

**CITY OF COOS BAY  
JOINT CITY COUNCIL / URA WORK SESSION  
Agenda Staff Report**

<b>MEETING DATE</b>	<b>AGENDA ITEM NUMBER</b>
December 27, 2016	

TO: URA Chair Kramer and Board Members

FROM: Samantha Pierson, Library Director

THROUGH: Rodger Craddock, City Manager

ISSUE: Library Facilities

**SUMMARY:**

In 2012, the City retained the services of SHN Consulting Engineering & Geologists, Inc. (SHN) to investigate the apparent settlement of the north wall of the library. Based on the findings of that investigation, the City retained the services of ZCS Engineering, Inc. (ZCS) to design a foundation solution to address the localized settlement. During the course of this design, ZCS began to question the effectiveness of a localized solution as it appeared to be a more global issue at the facility. The City again enlisted the services of SHN to provide a more inclusive geotechnical investigation of the facility in conjunction with the structural investigation being performed by ZCS.

As a result of these investigations / evaluations, it was learned that the existing foundation pilings were inadequate to support the structure; and groundwater fluctuation could be deteriorating the top timber pilings which could also be contributing to the settlement. An estimate for installing the necessary micropiles (over 200) to stabilize the foundation was slightly over \$6.3M (2014 dollars). A current estimate puts the price in the \$8.5 million range. It should be noted that the estimate is limited to the foundation mitigation, and it does not include the necessary repairs of other facility issues (failing roof, replacement of the facility HVAC system, etc.) Given the invasiveness of installing micropiles, it is estimated that the library would need to be closed for anywhere between 12 and 18 months.

At the time of the report, April 2014, it was the consensus of the Council to pursue a new facility rather than repairing the existing building. At the direction of Council, the Library Director, through community meetings and surveys, gathered community feedback regarding a general location of a new facility. In September 2014, a report was presented to City Council regarding the community feedback which was strongly in favor of the locating a new library facility in the downtown area. During the same meeting, City Council created a Library Facilities Steering Committee to work through the necessary steps towards a capital project of this nature.

The Steering Committee, consisting of representatives from Friends of the Library, Library Foundation, Library Staff, City Government, and Library Board, began in January 2015 to create a Strategic Plan for the library. The Library Foundation, in combination with a grant from Ford Family Foundation, funded the cost to hire a consultant, Penny Hummel to assist with creating the Strategic Plan. Community members contributed to the Plan through a variety of work sessions, surveys, focus groups, and community meetings. The three-year plan was accepted by City Council during the November 17, 2015 meeting.

The next step towards a new building was the Needs Assessment. In December 2015, a Request for Proposal was advertised and five architecture firms responded. In April 2016, the Urban Renewal Agency awarded the contract to Hacker Architects. Starting with a kick off meeting at the end of May (2016), Hacker Architects began gathering feedback from the community and focus group meetings along with data about current space and services to formulate the needs of a new building. All the information was compiled to determine physical space needed. The recommendation for a new facility is approximately 31,000 square feet. The current library is 25,872 square feet. An estimated cost of between \$13 and \$16 million for construction of a new building and up to \$12 million in additional soft costs and design decisions was presented. This estimate was based on similar buildings projects in the Northwest, seismic requirements, and other information, although nothing local to the South Coast.

Given the above estimate, it's the recommendation of the Library Steering Committee that the City obtain a second opinion / estimate from a local architectural firm who has experience with construction costs locally. Having a second opinion will be helpful to Council who will be asked how best to move forward with the options of repairing and/or replacing the current facility.

**ACTION REQUESTED:**

Allow the City Manager to engage the services of HGE to provide a construction estimate for the desired new facility as well as a list of cost saving options.

Attachments:

- Micropile Estimate
- April 1, 2014 Council Agenda Staff Report and attachment (ZCS Structural Assessment)
- September 2, 2014 Council Agenda Staff Report and attachment (Public input for siting of a new library)
- September 2, 2014 Council Agenda Staff Report establishing the Library Facility Steering Committee
- November 17, 2015 Council Agenda Staff Report regarding the Library Strategic Plan
- October 5, 2016 Facility Needs Assessment

Micropile Repair/Replacement Estimate

Description	Unit	FY 2014 Cost Estimate	FY 2018 Cost Estimate
Micropile Foundation Repairs	207 pile @ \$12,000 per pile	\$2,484,000	\$3,353,400
Demo and Replacement	\$85/sf	\$2,210,000	\$2,983,500
<b>Subtotal</b>		<b>\$4,694,000</b>	<b>\$6,336,900</b>
Permitting Fees	5%	\$235,000	317,250
Plan Development Fees	15%	\$704,000	950,400
Contingency	15%	\$704,000	950,400
<b>Total Building Improvements</b>		<b>\$6,337,000</b>	<b>\$8,554,950</b>

**CITY OF COOS BAY CITY COUNCIL**  
**Agenda Staff Report**

<b>MEETING DATE</b>	<b>AGENDA ITEM NUMBER</b>
April 1, 2014	

**TO:** Mayor Shoji and City Councilors

**FROM:** Jim Hossley, Public Works Director  
Randy Dixon, Operations Administrator

**THROUGH:** Rodger Craddock, City Manager *per*

**ISSUE:** Discussion of Structural and Geotechnical Investigation of the Coos Bay Library

**BACKGROUND:**

The Coos Bay Library building has experienced some superficial and structural damage due to settling. The City contracted with the consulting firms SHN and ZCS to perform geotechnical and structural investigations of the Coos Bay Library. Representatives from the consulting firms will provide the City Council and citizens with presentation on their findings.

**ADVANTAGES:**

This discussion will help City Councilors and citizens understand the settlement that is occurring to the library building and learn about potential solutions along with estimated cost for those solutions.

**DISADVANTAGES:**

None

**BUDGET IMPLICATIONS:**

None at this time

**RELATED CITY GOAL:**

**Infrastructure and Services:** To maintain and improve the City's physical infrastructure and provide quality services for current and future citizens.

And

**Citizen Education & Involvement:** Educate, cultivate, and encourage public participation in City government, urban renewal and disaster preparedness.

**ACTION REQUESTED:**

Staff is requesting the City Council direct staff as how you would like to proceed based on the information presented.

# Coos Bay Public Library Structural Assessment

525 Anderson Avenue, Coos Bay, OR

February 21, 2014



Prepared for:  
Randy Dixon  
500 Central Avenue  
Coos Bay, OR 97420  
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Prepared By:  
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EXPIRES: 12/31/15

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February 21, 2014

Randy Dixon, Operations Manager  
City of Coos Bay  
500 Central Avenue  
Coos Bay, OR 97420

Reference: Coos Bay Public Library  
Subject: Structural Improvement Evaluation

Mr. Dixon,

Please accept this report outlining our findings and recommendations for the structural improvement plan for the Coos Bay Public Library located at 525 Anderson Avenue in Coos Bay, Oregon. The purpose of our investigation was to verify the existing structural systems and perform an assessment based on current building code requirements to determine deficiencies, and to provide repair recommendations. We have outlined the findings of our evaluation in the enclosed report.

If you have any questions or concerns, please do not hesitate to contact our office at (541) 479-3865, or email me at SyA@ZCSengineering.com.

Sincerely,



**EXPIRES: 12/31/15**

Syllas E. Allen, PE  
Branch Manager

Enc: Structural evaluation report with repair recommendations and Tier 1 seismic evaluation.

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### Report Organization

**Introduction:** This section provides a brief overview and summary of the Structural Assessment and is intended to provide the reader with the important facts and findings contained in the overall report.

**Project Overview:** This section provides information on the background of the situation so the reader understands why this report was necessary.

**Observations & Findings:** This section includes a detailed summary of the building inspections along with the deficiencies that were observed.

**Conclusions & Recommendations:** This section outlines the conclusions that can be drawn from the information gathered and the actions deemed necessary to correct the noted deficiencies.

**Opinion of Probable Construction Cost:** This section provides a rough cost estimate to assist with the determination of the feasibility of moving forward with the structural repair work.

**Recommendations Moving Forward:** This section gives the reader an idea of the next steps to be taken if the City decides to move forward with the repair of this building.

**Limitations & Exclusions:** This section outlines the limits of the work performed, and the extent to which ZCS can be held responsible for the information provided in this report.

## 1.0 Introduction

This report outlines our findings regarding the structural assessment of the Coos Bay Public Library located at 525 Anderson Ave. in Coos Bay, Oregon. The purpose of this assessment was to determine the cause of building settlement, investigate existing structural systems for deficiencies, and prescribe repairs for the items found with associated costs to guide the City in their decision making regarding this building. Our scope did not include evaluation of space planning; fire and life safety and ADA code related items; energy efficiency, security measures, finish upgrades, facility modernization, or mechanical, electrical and plumbing systems. The list below briefly outlines the findings of our evaluation, and recommended repairs.

### Summary of Findings and Recommended Repairs

- Global settlement throughout the building, with localized areas of substantial settlement over short distances. In addition, condition of the existing pile and attachment to the pile caps is unknown. Refer to geotechnical report prepared by SHN Consulting Engineers & Geologists, Inc. dated January 22, 2014.
  - Complete foundation rehabilitation in the form of cased micropiles extending approximately 120' (into the underlying bearing stratum).
  - Localized floor slab repair incidental to structural work and levelling of drastic changes in elevation.
  - Repair and replacement of finishes, fixtures, casework, etc.
- Deficient gravity framing elements at the second floor storage portion of the original building (beams 'L' and 'F', and truss 'T-1' in Figure 5).
  - Repair measures should be further investigated, but could consist of additional columns or direct repairs to deficient members.
  - If deficiency is deemed a major concern, abandonment of second floor storage may be necessary.
- Concrete columns acting as lateral force resisting system in original structure are not compliant, refer to Appendix B: Tier 1 Evaluation.
  - Provide CMU shear walls to resist lateral loads, concrete columns remain for gravity element support.
- The roof diaphragm of the original building consists of 2x horizontal sheathing, rendering it inadequate for seismic loading, refer to Appendix B: Tier 1 Evaluation.
  - Provide plywood sheathing over existing 2x horizontal sheathing in conjunction with the re-roof of the building.
- The roof diaphragm of the wood-framed addition consists of unblocked plywood sheathing, refer to Appendix B: Tier 1 Evaluation.
  - Provide blocking at all panel edges and edge nail sheathing.
  - Improve connections at beam lines and walls to roof, provide strapping for connectivity across the building.

We have prepared an "Opinion of Probable Construction Cost" for the repair and rehabilitation of this building in Table 1. Based on expected costs to perform the work described above, we arrived at approximately **\$6.3 million**. The use of this budget should be limited to planning level decision making only, to determine the feasibility of undertaking the structural repairs outlined herein. The findings in this report, that the budget is based on, will need to be further evaluated to determine the exact nature of the necessary repairs should the City decide this route to be in their best interest. In addition, the following is recommended: hazardous material investigation, space planning if so desired, utility coordination, detailed code review, and preparation of construction documents for structural, architectural, and MEP disciplines.

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## 2.0 Project Overview

The original Coos Bay Public Library was constructed around 1965 on the corner of Anderson and 5<sup>th</sup> Streets in Coos Bay, Oregon. Based on the original construction drawings made available for our review, this single-story, 16,640 sf building was founded on timber pile capped with concrete, a structural floor slab and building superstructure. The perimeter concrete columns appear to function as the building's lateral- and gravity-force resisting system, with non-structural masonry infill walls and window packages between. The roof construction is comprised of heavy timber trusses and beam systems, with 2x roof decking and asphalt shingle roofing. The library underwent an approximately 9000 sf addition around 1998, expanding to the west of the original building and modifying the main entrance. Based on construction documents made available for our review, the addition was founded on steel pipe pile, and also supports a structural slab system, but the lateral- and gravity-force resisting system is comprised of wood shearwalls, and the roof is light timber-framed trusses with plywood sheathing and asphalt shingle roofing. At some point between the original construction and the addition, the north wall of the original building underwent undocumented modifications, bumping the exterior wall out under the existing overhang. This minor addition involved new concrete grade beams between the columns, and a wood-framed floor system and exterior walls between the existing concrete columns.



Figure 1 Building Exterior

It is our understanding the City of Coos Bay (City) retained the services of SHN Consulting Engineers & Geologists, Inc. (SHN) to investigate the apparent settlement of the north wall of the library where the undocumented modifications occurred (refer to Geotechnical Evaluation dated May 8, 2012). Based on the findings in that report, the City retained the services of ZCS Engineering, Inc. (ZCS) to design a foundation solution to address the localized settlement. During the course of this design, ZCS began to question the effectiveness of a localized solution, when the problem appeared to be of a global nature. The City again enlisted the services of SHN to provide further geotechnical investigation on a global scale (refer to "Supplemental Geotechnical Investigation" dated January 22, 2014), in conjunction with the structural investigation performed by ZCS. The following report summarizes the findings, recommendations and conclusions of the geotechnical and structural evaluations.

## 3.0 Observations & Findings

### 3.1 Geotechnical

Refer to SHN report "Supplemental Geotechnical Investigation Relative to Structural Distress" dated January 22, 2014 for additional information. The following summarizes the report:

- SHN performed geotechnical investigations to determine soil characteristics essential to determining the adequacy of the existing foundation and appropriate foundation repair methods.
- SHN performed a floor level survey to ascertain the nature of the building settlement in an attempt to relate the findings to the actual building grid loads as provided by ZCS.
- The soils were deemed highly compressible, even under light loading, with a long time-rate of settlement and possibility of induced downdrag forces on pile.
- The allowable pile capacity is approximately 16.67 kips for single pile, 11.77 kips per pile for pile groups (FS = 3.0, group efficiency factor = 0.7)

### 3.2 Structural

Agents of ZCS visited the site on a number of occasions at the request of the City to observe what appeared to be recent cracking of the finishes, to verify the information provided in the original construction drawings, and to observe the general layout of the furniture and shelving units to approximate the floor loading accurately. We prepared a summary of the loading on a grid basis for use by SHN in correlating their findings with the actual loading conditions (this loading summary can be found in the supplemental geotechnical report referenced above).

In conjunction with the loading summary, we also performed calculations to analyze the existing beams and trusses for deficient members. It was determined that some of the members supporting the second floor storage space are deficient under the prescribed code loading (see Figure 2). We also performed a Tier 1 Evaluation, per the ASCE 31-03 – Seismic Evaluation of Existing Buildings, to get a general sense of the adequacy of the lateral-force resisting system as it pertains to seismic loading (see Appendix B: Tier 1 Evaluation). Overall, the building did not raise many red flags; most notable were the inadequacy of the diaphragms (2x roof decking on the original structure, unblocked plywood sheathing on the addition), lack of cross-ties between diaphragm chords, improper spacing of the column ties at the connection to the pile cap where the forces would concentrate, and insufficient anchorage of the existing pile to the pile caps.



Figure 2 Storage Space Construction

## 4.0 Conclusions & Recommendations

### 4.1 Geotechnical

Refer to SHN report "Supplemental Geotechnical Investigation Relative to Structural Distress" dated January 22, 2014 for additional information. To summarize:

- The existing pile are inadequate for support of the structure, although a majority of the total expected settlement has occurred.
- Groundwater fluctuation could be deteriorating the top of the timber pile, contributing to the settlement observed.
- The best option for remediation of the settlement and adequate support of the building is cased micropile installed to a depth of approximately 120' (into the underlying dense siltstone bedrock).

### 4.2 Structural

Based on the calculated loads and condition of the underlying soils, all of the existing pile have insufficient capacity to support the calculated loads, contributing to the settlements observed. SHN has determined that the best repair option is to install an array of micropile that take the existing foundation out of service completely, even if the loads can be reduced below the provided allowable capacity of the existing pile. These micropile are very expensive, due to the depth they have to be installed to achieve capacity. The number of pile could fluctuate depending on the repair methods chosen, but our preliminary estimate puts the total just over 200 pile. This would involve installing a single pile through the middle of the existing pile caps where there are no columns interfering, and installing two pile where columns are interfering; one either side of the existing pile cap to negate any eccentricity (see Figure 4).

The installation of the pile will require intensive demolition with regards to the existing slab system. Portions of the slab would have to be removed to allow access to the existing pile caps, and replaced after the pile installation is complete. Structure would have to be appended to the existing pile caps to anchor the new micropile system to the building. Among other options, removal of the entire slab and replacement with a lighter wood-framed floor system was entertained, but the gain does not outweigh the cost since the existing pile were deemed useless regardless of the loading applied. In essence, it would require the same number of new micropile, and even more work to the substructure in order to frame the new floor into the building. The only major gain with this approach is a more level floor and unlimited access to the existing substructure during construction.

In order to install the micropile, the entire building would need to be cleared of all contents, and gutted of all interior walls and items conflicting with the pile locations, perhaps leaving the ceiling finishes and the existing HVAC system intact. This includes, but is not limited to, walls, casework, plumbing, fixtures, electrical, and floor finishes, which would all have to be replaced after the work is complete. This would also involve storing all the contents and closing down the library for the duration of construction, which could be a year to a year-and-a-half. This would provide the City with an opportune time to perform the desired roof replacement, and recommended structural roof upgrades.

The structural work described above is considered “repairs”, and is completely voluntary on the part of the City as the structure has not been deemed “dangerous”. Repairs are work that is deemed necessary to fix a structural deficiency, with the exception of the voluntary seismic strengthening that would fall into the “upgrades” category. Upgrades are items that may or may not improve the usability of the space, but improve the overall performance of the structure. While the seismic strengthening is voluntary per sections 3408.4 and 3404.5 of the OSSC, we would recommend performing this work to protect the investment that is made in the building. This would entail providing new CMU shearwalls to take the place of the existing concrete columns as part of the lateral force resisting system, as well as providing plywood sheathing and cross-ties at the roof level to create diaphragms and load path components.

It is our opinion that the repair of the library as described above would not be money well spent on the part of the City. The expected gain is minimal: reduction in maintenance associated with settlement, and assurance of public perception of safety. What is not gained is what determined our recommendation: the floor is still uneven; you gain no efficiencies that a modern building would grant you in MEP systems, maintenance costs, energy consumption, up-to-date electronics, security measures, and usability. An evaluation could be performed to determine if the library still fits the needs of the community, or if it is outdated. The contents of the library would have to be moved out, and the library closed for at least a year during construction, whereas if a new building was constructed, the City could move the contents directly into the new building with little down-time.

The City maintains the option to take no action, and continue to use the library as they are currently. The building is safe for occupancy, as the settlements observed do not constitute a collapse potential or immediate danger. The City will have to keep up with maintenance items such as repairs to finishes and thresholds as they become an issue due to continued settlement. We would recommend a monthly monitoring program be established to track the continued settlement of the building, as we can provide no warranty as to the condition of the building as it continues to settle, or its performance during a code wind or seismic event. The City will also have to tolerate the public perception of the settlement, with the knowledge that at some point the perception of the safety of the library may be compromised due to the undulations of the floor and the finish damage.

### 5.0 Opinion of Probable Construction Cost

The intent of this section is to help establish a reasonable estimate of the construction cost to help the City determine the feasibility of undertaking the foundation repair. To develop the probable construction cost for the repairs, we consulted a specialty contractor regarding the micropile foundation system, and a local contractor regarding the incidental demo and replacement work. The construction cost excludes the voluntary seismic strengthening work outlined previously, roof replacement, optional HVAC replacement, any hazardous material investigation/mitigation, any moving and storage of building contents, any costs associated with down-time during the construction process (approx. 1 to 1.5 year), and any alterations to the building outside the scope of the repairs. Based on basic finishes such as carpet and vinyl flooring, standard fixtures and casework, painted wood doors and trim, and wood framed walls with gypsum finishes, the following opinion utilizes a cost of \$85.00 per square foot for direct replacement of the existing interior elements.

Separate line items, including an industry standard 5% for permitting fees, 15% for soft costs associated with architectural/engineering plan development, and a 15% contingency associated with potential unknowns that could develop with a repair of this magnitude, have been included. The total construction cost is based on 26,000 sf of building area. The following table outlines our Opinion of Probable Construction Cost:

**Table 1** Opinion of Probable Construction Cost

Micropile Foundation Repairs	207 pile @ \$12,000 per pile	\$2,484,000
Demo and Replacement	\$85/sf	\$2,210,000
	<b>Subtotal</b>	<b>\$4,694,000</b>
Permitting Fees	5%	\$235,000
Plan Development Fees	15%	\$704,000
Contingency	15%	\$704,000
	<b>Total Building Improvements</b>	<b>\$6,337,000</b>

By comparison, if a new library of the same square footage were built today, the City could expect to pay around \$250/sf. At 26,000 sf, a new library would cost around **\$6.5 million**. With the current technology trends, and departure from paper media to more electronic media, a new library may not need to be as large as the existing library. An evaluation could be performed within the local community to determine if the currently library is sufficient, or if a new library could better serve the needs of the community.

It should be noted that the above probable construction costs do not include potential increases related to inflation over time and material price escalations. The above construction cost is based on current pricing data available. This budget should be used for planning level decision making only.

## 6.0 Recommendations Moving Forward

As stated above, it is not our recommendation to repair the existing library. We believe the community of Coos Bay could benefit from a more modern public library facility, and the City may come out money-ahead by pursuing a newer, more efficient building. We believe a viable option may be to construct a new facility on a corner of the current library parking lot, while continuing to utilize the existing library. When this structure is complete, the moving process would be relatively easy by comparison to moving to a completely different site, decreasing the down-time, and maintaining the public association with this site as the public library.

Should the City decide to proceed with the repairs to the library foundation, based on the information provided in this report, further investigation/evaluation will need to be performed during a schematic design phase. Further consultation with the micropile specialty contractor will be necessary to confirm the assumptions that were made to provide the above cost estimate. A schematic foundation repair plan shall be developed, which will be utilized during discussions and subsequent testing or selective demolition to maximize the efficiency of the proposed repairs. Schematic mechanical, electrical and plumbing plans shall be developed, which will be utilized to evaluate the existing utilities and compare to the new requirements. This phase will also include hazardous materials testing to determine the occurrence of the materials and how they will have to be dealt with during demolition and construction. The construction cost should be reevaluated at the end of the schematic design phase, prior to progressing into the construction document phase, and during each phase thereafter.

## 7.0 Limitations & Exclusions

This report is limited to the footprint of the building, and does not include public ways or parking requirements. This inspection took place within the readily accessible areas of the building and is limited to visual observations of evident conditions existing at the time of the inspection only. Limited structural analysis was performed at this stage to substantiate the structure's performance during prescribed code loading events. Concealed and latent defects and deficiencies are excluded from this report. Systems were not dismantled to provide inspection access. Destructive investigation and testing was not performed.

It is understood that ZCS Engineering, Inc. is not an insurer and that this inspection and report are not intended or to be construed as an express or implied guarantee or warranty of adequacy, performance, or condition of the structure at the inspected property address. No guarantee or warranty of the structure's performance outside the loading observed at the time of inspection can be made. The Client hereby releases and exempts ZCS Engineering, Inc. and its agents and employees of and from all claims of responsibility and liability for the cost of repairing or replacing any unreported deficiency or defect and for any consequential harm, property damage, personal injury of any nature, and/or legal fees. This report is for the sole, confidential and exclusive use of the Client.



## Appendix A: Figures

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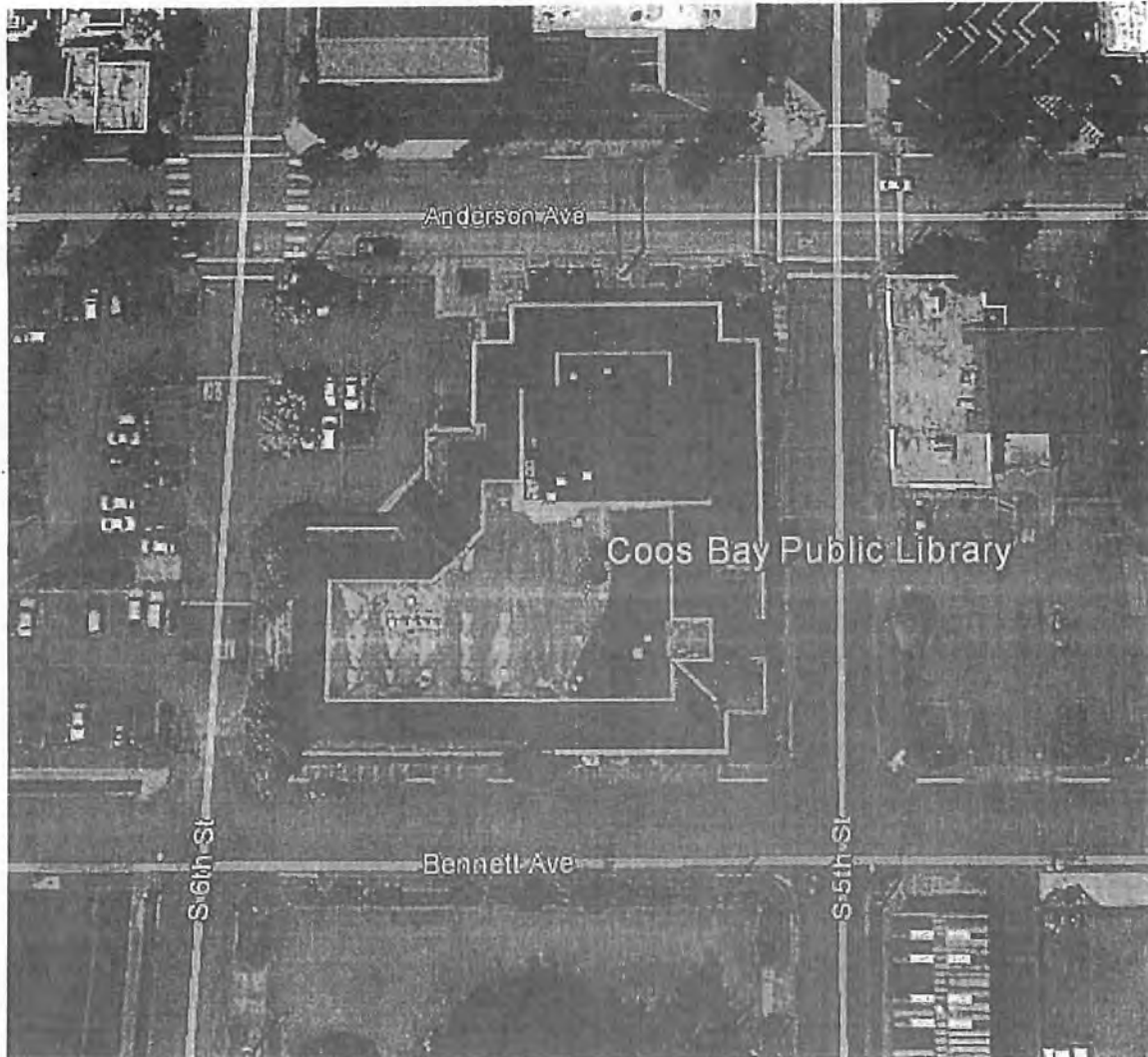


Figure 3 Coos Bay Public Library

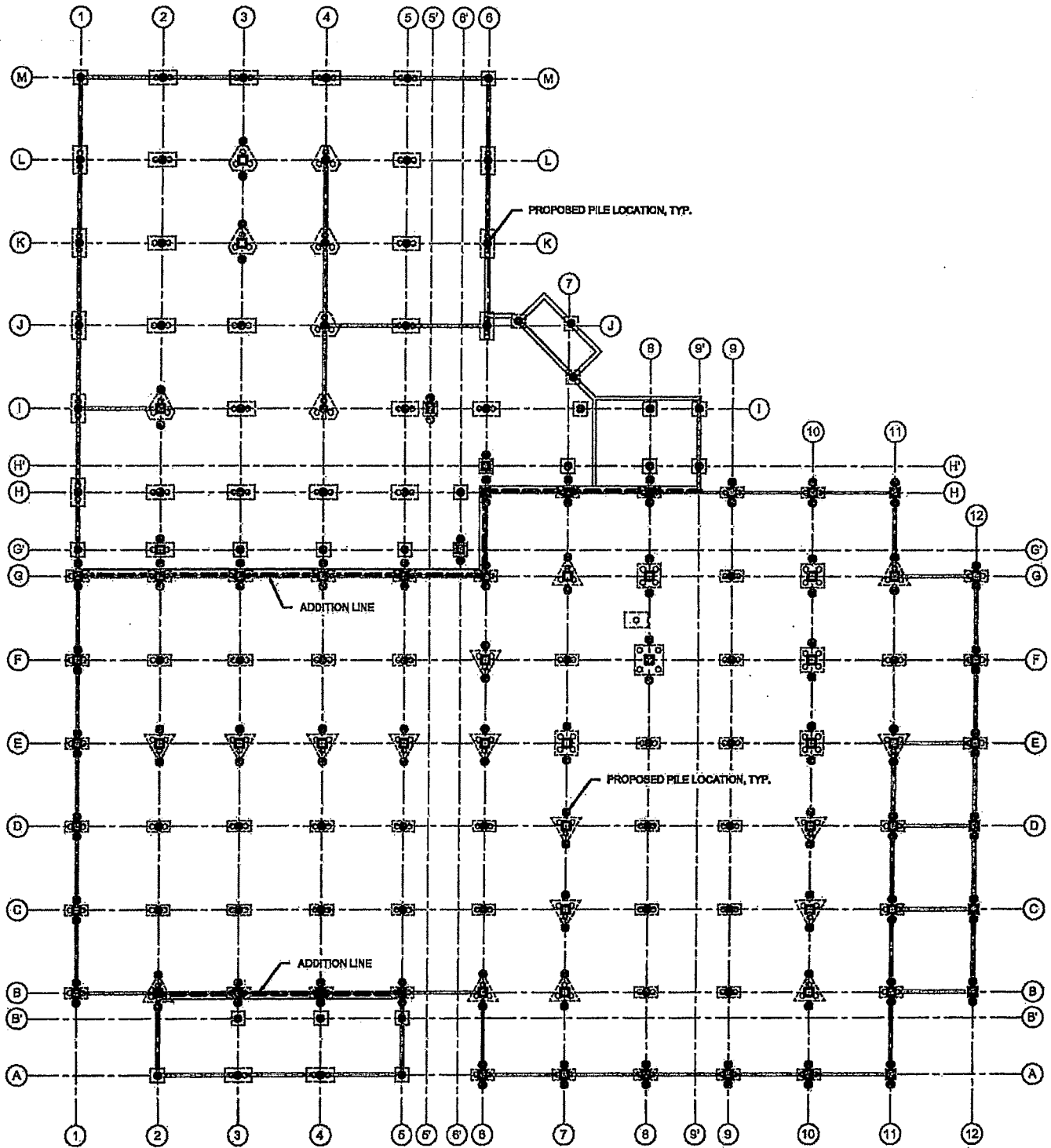


Figure 4 Foundation Plan with Column and Proposed Micropile Locations

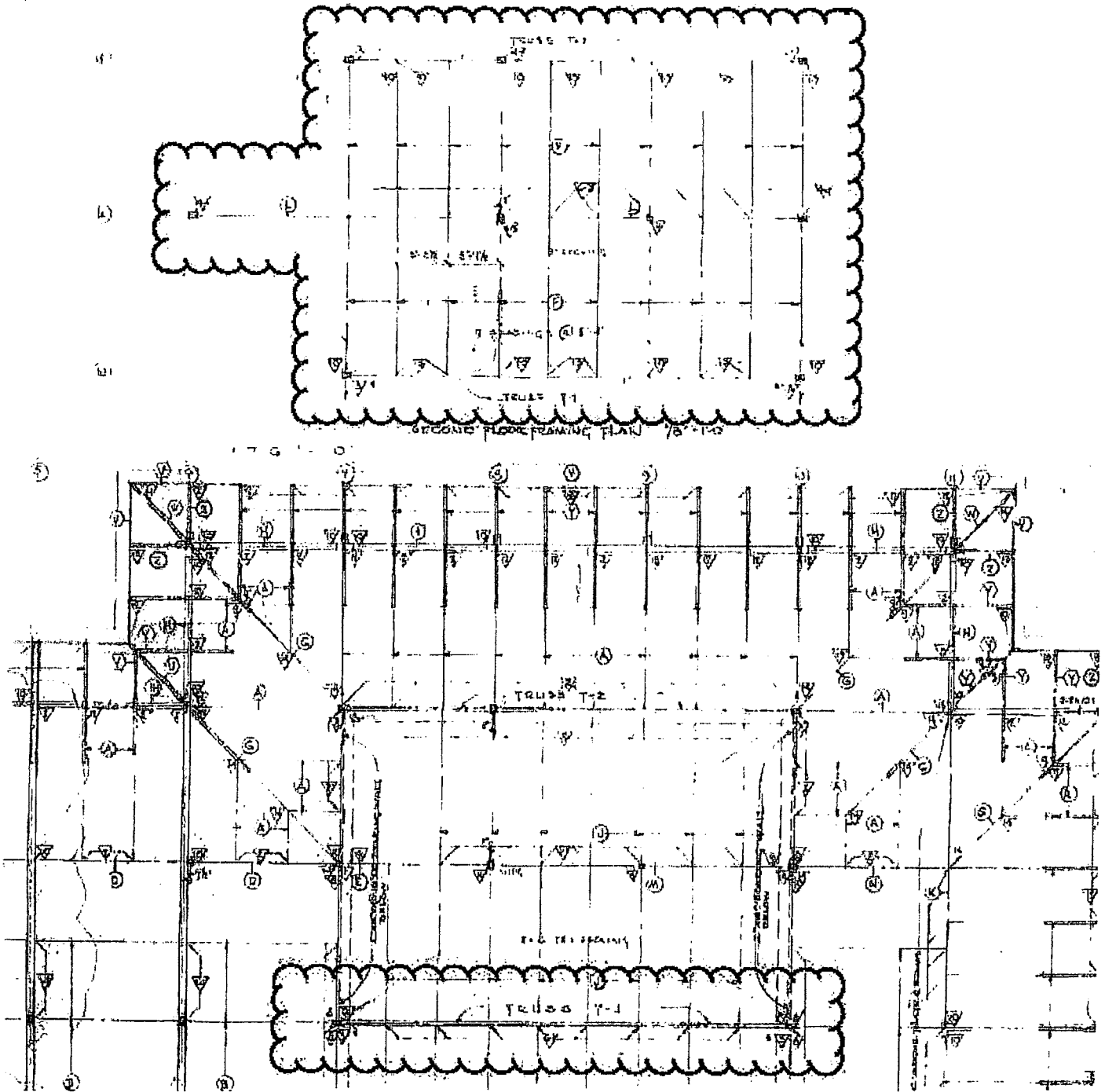


Figure 5 Original Roof and Second Floor Framing at Deficient Members

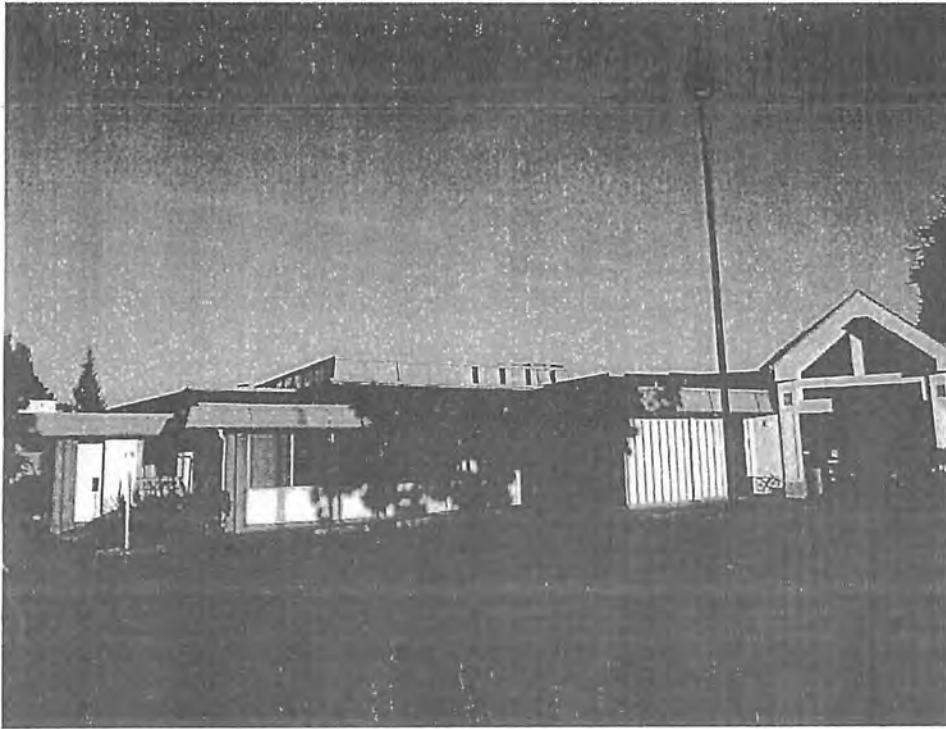


Figure 6 Building Exterior

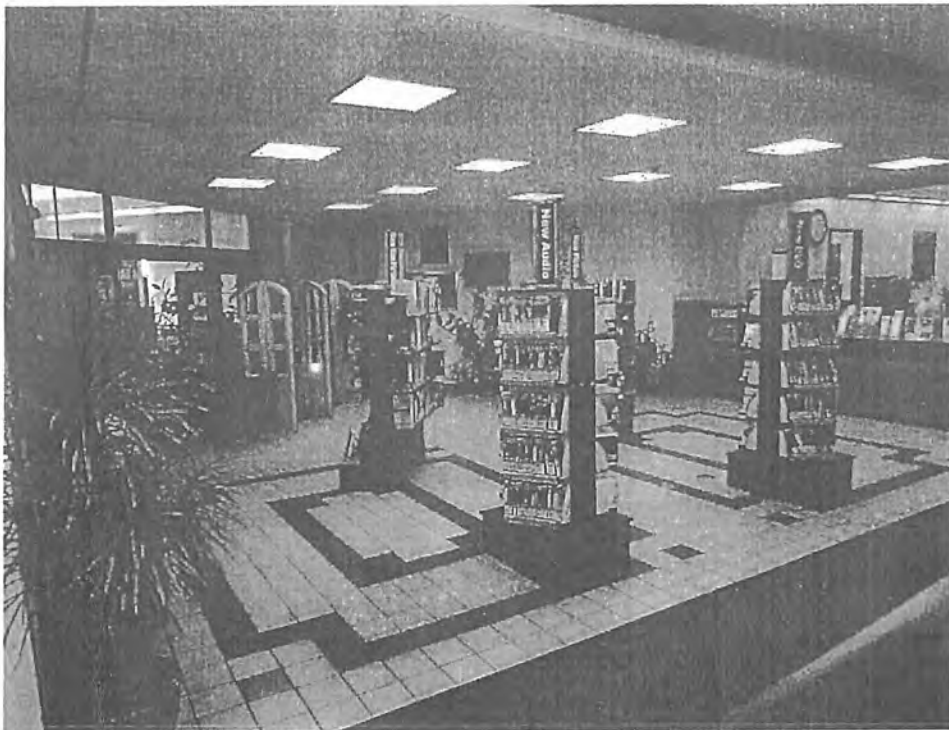


Figure 7 Building Lobby



Figure 8 Building Interior



Figure 9 Building Interior



Figure 10 Second Floor Storage

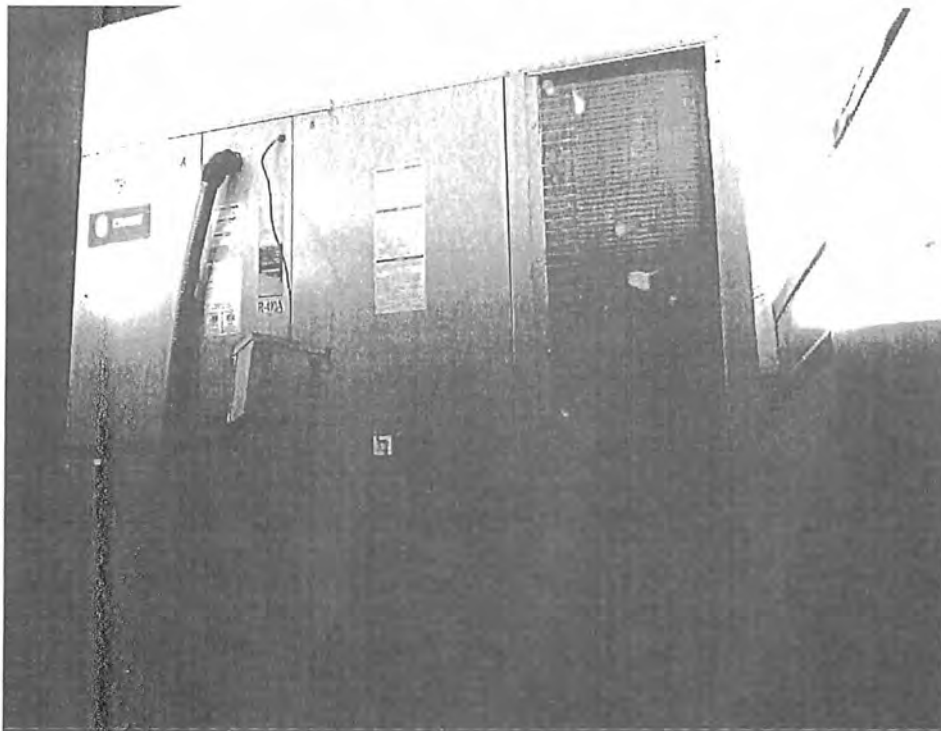


Figure 11 Existing HVAC Unit



## **Appendix B: Tier 1 Evaluation**

ASCE/SEI 31-03 – Seismic Evaluation of Existing Buildings

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**C3.3 Selection and Use of Checklists**

The evaluation statements provided in the checklists form the core of the Tier 1 Evaluation methodology. These evaluation statements are based on observed earthquake structural damage during actual earthquakes. The checklists do not necessarily identify the response of the structure to ground motion; rather, the design professional obtains a general sense of the structure's deficiencies and potential behavior during an earthquake. By quickly identifying the potential deficiencies in the structure, the design professional has a better idea of what to examine and analyze in a Tier 2 or Tier 3 Evaluation.

The General Structural Checklists are a complete listing of all evaluation statements used in the Common Building Type checklists. They should be used for buildings with structural systems that do not match the Common Building Types. While the general purpose of the Tier 1 Checklists is to identify potential weak links associated with structures of a specific type that have been observed in past significant earthquakes, the General Checklists, by virtue of their design, do not accomplish this. They only represent a listing of possible deficiencies. The design professional must consider first the applicability of the potential deficiency to the building system being considered. Generally, only the deficiencies applicable to the primary lateral-force-resisting elements of the building need be considered.

While the section numbers in parentheses following each evaluation statement correspond to Tier 2 Evaluation procedures, they also correspond to commentary in Chapter 4 regarding the statement's purpose. If additional information on the evaluation statement is required, please refer to the commentary in the Tier 2 procedure for that evaluation statement.

**Table 3-2. Checklists Required for a Tier 1 Evaluation**

Level of Seismicity <sup>3</sup>	Level of Performance <sup>2</sup>	Required Checklists <sup>1</sup>						
		Level of Low Seismicity (Sec. 3.6)	Basic Structural (Sec. 3.7)	Supplemental Structural (Sec. 3.7)	Geologic Site Hazard and Foundation (Sec. 3.8)	Basic Nonstructural (Sec. 3.9.1)	Intermediate Nonstructural (Sec. 3.9.2)	Supplemental Nonstructural (Sec. 3.9.3)
Low	LS	▶						
	IO		▶		▶	▶		
Moderate	LS		▶		▶	▶		
	IO		▶	▶	▶	▶	▶	
High	LS		▶	▶	▶	▶	▶	▶
	IO		▶	▶	▶	▶	▶	▶

<sup>1</sup>A checkmark (▶) designates the checklist that must be completed for a Tier 1 Evaluation as a function of the level of seismicity and level of performance.

<sup>2</sup>LS = Life Safety; IO = Immediate Occupancy (defined in Section 2.4).

