RDG PA

Volume 1

University of Oregon, Student Recreation Center



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In October of 2011, the University of Oregon contracted the team of Robertson/Sherwood/Architects PC (RSA) of Eugene, Oregon, RDG Architecture PC (RDG) of Des Moines, Iowa and Poticha Architects (PA) of Eugene, Oregon, to provide programming, master planning and design services for an expansion and renovation of the University's Student Recreation Center. This Design Team, aided by their consultants and University Planning and Capital Construction Staff, along with a Project User Group, has worked together over the course of the past several months to complete the Schematic Design phase of this project. This report documents the completed and approved Schematic Design.

Throughout the course of this effort, the Design Team, lead by Carl Sherwood of RSA in association with Jack Patton of RDG and Otto Poticha of PA, coordinated its efforts with Gene Mowery and Emily Eng of the University of Oregon Campus Planning and Real Estate. In addition to all the staff at the Student Recreation Center, the Design Team would like to thank the Project User Group for their participation and guidance during the course of the Schematic Design:

Project User Group:

Dennis Munroe, Director, Physical Education & Recreation, User Group Chair
Mike Eyster, Associate Vice-President, Student Affairs
Jen Phillips, Research Associate of Neuroscience
Julie Haack, Professor of Chemistry
Rob Thallon, Associate Dean of Administration and Associate Professor of Architecture
Bryan Haunert, Associate Director of Facilities and Operations, Physical Education & Recreation
Brent Harrison, Associate Director of Recreation Programs, Physical Education & Recreation
Sue Wieseke, Accountant, Physical Education & Recreation
Kristen Gleason, Coordinator, University of Oregon Club Sports
Geoff Hale, Student Representative of the Student Recreation Center Advisory Board
Michelle Vander Heyden, Associated Students of the University of Oregon
Derick Olsen, Student Employee of the Student Recreation Center

SCHEMATIC DESIGN APPROVAL/SIGNATURE PAGE

Signature: _____ Date: _____

Jamie Moffitt, Vice President, Finance & Administration

Signature: _____ Date: _____

Robin Holmes, Vice President, Student Affairs

Signature: _____ Date: _____

Dennis Munroe, Director of Physical Education and Recreation, User Group Chair

Table of Contents

University of Oregon, Student Recreation Center

VOLUME 1

Preface 1
Schematic Design Approval/Signature Page 2
Executive Summary 5
Project Participants 27
Design Process 30
- Design Objectives 35
- Patterns 35
- Integrated Design 37
- Master Plan 38
- Program 38
- Key Design Goals 40
- Code Analysis 41
- Project Schedule 46

Schematic Design: Narratives
- Sustainability Plan 47
- Civil 51
- Landscape 54
- Architectural 57
- Structural 62
- Mechanical 65
- Plumbing 71
- Electrical 74
- Lighting 78
- Technology 81
- Fire Suppression 83
- Pool Systems 87

Schematic Design: Construction Cost Estimate 90
Schematic Design: Drawings 96
Appendix 127
- Appendix A Campus Planning Committee Meeting Minutes
- Appendix B Accessibility Focus Group Meeting Minutes
- Appendix C City of Eugene, Limited Consultation Meeting Minutes
- Appendix D Preliminary Building Code Report
- Appendix E Energy Programming
- Appendix F LEED Checklist
- Appendix G Outline Specifications
- Appendix H Cost Estimating Booklet
- Appendix I Department of Physical Education & Recreation Memorandum of Understanding
- Appendix J SD Report Comments/Responses

Table of Contents

University of Oregon, Student Recreation Center

VOLUME 2
Program Diagrams

VOLUME 3
Workshops 1 and 2

VOLUME 4
Workshops 3 through 7

Introduction

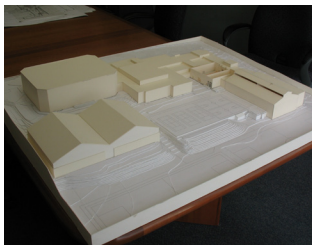
This document has been produced by the design team of RobertsonISherwoodIArchitects PC (RSA), RDG Architecture PC (RDG), Poticha Architects (PA), and their consultants to describe the completed Schematic Design (SD) for the University of Oregon Student Recreation Center (SRC) Expansion and Renovation Project (the project). It summarizes the project goals, program and the design process. Included are budget information and cost analyses, preliminary code analysis, outline specifications and a set of drawings illustrating the schematic design plans, elevations and sections.

Design Objectives

The project vision for the SRC Expansion and Renovation is to create a facility that meets current needs and plans for the future needs of student recreation and academic programs as the University's enrollment continues to grow. An expanded, enhanced and renovated SRC will be a popular campus venue that celebrates recreational, social, and intellectual activities. It will be a substantial contribution to the development of the campus and contribute positively to the student experience and overall residential quality of campus. The added capacity and features will also make the SRC attractive to the broader UO community, which (in addition to students) includes faculty, staff, alumni, and their children.

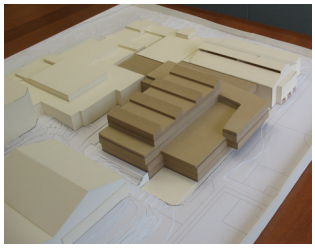
Ultimately the intent of the new construction is to create a durable, attractive, well daylit and energy efficient structure that will serve the campus community's recreation needs for many years to come. The facility will be designed to exceed State Energy Efficient Design (SEED) standards, targeting the UO Model of Sustainable Development of 35% more energy efficient than Oregon Energy Code requirements, and a goal of meeting the Leadership in Energy and Environmental Design (LEED) Gold standard.





Background

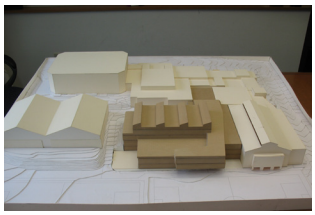
The existing SRC is located on 15th Avenue on the University of Oregon Campus. It was constructed 1999 as an addition to Esslinger Hall and Leighton Pool. Esslinger Hall was opened in 1937 as the Physical Education Building to serve 3,000 students and Leighton Pool was added between the years 1958-1959. Over time, both of these buildings have been renovated with the last major renovation occurring as part of the 1999 SRC addition when about 79,000 sf of existing area was renovated and 49,000 sf of additional recreation space was added. At the time of its completion, the SRC was meant to serve a student population of about 16,000. However, the 1999 project had to delete planned aquatics due to scope reduction. The current UO student population is about 24,000 students and is likely to continue to grow.



Since the completion of the 1999 SRC, there have been a number of studies funded by the UO to help plan for current and future growth. These studies were used by the UO to determine the initial scope and budget for the project. This scope and budget have been refined during the Schematic Design phase.

The studies are available through the UO planning office and include:

- Student Recreation Center, Conceptual Study, June 30, 2004 by Yost Grube Hall Architecture
- Master Plan and Campus Consultation Process, Erb Memorial Union and Student Recreation Center, December 2010 by Brailsford & Dunlavey
- Esslinger Hall Concept Study, March 2011 by Yost Grube Hall Architecture
- University Street Feasibility Study, April 2012 by Rowell Brokaw Architects



Funding

The project budget was initially established at $61 million based on the Master Plan and Campus Consultation Process report by Brailsford & Dunlavey (2010). Funding for this type of project is a partnership among the students, the University, and the State of Oregon, including student fees, gifts/fundraising, and state bonds.

In early 2011, legislative decisions limited the type of bond funding potentially available to the project at this time. As a result, the project budget was revised down to $50 million dollars in advance of commissioning the Schematic Design work. $35.5 million of this amount is the direct construction budget, with the remainder set aside for related project costs such as furniture and equipment, design and engineering fees, permitting costs, UO facilities costs and contingencies.

As noted, the project will be funded mostly by fees paid by UO students. In early April of 2012, a proposed student fee increase for the project was submitted for a student referendum with a successful result. In addition to student approval, the Oregon University System (OUS) Board needs to approve the project fee and eventually the State Legislature will need to approve the funding structure to authorize the sale of bonds. It may be possible to advance the design work while

these funding mechanisms are approved, but until authorization to proceed is granted the project will be put on hold upon the completion of the Schematic Design phase.

Construction Manager/General Contractor
Howard S. Wright (HSW) Contractors was selected through a competitive process to be the Construction Manager/General Contractor (CM/GC) for the Project. They have played an essential role as cost estimator during the SD Phase and will continue through the later design phases as both cost estimator and constructability advisor. They will manage the bidding of the work and act as the general contractor during the construction and post-construction phases.

Design Process
The Design Team began work in October, 2011 and has completed the Schematic Design process culminating in this report in May, 2012. The design process began with a review of Campus-wide and project specific Patterns with the Project User Group (PUG) and the establishment of project specific goals pertaining to the scope of funded improvements.

The information included in the Master Plan and Campus Consultation Process report (2010) by Brailsford & Dunlavey was utilized in determining the initial program requirements for the Project.

Early on the PUG established four main project priorities:

- Expand aquatics
- Expand weights and fitness
- Expand gym court sports
- Improve wayfinding



A program, including spatial diagrams, was developed to establish a list of required spaces along with their size, key components and adjacencies. This program established the total proposed area of new construction and also listed non-funded but desired spaces, including accommodations for Healthy Oregon Programs spaces and selective renovation work in Esslinger. This program was reviewed and refined through a series of focus group meetings and PUG workshops and eventually formed the basis for a series of initial design options. A copy of the full program and spatial diagrams is included in Volume 2 of this report.

As the design work progressed, an Integrated Design process was utilized, bringing together design and consultant team members, UO planning and facilities maintenance personnel, and the general contractor to explore structural, mechanical, electrical and lighting systems strategies and their potential impact on the design. A meeting with City of Eugene (COE) was held to review potential code issues. Cost estimates were developed to inform the evolving design. In all there were seven PUG workshops that explored the evolving design and affirmed the direction for the development and the approval of the final Schematic Design. At various stages, the design was presented to the SRC staff and to the SRC Advisory Board. A Student Steering Committee established by the Associated Students of the University of Oregon (ASUO) was invited to participate in workshops 4 through 7. The Campus Planning Committee (CPC) met three times to review design progress and on April 30, 2012 recommended to the University President the Schematic Design for approval.



