



# Multnomah County Courthouse Renovation Study

**Volume 2**  
**Final Report**  
**Appendix**  
**APRIL 13 2011**

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**VOLUME 2 - Appendix**

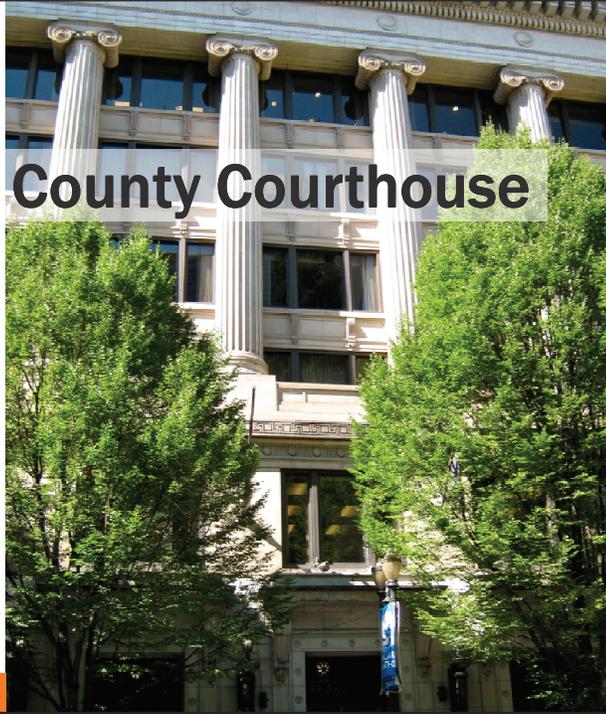
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**APPENDIX 1**  
**HISTORIC STATUS PRESENTATION**

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# Multnomah County Courthouse 1909-2010



## Multnomah County Courthouse NATIONAL HISTORIC REGISTER

NOMINATED BY MULTNOMAH COUNTY IN 1979  
NATIONAL REGISTER NO. 1979-06-11

*The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation.*

*Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.*

<http://www.nps.gov/nr/research/index.htm>



## Multnomah County Courthouse Constructed 1909-1914

**Original Cost**  
\$1,600,000

**200ft x 200ft**  
**8 Stories (122ft)**

**First Phase**  
**Complete: 1911**  
**Second Phase**  
**Complete: 1914**



Photo: Marguerite Wright



## Multnomah County Courthouse Constructed 1909-1914

**Designed by**  
**Whidden and Lewis**

- Neo Classical style with Baroque influences

**“In 1914 it stood as Portland’s largest building as well as the West Coast’s largest courthouse. Its style harks back to the monumental architecture of Rome while adhering to the modest scale of downtown Portland.”**

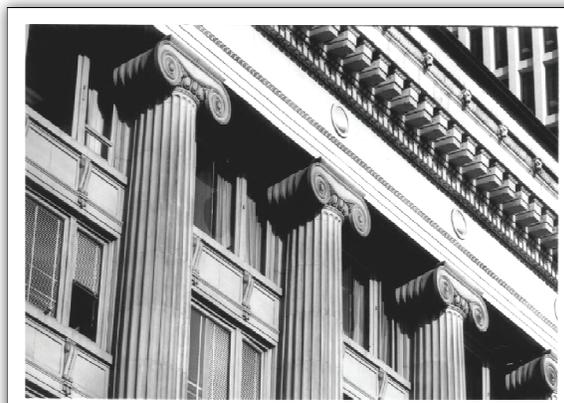


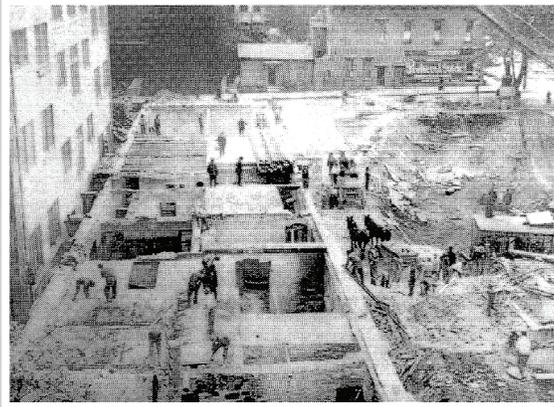
Photo: Marguerite Wright



## Multnomah County Courthouse Constructed 1909-1914

“With flexibility and ingenuity little seen today, construction of the new Courthouse was directed so as not to interrupt the proceedings of the old Courthouse sitting on the same block. The east wing of the building was completely finished through the eighth floor and the employees were moved from the old Courthouse into the new; only then was the old structure razed and the remaining three sides of the building begun.”

- NHR Nomination



## Multnomah County Courthouse Constructed 1909-1914

“The main staircase is open on all six floors; its marble steps and bronze railing make it the focal point of the structure.”

- NHR Nomination



Photo: Marguerite Wright



## Multnomah County Courthouse Constructed 1909-1914

“... the remodeling of the majority of the remaining offices throughout the eight floors and basement, have left only the hallways, stairs and **two courtrooms** in original or near-original condition.”

- NHR Nomination



Photo: Marguerite Wright



## Multnomah County Courthouse Constructed 1909-1914

“The central courtyard, 64 by 100 feet, contains a three story annex completed in 1951.”

- NHR Nomination



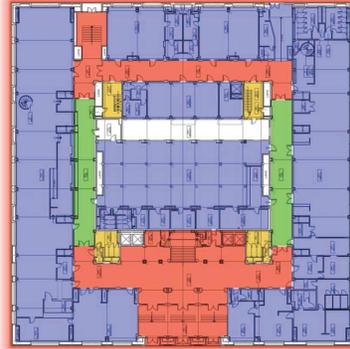
# Multnomah County Courthouse Constructed 1909-1914

PRIORITY LEVELS OF  
PRESERVATION\*

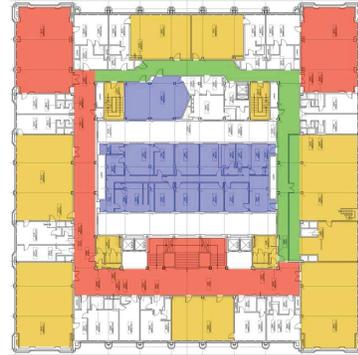
HIGHEST



LOWEST



FIRST FLOOR



THIRD FLOOR

\* 1998 Courthouse Maintenance Manual



# Multnomah County Courthouse 2010 and beyond

“The Multnomah County Board of Commissioners realizes that modernization is inevitable for most vital buildings, but it wishes to focus its efforts in the future on repair, renovation, and restoration activities that will **return the Courthouse to an appearance substantially closer to that which was originally intended.**”

- NHR Nomination



# Multnomah County Courthouse Renovation:2010 and beyond

ISSUE	OPPORTUNITY	CHALLENGE
EXISTING ATRIUM	<ul style="list-style-type: none"> <li>Infill will gain additional space</li> <li>Allows seismic upgrade with minimal disruption</li> </ul>	<ul style="list-style-type: none"> <li>Windows are unique, save or reuse</li> </ul>
SEPARATION OF CIRCULATION	<ul style="list-style-type: none"> <li>Renovation may improve in-custody holding and transit</li> </ul>	<ul style="list-style-type: none"> <li>Preferred circulation patterns for modernization conflict with existing layout and structure</li> </ul>
ADDITIONAL 9 <sup>TH</sup> FLOOR	<ul style="list-style-type: none"> <li>Extra floor(s) possible to gain space</li> </ul>	<ul style="list-style-type: none"> <li>New massing must respect visual set-back from street</li> </ul>
HAZARDOUS MATERIALS	<ul style="list-style-type: none"> <li>Create a building-wide HM mitigation strategy</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous Materials are extensive, any change will trigger mitigation</li> </ul>



# Multnomah County Courthouse Renovation:2010 and beyond

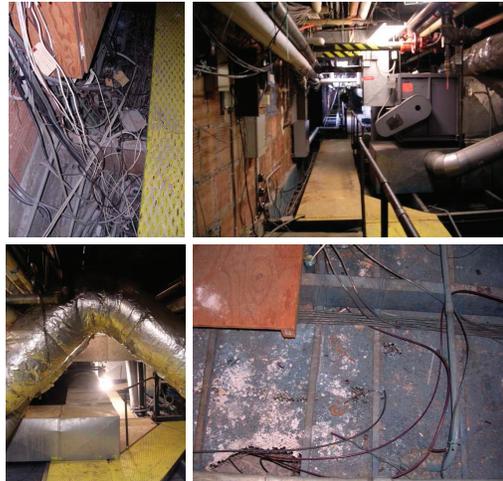
ISSUE	OPPORTUNITY	CHALLENGE
CODE COMPLIANCE FOR SEISMIC UPGRADE	<ul style="list-style-type: none"> <li>Raises life safety level of current building</li> </ul>	<ul style="list-style-type: none"> <li>may incur costs to remove and replace finishes, ie. Ceilings and column wraps</li> </ul>
ENERGY / LEED PERFORMANCE	<ul style="list-style-type: none"> <li>County requires Gold LEED-CI rating for major renovations, subject to life cycle cost analysis</li> </ul>	<ul style="list-style-type: none"> <li>Historic Building Envelope often limits energy improvement</li> </ul>
HISTORIC REVIEW PROCESS	<ul style="list-style-type: none"> <li>Confirm design concept</li> <li>May provide route to alternative funding strategies</li> <li>Renovate one of the most significant historical buildings in the county</li> </ul>	<ul style="list-style-type: none"> <li>Statements made in original Nomination must be honored</li> </ul>



## Multnomah County Courthouse Renovation: 2010 and beyond

### Next Steps towards Renovation

- Complete Concept Plan and Renovation Study Report
- Assess MEP systems and existing zoning
- Assess structural system integrity
- Understand what is essential vs. abandoned
- Map critical electrical and communications paths that may connect outside the building
- Determine required extent of disturbance of hazardous materials