<sup>3</sup>Defined in Section 2.5.

**3.7.2 Basic Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial**

This Basic Structural Checklist shall be completed where required by Table 3-2.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**C3.7.2 Basic Structural Checklist for Building Type W2**

These buildings are commercial or industrial buildings with a floor area of 5,000 square feet or more. There are few, if any, interior walls. The floor and roof framing consists of wood or steel trusses, glulam or steel beams, and wood posts or steel columns. Lateral forces are resisted by wood diaphragms and exterior stud walls sheathed with plywood, oriented strand board, stucco, plaster, straight or diagonal wood sheathing, or braced with rod bracing. Wall openings for storefronts and garages, where present, are framed by post-and-beam framing.

**Building System**

- (C) NC N/A **LOAD PATH:** The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
- C NC (N/A) **MEZZANINES:** Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
- C NC (N/A) **WEAK STORY:** The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
- C NC (N/A) **SOFT STORY:** The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
- C NC (N/A) **GEOMETRY:** There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
- (C) NC N/A **VERTICAL DISCONTINUITIES:** All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
- C NC (N/A) **MASS:** There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

(C) NC N/A DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)

C NC (N/A) WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)

**Lateral-Force-Resisting System**

(C) NC N/A REDUNDANCY: The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)

SEC ATT

(C) NC N/A SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2.7.1):

Structural panel sheathing	1,000 plf
Diagonal sheathing	700 plf
Straight sheathing	100 plf
All other conditions	100 plf

C NC (N/A) STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)

C NC (N/A) GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)

(C) NC N/A NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. ~~Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity.~~ (Tier 2: Sec. 4.4.2.7.4)

C NC (N/A) WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)

C NC (N/A) HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)

C NC (N/A) CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2.7.7)

C NC (N/A) OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive ties capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

**Connections**

C NC (N/A) WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)

(C) NC N/A WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

(C) NC N/A GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)



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TIER 1 EVAL

3.5.3.3 - SHEAR STRESS IN SHEAR WALLS (WOOD)

$$V_j \text{ AVE} = \left(\frac{1}{m}\right) \left(\frac{V_j}{A_w}\right)$$

$$V_j = \sum_{i=1}^n F_x \rightarrow V_j = F_x$$

$$F_x = V = C S_a W = 242 \text{ K}$$

$$C = 1.3$$

$$S_a = S_{D1} / T = 2.97 > 0.90 = S_{D5} = S_a$$

$$S_{D1} = 1.15$$

$$T = C_t h_n^\beta = 0.387 \text{ sec}$$

$$C_t = 0.06$$

$$h_n = 12'$$

$$\beta = 0.75$$

$$W = 207. \text{ K} \quad (10351 \text{ sf})$$

~~$V = 0.15 W = 510 \text{ K} = V_j$  → M-FACTOR = 1.0 § 3.5.3~~

$$(E-W) A_w = 17' + 22' + 17' + 9' + 6' + 8' + 19' = 98'$$

$$(N-S) A_w = 29' + 29' + 23' + 12' + 16' + 22' + 9' = 140'$$

$$m = 4.0$$

$$(E-W) V_j \text{ AVE} = 617 \text{ plf} < 1000 \text{ plf} \quad \underline{\underline{VOK}}$$

$$(N-S) V_j \text{ AVE} = 432 \text{ plf} < 1000 \text{ plf} \quad \underline{\underline{VOK}}$$

**3.7.2S Supplemental Structural Checklist for Building Type W2: Wood Frames, Commercial and Industrial**

This Supplemental-Structural Checklist shall be completed where required by Table 3-2. The Basic Structural Checklist shall be completed prior to completing this Supplemental Structural Checklist.

**Lateral-Force-Resisting System**

- C NC N/A **HOLD-DOWN ANCHORS:** All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

**Diaphragms**

- C NC N/A **DIAPHRAGM CONTINUITY:** The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
- C NC N/A **ROOF CHORD CONTINUITY:** All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
- C NC N/A **PLAN IRREGULARITIES:** There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
- C NC N/A **DIAPHRAGM REINFORCEMENT AT OPENINGS:** There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)
- C NC N/A **STRAIGHT SHEATHING:** All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
- C NC N/A **SPANS:** All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)
- C NC N/A **UNBLOCKED DIAPHRAGMS:** All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)
- C NC N/A **OTHER DIAPHRAGMS:** The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

**Connections**

- C NC N/A **WOOD SILL BOLTS:** Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end distance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)

**3.7.8 Basic Structural Checklist for Building Type C1: Concrete Moment Frames**

This Basic Structural Checklist shall be completed where required by Table 3-2.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**C3.7.8 Basic Structural Checklist for Building Type C1**

These buildings consist of a frame assembly of cast-in-place concrete beams and columns. Floor and roof framing consists of cast-in-place concrete slabs, concrete beams, one-way joists, two-way waffle joists, or flat slabs. Lateral forces are resisted by concrete moment frames that develop their stiffness through monolithic beam-column connections. In older construction, or in levels of low seismicity, the moment frames may consist of the column strips of two-way flat slab systems. Modern frames in levels of high seismicity have joint reinforcing, closely spaced ties, and special detailing to provide ductile performance. This detailing is not present in older construction. Foundations consist of concrete spread footings, mat foundations, or deep foundations.

**Building System**

- (C) NC N/A LOAD PATH: The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
- (C) NC N/A ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
- C NC (N/A) MEZZANINES: Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)
- C NC (N/A) WEAK STORY: The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
- C NC (N/A) SOFT STORY: The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
- C NC (N/A) GEOMETRY: There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
- (C) NC N/A VERTICAL DISCONTINUITIES: All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)



Screening Phase (Tier 1)

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C NC (N/A) MASS: There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)

(C) NC N/A TORSION: The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)

(C) NC N/A DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)

C NC (N/A) POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)

Lateral-Force-Resisting System

(C) NC N/A REDUNDANCY: The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal to 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)

C (NC) N/A INTERFERING WALLS: All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)

(C) NC N/A SHEAR STRESS CHECK: The shear stress in the concrete columns, calculated using the Quick Check procedure of Section 3.5.3.2, shall be less than the greater of 100 psi or  $2\sqrt{f'_c}$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.1)

(C) NC N/A AXIAL STRESS CHECK: The axial stress due to gravity loads in columns subjected to overturning forces shall be less than  $0.10f'_c$  for Life Safety and Immediate Occupancy. Alternatively, the axial stresses due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than  $0.30f'_c$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.2)

Connections

(C) NC N/A CONCRETE COLUMNS: All concrete columns shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the tensile capacity of reinforcement in columns of lateral-force-resisting system for Immediate Occupancy. (Tier 2: Sec. 4.6.3.2)



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TIER 1 EVAL

3.5.3.2 - SHEAR STRESS IN CONC. FRAME COLUMNS

$$V_{j,AVE} = \frac{1}{M} \left( \frac{n_c}{n_c - n_f} \right) \left( \frac{V_j}{A_c} \right)$$

$$V_j = C S_a W = 476 K$$

$$C = 1.3$$

$$S_a = S_{D1}/T < S_{D5} = 4.1 > S_{D5} = 0.90 = S_a$$

$$S_{D1} = 1.15$$

$$T = C_t h_n^\beta = 0.281$$

$$C_t = 0.03$$

$$h_n = 12'$$

$$\beta = 0.90$$

$$W = 407 K \quad (20,360 sf)$$

$$A_c = 79 sf \quad (\text{SEE REVERSE}) \rightarrow 11,376 in^2$$

$$n_c = 39 \text{ COLUMNS}$$

$$n_f = 17 (E-W), 25 (N-S)$$

$$M = 2.0 \text{ LIFE SAFETY}$$

$$V_{j,AVE} (E-W) = 37 psi < 100 psi \rightarrow \underline{\underline{OK}}$$

$$V_{j,AVE} (N-S) = 58 psi < 100 psi \rightarrow \underline{\underline{OK}}$$



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TIER 1

3.5.3.6 - AXIAL STRESS DUE TO OVERTURNING

$$p_{ot} = \frac{1}{M} \left( \frac{2}{3} \right) \left( \frac{V h_n}{L n_f} \right) \left( \frac{1}{A_{col}} \right)$$

M = 2.0 LIFE SAFETY

V = 470K (SEE 3.5.3.2)

h<sub>n</sub> = 12'

L = 112' (E-W), 176' (N-S)

n<sub>f</sub> = 17 (E-W), 25 (N-S)

A<sub>col</sub> = 2.43sf @ CORNERS → 346 in<sup>2</sup>

p<sub>ot</sub> (E-W) = 2.9 psi < 900 psi = 0.3 (3000 psi)

p<sub>ot</sub> (N-S) = 1.3 psi < 900 psi = 0.3 (3000 psi)

AXIAL STRESS FROM GRAVITY LOADS ONLY

WORST CASE = 26K / 346 in<sup>2</sup> = 75 psi < 300 psi = 0.1 (3000 psi)

**3.7.8S Supplemental Structural Checklist for Building Type C1: Concrete Moment Frames**

This Supplemental Structural Checklist shall be completed where required by Table 3-2. The Basic Structural Checklist shall be completed prior to completing this Supplemental Structural Checklist.

**Lateral-Force-Resisting System**

- (C) NC N/A FLAT SLAB FRAMES: The lateral-force-resisting system shall not be a frame consisting of columns and a flat slab/plate without beams. (Tier 2: Sec. 4.4.1.4.3)
- C NC (N/A) PRESTRESSED FRAME ELEMENTS: The lateral-force-resisting frames shall not include any prestressed or post-tensioned elements where the average prestress exceeds the lesser of 700 psi or  $f'_c/6$  at potential hinge locations. The average prestress shall be calculated in accordance with the Quick Check procedure of Section 3.5.3.8. (Tier 2: Sec. 4.4.1.4.4)
- (C) NC N/A CAPTIVE COLUMNS: There shall be no columns at a level with height/depth ratios less than 50 percent of the nominal height/depth ratio of the typical columns at that level for Life Safety and 75 percent for Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.5)
- C (NC) N/A NO SHEAR FAILURES: The shear capacity of frame members shall be able to develop the moment capacity at the ends of the members. (Tier 2: Sec. 4.4.1.4.6)
- (C) NC N/A STRONG COLUMN/WEAK BEAM: The sum of the moment capacity of the columns shall be 20 percent greater than that of the beams at frame joints. (Tier 2: Sec. 4.4.1.4.7)
- C NC (N/A) BEAM BARS: At least two longitudinal top and two longitudinal bottom bars shall extend continuously throughout the length of each frame beam. At least 25 percent of the longitudinal bars provided at the joints for either positive or negative moment shall be continuous throughout the length of the members for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.8)
- C (NC) N/A COLUMN-BAR SPLICES: All column bar lap splice lengths shall be greater than  $35d_b$  for Life Safety and  $50d_b$  for Immediate Occupancy, and shall be enclosed by ties spaced at or less than  $8d_b$  for Life Safety and Immediate Occupancy. Alternatively, column bars shall be spliced with mechanical couplers with a capacity of at least 1.25 times the nominal yield strength of the spliced bar. (Tier 2: Sec. 4.4.1.4.9)
- C NC (N/A) BEAM-BAR SPLICES: The lap splices or mechanical couplers for longitudinal beam reinforcing shall not be located within  $l_d/4$  of the joints and shall not be located in the vicinity of potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.10)
- C (NC) N/A COLUMN-TIE SPACING: Frame columns shall have ties spaced at or less than  $d/4$  for Life Safety and Immediate Occupancy throughout their length and at or less than  $8d_b$  for Life Safety and Immediate Occupancy at all potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.11)
- C NC (N/A) STIRRUP SPACING: All beams shall have stirrups spaced at or less than  $d/2$  for Life Safety and Immediate Occupancy throughout their length. At potential plastic hinge locations, stirrups shall be spaced at or less than the minimum of  $8d_b$  or  $d/4$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.12)
- C NC (N/A) JOINT REINFORCING: Beam-column joints shall have ties spaced at or less than  $8d_b$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.13)
- C NC (N/A) JOINT ECCENTRICITY: There shall be no eccentricities larger than 20 percent of the smallest column plan dimension between girder and column centerlines. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.14)

Screening Phase (Tier 1)

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- C NC (N/A) STIRRUP AND TIE HOOKS: The beam stirrups and column ties shall be anchored into the member cores with hooks of 135° or more. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.15)
- C (NC) N/A DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.2)
- C NC (N/A) FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.3)

Diaphragms

- (C) NC N/A DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
- C NC (N/A) PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
- C NC (N/A) DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

Connections

- C (NC) N/A UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

**3.7.16 General Basic Structural Checklist**

This General Basic Structural Checklist shall be completed where required by Table 3-2.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**BUILDING SYSTEM**

**General**

- (C) NC N/A **LOAD PATH:** The structure shall contain a minimum of one complete load path for Life Safety and Immediate Occupancy for seismic force effects from any horizontal direction that serves to transfer the inertial forces from the mass to the foundation. (Tier 2: Sec. 4.3.1.1)
- (C) NC N/A **ADJACENT BUILDINGS:** The clear distance between the building being evaluated and any adjacent building shall be greater than 4 percent of the height of the shorter building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.1.2)
- C NC (N/A) **MEZZANINES:** Interior mezzanine levels shall be braced independently from the main structure, or shall be anchored to the lateral-force-resisting elements of the main structure. (Tier 2: Sec. 4.3.1.3)

**Configuration**

- C NC (N/A) **WEAK STORY:** The strength of the lateral-force-resisting system in any story shall not be less than 80 percent of the strength in an adjacent story, above or below, for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.1)
- C NC (N/A) **SOFT STORY:** The stiffness of the lateral-force-resisting system in any story shall not be less than 70 percent of the lateral-force-resisting system stiffness in an adjacent story above or below, or less than 80 percent of the average lateral-force-resisting system stiffness of the three stories above or below for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.2)
- C NC (N/A) **GEOMETRY:** There shall be no changes in horizontal dimension of the lateral-force-resisting system of more than 30 percent in a story relative to adjacent stories for Life Safety and Immediate Occupancy, excluding one-story penthouses and mezzanines. (Tier 2: Sec. 4.3.2.3)
- (C) NC N/A **VERTICAL DISCONTINUITIES:** All vertical elements in the lateral-force-resisting system shall be continuous to the foundation. (Tier 2: Sec. 4.3.2.4)
- C NC (N/A) **MASS:** There shall be no change in effective mass more than 50 percent from one story to the next for Life Safety and Immediate Occupancy. Light roofs, penthouses, and mezzanines need not be considered. (Tier 2: Sec. 4.3.2.5)
- (C) NC N/A **TORSION:** The estimated distance between the story center of mass and the story center of rigidity shall be less than 20 percent of the building width in either plan dimension for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.3.2.6)

## Condition of Materials

- (C) NC N/A DETERIORATION OF WOOD: There shall be no signs of decay, shrinkage, splitting, fire damage, or sagging in any of the wood members, and none of the metal connection hardware shall be deteriorated, broken, or loose. (Tier 2: Sec. 4.3.3.1)
- C NC (N/A) WOOD STRUCTURAL PANEL SHEAR WALL FASTENERS: There shall be no more than 15 percent of inadequate fastening such as overdriven fasteners, omitted blocking, excessive fastening spacing, or inadequate edge distance. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.3.3.2)
- (C) NC N/A DETERIORATION OF STEEL: There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical- or lateral-force-resisting systems. (Tier 2: Sec. 4.3.3.3)
- (C) NC N/A DETERIORATION OF CONCRETE: There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements. (Tier 2: Sec. 4.3.3.4)
- C NC (N/A) POST-TENSIONING ANCHORS: There shall be no evidence of corrosion or spalling in the vicinity of post-tensioning or end fittings. Coil anchors shall not have been used. (Tier 2: Sec. 4.3.3.5)
- C NC (N/A) PRECAST CONCRETE WALLS: There shall be no visible deterioration of concrete or reinforcing steel or evidence of distress, especially at the connections. (Tier 2: Sec. 4.3.3.6)
- (C) NC N/A MASONRY UNITS: There shall be no visible deterioration of masonry units. (Tier 2: Sec. 4.3.3.7)
- (C) NC N/A MASONRY JOINTS: The mortar shall not be easily scraped away from the joints by hand with a metal tool, and there shall be no areas of eroded mortar. (Tier 2: Sec. 4.3.3.8)
- C NC (N/A) CONCRETE WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.9)
- C NC (N/A) REINFORCED MASONRY WALL CRACKS: All existing diagonal cracks in wall elements shall be less than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy, shall not be concentrated in one location, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.10)
- (C) NC N/A UNREINFORCED MASONRY WALL CRACKS: There shall be no existing diagonal cracks in wall elements greater than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy or out-of-plane offsets in the bed joint greater than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy, and shall not form an X pattern. (Tier 2: Sec. 4.3.3.11)
- (C) NC N/A CRACKS IN INFILL WALLS: There shall be no existing diagonal cracks in the infilled walls that extend throughout a panel greater than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy, or out-of-plane offsets in the bed joint greater than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy. (Tier 2: Sec. 4.3.3.12)
- (C) NC N/A CRACKS IN BOUNDARY COLUMNS: There shall be no existing diagonal cracks wider than 1/8 inch for Life Safety and 1/16 inch for Immediate Occupancy in concrete columns that encase masonry infills. (Tier 2: Sec. 4.3.3.13)

**LATERAL-FORCE-RESISTING SYSTEM**

**Moment Frames**

**General**

(C) NC N/A **REDUNDANCY:** The number of lines of moment frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of bays of moment frames in each line shall be greater than or equal to 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.1.1)

**Moment Frames with Infill Walls**

C (NC) N/A **INTERFERING WALLS:** All concrete and masonry infill walls placed in moment frames shall be isolated from structural elements. (Tier 2: Sec. 4.4.1.2.1)

**Steel Moment Frames**

C NC (N/A) **DRIFT CHECK:** The drift ratio of the steel moment frames, calculated using the Quick Check procedure of Section 3.5.3.1, shall be less than 0.025 for Life Safety and 0.015 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.1)

C NC (N/A) **AXIAL STRESS CHECK:** The axial stress due to gravity loads in columns subjected to overturning forces shall be less than  $0.10F_y$  for Life Safety and Immediate Occupancy. Alternatively, the axial stress due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than  $0.30F_y$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.2)

**Concrete Moment Frames**

(C) NC N/A **SHEAR STRESS CHECK:** The shear stress in the concrete columns, calculated using the Quick Check procedure of Section 3.5.3.2, shall be less than the greater of 100 psi or  $2\sqrt{f'_c}$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.1)

(C) NC N/A **AXIAL STRESS CHECK:** The axial stress due to gravity loads in columns subjected to overturning forces shall be less than  $0.10f'_c$  for Life Safety and Immediate Occupancy. Alternatively, the axial stresses due to overturning forces alone, calculated using the Quick Check procedure of Section 3.5.3.6, shall be less than  $0.30f'_c$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.2)

**Precast Concrete Moment Frames**

C NC (N/A) **PRECAST CONNECTION CHECK:** The precast connections at frame joints shall have the capacity to resist the shear and moment demands calculated using the Quick Check procedure of Section 3.5.3.5. (Tier 2: Sec. 4.4.1.5.1)

**Frames Not Part of the Lateral-Force-Resisting System**

C NC (N/A) **COMPLETE FRAMES:** Steel or concrete frames classified as secondary components shall form a complete vertical-load-carrying system. (Tier 2: Sec. 4.4.1.6.1)

**Shear Walls**

**General**

(C) NC N/A **REDUNDANCY:** The number of lines of shear walls in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.1.1)



**Concrete Shear Walls**

- C NC (N/A) SHEAR STRESS CHECK: The shear stress in the concrete shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or  $2\sqrt{f'_c}$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.1)
- C NC (N/A) REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.2)
- C NC (N/A) COLUMN SPLICES: Steel columns encased in shear-wall-boundary elements shall have splices that develop the tensile strength of the column. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.9)

**Precast Concrete Shear Walls**

- C NC (N/A) SHEAR STRESS CHECK: The shear stress in the precast panels, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the greater of 100 psi or  $2\sqrt{f'_c}$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.1)
- C NC (N/A) REINFORCING STEEL: The ratio of reinforcing steel area to gross concrete area shall be not less than 0.0015 in the vertical direction and 0.0025 in the horizontal direction for Life Safety and Immediate Occupancy. The spacing of reinforcing steel shall be equal to or less than 18 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.2)

**Reinforced Masonry Shear Walls**

- C NC (N/A) SHEAR STRESS CHECK: The shear stress in the reinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 70 psi for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.4.1)
- C NC (N/A) REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls shall be greater than 0.002 for Life Safety and Immediate Occupancy of the wall with the minimum of 0.0007 for Life Safety and Immediate Occupancy in either of the two directions; the spacing of reinforcing steel shall be less than 48 inches for Life Safety and Immediate Occupancy; and all vertical bars shall extend to the top of the walls. (Tier 2: Sec. 4.4.2.4.2)

**Unreinforced Masonry Shear Walls**

- C NC (N/A) SHEAR STRESS CHECK: The shear stress in the unreinforced masonry shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than 30 psi for clay units and 70 psi for concrete units for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.5.1)

**Infill Walls in Frames**

- C NC (N/A) WALL CONNECTIONS: Masonry shall be in full contact with frame for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.6.1)

Screening Phase (Tier 1)

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Walls In Wood-Frame Buildings

- (C) NC N/A SHEAR STRESS CHECK: The shear stress in the shear walls, calculated using the Quick Check procedure of Section 3.5.3.3, shall be less than the following values for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2.7.1):
 

Structural panel sheathing:	1,000 plf
Diagonal sheathing:	700 plf
Straight sheathing:	100 plf
All other conditions:	100 plf
- C NC (N/A) STUCCO (EXTERIOR PLASTER) SHEAR WALLS: Multi-story buildings shall not rely on exterior stucco walls as the primary lateral-force-resisting system. (Tier 2: Sec. 4.4.2.7.2)
- C NC (N/A) GYPSUM WALLBOARD OR PLASTER SHEAR WALLS: Interior plaster or gypsum wallboard shall not be used as shear walls on buildings over one story in height with the exception of the uppermost level of a multi-story building. (Tier 2: Sec. 4.4.2.7.3)
- (C) NC N/A NARROW WOOD SHEAR WALLS: Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Life Safety and 1.5-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of moderate and high seismicity. Narrow wood shear walls with an aspect ratio greater than 2-to-1 for Immediate Occupancy shall not be used to resist lateral forces developed in the building in levels of low seismicity. (Tier 2: Sec. 4.4.2.7.4)
- C NC (N/A) WALLS CONNECTED THROUGH FLOORS: Shear walls shall have interconnection between stories to transfer overturning and shear forces through the floor. (Tier 2: Sec. 4.4.2.7.5)
- C NC (N/A) HILLSIDE SITE: For structures that are taller on at least one side by more than one-half story due to a sloping site, all shear walls on the downhill slope shall have an aspect ratio less than 1-to-1 for Life Safety and 1-to-2 for Immediate Occupancy. (Tier 2: Sec. 4.4.2.7.6)
- C NC (N/A) CRIPPLE WALLS: Cripple walls below first-floor-level shear walls shall be braced to the foundation with wood structural panels. (Tier 2: Sec. 4.4.2.7.7)
- C NC (N/A) OPENINGS: Walls with openings greater than 80 percent of the length shall be braced with wood structural panel shear walls with aspect ratios of not more than 1.5-to-1 or shall be supported by adjacent construction through positive ties capable of transferring the lateral forces. (Tier 2: Sec. 4.4.2.7.8)

Braced Frames

General

- C NC (N/A) REDUNDANCY: The number of lines of braced frames in each principal direction shall be greater than or equal to 2 for Life Safety and Immediate Occupancy. The number of braced bays in each line shall be greater than 2 for Life Safety and 3 for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1.1)
- C NC (N/A) AXIAL STRESS CHECK: The axial stress in the diagonals, calculated using the Quick Check procedure of Section 3.5.3.4, shall be less than  $0.50F_y$  for Life Safety and for Immediate Occupancy. (Tier 2: Sec. 4.4.3.1.2)
- C NC (N/A) COLUMN SPLICES: All column splice details located in braced frames shall develop the tensile strength of the column. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.1.3)

**DIAPHRAGMS**

**Precast Concrete Diaphragms**

- C NC (N/A) TOPPING SLAB: Precast concrete diaphragm elements shall be interconnected by a continuous reinforced concrete topping slab. (Tier 2: Sec. 4.5.5.1)

**CONNECTIONS**

**Anchorage for Normal Forces**

- C NC (N/A) WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support shall be anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 3.5.3.7. (Tier 2: Sec. 4.6.1.1)

- C NC (N/A) WOOD LEDGERS: The connection between the wall panels and the diaphragm shall not induce cross-grain bending or tension in the wood ledgers. (Tier 2: Sec. 4.6.1.2)

**Shear Transfer**

- (C) NC N/A TRANSFER TO SHEAR WALLS: Diaphragms shall be connected for transfer of loads to the shear walls for Life Safety and the connections shall be able to develop the lesser of the shear strength of the walls or diaphragms for Immediate Occupancy. (Tier 2 Sec. 4.6.2.1)

- C NC (N/A) TRANSFER TO STEEL FRAMES: Diaphragms shall be connected for transfer of loads to the steel frames for Life Safety, and the connections shall be able to develop the lesser of the strength of the frames or the diaphragms for Immediate Occupancy. (Tier 2: Sec. 4.6.2.2)

- C NC (N/A) TOPPING SLAB TO WALLS OR FRAMES: Reinforced concrete topping slabs that interconnect the precast concrete diaphragm elements shall be doweled for transfer of forces into the shear wall or frame elements for Life Safety, and the dowels shall be able to develop the lesser of the shear strength of the walls, frames, or slabs for Immediate Occupancy. (Tier 2: Sec. 4.6.2.3)

**Vertical Components**

- C NC (N/A) STEEL COLUMNS: The columns in lateral-force-resisting frames shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the lesser of the tensile capacity of the column, the tensile capacity of the lowest level column splice (if any), or the uplift capacity of the foundation, for Immediate Occupancy. (Tier 2: Sec. 4.6.3.1)

- (C) NC N/A CONCRETE COLUMNS: All concrete columns shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the tensile capacity of reinforcement in columns of lateral-force-resisting system for Immediate Occupancy. (Tier 2: Sec. 4.6.3.2)

- (C) NC N/A WOOD POSTS: There shall be a positive connection of wood posts to the foundation. (Tier 2: Sec. 4.6.3.3)

- (C) NC N/A WOOD SILLS: All wood sills shall be bolted to the foundation. (Tier 2: Sec. 4.6.3.4)

- C NC (N/A) FOUNDATION DOWELS: Wall reinforcement shall be doweled into the foundation for Life Safety, and the dowels shall be able to develop the lesser of the strength of the walls or the uplift capacity of the foundation for Immediate Occupancy. (Tier 2: Sec. 4.6.3.5)

- (C) NC N/A SHEAR-WALL-BOUNDARY COLUMNS: The shear-wall-boundary columns shall be anchored to the building foundation for Life Safety, and the anchorage shall be able to develop the tensile capacity of the column for Immediate Occupancy. (Tier 2: Sec. 4.6.3.6)

Screening Phase (Tier 1)

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C NC (N/A) PRECAST WALL PANELS: Precast wall panels shall be connected to the foundation for Life Safety and the connections shall be able to develop the strength of the walls for Immediate Occupancy. (Tier 2: Sec. 4.6.3.7)

C NC (N/A) WALL PANELS: Metal, fiberglass, or cementitious wall panels shall be positively attached to the foundation for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.3.8)

Interconnection of Elements

(C) NC N/A GIRDER/COLUMN CONNECTION: There shall be a positive connection utilizing plates, connection hardware, or straps between the girder and the column support. (Tier 2: Sec. 4.6.4.1)

Panel Connections

C NC (N/A) ROOF PANELS: Metal, plastic, or cementitious roof panels shall be positively attached to the roof framing to resist seismic forces for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.5.1)

C NC (N/A) WALL PANELS: Metal, fiberglass, or cementitious wall panels shall be positively attached to the framing to resist seismic forces for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.5.2)

3.7.16S General Supplemental Structural Checklist

This General Supplemental Structural Checklist shall be completed where required by Table 3-2. The General Basic Structural Checklist shall be completed prior to completing this General Supplemental Structural Checklist.

LATERAL-FORCE-RESISTING SYSTEM

Moment Frames

Steel Moment Frames

- C NC (N/A) MOMENT-RESISTING CONNECTIONS: All moment connections shall be able to develop the strength of the adjoining members or panel zones. (Tier 2: Sec. 4.4.1.3.3)
- C NC (N/A) PANEL ZONES: All panel zones shall have the shear capacity to resist the shear demand required to develop 0.8 times the sum of the flexural strengths of the girders framing in at the face of the column. (Tier 2: Sec. 4.4.1.3.4)
- C NC (N/A) COLUMN SPLICES: All column splice details located in moment-resisting frames shall include connection of both flanges and the web for Life Safety, and the splice shall develop the strength of the column for Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.5)
- C NC (N/A) STRONG COLUMN/WEAK BEAM: The percentage of strong column/weak beam joints in each story of each line of moment-resisting frames shall be greater than 50 percent for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.3.6)
- C NC (N/A) COMPACT MEMBERS: All frame elements shall meet section requirements set forth by *Seismic Provisions for Structural Steel Buildings* Table I-9-1 (AISC, 1997). (Tier 2: Sec. 4.4.1.3.7)
- C NC (N/A) BEAM PENETRATIONS: All openings in frame-beam webs shall be less than 1/4 of the beam depth and shall be located in the center half of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.8)
- C NC (N/A) GIRDER FLANGE CONTINUITY PLATES: There shall be girder flange continuity plates at all moment-resisting frame joints. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.9)
- C NC (N/A) OUT-OF-PLANE BRACING: Beam-column joints shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.10)
- C NC (N/A) BOTTOM FLANGE BRACING: The bottom flanges of beams shall be braced out-of-plane. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.3.11)

Concrete Moment Frames

- C NC (N/A) FLAT SLAB FRAMES: The lateral-force-resisting system shall not be a frame consisting of columns and a flat slab/plate without beams. (Tier 2: Sec. 4.4.1.4.3)
- C NC (N/A) PRESTRESSED FRAME ELEMENTS: The lateral-force-resisting frames shall not include any prestressed or post-tensioned elements where the average prestress exceeds the lesser of 700 psi or  $f_c/6$  at potential hinge locations. The average prestress shall be calculated in accordance with the Quick Check procedure of Section 3.5.3.8. (Tier 2: Sec. 4.4.1.4.4)
- (C) NC N/A CAPTIVE COLUMNS: There shall be no columns at a level with height/depth ratios less than 50 percent of the nominal height/depth ratio of the typical columns at that level for Life Safety and 75 percent for Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.5)

- C (NC) N/A NO SHEAR FAILURES: The shear capacity of frame members shall be able to develop the moment capacity at the ends of the members. (Tier 2: Sec. 4.4.1.4.6)
- (C) NC N/A STRONG COLUMN/WEAK BEAM: The sum of the moment capacity of the columns shall be 20 percent greater than that of the beams at frame joints. (Tier 2: Sec. 4.4.1.4.7)
- C NC (N/A) BEAM BARS: At least two longitudinal top and two longitudinal bottom bars shall extend continuously throughout the length of each frame beam. At least 25 percent of the longitudinal bars provided at the joints for either positive or negative moment shall be continuous throughout the length of the members for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.8)
- C (NC) N/A COLUMN-BAR SPLICES: All column bar lap splice lengths shall be greater than  $35d_b$  for Life Safety and  $50d_b$  for Immediate Occupancy, and shall be enclosed by ties spaced at or less than  $8d_b$  for Life Safety and Immediate Occupancy. Alternatively, column bars shall be spliced with mechanical couplers with a capacity of at least 1.25 times the nominal yield strength of the spliced bar. (Tier 2: Sec. 4.4.1.4.9)
- C NC (N/A) BEAM-BAR SPLICES: The lap splices or mechanical couplers for longitudinal beam reinforcing shall not be located within  $l/4$  of the joints and shall not be located in the vicinity of potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.10)
- C (NC) N/A COLUMN-TIE SPACING: Frame columns shall have ties spaced at or less than  $d/4$  for Life Safety and Immediate Occupancy throughout their length and at or less than  $8d_b$  for Life Safety and Immediate Occupancy at all potential plastic hinge locations. (Tier 2: Sec. 4.4.1.4.11)
- C NC (N/A) STIRRUP SPACING: All beams shall have stirrups spaced at or less than  $d/2$  for Life Safety and Immediate Occupancy throughout their length. At potential plastic hinge locations, stirrups shall be spaced at or less than the minimum of  $8d_b$  or  $d/4$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.12)
- C NC (N/A) JOINT REINFORCING: Beam-column joints shall have ties spaced at or less than  $8d_b$  for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.4.13)
- (C) NC N/A JOINT ECCENTRICITY: There shall be no eccentricities larger than 20 percent of the smallest column plan dimension between girder and column centerlines. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.14)
- C NC (N/A) STIRRUP AND TIE HOOKS: The beam stirrups and column ties shall be anchored into the member cores with hooks of  $135^\circ$  or more. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.1.4.15)

Precast Concrete Moment Frames

- C NC (N/A) PRECAST FRAMES: For buildings with concrete shear walls, precast concrete frame elements shall not be considered as primary components for resisting lateral forces. (Tier 2: Sec. 4.4.1.5.2)
- C NC (N/A) PRECAST CONNECTIONS: For buildings with concrete shear walls, the connection between precast frame elements such as chords, ties, and collectors in the lateral-force-resisting system shall develop the capacity of the connected members. (Tier 2: Sec. 4.4.1.5.3)

Frames Not Part of the Lateral-Force-Resisting System

- C NC (N/A) DEFLECTION COMPATIBILITY: Secondary components shall have the shear capacity to develop the flexural strength of the components for Life Safety and shall meet the requirements of Sections 4.4.1.4.9, 4.4.1.4.10, 4.4.1.4.11, 4.4.1.4.12 and 4.4.1.4.15 for Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.2)

- C NC (N/A) FLAT SLABS: Flat slabs/plates not part of lateral-force-resisting system shall have continuous bottom steel through the column joints for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.1.6.3)

Shear Walls

Concrete Shear Walls

- C NC (N/A) COUPLING BEAMS: The stirrups in coupling beams over means of egress shall be spaced at or less than  $d/2$  and shall be anchored into the confined core of the beam with hooks of  $135^\circ$  or more for Life Safety. All coupling beams shall comply with the requirements above and shall have the capacity in shear to develop the uplift capacity of the adjacent wall for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.3)
- C NC (N/A) OVERTURNING: All shear walls shall have aspect ratios less than 4-to-1. Wall piers need not be considered. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.4)
- C NC (N/A) CONFINEMENT REINFORCING: For shear walls with aspect ratios greater than 2-to-1, the boundary elements shall be confined with spirals or ties with spacing less than  $8d_b$ . This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.5)
- C NC (N/A) REINFORCING AT OPENINGS: There shall be added trim reinforcement around all wall openings with a dimension greater than three times the thickness of the wall. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.6)
- C NC (N/A) WALL THICKNESS: Thickness of bearing walls shall not be less than  $1/25$  the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.2.7)
- C NC (N/A) WALL CONNECTIONS: There shall be a positive connection between the shear walls and the steel beams and columns for Life Safety and the connection shall be able to develop the strength of the walls for Immediate Occupancy. (Tier 2: Sec. 4.4.2.2.8)

Precast Concrete Shear Walls

- C NC (N/A) WALL OPENINGS: The total width of openings along any perimeter wall line shall constitute less than 75 percent of the length of any perimeter wall for Life Safety and 50 percent for Immediate Occupancy with the wall piers having aspect ratios of less than 2-to-1 for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.4.2.3.3)
- C NC (N/A) CORNER OPENINGS: Walls with openings at a building corner larger than the width of a typical panel shall be connected to the remainder of the wall with collector reinforcing. (Tier 2: Sec. 4.4.2.3.4)
- C NC (N/A) PANEL-TO-PANEL CONNECTIONS: Adjacent wall panels shall be interconnected to transfer overturning forces between panels by methods other than welded steel inserts. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.5)
- C NC (N/A) WALL THICKNESS: Thickness of bearing walls shall not be less than  $1/25$  the unsupported height or length, whichever is shorter, nor less than 4 inches. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.3.6)

Reinforced Masonry Shear Walls

- C NC (N/A) REINFORCING AT OPENINGS: All wall openings that interrupt rebar shall have trim reinforcing on all sides. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.3)

- C NC (N/A) PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than 30. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.4.4)

**Unreinforced Masonry Shear Walls**

- C NC (N/A) PROPORTIONS: The height-to-thickness ratio of the shear walls at each story shall be less than the following for Life Safety and Immediate Occupancy (Tier 2: Sec. 4.4.2.5.2):

Top story of multi-story building:	9
First story of multi-story building:	15
All other conditions:	13

- C NC (N/A) MASONRY LAY-UP: Filled collar joints of multi-wythe masonry walls shall have negligible voids. (Tier 2: Sec. 4.4.2.5.3)

**Infill Walls in Frames**

- C NC (N/A) PROPORTIONS: The height-to-thickness ratio of the infill walls at each story shall be less than 9 for Life Safety in levels of high seismicity, 13 for Immediate Occupancy in levels of moderate seismicity, and 8 for Immediate Occupancy in levels of high seismicity. (Tier 2: Sec. 4.4.2.6.2)

- C NC (N/A) SOLID WALLS: The infill walls shall not be of cavity construction. (Tier 2: Sec. 4.4.2.6.3)

- C NC (N/A) INFILL WALLS: The infill walls shall be continuous to the soffits of the frame beams and to the columns to either side. (Tier 2: Sec. 4.4.2.6.4)

**Walls in Wood-Frame Buildings**

- C NC (N/A) HOLD-DOWN ANCHORS: All shear walls shall have hold-down anchors constructed per acceptable construction practices, attached to the end studs. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.2.7.9)

**Braced Frames**

**General**

- C NC (N/A) SLENDERNESS OF DIAGONALS: All diagonal elements required to carry compression shall have  $Kl/r$  ratios less than 120. (Tier 2: Sec. 4.4.3.1.4)

- C NC (N/A) CONNECTION STRENGTH: All the brace connections shall develop the yield capacity of the diagonals. (Tier 2: Sec. 4.4.3.1.5)

- C NC (N/A) OUT-OF-PLANE BRACING: Braced frame connections attached to beam bottom flanges located away from beam-column joints shall be braced out-of-plane at the bottom flange of the beams. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.1.6)



**Concentrically Braced Frames**

- C NC (N/A) K-BRACING: The bracing system shall not include K-braced bays. (Tier 2: Sec. 4.4.3.2.1)
- C NC (N/A) TENSION-ONLY BRACES: Tension-only braces shall not comprise more than 70 percent of the total lateral-force-resisting capacity in structures over two stories in height. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.2)
- C NC (N/A) CHEVRON BRACING: The bracing system shall not include chevron, or V-braced, bays. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.3)
- C NC (N/A) CONCENTRICALLY BRACED FRAME JOINTS: All the diagonal braces shall frame into the beam-column joints concentrically. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.4.3.2.4)

**DIAPHRAGMS**

**General**

- (C) NC N/A DIAPHRAGM CONTINUITY: The diaphragms shall not be composed of split-level floors and shall not have expansion joints. (Tier 2: Sec. 4.5.1.1)
- C (NC) N/A CROSS TIES: There shall be continuous cross ties between diaphragm chords. (Tier 2: Sec. 4.5.1.2)
- (C) NC N/A ROOF CHORD CONTINUITY: All chord elements shall be continuous, regardless of changes in roof elevation. (Tier 2: Sec. 4.5.1.3)
- (C) NC N/A OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls shall be less than 25 percent of the wall length for Life Safety and 15 percent of the wall length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.4)
- C NC (N/A) OPENINGS AT BRACED FRAMES: Diaphragm openings immediately adjacent to the braced frames shall extend less than 25 percent of the frame length for Life Safety and 15 percent of the frame length for Immediate Occupancy. (Tier 2: Sec. 4.5.1.5)
- C NC (N/A) OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls shall not be greater than 8 feet long for Life Safety and 4 feet long for Immediate Occupancy. (Tier 2: Sec. 4.5.1.6)
- C NC (N/A) PLAN IRREGULARITIES: There shall be tensile capacity to develop the strength of the diaphragm at re-entrant corners or other locations of plan irregularities. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.7)
- C NC (N/A) DIAPHRAGM REINFORCEMENT AT OPENINGS: There shall be reinforcing around all diaphragm openings larger than 50 percent of the building width in either major plan dimension. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.1.8)

**Wood Diaphragms**

- C (NC) N/A STRAIGHT SHEATHING: All straight sheathed diaphragms shall have aspect ratios less than 2-to-1 for Life Safety and 1-to-1 for Immediate Occupancy in the direction being considered. (Tier 2: Sec. 4.5.2.1)
- C (NC) N/A SPANS: All wood diaphragms with spans greater than 24 feet for Life Safety and 12 feet for Immediate Occupancy shall consist of wood structural panels or diagonal sheathing. Wood commercial and industrial buildings may have rod-braced systems. (Tier 2: Sec. 4.5.2.2)
- C NC (N/A) UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms shall have horizontal spans less than 40 feet for Life Safety and 30 feet for Immediate Occupancy and shall have aspect ratios less than or equal to 4-to-1 for Life Safety and 3-to-1 for Immediate Occupancy. (Tier 2: Sec. 4.5.2.3)

**Metal Deck Diaphragms**

- C NC (N/A) NON-CONCRETE FILLED DIAPHRAGMS: Untopped metal deck diaphragms or metal deck diaphragms with fill other than concrete shall consist of horizontal spans of less than 40 feet and shall have span/depth ratios less than 4-to-1. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.5.3.1)

**Other Diaphragms**

- C NC (N/A) OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Tier 2: Sec. 4.5.7.1)

**CONNECTIONS**

**Anchorage For Normal Forces**

- C NC (N/A) PRECAST PANEL CONNECTIONS: There shall be at least two anchors from each precast wall panel into the diaphragm elements for Life Safety and the anchors shall be able to develop the strength of the panels for Immediate Occupancy. (Tier 2: Sec. 4.6.1.3)
- C NC (N/A) STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements shall be installed taut and shall be stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 inch prior to engagement of the anchors. (Tier 2: Sec. 4.6.1.4)

**Vertical Components**

- (C) NC N/A WOOD SILL BOLTS: Sill bolts shall be spaced at 6 feet or less for Life Safety and 4 feet or less for Immediate Occupancy, with proper edge and end distance provided for wood and concrete. (Tier 2: Sec. 4.6.3.9)
- C (NC) N/A UPLIFT AT PILE CAPS: Pile caps shall have top reinforcement and piles shall be anchored to the pile caps for Life Safety, and the pile cap reinforcement and pile anchorage shall be able to develop the tensile capacity of the piles for Immediate Occupancy. (Tier 2: Sec. 4.6.3.10)

**Interconnection Of Elements**

- C ~~(NC)~~ N/A GIRDERS: Girders supported by walls or pilasters shall have at least two ties securing the anchor bolts for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.4.2)
- C NC ~~(N/A)~~ CORBEL BEARING: If the frame girders bear on column corbels, the length of bearing shall be greater than 3 inches for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.6.4.3)
- C NC ~~(N/A)~~ CORBEL CONNECTIONS: The frame girders shall not be connected to corbels with welded elements. (Tier 2: Sec. 4.6.4.4)
- C NC ~~(N/A)~~ BEAM, GIRDER, AND TRUSS SUPPORTS: Beams, girders, and trusses supported by unreinforced masonry walls or pilasters shall have independent secondary columns for support of vertical loads. (Tier 2: Sec. 4.6.4.5)

**Panel Connections**

- C ~~(NC)~~ N/A ROOF PANEL CONNECTIONS: Roof panel connections shall be spaced at or less than 12 inches for Life Safety and 8 inches for Immediate Occupancy. (Tier 2: Sec. 4.6.5.3)

### 3.8 Geologic Site Hazards and Foundations Checklist

This Geologic Site Hazards and Foundations Checklist shall be completed where required by Table 3-2.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

#### Geologic Site Hazards

The following statements shall be completed for buildings in levels of high or moderate seismicity.