Program

The primary programmatic elements that will be added by the new construction are:

- Twelve lane lap pool with ramped entry – to support fitness, water polo and diving
- Leisure pool – with ramped entry, seating, lap lanes and water volleyball and basketball
- Spa – sized to accommodate 12 -16 persons
- Aquatics classroom – adjacent to pool

- Three court gymnasium – for basketball, volleyball and other uses
- Weights and fitness area (approx. 13,000 sf) – doubles existing weights and fitness area
- Group exercise room
- Locker rooms – wet locker room at pool level and dry locker room above
- Laundry facility – relocated from Gerlinger Annex
- Offices, toilet and custodial rooms, storage and mechanical rooms to support above spaces
- Improve circulation and expand social spaces
- Minor renovations and improvements to existing Esslinger Hall including: new laundry facility, renovated office spaces, expanded bike studio, and conversion of weight room #50 for use as a fitness room

A complete program summary is included on pages 18-21 of the Executive Summary.

Budget / Cost Estimating

The CM/GC, along with an independent cost estimator, completed reconciled cost estimates in March 2012. These estimates indicate a project that is about $4.9 million over budget. Refer to Howard S. Wright and Architectural Cost Consultants' cost estimate summary sheets on pages 22-25 of the Executive Summary. Since the completion of these estimates, the design team developed a list of cost saving measures totaling over $5 million that were reviewed and accepted by the SRC project management team and the PUG. The project described within this document has incorporated these cost saving measures and can be constructed for the $35.5 million direct construction budget. More information regarding the cost estimating process along with the cost saving measures are included in the Schematic Design: Construction Cost Estimate section later in this report.



Schedule

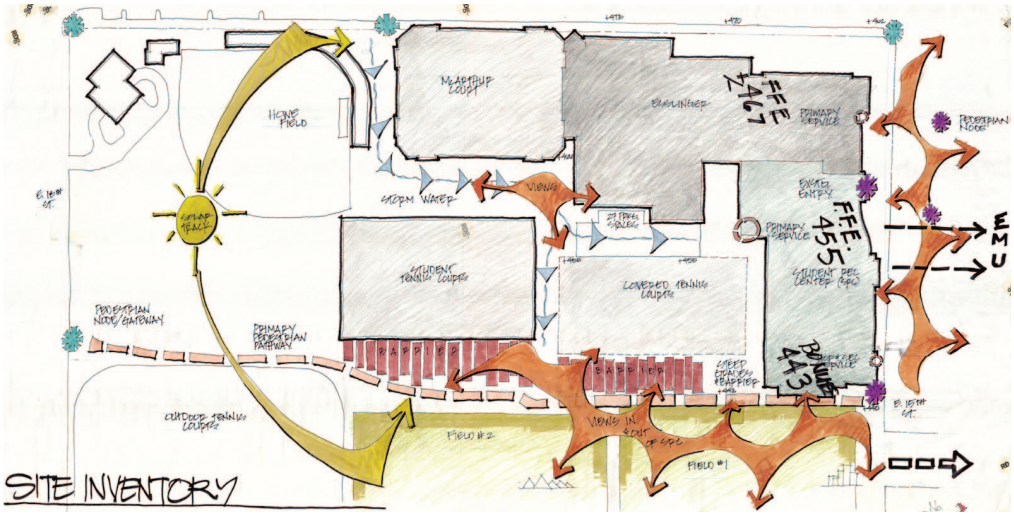
The initial project schedule indicated the completion of the design and construction document phases of the work early in 2013 and on-site construction starting in early July 2013 that supported the student fee increase to fund the project. This schedule was based on a successful student vote in November 2011. The vote failed and the project design has been delayed by the process to obtain student support and OUS Board approval. If the remaining phases of the design proceed by early July 2012, the initial targeted construction start early July 2013 may be met. The length of construction period is assumed to be about 18 months. A more definitive design and construction schedule will be developed once a resumption date of the project is known. A conceptual project schedule showing the phases of work with a variety of project restart dates including the most optimistic restart date of July 2012 is included on page 26 of the Executive Summary.

If the project's temporary hold extends beyond early July, the design and construction schedules would move accordingly. Depending on the length of delay there may be issues to address as the project restarts. Upon notification by the University to proceed the following steps should be taken:

Project Restart Steps:

- Notify Design Team and re-establish management and PUG groups
- Confirm budget with consideration of possible inflation and restart costs
- Affirm program and design direction with PUG
- Review code assumptions against new code requirements (if any)
- Start Design Development phase of work

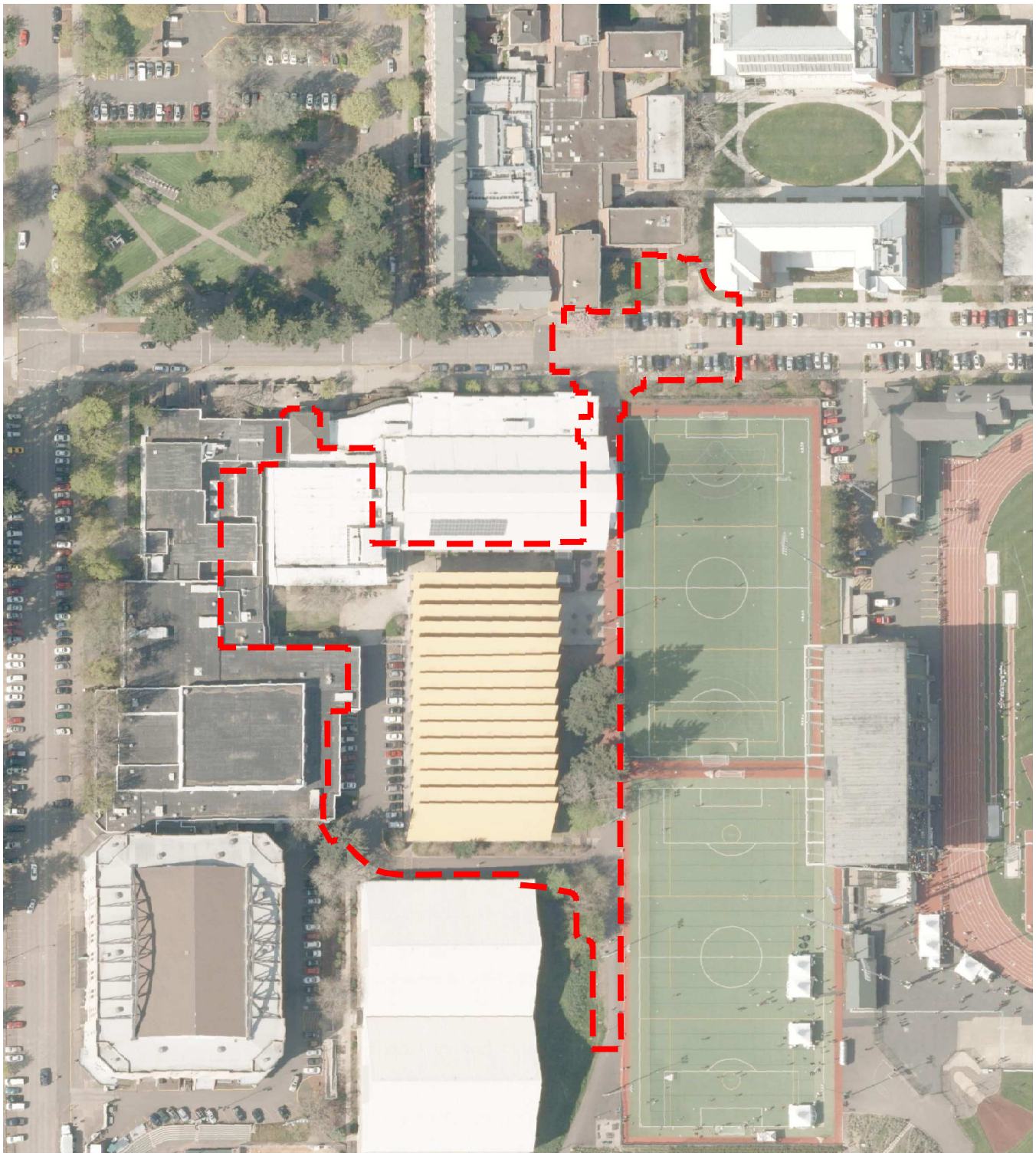




Schematic Design Drawings

The new three-story construction will occupy the area between Esslinger Hall and the playing fields to the east and between the south edge of the existing 1999 Student Recreation center and the enclosed Tennis Center. The outdoor existing covered tennis courts in this area will be removed.

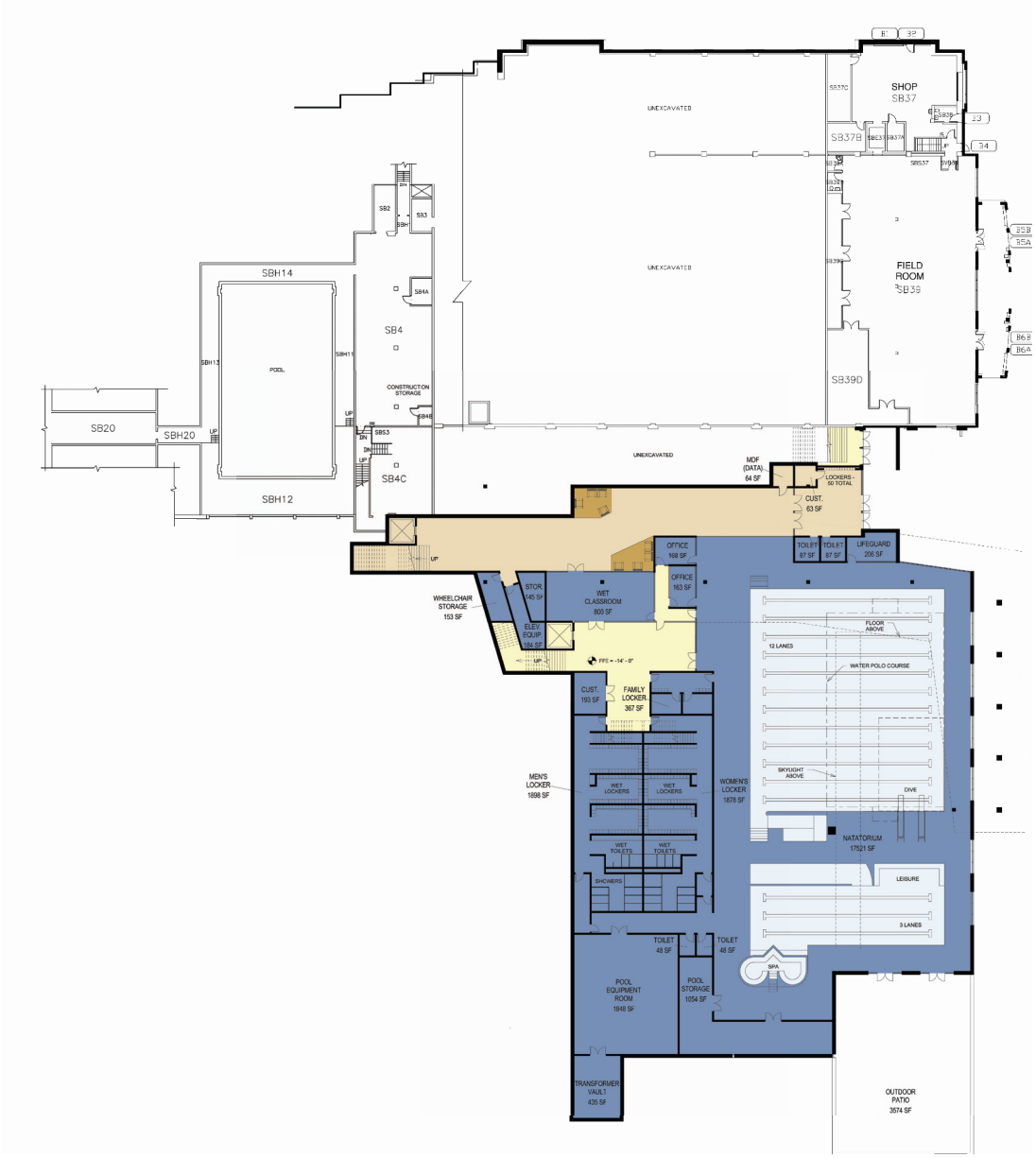
A complete set of schematic design drawings, along with a general description of these documents, are included in the Schematic Design: Drawings section later in this document. The following are reduced copies of the existing site plan showing the project area, the three floor level plans, building sections and elevations.