## Multnomah County Courthouse Renovation: Similar Projects



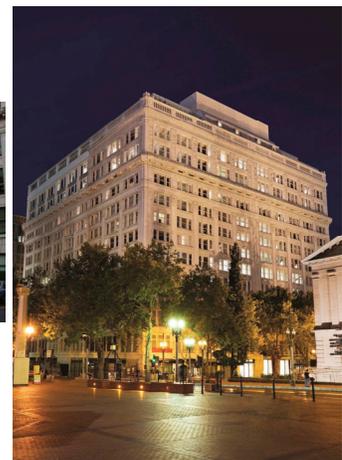
Pioneer Courthouse  
Portland, Oregon



State of Oregon  
Justice Building  
Salem, Oregon



City Hall  
Portland, Oregon



The Nines Hotel atop the historic Meier and Frank Building  
Portland, Oregon



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**APPENDIX 2**

**NATIONAL PARK SERVICE  
NATIONAL REGISTER OF HISTORIC PLACES  
NOMINATION**

APPENDIX 2: HISTORIC PLACES NOMINATION

Form No. 10-300 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

PH 0675563

FOR NPS USE ONLY	
RECEIVED	APR 18 1979
DATE ENTERED	APR 11 1979

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC Multnomah County Courthouse

AND/OR COMMON

**LOCATION**

STREET & NUMBER 1021 S. W. 4th Avenue

CITY, TOWN Portland VICINITY OF 1st

STATE Oregon COUNTY CODE 041 COUNTY Multnomah CODE 051

**CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input checked="" type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

**OWNER OF PROPERTY**

NAME Multnomah County ✓

STREET & NUMBER 1021 S. W. 4th Avenue

CITY, TOWN Portland VICINITY OF Oregon STATE 97204

**LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE, REGISTRY OF DEEDS, ETC. Multnomah County Courthouse, Recorder's Office, Room 102

STREET & NUMBER 1021 S.W. 4th Avenue

CITY, TOWN Portland Oregon STATE 97204

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE Portland Historical Landmark

DATE May 6, 1970  FEDERAL  STATE  COUNTY  LOCAL

DEPOSITORY FOR SURVEY RECORDS Portland Bureau of Planning  
424 S. W. Main Street

CITY, TOWN Portland Oregon STATE 97204

## APPENDIX 2: HISTORIC PLACES NOMINATION

### 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED      DATE _____
<input checked="" type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

---

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Occupying an entire block bordering two park blocks in downtown Portland, the Multnomah County Courthouse stands as a model of the prevalent style for governmental buildings erected in the early 20th century. The eight-story Neoclassical Revival structure is 200 feet square and is of riveted structural steel, fireproofed with concrete and faced with terra cotta (the decorative elements and courtyard walls) cementitious plaster (the seventh & eighth floors), and regular course granite (the two-story "pedestal and limestone (the base, columns, pilasters, and entablature). The central courtyard, 64 by 100 feet, contains a three story annex completed in 1951. The seventh and eighth floors, designed for detention purposes, are recessed from the perimeter 8 to 10 feet and were originally shielded from public view by a 10 feet high terra cotta-faced parapet wall (which has since been removed due to structural weakness). The ribbed metal roof of the two attic stories is very slightly hipped to allow drainage.

The east and west facades contained the primary and secondary entrances, respectively; however, the formal entrance on the west facade was later filled in to allow more courtroom space within, leaving two smaller flanking entrances. Either facade features a four-story colonnade of six Ionic columns resting on a two-story "pedestal", alternating with seven bays of triple wooden windows (original, although in poor condition). The first two floors--the "pedestal"--contain nine bays of windows except where entrances occur in their place. The north and south facades contain three wide bays of windows alternating with two narrower bays, each bay separated by a pilaster. Whereas the east and west facade windows are divided horizontally into four one-story sections reflecting the one-story offices within, the north and south facade windows stretch two stories to indicate the high ceilinged courtrooms within. Originally covered with bronze decorative screens, the north and south windows have been replaced with glass blocks and aluminum frame windows during remodeling of the courtrooms.

Exterior details are rich but subtle, with carved granite and cast terra cotta ornament on entrances, entablature, columns, and base. The style of ornament is neoclassic Roman, with "egg and dart" horizontal bands, carved lions' heads, rondels, and fluted consoles.

The original Courthouse interior was predominately of marble wainscoting, floors, and stairs; plaster walls, ceilings, and cornices; oak doors and molding; bronze stair railings and posts; and Italian statuary newel posts. Courtrooms were two-story spaces, decorated with marble Corinthian columns and tapestry-covered walls. The main staircase is open on all six floors; its marble steps and bronze railing make it the focal point of the structure.

Over the years the demand for courtrooms has grown, and the building has been remodeled on a recurring basis. All but four courtrooms have been changed from a single two-story space to two one-story spaces, effectively doubling the number of courtrooms but necessitating the removal of all original decorative elements. These modifications, plus the remodeling of the majority of the remaining offices throughout the eight floors and basement, have left only the hallways, stairs, and two courtrooms in original or near-original condition.

APPENDIX 2: HISTORIC PLACES NOMINATION

Form No. 10-300a  
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY	
RECEIVED	APR 18 1979
DATE ENTERED	JUN 11 1979

Multnomah County Courthouse, Portland, Multnomah County

**CONTINUATION SHEET**

ITEM NUMBER 7 PAGE 2

The mechanical system was quite innovative and complex for its time, supplying the building with forced air and radiant heating, on-site generated electricity for emergencies, and a built-in central vacuuming system with outlets for hose attachments located throughout. The original heating system pipe network, in poor condition, is still used, although other heating, ventilation, and cooling systems have been added over the years.

# APPENDIX 2: HISTORIC PLACES NOMINATION

Form No. 10-300a  
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UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

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Multnomah County Courthouse, Portland, Multnomah County

CONTINUATION SHEET

ITEM NUMBER 8 PAGE 2

that occurs in tall spaces. Providing forced air from a central source also reduced the noise of individual fans and motors and of creaking radiators that could disrupt courtroom proceedings.

But while the Courthouse functioned beautifully, it is its elegant appearance that gives it its acclaim. In 1914 it stood as Portland's largest building as well as the West Coast's largest courthouse. Its style harks back to the monumental architecture of Rome while adhering to the modest scale of downtown Portland. The somewhat somber exterior serves as a foil to the wealth of detail within. A visitor in 1914 was greeted by inlaid marble floors in the portico and lobby; from there he could travel up the formal marble staircase to the ornate courtrooms or to the plaster-corniced offices throughout. From the bronze grilles covering the courtroom air ducts to the terra cotta lions' heads along the cornice, the careful attention to detail makes the Multnomah County Courthouse a superior and valuable building, not to be lost.

To be sure, the Courthouse property is intensively used; additional floor space has been gained wherever possible, and modern mechanical systems have been introduced. Two facades have lost their bronze screens and wooden windows; many plaster ceilings are hidden beneath modern suspended acoustical ceilings; most courtrooms have been horizontally divided into two more modern, less impressive courtrooms; a three-story annex partially fills the courtyard; and general remodeling and modification of office space have given the Courthouse interior a variety of styles and elements. The Multnomah County Board of Commissioners realizes that modernization is inevitable for most vital buildings, but it wishes to focus its efforts in the future on repair, renovation, and restoration activities that will return the Courthouse to an appearance substantially closer to that which was originally intended. Major structural changes, such as the division of courtrooms, the addition of the annex, and some enlargements of offices are irreversible; but many other modifications--glass blocks, suspended ceilings, bricked-up entrances--are not. Some work has begun, and it is hoped that acceptance on the list of the National Register of Historic Places will provide the guidance and, possibly, some financial assistance to carry out the work in the best manner possible.

**8 SIGNIFICANCE**

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION	
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE	
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE	
<input type="checkbox"/> 1600-1699	<input checked="" type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION	
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input checked="" type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)	
		<input type="checkbox"/> INVENTION			

SPECIFIC DATES	1911 (East Wing) 1914 (Remainder)	BUILDER/ARCHITECT	Whidden & Lewis, Architects
----------------	--------------------------------------	-------------------	-----------------------------

STATEMENT OF SIGNIFICANCE

The Multnomah County Courthouse (1911-1914) is significant to the city of Portland and Multnomah County as an outstanding example of Neo Classical Revival architecture by the preeminent Portland architects of the turn of the century, William H. Whidden and Ion Lewis. Whidden and Lewis also were responsible for another civic monument nearby-- the Second Renaissance Revival City Hall of 1895. In the Courthouse project, conventional surface detail and progressive notions of function and utility were successfully combined in a solid academic design which defines the northwesterly border of a two-block park area in the downtown core. Since completion of the initial wing in 1911, the Courthouse has served as the seat of government for Multnomah County, which throughout the intervening 68 years has been the most urbanized and populous local jurisdiction in the state.

During the years 1890-1915, Portland, Oregon experienced a growth rate of phenomenal proportions. Economically and culturally Portland was "coming of age". The buildings and other structures erected during this time reflected the richer, more discerning taste that was prevalent. The premier architects were Whidden and Lewis, two "Easterners" who moved to Portland in the 1880s and who, more than any other architects, shaped the appearance of downtown Portland.

With flexibility and ingenuity little seen today, construction of the new Courthouse was directed so as not to interrupt the proceedings of the old Courthouse sitting on the same block. The east wing of the building was completely finished through the eighth floor and the employees were moved from the old Courthouse into the new; only then was the old structure razed and the remaining three sides of the building begun.

Upon completion, the Courthouse was considered a model of fire safety; the only wood used is for furnishings and trim. All parts of the steel frame are covered with concrete to prevent damage in case of fire, and plaster ceilings are applied directly to the masonry instead of to wooden lath.

Ease of maintenance was also addressed creatively, with the choice of windows that pivot about a vertical axis and thus allow cleaning of both sides from within the building. As mentioned in the building description, a built-in vacuuming system (no longer in use) allowed cleaning of the entire building by hose attachment outlets located throughout.

Mechanically speaking, the Courthouse was quite progressive for its time. Radiant heat was supplied to offices, hallways, and lobbies, while forced air heating kept two-story courtrooms comfortable by eliminating the stratification of hot and cold air

APPENDIX 2: HISTORIC PLACES NOMINATION

**9 MAJOR BIBLIOGRAPHICAL REFERENCES**

Oregonian Newspaper, March 24, 1912, pg. 6, sec. 2.

**10 GEOGRAPHICAL DATA**

ACREAGE OF NOMINATED PROPERTY 1 (one).