- C  NC N/A LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance shall not exist in the foundation soils at depths within 50 feet under the building for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.7.1.1)
- C NC N/A SLOPE FAILURE: The building site shall be sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or shall be capable of accommodating any predicted movements without failure. (Tier 2: Sec. 4.7.1.2)
- C NC N/A SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site is not anticipated. (Tier 2: Sec. 4.7.1.3)

#### Condition of Foundations

The following statement shall be completed for all Tier 1 building evaluations.

- C  NC N/A FOUNDATION PERFORMANCE: There shall be no evidence of excessive foundation movement such as settlement or heave that would affect the integrity or strength of the structure. (Tier 2: Sec. 4.7.2.1)

~~The following statement shall be completed for buildings in levels of high or moderate seismicity being evaluated to the Immediate Occupancy Performance Level.~~

- C NC  N/A DETERIORATION: There shall not be evidence that foundation elements have deteriorated due to corrosion, sulfate attack, material breakdown, or other reasons in a manner that would affect the integrity or strength of the structure. (Tier 2: Sec. 4.7.2.2)

#### Capacity of Foundations

The following statement shall be completed for all Tier 1 building evaluations.

- C NC  N/A POLE FOUNDATIONS: Pole foundations shall have a minimum embedment depth of 4 feet for Life Safety and Immediate Occupancy. (Tier 2: Sec. 4.7.3.1)

The following statements shall be completed for buildings in levels of moderate seismicity being evaluated to the Immediate Occupancy Performance Level and for buildings in levels of high seismicity.

- C NC N/A OVERTURNING: The ratio of the horizontal dimension of the lateral-force-resisting system at the foundation level to the building height (base/height) shall be greater than  $0.6S_w$ . (Tier 2: Sec. 4.7.3.2)

Screening Phase (Tier 1)

B28/33

- C (NC) N/A TIES BETWEEN FOUNDATION ELEMENTS: The foundation shall have ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Class A, B, or C. (Section 3.5.2.3.1, Tier 2: Sec. 4.7.3.3)
- C (NC) N/A DEEP FOUNDATIONS: Piles and piers shall be capable of transferring the lateral forces between the structure and the soil. This statement shall apply to the Immediate Occupancy Performance Level only. (Tier 2: Sec. 4.7.3.4)
- C NC (N/A) SLOPING SITES: The difference in foundation embedment depth from one side of the building to another shall not exceed one story in height. This statement shall apply to the Immediate Occupancy Performance Level only (Tier 2: Sec. 4.7.3.5)

**3.9.1 Basic Nonstructural Component Checklist**

This Basic Nonstructural Component Checklist shall be completed where required by Table 3-2.

Each of the evaluation statements on this checklist shall be marked Compliant (C), Non-compliant (NC), or Not Applicable (N/A) for a Tier 1 Evaluation. Compliant statements identify issues that are acceptable according to the criteria of this standard, while non-compliant statements identify issues that require further investigation. Certain statements may not apply to the buildings being evaluated. For non-compliant evaluation statements, the design professional may choose to conduct further investigation using the corresponding Tier 2 Evaluation procedure; corresponding section numbers are in parentheses following each evaluation statement.

**Partitions**

- C NC  N/A UNREINFORCED MASONRY: Unreinforced masonry or hollow clay tile partitions shall be braced at a spacing equal to or less than 10 feet in levels of low or moderate seismicity and 6 feet in levels of high seismicity (Tier 2: Sec. 4.8.1.1)

**Ceiling Systems**

- C NC  N/A SUPPORT: The integrated suspended ceiling system shall not be used to laterally support the tops of gypsum board, masonry, or hollow clay tile partitions. Gypsum board partitions need not be evaluated where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.2.1)

**Light Fixtures**

- C NC N/A EMERGENCY LIGHTING: Emergency lighting shall be anchored or braced to prevent falling during an earthquake. (Tier 2: Sec. 4.8.3.1)

**Cladding and Glazing**

- C NC  N/A CLADDING ANCHORS: Cladding components weighing more than 10 psf shall be mechanically anchored to the exterior wall framing at a spacing equal to or less than 4 feet. A spacing of up to 6 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.1)
- C NC  N/A DETERIORATION: There shall be no evidence of deterioration, damage or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.4.2)
- C NC  N/A CLADDING ISOLATION: For moment frame buildings of steel or concrete, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.3)
- C NC  N/A MULTI-STORY PANELS: For multi-story panels attached at each floor level, panel connections shall be detailed to accommodate a story drift ratio of 0.02. Panel connection detailing for a story drift ratio of 0.01 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.4)
- C NC  N/A BEARING CONNECTIONS: Where bearing connections are required, there shall be a minimum of two bearing connections for each wall panel. (Tier 2: Sec. 4.8.4.5)

Screening Phase (Tier.1)

B30/33

C NC (N/A) INSERTS: Where inserts are used in concrete connections, the inserts shall be anchored to reinforcing steel or other positive anchorage. (Tier 2: Sec. 4.8.4.6)

C NC (N/A) PANEL CONNECTIONS: Exterior cladding panels shall be anchored out-of-plane with a minimum of 4 connections for each wall panel. Two connections per wall panel are permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.4.7)

Masonry Veneer

C NC (N/A) SHELF ANGLES: Masonry veneer shall be supported by shelf angles or other elements at each floor 30 feet or more above ground for Life Safety and at each floor above the first floor for Immediate Occupancy. (Tier 2: Sec. 4.8.5.1)

C NC (N/A) TIES: Masonry veneer shall be connected to the back-up with corrosion-resistant ties. The ties shall have a spacing equal to or less than 24 inches with a minimum of one tie for every 2-2/3 square feet. A spacing of up to 36 inches is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.5.2)

C NC (N/A) WEAKENED PLANES: Masonry veneer shall be anchored to the back-up adjacent to weakened planes, such as at the locations of flashing. (Tier 2: Sec. 4.8.5.3)

C NC (N/A) DETERIORATION: There shall be no evidence of deterioration, damage, or corrosion in any of the connection elements. (Tier 2: Sec. 4.8.5.4)

Parapets, Cornices, Ornamentation, and Appendages

C NC (N/A) URM PARAPETS: There shall be no laterally unsupported unreinforced masonry parapets or cornices with height-to-thickness ratios greater than 1.5. A height-to-thickness ratio of up to 2.5 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.1)

C NC (N/A) CANOPIES: Canopies located at building exits shall be anchored to the structural framing at a spacing of 6 feet or less. An anchorage spacing of up to 10 feet is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.8.2)

Masonry Chimneys

C NC (N/A) URM CHIMNEYS: No unreinforced masonry chimney shall extend above the roof surface more than twice the least dimension of the chimney. A height above the roof surface of up to three times the least dimension of the chimney is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.9.1)

Stairs

C NC (N/A) URM WALLS: Walls around stair enclosures shall not consist of unbraced hollow clay tile or unreinforced masonry with a height-to-thickness ratio greater than 12-to-1. A height-to-thickness ratio of up to 15-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.10.1)

C NC (N/A) STAIR DETAILS: In moment frame structures, the connection between the stairs and the structure shall not rely on shallow anchors in concrete. Alternatively, the stair details shall be capable of accommodating the drift calculated using the Quick Check procedure of Section 3.5.3.1 without including tension in the anchors. (Tier 2: Sec. 4.8.10.2)

**Building Contents and Furnishing**

- C (NC) (N/A) **TALL NARROW CONTENTS:** Contents over 4 feet in height with a height-to-depth or height-to-width ratio greater than 3-to-1 shall be anchored to the floor slab or adjacent structural walls. A height-to-depth or height-to-width ratio of up to 4-to-1 is permitted where only the Basic Nonstructural Component Checklist is required by Table 3-2. (Tier 2: Sec. 4.8.11.1)

**Mechanical and Electrical Equipment**

- C NC (N/A) **EMERGENCY POWER:** Equipment used as part of an emergency power system shall be mounted to maintain continued operation after an earthquake. (Tier 2: Sec. 4.8.12.1)
- C NC (N/A) **HAZARDOUS MATERIAL EQUIPMENT:** HVAC or other equipment containing hazardous material shall not have damaged supply lines or unbraced isolation supports. (Tier 2: Sec. 4.8.12.2)
- C NC (N/A) **DETERIORATION:** There shall be no evidence of deterioration, damage, or corrosion in any of the anchorage or supports of mechanical or electrical equipment. (Tier 2: Sec. 4.8.12.3)
- C NC (N/A) **ATTACHED EQUIPMENT:** Equipment weighing over 20 lb that is attached to ceilings, walls, or other supports 4 feet above the floor level shall be braced. (Tier 2: Sec. 4.8.12.4)

**Piping**

- C NC (N/A) **FIRE SUPPRESSION PIPING:** Fire suppression piping shall be anchored and braced in accordance with NFPA-13 (NFPA, 1996). (Tier 2: Sec. 4.8.13.1)
- C NC (N/A) **FLEXIBLE COUPLINGS:** Fluid, gas, and fire suppression piping shall have flexible couplings. (Tier 2: Sec. 4.8.13.2)

**Hazardous Materials Storage and Distribution**

- C NC (N/A) **TOXIC SUBSTANCES:** Toxic and hazardous substances stored in breakable containers shall be restrained from falling by latched doors, shelf lips, wires, or other methods. (Tier 2: Sec. 4.8.15.1)



**3.9.2 Intermediate Nonstructural Component Checklist**

This Intermediate Nonstructural Component Checklist shall be completed where required by Table 3-2. The Basic Nonstructural Component Checklist shall be completed prior to completing this Intermediate Nonstructural Component Checklist.

**Ceiling Systems**

- C (NC) N/A LAY-IN TILES: Lay-in tiles used in ceiling panels located at exits and corridors shall be secured with clips. (Tier 2: Sec. 4.8.2.2)
- C (NC) N/A INTEGRATED CEILINGS: Integrated suspended ceilings at exits and corridors or weighing more than 2 pounds per square foot shall be laterally restrained with a minimum of four diagonal wires or rigid members attached to the structure above at a spacing equal to or less than 12 feet. (Tier 2: Sec. 4.8.2.3)
- C NC (N/A) SUSPENDED LATH AND PLASTER: Ceilings consisting of suspended lath and plaster or gypsum board shall be attached to resist seismic forces for every 12 square feet of area. (Tier 2: Sec. 4.8.2.4)

**Light Fixtures**

- C (NC) N/A INDEPENDENT SUPPORT: Light fixtures in suspended grid ceilings shall be supported independently of the ceiling suspension system by a minimum of two wires at diagonally opposite corners of the fixtures. (Tier 2: Sec. 4.8.3.2)

**Cladding and Glazing**

- C (NC) N/A GLAZING: Glazing in curtain walls and individual panes over 16 square feet in area, located up to a height of 10 feet above an exterior walking surface, shall have safety glazing. Such glazing located over 10 feet above an exterior walking surface shall be laminated annealed or laminated heat-strengthened safety glass or other glazing system that will remain in the frame when glass is cracked. (Tier 2: Sec. 4.8.4.8)

**Parapets, Cornices, Ornamentation, and Appendages**

- C NC (N/A) CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 shall have vertical reinforcement. (Tier 2: Sec. 4.8.8.3)
- C NC (N/A) APPENDAGES: Cornices, parapets, signs, and other appendages that extend above the highest point of anchorage to the structure or cantilever from exterior wall faces and other exterior wall ornamentation shall be reinforced and anchored to the structural system at a spacing equal to or less than 10 feet for Life Safety and 6 feet for Immediate Occupancy. This requirement need not apply to parapets or cornices compliant with Section 4.8.8.1 or 4.8.8.3. (Tier 2: Sec. 4.8.8.4)

**Masonry Chimneys**

- C NC (N/A) ANCHORAGE: Masonry chimneys shall be anchored at each floor level and the roof. (Tier 2: Sec. 4.8.9.2)

**Mechanical and Electrical Equipment**

- C **NC** N/A VIBRATION ISOLATORS: Equipment mounted on vibration isolators shall be equipped with restraints or snubbers. (Tier 2: Sec. 4.8.12.5)

**Ducts**

- C NC **(N/A)** STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts shall be braced and shall have flexible connections at seismic joints. (Tier 2: Sec. 4.8.14.1)

**CITY OF COOS BAY CITY COUNCIL  
Agenda Staff Report**

<b>MEETING DATE</b> September 2, 2014	<b>AGENDA ITEM NUMBER</b>
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TO: Mayor Shoji and City Councilors

FROM: Sami Pierson, Library Director  
Through: Rodger Craddock, City Manager *pel*

ISSUE Public Input on Criteria for Locating Coos Bay Public Library

**BACKGROUND**

During the City Council Meeting on May 20, 2014, the consensus of the Council was to seek feedback from the community regarding the future of the Library building. The Coos Bay Public Library Board held two public meetings to discuss the important criteria for locating a new library building. Approximately 65 people attended the public meetings. From these meetings, thirteen main criteria for determining a location for a new building were developed.

A survey for further public input was created using the thirteen criteria. The survey was offered to the public online and in paper format. There were 115 people who participated in the survey. Staff will be providing the results at the City Council meeting of the information gathered at the public meetings and the online surveys.

**ADVANTAGES**

Public input is desired and encouraged regarding City activities.

**DISADVANTAGES**

None

**CITY GOALS**

Citizen Education & Involvement and Infrastructure and Services.

**BUDGET**

There is no impact to the budget.

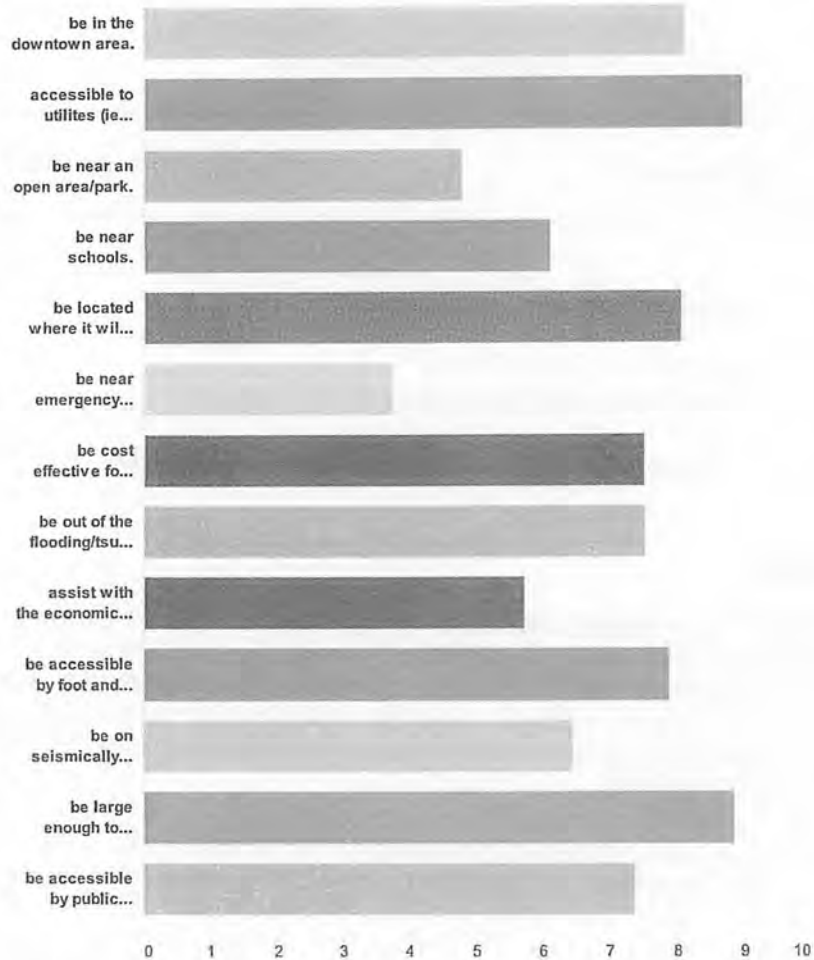
**RECOMMENDATION**

No action is required. Informational purposes only.

# Locating Coos Bay Public Library

## Q1 It is important that the new library location

Answered: 110 Skipped: 5



	1	2	3	4	5	6	7	8	9	10	11	12	13	Total	Average Ranking
be in the downtown area.	22.73%	10.00%	2.73%	7.27%	10.91%	4.55%	9.09%	3.64%	2.73%	5.45%	3.64%	9.09%	8.18%	110	8.11
accessible to utilities (ie. high speed internet).	11.82%	13.64%	8.18%	9.09%	15.45%	13.64%	8.18%	6.36%	3.64%	7.27%	0.91%	0.91%	0.91%	110	8.95
be near an open area/park.	2.73%	1.82%	2.73%	2.73%	3.64%	4.55%	8.18%	13.64%	6.36%	10.91%	12.73%	11.82%	18.18%	110	4.78
be near schools.	0.00%	5.45%	7.27%	8.18%	5.45%	4.55%	7.27%	10.00%	17.27%	8.18%	17.27%	6.36%	2.73%	110	6.10
be located where it will be a hub/center point of the city.	13.64%	10.91%	9.09%	7.27%	5.45%	6.36%	7.27%	14.55%	3.64%	9.09%	6.36%	4.55%	1.82%	110	8.04
be near emergency services.	0.91%	0.00%	1.82%	0.91%	2.73%	2.73%	8.18%	6.36%	10.00%	10.91%	10.00%	22.73%	22.73%	110	3.75
be cost effective for construction.	6.36%	10.00%	9.09%	3.64%	12.73%	9.09%	4.55%	13.64%	9.09%	8.18%	8.18%	1.82%	3.64%	110	7.50
be out of the flooding/tsunami inundation zone.	13.64%	7.27%	9.09%	6.36%	5.45%	10.00%	2.73%	8.18%	11.82%	4.55%	8.18%	10.91%	1.82%	110	7.51

## Locating Coos Bay Public Library

assist with the economic stability and growth of the downtown.	1.82% 2	5.45% 6	6.36% 7	3.64% 4	4.55% 5	10.91% 12	10.00% 11	3.64% 4	9.09% 10	12.73% 14	7.27% 8	14.55% 16	10.00% 11	110	5.73
be accessible by foot and bicycle.	3.64% 4	8.18% 9	14.55% 16	12.73% 14	9.09% 10	9.09% 10	11.82% 13	7.27% 8	6.36% 7	3.64% 4	5.45% 6	2.73% 3	5.45% 6	110	7.87
be on seismically stable land.	5.45% 6	10.91% 12	6.36% 7	10.00% 11	2.73% 3	3.64% 4	5.45% 6	4.55% 5	9.09% 10	11.82% 13	11.82% 13	9.09% 10	9.09% 10	110	6.46
be large enough to accommodate present and future needs.	15.45% 17	8.18% 9	16.36% 18	11.82% 13	10.91% 12	10.00% 11	7.27% 8	1.82% 2	3.64% 4	1.82% 2	3.64% 4	0.91% 1	8.18% 9	110	8.84
be accessible by public transportation.	1.82% 2	8.18% 9	6.36% 7	16.36% 18	10.91% 12	10.91% 12	10.00% 11	6.36% 7	7.27% 8	5.45% 6	4.55% 5	4.55% 5	7.27% 8	110	7.37

# Locating Coos Bay Public Library

## Q2 Please note any other criteria for consideration in locating the library that were not listed.

Answered: 30 Skipped: 85

#	Responses	Date
1	Consider land old hospital is on. Close to schools, park near, once building is down there is lots of parking and room to build a historic appearing library	8/18/2014 3:30 PM
2	The present design of the current library seems ok. The different section. Library personnel will surely have new "design" ideas for functionality.	8/18/2014 3:29 PM
3	Keep it modern but still a small town look and feel - we aren't Portland	8/18/2014 3:28 PM
4	Reflect the history of Coos Bay in design	8/18/2014 3:27 PM
5	I feel it's important to have as much green landscaping and as many trees as possible. Thank you for all you do for our community. I can't imagine life without a library!	8/18/2014 3:24 PM
6	Parking for cars and buses - That are large enough for pickups/trailer, thus easier to handle groups, such as school classes - safer for numerous small children - I chose one and two because I visited Alaska not too long after the big quake and saw the damage. A geologist said that Coos Bay is as liable to have such vast damage as Alaska did - it's not an "if" but when	8/1/2014 5:56 PM
7	suggest consideration of Kmart building if renovation costs are not unreasonable. Large building until room for expansion, lots of parking, easy access (traffic light already installed). Midway between Empire and downtown Coos Bay.	8/1/2014 5:48 PM
8	Anything okay	8/1/2014 5:34 PM
9	Why move it? I like it where it is.	8/1/2014 5:27 PM
10	What about the old Kmart building?	8/1/2014 5:24 PM
11	accessible at ground level, children need a place to play after storytime and puppet shows	8/1/2014 5:16 PM
12	accessible at ground level	8/1/2014 5:14 PM
13	locate on waterfront - first choice	8/1/2014 5:11 PM
14	Handicapped access - improve, if multi-floor - elevator, metal sensors wide enough for wheelchair/walker	8/1/2014 5:10 PM
15	Handicapped parking, Have sensors wide enough to allow passage for a wheel chair or a power chair	8/1/2014 5:05 PM
16	Have the DUDS by Genesis such as comedy, family	8/1/2014 5:02 PM
17	enough parking - safe	8/1/2014 4:41 PM
18	good parking, landscape, maybe outdoor area for young people to smoke, etc.	8/1/2014 4:31 PM
19	some consideration for expanding vertically as the city grows.	7/28/2014 5:58 PM
20	Financially sound planning for future dips in revenue to avoid dropping hours, etc.	7/14/2014 7:40 AM
21	How about being open more!!!!!!!!!!!!!!!!!!!!!!	7/5/2014 12:33 PM
22	Should be left where it is.	7/1/2014 5:21 PM
23	good parking available	6/29/2014 8:46 AM
24	Making sure that whoever builds it doesn't fuck it up this time around.	6/28/2014 2:41 PM
25	Use sustainable energy for heat and light.. ie solar and wind.	6/25/2014 2:52 PM
26	adequate parking	6/25/2014 12:53 PM
27	none	6/25/2014 10:58 AM
28	Open every day!	6/24/2014 9:39 PM
29	The question part 1 about present and future needs. What future needs are contemplated?	6/24/2014 3:48 PM
30	no disruption of service	6/24/2014 2:13 PM

**CITY OF COOS BAY CITY COUNCIL**  
**Agenda Staff Report**

<b>MEETING DATE</b>	<b>AGENDA ITEM NUMBER</b>
September 2, 2014	

**TO:** Mayor Shoji and City Councilors  
**FROM:** Rodger Craddock, City Manager *RC*  
**ISSUE:** Formation of the Library Facility Steering Committee

**BACKGROUND:**

On April 1, 2014, the Council was provided the results of the structural and geotechnical investigation of the foundation of the Coos Bay Library which revealed the foundation of the library had failed, and the projected cost to correct foundation and related structural issues was in the neighborhood of \$6.3MM.

On May 20, 2014, the Council decided by consensus not to repair the existing building and to seek the assistance from the Library Board in obtaining public input on where the future library should be build (area not specific location).

On August 15, 2014, the Council decided by consensus to consider the formation of a Library Facility Steering Committee to assist the City working through the multi-step process of securing a new library facility in the future.

Staff and the Library Board suggest that the Steering Committee be comprise of two Council members, two members of the Coos Bay Library Board, two members of the Coos Bay Library Foundation, and two members of the Friends of the Library. The Steering Committee, if approved, would serve as an advisory committee to the Council.

**ADVANTAGES:**

Establishment of a steering committee will help move the capital project along in an organized and timely fashion as well as involving representatives of the various stakeholder groups in the project process.

**DISADVANTAGES:**

None identified.

**BUDGET:**

Creating the Library Facility Steering Committee would not have a forcible impact to the budget.

**RELATED CITY GOAL:**

One of the City's goals is to encourage public participation in City government. The proposed Steering Committee meets the intent of the stated goal.

**RECOMMENDATION:**

If it pleases the Council, approve the formation of the Library Steering Committee and appoint two Council representatives.

**CITY OF COOS BAY CITY COUNCIL**  
**Agenda Staff Report**

<b>MEETING DATE</b>	<b>AGENDA ITEM NUMBER</b>
November 17, 2015	

TO: Mayor Shoji and City Councilors  
FROM: Sami Pierson, Library Director  
THROUGH: Rodger Craddock, City Manager  
ISSUE: Coos Bay Public Library Strategic Plan Approval

**BACKGROUND:**

The Coos Bay Public Library began the formal process for a Strategic Plan in January 2015. Funding for a library consultant was obtained from the Ford Family Foundation and the Coos Bay Public Library Foundation. Penny Hummel, the library consultant, worked with the library staff, members of the library board, the Friends of the Library, and Library Foundation members to gather information about the library and community. In addition, diverse community members were selected to participate in focus groups and community-wide meetings were held.

The Strategic Plan identifies services the library provides to the community, and how they will be provided. The Plan has been reviewed by the Coos Bay Public Library Board, members of the Foundation, community members, and other stakeholders.

**ADVANTAGES:**

The Strategic Plan will provide the library with a road map to service implementation for the next three years.

**DISADVANTAGES:**

None

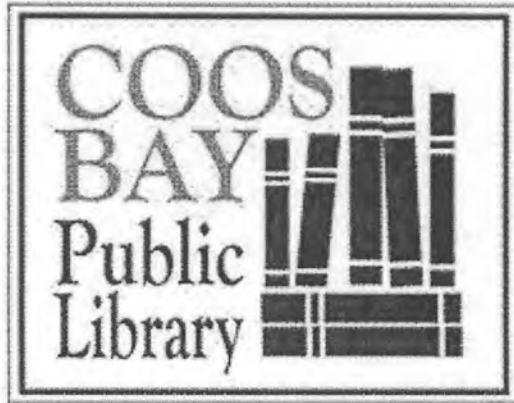
**BUDGET IMPLICATIONS:**

No impact on the budget.

**ACTION REQUESTED:**

After careful review, the Coos Bay Public Library Board recommends that the Coos Bay City Council adopt the Coos Bay Public Library Strategic Plan 2015 – 2018.





**Strategic Plan 2015 – 2018**

DRAFT

## **A Message from the Library Director**

Over a century ago, civic-minded community members gathered together to create the Coos Bay Public Library. Today, the library continues to be a cultural hub, an educational center, and a community gathering place in downtown Coos Bay. No longer just a place for books, your public library has responded to the 21<sup>st</sup> century digital age by providing a wide variety of services that would have been unimaginable only a generation ago, including Internet access, downloadable books, audio and databases, and more.

As technology evolves, the Coos Bay Public Library will evolve with it, continuing to provide relevant, valuable, and much-needed services to the community. Since thoughtful planning for the future is essential, the library has responded by undertaking a community-driven strategic planning process. Our goal has been to create a dynamic service plan for the Coos Bay Public Library that responds to community needs; establishes priorities for library services, programs and activities; and provides the foundation for the planning of a new library. My thanks go to the members of the Coos Bay Public Library Visioning Committee for sharing their wisdom and insights in this process:

Bruce Bennett  
Curt Benward  
Michelle Caldera  
Rodger Craddock  
Linda Farr  
Jake Flitcroft  
Spencer Gordon

Elena Gleason  
Jennifer Groth  
Robin McCrerry  
Trish McMichael  
Al Pettit  
Jessica Porter  
Patty Sanden

Debbie Shield  
Gina Sutherland  
Ellen Thompson  
Mike Vaughan  
Jayson Wartnik

I would also like to thank other community members who attended focus groups and filled out surveys, and extend my appreciation to library staff who also provided input. The strength of our strategic plan lies in its capacity to represent the diverse needs of our community. Using this plan as our roadmap, I am excited to begin the library's next chapter.

**Samantha Pierson**  
**Director**  
**Coos Bay Public Library**

## **Strategic Planning Process**

In 2014, the Coos Bay Public Library began the process of gathering community input about its future through a series of public forums and a print and online survey. This work formed the foundation for the current strategic planning process, which was designed to ensure that a wide range of community voices informed the future. With support from the Coos Bay Public Library Foundation and a grant from the Ford Family Foundation, the library contracted with library consultant Penny Hummel to develop and implement the planning process.

Work began in January 2015 with the formation of the Coos Bay Library Visioning Committee, a nineteen member group representing a wide range of occupations, interests, and ages. The Visioning Committee met three times between January and June, conducting a SOAR (Strength, Opportunities, Aspirations, and Results) review of the library and developing a vision of the community's needs that the library could best fulfill. Library staff also completed the SOAR exercise and director Samantha Pierson conducted a focus group with local teens. Since the initial data from the strategic planning process indicated a heightened focus on technology needs, the library also gathered input through the Impact Survey, a tool developed nationally specifically to gather information from public library users about their technology needs.

## **About the City of Coos Bay**

The largest municipality on the Oregon Coast, the City of Coos Bay is located where the Coos River enters Coos Bay on the Pacific Ocean. For centuries, the Coos, Lower Umpqua, Siuslaw, and Coquille Indians inhabited the region. In 1853, the permanent settlement of Marshfield developed at present day Coos Bay. With abundant natural resources, the town developed a profitable timber industry, eventually becoming one of the largest timber exporters on the West Coast. The area also became a major shipping hub with a deep-water port on the Oregon Coast. The City changed its name to Coos Bay in 1944 by vote of the residents. Later, the communities of Empire and Eastside merged with Coos Bay, making the City over 10 square miles in size.

The past thirty years have been a challenge to commerce and industry due to environmental restrictions, technologically advanced production methods, and corresponding shifts in demographics. The dramatic decline in timber, commercial fishing, and waterway shipping industries has transformed the City from a busy industrial center to a struggling community. As the table below indicates, when compared to Coos County and the State of Oregon, the City of Coos Bay has higher rates of poverty, lower household income, and lower education levels. The City also has a higher percentage of residents 65 and older, and a smaller percentage of minority residents than the state.

	Year	City of Coos Bay	Coos County	Oregon
<i>Population</i>	2010	15,967	63,043	3,831,074
<i>5-Year Unemployment Rate</i>	2008-13	7.2%	6.8%	7.1%
<i>Poverty Rate</i>	2008-13	21.2%	17.8%	16.2%
<i>Child Poverty Rate</i>	2008-13	25.3%	22.1%	21.7%
<i>% Minority Population</i>	2010	16.6%	13%	21.5%
<i>Median Household Income</i>	2008-13	\$34,870	\$37,940	\$50,229
<i>% &lt; High School Education</i>	2008-13	11.5%	12.0%	10.6%
<i>% Bachelor's Degree or Higher</i>	2008-13	21.9%	18.0%	29.7%
<i>% Under age 5 years</i>	2010	6.3%	5%	6.2%
<i>% under 18 years</i>	2010	20.3%	18.5%	22.6%
<i>% 65 or older</i>	2010	19.1%	23.3%	13.9%

Source: U.S. Census

## About the Library

Coos Bay Public Library is the largest public library on the southern Oregon coast. It is operated by the City of Coos Bay and is a member of the Coos County Library Service District, which supports eight public libraries in the county with a permanent tax rate of \$.7289 per thousand of assessed property value. The district tax revenue is dedicated to operational expenses and City of Coos Bay provides and maintains the library building and acts as fiscal agent. The Library Board of Trustees is appointed by the City Council as the library's policy-making body.

### 2013 - 2014 Statistics

Oregon State Library Designated Service  
 Population: 24,837  
 Circulation: 300,780  
 Library Visits: 191,966  
 Reference Questions Answered: 39,880  
 Public Computer Sessions: 32,662  
 Number of Programs: 219  
 Program Attendance: 7,752  
 Number of Open Hours a Week: 48  
 Staff (FTE): 11.6  
 Volunteers: 86  
 Physical Collection Size: 139,940

The library's 1966 building has had two major additions and is currently 25,872 square feet.

As an integral member of the Coos County Library Services District, the Coos Bay Public Library coordinates and cooperates with seven other public libraries in the district, Myrtle Point School District Libraries, and Southwestern Oregon Community College library to share materials freely with all county residents. In 2011-2012, participating libraries checked out 923,531 items and filled 153,284 hold requests for over 43,000 patrons.

## **Staffing and Services**

With 11.6 FTE staff and 48 service hours per week, Coos Bay Public Library provides materials, programming, computer use, and reference services. In addition to the physical collection of books, periodicals, music, DVDs, and audio books, the library provides electronic access to over 30,000 titles in downloadable audio and ebook format. Traditional reference services are still widely used, though the nature of the assistance is increasingly technical in nature.

The library offers programming for children, teens, and adults. Regular programs include story times, infant time, Lego Club, film programs, board games, computer classes, and book clubs. Special events such as author presentations, historical lectures, and science workshops are offered throughout the year to a variety of age levels.

The Library maintains a website (<http://coosbaylibrary.org/>) to provide 24-hour services for patrons. This includes access to the shared online catalog *Coastline*, databases, downloadable content, and more.

In 2013, users logged in to the library's 23 public access computers over 32,000 times. The library also offers 24-hour wireless internet to users with their own laptops, tablets, and other devices. In a recent survey, 81% of community respondents said it was important or very important to have these resources available; 27% of the library's public access technology users are low income; 32% of survey respondents indicated that they had used the public library's computers or wireless network for educational purposes, while 27% had used this access for job seeking activities.

## **Facility Needs**

A recent geotechnical study and structural assessment of the library facility revealed several major issues. The existing piles in the library foundation are inadequate and appear to be deteriorating, resulting in global settlement of the building with substantial settlement in certain areas. Several aspects of the building were also identified as non-compliant with current code, highlighting inadequate seismic load bearing in the roof and inadequate concrete columns. In addition, the building has other deficiencies, including an aging HVAC system and a leaking roof. Given that the estimated cost of repairs approximates the cost of constructing a new facility, the City of Coos Bay Council has agreed by consensus to proceed towards building a new facility. A Steering Committee consisting of members of the Library Board, Library Foundation, Friends of the Library, Library Staff, and City Council has been formed to shepherd the planning process.

## GUIDING PRINCIPLES

The Coos Bay Public Library will:

- Support the intellectual freedom of all by offering open access to a broad range of information and ideas
- Serve as a dynamic community hub that welcomes all residents to connect to information and to each other
- Advance lifelong learning for residents in all phases of life
- Provide excellent, customer-focused services
- Embrace new and innovative ways to respond to the community's changing needs, particularly with respect to 21<sup>st</sup> century technology
- Form partnerships to support and advance these values

### MISSION

The Coos Bay Public Library exists to provide library materials and services, and guidance to those materials and services for Coos County residents

### STRATEGIC INITIATIVE 1: IMPROVING FACILITIES

***Goal: Maximize capacity of current facility to meet community needs, and develop a plan for a new library that will provide a welcoming and well-functioning physical space for a wide range of community uses.***

Strategies:

- Review suggestions from SOAR exercise to make whatever improvements are possible in the existing building, such as an improved teen space
- Develop a pre-design plan for new library, including components, cost, size, and site requirements
- Develop funding plan for new library in collaboration with the City of Coos Bay and the Coos Bay Library Foundation

### STRATEGIC INITIATIVE 2: FOSTERING CURIOSITY, CREATIVITY, AND CULTURE

***Goal: Support local and cultural expression; build the library's role in providing original cultural programming; and offer materials, services, and programs that stimulate curiosity and creativity.***

Strategies:

- Partner with local cultural organizations and events
- Enable the library to become a cultural hub for local artists, authors, and performers
- Engage community members of all ages with programming such as DIY activities, local history, craft programs, and Makerspace activities
- Maintain a diverse collection of materials in a variety of formats that support creativity and cultural expression

### **STRATEGIC INITIATIVE 3: SUPPORTING LIFELONG LEARNING**

***Goal: Cultivate knowledge creation and lifelong learning for individuals from babies to seniors.***

Strategies:

- Ensure kindergarten readiness by offering early literacy activities such as storytimes, parent trainings, and family resources
- Collaborate with local schools to enhance primary and secondary education
- Offer a safe and welcoming space for teens and tweens
- Provide resources for homeschooling families
- Develop programming and services targeted to the unique needs and interests of young adults, families with growing children, and older adults, and market them effectively
- Develop programming and services targeted for the unique needs and interests of adults

### **STRATEGIC INITIATIVE 4: PROVIDING ACCESS TO 21<sup>ST</sup> CENTURY TECHNOLOGY**

***Goal: Ensure that Coos Bay residents are well connected to the information they need by utilizing efficient service technologies, providing reliable Internet access, offering library resources in a variety of digital formats, and providing training.***

Strategies:

- Ensure that the library's existing public access computers and Wi-Fi are maximally effective in meeting community demand
- Provide training opportunities so that residents can improve basic computer skills and be effective users of personal electronic devices
- Monitor emerging library technologies to ensure that the library's daily operations continue to be efficient and cost-effective

## **STRATEGIC INITIATIVE 5: ENHANCING THE ECONOMIC WELL-BEING OF THE COOS BAY COMMUNITY**

***Goal: Provide opportunities for Coos Bay residents to improve their lives socially, economically, and professionally.***

Strategies:

- Provide support and resources for jobseekers, small business owners, and post-secondary students
- Extend partnerships with local social service agencies to address the information needs of vulnerable community members
- Provide literacy resources and opportunities for both ESL and native learners
- Support local networks, projects, and events by providing access to library space for community activities

## **STRATEGIC INITIATIVE 6: EXPANDING MARKETING AND COMMUNITY RELATIONS**

***Goal: Increase awareness in all demographic groups of the wide variety of resources, services, and programs available through the Coos Bay Public Library to our community of library users.***

Strategies:

- Strengthen existing community partnerships and build new relationships to cross-promote the library to new and existing users
- Target outreach to underserved populations to increase understanding of the library's offerings
- Utilize social media as well as traditional public relations activities to manage ongoing communications with the public about the library



# Appendix A: Implementation Strategies

## Strategic Initiative 1

### **Maximize capacity of current facility to meet community needs, and develop plan for a new library**

Review suggestions from Strengths, Opportunities, Aspirations, Results exercise (SOAR) to make whatever improvements are currently possible

Review SOAR results with staff and identify improvements that can be made within current budget

Create more programming space in Children's Department

Merge Non Fiction collections

Rearrange elementary and beginning reader collections

Evaluate current space and growth of DVD, audio, and music collections

Create more personal computer use areas

Merge Index Tables in computer area

Rearrange tables and other furniture for maximum outlet access

Evaluate size of individual collections and growth rate for change of location

Develop pre-design program for new library including components, cost, size, and site requirements

Use Request For Proposal (RFP) to engage architect/library consultant team for needs assessment

Identify funding for needs assessment

Develop funding plan in collaboration with city and library foundation

Use RFP to engage fundraising consultant

Develop local fundraising plan/business plan

Identify potential fundraising sources

## Strategic Initiative 2

### **Support local and cultural expression, build library's role in providing original cultural programming, and offer materials, services, and programs that stimulate curiosity and creativity**

Partner with local cultural organizations and events

Identify and evaluate current partnerships and participation, evaluate effectiveness of the partnerships

Identify past partners and ways to renew those partnerships

Identify potential new partners

- Enable library to become cultural hub for local artists, authors, and performers
  - Implement space where children and teens can create and display art
  - Implement space where adults can create and display art
- Engage community members of all ages with programming
  - Offer variety both in topic and presentation style
- Maintain a diverse collection of materials in a variety of formats that support creativity and cultural expression
  - Create collection of “things” that can circulate (tools, craft tools)
  - Continually explore digital offerings beyond audio and e-books

### **Strategic Initiative 3**

#### **Cultivate knowledge creation and lifelong learning for individuals from babies to seniors**

- Ensure kindergarten readiness by offering early literacy activities
  - Continue to offer early literacy programs such as Mother Goose on the Loose, Preschool Story Time, parent literacy training, and summer reading
  - Evaluate current programming
  - Adjust programming to population shifts
- Collaborate with local schools to enhance education
  - Work with curriculum directors to ensure support materials for classroom projects
  - Continue to offer summer reading program
- Offer a safe and welcoming space for tweens and teens
  - Seek input from tweens and teens for improvements to current space and collection
- Provide resources for homeschooling families
  - Evaluate programming, materials, and resources needed
  - Evaluate current programming to better incorporate homeschooling needs
- Develop programming and services targeted for the unique needs and interests of young adults, families with growing children, and older adults
  - Evaluate current programming
  - Offer programming at diverse times, diverse subject matters, and in diverse ways
  - Develop advertising plans to target audiences
- Develop programming and services targeted for the unique needs and interests of adults
  - Evaluate current programming
  - Offer programming at diverse times, diverse subject matters, and in diverse ways
  - Develop advertising plans to target audiences

## **Strategic Initiative 4**

**Ensure that Coos Bay residents are well connected to the information they need by utilizing efficient service technologies, providing reliable Internet access, offering library resources in a variety of digital formats, and providing training**

Ensure that the library's existing public access computers and WiFi are maximally effective in meeting community demand

Continually reevaluate broadband service and all equipment

Create and maintain purchase schedule for equipment

Provide software such as graphic design programs, photo editing, and others that are relevant

Provide training opportunities so that residents can improve basic computer skills and be effective users of personal electronic devices

Continue to offer monthly computer skills classes

Develop new classes based on patron suggestions and needs

Explore ways to maintain level of service provided by AmeriCorps partnership

Monitor emerging library technologies to ensure that the library's daily operations continue to be efficient and cost effective

Reevaluate current software and hardware on a regular basis

Review software and hardware used by peer libraries for various functions

## **Strategic Initiative 5**

**Provide opportunities for Coos Bay residents to improve their lives socially, economically, and professionally**

Provide support and resources for jobseekers, small business owners, and post-secondary students

Continue to offer basic computer classes

Tailor computer classes to employer needs

Maintain current materials and databases

Maintain current software used in businesses

Create a job skills/job fair – allowing employers to share what they are looking for in employees and make employment connections

Extend partnerships with local social service agencies to address the information needs of vulnerable community members

Maintain contact with local temporary housing shelters and homeless service providers for patron needs

Continue to work with Head Start and the families they serve

Provide literacy resources and opportunities for both ESL and native learners

- Provide support for Southwestern Community College classes through materials and study space
- Maintain relevant and current materials
- Support local networks, projects, and events by providing access to library space for community activities
- Continue to provide access to Cedar Room for no charge and Myrtlewood Room at minimum charge.
- Explore opportunities for partnerships for programs and events

## **Strategic Initiative 6**

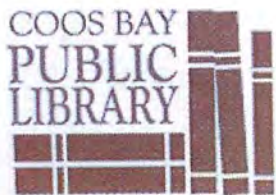
### **Increase awareness in all demographic groups of the wide variety of resources, services, and programs available through the Coos Bay Public Library to our community of library users**

- Strengthen existing community partnerships and build new relationships to cross-promote the library to new and existing users
  - Identify and evaluate current partnerships and participation, evaluate effectiveness of the partnerships
  - Identify past partners and ways to renew those partnerships
  - Identify potential new partners
  - Identify events for new audience cultivation
- Target outreach to underserved populations to increase understanding of the library's offerings
  - Provide time for librarians to travel to outside locations to promote the library
  - Create specific, targeted programming
- Utilize social media as well as traditional public relations activities to manage ongoing communications with the public about the library
  - Create advertising/pr checklist for consistency
  - Expand monthly email list
  - Create a subscription option online for monthly email

# Coos Bay Public Library

Facility Needs Assessment

October 05, 2016



**HACKER**

**Prepared for City of Coos Bay Library:**

**Program Team:**

Jim Hossley | Director of Public Works  
Bruce Bennett | Library Board Chair  
Curt Benward | Library Foundation Chair  
Crystal Shoji | Mayor, City of Coos Bay  
Jennifer Groth | City Council (representative to the Library board)  
Rodger Craddock | City Manager  
Sami Pierson | Library Director  
Ellen Thompson | Assistant Library Director

**Team:**

## HACKER

**Architect**

William Dann AIA | Principal in Charge  
laura Klinger AIA | Project Architect

## PENNY HUMMEL Consulting

**Library Consultant**

Penny Hummel | Library Programmer



**Cost Consulting**

Trish Drew | Cost Estimating

## ECONorthwest

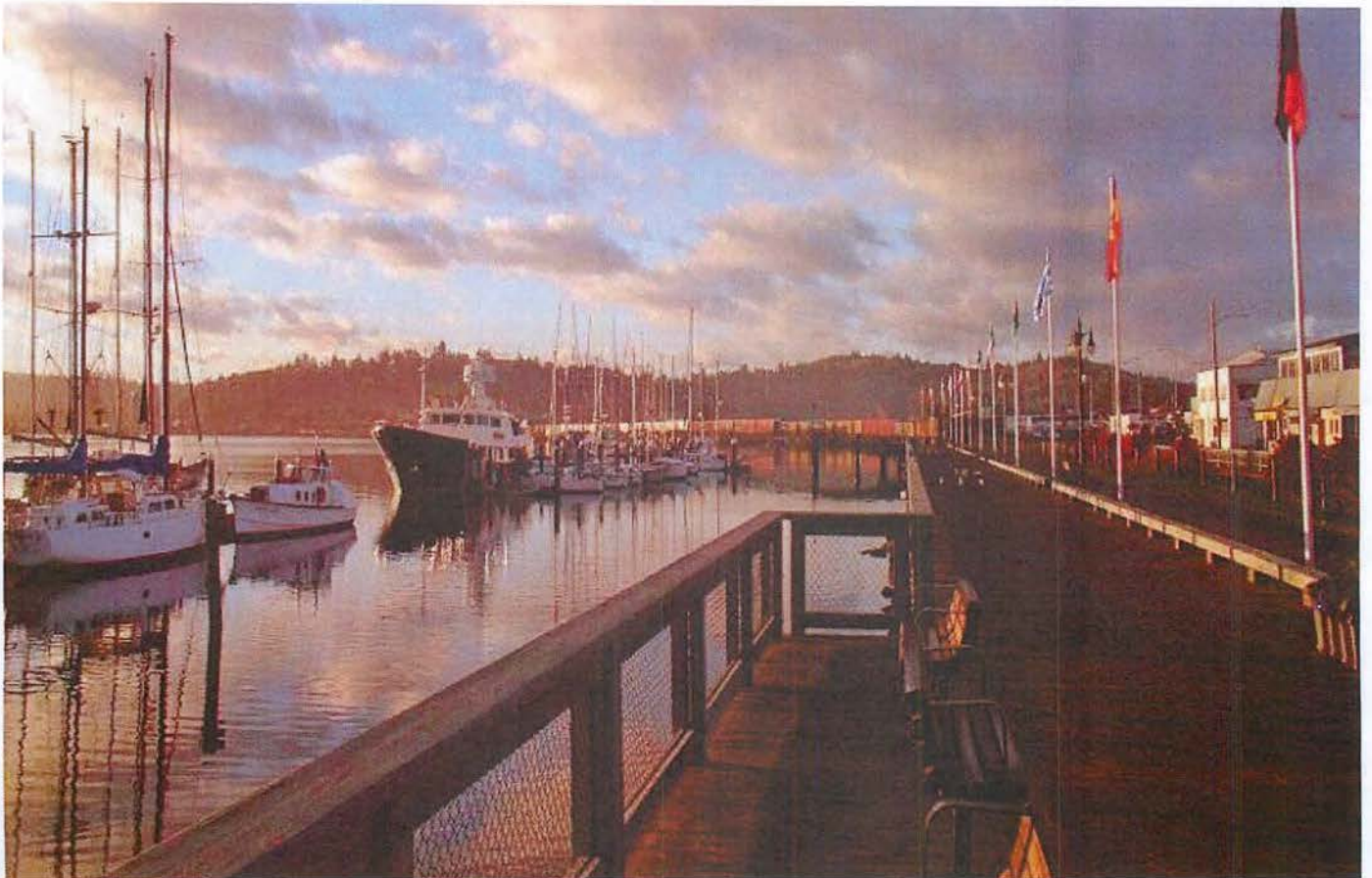
ECONOMICS • FINANCE • PLANNING

**Funding Analysis**

Lorelei Juntunen | Principal  
Emily Picha | Project Manager

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## I. Executive Summary

As the largest public library on Oregon's south coast, the 25,872 square foot Coos Bay Public Library serves residents and visitors in the heart of downtown Coos Bay. A beloved and well-used civic building, the library is an essential educational, informational and cultural asset to its community, offering 21st century technology as well as traditional library services. However, the building's many structural deficiencies (most importantly, its failing foundation) and inefficient footprint are limiting the library effectiveness in meeting community needs. Space for the collection and for library visitors is frequently congested and often noisy. Lack of appropriate seating restricts the library's ability to accommodate the needs of users, particularly those who need a quiet or private space to collaborate with others or to work alone, or who bring in their own devices for use within the library. Constantly in use, the library's two meeting rooms provide insufficient capacity for library events and programs as well as for gatherings sponsored by community groups. Finally, work areas for library staff and the all-volunteer Friends of the Library are cramped and inefficient.