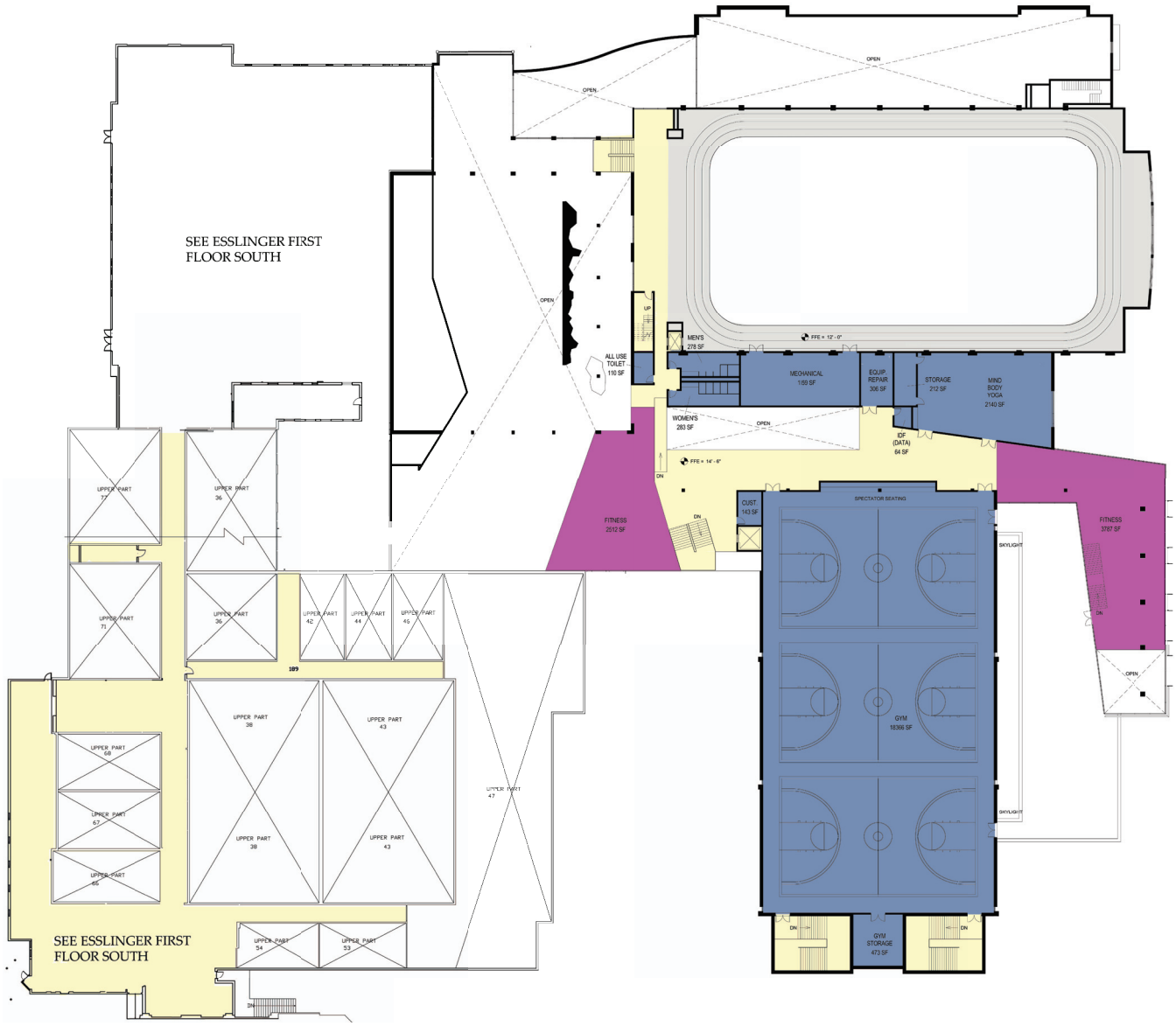
Site Plan



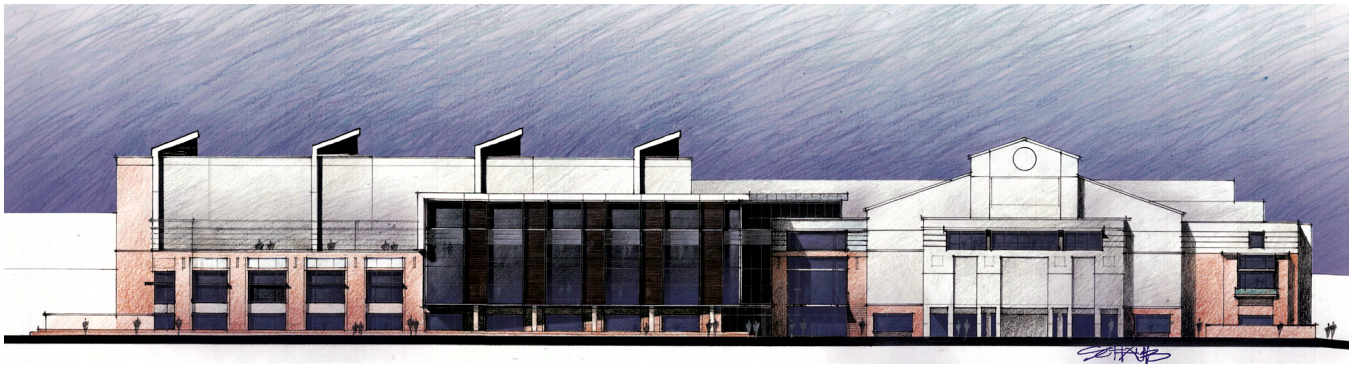
Main Level - Phase 1



Lower Level - Phase 1



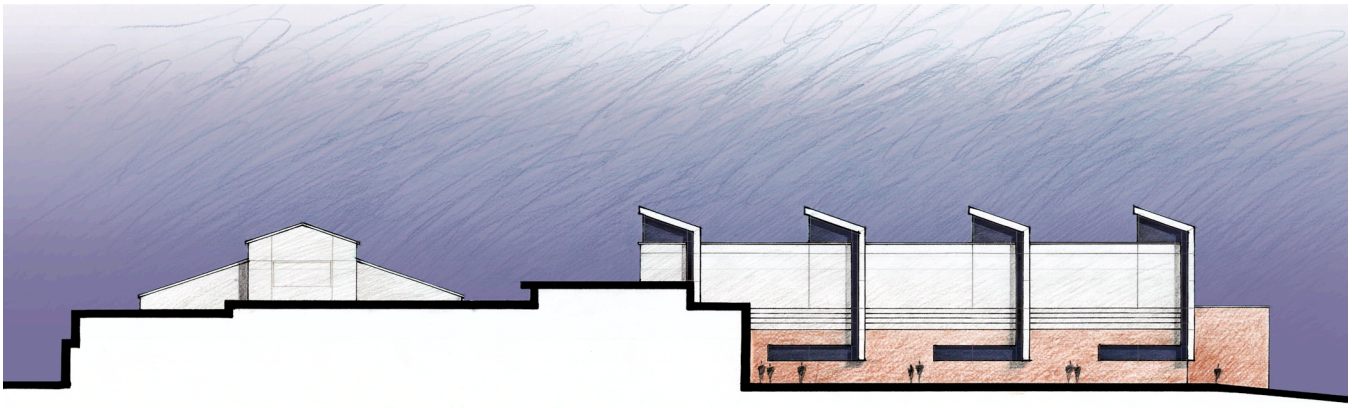
Upper Level - Phase 1



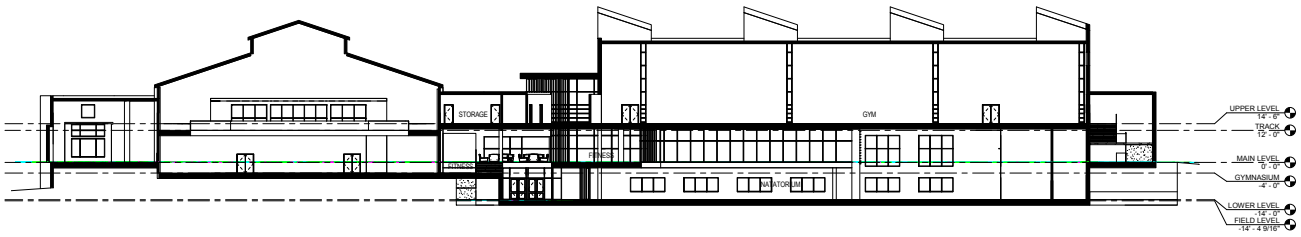
East Elevation

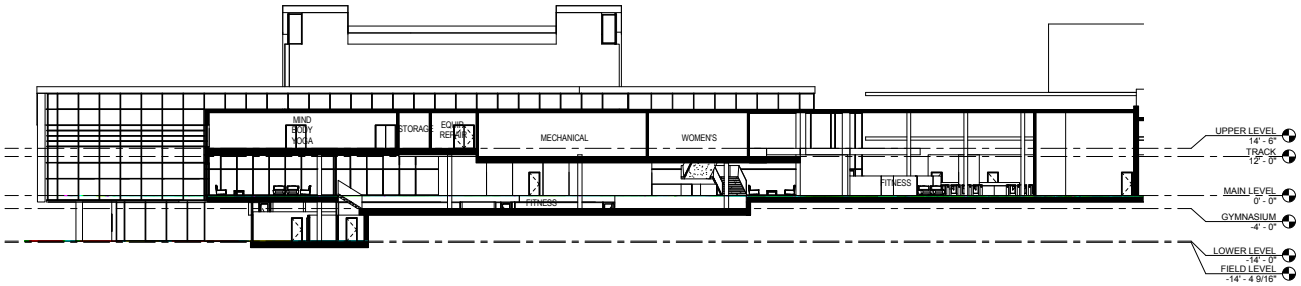


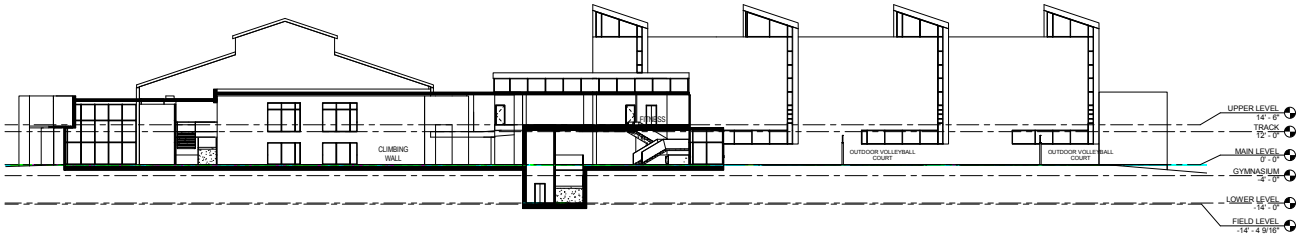
South Elevation

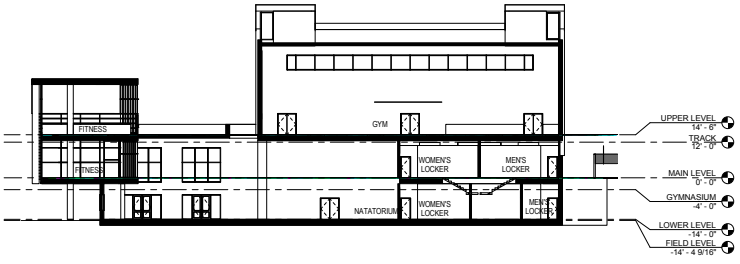


West Elevation









Building Sections

RDG... PA

architectural building program summary

University of Oregon Student Recreation Center
Architectural Building Program Summary

RDG No. 2011.499.00
Created: October 6, 2011
Revised: 'April 10, 2012

Base Program	B
Replacement	R
Un-Funded	U
Healthy Campus	H

	Description	Relevant Info		Replace?	Q	NSF	Extension	Mk	B for Base Program Area
								B	B
	Base Program								
	12 Lane Lap Pool				1	10,450	10,450	B	B
	Leisure Pool				1	10,000	10,000	B	B
	Whirlpool	16	Persons		1	600	600	B	B
	Pool Mechanical				1	2,500	2,500	B	B
	Natatorium Storage				1	900	900	B	B
A	Assistant Director for Aquatics				1	120	120	B	B
A	Pool Operator & Aquatics Coordinator Office				1	150	150	B	B
	Life Guard Room				1	150	150	B	B
	Men's Locker Room	All New		Half Lock'r	700	6.25	4,375	B	B
	Women's Locker Room	All New		Half Lock'r	700	6.25	4,375	B	B
	All User Changing Rooms				6	200	1,200	B	B
	Wet Classroom	40	Persons		1	600	600	B	B
	Wet Classroom Storage				1	80	80	B	B
	Three Court Gymnasium - 84 ft courts				1	19,344	19,344	B	B
	Three Court Gymnasium Storage				1	800	800	B	B
	Spectator Seating	500	NSF Exist		100	5	500	B	B
	Weights & Fitness	166	Pieces Eq		1	10,800	10,800	B	B
	Weight / Fitness Room Storage & Eq Repair - New				1	900	900	B	B
	Weight and Fitness Control				1	110	110	B	B
A	Control Desk			Exist Entry	1	200	200	B	B
A	STUB (Student Hub)				1	200	200	B	B
A	Operations Coordinator				1	200	200	B	B
A	CHUB (Custodial Hub)				1	200	200	B	B
	Improved Building Entry	1,150	NSF Exist		1	1,000	1,000	B	B
	Laundry			Gerlinger	1	1,000	1,000	B	B
	Pro Shop (Storage only)			24 Ess	1	100	100	B	B
	Social & Informal Study Areas				3	400	1,200	B	B
	Mind Body Small - Yoga	37	Persons		1	2,200	2,200	B	B
	Mind Body - Yoga, Storage				1	250	250	B	B
	Group Ex Large	50	Persons		1	3,000	3,000	B	B
	Group Ex Storage				1	300	300	B	B
	Loading Dock & Receiving Area				1	500	500	B	B
	Healthy Campus Initiative								
	Lobby Space (like a Living Room)	5	Persons		1	200	200	H	H
	Admin / Reception Info Desk	1	Persons		1	150	150	H	H
	Office - Director				2	150	300	H	H
	Offices				4	120	480	H	H
	Cubicle Work Stations				4	50	200	H	H
	Cubicle Work Station - Layout Area				1	180	180	H	H
	Multi-Purpose Room	20	Persons, Ea		2	1,200	2,400	H	H
	Multi-Purpose Room Alcove	9	Pieces Eq		1	300	300	H	H
	Equipment Storage				1	180	180	H	H
	Fitness Assessment Rooms				2	120	240	H	H
	Massage Room				1	150	150	H	H
	Bio Feedback Room				1	80	80	H	H
	Classroom	20	Persons		1	500	500	H	H
	Uni-Gender Changing Rooms (Dry)				2	50	100	H	H
	Uni-Gender Changing Rooms (Wet)				4	90	360	H	H

architectural building program summary

	Description	Relevant Info		Replace?	Q	NSF	Extension	Mk	B for Base Program Area
	Esslinger Replacement Spaces								
	Men's Locker Room		Half Lock'r	40 Ess	-	6.25	-	R	R
	Women's Locker Room		Half Lock'r	25 Ess	-	6.25	-	R	R
	Family / Unisex / Gender Neutral Locker Rooms			26a/b Ess	2	200	400	R	R
	Social & Informal Study Areas			26 Ess	1	400	400	R	R
	Weight Room	64	Pieces Eq	50 Ess	1	4,170	4,170	R	R
	Martial Arts	45	Persons	47 Ess	1	2,700	2,700	R	R
	Martial Arts - Storage			47B Ess	1	260	260	R	R
	Club Sports Storage			47A Ess	1	170	170	R	R
	(More) Outdoor Pursuits Storage			48 SRC	1	220	220	R	R
	Multipurpose Activity Court (MAC)			42 / 44 Ess	2	7,350	14,700	R	R
	MAC Storage			62 Ess	1	500	500	R	R