UTM REFERENCES

A	1,0	5,2,5	4,5,0	5,0,4,0	3,0,0	B			
	ZONE	EASTING	NORTHING				ZONE	EASTING	NORTHING
C						D			

VERBAL BOUNDARY DESCRIPTION

All of Block 58, Portland Addition, Portland, Multnomah County

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

**11 FORM PREPARED BY**

NAME / TITLE

Carl P. Moseley, Energy Coordinator

ORGANIZATION

Multnomah County

DATE

January 7, 1978

STREET & NUMBER

2505 S. E. 11th Avenue

TELEPHONE

(503) 248-5200

CITY OR TOWN

Portland

STATE

Oregon 97202

**12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION**

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL  STATE  LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

*David G. Tolbot*

TITLE State Historic Preservation Officer

DATE March 3, 1979

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

*Charles Adams*

DATE 6-4-78

ATTEST: *W. Kay*  
for KEEPER OF THE NATIONAL REGISTER

KEEPER OF THE NATIONAL REGISTER

DATE June 5, 1975

**APPENDIX 3**  
**KPFF SEISMIC ANALYSIS**  
**PRESENTATION**

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## APPENDIX 3: KPFF SEISMIC ANALYSIS PRESENTATION

Prior to any discussion about sequencing a renovation, the Team analyzed the appropriate structural systems to upgrade the entire building. In a presentation to the Building sub-committee on October XX, 2010, the Team presented the possible options for seismic rehabilitation.

### **Basic Life Safety Level (3-C) (meets minimum code requirements)**

- Overall Damage- Moderate
- Structure - No permanent drift. Structure substantially retains original strength and stiffness. Minor cracking may occur for facades, partitions, and ceilings as well as the structural elements. All systems important to normal operation are functional
- Non Structural Systems - Equipment and contents are generally secure, but may not operate due to mechanical failure or lack of utilities
- Earthquake Level: 500 year return period.

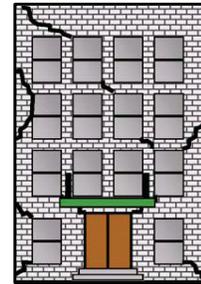
### **Immediate Occupancy Level (1-B) (exceeds code and allows for quicker recovery of building operations)**

- Overall Damage- Very Light
- Structure - No permanent drift. Structure substantially retains original strength and stiffness. Minor cracking may occur for facades, partitions, and ceilings as well as the structural elements. All systems important to normal operation are functional
- Non Structural Systems - Equipment and contents are generally secure, but may not operate due to mechanical failure or lack of utilities
- Earthquake Level: 500 year return period.

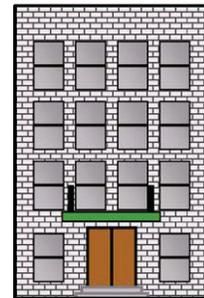
### **Operational (Level 1-A) (No down time. Intended for essential facilities determined by the county)**

- Overall Damage- Very Light
- Structure - No permanent drift. Structure substantially retains original strength and stiffness. Minor cracking may occur for facades, partitions, and ceilings as well as the structural elements. All systems important to normal operation are functional
- Non Structural Systems - Non-structural components receive negligible damage. Power and other utilities are available, possibly from standby sources.
- Earthquake Level: 500 year return period.

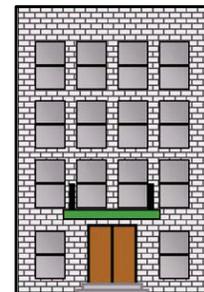
Attached are notes to the presentation made by KPFF to the Multnomah County Downtown Courthouse Building Committee.



LEVEL 1-A



LEVEL 1-A



LEVEL 1-A

SEISMIC REHABILITATION  
RESPONSE

## APPENDIX 3: KPFF SEISMIC ANALYSIS PRESENTATION

# Multnomah County Courthouse

## Seismic Rehabilitation Process

- Selection of Rehabilitation Objective
  - Building Performance Level vs Earthquake Hazard Level
- As-Built Information
  - Existing Drawings, On Site Verification and Testing
- Rehabilitation Method
  - Simplified vs Systematic
- Verification of Rehabilitation Design
  - Costs Estimates for Conceptual or Schematic Designs
- Construction Documents
  - If all goals are met prepare Contract Documents



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Rehabilitation Objective

- Selection of a Building Performance Level for a particular Earthquake Hazard
  - How the building performs relative to a particular size earthquake.
  - Building performance is measured relative to damaged suffered.



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Definitions

- Building Performance Level
  - Structural Engineer Definition**
    - **Building Performance Levels** are discrete damage states selected from among the infinite spectrum of possible damage states that buildings could experience as a result of an earthquake response.
    - Extent of anticipated building damage ranging from minimal to significant for a given **Building Performance Level**. A buildings performance level is a function of the performance of both the structural systems and nonstructural system components and contents.



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Definitions

- Building Performance Level

#### Lay Person Definition

- Safety afforded building occupants during and after an earthquake.
- Cost and feasibility of restoring the building to its pre-earthquake condition.
- Length of time the building is removed from service to effect repairs.
- Economic, architectural, or historic impacts on the larger community.



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Definitions

- Earthquake Hazard

#### Structural Engineering Definition

Probabilistic Earthquake Hazard Levels frequently used in design and their corresponding mean return intervals (average number of years between events of similar severity) are as follows:

Earthquake Having Probability of Exceedence	Mean Return Period (Years)
50%/50 Year	72
20%/50 Year	225
10%/50 Year	474
2%/50 Year	2500

The larger the earthquake return interval the larger the earthquake hazard.



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Definitions

- Earthquake Hazard

#### Lay Person Definition

- Magnitude of an earthquake measured on the Richter scale
- Landslide
- Tsunamis
- Liquefaction



Multnomah County Courthouse

SERA

## Seismic Rehabilitation Process

### Rehabilitation Objective

- A rehabilitation objective combines a building performance level with a particular earthquake hazard.
- A rehabilitation objective may have more than one combination of building performance levels and earthquake hazards.



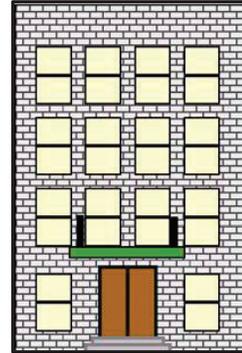
Multnomah County Courthouse

SERA

## Standard Building Performance Levels

### Operational Level (1-A)

- Overall Damage – Very Light
- Structure
  - No permanent drift. Structure substantially retains original strength and stiffness. Minor cracking may occur for facades, partitions, and ceilings as well structural elements. All systems important to normal operation are functional.
- Non-Structural Components
  - Non-structural components receive negligible damage. Power and other utilities are available, possibly from standby sources.



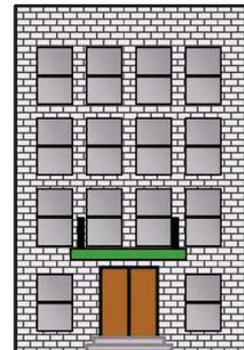
Multnomah County Courthouse

SERA

## Standard Building Performance Levels

### Immediate Occupancy (1-B)

- Overall Damage – Light
- Structure
  - No permanent drift. Structure substantially retains original strength and stiffness. Minor cracking may occur for facades, partitions, and ceilings as well as the structural elements. All systems important to normal operation are functional.
- Non-Structural Components
  - Equipment and contents are generally secure, but may not operate due to mechanical failure or lack of utilities.



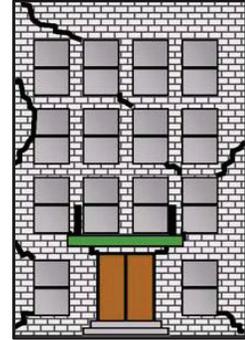
Multnomah County Courthouse

SERA

## Standard Building Performance Levels

### Life Safety Level (3-C)

- Overall Damage – Moderate
- Structure
  - Some residual strength and stiffness left in all stories. Gravity-load bearing elements function. No failure of walls or tipping of parapets. Structural system may have permanent drift. Damage occurs to partitions and non-structural components. Building may be uneconomical to repair.
- Non-Structural Components
  - Falling hazards mitigated. Many architectural, mechanical, and electrical systems are damaged.



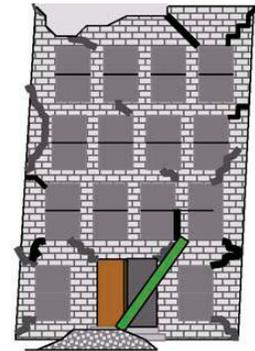
Multnomah County Courthouse

SERA

## Standard Building Performance Levels

### Collapse Prevention Level (5-E)

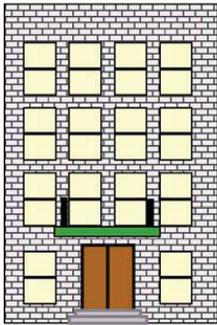
- Overall Damage – Severe
- Structure
  - Little residual stiffness and strength, but load bearing columns and walls function. Large permanent drifts occur. Some exits may be blocked. Infills, unbraced parapets may fail or at incipient failure. Building is very near to collapse.
- Non-Structural Components
  - Extensive Damage