In response to these concerns, the City of Coos Bay began planning efforts towards a new Coos Bay Library in 2016, engaging the services of the architectural firm Hacker to develop a space needs assessment. The consultants analyzed community demographics, reviewed library usage patterns, conducted focus groups with library staff and stakeholders, solicited community input and compared current service levels with best planning practices in the library industry. The space recommendations that result indicate the need for the following:

- Shelving to accommodate a collection of 115,000 books and media items;
- 160 seats for the public (there are currently 128);
- 48 public access computers, (including 12 laptops in a collaborative learning space) (there are currently 28);
- Increased meeting room capacity: a dividable 200-seat meeting room, and a smaller, 24-person conference room;
- Five group study rooms of varying capacity (the library currently has one small study room);
- A total of 31,041 square feet of library building space.

This assessment identifies the space needed to serve Coos Bay-area residents now and in the future as well as the estimated cost of a new library that incorporates all recommended features.

## II. Assessment Goals

Originally constructed in 1965 as a 16,640 square foot facility, the Coos Bay Public Library has been expanded twice to its current footprint of 25,872 square feet. Settlement of the north wall of the library led to a 2012 geotechnical evaluation by SHN Consulting Engineers & Geologists and a 2014 assessment by ZCS Engineering; both studies revealed significant structural issues. The existing piles in the library's foundation appear to be inadequate and evidence that the building is sinking is apparent from cracks in walls and doors that no longer open and close. Several aspects of the building were also identified as noncompliant with current code, and the facility has an aging HVAC system, a leaking roof, and inadequate space for many library functions. Given the high estimated cost of repairs, the City of Coos Bay Council has agreed by consensus to proceed towards building a new facility outside of Coos Bay's downtown tsunami zone. A steering committee consisting of members of the Library Board, Library Foundation, Friends of the Library, City and Library Staff and City Council was formed to shepherd the planning process.



Existing Coos Bay Library, OR

## III. Methodology

In 2016, the City of Coos Bay issued an RFP for a Library Needs Assessment with the goal of identifying the space needs and requirements for the library that will serve the community through 2040. The city selected the architectural firm Hacker for this project, with library facilities consultant Penny Hummel as part of the team. On May 31, 2016, Hacker architect Laura Klinger and Penny Hummel met with the New Library Steering Committee to discuss initial priorities for the new library. The following priorities emerged from this discussion:

- Sizing it appropriately so it can be operated by existing library staff and economically maintained by the City of Coos Bay;
- Maintaining a centrally located and convenient location;
- Expanding capacity to address inadequacies of current building, including study and programming areas;
- Providing engaging spaces for residents to connect with library services and each other;
- Improving library technology and patron access to technology;
- Building in flexibility for future needs;
- Expanding and supporting disaster preparedness for the Coos Bay community.

Laura Klinger and Penny Hummel also conducted a two-day site visit June 21 and 22, 2016, during which they toured the existing facility and observed its operations. They conducted focus groups with the City Council, library staff and the library's Friends, Foundation and board representatives, and led two public meetings to gather community input. This information is included in Appendix A. On June 22, 2016, Lorelei Juntunen and Emily Picha of ECONorthwest also led a funding brainstorming session with key project stakeholders, including many members of the new library steering committee. Their report is included in Appendix A. Penny Hummel also reviewed a variety of information about the library and its operations, including circulation data, usage statistics and demographic information. Basing their work on best practices in planning public library facilities, the consultants then developed service level recommendations for a new Coos Bay Public Library and calculated the spaces needed to achieve them. These recommendations are detailed later in this report.

## IV. Library Vision and Service Goals

The library's 2015 – 2018 strategic plan identifies facilities improvement as a major focus for the next three years and supports the development of a pre-design plan as well as a funding plan for a new Coos Bay library. Other strategic goals provide important context for programming the new library.

### **Strategic Initiative 1: Improving Facilities**

Goal: Maximize capacity of current facility to meet community needs, and develop a plan for a new library that will provide a welcoming and well-functioning physical space for a wide range of community uses.

### **Strategic Initiative 2: Fostering Curiosity, Creativity and Culture**

Goal: Support local and cultural expression, build the library's role in providing original cultural programming, and offer materials, services and programs that stimulate curiosity and creativity.

### **Strategic Initiative 3: Supporting Lifelong Learning**

Goal: Cultivate knowledge creation and lifelong learning for individuals from babies to seniors.

### **Strategic Initiative 4: Providing Access to 21st Century Technology**

Goal: Ensure that Coos Bay residents are well connected to the information they need by utilizing efficient service technologies, providing reliable Internet access, offering library resources in a variety of digital formats, and providing training.

### **Strategic Initiative 5: Enhancing the Economic Well-Being of the Coos Bay Community**

Goal: Provide opportunities for Coos Bay residents to improve their lives socially, economically and professionally.

### **Strategic Initiative 6: Expanding Marketing and Community Relations**

Goal: Increase awareness in all demographic groups of the wide variety of resources, services and programs available through the Coos Bay Public Library to our community of library users.

The Coos Bay Public Library's current strategic plan also offers the following guiding principles towards this effort, noting a strong commitment to:

- Support the intellectual freedom of all by offering open access to a broad range of information and ideas;
- Serve as a dynamic community hub that welcomes all residents to connect to information and each other;
- Advance lifelong learning for residents in all phases of life;
- Provide excellent, customer-focused services;
- Embrace new and innovative ways to respond to the community's changing needs, particularly with respect to 21st century technology;
- Form partnerships to support and advance these values.



Community Open House, June 22, 2016

## V. Community Description

Located where the Coos River enters Coos Bay on the Pacific Ocean, the City of Coos Bay is still evolving from its historical role as a major shipping hub on the West Coast. Dramatic changes in the timber industry, commercial fishing and waterway shipping have transformed Coos Bay from a busy industrial center to a community experiencing a variety of socioeconomic challenges. Over one in five (21.6%) of Coos Bay's residents is estimated by the U.S. Census to be living in poverty, a higher percentage than Coos County as a whole (19.8%), the state of Oregon (15.4%) and the U.S. as a whole (13.5%).

The Coos Bay Public Library is the largest public library on the southern Oregon Coast and is a member of the Coos County Library Service District, which supports eight public libraries in the county. According to the Oregon State Library, the service area population of the Coos Bay Public Library has remained relatively stable in recent years, varying between 23,000 and 25,000 people:

Coos Bay Public Library service area population, FY 2008 – 2015

Year	Population
FY08	23,291
FY09	25,030
FY10	23,415
FY11	24,293
FY12	24,224
FY13	24,837
FY14	25,505
FY15	24,505

Source: Oregon State Library

Similarly, the State of Oregon's Office of Economic Analysis (within the Department of Administrative Services) forecasts little growth in the population of Coos County as a whole:

Forecast of estimated population growth for Coos County, Oregon

Year	Population
2015	63,299
2020	64,098
2025	64,816
2030	65,210
2035	65,172
2040	64,934
2045	64,695
2050	64,654

Source: Office of Economic Analysis, Department of Administrative Services, State of Oregon

For the purposes of this study, the size of the community served by the Coos Bay Public Library in 2040 is assumed to be 26,000.

According to 2010 U.S. Census data, residents of Coos Bay (who constitute the largest portion of the library's service population) are 87.1% White (compared to 83.6% for the State of Oregon), .6% African American, 2.6% Native American and Alaska Native, .3% Native Hawaiian and Other Pacific Islander, 7.6% Hispanic or Latino, while 5.2% identify as two or more races. When compared with the state of Oregon as a whole, demographic distribution of the Coos Bay community according to the 2010 U.S. Census differs in several significant ways:

- A larger proportion of persons 65 or older (19.1% vs. 13.9%)
- A smaller proportion of college graduates 25 and older (20.8% vs. 30.1%)
- A higher proportion of persons under age 65 with a disability (15.8% vs. 10.1%)
- A lower median household income (\$36,360 vs. \$50,521)

These unique characteristics of the Coos Bay community are significant with respect to the library's efforts to tailor its services to the particular needs of its current and potential users.



## VI. Current Services Overview

The 25,872 square foot Coos Bay Public Library is located at 525 Anderson Avenue in downtown Coos Bay, Oregon, one of the largest communities on the south coast of Oregon. Originally built in 1965 and renovated twice since then, the library is an L-shaped building that, with adjacent parking, takes up a downtown city block. The library is open 48 hours a week, from 10 am to 7 pm Monday – Thursday and from noon – 6 pm on Friday and Saturdays. In 2014-15, the library's door count (annual visitors) was 190,381, or over 3,600 visitors a week—a reflection of the library's position as an essential community center in Coos Bay.

As of September 2016, the Coos Bay Public Library offers a collection of 130,054 physical items, including books, DVDs, audio books, music CDs and periodicals. Coos Bay patrons can also borrow materials from other libraries in Coos County (including the community college library), and can also access a digital collection of over 33,000 items through Library2Go, the statewide digital library consortium. The Coos Bay Public Library circulated 297,166 items in 2014-15.

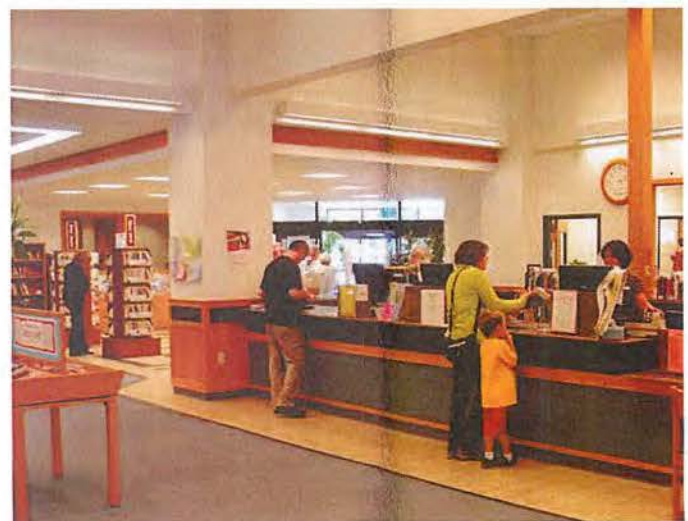
The library offers nineteen Internet computers, eight online catalog computers, and one children's learning station. These represent 1 computer per 1,000 people served, which is lower than the 1.5 – 2 workstations per 1,000 people that is currently considered best practice. In 2014-15, the library recorded 27,766 individual Internet sessions (over 530 times a week), an indication that these resources are in high demand.

Existing seating at the library is inadequate for current and future needs. Although the library has a current capacity for 128 seats (including both tables and lounge chairs), much of this seating capacity is at four person tables, which are usually used by only one person. Too few of the library's seating options are adjacent to a power source, which hinders patrons who need to plug in laptops, phones or tablets. In 2014-15, library users logged onto the library's Wi-Fi 12,782 times, almost 250 times a week.

The library maintains an active calendar of programming for all ages, which is offered in the Myrtlewood Room (capacity: 100) and the Cedar Room (capacity: 24). The storytime area in the children's library also hosts three early literacy-focused programs weekly. In 2014-15, the library offered 297 programs that attracted 2,328 attendees. While the library is fortunate to have program areas of various sizes, it is clear that the existing capacity is inadequate for current demand. Additional meeting room space is needed, not only for library programming, but for use by community groups, who have few other options for meeting and gathering space in the community. The library has only one quiet study room, which does not meet current needs.

The Coos Bay Public Library offers an expansive and light-filled space that is well used and well loved by community members.

However, the building's layout is inefficient, causing congestion in some areas and underutilization in others. Noise is also an issue, particularly in the library lobby. Similarly, workspaces within the library are frequently both insufficient and inefficient for library staff members, for the Friends of the Library, who operate a small used bookstore in the lobby, and for the library district's small Extended Services staff group, which conducts library outreach across the county from the Coos Bay Public Library. Given the cramped space in the Friends of the Library store, this volunteer group regularly hosts book sales in the library's meeting rooms, which then makes these spaces unavailable for other purposes. Since the library relies on money raised by the Friends of the Library to support ongoing programming, expanding capacity for the Friends will expand their capacity to contribute to the library's annual operating budget.



## VII. Space Needs Recommendations

### Overview

The Coos Bay Public Library should provide residents with the spaces and services that meet and anticipate their needs, in a comfortable facility that encourages use by the entire community. While the current building is well used by the community, its structural deficiencies and space constraints compromise the quality and level of service that can be provided.

A successful public library today plays multiple roles in the life of the community it serves. First, it provides access to the world of learning, knowledge and human creativity. Access to books and the printed word for all age groups continues to be the primary service expectation of many residents and remains a basic library function. As a corollary, library service to children introduces families to the joy of reading and establishes a foundation for a lifetime of reading. This role has expanded in recent years to include access to creative and informative works in many formats, including digital media and electronic content. Libraries have also become a primary public gateway to online information, offering free access to the Internet, wireless access and providing guidance in navigating and assessing the wealth of material available through these resources.

Even as the library's role as a resource for virtual information and literature continues to grow, its traditional role as a community destination and gathering place is also evolving and expanding. The public library now serves as the community's principal place for solitary reading and study as well as a venue for collaboration and group interaction. Book discussion groups, teen tech nights and family literacy evenings are a few examples of the multitude of educational and social community events that draw significant participation. The library facility can and should offer residents a safe, and comfortable place to be. This can be a sanctuary for solitary reflection, a quiet workspace in which to complete a school assignment or a social space for connecting with peers.

To perform these roles, the Library needs appropriate space – for collections, for people, for programming and for functional operations. The space needed to support specific services is described follow.

### Collection Shelving

The community needs access to a well-balanced collection in both print and digital media formats. Adequate shelving capacity is needed to support a truly balanced physical collection, so that materials can be shelved and displayed for convenient browsing. Shelving capacity needs to allow shelves to be kept 20% to 25% clear, so that there is readily available shelving space for incoming materials.



Areas for collection and seating at the Renton Highlands Library.  
Hacker Architects.



Areas for technology and meeting at the Mendenhall Library.  
Hacker Architects.

The various collections of the library need to be shelved in appropriate locations within the overall space, clearly identified and easily found, and at heights appropriate to their target audiences. The bottom two shelves on most shelving units should be angled to allow browsers to easily view book spines.

Currently, while public interest in downloadable books and media continues to be strong, there is increasing evidence that use of digital media is complementing, not replacing, the use of physical resources. Therefore, most public libraries currently plan their future collections assuming future use of both types of resources. The Coos Bay Public Library's currently offers local residents a total of 130,054 physical items (books, CDs, DVDs, etc.). This collection is currently undergoing a comprehensive weeding and refreshment process, with the expectation that it will be somewhat smaller in the future. This plan assumes a future collection of 115,000 physical or an average of 4.4 volumes per capita, which is within best practice for a library of Coos Bay's size.

A proposed Collection Plan is included in Appendix B to illustrate a hypothetical distribution of this collection into print and media components. Appendix B also includes a Collection and Shelving Needs spreadsheet, which summarizes planning assumptions used to calculate the collection space needs.

## Public Computer Access

The library's Internet access and early literacy computers are in frequent use. While patrons increasingly are bringing in their own devices (laptops, tablets and smartphones) for library use, for many others, library computers are their only way to access the Internet for research, job seeking, and connecting with friends and family.

More are needed to meet public demand and to enable the library to offer this service more effectively. 48 public access computers are recommended—28 sit-down workstations with Internet access and online catalog access (16 for adults, 6 for teens, 6 for children), 8 online catalog lookup stations at stack ends, 2 children's early literacy computers, and 12 laptops for in-library use in a lab/collaborative learning space. This will provide the community with 1.8 workstation computers for every 1,000 people served, a service level that will bring the Coos Bay Public Library on a par with best practices for a library of its size. A proposed plan for computers and other equipment needs is included in Appendix C.

## Seating, Programming and Meeting Room Space

In a library facility, it is as important to provide space for people to use the building, as it is to provide space to house and display the collection. The Coos Bay Public Library needs to reassign and augment seating capacity in all areas—at study tables and lounge

chairs, parent/child seats, casual seating for teens, and acoustically shielded study seating. Teens especially need a designated area with age appropriate furniture. The design of the space should not only send a message that they are welcome at the library but should also create buffer, both physical and psychological, between this gregarious age group and other library visitors. The children's area should offer distinct seating areas for individual school aged children who need to do homework or quietly read. The preschool/family area needs chair seating for toddlers and their parents or caregivers as well as floor space for storytimes. Adults need both table seating and lounge chairs for quiet reading of books and periodicals as well as concentrated work at a laptop. All seats should be adjacent to electrical power, with outlets located safely out of circulation paths.

An increase in seating is recommended to allow the library to offer appropriate work/study, collaboration and reading space for the community. A total of 160 seats are recommended. In addition to reader and lounge seats, this study also recommends five group study/collaboration rooms of various sizes (two for up to two people, two for up to four people and one for up to twelve people) for use in studying or tutoring. This increase will raise the seating capacity from the current five seats per 1,000 people served to over six seats per 1,000 people served, which moves the library from the lowest end of best planning practice in this respect.

Programs and events are a basic library service that complements the collection, attracts new users and provides the community with needed information on many topics. In 2014-15, a total of 312 programs and events were presented at the Coos Bay Public Library to over 2,000 participants, an average of 6 programs per week with audiences that range from preschoolers to adults. Dedicated space within the library is needed to provide an appropriate, accessible venue for these events, with seating to accommodate different groups of people. The primary programming space needs to be flexible and multipurpose, with a flat floor, stacking chairs, media projection equipment, adjustable lighting, a kitchen, and table and chair storage. The room should be located adjacent to the public entrance and lobby to support use beyond the library's open service hours.

Given that the library's existing programming space is inadequate to meet current demand, this study recommends an expansion of programming capacity. A dividable 200-seat meeting room will offer the ability to host two 100 person events (doubling the current capacity of the Myrtlewood Room). In accordance with community input that identified a potential role for the library as an information hub in the event of a natural disaster (such as a tsunami), the kitchen adjacent to this meeting room is sized to potentially accommodate commercial use.

In addition to the largest meeting room, a 24-person conference room will offer the capacity to host smaller events, and the largest of the quiet study rooms can host gatherings of up to 12 people. A proposed Public Seating Needs plan is included in Appendix C.

## Service Delivery and Staff Areas

Resulting in part from multiple renovations, the work spaces in the current building prevent efficient operations. A few examples: Staff at the circulation and reference desks cannot see each other from their respective posts, making it difficult to communicate and offer backup when necessary. The desks of the reference staff are along the sides of the major thoroughfare between the circulation desk and the staff work areas, causing frequent interruption. Technical services staff manage the acquisition and processing of the library's collection on built-in desks that date from when the library was originally built in the mid-1960s. The library's server is housed in a too-small unprotected space, and overall storage is inadequate.

Given that the library does not anticipate future staffing increases, there is a great need to make all circulation, reference and back of the library functions as efficient as possible. This study recommends an increase in the number of self-check machines and includes the capacity to incorporate RFID (Radio Frequency Identification) technology and automatic materials handling to improve workflows. Desks and work stations appropriate to the 21st century, sited in appropriate proximity to each other and to the daily work of assisting library customers, will enhance the staff's capacity to provide excellent customer service. In addition to addressing the needs of the staff of the Coos Bay Public Library, this study also includes space for the small library district staff group that manages countywide Extended Services (outreach) efforts. Also included are staff restrooms and a staff lounge area with seating and a kitchenette.

## Emergency Information Center

Given its location, Coos Bay is vulnerable to a Cascadia subduction zone seismic event. The design of the library should consider features to allow the building to function as a center of community information in the case of an earthquake, tsunami or other natural disaster. Features that should be considered include:

- Enhanced structural design beyond what is required by the building code to allow for immediate occupancy after a seismic event. See appendix C.
- Provide a storage room for emergency supplies. This should be accessible from the outside of the building.
- Provide a space with a community bulletin board to be used for the library and the public to post information. This could be in the main lobby space or could be a covered outdoor space to allow for 24 hour access.
- Consider systems that will remain operational when building is not connected to the electrical grid or city services:
- Consider making one of the toilets composting or use rain water collected from a cistern to allow use if the

sanitary system is not functioning. This could be used for demonstration/educational purposes.

- Consider a rainwater collection cistern to provide stored rainwater.
- Design the kitchen to be usable when the building is disconnected from services.
- Consider PV panels to provide power.

## Building Size

To support the library service needs of the community and accommodate the levels of service recommended, Coos Bay needs a library facility that provides approximately 31,041 square feet of building space. The following chart provides an allocation of spaces that will accommodate the space needs of the community, now and well into the future.

The overall square footage recommendation was developed using calculations that represent standard library planning space allocations. The overall square footage assumes that 75% of the facility floor space is assigned to library functions, such as restrooms, corridors, wall thicknesses and other building elements.

A facility of this size will offer the 2040 population of 26,000 an average of 1+ square foot per capita and will accommodate the shelving, seating, technology, programming and other spaces recommended. This amount of building space will place the Coos Bay Public Library within current best practices for facilities serving communities of up to 25,000 residents (.75 to 1.0 square feet per capita) and will provide a flexible space that will serve the community for decades to come.



## Space Summary

		Sq Ft		Current Sq Ft
<b>1.0</b>	<b>Entrance Area</b>			
1.1	Public Entrance / Lobby	504 *		530
1.2	Community Meeting Room A (Dividable)	2,400		1,200
1.3	Kitchen	308		107
1.4	Meeting Room Storage	288		70
1.5	Community Meeting Room B	480		315
1.6	Public Restrooms	IN GSF		
1.7	Friends' Bookstore	300		160
1.8	Friends' Workspace	403		
1.9	Café / Vending Area	212		
1.10	Community Information	30	4,903	
<b>2.0</b>	<b>Central Public Spaces</b>			
2.1	Self Checkout + Reserves	198		
2.2	New Books / Browsing	208		
2.3	Media Collection	842		
2.4	Circulation Desk	126	1,374	220
<b>3.0</b>	<b>Adult and Teen Spaces</b>			
3.1	Adult Public Access Computers	492		880
3.2	Reference Collection	349		
3.3	Adult Circulating Fiction Books	2,848		
3.4	Adult Circulating Nonfiction Books	2,824		
3.5	Magazines + Newspapers	516		
3.6	Oregon Collection	618		532
3.7	Reference Desk	126		180
3.8	Group Study / Collaboration Room A	60		
3.9	Group Study / Collaboration Room B	60		
3.10	Group Study / Collaboration Room C	120		
3.11	Group Study / Collaboration Room D	120		
3.12	Group Study / Collaboration Room E	300		
3.13	Teen Center	968		545
3.14	Learning + Collaboration Space	389	9,788	
<b>4.0</b>	<b>Children's Spaces</b>			
4.1	Children's New Books + Media	322		
4.2	Children's Public Access Computers	192		
4.3	Children's Circulating Books	1,182		
4.4	Family Space	410		
4.5	Picture Books + Easy Readers	1,185		
4.6	Storytelling + Class Visits Area	560		
4.7	Storytelling + Programming Storage	58		
4.8	Children's Librarian Desk	60		
4.9	Family Restroom	IN GSF	3,969	2,640
<b>5.0</b>	<b>CBPL Staff Work Areas</b>			
5.1	Library Director's Office	145		
5.2	Assistant Director's Office	100		
5.3	Circulation Manager's Office	100		
5.4	Staff Workroom	848		
5.5	Sorting + Returns	473		
5.6	Mail + Deliveries	140		
5.7	Supplies + Equipment Storage	250		
5.8	Server Room	140		
5.9	Staff Entrance / Lockers / Coat Closet	44		
5.10	Staff Lounge	294		
5.11	Staff Restrooms	IN GSF		
5.12	Custodial / Maintenance Services	147	2,681	
<b>6.0</b>	<b>Extended Services Work Areas</b>			
6.1	Extended Services: Director's Office	100		
6.2	Extended Services: Staff workroom	466	566	2,740
	Net Assignable Square Feet:	23,281		
	Gross Square Feet @ 75% Efficiency:	31,041		25,872
	*Public entrance/lobby also included in unassigned gross square feet			

## VIII. Project Cost Model

A report was developed by DCW Cost Management for the probable construction cost for the library. The costs provided are based upon the program information and design ideas provided by Hacker and the seismic requirements provided by the owner. The report offers a market assessment, explores benchmarks of similar buildings and provided a detailed cost perspective including anticipated added cost based on design options.

Based on a start date of June 2019, the cost of construction is estimated to range from 436 \$/sf to 520 \$/sf. For the proposed 31,041 sf building, the total construction cost is expected to be between \$13,533,876 to \$16,141,320. See Appendix C for the full cost report.

## IX. Funding Options

In June 2016, ECONorthwest facilitated a conversation with a group of community stakeholders regarding funding opportunities and challenges for the potential new Coos Bay Public Library facility. Meeting participants included City of Coos Bay staff and councilors, Library Foundation board members, library staff, and consultant partners. Participants agreed that identifying possible sources of funding for the construction of the new library is an essential step to moving forward with any new plans. Overall, limitations on local funding and financing sources suggest that state and federal funding as well as philanthropic sources are likely to be the cornerstones of an overall implementation strategy. They also suggest the importance of exploring partnerships and the possibility of co-location with other facilities. For the near term, the group identified the following next steps. See Appendix B.

1. Refine a potential mixed-use concept and consider approaches that might leverage novel sources of funding, such as housing or facilities that support workforce development or emergency response.
2. Work with community partners to gauge which project sparks the most interest and commitment.
3. Continue fundraising efforts and consider hiring a capital campaign consultant.
4. Develop a full funding strategy to address the facility's capital and operating cost needs.

## X. Building Program

### Site and Context

#### Visibility/Relationship to Surroundings/Access

The building must be clearly visible and recognizable as a civic building to allow visitors to easily find it. At the same time, it needs to fit comfortably on the site and work well with nearby buildings. Glimpses of interior spaces should be visible from outside to communicate the building's purpose and to draw visitors in. Planning physical access to the building, parking and the pathways available to pedestrians and vehicles is critical to the building's success. Provide pedestrian pathways to the public entrance that allow visitors who walk to the Library to arrive safely.

#### Public Entrance

The public entrance is the Library's "front porch". It must be visually prominent, expansive, well lit and welcoming. The entrance and lobby are often social spaces in which visitors cross paths with friends and neighbors. Space is needed for casual conversations as well as self-orientation as library patrons sort out where in the library they wish to go, make phone calls or wait for friends or a ride. Special care should be taken to ensure easy access by older people, family groups and physically disabled visitors. The street level entrance should also be easily accessible to visitors. A sheltered area outside the building, adjacent to the street level entrance, is highly desirable for people waiting for a ride either during open hours or after the Library has closed.

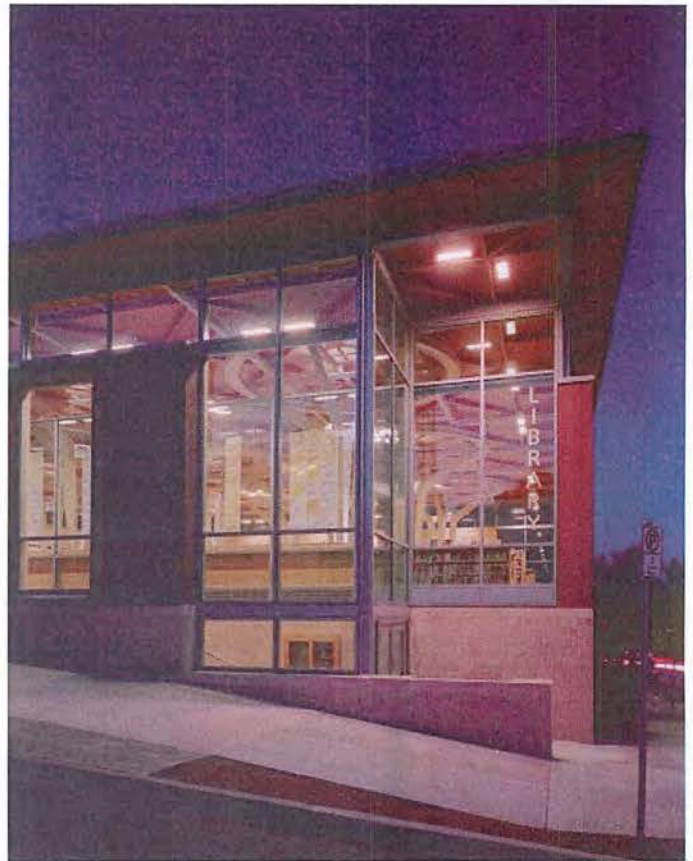
Return slots will be located at the street level perimeter to the building, close to the entrance or at a highly visible location adjacent to convenient, short-term parking. Exterior returns must be accessible for 24/7 drop-offs of Library books and media, with an overhang to protect both customers and materials.

#### Landscaping and Indoor/Outdoor Relationship

Attractive landscaping enhances the Library experience and softens the effect of massed parking areas often required. Landscaped areas should be:

- Low-maintenance
- Drought-tolerant
- Sloped away from the building
- Integrated with parking areas and walkways
- Open and low-profile for safety

Interior spaces and views should be visually linked to the exterior with windows that overlook landscaping and views.



The main entry of the Hillsdale library creates a welcoming light filled beacon. Hacker Architects.



Many of the spaces at the Mendenhall Valley library have views to the surrounding forest and mountains bringing the outdoors in. Hacker Architects.

### Exterior Courtyard

In addition to landscaped areas around the building, a contained exterior courtyard should be located within the library. This will allow patrons to engage with the outdoors while still within the secure area of the library. Careful consideration should be given to the courtyard's orientation and configuration to allow for maximum solar access. It should be partially covered, incorporate low maintenance and durable plantings and materials, and contain fixed seating. The suggested size is 1000 sf.

### Vehicular Access/Parking

Library parking should provide 1 space per 400 square feet of building space, or 78 spaces. Bicycle parking is desirable at the entrance to accommodate a minimum of 9 bicycles. Ensure that bike racks are visible from the lobby and are lockable. Given Coos Bay weather, it is preferable that the spaces are under cover.

The parking area should be designed with clear entrance and exit patterns to encourage smooth traffic movement on and off the site. The library should also consider providing short term parking close to the public entrance for convenient drop-off or pick-up of reserved material. If short-term spaces are allocated, ensure that vehicles using that parking do not block general traffic flow. Disabled access parking spaces must meet code and ADA requirements.

The library should provide two parking spaces adjacent to the delivery entrance and loading area for service and delivery vehicles. Vehicular access to the delivery entrance needs to be coordinated with library delivery vehicle dimensions and access needs.

The Coos Bay Municipal Code regulates parking and loading requirements per Chapter 17.340.

#### Off-Street Parking And Loading Requirements

##### Library Use

1 space per 400 square feet of floor area  
 $31,041 \text{ sf} / 400 = 78 \text{ parking spaces}$

##### Bicycle Parking: Table 17.340.030 – Bicycle Parking

For public uses

Other uses : One space per use plus one space per 10 vehicle

Parking spaces

9 spaces required

##### Loading : Table 17.340.040(B)

For public use :

Less than 30,000sf = 0 berth required

30,000 – 100,000sf = 1 berth required



The courtyard at the Bayview library in San Francisco provides an oasis within the secure library environment. Hacker Architects.

## Site Evaluation Criteria

The following criteria should be considered when selection a site for the library:

**Accessibility :** The library should be located as close to downtown Coos Bay as possible where it can be accessed by many people in the service area. Ideally it is close to other community amenities and services and is easily accessed from neighborhoods and schools by car, bicycle or foot.

**Site Capacity:** The site should be of adequate size and configuration to accommodate the target building area, exterior courtyard and parking along with landscaping.

**Amenities:** Ideally the site is connected to the natural environment through direct adjacency and views. It should also have access to natural light and in a location that is compatible with quiet library functions.

**Visibility and Neighborhood Context:** The site should be easily visible from the street. The neighboring buildings should be compatible in scale and use to the proposed building.

**Existing Conditions:** Ideally the land is free of hazardous materials and any other environmental factors. The site should be out of the Tsunami Inundation zone. If there are existing buildings, demolition will need to be factored into the site preparation cost. The site should have easy access to utilities. Zoning should allow for library use.

## Operations and Functionality

### Service Delivery Principles

A public library is a civic building that serves its community for many decades, offering daily service and space to thousands of visitors each year. It must be designed to support the following principles in an environment of constant, intense use.

a. *Open, welcoming spaces.* Public spaces need to welcome the public and draw them in, communicating to everyone who visits that the library is the community's "living room", encouraging every visitor to find their place within the facility.

b. *Acoustical zoning.* The interiors need to be organized to provide quiet areas for concentrated study and comfortable reading, spaces in which casual conversations and other collaborative activity can take place and active, noisy areas. All visitors need access both to quieter spaces and spaces in which conversations and higher noise levels are tolerated.

c. *Self-Explanatory Layout / Visibility.* Visitors should be able to find their way to the spaces and services they need without undue reliance on staff to point the way or to dependence on a building

directory. Simple, straightforward pathways, visual cues in the architecture and building finishes, clear major signage and similar embedded way finding strategies minimize the need to ask for directions and optimize building functionality.

d. *Operation with minimal staff / Self-service / Combined service points.* Limited fiscal resources are a given in today's library universe. The building layout and organization must support operation with only one staff person and include effective use of self-checkout technology and self-service holds pickup. Many libraries are adopting concierge-like service points rather than sit-down service desks.

e. *Flexible spaces and furniture.* As the library's role as a community "third place" evolves, flexible interiors are needed to allow space reconfiguration over time. Mobile shelving units on casters are needed to allow collections to be reconfigured or temporarily assembled at different locations.

f. *Browsable, accessible collections.* Increasing use of mid-height display shelving improves physical access to the collection and browsability. This plan recommends that all shelving be 66" or lower, and eliminates the higher shelving currently being used for the library's nonfiction collection.

g. *Technology and architecture integration.* Electronic technology is integral to library service today. Many library visitors carry their own computing devices with them – laptop computers, iPads, smart phones – and expect Internet connectivity as well as electrical power access during their visit. Library spaces typically must provide power outlets at all seats, including lounge seating, in group study and meeting rooms and in casual seating areas throughout the building. Wi-Fi access is standard in public spaces. Typically, separate wireless networks are provided for public use and for internal staff use. Almost universally, libraries provide free, high-speed computer access to the public at desktop workstations reserved for individual use. Increasingly, libraries are offering laptops for in-house lending to complement the desktop workstations. The building infrastructure must provide power and data distribution that supports all this technology as well as the integrated library system (ILS) that supports the online catalog, information databases, eBook offerings and a multitude of other digital information resources.

Many additional technological resources and features are part and parcel of library services, such as AV/digital projection systems in meeting rooms, flat screen monitors in conference rooms, video game consoles for teens, book and AV vending kiosks in the lobby. The design team needs timely access to a specific, detailed technology program that supplements the building program to appropriately specify the building power and data systems.

h. *Functional staff work space.* The building needs an efficient layout of employee workspaces for a productive operation. Sorting

and check-in of returned materials, for example, should take place away from the service desk in an enclosed, appropriately sized space. The staff workroom should accommodate desks and work counters of appropriate sizes, located close to public space.

### Spatial Relationships Summary

To be successful, the library's spaces must accommodate needed service components and be organized in functional relationships with each other. The spatial relationship principles below should guide space planning and the building design. The adjacency diagram that follows provides a visual summary of these relationships.

#### a. Acoustical and Activity Level Zones

The Library's spaces must be laid out to create distinct zones that support different activity and noise levels so that visitors can find the spaces and environments that match their needs. Active spaces with exuberant users, such as the children's area, need to be directly accessible from the public entrance or core public space. Areas for quiet and concentrated individual reading and study need to be more removed from the public entrance and main space. Space for group study or collaboration as well as technology-dense areas should be acoustically enclosed to contain noise.

#### b. Core Public Space

Several high-use, high-demand services and spaces need to be adjacent to, or visible from, the public entrance to provide quick, convenient access to visitors. This includes shelving for books and AV media, self-checkout units and holds shelving. The service desk should be visible from the entrance. Visitors ought to be able to fan out from the core space to other areas that are immediately identifiable through visual cues and signage – reading areas, public access computers, and additional collections.

#### c. Children's Space

The spaces for children and families should be considered a "library within the library", a self-contained cluster of services designed to serve this audience. Direct, convenient access to the space from the public entrance is critical as is effective acoustical separation from the rest of the library. Within the space, distinct areas are needed to serve different age groups, with proper attention paid to each group's interests and needs. Areas targeting toddlers and preschool age children and their families should be contained to minimize opportunities for young children to wander away from adult supervision. Storytelling programs and other events for young children should be conducted close to picture books. Collections and study seating for older children should be defined and separate from programming areas.



The core public space adjacent to the building entry at the Renton Highlands library provides a light filled, active and inspiring environment. Hacker Architects.



The Children's area at Mendenhall Valley Library is a self-contained space that provides a playful environment for children of various ages. Hacker Architects.

#### d. Teen Space

Teenagers need space within the Library they perceive as “a room of their own”, both for focused reading and study and for more casual collaboration, socializing and hanging out. These spaces need their own visual, physical and psychological identity and should be acoustically buffered from other parts of the building. At the same time, visibility into the space is essential to ensure a degree of supervision.

#### e. Quiet Reading and Study

Quiet reading and study seating is needed by all age groups and should be located away from the core public space.

#### f. Public Computers

The library can provide public computer access with both desktop and laptop devices. Desktop workstations should be clustered and readily visible to visitors, with a clear sightline to the service desks. The new library will provide considerably more computers than the current facilities. These workstations need to be clustered for visibility, effective management and staff oversight.

