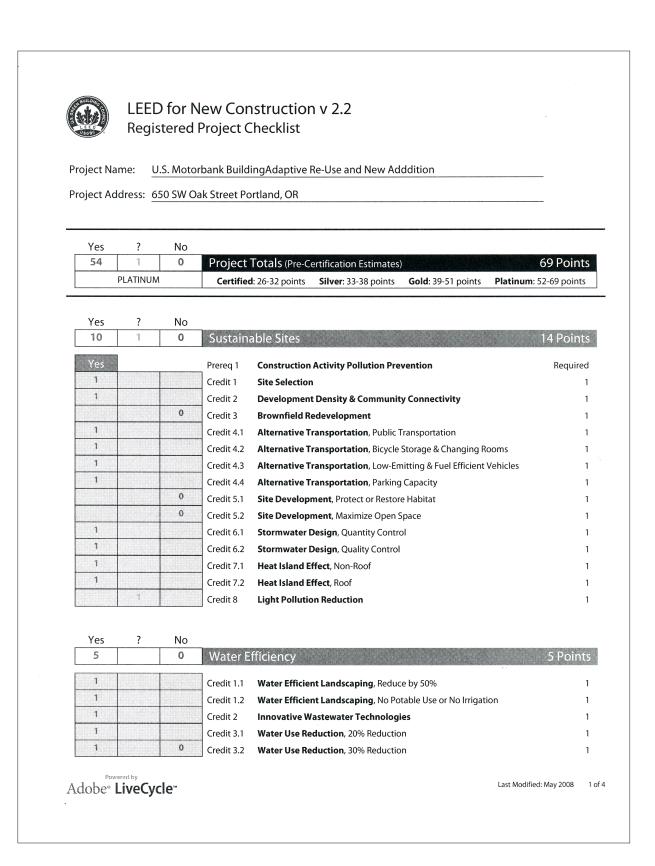
Double skin with 30" catwalk cooridor for maintenance access

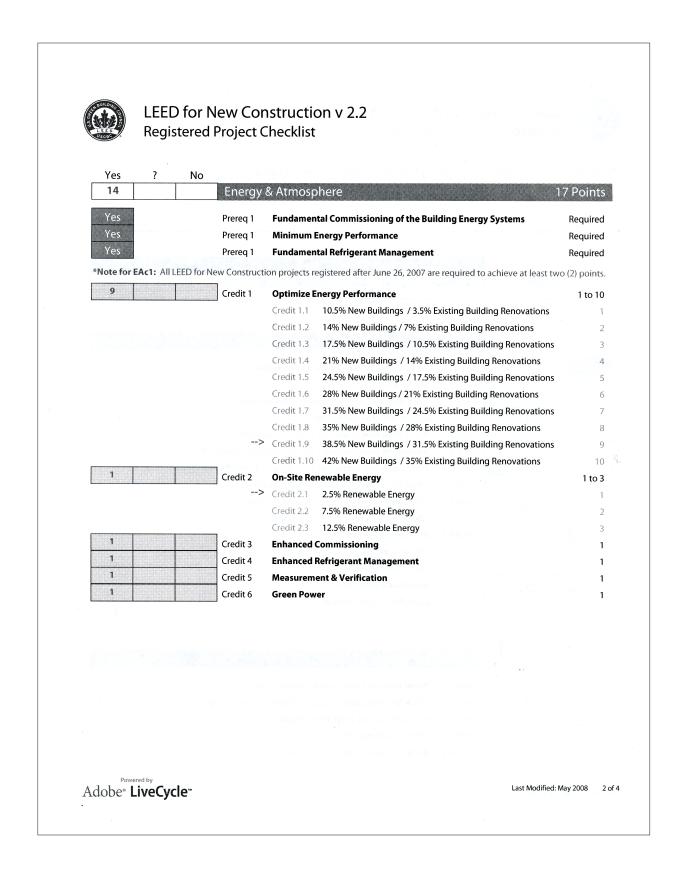
Double skin provides both active and passive ventilation with programmable sensors