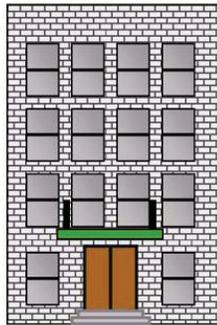
Multnomah County Courthouse

SERA

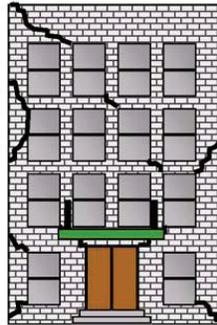
## Standard Building Performance Levels



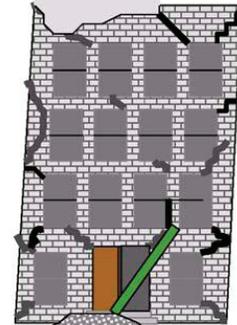
Operational



Immediate  
Occupancy



Life Safety



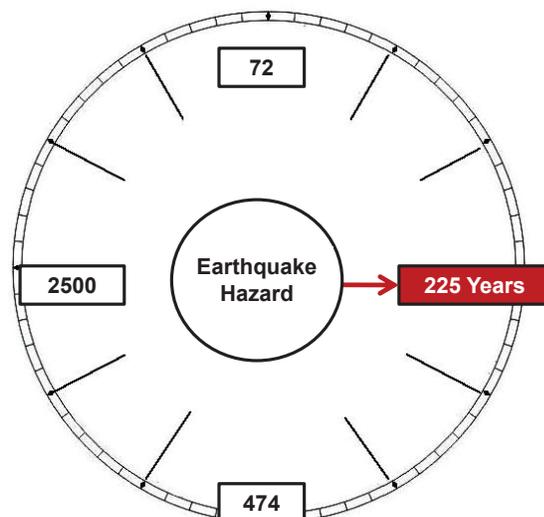
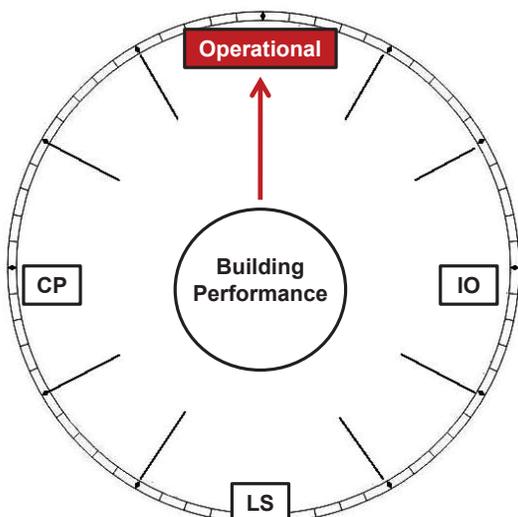
Collapse  
Prevention



Multnomah County Courthouse



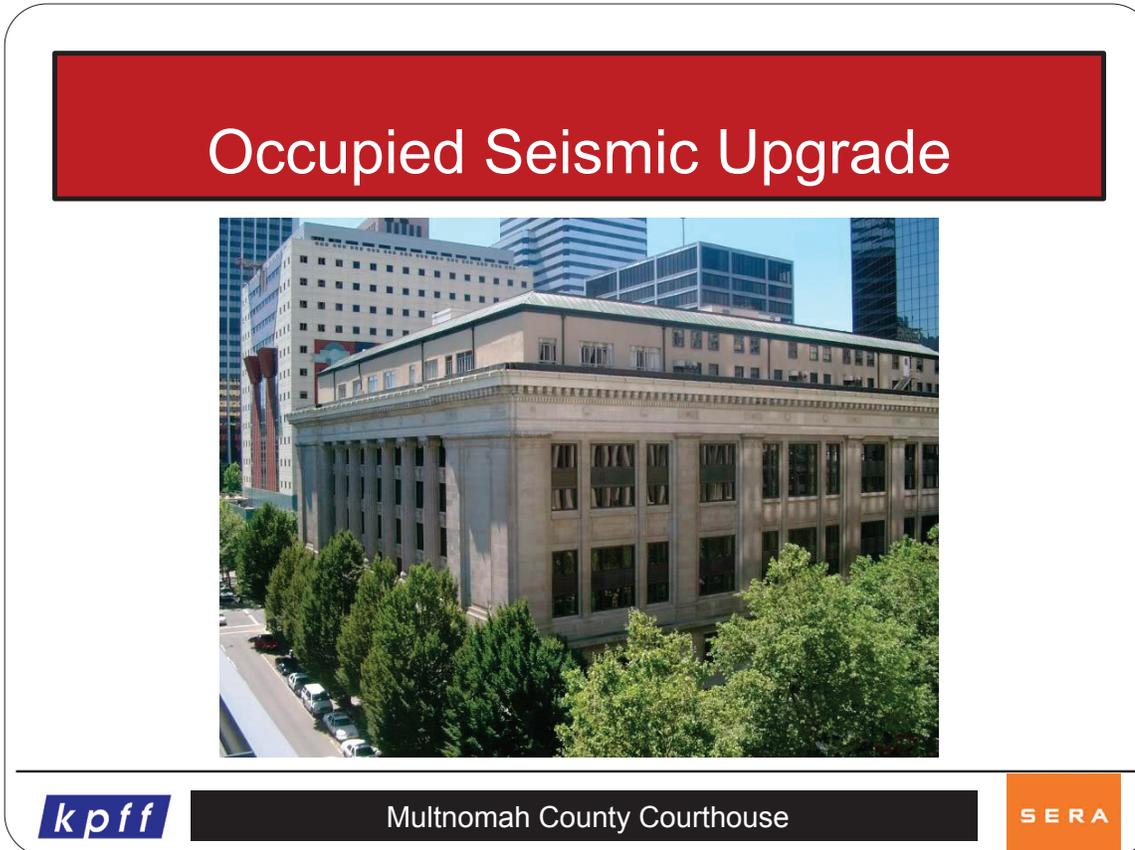
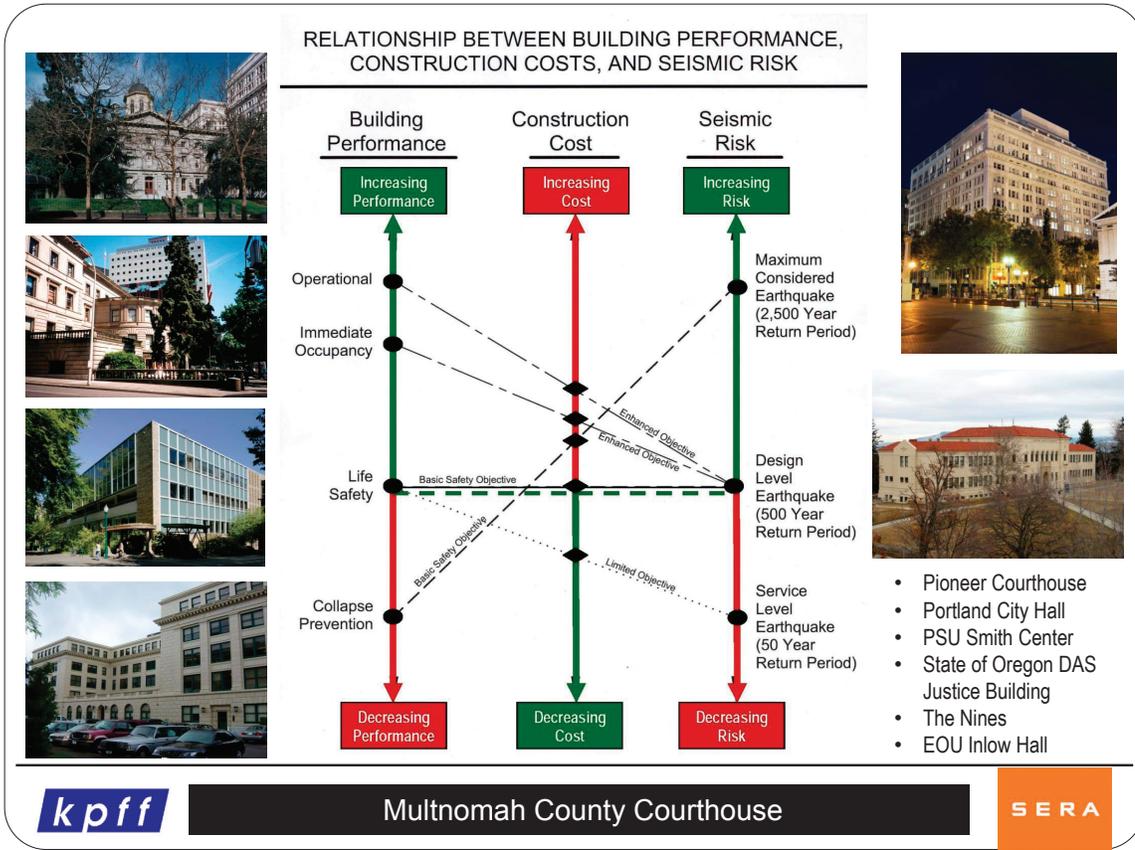
## Standard Building Performance Levels