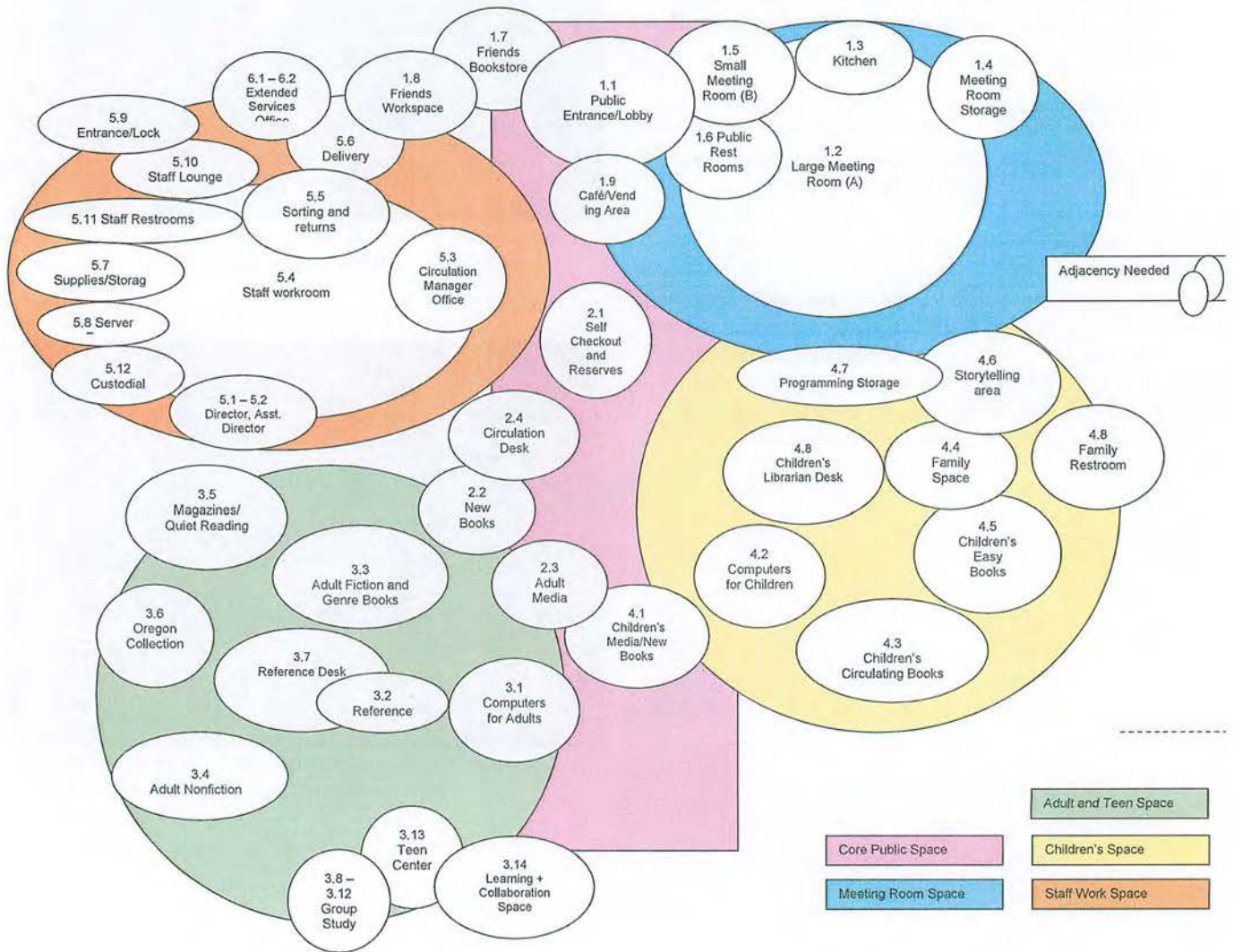


The Teen area at Mendenhall Valley Library is a self-contained space that provides a flexible, fun environment. Hacker Architects.



The hearth area at Mendenhall Valley Library provides a quiet reading zone with views to the forest and mountains. Hacker Architects.

# Adjacency Diagram





## Security and Accessibility

### Safety and Physical Security

The library will be a major destination for community members of all ages. The design must contribute to the safety and security of both public and staff, incorporating strategies that guarantee a physically safe environment and an atmosphere that deters misbehavior or unsafe conditions, such as:

- Open, clear visibility along exterior pathways and throughout the interior space.
- Well-lighted public spaces with minimal area outside the direct visual control of staff and open circulation pathways that encourage self-policing.
- Enclosed public spaces, such as a quiet study room, have large, unobstructed windows facing the open access public space.
- Doors to controlled access spaces lock (e.g., staff work areas).
- Service desks that can be exited from both sides.
- Unauthorized access is blocked to the roof, windows or exterior ledges and potential entry points are protected from illegal entry.
- Non-skid walking surfaces are applied appropriately along exterior pathways and as appropriate within the building.
- Furniture and casework are designed without sharp corners or climbing/tripping hazards.

A building intrusion alarm may be required. If so, the designer needs to specify the alarm system in accordance with owner requirements.

### Collection Preservation

The interior environment must ensure that both the collection and visitors to the building are housed in comfortable conditions that maintain steady temperature and humidity levels within recommended ranges. Shelving should be oriented to avoid direct sunlight. Window coverings that guarantee effective UV protection are needed in areas that allow exposure to sunlight.

### Universal Access

The building needs to meet or exceed guidelines set out in the Americans with Disabilities Act (ADA). The design should consider these guidelines broadly with the understanding that many people experience temporary disabilities and many people with physical limitations who do not consider themselves disabled use the library.

## Building Systems, Structure and Maintenance

### Acoustics

Acoustical conflicts and inadequate noise control are problems that users mention frequently when asked what improvements they would make to the library. The library design needs to:

- Create acoustical zones that separate public areas into quiet, medium and highly active, noisy spaces.
- Insulate interior spaces from sources of exterior noise, such as nearby streets or highways.
- Ensure that spaces in which events and meetings are held have excellent acoustical characteristics.
- Control noise generated by the library and its site from disturbing the building's neighbors.
- Control noise and vibration generated by the building mechanical equipment.

Each space in the building needs to meet acoustic criteria that include standard noise criteria rating requirements, as shown below.

Space Type	Noise Criteria Rating
Open Public Areas (Checkout, Reference)	30-40
Computer Work Areas	40
Open Staff Work Areas	35-40
Reading Rooms	25-30

Source: Acoustics for Libraries by Charles M. Salter. California State Library for the Libris Design website, no date.

Effective acoustic control strategies include:

- Space layouts in which main traffic patterns avoid quiet areas and effectively separate active, noisy areas from areas intended for quiet reading and study
- Enclosed spaces for small groups to work together
- Thoughtful, effective use of sound absorbing building materials
- Careful specification, selection and placement of mechanical and electrical equipment
- Careful design and layout of programming spaces and meeting rooms
- Careful specification and selection of audiovisual projection equipment

Acoustical issues related to specific spaces and services are noted in the Space Descriptions that follow.

## Building Finishes

### a. Floor Coverings

Floor coverings should be both attractive and durable. High-quality, commercial grade, anti-static nylon carpet square floor covering is preferred for most public and staff spaces. Resilient floor coverings, such as vinyl, cork, linoleum, rubber or composites, rather than carpet, should be considered for the following areas.

- Public entrance and lobby
- Kitchen areas
- Storage and supply rooms
- Restrooms
- Copy machine areas
- Staff/delivery entrance
- Materials return and sorting space

### b. Wall coverings

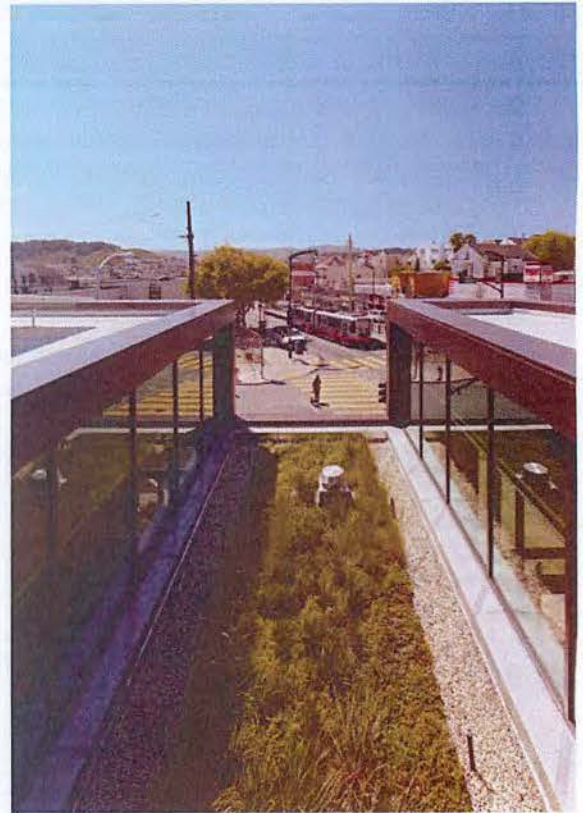
Wall coverings should be durable and appropriate to the space. Painted surfaces should use high quality, standard paint from a major manufacturer. Painted walls should be avoided in high traffic areas, such as the public entrance, or the layout in these spaces should minimize potential for customer direct contact with walls. Fabric wall coverings should be avoided. Durable corner guards and chair rails should be considered in areas where book trucks, stacking chairs and other items with high-risk for wall damage are in use.

### c. Restrooms

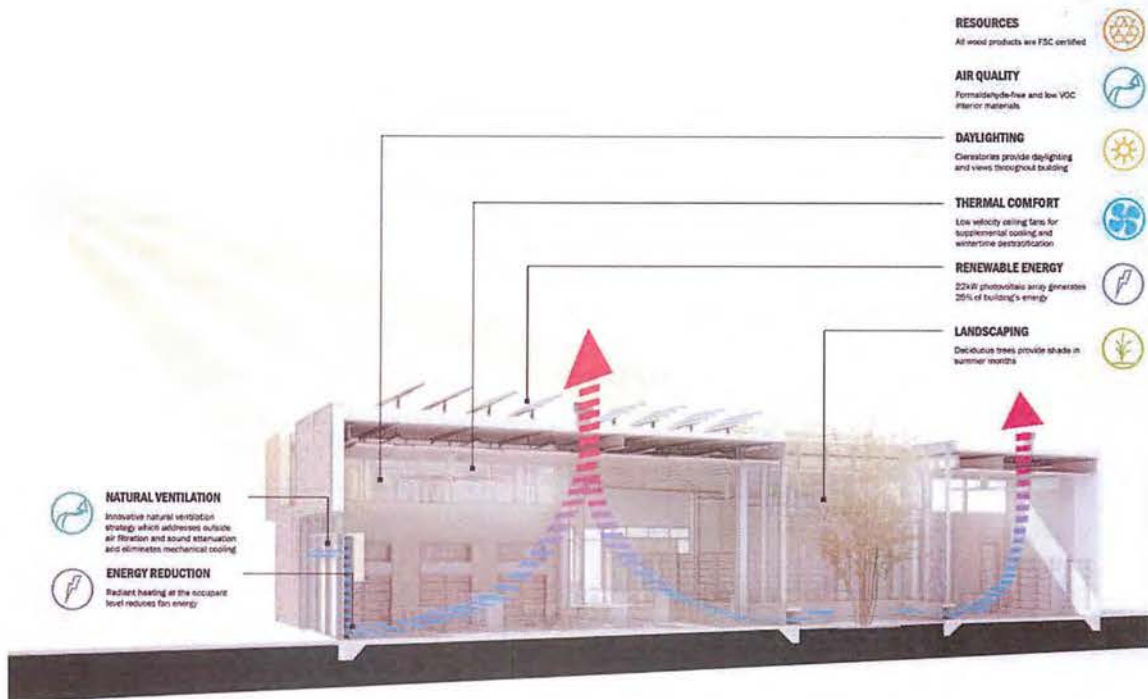
Restroom walls and floors require durable, vandal resistant coverings such as ceramic tile.

## Sustainable Design

21st century public buildings have the opportunity to make a substantial contribution to the sustainable future of our planet; both by setting precedents for comfort standards and by educating the public about innovative, efficient systems and materials. Public library designers should first consider the options for building orientation, building massing and window placement relative to the sun as well as prevailing wind directions. These key decisions can reduce energy demand. Then they need to carefully examine options for heating, cooling, lighting and materials in the building envelope in order to select the most efficient options feasible within the project parameters. And, finally, designers need to explore all options for creating on-site energy production during the design process. Buildings that cannot support on site energy generation at present should be designed with the flexibility to take advantage of systems that may become more economically or technically available in the future so that, as a society, we can move away from carbon related energy use as soon as possible. Ideally public library design also thoughtfully selects interior materials that contribute to healthier occupants and a healthier environments from which these products are sourced.



A vegetated roof on the Bayview library filters stormwater on-site and PV panels provide renewable energy. Hacker Architects.



- ENERGY REDUCTION**  
Building Energy is reduced by 41%
- RECYCLED MATERIALS**  
75% of construction waste recycled  
20% materials contain recycled content
- STORMWATER MANAGEMENT**  
Green roofs filter and detain stormwater on site
- ENERGY REDUCTION**  
Light colored roofing reduces heat island effect and energy needed for cooling
- ENERGY REDUCTION**  
High performing envelope construction (transcreen technology, continuous insulation, 30% window to wall ratio, high-performance glazing)
- PUBLIC TRANSIT**  
Proximity to Street Car and bus routes supports alternative modes of transportation



Sustainable strategies were core to the design of the Bayview Library in San Francisco Hacker Architects

**BAYVIEW LIBRARY**  
SUSTAINABLE FEATURES  
LEED GOLD ANTICIPATED

## Electrical Power and Data

### a. Overall

The facility must have powerful, flexible power and data distribution systems that can support the Library's current and future wiring and cabling needs. A detailed, specific technology program should be developed in addition to the building program to provide the information needed to appropriately design and specify building technology infrastructure.

Over time, the Library may reconfigure interior spaces to meet changing service needs. This may include repositioning computer equipment or installation of new equipment. The building needs built-in capacity to accommodate these changes, through ready access to electrical and data outlets in the floor and furniture raceways, universal and unobstructed wireless access and generous capacity in electrical and telecommunications closets, conduit and under-floor raceways.

The public must be able to plug in electrically powered devices at every seat in the public space, in every enclosed study space and anywhere within the meeting room.

Wire management associated with furniture both in the public spaces and at service desks needs to allow efficient work surface access to power and data, with no wiring exposed or hanging loosely from furniture. Power and data locations need to be coordinated with furniture layouts in a timely manner to ensure that interfaces with tables and other furniture are not awkwardly placed or cause tripping hazards.

Library data network requirements are extensive. Close collaboration with the library's IT department will ensure that the new facility is planned in alignment with technological requirements for the system as a whole.

### b. Computer Room

Power to this room should be filtered and on dedicated circuits. Equipment racks need ample working space both front and back (36" to 42" inches clearance). Continuous air conditioning to this space is required that ensures a temperature range of 62 to 80 degrees and 20% to 55% relative humidity.

## Lighting

### a. Overall

Light quality within the Library is a prime design consideration. Lighting must be uniform throughout each space without glare or excessive contrast. All public and staff occupied spaces should have optimum access to natural light. Indirect lighting in all spaces is preferred. Energy conservation requirements must be achieved while lighting levels and light quality are retained.

### b. Lighting levels

Lighting levels should meet recommendations based on the *Illuminating Engineering Society Handbook*, 2000 edition or later.

Reading Areas: 30 – 40 foot-candles average, measured at the desktop, augmented by task lighting where appropriate.

Book stacks: 6 – 35 foot-candles, measured vertically at any height along the book stack face to achieve a 6-to-1 maximum-to-minimum ratio across the stack face. Lighting over stacks may be parallel or perpendicular to the stacks as long as the required lighting level is achieved.

Service Desks: 40 – 50 foot-candles average measured at the countertop.

Study Rooms: 30 – 40 foot-candles average measured at the tabletop.

Staff Work Areas: 40 – 50 foot-candles average, measured at the desktop, augmented by task lighting where appropriate.

Programming Spaces: 30 – 40 foot-candles average with all lights on. Lighting should be dimmable or switchable to provide approximately 2 foot-candles for note taking during AV presentations.

### c. Lighting fixtures and light sources

Lighting fixtures should effectively control glare, through shielded parabolic louvers in downlights, uplighting and other similar techniques. Indirect lighting throughout the building is preferred. Lighting in areas in which computer use is intense (e.g., public computers, staff workstation) should meet standards for visual display terminal lighting.

Fluorescent lighting, in warm, medium or cool color with a color-rendering index of 82, is preferred for general use. Use electronic ballasts whenever possible. Avoid incandescent lamps due to life-cycle costs. Minimize the number of different lamp types used to simplify maintenance and economize on lamp stocking. Avoid placing light fixtures in inaccessible locations that will require special scaffolding for access.

Make optimal use of daylighting principles to reduce energy costs and enhance building sustainability without undue direct sunlight falling on book stacks, display areas or seating spaces. Consider exterior shading devices or similar strategies to minimize solar heat gain and diffuse sunlight along east, south and west-facing windows.

### d. Lighting controls

Library lighting, including task lights, should be controlled by a programmable timer system that staff can turn off all lights at once or turn on only selected lights. The control system must include a

manual override.

e. Emergency and exit lighting

Emergency and exit lighting must be incorporated into the lighting plan, with capacity to light the building for at least one hour during power outages. The emergency lighting system needs to have a means of being tested without triggering security of fire alarms.

**Building Maintenance**

Building finishes must be durable and not require frequent painting or staining. Finishes such as high quality masonry, pre-cast concrete or similar products are preferable to wood or stucco. Vandal-resistant finishes are recommended, including graffiti retardant coating applied to all appropriate exterior surfaces from grade to a height of at least twelve feet and features that deter skateboarding.

Use durable building finishes that will stand up to years of heavy use and that contribute to an environmentally sound building. Consider giving preference to building materials that have a favorable Life Cycle Assessment (LCA) rating, including materials made of post-consumer or post-industrial recycled materials, renewable materials, materials made of certified wood or other materials that are considered sustainable.

Avoid surface treatments that require waxing, polishing, frequent repainting or refinishing or have special cleaning requirements. Select finishes that are washable and vandal-resistant. Install corner guards at appropriate locations in both public and staff work areas and chair rails on walls adjacent to areas where book trucks may congregate.

Design the building to require low maintenance, both inside and outside. This is a prime consideration for the selection of building materials, finishes, mechanical systems, furnishings, and equipment.

To the extent feasible, design the building so that exterior windows can be cleaned and interior lights can be changed using hand equipment without scaffolding. All materials and products should be specified as standard sizes and colors for economical replacement. The same materials and products should be used throughout the building, to the extent possible.

**Mechanical Systems**

The building mechanical systems provide air distribution throughout all interior spaces. The system needs to ensure comfortable and steady airflow with temperatures and relative humidity within ranges recommended for personal comfort and health, including the following requirements:

- Ventilation units should be zoned according to the intended use, occupancy level, orientation and hours of

operation of each space.

- Exhaust fans should be provided for restrooms and food preparation areas, at appropriately specified levels.
- Electrical and telecom rooms should be supplied with backup air distribution and ventilation units, as appropriate.
- Mechanical equipment with rotating and reciprocal motors should be isolated to prevent transmission of noise or vibration. Reading and study areas, meeting rooms and other spaces considered sensitive to noise should be provided with acoustically treated ducts. Acoustically rated interior partitions that are penetrated should be sealed with acoustically rated sealant.
- Mechanical areas for air handling units should provide sufficient free space for proper airflow and maintenance and positioned to mitigate acoustical impact on adjacent spaces.
- Provide adequate venting in areas with equipment that emits significant airborne particles, such as copy machines.

Sustainable approaches to air distribution and temperature control should be given strong consideration, including natural ventilation, window orientation and exterior overhangs at east, south and west facing windows.

**Plumbing**

Restrooms should be easy to find and accessible, designed for durability and resistant to vandalism. Avoid single occupancy restrooms for the public except for family restrooms that serve children and families.

Restrooms should be designed using the following criteria:

- Each plumbing fixture should be equipped with a separate shut-off valve, located for convenient maintenance access.
- Energy efficient strategies, such as shut-off faucets, should be employed in all restrooms.
- Fixtures should be wall-mounted and cubicle partitions ceiling-mounted for easy maintenance.
- Floor and wall finishes should be hard surfaces, such as ceramic tile, coved at the point at which the floor and wall meet.
- Each restroom needs a sloping floor drain and hose bib.
- Restrooms must be ADA compliant with entrances that ensure easy entrance by people in wheelchairs.
- Vandal resistant fixtures and finishes within restrooms are essential.
- Restrooms should be separately vented and acoustically isolated from adjacent spaces.

The following specifics are required in all restrooms:

- Soap dispensers must be tamper resistant and mounted directly over the sink to avoid soap and water drips on the

floor or counter.

- Paper towel dispensers and air-drying units, wall-mounted.
- Baby changing tables are required
- Low flush toilets are required
- Purse/parcel shelves are required in each stall

## Technology

### 1. Overall

The building needs a power and data infrastructure that can support a technology-rich array of services over time as the library continues to provide public access to the online world through a constantly evolving configuration of digital equipment. The building must be designed to support introduction of new technologies to the maximum extent feasible. The power and telecommunications plans for the building should be designed for flexibility, in effect to "future proof" the library for the next ten to twenty years or more. Under-floor plenums, wireless access networks and other strategies should be considered throughout the building.

### 2. Data network and wire management

The library data network requirements are extensive. Wiring must be color-coded, tamper-resistant, numbered and easily accessible to staff. Network security and access control are critical.

Use concealed wire management strategies wherever electronic equipment is located (e.g., public computers, service desks, staff workroom). Allow easy access to power and data at or slightly above work surface height. Prevent exposed wiring on the floor or exposed below furniture work surfaces. The power and data interface between the building and furniture must be easy to use, difficult to damage and tucked away from traffic or exposure to tampering.

Conduit should be sized for Category 6 (100Mbps) universal twisted pair copper or better.

Provide power and data to support online interactivity for demonstrations and programming in the group study rooms and community meeting room.

### 3. Public computers

The library will offer public online access at desktop computer workstations and laptop computers for in-library checkout. Over time, the ratio of desktop to laptop workstations may change and seating allocated to desktop workstations may be re-allocated to other functions. The public space needs to support reconfiguration of public technology to the extent feasible. Each public computer workstation with a desktop computer needs a work surface that accommodates a flat screen monitor and keyboard as well as clear workspace for note taking and research.



Optimized natural and artificial light create an inspiring environment at the Renton Library . Hacker Architects.

When the library is designed, the architects need to confer with library IT staff during design to obtain specifications and dimensions of equipment to accommodate on these work surfaces – for adults, teens and children. Placement and orientation of equipment must consider avoidance of screen glare and must maintain a balance between visual surveillance by staff and a measure of privacy for each user.

## Service Points, Staff Work Spaces and Storage Areas

### 1. Service Desks

The Library will have two service desks. The circulation desk will be visible from the public entrance and the circulation and the reference and circulation desks will be visible to each other. Staff will move back and forth from the desks to the public areas on a continual basis, helping customers as needed. The space programmed at the desk includes the desk itself as well as circulation space behind and in front of each desk. The desk must have effective concealed wire management for computer equipment located on each counter, and must be oriented so that staff face customers as they approach, with generous queuing space for the public. The counters should be height adjustable to allow staff to set work surface height between 34" and 29" above the floor. Each desk must accommodate people in wheelchairs, either public or staff.

Countertops should be durable and easily cleaned. A purse shelf and toe space at the foot of each desk should be considered for maintenance and to keep the countertop clear. Floor cushioning is critical on the staff side of the desk. Counters should be approximately 24" deep with 4' to 5' of lateral space at each staff position.

### 2. Staff Work Space

Workstations in the staff workroom need to be flexible and designed to support multiple functions. The Library needs dedicated, secure, well-organized storage space for supplies and small equipment to operate the facility as well as storage for programming.

## Movable Furniture and Shelving

### 1. Seating and Tables

Movable furniture must be flexible and able to support reconfiguration of the public space over time. All table and lounge seating needs to accommodate laptop computer plug-in, at the tabletop or at floor level. Mobile furniture is needed in several areas for flexibility. Electrical outlets in these areas should be located thoughtfully and plentifully to support laptop computer use while avoiding dangerous tripping hazards.



Public computers are located adjacent to the circulation desk at the Renton Highlands Library providing easy access to assistance. Hacker Architects.

## Signage, Way finding and Public Art

### 1. Signage and Wayfinding Exterior

A large-scale, high visibility sign with the name and address of the library is needed outside the building, clearly visible day or night. Additional exterior signage is required, visible at the entrance, with the following information. This signage must be easily revised by onsite staff.

- Library service hours
- Library Internet address

### 2. Signage and Wayfinding Interior

Consistent, easily understood signage and way finding is needed throughout the public space. Signage must use clear, logical visual and textual hierarchies that allow visitors to find their way through the building, readily interpret signage and communicate directions to others.

Major signs that identify service points and primary spaces need to be oriented toward the most used approach to each space and designed in coordination with the building space plan, interior finishes and reflected ceiling plan.

In keeping with space flexibility, signage must be specified for easy relocation and re-installation. Secondary signage, such as stack end signs, must be designed and specified for easy, economical revision by onsite staff.

### 3. Public Art

Public art can add spirit and energy to a library environment. If planned for early in the process, art can be incorporated into elements throughout the building. Glass for windows, tile or wood flooring and stair railings are some of the common places art can be integrated into the design. The artist and architect should work closely to develop the work so that the end product is in harmony with the building and the community it serves. Art can also be added after the building design is complete, but again it needs to be coordinated with the architect to ensure it works well in the space and is appropriate to the overall vision.



The work of local artist Ron Sanders in the courtyard of the Bayview Library, San Francisco . Hacker Architects.



## Detailed Space Summary

	Quantity	Item	SF/Item	Total SF Needed
<b>1.1 Public Entrance / Lobby</b>				
display cases, glass-enclosed, wall-mounted, 6'w x 5'h x 1.5'd min overall	2	case	30	60
flat screen monitor, wall mounted for announcements and marketing	1		0	0
library book drop	1	book drop	20	20
RFID compatible security gates	1	pair	24	24
<i>unprogrammed space</i>				400
<b>total</b>				504
<b>1.2 Community Meeting Room A (Dividable)</b>				
stacking chairs	200	seats	12	2,400
tables, folding, lightweight, 5' x 2'	35	tables	0	0
podium, movable	1	podium	0	0
video/digital projector, ceiling-mounted	1	projector	0	0
projection screen, ceiling-mounted	1	screen	0	0
<b>total</b>				2,400
<b>1.3 Kitchen</b>				
below	1	counter	130	130
refrigerator, full size	1	unit	20	20
microwave oven, on counter	1	oven	0	0
oven with range-top, under counter	1	oven	0	0
trash containers/recycling container	1	container	6	6
<i>Unprogrammed space (for commercial kitchen, capacity TBD)</i>			150	150
<b>total</b>				306
<b>1.4 Meeting Room Storage</b>				
dollies, mobile, for stacking chairs	20	dollies	8	160
table trucks for folding tables	6	dollies	10	60
equipment racks for meeting room AV media projection equipment	1	rack	10	10
clear space for storage of easels, equipment, other programming supplies	1	space		38
<b>total</b>				268
<b>1.5 Community Meeting Room B</b>				
conference table	1	table	0	0
white board, wall-mounted, interactive	1	board	0	0
video/digital projector, ceiling-mounted	1	projector	0	0
seating	24	seats	20	480
<b>1.6 Public Restrooms</b>				IN GSF
<b>1.7 Friends' Bookstore</b>				
display shelving, 72" for books + media on sale	20	SS sections	10	200
display tables, freestanding, 2.5' x 2.5	4	display tables	25	100
<b>total</b>				300
<b>1.8 Friends Workspace</b>				
desk/workspace with computer	1	desk	40	40
supply cabinet, 2-door, for online supplies storage	1	cabinet	20	20
work tables, 8' x 3' for processing/sorting donations	2	tables	40	80
book truck parking	6	trucks	8	48
clear floor space for incoming donations, temp storage, shipments to	1	space	75	75
shelving, 84", for sorting and storage	14	sections	10	140
<b>total</b>				403
<b>1.9 Café/Vending Area (Placeholder)</b>				
coffee vending machine, tabletop unit	1	machine	6	6
cold drinks vending machine	1	machine	15	15
snack counter / vending machine	1	machine	15	15
condiments table, 4' x 2'	1	table	16	16
café tables + seating	8	seats	20	160
<b>total</b>				212
<b>1.10 Community Information</b>				
community information display unit, wall-mounted, with brochure & nsp racks, bulletin board & storage below, 6'L x 5'H x 1.5'D	1	unit	30	30
<b>total</b>				30

## Detailed Space Summary

	Quantity	Item	SF/Item	Total SF Needed
<b>2.1 Self Checkout and Reserves</b>				
self-checkout machines	4	machines	40	160
shelving 66", for reserves	3	sections	10	30
queuing space	2	people	4	8
<b>total</b>				<b>198</b>
<b>2.2 New Books / Browsing</b>				
shelving, display, 2.5' x 5' for new + popular books, slatwall display @ either	4	DS units	42	168
shopping carts/baskets for patrons	3	basket stacks	5	15
bench, 2-person	1	bench	25	25
<b>total</b>				<b>208</b>
<b>2.3 Media Collection</b>				
shelving, display, 2.5' x 5', 66"h for DVDs	9	DS sections	42	378
shelving, 66" browse bins for music CDs	11	DS section	17	187
shelving, display, 2.5' x 5' 66" for audiobooks	6	DS sections	42	252
bench, 2-person	1	bench	25	25
<b>total</b>				<b>842</b>
<b>2.4 Circulation Desk</b>				
staff counter positions with computer workstations + staff printer	2	positions	50	100
cash register	1	machine	0	0
book truck parking	2	trucks	8	16
shelving, wall-mounted, for secure reserves, etc.	1	section	10	10
<b>total</b>				<b>126</b>
<b>3.1 Adult Public Access Computers</b>				
computer workstations, sitdown	16	wkstns	30	480
networked printers/print release station	1	printer	12	12
<b>total</b>				<b>492</b>
<b>3.2 Reference Collection</b>				
seating @ 2-pl tables	4	seats	25	100
shelving, 66", for reference books	3.0	DS section	17	51
microfilm/oral history	4	SS section	8	32
copy machine, freestanding	1	machine	30	30
scanner	1	machine	30	30
microfilm	2	machines	30	60
video magnifier	1	machine	30	30
copier storage cabinet with work counter + small eqpt	1	cabinet	16	16
<b>total</b>				<b>349</b>
<b>3.3 Adult Circulating Fiction Books</b>				
shelving, 66" for fiction	59	DS sections	17	1,003
shelving, 66" for mysteries, science fiction	60	DS sections	17	1,020
shelving, 66" for large print books	21	DS sections	17	357
read and return spinner	1.0	spinner	49	49
display case	1.0	case	81	81
online catalog stations, standup @ stack ends	3	wkstns	16	48
seating @ 2-pl tables	6	seats	25	150
seating, lounge chairs	4	seats	35	140
<b>total</b>				<b>2,848</b>
<b>3.4 Adult Circulating Nonfiction Books</b>				
shelving, 66" for adult nonfiction	99	DS sections	17	1,683
shelving, 66", for foreign language books	2	DS sections	17	34
oversize	1	DS sections	17	17
shelving, 66" for puzzles	2	DS sections	17	34
online catalog stations, standup @ stack ends	3	wkstns	16	48
seating @ 2-pl tables	16	seats	25	400
Adult Circulating Nonfiction Books	8	seats	25	200
laptop / study counter	8	seats	16	128
seating @ lounge chairs	8	seats	35	280
<b>total</b>				<b>2,824</b>
<b>3.5 Magazines + Newspapers</b>				
shelving, 66" for magazine current issue display and recent backfiles below	2	DS sections	26	52
shelving, 66" for newspaper display of current/recent issues	0.6	DS sections	26	16
shelving, 66" for magazine backfiles (placeholder)	4	DS sections	17	68
seating, lounge chairs	8	seats	35	280

## Detailed Space Summary

	Quantity	Item	SF/Item	Total SF Needed
Map cases	2	cabinets	12	24
clippings file	1	SS section	8	8
atlas/folio stand	1	cabinet	38	38
seating @ 2-pl table	4	seats	25	100
seating @ lounge chairs	4	seats	35	140
total				616
<b>3.7 Reference Desk</b>				
staff counter positions with computer workstations + staff printer	2	positions	50	100
book truck parking	2	trucks	8	16
shelving, wall-mounted, for puzzles, etc.	1	section	10	10
total				126
<b>3.8 Group Study / Collaboration Room A</b>				
table, conference	1	table	0	0
seating @ conference table	2	seats	30	60
total				60
<b>3.9 Group Study / Collaboration Room B</b>				
table, conference	1	table	0	0
seating @ conference table	2	seats	30	60
total				60
<b>3.10 Group Study / Collaboration Room C</b>				
table, conference	1	table	0	0
seating @ conference table	4	seats	30	120
total				120
<b>3.11 Group Study / Collaboration Room D</b>				
table, conference	1	table	0	0
seating @ conference table	4	seats	30	120
total				120
<b>3.12 Group Study / Collaboration Room E</b>				
table, conference	1	table	0	0
seating @ conference table	12	seats	25	300
total				300
<b>3.13 Teen Center</b>				
shelving, display, 2.5' x 5' for teen new + popular books	1	DS section	42	42
shelving, 66", for teen fiction / graphic novels	14	DS sections	17	238
shelving, 66", for teen nonfiction	1	DS sections	17	17
shelving, 66" for teen audiobooks	1	DS section	17	17
shelving, 66" for teen magazine display + backfiles	0.5	DS section	26	13
read and return spinner	1.0	spinner	49	49
computer workstations, sitdown	6	wkstns	30	180
online catalog stations, standup @ stack ends	1	wkstn	16	16
networked printers/print release stn	1	printer	12	12
seating @ 4-pl café tables	8	seats	20	160
casual lounge seating	8	seats	16	128
laptop / study counter	6	seats	16	96
wall-mounted display boards	2	boards	0	0
total				968
<b>3.14 Learning + Collaboration Space</b>				
laptop/tablet storage/recharging station, 12-unit capacity, w 12 devices	1	storage unit	12	12
seating @ 2-pl work tables, 30" x 48"	12	seats	20	240
computers, sit-down, enhanced/specialized equipment	1	wkstns	35	35
networked printers/print release stn	1	printer	12	12
supply closet	1	closet	50	50
counter, 8' x 2', w double sink, commercial grade, cabinets above + below	1	counter	40	40
video/digital projector, ceiling-mounted	1	projector	0	0
projection screen, ceiling-mounted	1	screen	0	0
white board, wall-mounted, interactive	1	board	0	0
total				389

## Detailed Space Summary

	Quantity	Item	SF/Item	Total SF Needed
<b>4.1 Children's New Books + Media</b>				
shelving, display 2.5' x 5' for children's new books	1	DS sections	42	42
shelving, 66" display for J magazines, with backfiles underneath	0.5	DS section	26	13
shelving, 66" for J DVDs	2	DS sections	17	84
shelving, 66" AV browsing for J music CDs	0.6	DS section	17	11
shelving, 66" for J audio books	2	DS section	17	34
shelving, 60" w hang-up rods for J AV media kits	1	DS section	17	17
display case	1.0	case	81	81
express self-checkout machine	1	machine	40	40
total				322
<b>4.2 Children's Public Access Computers</b>				
computer workstations, sitdown, with 2 low seats @ each	6	wkstns	30	180
networked printer/print release station	1	printer	12	12
total				192
<b>4.3 Children's Circulating Books</b>				
shelving, 66" for J fiction	28	DS sections	17	476
shelving, 66" for J large print	0.4	DS section	17	7
read and return spinner	1.0	spinner	49	49
shelving, 66" for J nonfiction/biography	22	DS sections	17	374
seating @ 2-pl tables	8	seats	25	200
lounge seats or window seats	2	seats	30	60
online catalog stations, standup @ stack ends	1	wkstn	16	16
total				1,182
<b>4.4 Family Space</b>				
lounge seats, parent/child	2	chairs	30	60
seating @ 4-person tables, mobile, round for toddlers	12	seats	20	240
computer workstations, sitdown, child-height, 2 seats each	2	wkstns	30	60
space for interactive manipulatives	1	space	20	20
interactive fire truck play station	1	space	15	15
cabinet for puzzle and toy storage	1	cabinet	15	15
total				410
<b>4.5 Picture Books + Easy Readers</b>				
shelving, 45" for picture books/toddler books	35	DS sections	17	595
shelving, 45" for easy readers	10	DS sections	17	170
seating @ 4-pl tables, mobile, round for toddlers	12	seats	20	240
lounge seats or window seats	2	seats	30	60
lounge seats, parent/child	4	chairs	30	120
total				1,185
<b>4.6 Storytelling + Class Visits Area</b>				
carpeted floor space for children and parents	50	spaces	10	500
stroller parking	10	strollers	6	60
total				560
<b>4.7 Storytelling and Programming Storage</b>				
shelving, industrial, 80" for storytime, programming props	4	sections	12	48
shelving, 84" for programming collection	1	section	10	10
total				58
<b>4.8 Children's Librarian Desk</b>				
work station, 8' x 6' + 25% circ space, for children's librarian	1	wkstn	60	60
<b>4.8 Family Restroom</b>				IN GSF

## Detailed Space Summary

		Quantity	Item	SF/Item	Total SF Needed
<b>5.1</b>	<b>Library Director's Office</b>				
	desk, computer workstation, printer + task chair	1	desk	50	50
	table, conference, round, 36"	1	table	60	60
	chairs, guest	2	chairs	0	0
	shelving, 84", wall-mounted	2	sections	10	20
	lateral file, 3-drawer unit	1	cabinets	15	15
	total				145
<b>5.2</b>	<b>Assistant Director's Office</b>				
	desk, computer workstation, printer + task chair	1	desk	50	50
	chair, guest	1	chair	15	15
	shelving, 84", wall-mounted	2	sections	10	20
	lateral file, 3-drawer unit	1	cabinet	15	15
	total				100
<b>5.3</b>	<b>Circulation Manager's Office</b>				
	desk, computer workstation, printer + task chair	1	desk	50	50
	chair, guest	1	chair	15	15
	shelving, 84", wall-mounted	2	sections	10	20
	lateral file, 3-drawer unit	1	cabinet	15	15
	total				100
<b>5.4</b>	<b>Staff Workroom</b>				
	work stations, 8' x 6' + 25% circ space, for assigned staff	9	wkstns	60	540
	work stations, 6' x 6' + 25% circ space, for volunteers +/- or shared use	1	wkstns	45	45
	work table with 4 chairs, for volunteers + staff	1	tables	40	40
	sections full-ht shelving	10	sections	10	100
	bulletin board, white board	2	boards	0	0
	lateral file, 3-drawer unit	1	cabinet	15	15
	flat file, 10-drawer, for posters + art supplies	1	file	36	36
	work counter, 8' x 2', with cabinets above + below + sink	1	counter	40	40
	fax machine	1	fax	16	16
	networked color laser printer	1	printer	16	16
	total				848
<b>5.5</b>	<b>Sorting + Returns</b>				
	automated materials handling system, 7-bin (placeholder)	1	sorter	225	225
	staff workstations for returns + check-in, 6' x 6'	2	workstn	50	100
	book truck parking	14	trucks	8	112
	shelving, 84" for damaged items/temporary storage	2	sections	10	20
	extra return bins for automated sorter (placeholder)	2	bins	8	16
	total				473
<b>5.6</b>	<b>Mail + Deliveries</b>				
	mail delivery sorting counter, 6' x 3'	1	counter	30	30
	delivery box stacking space (4 stacks @ 4 boxes each)	4	stacks	4	16
	book truck parking	4	trucks	8	32
	clear floor space for receiving & unpacking shipments	1	space	50	50
	document disposal receptacle	1	unit	6	6
	trash container, large	1	unit	6	6
	total				140
<b>5.7</b>	<b>Supplies + Equipment Storage</b>				
	shelving, 84", for general supplies	10	sections	10	100
	clear floor space for box storage	1	space	50	50
	emergency storage supply area	1	space	100	100
	total				250



SFPL Bayview Library, San Francisco CA  
Hacker Architects

## XI. Space Descriptions

### 1.0 Entrance Area

#### 1.1 Public Entrance/Lobby

**Square Feet:** 504 sq ft

**Target Audience:** All visitors

**Occupancy:** 5 – 15

**Functional Description:** The entrance needs to be the single point of public access, positioned in alignment with the security gates. It should be well lit and welcoming and feature automatic doors. The lobby must be large enough so that visitors can orient themselves, with the meeting room entrances, library entrance, café and Friends of the Library bookstore clearly visible from the entry.

A wall-mounted return slots for 24/7 return of circulating materials will be located on the exterior face of the building, adjacent or very near the public entrance. Returns must drop directly into the Sorting and Returns space.

The library floor should be a hard surface; floor mats or inset floor grates should be considered to facilitate dirt and mud removal as patrons enter the building. The distance between the door and the security gates should be far enough that debris and water on visitor's feet is knocked off as they walk through the lobby.

One pair of RFID material theft security portals is needed at the point at which visitors exit the Library public space into the lobby, with easy access for staff to meet and intercept customers who have set off the alarm. The theft security system should be compatible with radio frequency inventory control technology (RFID), without horizontal cross pieces or other components that encourage climbing or sitting.

Waste receptacles, wall-mounted glass-enclosed display cases, a community information display, a flat screen monitor with library announcements, a donor recognition wall and a drinking fountain should be located in the lobby. The entrance needs a covered area to protect visitors from the elements as they enter and exit the building.

**Adjacency:** Public Restrooms  
Community Meeting Room A  
Community Meeting Room B  
Café/Vending Area  
Sorting + Returns

**Acoustics:** Conversations from incoming and outgoing visitors should be buffered so that noise does not bleed into the library itself. Avoid floor surfaces that generate acoustical reverberation and loud footfalls.

**Power/  
Technology:** Materials theft detection devices have specific power/data requirements that must be coordinated with the vendor.

**Environmental  
Conditions:** Design the entrance so that rain and wind from outside the library do not intrude into the interior. Lobby air ventilation should be zoned separately from the library.

	Quantity	Item	SF/Item	Total SF Needed
<b>Public Entrance / Lobby</b>				
display cases, glass-enclosed, wall-mounted, 6'w x 5'h x 1.5'd min overall	2	case	30	60
flat screen monitor, wall mounted for announcements and marketing	1		0	0
library book drop	1	book drop	20	20
RFID compatible security gates	1	pair	24	24
<b>total</b>				<b>104</b>

**1.2 Community Meeting Room A (Dividable)**

**Square Feet:** 2,400 sq ft  
**Target Audience:** All visitors  
**Occupancy:** 200 adults when seated in chairs arranged auditorium style

**Functional Description:** Since this space will be the Library’s primary venue for programming events, it needs to be designed to support a wide variety of activities, ranging from summer reading celebrations to author readings to movie nights. Some programs will attract large audiences; others will appeal to audiences of 25 – 50 people. For maximum flexibility, the space must be dividable into two spaces using movable wall partitions with acoustical properties. The wall partitions should be configured to split the space into two equal areas. Both spaces need to be accessible directly from the Public Entrance/Lobby, each with separate lighting and AV projection controls. When the entire space is used, it needs to accommodate an audience of 200 adults seated in stacking chairs arranged in auditorium style facing one end of the room.

This space needs wireless access and must be equipped with adjustable lighting levels, ceiling-mounted video projector, projection screen and assistive listening device capability. The space needs to be wired and cabled to support a variety of audiovisual and telecommunications activities, including cable TV reception, distance learning events, video programming and interactive demonstrations of online or Internet resources. To the extent possible, these features need to be available independently within each subdivided space.

The public entrance to the room should be located so that meeting participants may enter and leave the room through the lobby, outside security, while the Library is closed. The room needs chair rails around the perimeter, tackable wall surfaces and corner guards at key locations throughout the space. The space needs to provide good sightlines for all program attendees with no columns or other obstructions that would limit visibility from any part of the room.

**Adjacency:** Public Entrance/Lobby  
 Serving Kitchen  
 Public Restrooms  
 Meeting Room Storage

**Acoustics:** This space will be used constantly for programs, lectures and similar public events. It needs to be designed and finished to promote excellent acoustical conditions throughout the space. Wall, ceiling and floor surfaces should be absorptive, including carpet, acoustical wall panels and ceiling tile. The space should be acoustically insulated to contain sound.

**Lighting:** Provide a minimum 30 – 40 foot-candles average with all lights on and with separately controlled lighting and spotlighting for the front of the room on. The lighting should be dimmable or switchable to produce approximately 2 foot candles for note taking during AV presentations. The note-taking lights should not spill into the projection screen. Lighting and AV projection controls must independently serve each of the two subdivided spaces.

**Power/Technology:** This space needs adjustable lighting levels, ceiling-mounted video projection and assistive listening device capability. Floor-mounted and wall-mounted electrical outlets are needed throughout the space to support laptop computer use.