	Racquetball Court			Multiple (5) Es	6	800	4,800	R	R
	Squash Court (Convertible)			68 Ess	2	800	1,600	R	R
	Cycling Studio	64	Persons	43 Ess	1	1,600	1,600	R	R
	Cycling Storage				1	150	150	R	R
	Group Exercise	53	Persons	41 Ess	1	3,150	3,150	R	R
	Group Ex - Storage			41B Ess	1	410	410	R	R
	Mind Body	35	Persons	77 Ess	1	2,100	2,100	R	R
	Mind Body - Storage			77A / 77B Ess	1	250	250	R	R
	Mind Body	35	Persons	71 Ess	1	2,100	2,100	R	R
	Mind Body - Storage			71C Ess	1	250	250	R	R
	Equipment Issue			22 / 5E Ess	1	800	800	R	R
	Classroom	26	Persons	63 Ess	1	650	650	R	R
	Classroom Mannequin Storage			63B Ess	1	240	240	R	R
	Classroom - Storage				1	70	70	R	R
	Outdoor Pursuits Offices			186 / 186A Es	1	600	600	R	R
	Outdoor Pursuits Storage / Equipment			50 Ess	1	590	590	R	R
	Custodial Storage			59 / 60 / 60A I	1	350	350	R	R
	General Building Storage			63A / 71 D-G,	1	900	900	R	R
	PE / REC Offices & Administration								
A	PE / Rec Director's Office				2	180	360	R	R
A	PE / Rec Director's Conference Room				1	150	150	R	R
A	Associate Director PE				1	150	150	R	R
A	Associate Director Programs				1	120	120	R	R
A	Associate Director Fac / Ops				1	120	120	R	R
A	Facilities Coordinator				1	120	120	R	R
A	Gerlinger Equipment Manager				1	120	120	R	R
A	Associate Dir Services				1	120	120	R	R
A	PE Area Coordinator's Office				7	120	840	R	R
A	Growth Offices				3	120	360	R	R
A	Assistant Dir Marketing				1	150	150	R	R
A	Marketing Workstations				2	60	120	R	R
A	Marketing Workroom				1	220	220	R	R
?	Physical Education Faculty Office				12	120	1,440	R	R
?	Part-Time Employee's Work Stations				12	50	600	R	R
A	Conference Room	15	Persons		1	450	450	R	R
A	Duplication / Mail Room / Admin Area				2	250	500	R	R
?	Administration Storage				4	80	320	R	R
A	Breakroom / Pantry / Lounge				1	200	200	R	R
A	PE / REC Lobby / Guest Seating Area	6	Persons		1	200	200	R	R
A	Student Receptionist				1	100	100	R	R
A	Accounting Assistant				1	120	120	R	R
A	Accountant				1	150	150	R	R
A	Office Manager				1	120	120	R	R
?	Student Employee Work Area				2	120	240	R	R
A	Membership Services				1	250	250	R	R
A	PE / Rec Program Office				1	250	250	R	R

architectural building program summary

	Description	Relevant Info		Replace?	Q	NSF	Extension	Mk	B for Base Program Area	
A	Office Coordinator				1	120	120	R	R	
A	Assistant Dir Membership Services				1	120	120	R	R	
A	Business Assistant				1	120	120	R	R	
A	IM Coordinator				1	120	120	R	R	
A	Assist Dir IM				1	120	120	R	R	
A	Fitness Coordinator				1	120	120	R	R	
A	Assist Dir Fitness				1	120	120	R	R	
A	Conference Room	10	Persons		1	300	300	R	R	
A	The Hub				1	600	600	R	R	
	Un-Funded - Desired spaces. No funding.									
	Steam Room (on Pool Deck)				1	200	200	U	U	
	Improved Building Entry (Future)				1	1,000	1,000	U	U	
	Juice Bar				1	900	900	U	U	
A	Pro Shop (Retail)			24 Ess	1	200	200	U	U	
	Social & Informal Study Areas				3	400	1,200	U	U	
	Tennis Center Expansion	6	Exist Courts	Tennis	2	6,240	12,480	U	U	
	Group Exercise	100	Persons	270 Ger	1	6,000	6,000	U	U	
	Group Ex - Storage			270 Ger	1	600	600	U	U	
	Climbing Wall Addition (Wall & Boulder)	3,100	SF Wall		1	1,900	1,900	U	U	
	Climbing Wall Addition - Storage				1	200	200	U	U	
	New Bonus Room				1	4,000	4,000	U	U	
	New Bonus Room - Storage				1	400	400	U	U	
	Exterior / Grounds Services Room				1	750	750	U	U	
	Classroom	36	Persons		1	900	900	U	U	
	Classroom - Storage				1	100	100	U	U	
	Conference Room	10	Persons		1	300	300	U	U	
	Conference Room	12	Persons		1	360	360	U	U	
	Running Track Extension				1	3,500	3,500	U	U	
	Crew Club Storage			Mac Court	1	120	120	U	U	
	A Denotes Administration Space (above)									
	Sub Totals						172,994			78,304
	Net to Gross Ratio		70%				74,140			33,559
	Gross Area / Bldg Const Cost Subtotals						247,134			111,863
	Bldg Cost / GSF									