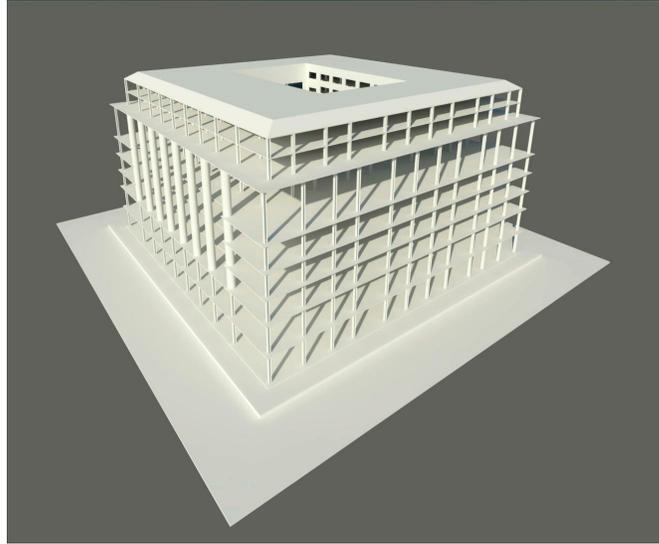
Multnomah County Courthouse



# APPENDIX 3: KPFF SEISMIC ANALYSIS PRESENTATION



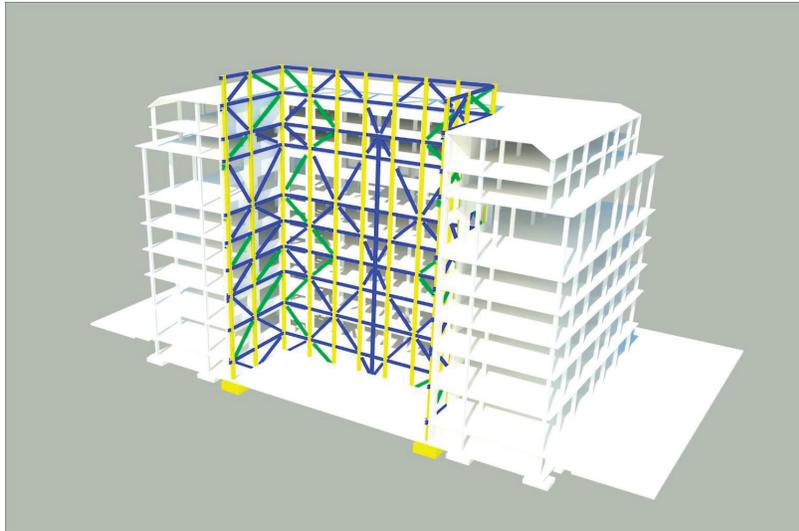
## Occupied Seismic Upgrade



Multnomah County Courthouse

SERA

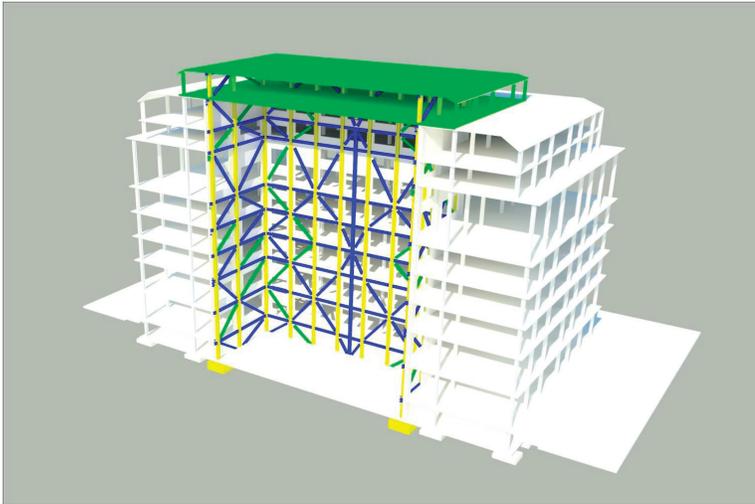
## Occupied Seismic Upgrade



Multnomah County Courthouse

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## Occupied Seismic Upgrade

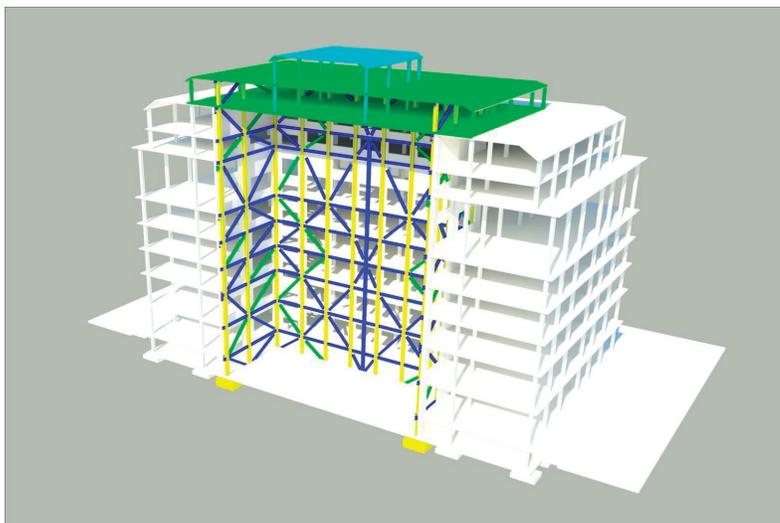


kpff

Multnomah County Courthouse

SERA

## Occupied Seismic Upgrade Option

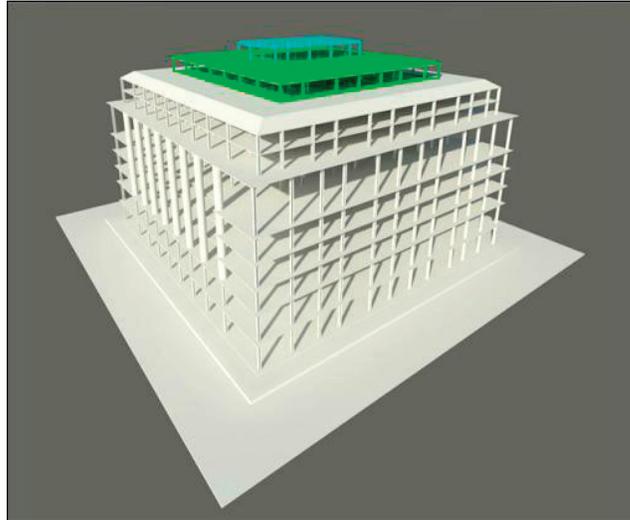


kpff

Multnomah County Courthouse

SERA

## Occupied Seismic Upgrade



Multnomah County Courthouse

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## Next Steps

- Feasibility Study Completed
  - Workable Solution Achieved
  - Construction Costs Reasonable
- Start Due Diligence
  - As Built Drawing Verification
  - Materials Testing
  - Environmental Testing
- Further Refinement of Concept
  - Preliminary Analysis Completed
  - Preliminary Construction Costs Developed



Multnomah County Courthouse

SERA

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**APPENDIX 4  
COURT COUNT**

## APPENDIX 4: COURT COUNT

### Courtroom Availability by Phase

Phase 1: 37 courtrooms available- (2) Traffic Courts move to downtown lease space.

Phase 2: 36 courtrooms available

Phase 3: 46 courtrooms available with 10 new courtrooms in the core and 2 temporary courtrooms on each level 8 & 9.

Phase 4: 41 courtrooms available. (1) new courtroom is isolated by construction

Phase 5: 35 courtrooms available. (4 ) new courtrooms are isolated by construction for the duration.

Phase 6: 34 courtrooms available. (2) new courtrooms are isolated by construction.

Phase 7: Project complete . 41 courtrooms available. The two Traffic Courts may move back from downtown location.

**Construction Sequence and Courtroom Availability**

Court count varies at each construction phase. Currently the County operates 39 courtrooms in the Courthouse. 2 of those are Traffic Courts, which will be moved to another location downtown for the duration of construction, leaving 37 courtrooms whose services must be available during construction.

In Phase 2 three courts must move off of the 7th floor. Two will move to the former Traffic courtrooms and one court must move to temporary space on the 6th floor in the vacated District Attorney’s office.

During Phase 3, with the addition of 10 new courtrooms in the central core, the court count may potentially exceed the number of appointed judges. Some smaller courtrooms may be decommissioned early for renovation but Phases 5 & 6 may require their use.

In phase 4 available courts drop to 41 as more courtrooms are taken offline. Court count will accommodate all judges plus two referees.

In Phases 5 and 6, temporary courtrooms will be needed on floors 8 and 9 to make up for the remodel of floors 2 through 5, when the most existing courtrooms will be “offline” at one time. The court may be short as many as 3 courtrooms for approximately one year.

At the completion of Phase 7, a total of 41 courtrooms are functioning once again on floors 2 through 7. Floors 8&9 may be returned to office functions as needed.

<b>POTENTIAL COURTROOM COUNT AT EACH CONSTRUCTION PHASE</b> (actual count may vary at any time during construction)							
<b>CONSTRUCTION PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>BUILDING LEVEL</b>							
<b>B</b>	0	0	0	0	0	0	0
<b>1</b>	3	3	3	3	3	3	0
<b>2</b>	6	6	6	6	6	0	6
<b>3</b>	8	8	8	8	10	0	8
<b>4</b>	6	6	8	8	0	7	7
<b>5</b>	8	8	6	6	0	8	8
<b>6</b>	3	3	5	2	6	6	6
<b>6M</b>							
<b>7</b>	5	2	6	4	6	6	6
<b>8</b>	0	0	2	2	2	2	0
<b>9</b>	0	0	2	2	2	2	0
<b>TOTAL</b>	<b>39</b>	<b>36</b>	<b>46</b>	<b>41</b>	<b>35</b>	<b>34</b>	<b>41</b>
Justice Center	4	4	4	4	4	4	4
Juvenile Justice Center	6	6	6	6	6	6	6
East County	3	3	3	3	3	3	3
Traffic Court Downtown Location	2	2	2	2	2	2	2
<b>All County Total</b>	<b>54</b>	<b>51</b>	<b>61</b>	<b>56</b>	<b>50</b>	<b>49</b>	<b>56</b>

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**APPENDIX 5  
AREA TABULATIONS AND SPACE  
ASSIGNMENTS**

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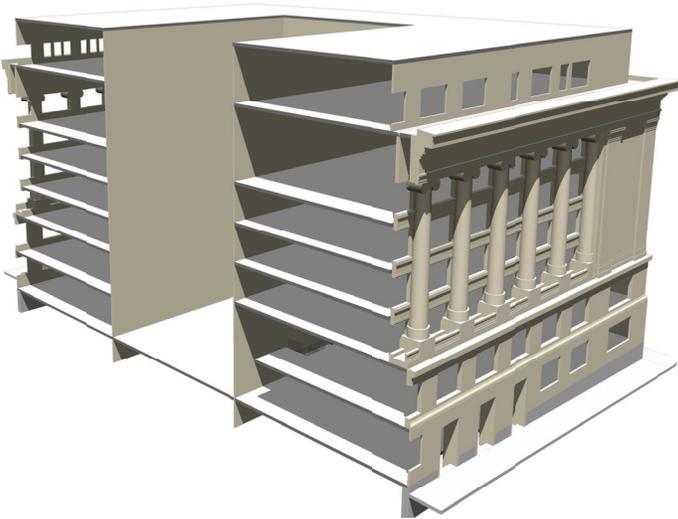
APPENDIX 5 : AREA TABULATIONS AND SPACE ASSIGNMENTS