	Quantity	Item	SF/Item	Total SF Needed
<b>Community Meeting Room A (Dividable)</b>				
stacking chairs	200	seats	12	2,400
tables, folding, lightweight, 5' x 2'	35	tables	0	0
podium, movable	1	podium	0	0
video/digital projector, ceiling-mounted	1	projector	0	0
projection screen, ceiling-mounted	1	screen	0	0
total				2,400



### 1.3 Kitchen

**Square Feet:** 306 sq ft

**Target Audience:** Library staff, volunteers, event organizers

**Occupancy:** 1 – 4

**Functional Description:** An enclosed serving kitchen with a commercial grade sink, appliances and storage cabinets is required. The kitchen and the area adjacent to it require hard flooring to prevent carpet damage when food is served. Given the City of Coos Bay's interest in utilizing this space in the event that the library should serve as an information center during a natural disaster, additional square footage has been added to this area to accommodate as-yet undetermined needs.

**Adjacency:** Community Meeting Room A

**Acoustics:** The space should be acoustically insulated to contain sound.

**Power/Technology:** This space needs to accommodate power requirements consistent with a commercial kitchen.

Kitchen	Quantity	Item	SF/Item	Total SF Needed
counter w double sink, commercial grade, dishwasher, cabinets above + below	1	counter	130	130
refrigerator, full size	1	unit	20	20
microwave oven, on counter	1	oven	0	0
oven with range-top, under counter	1	oven	0	0
trash containers/recycling container	1	container	6	6
<i>Unprogrammed space (for commercial kitchen, capacity TBD)</i>			150	150
total				306

### 1.4 Meeting Room Storage

**Square Feet:** 268 sq ft

**Target Audience:** Library staff, volunteers, event organizers

**Occupancy:** 0 - 2

**Functional Description:** Adjacent to the Community Meeting Room A, this space will provide secure storage for stacking chairs on movable dollies, folding tables and audiovisual equipment controls associated with the main meeting room. Resilient floor surfaces are required in this space. Double doors or an extra-wide door and immediate access to each subdivided space of the Community Room are also required. Placement and access to the room must accommodate both portions of the meeting room when divided.

**Adjacency:** Community Meeting Room A

**Power/Technology:** Electrical and data outlets must support A V and other projection equipment

Meeting Room Storage	Quantity	Item	SF/Item	Total SF Needed
dollies, mobile, for stacking chairs	20	dollies	8	160
table trucks for folding tables	6	dollies	10	60
equipment racks for meeting room AV media projection equipment	1	rack	10	10
clear space for storage of easels, equipment, other programming supplies	1	space		38
total				268

**1.5 Community Meeting Room B**

**Square Feet:** 480 sq ft

**Target Audience:** All visitors

**Occupancy:** 24

**Functional Description:** This space provides a conference table with a capacity of 24 seats to accommodate a variety of library programs and community meetings. An interactive white board and a ceiling mounted video/digital projector are included to facilitate a variety of needs.

**Adjacency:** Public Entrance/Lobby, Public Restrooms

**Acoustics:** Wall, ceiling and floor surfaces should be absorptive, including carpet, acoustical wall panels and ceiling tile. The space should be acoustically insulated to contain sound.

**Power/Technology** Floor-mounted and wall-mounted electrical outlets are needed throughout the space to support laptop computer use.

Community Meeting Room B	Quantity	Item	SF/Item	Total SF Needed
conference table	1	table	0	0
white board, wall-mounted, interactive	1	board	0	0
video/digital projector, ceiling-mounted	1	projector	0	0
seating	24	seats	20	480
total				480

**1.6 Public Restrooms**

**Square Feet:** in GSF

**Target Audience:** All visitors

**Occupancy:** Must meet local code requirements

**Functional Description:** The restroom must be designed for ease of maintenance, durability and resistance to vandalism. Fixtures should be wall-mounted or counter-mounted and cubicle partitions should be ceiling-mounted. Floor and wall covering should be tile. Sloping floors and floor drains are essential as well as an adjacent custodial closet with mop sink, either elevated or at floor level. Waste receptacles should be recessed and/or wall-mounted. Automatic soap and towel dispensers should be located directly over sinks to prevent soap leaks and avoid water drips on the floor. Install towel dispensers and a baby changing counter in both men’s and women’s restrooms. Parcel/purse shelves are needed in each stall. Ensure effective acoustic separation and sufficient ventilation of the restrooms from other occupied areas of the building.

**Adjacency:** Public Entrance/Lobby  
Community Meeting Room A  
Community Meeting Room B

**Acoustics:** Ensure effective acoustic separation of restrooms from other occupied areas of the building.

### 1.7 Friends' Bookstore

**Square Feet:** 300 sq ft

**Target Audience:** All visitors

**Occupancy:** 2 – 5

**Functional Description:** Operated by the Friends of the Library, this used book retail space will be located close to the lobby and will be highly visible. The shelves will be stocked with frequently changing displays of donated books for sale. Donations will be received and sorted elsewhere, in an enclosed space allocated to Friends volunteers.

**Adjacency:** Public Entrance/Lobby  
Sorting Space

**Acoustics:** Wall, ceiling and floor surfaces should absorb sound.

**Lighting:** Lighting over shelving should match lighting levels in library shelving areas.

Friends' Bookstore	Quantity	Item	SF/Item	Total SF Needed
display shelving, 72" for books + media on sale	20	SS sections	10	200
display tables, freestanding, 2.5' x 2.5	4	display tables	25	100
total				300

### 1.8 Friends' Workspace

**Square Feet:** 403 sq ft

**Target Audience:** Friends of the Library volunteers

**Occupancy:** 2 – 6

**Functional Description:** This area will provide a secure and dedicated space where Friends volunteers can sort and process donations for sale in their adjacent bookstore. The room will include clear space for receiving and sorting incoming donations, work tables and shelving. Planning for a desk and computer is also recommended. Convenient access between the sorting area and the books store is important for effective and efficient management.

**Adjacency:** Friends' Bookstore  
Delivery

**Acoustics:** Volunteers will regularly move book carts in and out of this space on a daily basis. The area should be acoustically buffered to keep noise from intruding into nearby spaces, and to ensure comfortable working conditions.

**Power/Technology:** Power and data connections are required at the desk for a computer workstation, printer and telephone.

Friends Workspace	Quantity	Item	SF/Item	Total SF Needed
desk/workspace with computer	1	desk	40	40
supply cabinet, 2-door, for online supplies storage	1	cabinet	20	20
work tables, 8' x 3' for processing/sorting donations	2	tables	40	80
book truck parking	6	trucks	8	48
clear floor space for incoming donations, temp storage, shipments to recycling	1	space	75	75
shelving, 84", for sorting and storage	14	sections	10	140
total				403

**1.9 Café/Vending Area**

**Square Feet:** 212 sq ft  
**Target Audience:** All visitors  
**Occupancy:** 6 – 10

**Functional Description:** This space will offer visitors a comfortable, casual spot to purchase and consume hot and cold beverages while they read, use their digital devices or chat with friends. Vending machines will be self-service.

Library policies regarding food and drinks within the library need to be reviewed to incorporate this service.

**Adjacency:** Public Entrance/Lobby  
Restrooms

**Acoustics:** Noise from this area should be contained within the lobby and not extend into the library.

**Power/Technology:** Electrical outlets at each counter seat and at each table.

Café/Vending Area (Placeholder)	Quantity	Item	SF/Item	Total SF Needed
coffee vending machine, tabletop unit	1	machine	6	6
cold drinks vending machine	1	machine	15	15
snack counter / vending machine	1	machine	15	15
condiments table, 4' x 2'	1	table	16	16
café tables + seating	8	seats	20	160
total				212

**1.10 Community Information**

**Square Feet:** 30 sq ft  
**Target Audience:** All visitors  
**Occupancy:** 1 - 3

**Functional Description:** The library is a primary community resource for information about upcoming events, local publications, sources of assistance, local government, classes and learning opportunities, job listings and publications such as DMV booklets and bus schedules. This area will be a visible focal point for browsing such information.

A custom designed, wall-mounted cabinet is recommended to provide attractive, high visibility display of diverse materials. Traditional tackable wall surfaces and Plexiglas brochure holders of various sizes will be complemented by a large flat screen monitor for digital announcement located in the lobby. The unit will need secure space built into the unit base for storage of additional supplies.

**Adjacency:** Along main path of travel within lobby.

**Lighting:** Downlights above the display will increase visibility.

Community Information	Quantity	Item	SF/Item	Total SF Needed
community information display unit, wall-mounted, with brochure & nsp racks, bulletin board & storage below, 6'L x 5'H x 1.5'D	1	unit	30	30
total				30

**2.0 Central Public Spaces: Service Desk/Checkout/Browsing**

**2.1 Self Checkout + Reserves**

**Square Feet:** 198 square feet

**Target Audience:** All visitors

**Occupancy:** 4 – 8 people

**Functional Description:** Self-service checkout utilizing RFID technology is strongly recommended for the Library, to improve operational efficiency and ease staff workload. Four self-service units should be located in the central public space and a fifth unit located in the children’s area.

Self checkout needs ample circulation space for queuing and to allow family groups to gather as each person checks out his or her items. While adjacency to the entrance is not necessary or even preferred, customers should be able to see this space as they enter the Library or as they conclude their visit. Many customers will visit the Library expressly to browse for new books and media, check out material and exit the building. This area must be designed to accommodate constant ‘quick in/quick out’ activity, and should be easily visible from the circulation desk to facilitate staff assistance where needed.

Each self checkout unit needs a clear work surface approximately 18” x 18” on each side to provide customers with a clear work surface while they check out. Shelving for books and media on hold should be positioned adjacent to the self-checkout units, with generous circulation space to accommodate several people browsing at once for items they have on reserve. Some proximity to the staff workroom is recommended since staff will place new items on the hold shelves throughout the day.

Self Checkout and Reserves	Quantity	Item	SF/Item	Total SF Needed
self-checkout machines	4	machines	40	160
shelving 66", for reserves	3	sections	10	30
queuing space	2	people	4	8
total				198

**2.2 New Books/Browsing**

**Square Feet:** 208 sq ft

**Target Audience:** Adults, teens, families

**Functional Description:** This space will be one of the busiest and most frequently visited areas of the Library. Many visitors will enter, make a beeline for the browsing shelves, find books or media that interest them, check out their materials and exit the building. The area needs to be visible from the entrance, with excellent lighting and generous circulation space that draws customers in and allows them to browse without impeding traffic flow. This area should also be easily visible from the circulation desk.

Adult new books will be displayed here on retail display, bookstore-like shelving. Slat wall end panels will maximize the display potential of the space. Some proximity to the children’s new book and media display is important since family groups will tend to browse in both areas. A bench will be placed within the area for browsers’ comfort.

New Books / Browsing	Quantity	Item	SF/Item	Total SF Needed
shelving, display, 2.5' x 5' for new + popular books, slat wall display @ either end	4	DS units	42	168
shopping carts/baskets for patrons	3	basket stacks	5	15
bench, 2-person	1	bench	25	25
total				208

### 2.3 Media Collection

**Square Feet:** 842 sq ft

**Target Audience:** Adults, teens, families

**Functional Description:** This area will be a popular destination point for visitors of all ages. DVDs, books and music on CD, and other media collections will be housed here on 66" media browsing and display shelving on both browsing shelves and mid-height regular shelves. It will be important to provide wide aisles between the shelving. Adjacency to the Children's New Books and Media is important to enhance the browsing potential of this area.

**Adjacency:** Children's New Books and Media

Media Collection	Quantity	Item	SF/Item	Total SF Needed
shelving, display, 2.5' x 5', 66"h for DVDs	9	DS sections	42	378
shelving, 66" browse bins for music CDs	11	DS section	17	187
shelving, display, 2.5' x 5' 66" for audiobooks	6	DS sections	42	252
bench, 2-person	1	bench	25	25
total				842

## 2.4 Circulation Desk

<b>Square Feet:</b>	126 sq ft
<b>Target Audience:</b>	Visitors who need help using library resources
<b>Occupancy:</b>	1 – 2 staff; 1 – 6 public

**Functional Description:** While thoughtful layout will facilitate independent use of the library, it is also critical that visitors find staff when they need help, either as they enter the building or later on. The circulation desk must be visible, accessible and welcoming to all. Staff here will monitor activity in the central public space as well as in as much of the balance of public spaces as possible. As the primary service point for visitors, the circulation desk should have sightlines to the major areas inside the library, including the conference/collaboration rooms, the new book browsing area, the adult public computers and the teen center.

The desk should have a compact footprint and still create sufficient space within that footprint to allow two staff members to move about efficiently without getting in each other's way. At the same time, the public must perceive and respect the area behind the desk as 'staff-only' space. Each staff position will include a computer (or space for a laptop), telephone handset and convenient storage for forms and handouts. Ample clear counter space is essential at each position, especially if the Library invests in RFID technology, to ensure that materials placed on the counter are not inadvertently checked out.

A printer will be shared between the two positions, located behind or under the desk counter. Lighting over the desk counter needs to be strong and consistent, without glare or direct daylight, to support comfortable reading and viewing of print and computer screens.

Ergonomic and accessibility design principles are critical to the desk design. The counter should be 29" to 34" inches above the floor (sit-down desk height to maximum ADA height) to offer comfortable interaction with children and people in wheelchairs. Ample clear counter space is essential at each position.

<b>Acoustics:</b>	With frequent activity, this area will be sometimes noisy. The space should be designed to minimize spillage into the rest of the library.
<b>Lighting:</b>	Provide 40 – 50 foot-candles average, measured horizontally at the counter top, carefully coordinated with computer screen locations, to minimize glare. Consider supplemental lighting over the counter, as needed, to allow sufficient lighting levels.
<b>Power/Technology:</b>	Provide standard power/data outlets at each position, mounted under the counter, with wire management that prevents the appearance of loose cables or wiring. Provide dedicated power outlets for staff printer.

Circulation Desk	Quantity	Item	SF/Item	Total SF Needed
staff counter positions with computer workstations + staff printer	2	positions	50	100
cash register	1	machine	0	0
book truck parking	2	trucks	8	16
shelving, wall-mounted, for secure reserves, etc.	1	section	10	10
total				126

**3.0 Adult and Teen Spaces**

**3.1 Adult Public Access Computers**

**Square Feet:** 492 sq ft

**Target Audience:** Adults

**Occupancy:** 16

**Functional Description:**

In the new library, visitors will have access to an expanded array of technology including desktop workstations, laptops and other digital devices for public use. This group of computers will be the primary concentration of public access desktops for adults. The space should be positioned prominently toward the entrance to the adult area, convenient to customers as they enter the building. Alternately, they may borrow a laptop computer or digital tablet for in-library use, available at the service desk. Additional computers for teens, children and families will be located in spaces designated for their use.

Generous clear work surface space is needed at each workstation as well as sufficient lateral space to allow two individuals to sit side by side facing the monitor. At a minimum, one workstation needs to offer print enlargement and other accessibility features. The design team needs to consult with the Library during design to obtain specific dimensions and specifications for all computer equipment in use in the building, to ensure that power/data distribution will accommodate the equipment.

**Acoustics:** Finishes in this area need to mitigate machine and keyboard noise generated by computers.

**Lighting:** Ensure that lighting (both natural and artificial) does not interfere with screen visibility in this area.

**Power/Technology:** Provide network data drops and electrical outlets for each workstation, preferably integrated into the tables.

**Components:**

<b>Adult Public Access Computers</b>	<b>Quantity</b>	<b>Item</b>	<b>SF/Item</b>	<b>Total SF Needed</b>
computer workstations, sit-down	16	wkstns	30	480
networked printers/print release station	1	printer	12	12
total				492



### 3.2 Reference Collection

**Square Feet:** 349 sq ft

**Target Audience:** Adults and teens

**Occupancy:** 2 – 4

**Functional Description:** This space contains the adult reference book collection. The shelving needs to be adjacent to the Reference Desk so that staff can easily help customers with their research. Two-place tables will be located here for the convenience of customers using the reference collection.

**Adjacency:** Reference Desk

**Acoustics:** Wall, ceiling and floor surfaces should be absorptive, including carpet, acoustical wall panels and ceiling tile.

**Power/Technology:** Provide standard, recessed flush floor-mounted or wall-mounted communications and power outlets to support electronic equipment located here, or to support future equipment moved here from another part of the library. Four microfilm/fiche reader/printer, a video magnifier and a copy machine.

If task lighting is used at reader tables, ensure that flush floor-mounted communications and power outlet locations are coordinated with table elements that carry power and data connection to tabletop, to avoid exposed, loose wiring that is unsightly or causes a tripping hazard. Provide one laptop computer power connection at each reader seat. This area needs to provide wireless access.

Reference Collection	Quantity	Item	SF/Item	Total SF Needed
seating @ 2-pl tables	4	seats	25	100
shelving, 66", for reference books	3.0	DS section	17	51
microfilm/oral history	4	SS section	8	32
copy machine, freestanding	1	machine	30	30
scanner	1	machine	30	30
microfilm	2	machines	30	60
video magnifier	1	machine	30	30
copier storage cabinet with work counter + small eqpt	1	cabinet	16	16
total				349

**3.3 Adult Circulating Fiction Books**

**Square Feet:** 2,848 sq ft

**Target Audience:** Adults and Teens

**Functional Description:** Adult fiction books will be shelved in the browsing area and here, on 66" high, adjustable shelving with slat wall end panels to allow spot collection display. Mysteries, science fiction, general fiction, large print books and other genres should be clearly identified by eye-catching, large scale signage mounted on or above shelving.

An online catalog lookup station will be mounted on a compact stack-end shelf for customer convenience. A pair of lounge chairs will be placed adjacent to the large print and fiction shelves. This should be considered a quiet browsing space used primarily by adults, with proximity to the quiet reading space. Browsers should be able to easily flow between fiction and non-fiction collections.

**Adjacency:** Adult nonfiction

**Acoustics:** This area is intended for quiet browsing and studying.

**Power/Technology:** Power and data must be integrated into the shelving to support the stack-end online catalog. Each seat needs an adjacent electrical outlet for laptop use.

<b>Adult Circulating Fiction Books</b>	<b>Quantity</b>	<b>Item</b>	<b>SF/Item</b>	<b>Total SF Needed</b>
shelving, 66" for fiction	59	DS sections	17	1,003
shelving, 66" for mysteries, science fiction	60	DS sections	17	1,020
shelving, 66" for large print books	21	DS sections	17	357
read and return spinner	1.0	spinner	49	49
display case	1.0	case	81	81
online catalog stations, standup @ stack ends	3	wkstns	16	48
seating @ 2-pl tables	6	seats	25	150
seating, lounge chairs	4	seats	35	140
total				2,848

**3.4 Adult Circulating Nonfiction Books**

**Square Feet:** 2,824 sq ft

**Target Audience:** Adults and Teens

**Functional Description:** Adult nonfiction books will be shelved in the browsing area and here, on 66" high, adjustable shelving with slat wall end panels to allow collection display. Nonfiction titles, biographies and oversize books should be clearly identified by eye-catching, large scale signage mounted on or above shelving. Three online catalog lookup stations will be mounted on a compact stack-end shelf for customer convenience. This should be considered a quiet browsing and study space used primarily by adults, with proximity also to the quiet reading space.

Browsers should be able to flow between fiction and non-fiction collections. Since individuals researching local and regional history will often need access to both the nonfiction and Oregon collections, proximity between the two spaces is recommended.

**Adjacency:** Adult fiction

**Acoustics:** This area is intended for quiet reading and study.

**Power/Technology:** Power and data must be integrated into the shelving to support the stack-end online catalog. Each seat needs an adjacent electrical outlet for laptop use.

Adult Circulating Nonfiction Books	Quantity	Item	SF/Item	Total SF Needed
shelving, 66" for adult nonfiction	99	DS sections	17	1,683
shelving, 66", for foreign language books	2	DS sections	17	34
oversize	1	DS sections	17	17
shelving, 66" for puzzles	2	DS sections	17	34
online catalog stations, standup @ stack ends	3	wkstns	16	48
seating @ 2-pl tables	16	seats	25	400
Adult Circulating Nonfiction Books	8	seats	25	200
laptop / study counter	8	seats	16	128
seating @ lounge chairs	8	seats	35	280
total				2,824

### 3.5 Magazines and Newspapers

**Square Feet:** 100 sq ft

**Target Audience:** All visitors; adults are primary audience

**Occupancy:** 2 - 12

**Functional Description:** This area will be a preferred spot by adults for casual reading with a "living room" ambience. Individual tables for newspaper and magazine reading will be located here alongside browsing shelves for these collections. Ideally, this space will offer the opportunity for patrons to enjoy a view of the outside.

**Acoustics:** This area is intended for quiet reading and study. Locate shelving in nearby areas To buffer seating from more active areas.

**Power/Technology:** Each seat needs an adjacent electrical outlet for laptops, tablets or phones.

Magazines + Newspapers	Quantity	Item	SF/Item	Total SF Needed
shelving, 66" for magazine current issue display and recent back files below	2	DS sections	26	52
shelving, 66" for newspaper display of current/recent issues	0.6	DS sections	26	16
shelving, 66" for magazine backfills (placeholder)	4	DS sections	17	68
seating, lounge chairs	8	seats	35	280
seating @ 2-pl tables	4	seats	25	100

### 3.6 Oregon Collection

**Square Feet:** 616 sq ft

**Target Audience:** All visitors. Adults are considered the primary audience, although students of all ages may conduct research here.

**Occupancy:** 2 – 12

**Functional Description:** This space will house some of the library's most unique and valuable materials as well as provide a focal point for the City's cultural heritage and civic pride. Furniture and finishes used here should be an upgraded quality and space should a point of pride within the building. Traditional collections – printed books, maps, photographs, newspaper index – will be complemented by digitized materials. Since individuals researching local and regional history will often need access to both the nonfiction and Oregon collections, proximity between the two spaces is recommended.

**Acoustics:** Wall and floor coverings and furniture finishes here need to support quiet study.

**Power/Technology:** Each seat needs an adjacent electrical outlet for laptops, tablets or phones. Network data drops and electrical outlets are needed to support both current and future technology.

Oregon Collection	Quantity	Item	SF/Item	Total SF Needed
shelving, 66" for local history	18.0	DS section	17	306
map cases	2	cabinets	12	24
clippings file	1	SS section	8	8
atlas/folio stand	1	cabinet	38	38
seating @ 2-pl table	4	seats	25	100
seating @ lounge chairs	4	seats	35	140
total				616

**3.7 Reference Desk**

**Square Feet:** 126 sq ft

**Target Audience:** All visitors

**Occupancy:** 1 – 2 people

**Functional Description:** This two-person reference desk will be staffed all hours the library is open and needs to be clearly visible to customers as they enter from the lobby. The counter will be desk-height, ADA accessible from both sides. It needs to be positioned strategically to allow customers of all ages to easily find and approach the desk and to give staff at the desk as much visual control of the public space as possible. The desk needs a computer, telephone and printer.

Reference collection shelving needs to be adjacent, and this space should share proximity with the adult fiction and nonfiction collections. Visibility is desirable from the desk to the Group Study/Collaboration Rooms and New Books/Browsing.

**Adjacency:** Reference Collection

**Acoustics:** Activity here will be sometimes noisy, with incoming phone calls and conversations between library staff and customers. Utilize building finishes and lay out the space to minimize noise spillage into the rest of the library. Wall, ceiling and floor surfaces should be absorptive, including carpet, acoustical wall panels and ceiling tile.

**Lighting:** Provide 40 – 50 foot-candles average, measured horizontally at the counter top, carefully coordinated with computer screen locations, to minimize glare. Consider supplemental lighting over the counter, as needed, to allow sufficient lighting levels.

**Power/Technology:** Provide standard power/data outlets at each position, mounted under the counter, with wire management that prevents the appearance of loose cables or wiring. Provide dedicated power outlets for staff printer.

Reference Desk	Quantity	Item	SF/Item	Total SF Needed
staff counter positions with computer workstations + staff printer	2	positions	50	100
book truck parking	2	trucks	8	16
shelving, wall-mounted, for puzzles, etc.	1	section	10	10
total				126

**3.8 Group Study/Collaboration Room A**  
**3.9 Group Study/Collaboration Room B**

**Square Feet:** 60 sq ft  
**Target Audience:** Adults and teens in small groups  
**Occupancy:** 1 - 2

**Functional Description:** These rooms will provide acoustically enclosed space in which 2 people will be able to work collaboratively without disturbing other visitors. They will be outfitted with one conference tables and two chairs and will provide wireless network access.

Visibility into the rooms is essential. At a minimum, one wall separating each room from the main public space needs to be glass enclosed from a height of 36" to the ceiling. The rooms should be located along the main path of travel in the public space and within sight of the Circulation and Reference desks.

**Acoustics:** Building and furniture finishes should absorb sound and enhance the room's acoustical qualities. The room should be designed to minimize noise spillage into adjacent spaces.

**Power/Technology:** This room needs wireless access as well as outlets for laptops, tablets or phones.

Group Study / Collaboration Room A	Quantity	Item	SF/Item	Total SF Needed
table, conference	1	table	0	0
seating @ conference table	2	seats	30	60
total				60

**3.10 Group Study/Collaboration Room C**  
**3.11 Group Study/Collaboration Room D**

**Square Feet:** 120 sq ft  
**Target Audience:** Adults and teens  
**Occupancy:** 2 - 4

**Functional Description:**

These rooms will provide acoustically enclosed space in which small groups -- students, business people, committees, tutoring pairs or groups, homeschoolers and others --will be able to work collaboratively without disturbing other visitors. They will be outfitted with one conference tables and four chairs and will provide wireless network access.

Visibility into the rooms is essential. At a minimum, one wall separating each room from the main public space needs to be glass enclosed from a height of 36" to the ceiling. The rooms should be located along the main path of travel in the public space and within sight of the Circulation and Reference desks.

**Acoustics:** Building and furniture finishes should absorb sound and enhance the room's acoustical qualities. The room should be designed to minimize noise spillage into adjacent spaces.

**Power/Technology:** This room needs wireless access as well as outlets for laptops, tablets or phones.

Group Study / Collaboration Room C	Quantity	Item	SF/Item	Total SF Needed
table, conference	1	table	0	0
seating @ conference table	4	seats	30	120
total				120

**3.12 Group Study/Collaboration Room E**

**Square Feet:** 300 sq ft

**Target Audience:** Adults and teens

**Occupancy:** 6 – 12

**Functional Description:**

This room will provide an acoustically enclosed space in which small groups -- students, business people, committees, book discussion groups, homeschoolers and others --will be able to work collaboratively without disturbing other visitors. They will be outfitted with one conference tables and twelve chairs and will provide wireless network access.

Visibility into the room is essential. At a minimum, one wall separating the room from the main public space needs to be glass enclosed from a height of 36" to the ceiling. The rooms should be located along the main path of travel in the public space and within sight of the Circulation and Reference Desks.

**Acoustics:** Building and furniture finishes should absorb sound and enhance the room's acoustical qualities. The room should be designed to minimize noise spillage into adjacent spaces.

**Power/Technology:** This room needs wireless access as well as outlets for laptops, tablets or phones.

<b>Group Study / Collaboration Room E</b>	<b>Quantity</b>	<b>Item</b>	<b>SF/Item</b>	<b>Total SF Needed</b>
table, conference	1	table	0	0
seating @ conference table	12	seats	25	300
total				300

### 3.13 Teen Center

**Square Feet:** 968 sq ft

**Target Audience:** Teens

**Occupancy:** 2 – 24

**Functional Description:** This space is intended to offer the youth of Coos Bay a friendly and age appropriate space that targets their needs – computers just for their use, browsing collections of print books, including graphic novels, audiobooks and magazines and comfortable, teen-centric seating. The space will provide both study and collaboration areas as well as the opportunity to just hang out.

The library hopes that many teens will use the new, renovated Library building, both individually and in groups. While they will be encouraged to use the entire facility, it is essential to provide space that teens recognize as their own - space that is designed for them and that tells them they are welcome. Wall displays, furniture choices and building finishes are needed that send a message both to teens and to adults that this is their special area.

This space should be visible from the circulation desk as well as acoustically separate from the main public space, although it can be a zone that is open or an enclosed room. Adjacency to the planned Learning + Collaboration Space is needed since teens will be major users of that service.

**Adjacency:** Learning + Collaboration Space

**Acoustics:** A higher level of ambient noise will be allowed here. Therefore, acoustical treatment of the interior is essential to minimize noise spillage.

**Power/Technology:** Each seat needs access to electrical power for laptops and other digital devices, integrated into the furniture or similarly located to ensure safety. Wi-Fi access is also necessary.

Teen Center	Quantity	Item	SF/Item	Total SF Needed
shelving, display, 2.5' x 5' for teen new + popular books	1	DS section	42	42
shelving, 66", for teen fiction / graphic novels	14	DS sections	17	238
shelving, 66", for teen nonfiction	1	DS sections	17	17
shelving, 66" for teen audiobooks	1	DS section	17	17
shelving, 66" for teen magazine display + back files	0.5	DS section	26	13
read and return spinner	1.0	spinner	49	49
computer workstations, sit-down	6	wkstns	30	180
online catalog stations, standup @ stack ends	1	wkstn	16	16
networked printers/print release stn	1	printer	12	12
seating @ 4-pl café tables	8	seats	20	160
casual lounge seating	8	seats	16	128
laptop / study counter	6	seats	16	96
wall-mounted display boards	2	boards	0	0
total				968



**3.14 Learning + Collaborative Space**

**Square Feet:** 389 sq ft

**Target Audience:** All visitors

**Occupancy:** 4 – 12

**Functional Description:** This space will be a center for creative activity and will offer the capacity for a wide variety of programming, including computer classes, craft programs and Makerspace events. 12 laptops will be stored in this area, allowing flexibility in programming computer classes in relationship to other needs. Adjacency to the Teen Center is needed since teens will be major users of this space.

**Adjacency:**

**Acoustics:** Wall and floor finishes should allow individuals in the space to concentrate as they work on their projects.

**Power/Technology:** Each seat needs access to electrical power for laptops and other digital devices, integrated into the furniture or similarly located to ensure safety. Wi-Fi access is also necessary.

Learning + Collaboration Space	Quantity	Item	SF/Item	Total SF Needed
laptop/tablet storage/recharging station, 12-unit capacity, w 12 devices	1	storage unit	12	12
seating @ 2-pl work tables, 30" x 48"	12	seats	20	240
computers, sit-down, enhanced/specialized equipment	1	wkstns	35	35
networked printers/print release stn	1	printer	12	12
supply closet	1	closet	50	50
counter, 8' x 2', w double sink, commercial grade, cabinets above + below	1	counter	40	40
video/digital projector, ceiling-mounted	1	projector	0	0
projection screen, ceiling-mounted	1	screen	0	0
white board, wall-mounted, interactive	1	board	0	0
total				389

#### 4.0 Children's Spaces

##### 4.1 Children's New Books + Media

**Square Feet:** 322 square feet

**Target Audience:** Children and families

**Functional Description:** The browsable displays of new children's books and media will draw many children and families into this area. The furnishings and ambience should relate to the browsing area in the central public space while presenting a unique, child-centered look and ambience. This area should be visible from the public entrance.

Family groups will browse the shelving here to find books, audio books, music CDs and DVDs to check out. Wide aisles between shelving units and generous circulation space are needed to accommodate family groups, strollers and informal conversations when friends and neighbors meet. One self-checkout machine will provide convenient checkout access for children and their families. Adjacency to the adult new book/browsing area will enhance the browsing potential of this area.

**Adjacency:** New books/browsing

**Acoustics:** As much as possible, this area needs to contain noise spillage through sound absorbing building finishes.

Children's New Books + Media	Quantity	Item	SF/Item	Total SF Needed
shelving, display 2.5' x 5' for children's new books	1	DS sections	42	42
shelving, 66" display for J magazines, with back files underneath	0.5	DS section	26	13
shelving, 66" for J DVDs	2	DS sections	17	84
shelving, 66" AV browsing for J music CDs	0.6	DS section	17	11
shelving, 66" for J audio books	2	DS section	17	34
shelving, 60" w hang-up rods for J AV media kits	1	DS section	17	17
display case	1.0	case	81	81
express self-checkout machine	1	machine	40	40
total				322

#### 4.2 Children's Public Access Computers

**Square Feet:** 192 sq ft

**Target Audience:** Children and their parents and caregivers

**Occupancy:** 6 – 10

**Functional Description:** Six computer workstations for children will be located here as well as a networked printer. The area needs to be easily monitored from the service desk. Clear work surfaces at each computer should be generous to allow the use of notebooks and other study materials while online. Children of any age will be able to use this equipment although additional units in the Family Space will offer educational games and other applications specifically targeting literacy skills and competencies. Two people should be able to sit side by side at each workstation to allow two children or a parent and child to work together.

The children's space generally needs to support parents who want to use their laptop while their children explore the collection and other offerings found there. Also, children will use laptops, either Library- provided or their own. Electrical outlets are needed wherever seating is planned both for children and adults

**Acoustics:** Building finishes for this area should minimize machine and keyboard noise generated by the computers.

**Lighting:** Ensure that natural and artificial lighting in this area does not interfere with screen visibility.

**Power/Technology:** Provide network data drops for each workstation, preferably integrated into the computer tables.

Children's Public Access Computers	Quantity	Item	SF/Item	Total SF Needed
computer workstations, sit-down, with 2 low seats @ each	6	wkstns	30	180
networked printer/print release station	1	printer	12	12
total				192

### 4.3 Children's Circulating Books

**Square Feet:** 1,182 sq ft.

**Target Audience:** Children, their parents and caregivers

**Functional Description:** This area will include children's fiction and nonfiction books and will complement the children's new book area. Ideally, visitors will perceive browsing and this area as two parts of a whole, moving back and forth to explore the materials shelved in both locations.

Children in grades K-6 are intended as the primary audience for these collections. Of all the Library's collections, these are expected to grow most dramatically in the renovated building. The shelving must be spaciouly arranged, both visually and physically browsable, on mid-height shelving with slat wall end panels for display.

The space will offer table seats to encourage individual reading and study. This will be the primary location for elementary school-age students to work on individual school assignments and read while in the building. An online catalog will be located on a compact shelf at the end of a prominent stack range for convenient catalog lookups.

**Acoustics:** This area is intended for quiet study and reading. Locate book stacks to buffer seating from more active areas.

**Power/Technology:** Each seat needs access to electrical power for laptop and other digital device plug-in, integrated into the furniture or similarly located to ensure safety. Wireless network access is also needed. Power and data must be integrated into the shelving to support the stack-end online catalog.

Children's Circulating Books	Quantity	Item	SF/Item	Total SF Needed
shelving, 66" for J fiction	28	DS sections	17	476
shelving, 66" for J large print	0.4	DS section	17	7
read and return spinner	1.0	spinner	49	49
shelving, 66" for J nonfiction/biography	22	DS sections	17	374
seating @ 2-pl tables	8	seats	25	200
lounge seats or window seats	2	seats	30	60
online catalog stations, standup @ stack ends	1	wkstn	16	16
total				1,182

**4.4 Family Space**

**Square Feet:** 410 sq ft

**Target Audience:** Children (primarily 0 – 5) and their families

**Occupancy:** 16

**Functional Description:** This area will serve as a comfortable reading and play area for families with toddlers and preschoolers. Often, families will stop in this space before or after attending a program or event in the adjacent Storytelling and Class Visits area. The furniture must be mobile and lightweight for easy reconfiguration of the space and the space itself should be located to minimize noise spillage into other areas. Two early literacy computer workstations will be located here. Adjacency to picture books is also essential, as is proximity to the Family Restroom.

**Adjacency:** Picture Books + Easy Readers  
Storytelling Space

**Acoustics:** As much as possible, this area needs to contain noise through the use of sound absorbing finishes.

**Power/Technology:** Network data drops and electrical outlets are needed for the computers.

Family Space	Quantity	Item	SF/Item	Total SF Needed
lounge seats, parent/child	2	chairs	30	60
seating @ 4-person tables, mobile, round for toddlers	12	seats	20	240
computer workstations, sit-down, child-height, 2 seats each	2	wkstns	30	60
space for interactive manipulatives	1	space	20	20
interactive fire truck play station	1	space	15	15
cabinet for puzzle and toy storage	1	cabinet	15	15
total				410

#### 4.5 Picture Books + Easy Readers

**Square Feet:** 1,185 sq ft

**Target Audience:** Children (primarily 0 – 5), their families and caregivers

**Functional Description:** Books for the Library’s youngest customers will be located here on low shelving (45” high). This area will be part of a larger area that also includes the adjacent Family Space and a programming area. The Library’s successful early literacy programming for families will take place here to enable participants to move directly to the picture book collection following a program or storytime.

Comfortable nooks with window, low table and floor seating are needed throughout the space to encourage parents and children to read together. Good sightlines from Children’s Librarian Desk and the Circulation Desk are important. The area should be organized to “contain” its users, distant from the public entrance, for the safety of the children who visit here.

**Adjacency:** Family Space  
Storytelling Space

**Acoustics:** As much as possible, this area needs to contain noise through the use of sound absorbing finishes.

**Power/Technology:** Power and data must be integrated into the shelving to support the stack-end online catalog.

Picture Books + Easy Readers	Quantity	Item	SF/Item	Total SF Needed
shelving, 45" for picture books/toddler books	35	DS sections	17	595
shelving, 45" for easy readers	10	DS sections	17	170
seating @ 4-pl tables, mobile, round for toddlers	12	seats	20	240
lounge seats or window seats	2	seats	30	60
lounge seats, parent/child	4	chairs	30	120
total				1,185

#### 4.6 Storytelling + Class Visits Area

**Square Feet:** 560 sq ft

**Target Audience:** Children (primarily 0 – 5) and their parents and caregivers

**Occupancy:** 50

**Functional Description:** In this space, children will enjoy story times and other programming for families. This space will also provide an area for school classes to gather during library visits for library orientations. The area needs to accommodate 50 children and parents, seated on a flat, carpeted floor. Clear space is also required for the storyteller and a display table.

This area needs to be child-friendly, cozy and comfortable for children and their families, with sufficient circulation space to park 8 - 10 strollers in the area. The design needs to allow individual family groups to use the space when programming is not occurring. This space will be used in tandem with the Family Space and picture book collection. These areas should be designed to work together to serve the intended audience.

**Adjacency:** Picture Books + Easy Readers  
Family Space  
Programming Storage

**Acoustics:** As much as possible, this area needs to contain noise through the use of sound absorbing finishes. The space may or may not be a separate room as long as acoustical separation from the rest of the Library is achieved.

**Power/Technology:** Dedicated power and data outlets are needed for programming equipment built into the space.

Storytelling + Class Visits Area	Quantity	Item	SF/Item	Total SF Needed
carpeted floor space for children and parents	50	spaces	10	500
stroller parking	10	strollers	6	60
total				560

#### 4.7 Storytelling + Programming Storage

**Square Feet:** 58 sq ft  
**Target Audience:** Library staff  
**Occupancy:** 1

**Functional Description:** This secure space will provide storage for the storytelling collection and for children’s programming supplies and props. Both standard metal and deep industrial shelving are needed.

**Adjacency:** Storytelling + Class Visits Area

Storytelling and Programming Storage	Quantity	Item	SF/Item	Total SF Needed
shelving, industrial, 80" for storytime, programming props	4	sections	12	48
shelving, 84" for programming collection	1	section	10	10
total				58

#### 4.8 Children’s Librarian Desk

**Square Feet:** 60 sq ft  
**Target Audience:** Children and families  
**Occupancy:** 1 - 2

**Functional Description:** This desk will provide a focal point for assistance to children and their families in the Children’s Services area. It needs to be visually prominent and centrally located to give staff at the desk clear sight lines into as much as possible of the public space. Even though the staff will roam through the public space, the desk will provide a starting point for many interactions. It must be clearly visible to both adults and children as they enter the space and should be open at both ends so staff/volunteers can easily move in and out of the desk area. This desk should also have good visibility to the Family Restroom, the Picture Books + Easy Readers, the Children’s Computers and Family Space.

**Acoustics:** Activity here will often be brisk and sometimes noisy. Staff and customers will carry on conversations and reference interviews throughout the day. Treat the space finishes to minimize noise spillage from this area into other spaces. Wall, ceiling and floor surfaces should be absorptive, including carpet, acoustical wall panels and ceiling tile.

**Power/Technology:** Provide standard communication and power outlets, conveniently mounted under the counter, with associated wire management channels to bring equipment wires and cables from the service counter cleanly, without loose cables on the service counter or in the staff work space. Provide standard communications and power outlets at each staff work station in the area. This space needs to support wireless access.

Children's Librarian Desk	Quantity	Item	SF/Item	Total SF Needed
work station, 8' x 6" + 25% circ space, for children's librarian	1	wkstn	60	60

#### 4.9 Family Restroom

**Square Feet:** in GSF  
**Target Audience:** Families  
**Occupancy:** 1 – 3

**Functional Description:** This will be a single occupancy restroom available to families within the children’s space. Proximity to the storytime space and families/early literacy area is important. Visibility from the children’s service desk is critical.

**Acoustics:** Ensure effective acoustic separation of restrooms from the other occupied areas of the building.

**5.0 CPL Staff Work Areas**

**5.1 Library Director's Office**

**Square Feet:** 145 sq ft

**Target Audience:** Library director

**Occupancy:** 1 – 4

**Functional Description:** The Director needs an enclosed office in which to perform tasks that require concentration and/or confidentiality, write reports, gather and analyze statistics and meet with members of the public, Board members, City staff and other visitors. This space should be adjacent to the Staff Workroom, with a desk, task chair, computer, printer, a compact conference table and guest chairs, wall-mounted shelving and lateral file.

**Adjacency:** Staff workroom

**Acoustics:** The office must be acoustically enclosed to allow the occupants to concentrate and to ensure the confidentiality of conversations held here.

**Power/Technology:** Power/data connections are required for the computer, printer and telephone at the desk.

Library Director's Office	Quantity	Item	SF/Item	Total SF Needed
desk, computer workstation, printer + task chair	1	desk	50	50
table, conference, round, 36"	1	table	60	60
chairs, guest	2	chairs	0	0
shelving, 84", wall-mounted	2	sections	10	20
lateral file, 3-drawer unit	1	cabinets	15	15
total				145

**5.2 Assistant Director's Office**

**Square Feet:** 100 sq ft

**Target Audience:** Assistant Director

**Occupancy:** 2

**Functional Description:** The Assistant Director needs an enclosed office in which to perform tasks that require concentration and/or confidentiality, write reports, gather and analyze statistics and meet with staff, volunteers and other visitors. This space should be adjacent to the Staff Workroom, with a desk, task chair, computer, printer, a guest chair, wall-mounted shelving and lateral file.

**Adjacency:** staff workroom

**Acoustics:** The office must be acoustically enclosed to allow the occupants to concentrate and to ensure the confidentiality of conversations held here.

**Power/Technology:** Power/data connections are required for the computer, printer and telephone at the desk.

Assistant Director's Office	Quantity	Item	SF/Item	Total SF Needed
desk, computer workstation, printer + task chair	1	desk	50	50
chair, guest	1	chair	15	15
shelving, 84", wall-mounted	2	sections	10	20
lateral file, 3-drawer unit	1	cabinet	15	15
total				100



**5.3 Circulation Manager's Office**

**Square Feet:** 100 sq ft

**Target Audience:** Circulation Manager

**Occupancy:** 2

**Functional Description:** The Circulation Manager each need an enclosed office in which to perform tasks that require concentration and/or confidentiality, write reports, gather and analyze statistics and meet with members of the public, Board members, City staff and other visitors. These spaces should be adjacent to the Staff Workroom, with a desk, task chair, computer, printer, a guest chair, wall-mounted shelving and lateral file.

The office of the Circulation Manager should be positioned at the edge of the central public space to allow the quick access to the Circulation Desk and accommodate meetings with members of the public, as needed.

**Adjacency:** Staff Workroom

**Acoustics:** The office must be acoustically enclosed to allow the occupants to concentrate and to ensure the confidentiality of conversations held here.