**NORTH ELEVATION:** SW Oak Street & Main Cyclist Entry **SCALE**: 1/10TH" = 1'

**WEST ELEVATION:** Broadway and Main Business Lobby Entrance **SCALE:** 1/10TH" = 1'





### MOTORBANK BUILDING | LEED v2.2 Checklist | Goal: Platinum

10 2 3				nstruction v 2.2 Checklist	
Yes	?	No			
7		0	Materia	lls & Resources	13 Points
Yes			Prereq 1	Storage & Collection of Recyclables	Required
1			Credit 1.1	<b>Building Reuse,</b> Maintain 75% of Existing Walls, Floors & Roof	1
		0	Credit 1.2	<b>Building Reuse,</b> Maintain 95% of Existing Walls, Floors & Roof	1
		0	Credit 1.3	<b>Building Reuse,</b> Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	Construction Waste Management, Divert 50% from Disposal	1
1			Credit 2.2	Construction Waste Management, Divert 75% from Disposal	1
		0	Credit 3.1	Materials Reuse, 5%	1
		0	Credit 3.2	Materials Reuse, 10%	1
1			Credit 4.1	Recycled Content, 10% (post-consumer + 1/2 pre-consumer)	1
		0	Credit 4.2	Recycled Content, 20% (post-consumer + 1/2 pre-consumer)	1
1			Credit 5.1	Regional Materials, 10% Extracted, Processed & Manufactured	
		0	Credit 5.2	Regional Materials, 20% Extracted, Processed & Manufactured	1
1			Credit 6	Rapidly Renewable Materials	
Yes	?	No	7		
Yes 14	?	No 0	Indoor	Environmental Quality	15 Point
	?		Indoor Prereq 1	Environmental Quality  Minimum IAQ Performance	
14	?		_		Require
Yes Yes	?		Prereq 1	Minimum IAQ Performance	Required Required
Yes Yes 1	?		Prereq 1 Prereq 2	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring	15 Point Required Required
Yes Yes 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation	Required Required
Yes Yes 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction	Required Required
Yes Yes 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy	Required Required
Yes Yes 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 3.2 Credit 4.1 Credit 4.2 Credit 4.3	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.4	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems Low-Emitting Materials, Composite Wood & Agrifiber Products	Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.4 Credit 5	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems Low-Emitting Materials, Composite Wood & Agrifiber Products Indoor Chemical & Pollutant Source Control	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.4 Credit 5 Credit 6.1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems Low-Emitting Materials, Composite Wood & Agrifiber Products Indoor Chemical & Pollutant Source Control Controllability of Systems, Lighting	Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.4 Credit 5 Credit 6.1 Credit 6.1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems Low-Emitting Materials, Composite Wood & Agrifiber Products Indoor Chemical & Pollutant Source Control Controllability of Systems, Lighting Controllability of Systems, Thermal Comfort	Required Required
Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	?		Prereq 1 Prereq 2 Credit 1 Credit 2 Credit 3.1 Credit 4.1 Credit 4.2 Credit 4.3 Credit 4.4 Credit 5 Credit 6.1 Credit 6.2 Credit 7.1	Minimum IAQ Performance Environmental Tobacco Smoke (ETS) Control Outdoor Air Delivery Monitoring Increased Ventilation Construction IAQ Management Plan, During Construction Construction IAQ Management Plan, Before Occupancy Low-Emitting Materials, Adhesives & Sealants Low-Emitting Materials, Paints & Coatings Low-Emitting Materials, Carpet Systems Low-Emitting Materials, Composite Wood & Agrifiber Products Indoor Chemical & Pollutant Source Control Controllability of Systems, Lighting Controllability of Systems, Thermal Comfort Thermal Comfort, Design	Require