	Additional Const Cost Burdens	Relevant Info	Qty	Mk		
	Demolition Cost @ Leighton Pool	Assumes $10 / SF. Not required if used as Cistern	1	B	B	1
	Wayfinding Improvements	Best Guesstimate	1	B	B	1
	Esslinger Renovation Allocation	Plug Number	1	B	B	1
	Cistern Allocation	Best Guesstimate	1	B	B	1
	Demolition Costs @ East Bump on Esslinger	Assumes $10 / SF	1	R	R	-
	Placeholder for things unknown!		1	R	R	-
	Placeholder for things unknown!		1	U	U	-
	Subtotal - Additional Cost Burdens					
	Construction Cost Totals					**111,863**
	Bldg Cost / GSF					

	Site Construction Items			Qty	Mk	
	General Site Costs			30,000	B	B
	Replace Outdoor Basketball	2	Courts	14,400	B	B
	Burden for Roof Top Court(s)	1		12,000	B	B
	Repair Fountain at Existing Front Door			1	B	B
	Replace Synthetic Turf Field No. 2			1	B	B
	Parking Replacement			27	B	B
	General Site Costs (Replacement)			10,000	R	R

architectural building program summary

Description	Relevant Info		Replace?	Q	NSF	Extension	Mk	B for Base Program Area
Site Construction Items						**Qty**	**Mk**	
General Site Costs						30,000	B	B
Replace Outdoor Basketball	2	Courts				14,400	B	B
Burden for Roof Top Court(s)	1					12,000	B	B
Repair Fountain at Existing Front Door						1	B	B
Replace Synthetic Turf Field No. 2						1	B	B
Parking Replacement						27	B	B
General Site Costs (Replacement)						10,000	R	R
General Site Costs (Unknown)						10,000	U	U
Sub Totals								
Total Construction Cost (Building & Site)								
Design Contingency	Ea Phase	10%						
Grand Total Calculations								
Grand Total - Probable Direct Construction Cost, Each Scenario - 2012 Dollars								B

Items excluded in this Statement of Probable Cost

All costs related to the 1% for Arts Program. These are carried elsewhere in the Project Budget
All costs related to the 1.5% set aside for Solar Energy systems. These are carried elsewhere in the Project Budget
All costs related to UO Provided Direct Construction Costs (Computer wiring, A/V Data Eq., Signage, FF&E, Locks & Hardware, etc.)
Owner's Direct Construction Contingency
Design Services & Fees (including A/E, Geotech, Energy, Testing Labs, Air Balancing, etc.)
UO Project Management and Inspection
Miscellaneous Fees (Temp utilities, SEED, LEED, Plan Review, Bldg Permit, etc.)
UO FS Support Costs (Printing, Zone support, EHS support, etc.)
Owner's Cost Contingency

Howard S. Wright
a Balfour Beatty company

Direct Construction Summary

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG		

Description					**Total**
New Addition				$	37,982,470
Leighton Pool Renovation (Fitness/Climbing Wall)				$	1,578,983
Miscellaneous Renovations (Locker Room Area)				$	453,120
Replace Existing Parking Spaces	42 ea	$	5,000.00	$	210,000
Site Work at 15th Street				$	103,988
Project Total				**$**	**40,328,561**

Alternates

Escalation from mid 2013 to mid 2014	3.00%	$	1,209,857
Replace Existing Fire Alarm		$	229,830
Wayfinding Improvements	deleted from project	$	-
Miscellaneous Esslinger Renovations	deleted from project	$	-
Repair Fountain at Existing Front Door	deleted from project	$	-
Replace Existing Field Turf	deleted from project	$	-

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New Construction - Recap

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG	GSF:	117,589

System		Unit Cost	Total
General Requirements		$ 12.98	$ 1,526,280
Sitework		$ 12.24	$ 1,439,290
Foundations		$ 9.58	$ 1,126,715
Substructure		$ 6.44	$ 757,567
Superstructure		$ 31.12	$ 3,659,081
Exterior Closure		$ 37.03	$ 4,354,044
Roofing		$ 15.49	$ 1,822,026
Interior Construction		$ 46.27	$ 5,441,245
Special Construction (Pools)		$ 28.55	$ 3,357,434
Conveying Systems		$ 6.83	$ 803,659
Mechanical		$ 37.07	$ 4,359,002
Electrical		$ 25.13	$ 2,955,332
Subtotal		$ 268.75	$ 31,601,676
Estimating Contingency	5.00%	$ 13.44	$ 1,580,084
Contractors Contingency	2.50%	$ 6.72	$ 790,042
Subtotal		$ 288.90	$ 33,971,802
Escalation to July 2013	2.50%	$ 7.22	$ 849,295
General Conditions	6.00%	$ 17.77	$ 2,089,266
GM/GC Fee	1.95%	$ 6.12	$ 719,752
Builder's Risk Insurance	0.25%	$ 0.80	$ 94,075
P&P Bond	0.68%	$ 2.20	$ 258,281
Total - New Construction		**$ 323.01**	**$ 37,982,470**

Area Recap

Lower Level	45,626	sf
Main Level	34,328	sf
Upper Level	37,635	sf
Total	**117,589**	**sf**

Student Recreation Center University of Oregon Eugene, Oregon Robertson Sherwood / RDG Planning & Design Schematic Design Probable Cost Estimate - REVISION #4	***Architectural Cost Consultants, LLC*** James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA 8060 SW Pfaffle Street, Suite 110 Tigard, Oregon 97223-8489 Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Estimate Date: *Rev 3/28/12* Document Date: 27-Feb-12 Print Date: 28-Mar-12 Print Time: 4:20 PM Constr. Start: 01-Jul-13

DIRECT CONSTRUCTION COST SUMMARY

Component	Area		$ / SF	Total	
New Addition Estimate	117,525	sf	$322.94 /sf	$37,953,934	
Fitness/Climbing Wall Area Remodel Est.	17,200	sf	$92.36 /sf	$1,588,641	
Locker Room Area Remodel Estimate	6,800	sf	$74.25 /sf	$504,874	
Subtotal				$40,047,449	
Replace Parking Spaces	*42*	*ea*	*$5,000.00 / ea*	*210,000*	
06 | Add Site Work @ 15th Street				120,940	
TOTAL DIRECT CONSTRUCTION COST	141,567	sf	$285.22 /sf	**$40,378,389**	
Budget				35,500,000	verify
Indicated Surplus / (Deficit)				(4,878,389)	

ALTERNATES			
01 | Upgrade Membrane Roof	Add ±	118,658	
02 | Add Green Roof	Add ±	34,873	
03 | Upgrade Lockers	Add ±	165,632	
04 | Add Wayfinding Improvements Allowance per previous narrative	*Add ±*	*0*	*deleted 3/13 meeting*
05 | Escalation from July 1, 2013 to July 1, 2014 - Base Bid (Alts NIC)	Add ±	1,201,423	@ ± 2.5% per year
06 | Add Site Work @ 15th Street	Add ±	see above	
07 | Replace Field # 2 Synthetic Turf	*Add ±*	*0*	*deleted 3/13 meeting*
08 | Upgrade Natatorium Skylight	Add ±	82,572	
09 | Miscellaneous Esslinger Renovations	Add ±	0	w/ above ????
10 | Repair Fountain @ Existing Front Door	*Add ±*	*0*	*deleted 3/13 meeting*
11 | Replace Existing Fire Alarm	Add ±	241,099	

The above estimates are for direct construction cost only. They do not include furnishings & equipment, architect and engineer design fees, consultant fees, inspection and testing fees, plan check fees, state sales tax, hazardous material testing and removal, financing costs, nor any other normally associated development costs.

The above estimates assume a competitive subcontractor bids, with at least three qualified bidders in each of the major sub-trades.

The above estimates assume a construction start date of: July 2013. If the start of construction is delayed beyond the date above, the estimates must be indexed at a rate of 3 to 4% per year compounded.

This is a probable cost estimate based on in-progress documentation provided by the architect. The actual bid documents will vary from this estimate due to document completion, detailing, specification, addendum, etc. The estimator has no control over the cost or availability of labor, equipment, materials, over market conditions or contractor's method of pricing, contractor's construction logistics and scheduling. This estimate is formulated on the estimator's professional judgment and experience. The estimate makes no warranty, expressed or implied, that the quantities, bids or the negotiated cost of the work will not vary from the estimator's opinion of probable construction cost.

The cost / unit costs include 1% sub guard bond cost, layout and dust & barrier protection.

Structural steel quantities adjusted per architect and engineer input. ACC dose not necessarily agree with these modifications, but this estimate reflects the directive given by the design team.

The exterior enclosure quantities are quantities provided by the design team.