**Power/Technology:** Power/data connections are required for the computer, printer and telephone at the desk.

Assistant Director's Office	Quantity	Item	SF/Item	Total SF Needed
desk, computer workstation, printer + task chair	1	desk	50	50
chair, guest	1	chair	15	15
shelving, 84", wall-mounted	2	sections	10	20
lateral file, 3-drawer unit	1	cabinet	15	15
total				100

**5.4 Staff Workroom**

**Square Feet:** 848 sq ft

**Target Audience:** Library staff and volunteers

**Occupancy:** 4 - 14

**Functional Description:** Library staff will serve the public directly as well as perform duties behind the scenes, such as collection development, cataloging materials, preparing for programs and outreach activities, working with the Library's IT support staff, processing items borrowed and Coos Bay Library District and numerous other activities.

Library staff will spend much of their time in the public space, greeting visitors and responding to questions at the service desk, conducting programs and managing services, collections and equipment. The staff workroom will provide an enclosed area in which staff can perform tasks they cannot effectively complete in the public space.

Nine modules of work group furniture are recommended for Coos Bay Public Library Staff, each approximately 6' x 8', for staff with off- desk duties. An additional module is recommended for volunteers or to be shared by part time staff. It is critical that staff with significant responsibilities that require a desk and computer access are allocated a module on an ongoing basis.

A shared work counter, processing tables and work tables are also needed for both staff and Library volunteers, who will work on assigned projects in this space.

The desks and workspace furniture specified here need to encourage collaboration and communication. Mobile, reconfigurable work group furniture with low partitions is needed rather than traditional office cubicles. Excellent task lighting as well as adequate ambient lighting levels are critical in this space.

**Spatial Relationships:**

Adjacency: CBPL library staff offices  
 Sorting and returns  
 Delivery  
 Supplies/Storage  
 Staff Lounge  
 Staff Restroom  
 Server

**Power/Technology:** Data and phone drops are required at each workstation.

<b>Staff Workroom</b>	<b>Quantity</b>	<b>Item</b>	<b>SF/Item</b>	<b>Total SF Needed</b>
work stations, 8' x 6' + 25% circ space, for assigned staff	9	wkstns	60	540
work stations, 6' x 6' + 25% circ space, for volunteers +/- or shared use	1	wkstns	45	45
work table with 4 chairs, for volunteers + staff	1	tables	40	40
sections full-ht shelving	10	sections	10	100
bulletin board, white board	2	boards	0	0
lateral file, 3-drawer unit	1	cabinet	15	15
flat file, 10-drawer, for posters + art supplies	1	file	36	36
work counter, 8' x 2', with cabinets above + below + sink	1	counter	40	40
fax machine	1	fax	16	16
networked color laser printer	1	printer	16	16
<b>total</b>				<b>848</b>

**5.5 Sorting and Returns**

**Square Feet:** 473 sq ft

**Target Audience:** Library staff

**Occupancy:** 1 – 4

**Functional Description:** In this enclosed space, library staff will receive, check in and sort books, magazines and AV media that customers return to the Library. Public access to the exterior return slot is needed at all hours, whether or not the building is open. Two slots are needed with 24/7 access – one with the capacity to be connected to an automated materials handling (AMH system), the other a manual backup return. An additional slot within the Library is needed, also tied to the AMH system, adjacent to the service desk. If implemented, the AMH system will be integrated with the Library's RFID inventory control and circulation system.

The return slots will empty directly into mobile, ergonomic bins in the Sorting and Returns space. Staff will empty the bins and check in the returned materials at check-in stations located in the room, then place items on book trucks also located in the room. Staff will move filled trucks into the public area frequently and bring empty trucks back into the space.

The return slots must be engineered to prevent vandalism. The room should be enclosed and/or the area immediately adjacent to the return drops should be fire-rated in accordance with local code ordinances.

Consider heavy duty corner and wall guards in this area to protect the interiors and door frames from damage from the constant movement of book trucks. Mail deliveries will be dropped off and picked up in a separate Mail and Deliveries area.

The sorting area needs to accommodate 14 book carts. Staff will continually move carts in and out of the space. There must be sufficient clear space to maneuver these trucks as well as to park them within the space. There should be no door between this space and adjoining spaces to make book truck movement easy.

**Adjacency:** Public entrance/lobby  
Staff workroom  
Mail + Deliveries

**Acoustics:** Customers will return materials to this space continually and staff will move book trucks in and out of the space all day long. The area must be acoustically buffered to keep noise from intruding into the surrounding public spaces. In addition, the space itself must be acoustically treated to ensure working conditions within the room are sustainable.

Sorting + Returns	Quantity	Item	SF/Item	Total SF Needed
automated materials handling system, 7-bin (placeholder)	1	sorter	225	225
staff workstations for returns + check-in, 6' x 6'	2	workstn	50	100
book truck parking	14	trucks	8	112
shelving, 84" for damaged items/temporary storage	2	sections	10	20
extra return bins for automated sorter (placeholder)	2	bins	8	16
total				473

**5.6 Mail + Deliveries**

**Square Feet:** 140 sq ft

**Target Audience:** Library staff, UPS, USPS and other delivery personnel, service/repair vendors

**Occupancy:** 1 - 3

**Functional Description:** This area will provide expedited building access for library staff, delivery personnel, mail carriers, maintenance staff and service vendors. It will be used frequently throughout the day. Adequate receiving and sorting space with an ergonomically appropriate counter is essential. A dedicated mail sorting counter with multiple cubby holes located above counter height will be located here, as well.

This entrance will be controlled by library staff. A doorbell outside the entrance linked to the Staff Workroom is recommended to enable staff to monitor access. Discuss the location and logistics of the doorbell with Library staff during design.

The entrance should be at grade to ensure that deliveries can be loaded and unloaded with efficiency. A canopy is needed over the doorway to protect shipments during inclement weather. The canopy must be high enough to accommodate typical delivery vehicles without exposing shipments to rain and wind. Building intrusion alarm controls may also be located here.

**Adjacency:** Staff workroom  
Sorting + Returns

**Power/Technology:** Provide power and data outlets at countertop height.

Mail + Deliveries	Quantity	Item	SF/Item	Total SF Needed
mail delivery sorting counter, 6' x 3'	1	counter	30	30
delivery box stacking space (4 stacks @ 4 boxes each)	4	stacks	4	16
book truck parking	4	trucks	8	32
clear floor space for receiving & unpacking shipments	1	space	50	50
document disposal receptacle	1	unit	6	6
trash container, large	1	unit	6	6
total				140

**5.7 Supplies + Equipment Storage**

**Square Feet:** 250 sq ft

**Target Audience:** Staff

**Occupancy:** 0 - 1

**Functional Description:** This storage area will permit convenient storage of office and mending supplies, equipment, forms and handouts, computer and copy machine supplies and other items needed for library operations. Both shelving and clear floor space is needed. It also includes placeholder space for storage of emergency supplies. The meeting room, children's storytime space and custodial supplies will have separate, dedicated storage areas elsewhere in the building.

**Adjacency:** Staff workroom

Supplies + Equipment Storage	Quantity	Item	SF/Item	Total SF Needed
shelving, 84", for general supplies	10	sections	10	100
clear floor space for box storage	1	space	50	50
emergency storage supply area	1	space	100	100
total				250

**5.8 Server Room**

**Square Feet:** 140 sq ft

**Target Audience:** Library IT staff

**Occupancy:** 1

**Functional Description:** This space will provide a secure, climate-controlled space in which the Library's computers, switches, firewall and similar equipment can be managed. It includes two equipment rack enclosures. This space's ventilation and air conditioning needs need to be taken into account with respect to the design of the HVAC system. This space also includes a workstation for library IT staff.

Consult with IT staff during design to obtain equipment specifications and power requirements for this room.

**Spatial Relationships:**

**Adjacency:** Direct adjacency to an exterior wall is recommended.

**Power/Technology:** The server and data requirements of this room must be coordinated with and confirmed by IT staff during design.

Server Room	Quantity	Item	SF/Item	Total SF Needed
equipment racks	2	rack	30	60
supply cabinet, 2-door, for IT supplies storage	1	cabinet.	20	20
work station, 8' x 6' + 25% circ space, for assigned staff	1	wkstn	60	60
total				140

**5.9 Staff Entrance/Lockers/Coat Closet**

**Square Feet:** 44 sq ft

**Target Audience:** Staff and volunteers

**Occupancy:** 1

**Functional Description:** This space includes lockers and a coat closet for staff and volunteers.

**Adjacency:** Staff Lounge

Staff Entrance / Lockers / Coat Closet	Quantity	Item	SF/Item	Total SF Needed
lockers, half-height, 6 per stack (for 24 people)	4	stacks	5	20
coat closet, 6' x 3'	1	closet	24	24
total				44

**5.10 Staff Lounge**

**Square Feet:** 294 sq ft  
**Target Audience:** Library staff and volunteers  
**Occupancy:** 2 – 8

**Functional Description:** This area will provide Library staff and volunteers with a quiet area, away from the public space and work room, for breaks. The space needs both lounge and table seating with a quiet ambience and sufficient space for several individuals to enjoy the space without disturbing each other.

A kitchenette with a work counter, full-size refrigerator, microwave oven, vending machine and dishwasher, is needed.

**Adjacency:** Staff Entrance/Lockers/Coat Closet

**Acoustics:** Ensure that noise and conversations in this space do not intrude into the building’s public spaces.

**Power/Technology:** Wireless access for laptop computers is required.

Staff Lounge	Quantity	Item	SF/Item	Total SF Needed
seating @ 4-person tables	8	seats	22	176
sofa, 2-person	1	sofa	50	50
counter, 8' x 2', w double sink, commercial grade, cabinets above + below	1	counter	40	40
dishwasher, under counter	1	unit	0	0
refrigerator, full size	1	unit	20	20
microwave oven, on counter	1	oven	0	0
trash containers/recycling containers	2	containers	4	8
bulletin board, wall-mounted	1	board	0	0
total				294

**5.11 Staff Restroom**

**Square Feet:** in GSF  
**Target Audience:** Library staff and volunteers  
**Occupancy:** 1

**Functional Description:** A single occupancy restroom dedicated to staff and volunteer use is needed, close to the Workroom and adjacent to the Staff Lounge. The restroom must be designed for low maintenance and durability. Fixtures should be wall-mounted. Floor and wall coverings should be ceramic tile. Sloping floors and floor drains are needed.

Waste receptacles should be recessed and/or wall-mounted. Soap and towel dispensers should be located directly over the sink. Install paper towel dispensers, parcel/purse shelf and coat hook.

**Adjacency:** Staff Workroom

**5.12 Custodial/Maintenance Services**

**Square Feet:** 147 sq ft

**Target Audience:** Custodial staff

**Occupancy:** 1

**Functional Description:** This room will provide a secure storage area for building custodial equipment and supplies. Storage should include open and closed shelving to ensure that potential hazardous items are secure, as well as clear floor space for bulky or boxed supplies and large equipment.

Custodial / Maintenance Services	Quantity	Item	SF/Item	Total SF Needed
shelving, industrial, 80" for supplies storage	6	sections	12	72
supply cabinet, 2-door, for secure supplies storage	1	cabinet	20	20
clear space for boxed, bulk storage	1	space	30	30
mop sink, floor-mounted w mop storage, wall-mounted	1	space	25	25
total				147

**6.0 Extended Services Staff Work Areas**

**6.1 Extended Services: Director's Office**

**Square Feet:** 100 sq ft

**Target Audience:** Director of Coos County Library District Extended Service

**Occupancy:** 1 - 2

**Functional Description:** The Extended Service Director of the Coos County Library District needs an enclosed office in which to perform tasks that require concentration and/or confidentiality, write reports, gather and analyze statistics and meet with staff and visitors. This should be adjacent to the Extended Services workroom, with a desk, task chair, computer, printer, a guest chair, wall-mounted shelving and lateral file.

**Adjacency:** Extended Services workroom

**Acoustics:** The office must be acoustically enclosed to allow the occupants to concentrate and to ensure the confidentiality of conversations held here.

**Power/Technology:** Power/data connections are required for the computer, printer and telephone at the desk.

Extended Services Office--Director's office	Quantity	Item	SF/Item	Total SF Needed
desk, computer workstation, printer + task chair	1	desk	50	50
chair, guest	1	chair	15	15
shelving, 84", wall-mounted	2	sections	10	20
lateral file, 3-drawer unit	1	cabinet	15	15
total				100

**6.2 Extended Services: Staff workroom**

**Square Feet:** 466 sq ft

**Target Audience:** Coos County Library District Extended Services Staff

**Occupancy:** 2

**Functional Description:** Along with the Extended Service Director's office, this area provides the workspace for the library district's outreach operations, which are operated out of the Coos Bay Public Library.

Two modules of work group furniture are recommended for Extended Services Staff, each approximately 6' x 8', for staff with off- desk duties. This space also includes shelving for the collection that is circulated and managed by the Extended Services office.

**Adjacency:** Extended Services Director's Office  
Mail + Deliveries

<b>Extended Services Office: Staff Workroom</b>	<b>Quantity</b>	<b>Item</b>	<b>SF/Item</b>	<b>Total SF Needed</b>
work stations, 8' x 6' + 25% circ space, for assigned staff	2	wkstns	60	120
lateral file, 3-drawer unit	3	cabinets	15	45
sections full-ht shelving	5	sections	10	50
shelving, 74", for circulating collection	22	sections	10	220
lateral file, 3-drawer unit	1	cabinet	15	15
networked laser printer	1	printer	16	16
book truck parking	8	trucks	8	64
<b>total</b>				<b>466</b>



**Appendices:**

**Appendix A: Community Input Summaries**

- A1 Community Open House Notes
- A2 Staff Focus Group
- A3 Friends and Foundation Focus Group

**Appendix B: Funding Strategies**

**Appendix C: Cost Model**

**Appendix D:**

- D1 Coos Bay Public Library Collection Growth Plan
- D2 Coos Bay Public Library Collection and Shelving Needs
- D3 Coos Bay Public Library Computer and Equipment Needs
- D4 Coos Bay Public Library Seating Needs

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## Meeting Notes

**Date:** June 21 & 22, 2016 **Project:** Coos Bay Library Needs Assessment

**Author:** Laura Klinger / Penny Hummel **Project No:** 1608

**Re:** Community Comments

**Present:**

**Cc:**

### Comments:

<b>Spaces for gathering and meeting</b>
---

#### Group 1

Space for theater and drama

Internet café, soup sandwiches, juice, treats and soft drinks

Space for two small meeting rooms for the public

Bring representatives in from all group agencies, clubs and community to the table

Places for small businesses to meet with clients

A variety of conference room sizes

Small group study rooms soundproof

Outdoor courtyard

A local history collection that can be checked out

Tutoring spaces

Green infrastructure for storm water management.

It should feel warm and welcoming

Space for art for children and adults

Coffee shop type space is needed for discussions and informal meetings

Use recycled (safe) materials

Need more study rooms in various sizes including at least one with a computer

Areas for local clubs to feel welcome

Master gardeners and knitting and quilting groups, cooking clubs

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Padded chairs in meeting rooms for handicapped people  
Adjustable sized airy meeting rooms  
Larger meeting room but capable of being divided into smaller areas.  
Need a 2<sup>nd</sup> room as large as cedar room.  
Need a room larger than Myrtlewood room (250 – 300) that could be easily divided and flexible.  
Current meeting room too small. Also needs better internet, projection system.  
Maybe accordion walls  
Meeting spaces important for clubs, small businesses and cultural organizing  
Current Myrtlewood Room is too small for our community  
Cedar room in high demand, we could easily use a couple more of similar size, perhaps dividable large space.

## **Group 2**

Bright colored and educational rugs  
Hands on stuff  
An interactive wall  
The “community center” aspect seems crucial to me—for many reasons. The ability to share and find information is essential in a society and the library is a “knowledge” place  
User friendly—some “softness” comfort is welcome  
But we need space for small gatherings to enjoy foreign films and documentation  
I would like to not duplicate spaces already existing in the community. For example, Egyptian is an auditorium. Prefer to spend money on what we don't have.  
Whiteboards  
Whiteboards are a great idea  
IBM computers  
An eating lounge area  
At home feel  
A place to come and stay, like “game night”  
Accordion walls with white boards  
Theater seating places for films and performances. Please!  
A room with accordion white board walls  
More private study rooms  
Community room with accordion wall to children's room  
Artwork  
Internet café  
Large meeting rooms  
Community room with windows  
Spaces that can shrink and expand as needed  
A number of small rooms that can be used for one/two people  
Rooms that can be divided  
Large, small and smaller spaces or the capacity to create them  
Incorporating local materials—different woods  
Recycled glass, wood, glass, etc.  
Natural air filters

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### Spaces for babies and children

#### Group 1

More open space for Lego club and others  
Tactile experiences  
Destination for families on rainy days  
Art room or space could be good for kids and adults  
Kids need room for projects, Legos, robots  
Bathrooms with changing stations for infants and toddlers  
More children's toys and more of the boxes that can be checked out  
Family bathroom in children's area  
I would love to see a space for infants and toddler story times separate from the books  
Make kids' area colorful and interesting. It would be nice to have a wall-like in the picture to the left (Los Gatos)

#### Group 2

Sink in children's area for craft cleanup  
Big kid pillows with covers that can be removed and washed  
Bright and bright colored play and learn space. Modern  
Sami has instituted Lego Day—great idea! Storytime is traditional and valuable but "building" is also good. Establish the joy of the library as young as possible.  
Small "nursing area" for mothers  
Toddler area should be able to tap into having them use all senses (like an Exploratorium)  
Balance open space with cozy areas for those afraid of open spaces

### Spaces for tweens and teens

#### Group 1

Separate area for YA books so they don't have to go into the kid's area  
Posters of YA movies and the books tie in  
Homework area with tutors/helpers  
Young adult meeting area  
Gaming area  
Mentor program, older teens helping younger  
Teaching teens about proper research techniques  
Gaming is important  
Collaborate with mentoring program that are being developed in the community  
Reduce interaction with grownups  
Classroom sized space for field trip groups to come in for lessons, research, etc.  
After-hours access for teen, tween space separate from the general meeting rooms.

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Multi use space for day activities as well.  
Separate tween space with seating.  
Teens need our own space: study rooms, comfy seating, coffee shop

**Group 2**

Acceptance space/area for LGBT  
Glassed in soundproof comfy seating  
Comfortable seat. Bright area. Welcoming  
Seating sized correctly.  
Space to be a teen  
Video setups for teens or others to practice interviewing skills?  
Hands on space that they could shift or decorate (i.e. magnet letters) art pieces (tanagrams)

**Spaces for creating and making**

**Group 1**

A room for all age creativity  
Spaces for different clubs: knitting, crochet, scrapbooking  
Classes in cross stitch, quilting, beading and other handicrafts  
Design technology not available elsewhere  
Kids 4 – 8 need room/table for Legos EV3 robots and who knows what?  
Art room for children and adults  
Areas for types of creating indicated

**Group 2**

Mental health enrichment components  
Vocation skills learning.  
Mentoring space  
Spaces for learning about arts that are being lost: sewing to blacksmithing  
Recording studio and art gallery  
I love this idea—had never heard of it before and I'm delighted! Such a space helps "build" the society/community.  
Hands on learning for podcasts, fixing stuff

**Spaces for technology**

**Group 1**

Plugs, chargers, outlets maximized  
More and more people use electronic means of accessing their news. But please keep the actual newspapers  
Classes on using smartphones, tablets and others for those of us who are not teens  
Access to research sources not available locally

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Hands on tech learning for all ages, i.e., touch screens, homework tech for teens and tutors  
IN addition to small and large rooms, have a large computer area.  
There are never enough power and computer connections.  
Apple store layout for all tables.

### **Group 2**

Private, quiet single computer work stations  
Divided cubicles for individual computers  
Spaces and training in technology is so essential—and making it available to all socioeconomic levels keeps a society cohesive. Very important!  
Classroom capability  
Varieties of lighting in different areas  
Divided areas, cubicles for small number of people  
Quiet spaces—areas for teens as well as adults  
Quiet areas for people using computers. Divided areas

<b>Spaces for collections</b>
-------------------------------

### **Group 1**

320 square feet for newspaper archives—important to include  
pub like room with alcohol and all age licenses and lecture hall  
airy high ceilings  
Let people know they can donate brand new books and fill the need  
Storage for local newspapers to include historical book section and a room for research  
Newspaper collection with pullout drawers, like Newseum  
The library as repository for historical documents. Research is important  
Community need: 325 square foot for shelving or newspaper repository  
Local books, newspaper and history, local art  
For reference, a newspaper repository of CB times would be useful and unique  
We need space for historical archives for local history  
Highlight local treasures  
Signage of books in area: young adult, mystery, DVDs, etc.  
A space to highlight local history

### **Group 2**

Incorporate fishing/ocean and timber themes  
Easy access for people in wheelchairs  
Easy access shelving  
Rainwater collection on roof or else—where that can be used to water plants—roof garden or reading area?  
Shelving that is not too low or too high  
Adaptable shelving that can easily be reconfigured  
Adaptable spaces for various uses

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History panels  
Shelves on casters  
Places on walls for art  
Flexibility

### Spaces for reading

#### Group 1

Areas of quietude  
Combine Oregon collection and newspaper storage  
In this climate maybe a space that brings the outside in—windows, plants and greenery  
Comfortable seating—easy to keep clean  
Reading requires concentration, and concentration requires quiet  
An absolute quiet space enclosed for silent reading  
Variety of seating types and configurations  
Quiet area, enclosed  
Quiet

#### Group 2

Lots of natural light and comfortable seating  
Definitely need quiet areas  
Have open meeting  
Open and not so enclosed  
Variety of seating  
Tables and chairs of various heights or that can be raised or lowered to accommodate tall or short patrons  
Light and airy  
Local Coos Bay history (lumber, fishing) incorporated into design/decoration  
Good ventilation during summer—solar, wind, energy used?  
Seating with plants, trees, etc.  
variety of seating  
Larger open areas  
Smaller glass enclosed feels like a fishbowl  
Places to study

### Library service

#### Group 1

Maps of local must see places  
Larger book storage area  
Classes to teach computer skills and programs  
Mass transit availability for outlying areas and patrons without cars

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**Self-checkout**

Larger bookstore sorting area—FOL office

Computer room for just computers but near reference area

Social services for at risk populations

Art and art room or space

I'm not sure the current library is too small in square feet, but it is not flexible.

Reading program for developmentally challenged community members

Larger FOL bookstore and book donation sorting area with shelving and office

Emergency services –earthquake, tsunami, generator large enough to power the building and communications infrastructure.

**Group 2**

Atrium with seating

It is important that the staff be friendly, supportive, not punitive and overly protective of the space, not turf oriented

Central location

Designed for the long term

What we currently have going and other great programs of choice from community

Automated book return

Wheel chair or motorized chair

Drive through drop off services

Wheelchairs for in library use

Bathroom, lights, faucets, soap on timers to save \$ on energy, water, etc.

Bathroom lights and faucets on timers to save on energy and money

Water saving toilets

Automatic flushing

Murals could be painted by community members

Available wheelchair

Wheelchair maneuverability

Windows, outside murals, outlets

Lots of light and windows

Raised floor with electrical wires underneath

Lots of plug-ins

Social services for homeless, partnering with social service agencies

Large meeting rooms

Design for long term

Artful way finders

Sight lines

**We need your input...**

Computer research Lego club dvds author visits

A good security system, cameras in every room



Appendix A: Community Input Summaries  
A1 Community Open House Notes

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Seating for movies presentations etc. to have seating at different levels to allow viewing without looking between the heads of others

Seating for movies to be cushioned

Space for art, current display is very limited but in high demand

Above tsunami line and then some. We really don't know how high that will be.

More computers more space more adult programs

Tree sculpture (sandy library), marine animals.

I love the library. Love the programs the library has for all ages and tastes. Sometimes I just like to sit in a comfy chair and read.

Auditorium for music and speaker programs

Open and spacious

Lots of windows—bay view

Solar panels (will pay for themselves)

Raised floor

We need a variety of styles and sizes of seating. We need to remember the elderly and disabled.

Fanciful sculptures

Please put in a drive through window

Outdoor area with durable tables with attached seating

A solarium with plants

Comfy, homey, bright, spacious close

Native plant species in landscaping

A drive in window would be nice

Bio swales for drainage educate and demonstrate

Use wood in the building. Structural

Emergency information center

Movable lighting

Outdoor space

HACKER

733 Southwest Oak Street v 503-227-1254  
Portland, Oregon 97205 hackerarchitects.com

## Meeting Notes

**Date:** June 22, 2016      **Project:** Coos Bay Library Needs Assessment  
**Author:** Laura Klinger / Penny Hummel      **Project No:** 1608  
**Re:** Staff Focus Group  
**Present:**  
**Cc:**

### Comments:

The following questions were asked of the group. Responses accompany each question

**Who is using the library? Who isn't? Which parts of the community are the heaviest users? Which parts are underrepresented?**

- Elderly people and young people. We're missing the in between, young adults
- Non English speakers don't use the library. Spanish speakers. Kids interpret for them. We've tried programming.
- Homeless and transient—heavy users. We're the day shelter. They use everything. Only town with shelters—next one is in Newport. We have two shelters. We're on the thoroughfare. People pass through. Unemployed job seekers large patron group.
- Broad range of users. There are people that just come for the movies.
- Kids area—divided by socioeconomic. People who are better off come to the programs. Poorer folks don't come to the programs but they use the computers. They also take computer programs.
- Lots of community groups use the library. Big list.
- There are not that many free meeting rooms in town. Biggest demand: conference room. (like police room). Ours are sometimes too large or too big.
- There would be demand for 2 and 4 room person. Right now, we don't reserve meeting room. We could also use something like 6 people.
- Larger study room. More study rooms.
- People want quiet space without listening to people talking.

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**What services do people use the most? What is in the most demand?**

- Computer—we're not usually full but could use a few more
- DVDs.
- Kids programming and collection
- Bathrooms.
- We need a quiet and space, lab space for computers.
- More teen computers. None right now. Or at least laptops.
- We're seeing more proctoring right now. We need spaces for that.
- Space for 2 types of proctoring—with and without computers.

**What works well in the current library? What will people not want to lose?**

- Windows
- Plants—we have a lot. People love them.
- Open space by the magazines.
- We need more outlets.
- People like back areas with study carrels. They can go and do their work.
- Community bulletin board. They would like it to be bigger.
- Art exhibit area—but preferably, not outside the bathrooms. Some people come down to see the art
- Programs work well. People like the variety of programming. Right now, we can't do performances or making stuff. We just got a 3D printer but we don't have an ideal space for it.
- Travelers tell us: your library is so friendly and it's so easy to find things.

**What aspects of the facility get in the way of providing good service? Are there services people ask for that you cannot supply?**

- Layout is challenging
- We need a family bathroom in kids department
- We need an enclosed kids area for safety and sound
- Bathroom for trans patrons would be great. Separate from family bathroom.
- People ask for quiet space, hard to provide. If the meeting and study rooms are in use, it's not quiet.
- Computer area. Layout is limiting and people need more privacy. People who are in the alcove, that's great.
- Many of our patrons are hard of hearing—it disturbs everyone when you have to raise your voice.
- A lot of sound issues. Echo chamber.

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- We are getting more elderly people—they want benches to sit on. They can't get to the bottom shelf.
- Low hung chairs—people can't get out of them.
- Upholstered chairs are hard to keep clean.
- Carpets look awful, they can't be cleaned.
- No carpet in the staff room, please!
- We don't have anywhere to put lively teens. They want: gaming space, study space and computer space.
- Layout is a big hindrance.
- People come to circ for reference questions because they can't see it.
- Could be confusing if we combine desks. Could link them.
- When all are together, it can be chaotic.
- Right now: 2 people at circ, 1 at ref, 1 at children's library desk. Ref desk is swamped. We need better sight lines.
- Entrance—people shouldn't have to step up. It's hard to bring a cart in, and is not accessible
- Keeping the carpet clean is challenging—better to use carpet tiles
- Entrance is slick when it gets wet—safety hazard.
- We have no place for someone to wait for a ride outside.
- We need better bicycle storage.

**What staff workflow changes would you like to see in the new library?**

- RFID
- Self pick up of holds. Right now, there's no place to put them.
- Book drop closer to circ area.
- Needed in children's area: storage and a work station.
- Book drop that's not too low and that's nearer to check in room.
- Drive through book drop
- We need to run to the back to see if anyone is available for reference.
- It would be nice if our offices were closer together.
- Reference office is impossible because it's a main thoroughfare.
- If offices could have windows to see out.
- Desks that are designed for 21<sup>st</sup> century needs.
- Dedicated storage. Centralized office supplies—right now, 4 different spots.
- Cataloging and processing need more space. So when there is a new printer that's bigger,
- Work station for volunteers.
- A table to process books.
- Inefficient workflow of check in
- ESO could use closed in space. They need their own wing.

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- We need our staff room away from offices.
- Delivery door—buzz people in the front instead of having to run
- Fax in the back room—should be up front.
- Space for reference staff isn't efficient or conducive to getting work done.
- More meeting rooms!
- 2 staff bathrooms is better than 1.
- Bigger space for the Friends—not just the store, but storage for their donations.

**What are the most frequent complaints from the public?**

- Noise
- Technology. Internet isn't work much at all. Entire infrastructure. Operating system, wi fi
- Not enough electrical plugs.
- Loud people.
- Food and drink: if we had a café space that would be great.
- Right now we send them to the lobby—one bench.
- Sometimes, not enough parking.
- Meeting room users are supposed to park in the Bennett street parking lot, but not enforced.

**What services or features will be most important to incorporate into a new library? What will be most important to make your community successful?**

- Raised floor with power underneath. Good infrastructure
- Visibility. Better layout.
- Bed of tables: no power, people don't sit there.
- Quiet study areas
- Much better acoustics
- Actual charging station. Like at an airport.
- More comfy seating. So they feel they can stay.
- Comfortable area that isn't overrun with other services.
- Nice fireplace area.
- More YA shelving.
- Eliminating shelving that is too high.
- Endcap displays
- More display space. More merchandising opportunities.
- Wider aisles for the DVDs. People spend time there.
- Pull out shelves for music.
- Create a library within the trees. Natural materials can highlight the wealth nature that we have here.

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- It does rain a lot so overhangs are important. We need walkoff mats—inside and outside.
- Drinking fountain with bottle refill.
- Hand dryers
- Atrium in the middle.
- Staff shower.
- Commercial kitchen.
- It would be nice to have the machines in a walled off area. Microfiche, copying.
- Family bathroom
- Mobile work stations—bring laptop.
- Art pieces in the library that can be using as directionals “Go to the green man...”
- Real server room
- We have sizable arts community. People would like a space to make and display art.

**Are there libraries you have visited elsewhere that have features that would improve this library?**

- Bigger brighter signage as to genre. Little sideways things right now.
- Teens and kids. Medford library—you can see teen area—big glass wall but you can’t hear them. Kids are on the other side.
- A screen for announcements in the lobby.
- Outside reader board—very successful.
- Having our open hours on the street side. Visible.
- We would like enclosed outdoor space. Enclosed with respect to the wind.
- Area to have programs in, but also modified amphitheater seating.
- Outside area for staff to go? Not be bombarded with questions.

**Close your eyes and imagine a renovated or new library. What adjectives describe it?**

Bright	Cleanable
Welcoming	Wash and wear
Open	Flexible
High ceilings	
Functional	
Flexible	
Comfortable	
Warm	
Friendly	
Safe	
Easy to	
Exciting	

## Meeting Notes

**Date:** June 22, 2016 **Project:** Coos Bay Library Needs Assessment

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**Author:** Laura Klinger / Penny Hummel **Project No:** 1608

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**Re:** Stakeholders Focus Group

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**Present:**

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**Cc:**

### Comments:

#### What do you like about the Library? What is successful about it?

- Management and staff. Customer service is excellent
- (Desk areas at the corner of the L, a small number of staff can see all areas of the staff. Will be harder with a bigger building.
- Important to balance the issues of older patrons. Not too low, not too high.
- Single level library.

#### What would you change about the building?

- No flat roof—both function and aesthetics
- Eaves on the building that provide an oversplash area—not adequate now
- Would like drive and drop off.
- We need to look at our meeting spaces. There used to be more than twice as much meeting room space as there is now. Clearly, community gathering space is very important and it is in high demand.
- Shifting our space needs with the changing collection—more electronic materials.
- 1 on 1 meeting rooms are important.
- Building in flexibility for things like job fairs, providing interviews.
- Better HVAC system. Need to account for with temporary walls.
- Clear signage.

#### What services or features would you like to see expanded to better serve the needs of the community?

- Expanding kitchen area, feeding people in times of need, cots?
- Creating a Disaster information center.

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- Place to charge phone, email relatives, find out when FEMA people will show up. We would need a clear definition of what we would and wouldn't be doing. Fire Hall is the emergency demand center.
- Low flow water, lights off –energy saving functions
- We'll need a generator. Storage of blankets and cots for staff?
- At risk population: it needs to be available to them. Specifically: walking distance to downtown, near public transportation.

**Are there libraries you have visited elsewhere that have features that would improve this library?**

- Teenage room: Redwood Shores. Enclosed but visible.
- I wish we had more display space for artwork. There's stuff way behind the stacks now.
- Corvallis—children specific bathrooms.
- Fireplace.
- Small dedicated technology area—to screen videos. Like old “listening rooms” of record stores
- Seattle: open space, tables, people using computers
- Simple signage.
- We get major sun breaks in the winter. Put in a courtyard, not open to the outside but inside, where people can sit in nice weather.
- Eugene: nice outdoor children's area
- Adjustable lighting
- LED lighting. Use dimmer features
- Nice background for speakers.

**(TO THE FRIENDS) Tell us about the Friends of the Library's activities and space needs. How would you like a renovated or new library to improve your workflows?**

- We do 10 booksales a year and run a bookstore.
- We need way more space. We use both meeting rooms and we still don't have nearly enough room. We have stuff piled on the floor.
- We need more space to store and sort, which is closer to the bookstore.
- We need a place where we can load books. They're donated. 30% are library discards. Sometimes we get huge donations.
- We have so little space we sometimes have to give some away.
- We are one of the few bookstores in Coos Bay.
- We lose sales because people don't want to cram into the store.
- Street visibility would be great—an outside window that lets people see we are there. Maybe a separate entrance?
- We need technology access—



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**Close your eyes and imagine the renovated or new library. What adjectives describe it?**

Welcoming

Light and bright

Frugal like we promised the taxpayers

Thriving

Good shepherds of the tax dollars

Not "Taj Mahal."

Community gathering point

Comfortable

Dynamic

Responsive

Face of the community

A visitor's center

Accessible.

A kitchen not just a grocery store

Close to schools

Warm

Source of information.



**DATE:** June 22, 2016  
**TO:** Hacker Architects  
**FROM:** Lorelei Juntunen and Emily Picha  
**SUBJECT:** Coos Bay Library Funding Brainstorming Session

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## 1 Purpose

The Coos Bay Public Library is working with a team led by Hacker Architects to assess community needs for a new library, produce a conceptual building program, provide cost estimates for a potential future facility, and identify possible funding strategies and partnerships. ECONorthwest assisted with one portion of this project: documenting the beginnings of a conversation about funding and implementation for the potential new facility.

ECONorthwest facilitated a conversation with a group of community stakeholders regarding funding opportunities and challenges. Meeting participants included City of Coos Bay staff and councilors, Library Foundation board members, library staff, and consultant partners. In attendance were: Bruce Bennett, Marie Benton, Kurt Benward, Roger Craddock, Jennifer Groth, Bob Moore, Crystal Shoji, Gina Sutherlin, and Ellen Thompson.

The purpose of this memorandum is to document key takeaways from that discussion, which was held on June 22<sup>nd</sup>, 2016. The memorandum can provide a starting place for more detailed conversation about implementation as ideas for the library facility continue to evolve.

## 2 Funding Landscape

The group reported that there is a strong preference for locating the library in or near downtown, and ideally as a stand-alone facility that has the ability to flexibly expand in the future as needed. The group discussed a number of opportunities and barriers to funding and financing a facility that together define the landscape for the facility's construction and eventual operations. Overall, limitations on local funding and financing sources suggest that state and federal funding as well as philanthropic sources are likely to be the cornerstones of an overall implementation strategy. They also suggest the importance of exploring implementation partnerships and the possibility of co-location with other facilities.

### Opportunities

- Strong public support for the library. The existing library is a community landmark. It is one of the reasons people move to the area and a common stopping point for visitors. People seem "all in," and generally supportive of a capital fundraising campaign.
- Several recent successful funding campaigns show community willingness to undertake signature community projects, like the Egyptian Theater.

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- Most local nonprofits have not tapped into estate planning and philanthropy as a way to raise funds. The library could work with Oregon Community Foundation to build fundraising capacity in this sphere.
  - The Foundation has been sending members to fundraising training, which has built capacity within the team. The group recognizes that any capital campaign is likely to include fundraising.
  - The Foundation has raised some funds to date (about \$97,000), which can serve as a nest egg.

### Challenges

- There are many competing projects that also require public and community funding. Examples include schools, stormwater and wastewater treatment infrastructure, and other projects. The urban renewal area has limited funds available, and many projects that require support. This means that library supporters will need to make a clear case that demonstrates a need. This will be especially challenging given that the library was improved 15 years ago and appears solid to most casual observers, despite engineering data that shows that the building is sinking.
- There are limited sites where a new library could be built. Much of downtown sits within the tsunami inundation zone, and new public buildings cannot be built in tsunami zone under state law. Based on the group's collective knowledge, there are a very limited number of sites that are available, and none that are currently publicly controlled.
- There is limited new private sector development, which could help to support the library's development.
- All public borrowing (bonds) must go to a vote of the public.
- Current library district funds can only be used for operations, and are not available for use on capital projects.

## 3 Possible Co-Location / Partnership Opportunities

Co-locating a library with other uses can have both benefits and drawbacks. On the positive side, bringing additional uses to the table can also open the door to potential new funding sources and reduce costs through more efficient use of space. However, co-location can reduce flexibility in the programming of the space and create challenges between and among users of the space.

While the stated preference is for a stand-alone library, the group brainstormed opportunities for co-locations and partnerships, and arrived at three possible options: a mixed-use development that includes a ground-floor library with a residential component above; co-location with a workforce training center; and a library that can be used as a community meeting and communication space in an emergency event, such as an earthquake and tsunami. All three represent creative combinations of facilities and uses that have been successfully

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implemented in other communities, which may address the real funding constraints a stand-alone library project faces in Coos Bay.

### 3.1 Mixed-Use Residential Library

- **Opportunities:**
  - o The City of Coos Bay has a rental housing shortage; the group cited a 1% vacancy rate for rental housing.
  - o Affordable housing brings the possibility of additional funding sources, such as Low Income Housing Tax Credits, Community Development Block Grants, etc.
  - o Coos Bay's population trends toward older populations, suggesting a need for senior housing.
  - o Residential mixed-use library models are becoming more common around the country; there are several examples either in existence or under consideration in Oregon. Libraries provide an excellent active ground floor use that is very appropriate in downtown and Main Street areas, and often share parking with residential uses well (residential users need parking spaces in the evenings when libraries are often closed). Examples include the Hollywood Branch library, in Portland, which was designed by Hacker Architects.
- **Challenges:**
  - o Need to identify a beneficial lease / ownership structure between the public and private components of the project. This structure is likely to be driven by siting and land ownership options, and negotiated with a developer through a development agreement (a legally binding agreement that determined the details of a public-private partnership project). There are at least two possible structures for such an agreement, each of which has pros and cons that would need to be carefully weighed. Either the developer would own the property and lease the ground floor to the library, or the City would own the property and lease the air rights to a developer.
  - o Possible leasing challenges with tenants, depending on which population goes into the housing. Depending on the tenants' needs, on-site social services may be a more fitting ground-floor partner.
  - o Residential development above may create design challenges for the library space. For example, natural light and ceiling heights could be limited, and structural supports could break up the library space in awkward ways. These challenges could be addressed through high quality design.
- **Partners:** Coos Curry Housing Authority, Urban Renewal Agency, housing developers, social service agencies and nonprofits, downtown businesses
- **Possible funding sources:**
  - o Urban Renewal, Low Income Housing Tax Credits, CDBG funds, USDA funds

## 3.2 Job Training

- **Opportunities:**
  - o Libraries are included in the *Workforce Innovation and Opportunity Act* as one-stop partners for training resources, which may open libraries up for funding through workforce training grants. The Institute for Museum and Library Services and the American Library Association have information on these programs at <http://www.ala.org/advocacy/advleg/federallegislation/workforce>.
  - o Missions are aligned. The Coos Bay Library's strategic plan specifically names the development of makerspace activities, adult continuing education, and access and training in new technologies as priorities, all of which could be critical components in workforce training.
  - o There are several economic organizations that might be interested in additional conversations about co-housing facilities, such as a retail incubator space. These included the Regional Solutions Center, and the South Coast Development Council.
- **Challenges:**
  - o Some members of the group cited negative experiences working on business incubators before.
  - o Funding sources are not well established and may not be available for capital projects.
- **Partners:** South Coast Development Council; Regional Solutions Teams; Worksource Oregon.
- **Funding sources to leverage:** State or Federal workforce training grants, like the Library Services and Technology Act grant, Business Oregon grants, CDBG grant funding, Economic Development Initiative grants.

## 3.3 Community Emergency Response Center

- **Opportunities:**
  - o The City does not currently have a central gathering space in case of an emergency. This facility would need to be able to make communications possible, serve as a central gathering space for family members, and house emergency materials. When not in use for an emergency, it could be used as a meeting space.
  - o It could house a commercial kitchen that could be used most of the time for lease to caterers or as a small restaurant incubator. There are several foodshare programs that operate in this sphere that might be interested in partnering.

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- o The commercial kitchen could potentially be rented out as a commissary space to local small businesses in need of commercial kitchen facilities as a way to generate additional revenue for the library.
  - o The City has a natural hazards mitigation plan that is compliant with the Disaster Mitigation Act of 2000 and dovetails with the County and State plans. The City worked with OPDR and the University of Oregon to produce the natural hazards mitigation plan. The group did not know whether the natural hazards mitigation plan identified the library as one of the projects.
  - o This project would serve as a demonstration opportunity for the rest of the state or coast and can serve as on-going resource for information/training on disaster preparedness.
  - o Westport, WA was recently able to build a new elementary school that doubles as a vertical tsunami emergency center capable of providing shelter for 1,000 people. Voters had rejected bond financing for the school multiple times before the plan included public engagement on the inclusion of an evacuation site. After the significant public input in the creation of the emergency center plan the school bond measure was approved by a margin of 70 to 30 percent. More information about Project Safe Haven at Ocosta Elementary is available at <http://irvil.wa.gov/blog/news/post/nations-first-tsunami-vertical-evacuation-center-breaks-ground>.
- **Challenges:**
    - o Attendees wondered how well this partnership would match with the needs of a library.
  - **Partners:** Office of Emergency Management (State Hazard Mitigation Officer); Oregon Partners for Disaster Resilience
  - **Next steps:**
    - o Update the hazard mitigation plan to include this possible project to make it eligible for state and federal money.
    - o Look at granting requirements for CBDG for what is fundable.
    - o CBDG funds managed by CCD—Cous Curry Douglas out of Roseburg. Roger asked Becky Bryant, of the Oregon Infrastructure Authority and was told that libraries are generally not fundable.
    - o Look into FEMA Pre-Disaster Mitigation grant funds. Grants provide funds to local governments to implement pre-disaster natural hazard mitigation measures. Eligible projects include flood proofing, construction of safe rooms and elevation of structures.

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### 3.4 Other ideas

The group also discussed several other less viable options, including:

- **Senior center:** Group could not immediately think of a viable senior facility with which to partner, but bears some research into existing community resources. There are several successful examples of CBDG grants being used to fund libraries in conjunction with senior centers. For example, in Mellen, WI, their senior center and library is equipped to serve meals and provide other programming.
- **School district facilities:** Have had some initial conversations, but group did not think it warranted future conversations. May want to ask whether the school district has any plans to build or refurbish any facilities in the next decade, especially those in flood-prone areas, such as Blossom Gulch Elementary.
- **Part of Coos Bay offices:** No one has discussed this option with the Port.
- **College:** The group didn't think the college would consider building anything off campus.
- **Private or publicly funded community center:** The City lacks a community center. The College has a recreation center that is open to the public for a fee, and the City of North Bend has a community center that may be rented for events. Perhaps a partnership with the YMCA or other organization interested in co-locating a community center event space or fitness center with the library may be possible.