Yes	?	No			
4			Innovation & Desi	ign Process	5 Points
1			Credit 1.1 Innovation i	n Design: Provide Specific Title	1
1			Credit 1.2 Innovation i	n Design: Provide Specific Title	1
1			Credit 1.3 Innovation i	n Design: Provide Specific Title	1
			Credit 1.4 Innovation i	n Design: Provide Specific Title	1
1			Credit 2 LEED® Accre	dited Professional	1

#### **LEED Checklist Summary**

#### Sustainable Sites:

Target all sustainable site points except those not applicable to an existing urban building adaptive re-use project that utilizes the full existing building footprint (i.e. brownfield, open space, and habitat restoration)

#### Water Efficiency

Portland's climate and moderate rainfall allow for all water efficiency points to be achieved with rainwater harvesting, green roof installations, use of rainwater for irrigation and the installation of a separate grey water toilet flushing system alongside traditional plumbing.

#### Energy and Atmosphere

The majority of Energy and Atmosphere points may be achieved by the installation of an active passive double skin envelop that allows for more optimized conditioning of the interior space by reducing loads on heating, cooling, and ventilation systems. Photovotalic panels on the southern facade meet minimum on-site energy generation requirements.

#### Materials and Resources

The most difficult of the categories to achieve points. While the use of bamboo flooring and certified wood interior details is easily achievable, the existing building re-use percentage points remain hard to achieve given the design goals of the adpative-reuse project.

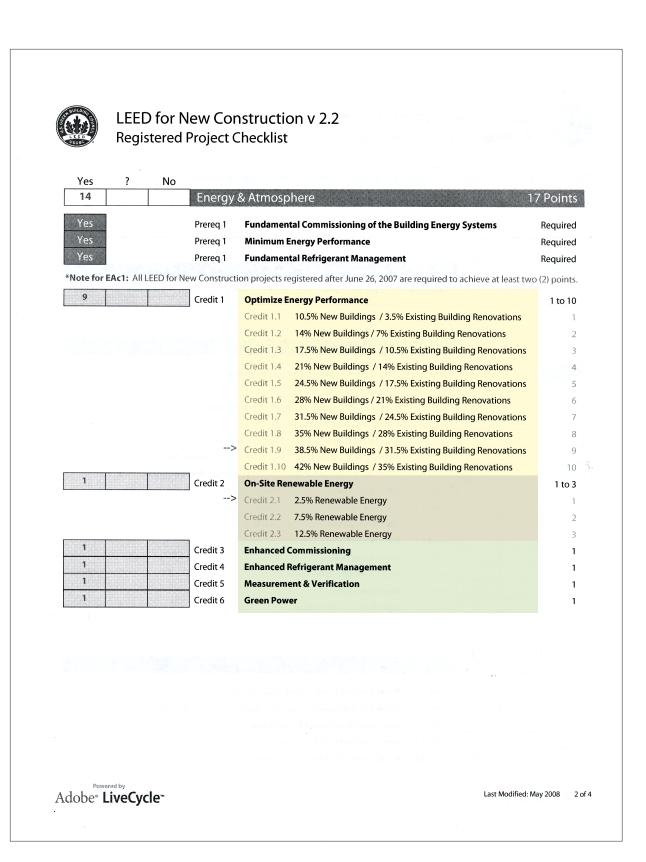
#### Indoor Environment Quality

Target all points except the 90% Daylight and Views which is not possible in the existing building.

#### Innovation and Design Process

Target points via the installation of a double skin envelop and monitoring equipment on the roof top surface to study synergistic relationships between green roof, cool roof and photovotalic surfaces. Also create a building "dashboard", a online data repository of how a building is performing to allow building occupants to stay informed of their working environment energy performance.

### MOTORBANK BUILDING | LEED V2.2 Checklist | Goal: Platinum



LEED rewards a high percentage of points to energy optimization. Optimized energy performance can be difficult to achieve without changing or updating character defining features of historic buildings.