MCCH RENOVATION STUDY ESTIMATED AREA SUMMARY														
All areas in SF (Square Feet)	Basement	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 6 mezz	Level 7	Level 8	Level 9	Penthouse	Totals	% Usable Gross Floor Area
BUILDING FACILITIES	10,520	468	-	-	-	-	-	-	-	-	-	-	10,988	2.8%
COURT ADMINISTRATION	-	13,312	2,852	-	-	-	-	-	-	-	-	-	16,164	4.2%
FLEX SPACE	-	-	9,924	12,443	10,454	12,376	9,974	-	7,401	23,500	16,789	-	40,289	10.4%
COURTROOM	-	-	-	-	-	-	-	-	-	-	-	-	62,572	16.2%
COURT CARE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
DA	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
FAMILY COURTS	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
JUDGES CHAMBERS	-	-	4,259	3,501	3,477	3,511	1,994	-	3,083	-	-	-	19,825	5.1%
JUDGES STAFF	-	-	6,036	3,925	1,336	3,038	5,087	-	6,450	-	-	-	25,872	6.7%
JURY	-	5,236	2,245	2,973	5,200	3,826	2,578	-	2,905	-	-	-	24,963	6.5%
GRAND JURY	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
LAW LIBRARY	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
MEP	9,821	2,369	1,201	795	800	803	803	32,589	834	803	803	7,665	59,286	15.3%
PUBLIC_CIRCULATION	399	10,231	6,692	6,978	6,027	7,127	7,171	1,571	7,248	4,175	3,815	221	61,755	16.0%
RECORDS	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
RETAIL	-	565	-	-	-	-	-	-	-	-	-	-	565	0.1%
SECURE CIRCULATION	-	934	625	1,318	1,657	1,335	-	-	1,239	-	-	-	7,108	1.8%
JUDGES ELEV	-	-	561	-	-	-	1,290	-	-	-	-	-	1,851	0.5%
SHERIFF OFFICE/ HOLDING	13,700	4,103	-	-	-	-	-	-	-	-	-	-	17,803	4.6%
SHERIFF SECURE CIRCULATION	1,925	1,355	1,723	1,958	1,957	1,944	1,957	1,712	1,648	1,732	1,696	1,570	21,177	5.5%
STORAGE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
TOILETS	-	860	894	848	897	900	889	-	860	862	862	-	7,872	2.0%
<b>Proposed Gross Measured Area</b>	<b>36,365</b>	<b>39,433</b>	<b>37,012</b>	<b>34,739</b>	<b>31,805</b>	<b>34,860</b>	<b>31,743</b>	<b>35,972</b>	<b>31,668</b>	<b>31,072</b>	<b>23,965</b>	<b>9,456</b>	<b>378,090</b>	
Lightwell	-	-	891	881	881	870	876	881	885	881	881	881	8,808	2.3%
<b>Gross Measured Area+ Lightwell</b>	<b>36,365</b>	<b>39,433</b>	<b>37,903</b>	<b>35,620</b>	<b>32,686</b>	<b>35,730</b>	<b>32,619</b>	<b>36,853</b>	<b>32,553</b>	<b>31,953</b>	<b>24,846</b>	<b>10,337</b>	<b>386,898</b>	<b>100.0%</b>
<b>PROPOSED RENOVATION AREAS</b>														
Remain	-	-	-	-	-	-	-	26,928	-	-	-	-	26,928	7%
Restore	9,375	11,165	13,947	20,949	17,523	21,043	15,113	679	4,595	-	-	-	114,389	30%
Replace	20,437	21,532	17,967	9,964	8,780	8,314	11,127	2,568	21,487	16,586	-	-	138,762	37%
New	6,553	6,736	5,098	3,826	5,502	5,503	5,503	5,797	5,586	14,486	23,965	9,456	98,011	26%
<b>Check sum Proposed GMA</b>	<b>36,365</b>	<b>39,433</b>	<b>37,012</b>	<b>34,739</b>	<b>31,805</b>	<b>34,860</b>	<b>31,743</b>	<b>35,972</b>	<b>31,668</b>	<b>31,072</b>	<b>23,965</b>	<b>9,456</b>	<b>378,090</b>	<b>100%</b>
Exterior New	2,969	-	-	-	-	-	-	-	-	-	-	-	2,969	3,108
<b>Construction Area</b>	<b>39,334</b>	<b>39,433</b>	<b>37,012</b>	<b>34,739</b>	<b>31,805</b>	<b>34,860</b>	<b>31,743</b>	<b>35,972</b>	<b>31,668</b>	<b>31,072</b>	<b>23,965</b>	<b>9,456</b>	<b>381,059</b>	<b>398,885 GSF</b>
Lightwell	-	-	891	881	881	870	876	881	885	881	881	881	8,808	8,808
Dbl Vol Restore	-	-	-	-	3,109	-	3,123	-	-	-	-	-	6,232	6,232
<b>Estimated Gross Building Area</b>	<b>39,334</b>	<b>39,433</b>	<b>37,903</b>	<b>35,620</b>	<b>35,795</b>	<b>35,730</b>	<b>35,742</b>	<b>36,853</b>	<b>32,553</b>	<b>31,953</b>	<b>24,846</b>	<b>10,337</b>	<b>396,099</b>	<b>413,925</b>
(County ) Existing Gross Building Area	32,819	38,780	37,312	34,661	30,639	30,650	30,769	30,769	30,769	26,318	-	-	323,486	Exist. GBA
	95%	96%	96%	96%	96%	96%	96%	98%	84%	98%			95%	
<b>Net GROSS BLDG AREA INCREASE</b>													<b>75,399</b>	<b>additional GSF</b>
														<b>plus/minus 5000 gsf</b>

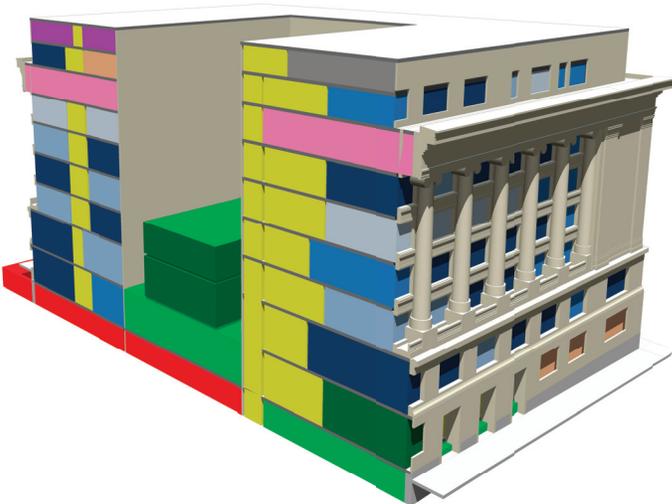
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**APPENDIX 6**  
**3-D MODEL VIEWS**

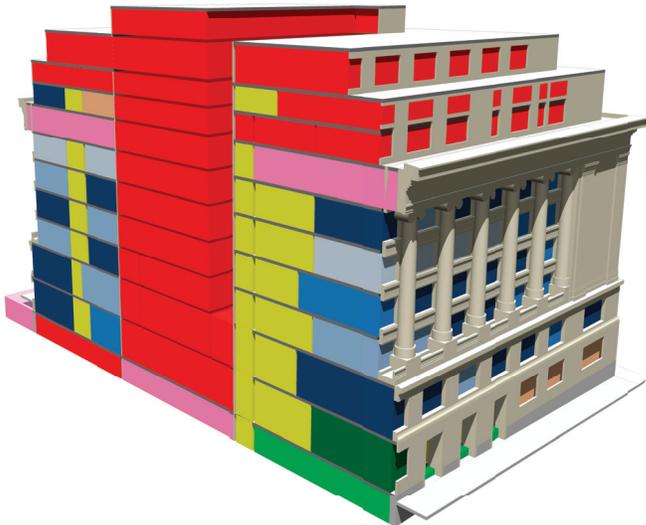
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**PRE  
CONSTRUCTION**



**PHASE 1**



**PHASE 2**



**Red indicates construction phase**

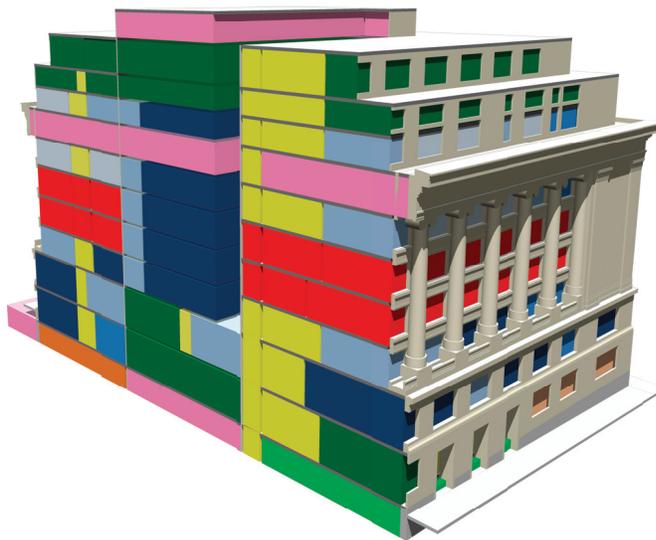
# PHASE 3



# PHASE 4

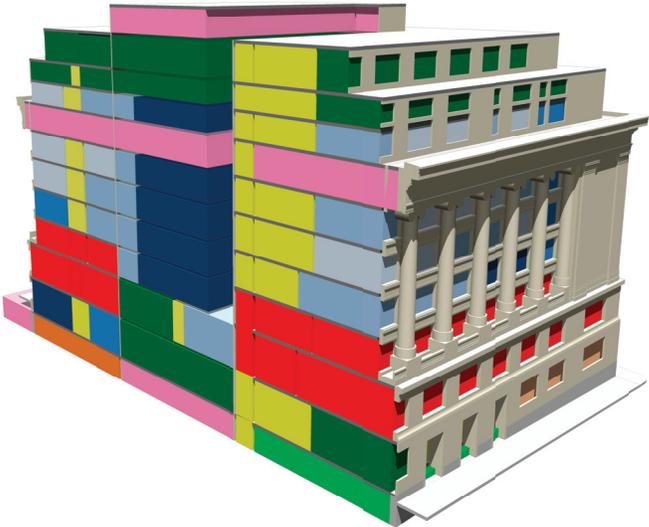


# PHASE 5



Red indicates construction phase





# PHASE 6



# PHASE 7



# CONSTRUCTION COMPLETE



**Red indicates construction phase**

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**APPENDIX 7**  
**DETAILED COST DATA**

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APPENDIX 7: DETAILED COST DATA