## 4 Capital Funding Sources

The library will need funding for site acquisition outside of the Tsunami Inundation Zone and for design and construction of the facility. Exhibit 1 outlines potential capital funding sources for the library.

**Exhibit 1. Capital Funding Sources**

	Uses	Funding Limits	Political and Implementation Considerations
Union Renewal	Land purchase, help support predevelopment and construction.	Can be used for capital Capacity limited ~\$35 million in max indebtedness too	Perception that there are other priority projects that take precedence over this project Limited expansion ability, expanded 15 years ago when library expanded.
State Workforce Training Grants	Expanding workforce development and technology services.	Have no experience applying for this sort of grant.	
Philanthropy/Esstate Planning	Capital and operating expenses	Have not done much outreach in this area so far.	Has the most flexibility in use for capital and operating costs.
COBG Funds	Often used for affordable housing projects. Section 106 loan or guarantee may be available	Libraries are not a typical use but have been funded in other places.	Often requirements are strict and may require a considerable amount of work to manage.
GO Bond	Capital and/or land purchase.		Have a City charter amendment that requires any bonding have a vote of the people. Very few bond elections have not passed (Firehouse and school district have passed, due to great marketing program). Firehouse bond expires in 2024. Will take a long time and will take professional grant writing expertise.
Capital Fundraising	Capital projects and/or land purchase.		
Retain existing land	Keep existing lot for parking.		
Property Taxes		No additional funding available.	
USDA		Meeting participants suggested that Coos Bay is too big for most of the rural funds available through USDA, but could be worth exploring further	
Utility Fee	Additional fees on utility bills have been used for public facilities in many communities in Oregon	Already raising sewer rates by 0.5% not feasible to raise more.	

**4.1 Operating Funding Sources**

The Coos County Library Service District currently funds libraries in eight cities. The CCLSD is a permanent taxing district with a steady stream of tax revenue. Currently, there are around \$1 million dollars in the fund, however those funds are specifically allocated for operating costs and are not available for capital projects. When more is known about library programming and operating funding needs, the district rate can be evaluated to determine whether it is sufficient. Identifying possible sources of funding for the construction of the new library is the essential step to moving forward with any new plans.



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## 5 Implications and Next Steps

Though the group has the most interest in a stand-alone library, the funding realities make that the most difficult option to pursue in the immediate time frame. Casting a wide net for partners and ideas, as well as being open to a variety of potential project types and partners will be key to bringing the new library to fruition. In the near term, the group should consider approaching current partners and community stakeholders to gauge which project sparks the most interest and commitment. Narrowing down the exact configuration of the project will need to happen before any other decisions can be taken.

The group identified the following as a list of partners to approach:

Friends of the Library

City of Coos Bay

Oregon Community Foundation (*wide variety of donors, and field office in Coos Bay*)

Ford Foundation

During this initial period of investigation and meeting with partners and stakeholders it will be important to:

- Refine a potential mixed-use concept
  - Research potential grant funding for “tsunami command center” and associated space needs. Determine which areas of the library would transform in an emergency. Work closely with state and other partners on possible funding.
  - Identify potential housing providers for a mixed use housing concept
  - Inquire into organizations currently engaged in workforce development activities to assess interest level in co-locating facility.
- Continue fundraising efforts
  - Oregon Community Foundation – near term action with regards to developing an estate planning campaign.
  - Consider hiring a capital campaign consultant.
- Ultimately, as more is known about the building needs and configuration, it will be necessary to develop a full funding strategy to address capital and operating cost coverage.

*Prepared for:*

# Hacker



**City of Coos Bay**  
**Order of Magnitude Cost Model**  
**PublicLibrary**

October 10, 2016

**Executive Summary:**

This report provides an opinion of probable construction cost for the Coos Bay Library. The costs provided in this report are based upon the program information and design ideas provided by Hacker and the seismic requirements provided by the owner. This report offers a market assessment, explores benchmarks of similar buildings, provides a detailed cost perspective including anticipated added costs based upon design options.

**Market Conditions:** Regionally, the Pacific Northwest is experiencing continued growth in construction, driven by increasing residential building, and a rebound in non-building construction. Oregon's largest employment growth is within the construction sector, (+8.9%). General Contractors and subcontractors have increased demand, and a capacity that has not matched the current growth rate.

The largest areas of growth are correlated with the region's largest cities, contributed by the Tech boom across Washington and Oregon states. Cities further removed from these high growth epicenters may not experience similar gains in employment and development. Coos Bay has an unemployment rate higher than the state and national average, and median income is below the state and national averages. Recent major construction projects within Coos county include the Heritage and Maritime Museum completed in 2015, the Wastewater treatment plant currently underway and multiple urban renewal projects.

The cost implication in a high growth market is a decrease in competitive contractor pricing, and a more selective general contractor market. Regional contractors may be invested in other markets. An IPD project may provide a best value solicitation with a fixed rate of profit. A low-bid solicitation may receive a reduced pool of qualified contractors with greater risk to the budget and design.

**Similar Project Costs:** Local and regional library comparison was limited to construction start dates between 2013 and 2016 to provide comparisons within a similar construction climate. Within this construction start period of time, there was limited variance of costs per square foot, and total construction costs, consistent throughout the Pacific Northwest.

Completed 2016 Library 1, \$724/SF, \$10.5M total construction cost- Reno and new  
Planned Completion 2018 Library 2, \$758/SF, \$11.3M total construction cost.  
Planned completion 2017 Library 3, \$755/SF, \$10.0M total construction cost.

**Other Project Costs included above:** DCW has prepared budgetary allowances for the following, based on similar library construction projects.

Indirect Costs, Allow \$500,000.  
FFE: Allow \$1,400,000.  
Technology: Allow \$500,000.  
Automated materials handling: Allow \$350,000.

**Seismic Code: (see descriptions)** The two seismic code scenarios considered for the Coos Bay Library project are Immediate Occupancy, and Life Safety. Each of these scenarios will allow safe egress from the library during a seismic event, but with varying degrees of structural impact. The cost implication for the higher standard of Immediate Occupancy is based on heightened construction costs for structural enhancements, and does include the varied degree of post-event repairs necessary to resume normal building function and occupancy.

### **Scope of Work and Cost Basis**

The scope of work includes the development of a cost model at the programming level of design for the Coos Bay Library. A baseline cost model is provided with additive costs for additional features. The costs for this study are developed from the assumptions listed below.

### **Assumptions**

The building area of 31,041 square feet is derived from the programming requirements.

The site is flat and the building will require conventional footings and foundations

Utilities are typically located and electrical and data will be managed by the local franchise

The building is one story (see overall summary for two-story construction)

The building will be seismically code compliant (see overall summary for seismic upgrade)

The building envelope costs are developed based upon the following typical construction elements:

- Concrete slabs

- Structural steel with reinforced masonry shear construction

- 30% exterior glazing

- Metal panel and wood cladding systems

- Pitched insulated metal roof system and entry canopies

- Carpet and resilient flooring

- Insulated gyp walls

- Gyp and ACT ceilings

- Traditional MEP systems

- 75 stall parking lot with light poles

- Typical landscaping and features

In preparing the cost models for the Coos Bay project, multiple sources were used. The source information includes a current perspective on codes, technology, energy conservation, specific site elements, local general and sub construction markets and labor agreements, material costs and availability and labor efficiencies.

**Procurement:** The project planned delivery method is CM GC.

**Schedule:** The project assumed start date is June 2019.

<b>Coos Bay Library Cost Model</b>		
<b>Control Quantities</b>		
		<b>Sq Ft</b>
<b>1.0</b>	<b>Entrance Area</b>	
1.1	Public Entrance / Lobby	504
1.2	Community Meeting Room A (Dividable)	2,400
1.3	Kitchen	306
1.4	Meeting Room Storage	268
1.5	Community Meeting Room B	480
1.6	Public Restrooms	<i>IN GSF</i>
1.7	Friends' Bookstore	300
1.8	Friends' Workspace	403
1.9	Café / Vending Area	212
1.10	Community Information	30
<b>2.0</b>	<b>Central Public Spaces</b>	
2.1	Self Checkout + Reserves	198
2.2	New Books / Browsing	208
2.3	Media Collection	842
2.4	Circulation Desk	126
<b>3.0</b>	<b>Adult and Teen Spaces</b>	
3.1	Adult Public Access Computers	492
3.2	Reference Collection	349
3.3	Adult Circulating Fiction Books	2,848
3.4	Adult Circulating Nonfiction Books	2,824
3.5	Magazines + Newspapers	516
3.6	Oregon Collection	616
3.7	Reference Desk	126
3.8	Group Study / Collaboration Room A	60
3.9	Group Study / Collaboration Room B	60
3.10	Group Study / Collaboration Room C	120
3.11	Group Study / Collaboration Room D	120
3.12	Group Study / Collaboration Room E	300
3.13	Teen Center	968
3.14	Learning + Collaboration Space	389
<b>4.0</b>	<b>Children's Spaces</b>	
4.1	Children's New Books + Media	322
4.2	Children's Public Access Computers	192
4.3	Children's Circulating Books	1,182
4.4	Family Space	410
4.5	Picture Books + Easy Readers	1,185
4.6	Storytelling + Class Visits Area	560
4.7	Storytelling + Programming Storage	58
4.8	Children's Librarian Desk	60
4.9	Family Restroom	<i>IN GSF</i>
<b>5.0</b>	<b>CBPL Staff Work Areas</b>	
5.1	Library Director's Office	145
5.2	Assistant Director's Office	100

Coos Bay Library Cost Model		
Control Quantities		
5.5	Sorting + Returns	473
5.6	Mail + Deliveries	140
5.7	Supplies + Equipment Storage	250
5.8	Server Room	140
5.9	Staff Entrance / Lockers / Coat Closet	44
5.10	Staff Lounge	294
5.11	Staff Restrooms	<i>IN GSF</i>
5.12	Custodial / Maintenance Services	147
<b>6.0 Extended Services Work Areas</b>		
6.1	Extended Services: Director's Office	100
6.2	Extended Services: Staff workroom	466
	Net Assignable Square Feet:	23,281
	Gross Square Feet @ 75% Efficiency:	<b>31,041</b>
	*Public entrance/lobby also included in unassigned gross square feet	

## City of Coos Bay

### Baseline Cost Model -SUMMARY

		TOTAL SF	31,041
COMPONENT COST SUMMARY		\$/ SF	Cost - \$
1. Foundations		\$ 11.82	\$ 366,972
2. Vertical Structure		\$ 29.97	\$ 930,440
3. Floor and Roof Structure		\$ 49.82	\$ 1,546,530
4. External Cladding		\$ 34.30	\$ 820,820
5. Roofing and Waterproofing		\$ 29.87	\$ 714,861
<b>SHELL 1 - 5</b>		<b>\$ 155.79</b>	<b>\$ 4,379,622</b>
6. Interior Partitions		\$ 27.09	\$ 841,004
7. Interior Finishes		\$ 18.29	\$ 567,847
<b>INTERIORS 6 - 7</b>		<b>\$ 45.39</b>	<b>\$ 1,408,851</b>
8. Equipment and Specialties		\$ 24.24	\$ 752,484
9. Vertical Transportation		\$ -	\$ -
<b>EQUIPMENT &amp; VERT. TRANS 8 - 9</b>		<b>\$ 24.24</b>	<b>\$ 752,484</b>
10. Plumbing		\$ 13.38	\$ 415,329
11. HVAC		\$ 41.69	\$ 1,294,181
12. Electrical		\$ 31.27	\$ 970,690
13. Fire Protection		\$ 5.50	\$ 170,726
<b>MECHANICAL AND ELECTRICAL 10 - 13</b>		<b>\$ 91.84</b>	<b>\$ 2,850,926</b>
<b>BUILDING 1 - 13 - DIRECT COST</b>		<b>\$ 317.26</b>	<b>\$ 9,391,882</b>
14. Sitework and Utilities		\$ 26.84	\$ 833,150
<b>Building and Site Costs</b>		<b>\$ 344.11</b>	<b>\$ 10,225,032</b>
Contingency	15%		\$ 1,533,755
Pre-construction	3%		\$ 306,751
General Conditions and Requirements	16%		\$ 1,881,406
Fee- OH&P	5%		\$ 697,347
Bonds and Insurance	2%		\$ 178,938
Escalation to Start (Jun 2019)	7.8%		\$ 917,185
<b>TOTAL LIBRARY CONSTRUCTION COST - JUNE 2019</b>		<b>\$ 507.08</b>	<b>\$ 15,740,414</b>
		<b>LOW</b>	<b>HIGH</b>
<b>HIGH/ LOW Cost per SF analysis</b>		<b>\$ 436.00</b>	<b>\$ 520.00</b>
<i>Based upon efficiencies - LOW*</i>			
<i>Based upon unforeseen conditions -</i>			

**COSTS ABOVE REFLECT DIRECT CONSTRUCTION COSTS ONLY, AND ARE NOT INCLUSIVE OF THE FOLLOWING: Owner's Soft Costs . Sales tax. Permits**

The high-low method above uses the highest and lowest potential values for the proposed construction activities as outlined. It attempts to acknowledge the variables for both savings and increases. Because the options are provided as programmatic, efficiencies have not yet been explored and incorporated within the costs above.

## Coos Bay Library Baseline Cost Model Detail

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Rate</i>	<i>Total</i>
<b>New Library 1 story</b>	<b>31,041</b>	<b>SF</b>		
<b><u>1. Foundations</u></b>				
Demolition (includes temporary shoring as req for build back)				
Clear site and prep	31,041	SF	6.00	186,246
Shoring as required	1	LS	10,000.00	10,000
Standard foundations	31,041	SF	5.50	170,726
				<b>366,972</b>
<b><u>2. Vertical Structure</u></b>				
Structural Steel				
Structural steel framing and connections Assume 12#/SF wall structure	128	TN	5,200.00	665,184
Columns	34	EA	5,000.00	170,000
Fireproofing	146	TN	550.00	80,256
Connections and site welding	1	LS	15,000.00	15,000
				<b>930,440</b>
<b><u>3. Floor and Roof Structure</u></b>				
Concrete				
6" Slab on grade	31,041	SF	15.00	465,615
Structural Steel				
Structural steel framing and connections Assume 12#/SF roof	186	TN	5,200.00	968,479
Fireproofing	186	TN	550.00	102,435
Connections and site welding	1	LS	10,000.00	10,000
	<b>31,041</b>	<b>SF</b>	<b>49.82</b>	<b>1,546,530</b>
<b><u>4. Exterior Cladding</u></b>				
Install new exterior cladding system	14,924	SF	22.00	328,328
Install new glazed systems	6,396	SF	77.00	492,492
	<b>31,041</b>	<b>SF</b>	<b>26.44</b>	<b>820,820</b>
<b><u>5. Roofing, Waterproofing &amp; Skylights</u></b>				
Install insulated metal roof system	31,041	SF	21.00	651,861
Waterproof joints and connections	1	LS	10,000.00	10,000
Entry and egress canopies	1	LS	35,000.00	35,000
Connections to storm drain system	1	LS	18,000.00	18,000
	<b>31,041</b>	<b>SF</b>	<b>23.03</b>	<b>714,861</b>
<b><u>6. Interior Partitions, Doors &amp; Glazing</u></b>				
Partitions incl. acoustic and fire rated applications				
Glazed partitions	1,200	SF	60.00	72,000
Standard partions	33,840	SF	11.50	389,160



Window walls and borrowed lights				
Interior relites	300	SF	65.00	19,500
Interior doors and frames				
Doors including frames and hardware including ADA opener at entry	36	EA	2,250.00	81,000
Movable partitions				
Room divider with steel	1	LS	45,000.00	45,000
Restrooms				
Men's -Complete	2	EA	36,200.00	72,400
Women's - Complete	2	EA	36,200.00	72,400
Family restroom				INC
Staff restroom				INC
	<b>31,041</b>	<b>SF</b>	<b>27.09</b>	<b>841,004</b>

**7. Floor, Wall & Ceiling Finishes**

Floors				
Floor finish, assume carpet	24,833	SF	9.00	223,495
Walk off mat at entry	400	SF	12.00	4,800
Resilient flooring	1,208	SF	6.50	7,853
Restroom tile	600	SF	14.00	8,400
Sealed concrete in mechanical/electrical rooms and storage	4,000	SF	0.75	3,000
Walls				
Wall finish including graphics	48,764	SF	2.88	140,440
Ceilings				
Ceiling finish, assume mostly ACT	30,441	SF	5.80	176,558
Gyp in restrooms	600	SF	5.50	3,300
	<b>31,041</b>	<b>SF</b>	<b>18.29</b>	<b>567,847</b>

**8. Function Equipment & Specialties**

Equipment				
Wall protection, signage, casework, window treatment, and fire extinguisher	31,041	SF	24.00	744,984
Smart boards (sim), presentation walls	1	EA	7,500.00	7,500
	<b>31,041</b>	<b>SF</b>	<b>24.24</b>	<b>752,484</b>

**9. Stairs & Vertical Transportation**

Not required				NIC
	<b>31,041</b>	<b>SF</b>		<b>0</b>

**10. Plumbing Systems**

New plumbing system	31,041	SF	13.38	415,329
	<b>31,041</b>	<b>SF</b>	<b>13.38</b>	<b>415,329</b>

**11. Heating, Ventilation & Air Conditioning**

Heat generation & chilling				
New mechanical systems including heating, cooling and exhaust				
31,041	SF	41.00	1,272,681	
Mechanical curbs and screen				
1	LS	6,500.00	6,500	
Testing and balancing				
120	HRs	125.00	15,000	
<b>31,041</b>	<b>SF</b>	<b>41.69</b>	<b>1,294,181</b>	

**12. Electrical Lighting, Power & Communication**

Main service and distribution				
Pathways to new location -connect to new panels, allow				
1	LS	155,000.00	155,000	
Lighting				
LED Light fixtures inc. connected to				
31,041	SF	16.00	496,656	
User convenience power				
Receptacles				
414	EA	450.00	186,246	
Telephone & communication				
Voice data ports, USB chargers -revisions				
155	EA	550.00	85,363	
Alarm & security				
Fire alarm system -extension				
0	EA	500.00	176	
Security system & intercom- extension				
31	EA	1,200.00	37,249	
Other				
Allow for commissioning assist & documentation of sustainability measures				
80	HR	125.00	10,000	
<b>31,041</b>	<b>SF</b>	<b>31.27</b>	<b>970,690</b>	

**13. Fire Protection Systems**

Fire protection				
New fire suppression system				
31,041	SF	5.50	170,726	
<b>31,041</b>	<b>SF</b>	<b>5.50</b>	<b>170,726</b>	

**14. Sitework and Utilities**

Utilities				
Water				
31,041	SF	2.00	62,082	
Sanitary Sewer				
31,041	SF	2.00	62,082	
Storm water management				
31,041	SF	4.00	124,164	
Power				
31,041	SF	4.00	124,164	
Gas				
31,041	SF	2.00	62,082	
Parking lot				
75 stall vehicular asphalt paving w/stripping				
15,750	SF	7.80	122,850	
Pole lighting				
10	EA	10,500.00	105,000	
Landscape				
Site features, landscape and irrigation				
31,041	SF	5.50	170,726	
<b>31,041</b>	<b>SF</b>	<b>26.84</b>	<b>833,150</b>	

## Coos Bay Library Additive Costs

**Direct Costs:** The following costs are additive to the baseline construction costs and are inclusive of the general contractor's mark-ups.

				<b>With Mark up</b>
<b>Two-story construction</b>	<i>adds 11.5%</i>	\$	1,810,148	\$ 2,786,541
Reduce building foot print				
Reduce roof structure				
Add elevator and two egress stairs				
Add metal pan and concrete 2nd level w/finish				
<b>Seismic Upgrade</b>	<i>adds 9.21%</i>	\$	1,449,692	\$ 2,231,656
<i>Increase to Immediate Occupancy for 500 year Seismic event</i>				
Increase size of structural elements				
MEP and Fire protection system seismically tied to structure				
ACT ceilings tied to structure				
Exterior systems designed for Immediate Occupancy				
Mass notification system				
<b>Add Courtyard at building center</b>	<i>Adds 6.2%</i>	\$	975,906	\$ 1,502,309
Add Cladding and glazing to center core				
Add egress				
Add landscaping and features				
<b>Add Skylights</b>	<i>Adds 1.2%</i>	\$	188,885	\$ 290,770
Add skylights to 10% of roof surface				
<b>Add Photovoltaic panels to roof</b>	<i>Adds 3.9%</i>	\$	600,000	\$ 923,640
Add frame, inverter and system infrastructure				
Add PV panels (600 kW system)				
<b>Upgrade building architectural features</b>	<i>Adds 7.3%</i>	\$	1,149,050	\$ 1,768,848
Add glulam beams in lieu of structural steel in 40% of roof structure				
Upgrade finishes including heavy timber construction elements				
Provide low flow toilets and instant hot water				

**Indirect Costs:** The following costs are typically Owner's cost to achieve a complete project

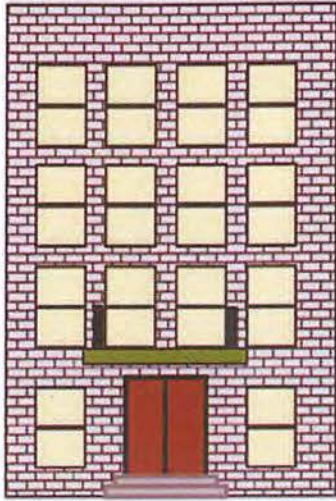
<b>Site Acquisition</b>				<i>Not known</i>
Site dependent				
<b>Soft Costs</b>	<i>30% of Construction</i>		\$	4,722,124
A/E fees				
Permits				
Utility infrastructure if required (depends on franchise)				
Testing and inspections				
Security Systems (infrastructure in base)				
Telephone and data (infrastructure in base)				

Appendix C : Cost Model

<b>Furniture Fixtures and Equipment</b>	<i>Recommended allowance</i>	<b>\$ 600,000</b>
Library shelves (seismically tied)		
Office and media systems		
Desks, chairs and furnishing		
Trash and recycling		
Automated materials handling system		
<b>Other Costs</b>	<i>Recommended Allowance</i>	<b>\$ 2,000,000</b>
Owner's project management		
Community Outreach		
Owner's contingency		

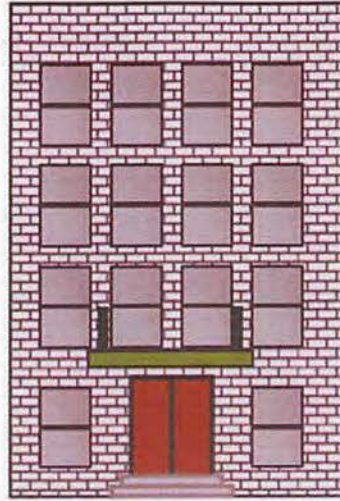
### Seismic Design Options and Cost Implications

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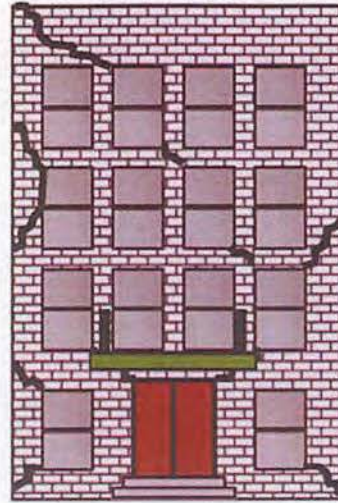
**Operational**

- \*Little to no risk to life safety.
- \*Negligible damage to structural system.
- \*Minor damage to nonstructural systems.
- \*MEP and other systems maintain normal operation.
- \*Repairs done at convenience of occupants.



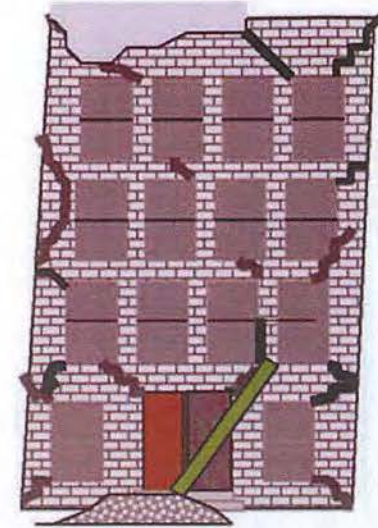
**Immediate Occupancy**

- \*Little to no risk to life safety.
- \*Slight damage to structural system.
- \*Light damage to nonstructural systems.
- \*Life safety utilities function, others will require repair.
- \*Structure is safe to occupy, but significant nonstructural repairs are required before return to normal service.



**Life Safety**

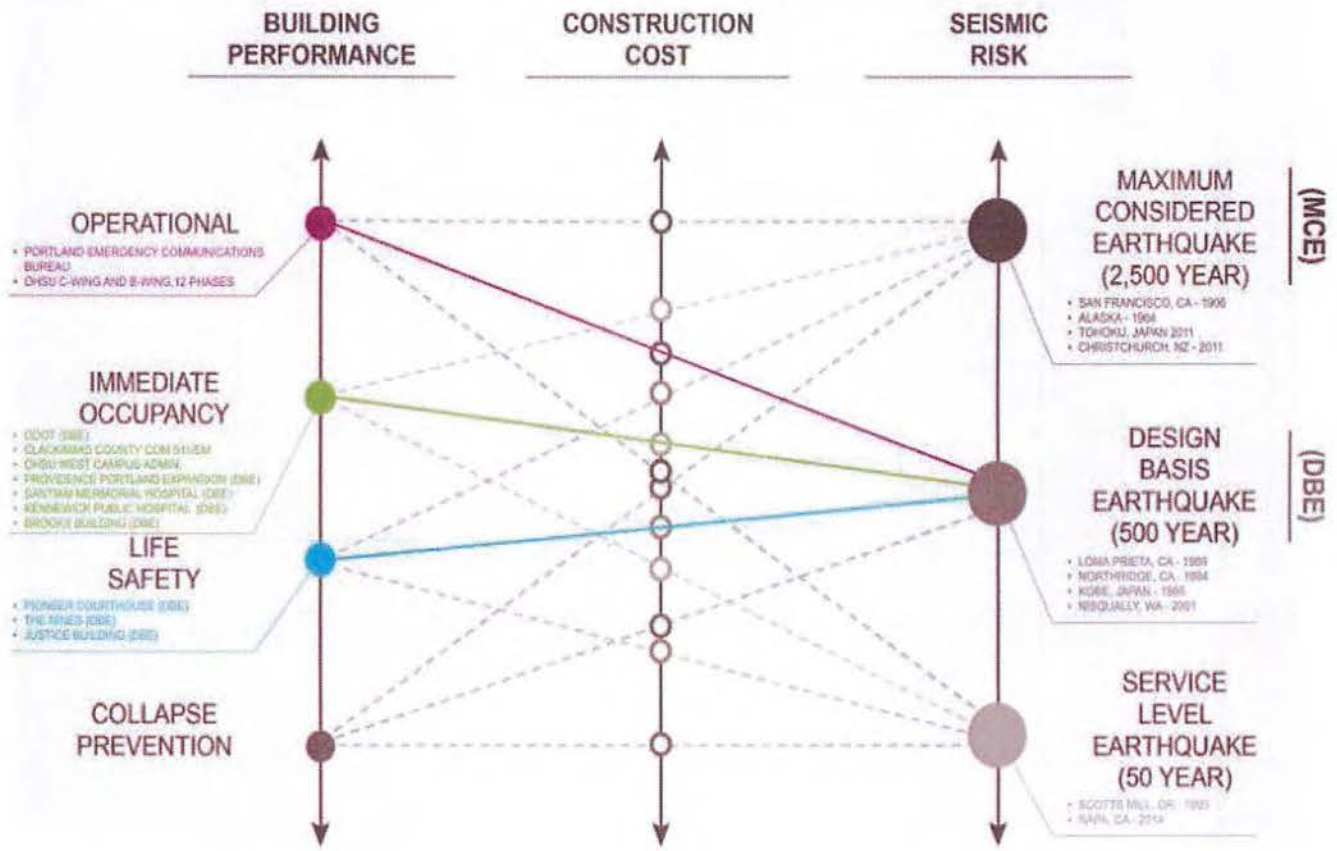
- \*Very low risk to life safety.
- \*Significant damage to structural system, wide margin against collapse.
- \*Nonstructural elements are heavily damaged and cannot operate.
- \*Structure is not safe to occupy, aftershocks may present life threatening damage.
- \*Repairs are possible, but may not be economically viable.



**Collapse Prevention**

- \*Low to moderate risk to life safety.
- \*Nearly complete damage to structure, low margin against collapse.
- \* Nonstructural elements are dislodged, and are falling hazards.
- \*Structure is not safe to occupy, moderate aftershocks may result in total collapse.
- \*Repairs are not practical.

### Seismic Design Options and Cost Implications



Appendix D  
 D1 Coos Bay Public Library Collection Growth Plan

9/2/16]

Coos Bay Public Library  
 Collection Plan

	Adult	Teens	Children	Total	
<b>Total Physical Book + Media Collection:</b>				<b>115,000</b>	
<b>Audiovisual Media</b>				<b>19,365</b>	<b>17%</b>
<b>Books</b>				<b>95,635</b>	<b>83%</b>
<b>Books</b>	68,651	4,135	22,849	95,635	
	72%	4%	24%		
<b>Media</b>	16,400	343	2,622	19,365	
	85%	2%	14%		
<b>Total</b>	<b>85,051</b>	<b>4,478</b>	<b>25,471</b>	<b>115,000</b>	
<b>Books</b>	<b>Adult</b>	<b>Teens</b>	<b>Children</b>	<b>Total</b>	
Reference Collection	580			580	
New Books/Browsing Collection	1,108	108	322	1,538	
Mysteries/Science Fiction/Westerns	16,500			16,500	
Fiction/Graphic Novels	16,090	3,940	7,683	27,713	
Nonfiction	25,420	87	5,527	31,034	
Oregon Collection	2,990			2,990	
Foreign Languages	426		0	426	
Large Print	5,306		109	5,415	
Picture Books/Toddler Books			7,100	7,100	
Easy Readers			2,108	2,108	
Oversize	231		0	231	
<b>Total Books:</b>	<b>68,651</b>	<b>4,135</b>	<b>22,849</b>	<b>95,635</b>	
<b>Audiovisual Media</b>					
DVDs / Videos	6,690		1,600	8,290	
Music Compact Discs	5,460	0	332	5,792	
Audiobooks (F/NF)	4,250	343	533	5,126	
AV Media Kits (book + CD)			157	157	
<b>Total Media</b>	<b>16,400</b>	<b>343</b>	<b>2,622</b>	<b>19,365</b>	
<b>Total Books &amp; Media:</b>	<b>85,051</b>	<b>4,478</b>	<b>25,471</b>	<b>115,000</b>	

Coos Bay Public Library  
Collection and Shelving Needs

BOOK STACKS = Standard steel shelving footprint is 3' x 1' and is allocated 17 SF per double-sided section.											
BROWSING = Display shelving footprint is 5' x 2.5' and is allocated 42 SF per double-sided section.											
MAGAZINE/NEWSPAPER = Slanted shelves with flat shelf below for recent issue storage and allocated 26 SF/double-sided section.											
				% on Shelf	Items Shlvd	Shelf Type	Items/LF	LF Needed	Sections Needed	Sections (round)	SF Needed
		Items in 2036									
<b>Adult Books</b>											
<b>Reference Collection</b>											
3.2	Reference books	580		100%	580	66"¼ sh	7	83	3.5	3.0	51
3.6	Oregon Collection	2,990		100%	2,990	66"¼ sh	7	427	17.8	18.0	306
<b>Total Reference Collection</b>		<b>3,570</b>			<b>3,570</b>			<b>510</b>	<b>21</b>	<b>21</b>	<b>357</b>
<b>Circulating Books</b>											
2.2	New Books/Browsing Collection	1,108		66%	731	66"½ sh, display gondola, 2.5' x 5'	4	183	3.7	4	168
3.3	Mysteries/Science Fiction	16,500		70%	11,550	66"¼ sh	8	1,444	60.2	60	1,020
3.3	Fiction	16,090		70%	11,263	66"¼ sh	8	1,408	58.7	59	1,003
3.3	Large Print	5,306		75%	3,980	66"¼ sh	8	497	20.7	21	357
3.4	Nonfiction	25,420		75%	19,065	66"¼ sh	8	2,383	99.3	99	1,683
3.4	Foreign Languages	426		70%	298	66"¼ sh	8	37	1.6	2	34
3.5	Oversize	231		75%	173	66"¼ sh	8	22	0.9	1	17
<b>Total Adult Circulating Books</b>		<b>65,081</b>			<b>47,060</b>			<b>5,974</b>	<b>245</b>	<b>246</b>	<b>4,282</b>
<b>Total Adult Books</b>		<b>68,651</b>			<b>50,630</b>			<b>6,484</b>	<b>266</b>	<b>267</b>	<b>4,639</b>
<b>Teen Books</b>											
3.13	Teen Nonfiction	87		75%	65	66"¼ sh	8	8	0.3	1	17
3.13	Teen New Books	108		66%	71	66"½ sh, display gondola, 2.5' x 5'	4	18	0.4	1	42
3.13	Teen Fiction/Graphic Novels	3,940		66%	2,600	66"¼ sh	8	325	13.5	14	238
<b>Total Teen Books</b>		<b>4,135</b>			<b>2,737</b>			<b>351</b>	<b>14</b>	<b>16</b>	<b>297</b>



Coos Bay Public Library  
Collection and Shelving Needs

			% on Shelf	Items Shlvd	Shelf Type	Items/LF	LF Needed	Sections Needed	Sections (round)	SF Needed
<b>Children's Books:</b>										
4.1	New Books	322	66%	213	66"/5 sh, display gondola, 2.5' x 5'	4	53	1.1	1	42
4.3	Children's Fiction	7,683	70%	5,378	66"/4 sh	8	672	28.0	28	476
4.3	Children's Large Print	109	70%	76	66"/4 sh	8	10	0.4	0.4	7
4.3	Nonfiction/Biography	5,527	75%	4,145	66"/4 sh	8	518	21.6	22	374
4.5	Picture Books/Toddler Books	7,100	70%	4,970	45"/3 sh	8	621	34.5	35	595
4.5	Easy Readers	2,108	70%	1,476	45"/3 sh	8	184	10.2	10	170
	<b>Total Children's Books</b>	<b>22,849</b>		<b>16,258</b>			<b>2,059</b>	<b>96</b>	<b>96</b>	<b>1,664</b>
	<b>Total Book Collection:</b>	<b>95,635</b>		<b>69,625</b>			<b>8,894</b>	<b>376</b>	<b>379</b>	<b>6,600</b>
<b>Media Collections</b>										
<b>Adult/Teen Media:</b>										
2.3	DVDs	6,690	66%	4,415	66"/5 sh, display gondola, 2.5' x 5'	10	442	8.8	9	378
2.3	Music Compact Discs	5,460	70%	3,822	66"/AV browsing, 3 sh	20	191	10.6	11.0	187
2.3	Audiobooks (F/NF)	4,250	66%	2,805	66"/5 sh, display gondola, 2.5' x 5'	10	281	5.6	6	252
3.13	Teen Audiobooks	343	66%	226	66"/4 sh	8	28	1.2	1	17
	<b>Total Adult/Teen Media:</b>	<b>16,743</b>		<b>11,269</b>			<b>941</b>	<b>26</b>	<b>27</b>	<b>834</b>

Coos Bay Public Library  
Collection and Shelving Needs

			% on Shelf	Items Shlvd	Shelf Type	Items/LF	LF Needed	Sections Needed	Sections (round)	SF Needed
<b>Children's Media:</b>										
4.1	Children's DVDs	1,600	66%	1,056	66"/5 sh, display gondola, 2.5' x 5'	10	106	2.1	2	84
4.1	Children's Music Compact Discs	332	70%	232	66"/AV browsing, 3 sh	20	12	0.6	0.6	11
4.1	Children's AudioBooks	533	70%	373	66"/4 sh	8	47	1.9	2	34
4.1	AV Media Kits	157	66%	104	60"/4 sh	6	17	0.7	1	17
<b>Total Children's Media:</b>		<b>2,622</b>		<b>1,765</b>			<b>181</b>	<b>5</b>	<b>6</b>	<b>146.0</b>
<b>Total Media Collection:</b>		<b>19,365</b>		<b>13,034</b>			<b>1,123</b>	<b>32</b>	<b>33</b>	<b>980.0</b>
<b>Total Books &amp; Media:</b>		<b>115,000</b>		<b>82,659</b>			<b>10,016</b>	<b>408</b>	<b>412</b>	<b>7,579.7</b>
<b>Magazines &amp; Nsp Displayed</b>										
3.5	Adult Magazine Display/Backfiles	50 titles	100%	50	66"/4 slanted sh w flat shelf below for recent issues	1	50	2.1	2	52
3.5	Newspapers, - Adult Display/ Recent Issues	10 titles	100%	10	66"/4 slanted sh w flat shelf below for recent issues	0.67	15	0.6	0.6	16
3.13	Teen Magazines	12 titles	100%	12	66"/4 slanted sh w flat shelf below for recent issues	1	12	0.5	0.5	13
4.1	Children's Magazines	12 titles	100%	12	66"/4 slanted sh w flat shelf below for recent issues	1	12	0.5	0.5	13
<b>Total Mag &amp; Nsp Display:</b>		<b>84</b>		<b>84</b>			<b>89</b>	<b>4</b>	<b>4</b>	<b>94</b>
<b>Total Linear &amp; Square Ft Needed:</b>							<b>10,105</b>	<b>412</b>	<b>416</b>	<b>7,674</b>

Appendix D

D3 Coos Bay Public Library Computer and Equipment Needs

Coos Bay Public Library  
Computers and Other Equipment Needs

Space #		Equipment Type	Table	Units	SF/Seat	SF Needed	
<b>Public Access Computers</b>							
3.1	Public Access Computers	sitdown computer wkstn		16	16	30	480
3.3	Adult Circulating Fiction Books	online catalog wkstn @ stack end		0	3	16	48
3.4	Adult Circulating Nonfiction Books	online catalog wkstn @ stack end		0	3	16	48
3.13	Teen Center	sitdown computer wkstn		2	6	30	180
3.13	Teen Center	online catalog wkstn @ stack end		0	1	16	16
3.14	Learning + Collaboration Space	laptops +/- or tablets for in-library use, stored in recharging/storage unit		0	12	0	0
4.2	Children's Public Access Computers	sitdown computer wkstn		6	6	30	180
4.3	Children's Circulating Books	online catalog wkstn @ stack end		0	1	16	16
4.4	Family Space	sitdown computers - educational games/early lit		2	2	30	60
<b>Public Access Computers Total:</b>				<b>26</b>	<b>50</b>		<b>1028</b>
<b>Internet Desktop Computers:</b>					<b>28</b>		
<b>Public Access Laptops / Tablets:</b>					<b>12</b>		
<b>Online Catalog Lookup Stations:</b>					<b>8</b>		
<b>Specialty Workstations:</b>					<b>2</b>		
<b>Other Public Equipment:</b>							
2.1	Self Check + Reserves	express checkout station		1	4	40	160
3.2	Reference Collection	scanner		1	1	30	30
3.2	Reference Collection	microfilm		2	2	30	60
3.2	Reference Collection	video magnifier		1	1	30	30
3.2	Reference Collection	copy machine		0	1	30	30
3.14	Learning + Collaboration Space	laptop/tablet storage + recharging unit, 12-unit capacity		0	1	12	12
4.1	Children's New Books + Media	express checkout station		1	1	40	40
<b>Other Public Equipment Total:</b>				<b>5</b>	<b>10</b>		<b>322</b>
<b>Public Printers</b>							
3.1	Adult Public Access Computers	networked printer/print release station		1	1	12	12
3.13	Teen Center	networked printer/print release station		1	1	12	12
3.14	Learning + Collaboration Space	networked printer/print release station		1	1	12	12
4.2	Children's Public Access Computers	networked printer/print release station		1	1	12	12
<b>Public Printers Total:</b>				<b>4</b>	<b>4</b>		<b>48</b>
<b>Total Public Technology:</b>				<b>35</b>	<b>64</b>		<b>1398</b>

Appendix D  
D4 Coos Bay Public Library Seating Needs

Coos Bay Public Library  
Public Seating Needs

Space		Seating Type	# Tables	# Seats	SF/Chair	SF Needed
<b>Open Access Seats:</b>						
<b>General</b>						
1.9	Café/Vending Area	seats @ café tables	4	8	20	160
<b>For Adults</b>						
2.2	New Books / Browsing	bench, 2-person		1	25	25
2.3	Media Collection	bench, 2-person		1	25	25
3.2	Reference Collection	2-place tables, rectangular	2	4	25	100
3.3	Adult Circulating Fiction Books	2-place tables, rectangular	3	6	25	150
3.3	Adult Circulating Fiction Books	lounge chairs		4	35	140
3.4	Adult Circulating Nonfiction Books	2-place tables, rectangular	8	16	25	400
3.4	Adult Circulating Nonfiction Books	1 place tables	8	8	25	200
3.4	Adult Circulating Nonfiction Books	lounge chairs		8	35	280
3.5	Magazines + Newspapers	lounge chairs		8	35	280
3.5	Magazines + Newspapers	2-place tables, rectangular	2	4	25	100
3.6	Oregon Collection	2-place tables, rectangular	2	4	25	100
3.6	Oregon Collection	lounge chairs	0	4	35	140
<b>Adult Seats subtotal:</b>				<b>76</b>		<b>2100</b>
<b>For Teens</b>						
3.13	Teen Center	seats @ café tables, 4-pl	2	8	20	160
3.13	Teen Center	casual lounge seats	0	8	16	128
3.13	Teen Center	laptop / study counter	1	6	16	96
<b>Teen Seats subtotal:</b>				<b>22</b>		<b>224</b>
<b>For Children</b>						
4.3	Children's Circulating Books	2-place tables, rectangular	4	8	25	200
4.3	Children's Circulating Books	lounge chairs/window seating		2	30	60
4.4	Children's Circulating Books	parent/child lounge seats		2	30	60
4.5	Picture Books + Easy Readers	lounge chairs/window seating		2	30	60
4.5	Picture Books + Easy Readers	4-place toddler tables, mobile	3	12	20	240
4.5	Picture Books + Easy Readers	parent/child lounge seats		4	30	120
<b>Children's Seats subtotal:</b>				<b>30</b>		<b>740</b>
<b>Open Access Seats Total:</b>				<b>128</b>		<b>3064</b>
<b>Collaboration / Conference Room Seats:</b>						
3.8	Group Study / Collaboration Room A	seats @ conference table	1	2	30	60
3.9	Group Study / Collaboration Room B	seats @ conference table	1	2	30	60
3.10	Group Study / Collaboration Room C	seats @ conference table	1	4	30	120
3.11	Group Study / Collaboration Room D	seats @ conference table	1	4	30	120
3.12	Group Study / Collaboration Room E	seats @ conference table	1	12	25	300
3.14	Learning + Collaboration Space	2-place tables, mobile	6	12	20	240
<b>Collaboration / Conference Room Seats Total:</b>				<b>32</b>		<b>780</b>
<b>Total Open Access Seats:</b>				<b>160</b>		<b>3844</b>
<b>Programming / Meeting Room Seats:</b>						
1.2	Community Meeting Room A (dividable)	stacking chairs		200	12	2400
1.5	Community Meeting Room B	seats @ conference table		24	20	480
4.6	Storytelling + Class Visits Area	floor seating		50	10	500
<b>Programming / Meeting Room Seats Total:</b>				<b>274</b>		<b>3380</b>