Historic buildings could be allowed to exist in under optimized condition under the pre-tense that in the near future, advances in technology could offer less damaging options for optimized energy performance.

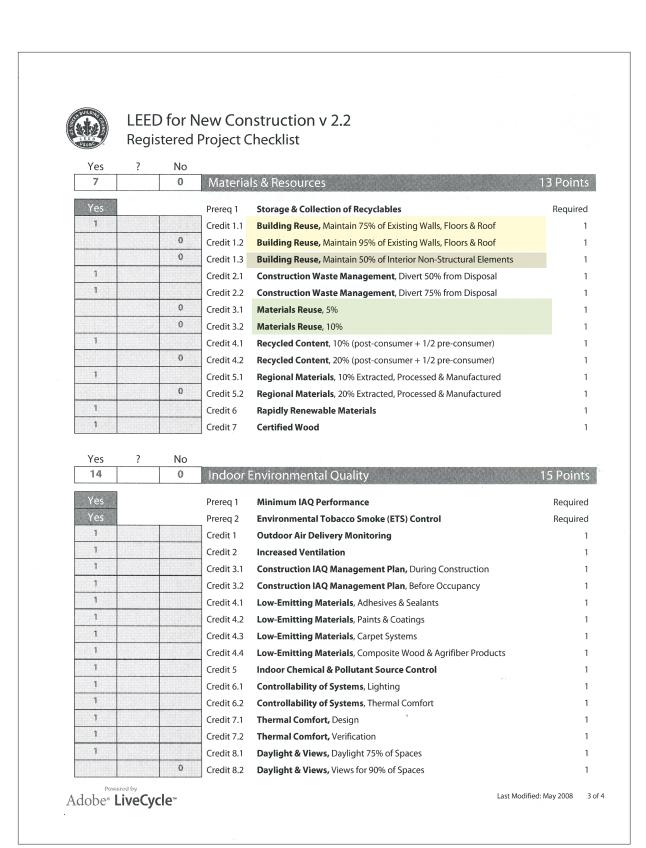
LEED rewards points for on-site renewable energy. On-site renewable energy can be difficult to achieve without changing or updating character defining features of historic buildings.

For example, a solar panel may be optimized in one position but may be deemed as to visually disturbing to the historic fabric and placed in a less optimized position away from visual sightlines.

LEED rewards points for commissioning and the measurement and verification of both the existing building and new addition together. While it may be advantageous for difference performance metrics to balance eachother out between the existing and the new addition, it does not help create an accurate story of the performance of the two built environments.

For example, a new addition could be heavily glazed while the existing building could be well insulated. Combining the measurement and verification of the buildings' energy performance may make the highly glazed new addition appear more energy efficient than if it existed on its own.

## MOTORBANK BUILDING | Preservation vs. LEED | Conflicts and Synergies



LEED rewards points for the re-use of 75% and up to 95% of a buildings existing walls, floor and roof. This may encourage new construction projects to seek out existing building stock to utilize as an adaptive re-use project.

While a positive, LEED may also encourage the "adaptive re-use" of buildings without rewarding projects that chose to retain and preserve character defining features of buildings that fall short of the 75% measurement.

LEED rewards points for the re-use of existing interior elements.

While a positive, LEED's arbitrary 50% metric does not consider that some adaptive re-use projects may wish to remove a majority of an existing buildings interior elements while highly preserving key elements that tell a building's story.

LEED rewards points for materials re-use. The percentage of material re-use is based on the entire project of both existing building and new addition.

While a positive from an adaptive re-use standpoint, it does not encourage true preservation. Additionally, LEED inadvertently keeps new additions from scaling up if they wish to pursue these material re-use points as it gets harder to meet the 5% and 10% material re-use requirement as a new addition grows in scale.

### MOTORBANK BUILDING | Preservation vs. LEED | Conflicts and Synergies