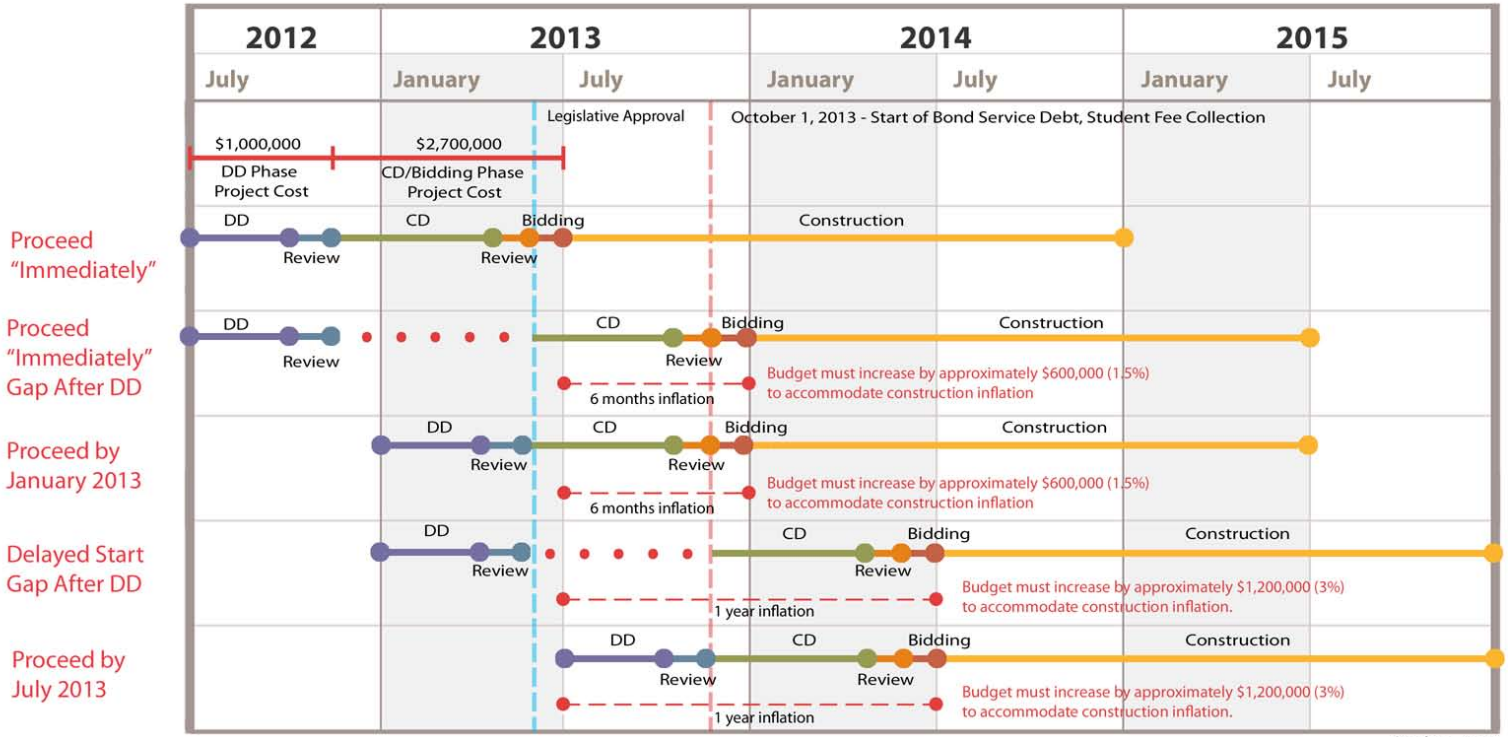
Student Recreation Center	***Architectural Cost Consultants, LLC***	Estimate Date: Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

SUMMARY		New Building Addition		Fitness / Climbing Area Remodel		Locker Room Area Remodel		Totals	
DIRECT CONSTRUCTION COSTS		**$/SF**	**Cost**	**$/SF**	**Cost**	**$/SF**	**Cost**		**Comments**
Area - SF			117,525		17,200		6,800	141,525	sf
001 | GENERAL REQUIREMENTS		13.13	$1,542,972	1.97	$33,875	1.97	$13,393	1,590,240	
A10 | FOUNDATIONS		8.75	1,028,499	0.56	9,634	0.00	0	1,038,133	
A20 | BASEMENT CONSTRUCTION		6.45	757,557	0.00	0	0.00	0	757,557	
B10 | SUPERSTRUCTURE		30.91	3,632,746	7.38	126,921	0.00	0	3,759,667	
B20 | EXTERIOR CLOSURE		37.31	4,384,543	0.00	0	0.00	0	4,384,543	
B30 | ROOFING		14.82	1,741,592	0.00	0	0.00	0	1,741,592	
C10 | INTERIOR CONSTRUCTION		20.54	2,413,934	10.97	188,628	11.82	80,358	2,682,920	
C20 | STAIRS		5.27	619,425	3.17	54,464	0.00	0	673,889	
C30 | INTERIOR FINISHES		21.84	2,566,171	21.57	370,993	16.81	114,293	3,051,457	
D10 | CONVEYING SYSTEMS		1.19	140,036	0.00	0	0.00	0	140,036	
D20 | PLUMBING SYSTEMS		0.00	w /D30 hvac	0.68	11,685	0.43	2,899	14,584	
D30 | HVAC SYSTEMS		34.24	4,023,658	11.16	191,916	7.85	53,403	4,268,977	
D40 | FIRE PROTECTION SYSTEMS		2.67	313,584	1.52	26,058	1.52	10,302	349,944	
D50 | ELECTRICAL SYSTEMS		25.25	2,967,068	9.58	164,818	12.84	87,282	3,219,168	
E10 | EQUIPMENT		2.07	243,614	0.65	11,110	0.00	0	254,724	
E20 | FURNISHINGS		2.16	253,550	0.29	5,050	0.00	0	258,600	
F10 | SPECIAL CONSTRUCTION		28.28	3,323,311	0.00	0	0.00	0	3,323,311	
F20 | SELECTIVE DEMOLITION		2.14	251,219	7.13	122,679	8.36	56,880	430,778	
G10 | SITE PREPARATION		3.03	355,622	0.00	0	0.00	0	355,622	
G20 | SITE IMPROVEMENTS		5.21	612,532	0.00	0	0.00	0	612,532	
G30 | SITE MECHANICAL UTILITIES		2.66	312,426	0.00	0	0.00	0	312,426	
G40 | SITE ELECTRICAL UTILITIES		0.00	w/ D50 Elect	0.00	0	0.00	0	0	
G90 | OTHER SITE CONSTRUCTION		0.00	0	0.00	0	0.00	0	0	
SUB-TOTAL		**267.89**	**$31,484,059**	**76.62**	**$1,317,831**	**61.59**	**$418,810**	**$33,220,700**	
Estimating Contingency	5.00%	13.39	1,574,203	3.83	65,892	3.08	20,941	1,661,035	
Index To Construction Start	2.50%	7.03	826,457	2.01	34,593	1.62	10,994	872,043	
General Conditions	6.20%	17.87	2,100,000	5.11	87,900	4.11	27,935	2,215,835	
Builders Risk Insurance	0.25%	0.77	89,962	0.22	3,766	0.18	1,197	94,924	
Subcontractor Bond	0.00%	0.00	0	0.00	0	0.00	0	0	incl. w/ cost / unit above
CMGC Bond	0.68%	2.09	245,308	0.60	10,268	0.48	3,263	258,839	
Contractors Contingency	2.50%	0.00	908,000	2.21	38,006	1.78	12,078	958,084	
CMGC Fee	1.95%	6.18	725,946	1.77	30,386	1.42	9,657	765,988	
TOTAL DIRECT CONSTRUCTION COST		**315.22**	**$37,953,934**	**92.36**	**$1,588,641**	**74.25**	**$504,874**	**$40,047,449**	

RDG... PA

Project Schedule

University of Oregon, Student Recreation Center



April 23, 2012

Project User Group

Dennis Munroe, Director, Physical Education & Recreation, User Group Chair
Mike Eyster, Associate Vice-President, Student Affairs
Jen Phillips, Research Associate of Neuroscience
Julie Haack, Professor of Chemistry
Rob Thallon, Associate Dean of Administration and Associate Professor of Architecture
Bryan Haunert, Associate Director of Facilities and Operations, Physical Education & Recreation
Brent Harrison, Associate Director of Recreation Programs, Physical Education & Recreation
Sue Wieseke, Accountant, Physical Education & Recreation
Kristen Gleason, Coordinator, University of Oregon Club Sports
Geoff Hale, Student Representative of the Student Recreation Center Advisory Board
Michelle Vander Heyden, Associated Students of the University of Oregon
Derick Olsen, Student Employee of the Student Recreation Center

Project Management Team

Gene Mowery, Campus Planning and Real Estate
Greg Lobbiser, Associate Vice-President for Capital Projects, Student Affairs
Dennis Munroe, Director, Physical Education & Recreation
Bryan Haunert, Associate Director of Facilities and Operations, Physical Education & Recreation
Darin Dehle, Director, Capital Construction
Charlene Lindsay, Capital Construction
Emily Eng, Campus Planning and Real Estate
Carl Sherwood, Principal, Robertson/Sherwood/Architects
Dan Pelissier, Project Executive, Howard S. Wright (CM/GC)

Student Steering Committee (ASUO Appointment)

Brandon Morelli
Craig Speck
Katherine DuPont
Alex Sylvester
Gabriella Ailstock
Sophie Luthin
Many Garcia
Cedar Cosner
Rachel Gowland

Project Participants

University of Oregon, Student Recreation Center

Design Team and Consultants

Robertson/Sherwood/Architects PC (RSA)

Carl Sherwood	Principal-in-Charge
Dave Guadagni	Project Manager

RDG Architects PC (RDG)

Jack Patton	Principal
Jeff Schaub	Project Designer
Jim Henry	Project Designer
Emlyn Altman	Lighting Designer
Michael Andresen	Sustainability Coordinator
Justin Platts	Landscape Designer

Poticha Architects (PA)

Otto Poticha	Principal

KPFF Civil Engineers

Matt Keenan	Civil Engineer

Cameron McCarthy Landscape Architects (CM)

Matt Koehler	Landscape Architect

M.R. Richards Consulting Engineers (MRR)

Mark Richards	Structural Engineer

Interface Engineering (IE)

Andy Frichtl	Principal / Mechanical Engineer
Steve Dacus	Mechanical Engineer
Chris Larson	Electrical Engineer

Energy Studies in Buildings Lab (ESBL)

G.Z. Brown	Lab Director, UO Professor of Architecture

Aquatics Design Group (ADG)

Justin Caron	Pool Designer

Creighton Engineering, Inc. (CEI)

Scott R. Creighton	Code Consultant & Fire Protection Engineering

Construction Manager/General Contractor (CMGC)

Howard S. Wright (HSW)