Estimated Project Construction Costs

	Remaining (L6 mezz) Areas		Restoration Areas		Replacement Areas		New Areas		Total Project		Comments
	low	high	low	high	low	high	low	high	low	high	
	28,188 gsf		119,740 gsf		145,253 gsf		105,704 gsf		398,885 gsf		
<b>Direct Cost Elements</b>	<b>\$71.90</b>	<b>\$88.68</b>	<b>\$143.00</b>	<b>\$178.60</b>	<b>\$207.50</b>	<b>\$244.10</b>	<b>\$312.24</b>	<b>\$365.78</b>	<b>\$206.31</b>	<b>\$245.70</b>	
Existing Conditions											
Hazardous Materials Abatement											
Demo entire structure	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$2.94	\$3.68	
Light demo									\$1.06	\$1.32	
Demo to structure									\$1.50	\$2.10	
Clean up mech mezzanine	\$2.50	\$3.00		\$7.00	\$12.00	\$14.00			\$4.37	\$5.10	
Excavation							\$2.50	\$3.00	\$0.18	\$0.21	
Structure									\$0.66	\$0.79	
Footings							\$15.00	\$18.00	\$3.97	\$4.77	
Core brace							\$37.74	\$45.28	\$10.00	\$12.00	
Flooring tie-ins									\$9.56	\$11.03	
New structure							\$25.00	\$30.00	\$6.62	\$7.95	
Roof work (leveling or replace)									\$1.06	\$1.28	
Stairs	\$1.40	\$1.68	\$1.60	\$1.92	\$1.60	\$1.92	\$2.50	\$3.00	\$1.69	\$2.03	exit & grand stair
Exterior Façade	\$4.00	\$6.00	\$6.00	\$8.00	\$6.00	\$8.00	\$40.00	\$45.00	\$14.87	\$17.66	
Interiors	\$3.00	\$4.00	\$25.00	\$35.00	\$60.00	\$70.00	\$60.00	\$70.00	\$45.47	\$54.83	
Elevators			\$9.00	\$11.00	\$9.00	\$11.00	\$10.00	\$12.00	\$8.63	\$10.49	
Mechanical Systems									\$53.51	\$62.42	
Common large equipment	\$13.00	\$15.00	\$13.00	\$15.00	\$13.00	\$15.00	\$13.00	\$15.00	\$13.00	\$15.00	
HVAC distribution			\$15.00	\$18.00	\$27.00	\$31.00	\$27.00	\$31.00	\$21.49	\$24.91	
Plumbing	\$2.00	\$3.00	\$7.00	\$8.00	\$7.00	\$8.00	\$22.00	\$25.00	\$10.62	\$12.15	
Controls	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	
Fire protection	\$2.00	\$2.50	\$3.50	\$4.50	\$3.50	\$4.50	\$3.50	\$4.50	\$40.22	\$48.05	
Electrical Systems									\$4.00	\$5.00	
Common large equipment	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$8.50	\$10.00	
Emergency power	\$8.50	\$10.00	\$8.50	\$10.00	\$8.50	\$10.00	\$8.50	\$10.00	\$3.00	\$3.50	
Fire alarm	\$3.00	\$3.50	\$3.00	\$3.50	\$3.00	\$3.50	\$3.00	\$3.50	\$11.05	\$12.98	
Lighting	\$2.00	\$3.00	\$7.00	\$9.00	\$14.00	\$16.00	\$14.00	\$16.00	\$7.36	\$8.98	
Power	\$3.00	\$4.00	\$6.00	\$8.00	\$8.50	\$10.00	\$8.50	\$10.00	\$6.31	\$7.59	
Low voltage	\$1.50	\$2.00	\$6.00	\$7.00	\$7.00	\$8.50	\$7.00	\$8.50	\$7.00	\$8.50	
<b>Indirect Cost Elements</b>	<b>\$44.97</b>	<b>\$55.36</b>	<b>\$59.19</b>	<b>\$73.66</b>	<b>\$72.09</b>	<b>\$87.00</b>	<b>\$93.03</b>	<b>\$111.77</b>	<b>\$71.85</b>	<b>\$87.32</b>	
Hoisting	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	
Temporary Construction	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	\$4.00	\$5.00	walls, MEP, roof
GC's/Job Services	\$16.50	\$20.00	\$16.50	\$20.00	\$16.50	\$20.00	\$16.50	\$20.00	\$16.50	\$20.00	
Insurance/Bonding	\$4.38	\$5.76	\$7.58	\$10.09	\$10.48	\$13.24	\$15.20	\$19.10	\$10.43	\$13.32	
Contingency	\$11.69	\$14.40	\$20.22	\$25.23	\$27.96	\$33.11	\$40.53	\$47.75	\$27.82	\$33.30	10% in all columns
CMGC Fee	\$3.40	\$4.20	\$5.89	\$7.35	\$8.14	\$9.64	\$11.80	\$13.91	\$8.10	\$9.70	3% in all columns
<b>Project Total Cost/GSF</b>	<b>\$116.87</b>	<b>\$144.04</b>	<b>\$202.19</b>	<b>\$252.26</b>	<b>\$279.59</b>	<b>\$331.10</b>	<b>\$405.26</b>	<b>\$477.55</b>	<b>\$278.16</b>	<b>\$333.02</b>	
<b>Project Total Cost</b>	<b>\$3,294,454</b>	<b>\$4,060,231</b>	<b>\$24,210,253</b>	<b>\$30,206,157</b>	<b>\$40,610,767</b>	<b>\$48,092,864</b>	<b>\$42,837,980</b>	<b>\$50,478,877</b>	<b>\$110,953,454</b>	<b>\$132,838,130</b>	

## APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>1.0 Estimated Construction Cost (ECC)</b>	<b>\$ 110,953,454</b>	<b>\$ 132,838,130</b>
<b>2.0 Soft Cost (SC)</b>	<b>\$ 48,720,568</b>	<b>\$ 66,754,445</b>
<b>2.1 Associated Construction Costs (ACC)</b>	<b>\$ 36,797,688</b>	<b>\$ 49,503,378</b>
<b>2.2 Additional Move Costs (AMC)</b>	<b>\$ 11,922,880</b>	<b>\$ 17,251,067</b>
<b>3.0 Subtotal ECC + SC</b>	<b>\$ 159,674,022</b>	<b>\$ 199,592,575</b>
Project Contingency (10 % of ECC+SC)	<b>\$ 15,967,402</b>	<b>\$ 19,959,258</b>
<b>4.0 TOTAL PROJECT COST</b>	<b>\$ 175,641,424</b>	<b>\$ 219,551,833</b>

APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>Soft Costs TOTAL</b>	<b>\$ 48,720,568</b>	<b>\$ 66,754,445</b>
= Construction related soft costs		
= Move related soft costs		
<b>A. District Attorney (moves out/moves back in) based upon 230 FTE staff.</b>	<b>6,412,800</b>	<b>9,258,200</b>
1.0 Lease cost range for 31,500 sq ft for 6 years @ \$20-\$30 / sq. ft./ year.	\$ 3,780,000	\$ 5,670,000
2.0 Tenant improvement cost range for lease space 31,500 sq ft @ \$60-\$80 / sq. ft./ year	\$ 1,890,000	\$ 2,520,000
3.0 Information technology cost for temporary space and final space back in building (by Multnomah County information technology)	see part P	see part P
4.0 Tenant Move 230 FTE out @ \$300-\$350 / FTE	\$ 69,000	\$ 80,500
5.0 Tenant Move 230 FTE back @ \$300-\$350 / FTE	\$ 69,000	\$ 80,500
6.0 Added security cost for temporary space 4-6 years @ \$630/month each FTE, 2 FTE	\$ 604,800	\$ 907,200
<b>B. Grand Jury (moves out/moves back in with District Attorney)</b>	<b>762,960</b>	<b>1,118,520</b>
1.0 Lease cost for 2552 sq. ft for 6 years @ \$20-\$30 / sq. ft./ year	\$ 306,240	\$ 459,360
2.0 Tenant improvement cost for lease space 2,552 sq. ft. @ \$60-80 / sq. ft.	\$ 153,120	\$ 204,160
3.0 Information technology cost for temporary space and final space back in building	see part P	see part P
4.0 Tenant Move 2 FTE out @ \$300-\$350 / FTE	\$ 600	\$ 700
5.0 Tenant Move 2 FTE back @ \$300-\$350 / FTE	\$ 600	\$ 700
6.0 Added security cost for temporary space 4-6 years @ \$630/month each FTE, 1 FTE	\$ 302,400	\$ 453,600
<b>C. Law library (moves out and back in)</b>	<b>1,647,000</b>	<b>2,376,000</b>
1.0 Lease cost for 9,000 sq. ft. for 6 years	\$ 1,080,000	\$ 1,620,000
2.0 Tenant improvement cost for lease space for 9000 sq. ft. @ \$60-\$80 / sq. ft.	\$ 540,000	\$ 720,000
3.0 Information technology cost for final space (by Multnomah County Information Technology)	see part P	see part P
4.0 Move out (9,000 sq. ft) @ \$1.50 - \$2.00 / SF	\$ 13,500	\$ 18,000
5.0 Move in (9,000 sq. ft) @ \$1.50 - \$2.00 / SF	\$ 13,500	\$ 18,000

## APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>D. Traffic Courts (moves out and back in)</b>	<b>1,605,480</b>	<b>2,350,960</b>
1.0 Lease cost for 5526 sq. ft. for 6 years	\$ 663,120	\$ 994,680
2.0 Tenant improvement cost for lease space 5526 sq. ft. @ \$60-\$80 / sq. ft.	\$ 331,560	\$ 442,080
3.0 Information technology cost for temporary space and final space back in building (by Multnomah County information technology)	see part P	see part P
4.0 Move 10 FTE out @ \$300-\$350 / FTE	\$ 3,000	\$ 3,500
5.0 Move 10 FTE back @ \$300-\$350 / FTE	\$ 3,000	\$ 3,500
6.0 Added security cost for temporary space 4-6 years @ \$6300/month each FTE, 2 FTE	\$ 604,800	\$ 907,200
<b>E. Miscellaneous moves within courthouse per phase x 2 moves, based upon average FTE per floor for 2 floor moves.</b>	<b>2,887,182</b>	<b>3,852,908</b>
1.0 Phase 1: Move 7th floor courts to 6th / First floors, 2nd, 3rd floor light well to 6th, 10,430 sq. ft	\$ 15,645	\$ 20,860
2.0 Phase 1: Move first floor records/basement records to offsite location or temporary trailer locations or electronically scan 22,349 sq. ft	\$ 100,571	\$ 134,094
3.0 Move Detention staff and equipment to Basement 9,433 sq. ft	\$ 14,150	\$ 18,866
4.0 Phase 3: Buildout 8th and 9th floors for temporary Courts use including interim court rooms, jury rooms, Judge's Offices, Judicial staff space, etc. plus temporary tenant improvements of 11,126 sq. ft.	\$ 2,407,560	\$ 3,210,080
5.0 Phase 3: Move Courts related functions from 6th floor to 7th, 8th and 9th floors and miscellaneous uses in basement 3000 sq. ft.	\$ 4,500	\$ 6,000
6.0 Phase 4: Move Courts related functions to completed 6th floor, 7th floor and more courts functions from floors 5 and 4 for renovation 12,000 sq. ft.	\$ 18,000	\$ 24,000
7.0 Phase 5: Move courts related functions to completed space on 4th and 5th floors from 3rd and 2nd floors to facilitate construction of 3rd and 2nd floors 12,000 sq. ft.	\$ 18,000	\$ 24,000
8.0 Phase 6: Move Courts related functions from 8th and 9th floor down to occupy completed 3rd and 2nd floor spaces. 12000 sq. ft.	\$ 18,000	\$ 24,000
9.0 Phase 7: Remove interim tenant improvements completed on the 8th and 9th floors for Courts 40,126 SF @ \$6-8 / SF use	\$ 240,756	\$ 321,008
10.0 Phase 7: Relocate during phases 5, 6 and 7, miscellaneous areas around the first floor to accommodate ongoing courthouse operations and final construction during phase 7. 2000 sq. ft.	\$ 50,000	\$ 70,000

APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>F. Predesign services (Further studies for in depth programming services needed to start design)</b>	<b>2,325,600</b>	<b>3,774,000</b>
1.0 Programming and Conceptual Design	\$ 1,200,000	\$ 1,800,000
2.0 Geo Technical Assessment	\$ 100,000	\$ 200,000
3.0 Structural Assessment and Testing	\$ 150,000	\$ 300,000
4.0 Envelope Assessment and Testing	\$ 75,000	\$ 125,000
5.0 Elevator Assessment and Upgrade Proposal	\$ 30,000	\$ 50,000
6.0 Electrical System Assessment and Replacement Protocol	\$ 150,000	\$ 300,000
7.0 Mechanical System Assessment and Replacement Protocol	\$ 75,000	\$ 125,000
8.0 IT Assessment & Design Assistance	\$ 100,000	\$ 200,000
9.0 Conceptual Cost Estimate/ Preconstruction CMGC	\$ 200,000	\$ 300,000
10.0 HazMat Material Assessment Level I Report	\$ 200,000	\$ 300,000
11.0 2% County Management	\$ 45,600	\$ 74,000
<b>G. Landmarks, planning, appeals, services</b>	<b>50,000</b>	<b>75,000</b>
1.0 Present Renovation Concept to Landmarks, SHPO, NPS to obtain clarification for Tax Credits	\$ 50,000	\$ 75,000
<b>H. A/E Fees</b>	<b>9,870,916</b>	<b>14,761,200</b>
1.0 Multnomah County Courthouse Renovation Design and Construction Documents 8-10% ECC	\$ 8,876,276	\$ 13,283,813
2.0 Tenant Improvement Fees (for interim moves) 3% Tenant Improvement Construction Costs	\$ 87,440	\$ 116,587
3.0 Tenant Move Coordination Fee 2-3 FTE @ \$6300/month x 6 years	\$ 907,200	\$ 1,360,800
<b>I. Preconstruction Contractor</b>	<b>100,000</b>	<b>150,000</b>
1.0 Building Scan	\$ 100,000	\$ 150,000
<b>J. Project Management</b>	<b>2,219,069</b>	<b>2,656,763</b>
County Management Costs 2% ECC	\$ 2,219,069	\$ 2,656,763

## APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>K. Special Inspections</b>	<b>2,171,600</b>	<b>2,707,400</b>
1.0 Special Inspections/ Testing (city required tests: embeds, structural welding/connections, concrete, etc)	\$ 75,000	\$ 125,000
2.0 Hazardous Material Oversight 1.25 FTE @ \$150K / FTE x 6 years	\$ 1,125,000	\$ 1,125,000
3.0 Haz Mat Testing 6 locations x 2 floors x 4 tests/month x \$400/ test @ 4-6 years	\$ 921,600	\$ 1,382,400
4.0 Other Inspections	\$ 50,000	\$ 75,000
<b>L. Furniture, Fixtures and Equipment</b>	<b>1,490,000</b>	<b>1,765,000</b>
1.0 New furniture for District Attorney (230 FTE)	\$ 1,150,000	\$ 1,265,000
2.0 New furniture for Grand Jury	\$ 40,000	\$ 50,000
3.0 New casework for (2) interimTraffic Courts (bench seating, Judges Bench, recorders desk)	\$ 150,000	\$ 200,000
4.0 New furniture for miscellaneous moves within existing building.	\$ 50,000	\$ 100,000
5.0 New furniture for public space within existing building.	\$ 100,000	\$ 150,000
6.0 New casework for Courts (fixed furniture, spectator benches, jury box and well bar)	incl. in ECC	incl. in ECC
7.0 New furniture for Judicial / Courts Administration	NA	NA
8.0 New furniture for Law Library	NA	NA

APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>M. Permits/Fees/Charges</b>	<b>2,294,038</b>	<b>2,706,737</b>
1.0 Building permit reviews	\$ 665,494	\$ 934,403
2.0 Tree Fund	\$ 50,000	\$ 50,000
3.0 Bicycle Fee	\$ 25,000	\$ 25,000
4.0 Fire Plan and Life Safety Review	\$ 200,392	\$ 238,964
5.0 Mechanical Plans Review and Permit	\$ 259,783	\$ 259,783
6.0 System Development Charges	\$ 402,000	\$ 402,000
7.0 Development Services Charge	\$ 123,262	\$ 146,992
8.0 Zoning	\$ 71,568	\$ 85,344
9.0 Land Use / Site Review	\$ 247,696	\$ 295,408
10.0 BES Water and Stormwater	\$ 56,740	\$ 56,740
11.0 Metro, forestry	\$ 12,103	\$ 12,103
12.0 PGE	\$ 180,000	\$ 200,000
<b>N. Solar Initiative</b>	<b>1,664,302</b>	<b>1,992,572</b>
1.0 Provide Solar Energy production capacity 1.5% of ECC	\$ 1,664,302	\$ 1,992,572
<b>O. Audio Visual costs</b>	<b>-</b>	<b>-</b>
1.0 Design Fees	incl. in part P	incl. in part P

## APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>P. Multnomah County Technical Services Costs</b>	<b>7,570,000</b>	<b>9,950,000</b>
1.0 Telcom / Data continuing operations and replacement	\$ 5,300,000	\$ 6,900,000
2.0 Security CCTV cameras disk storage, offsite storage	\$ 1,100,000	\$ 1,500,000
1. District Attorney temp space	MCC	MCC
2. Grand Jury for temp space	MCC	MCC
3. Law Library for temp space	MCC	MCC
4. Miscellaneous moves within building	MCC	MCC
5. District Attorney back in building	MCC	MCC
6. Grand Jury back in building	MCC	MCC
7. Traffic Court back in building	MCC	MCC
3.0 Telcom Infrastructure moves / changes (including interim moves out of the	\$ 420,000	\$ 550,000
4.0 Detention Electronics	\$ 750,000	\$ 1,000,000

APPENDIX 7: DETAILED COST DATA

MULTNOMAH COUNTY COURTHOUSE RENOVATION STUDY 2011 ESTIMATED PROJECT COST SUMMARY		
	Low	High
<b>Q. Commissioning/ balancing</b>	<b>700,000</b>	<b>1,020,000</b>
1.0 MEP Systems Commissioning (1) FTE @ \$150K / yr x 4-6 yrs	\$ 600,000	\$ 900,000
2.0 Building Envelope Systems	\$ 100,000	\$ 120,000
<b>R. Other Multnomah County Costs</b>	<b>4,949,621</b>	<b>6,239,185</b>
1.0 On-site Security Screening Stations 3 total@ \$20,000-\$30,000 each	\$ 60,000	\$ 90,000
2.0 Off-site Security Screening Stations 4 total@ \$20,000-\$30,000 each	\$ 80,000	\$ 120,000
3.0 (3) FTE Construction Security screening officers during 4-6 years construction @ \$6300 / mo.	\$ 907,200	\$ 1,360,800
4.0 2% for Art	\$ 2,219,069	\$ 2,656,763
5.0 USGBC LEED Certification Fees (registration, certification, plaque)	\$ 19,050	\$ 19,050
5.0 Builders Risk Insurance 1.5% ECC	\$ 1,664,302	\$ 1,992,572
<b>S. Construction Cost DATA</b>		
Cost per square foot (ECC +ACC) + 10% contingency divided by Renovated building gross square feet	\$ 407	\$ 503
<b>Basis of Costs:</b>		
1.0 All costs reflect 1st Qtr 2011		
2.0 Renovated Courthouse - LEED Gold Minimum		
3.0 Existing building gross square footage sq. ft.	323,486	sq ft
4.0 Renovated building gross square footage sq. ft.	398,885	sq ft
5.0 Tenant move cost range / square foot	\$ 1.50	\$ 2.00
6.0 Tenant move cost range / person (boxes and furniture included)	\$ 300	\$ 350
7.0 Tenant Improvement cost range / square foot	\$ 60	\$ 80
8.0 Tenant Lease cost range / square foot / year	\$ 20	\$ 30

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**APPENDIX 8**  
**EXISTING CONDITIONS**  
**PHOTOS**

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# APPENDIX 8: EXISTING CONDITIONS PHOTOS



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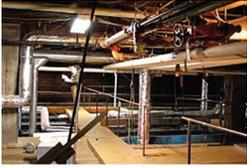


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# APPENDIX 8: EXISTING CONDITIONS PHOTOS



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# APPENDIX 8: EXISTING CONDITIONS PHOTOS



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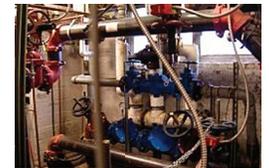
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# APPENDIX 8: EXISTING CONDITIONS PHOTOS



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## APPENDIX 8: EXISTING CONDITIONS PHOTOS



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TERIOR GRAND STAIRCASE F



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# APPENDIX 8: EXISTING CONDITIONS PHOTOS



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