Dan Pelissier	Principal-in-Charge
Bill Jensen	Cost Estimator

UO Independent Cost Consultant

Architectural Cost Consultants

Stan Pszczolkowski	Cost Estimator
Will Gerstner	Cost Estimator

UO Independent Energy Analyst

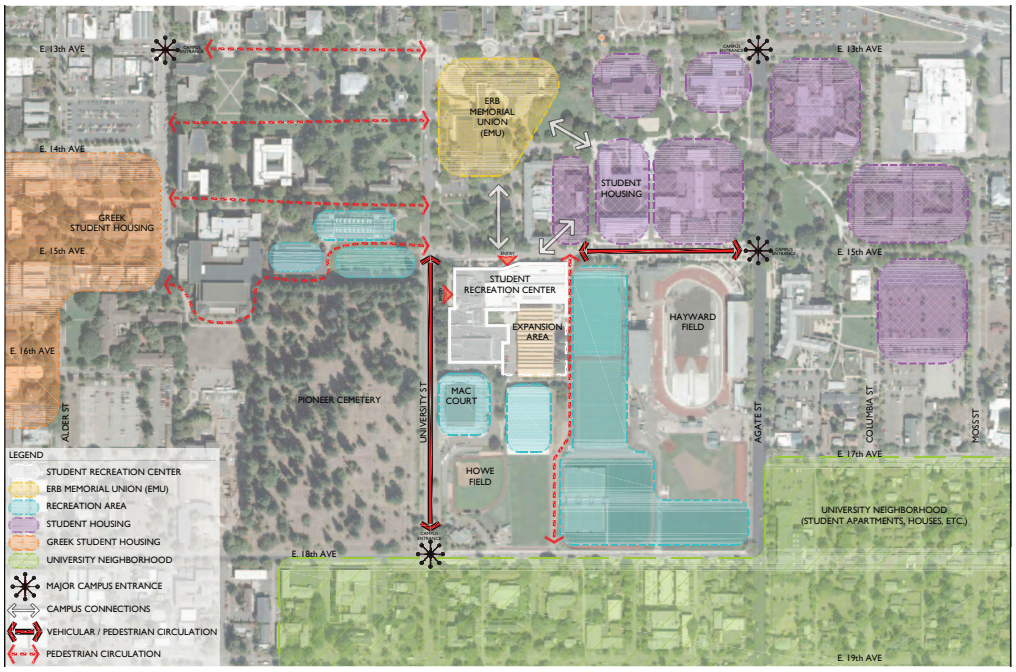
Glumac

Mitch Dec	Senior Energy Analyst
Lura Griffiths	Senior Energy Analyst

The Schematic Design for the University of Oregon Student Recreation Center Expansion and Renovation Project evolved over a roughly seven-month period beginning in early October 2011 and ending in May 2012. Weekly meetings throughout this period were held with the management team. The design team collaborated with the Project User Group (PUG) through a series of seven multi-day workshops, met four times with representatives of UO Facilities Maintenance (Integrated Design meetings), met three times with the Campus Planning Committee, met twice with an Accessibility Focus Group, and met once with the City of Eugene in a Limited Consultation code review meeting. Meetings with nine SRC appointed focus groups were held (refer to PUG Workshop records in Volumes 3 and 4) and the Project was presented to the SRC staff at four separate meetings.

A Student Steering Committee was established mid-way through the schematic design process by the Associated Students of the University of Oregon (ASUO) to provide design feedback. The Design team presented the design to this group and they were invited to attend further workshops. They were also invited to comment on the design in workshops #5, 6 and 7.

A list of these PUG meetings and key agenda items follows. Complete workshop notebooks are included in Volumes 3 and 4 of this report.

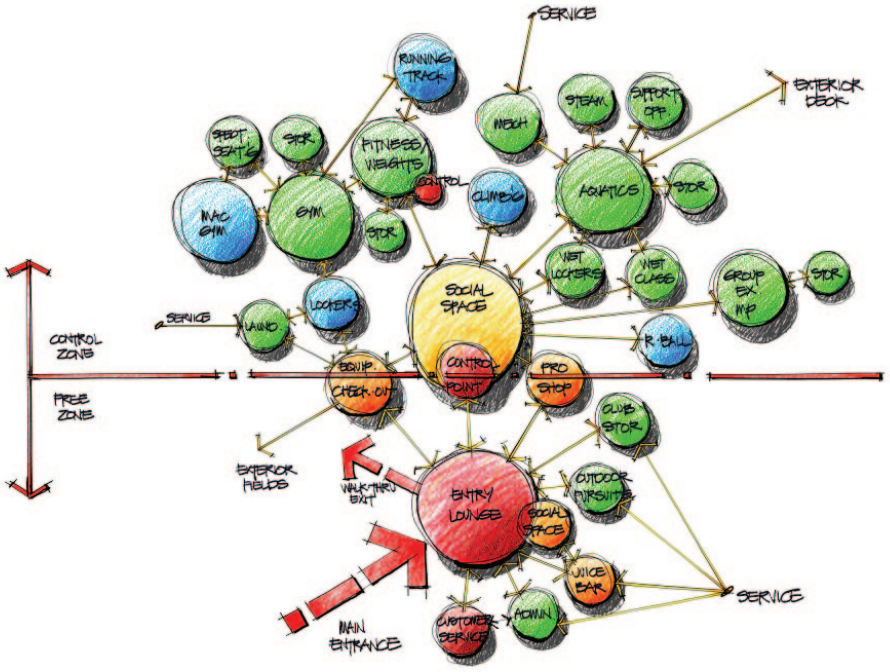


Facilities Tour – August 29 – September 1, 2011

University of Cincinnati
Ohio State University
University of Dayton
Ball State University
Indiana State University
University of Illinois
University of Illinois-Chicago

PUG Work Session #1 – September 27 – 29, 2011 - Programming

Identify Design Criteria
Visual Learning / Trends / Research
Facility Tours Debrief
Define Goals: Function, Design, Sustainability
Walk through of existing facility
Leighton Pool Assessment
Identify / Validate Initial Pattern Language
Contextural Survey / Master Plan
Identify initial Program spaces, and initially program each
Develop initial Area / Cost Model
Develop Functional Relationship Diagram
Create Initial Site Analysis
Benefit / Drawback Summary of Existing Facility



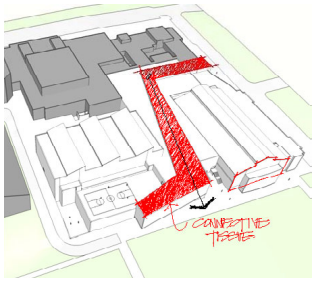


PUG Work Session #2 – October 18 – 20, 2011 - Programming

Discuss initial SEED / LEED Targets and Strategy
Review Program Space Summaries
Review Area / Cost Model
Value Engineering, as required (right-sizing facility & budget)
Review Functional Relationship Diagram
Review Conceptual Blocking Diagrams
Validate Pattern Language
Evaluate Site Design Options / Opportunities
Review / determine initial “Add-Back” Items
BIM Model Strategies
Initial Parti Diagramming (the basis for conceptual design) *Review and Approve Program*

PUG Work Session #3 – November 1 – 3, 2011 - Conceptual Design

Review Core Purpose Summaries / Guiding Principles
Review and Evaluate Conceptual Design Options
Evaluate the Benefits / Drawbacks of each Option
Compare Options against Pattern Language
Discuss SEED / LEED Opportunities in Options
Review Area / Cost Model
Value Engineering, as required
Define / Determine specific “Add-Back” Items



PUG Work Session #4 – December 13 - 15, 2011 - Schematic Design

Review Options of Schematic Design
Review initial Image Vignettes
Discuss Material Selections
Review Consultants' Initial System Concepts
Review Final Area / Cost Model, including "Add-Back" Items
Confirm initial Outline for SD Report
Confirm Project Schedule

PUG Work Session #5 – January 17 - 19, 2011 - Schematic Design

Present proposed Schematic Design
Review Updated Area / Cost Model
Comparison with CM/GC Cost Estimate
Conduct "Value Analysis" as needed
Evaluate proposed Schematic Design
Interactive work session
Develop Initial Schematic Design Recommendation to CPC

PUG Work Session #6 – February 12 – 14, 2012 - Schematic Design

Student Steering Committee Comments and Questions
Review and Evaluation of Exterior Schematic Design
Review and Evaluation of Interior Schematic Design
Recap of User Group Comments and Issues to be Resolved
Review Schedule for Schematic Design, including Completion

PUG Work Session #7 – April 18 - 20, 2012 - Schematic Design

Review / Adjust / Confirm Schematic Building Design
Review / Adjust / Confirm Schematic Site Design
Confirm Project Budget
Prepare for CPC Review
Prepare to put all Work on Hold until Design Development



In addition to the PUG meetings the following meetings were held:

Integrated Design Meetings – June 29, October 26, December 21, 2011, January 19, February 15, 2012

Jointly held meetings that included PUG members, UO Planning, UO Capital Construction, CM/GC, and the Design Team and their to discuss and clarify Project goals and systems.

Campus Planning Committee (CPC) Meetings – January 18, February 16th, April 30, 2012

Review Project's site design, massing and elevations and their impact on the larger Campus.
In addition, the PUG met with the CPC in advance of design team involvement.
Refer to meeting minutes in appendix.

Accessibility Focus Group Meetings – January 18, March 7, 2012

Review Project Scope and Accessibility Goals.
Refer to meeting minutes in appendix.

ASUO Student Steering Committee Meeting – February 8, 2012

Present Schematic Design Scope.

City of Eugene – Limited Code Consultation Meeting – February 15, 2012

Review of specific Project code Issues with COE Code Analyst and Fire Marshall.
Refer to meeting minutes in appendix.

CM/GC - Estimators Meeting – December 21, 2011, March 12, 2012

Review Budget and Funding Issues
Resolve Estimate Format

UO Facilities Schematic Design Review – February 28, April 9, 2012

Present of SD Scope and review of SD report comments.
Refer to SD Report Comments in appendix.



Design Objectives

The project vision for the SRC Expansion and Renovation is to create a facility that meets current needs and plans for the future needs of student recreation and academic programs as the University's enrollment continues to grow. An expanded, enhanced and renovated SRC will be a popular campus venue that celebrates recreational, social, and intellectual activities. It will be a substantial contribution to the development of the campus and contribute positively to the student experience and overall residential quality of campus. The added capacity and features will also make the SRC attractive to the broader UO community, which (in addition to students) includes faculty, staff, alumni, and their children.

Ultimately the intent of the new construction is to create a durable, attractive, well daylit and energy efficient structure that will serve the campus community's recreation needs for many years to come. The facility will be designed to exceed State Energy Efficient Design (SEED) standards, targeting the UO Model of Sustainable Development of 35% more energy efficient than Oregon Energy Code requirements, and a goal of meeting the Leadership in Energy and Environmental Design (LEED) Gold standard.

Patterns

The *Campus Plan* requires the consideration of specific Patterns. A pattern is defined as "any general planning principle which states a clear problem that may occur repeatedly in the environment, states the range of contexts in which this problem will occur, and gives the general features required by all buildings or plans which will solve this problem." (*The Oregon Experiment*, pg 101, by Christopher Alexander)

As required by the UO *Campus Plan* and in order to help accomplish the design objectives, the PUG identified a list of Patterns from the Campus Plan to help inform and focus the design effort. In addition, the PUG developed several patterns specific to the Project.

A complete description of these Patterns can be found in the *Campus Plan*, in the User Group produced Project Description, and in the Workshop 2 booklet included in Volume 3 of this report. The list of Patterns is extensive so the Design team focused on the following as the most relevant for early Schematic Design discussion:

- Wholeness of Project
- Building Complex
- Connected Buildings
- Flexibility and Longevity
- Future Expansion
- Engage in Sustainability
- Architectural Style
- Dynamic Building
- Clear Organization, Sightlines and Adjacencies
- Supportive of Social Interaction
- Inclusive and Welcoming to All
- Universal Access
- Rooms that Fit and are Flexible
- Easily Supervised
- Pedestrian Pathways from Open Space Framework
- Site Repair
- Positive Outdoor Space
- South Facing Outdoors
- Main Building entrance

In addition to the pre-selected Patterns, the following Patterns were developed by the PUG during the Schematic Design Phase. Refer to Workshop Notes in Volume 3 and 4 for further description of these Patterns.

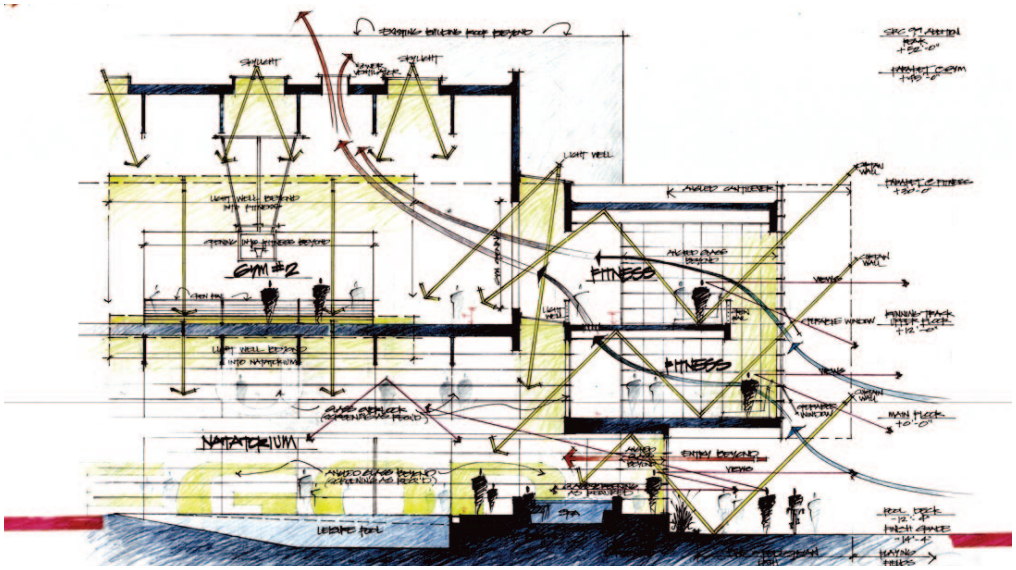
- Variety of Food Out Front
- Bring nature In / Program Out
- Sound of the Place
- Meatheads to the Back
- Pools are Architecture, Design Them Well

Integrated Design

At the beginning of the SD Phase, the design team and consultants met with Campus Planning and Real Estate (CP&RE) Capital Construction, and Facilities/Operations staff to discuss environmental issues, including energy and sustainability goals, as they related to the integration of the design and the building systems. Additional meetings were held where key stakeholders were brought together to review the status of the design and to discuss and clarify project goals and expectations. The focus was on making sure that each group understood the status of the project, timelines for making key decisions regarding systems strategies, and most importantly, the needs and expectations of the other groups. Specific areas needing additional research and decision making were determined and specific members tasked with leading these efforts.

The main focus of the integrated design process is on environmental issues, but the grouping of all interested parties allows for discussions beyond this limited focus. Issues that could impact any aspect of the design were discussed and considered in a larger context rather than in isolation.

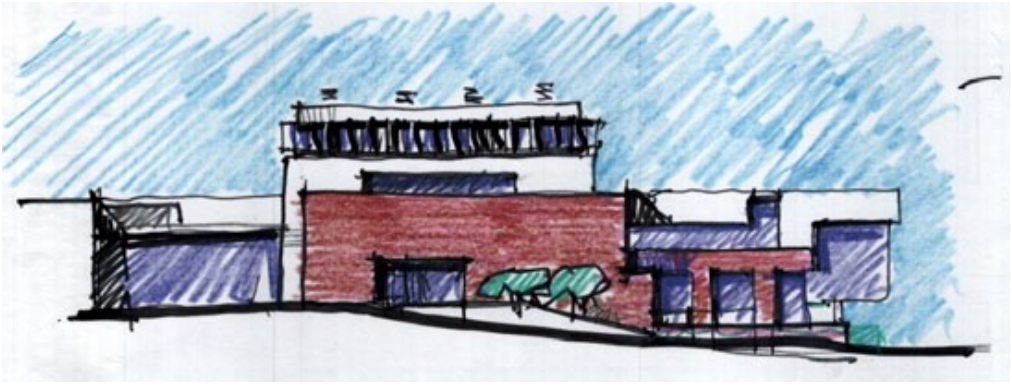
This process will continue as the project moves into the later design stages with an emphasis on continued cooperative effort, fine-tuning the project goals, and eventually establishing methods and metrics to predict the building performance relative to established goals.



Master Plan

The planning and design work for the expansion and renovation of the Student Recreation Center (SRC) is being completed in full light of the Department's vision for the future. That vision includes the opportunity to attract and engage more recreation and Physical Education participants in the campus programs, and for possible future replacement of all spaces currently used inside the Esslinger building.

Based upon many metrics and analyses, the current building expansion program of more than 110,000 GSF will serve most, but not all, of the foreseeable user demand experienced by the University's Physical Education and Recreation Program. Master planning for the future needs thus became a prime consideration for development of the Schematic Design. The master plan for this facility seeks to meet these demands in future expansion and renovation, by holding physical space for future construction and aligning connectivity with the currently proposed renovations – the future building parts and spaces will fit well with the current ones!



Program

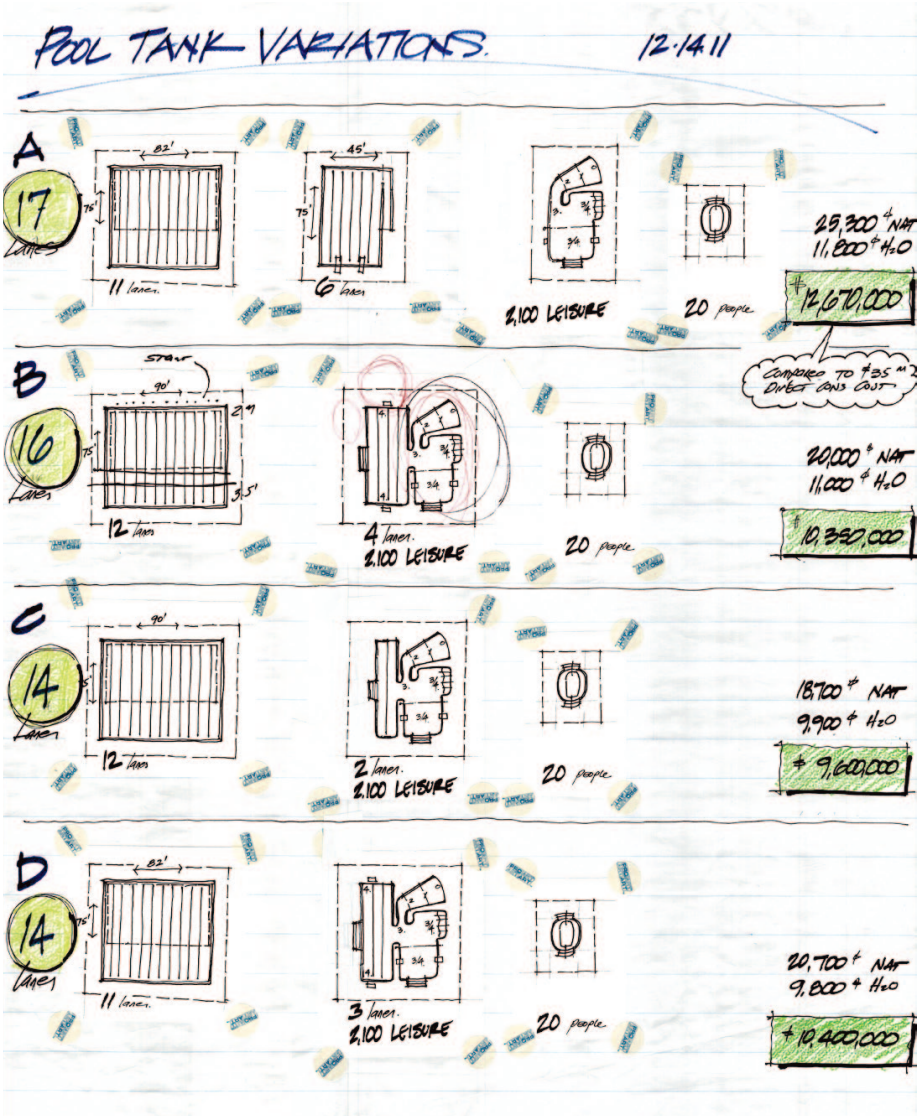
The information included in the Master Plan and Campus Consultation Process report (2010) by Brailsford & Dunlavey was utilized in determining the initial program requirements for the Project.

Early on the PUG established four main project priorities:

- Expand aquatics
- Expand weights and fitness
- Expand court sports
- Improve wayfinding

A program, including spatial diagrams, was developed to establish a list of required spaces along with their size, key components and adjacencies. This program established the total proposed area of new construction and also listed non-funded but desired spaces, including accommodations for Healthy Oregon Programs spaces and selective renovation work in Esslinger. This program was reviewed and refined through a series of focus group meetings and PUG workshops and eventually formed the basis for a series of initial design options. A copy of the full program and spatial diagrams is included in Volume 2 of this report.

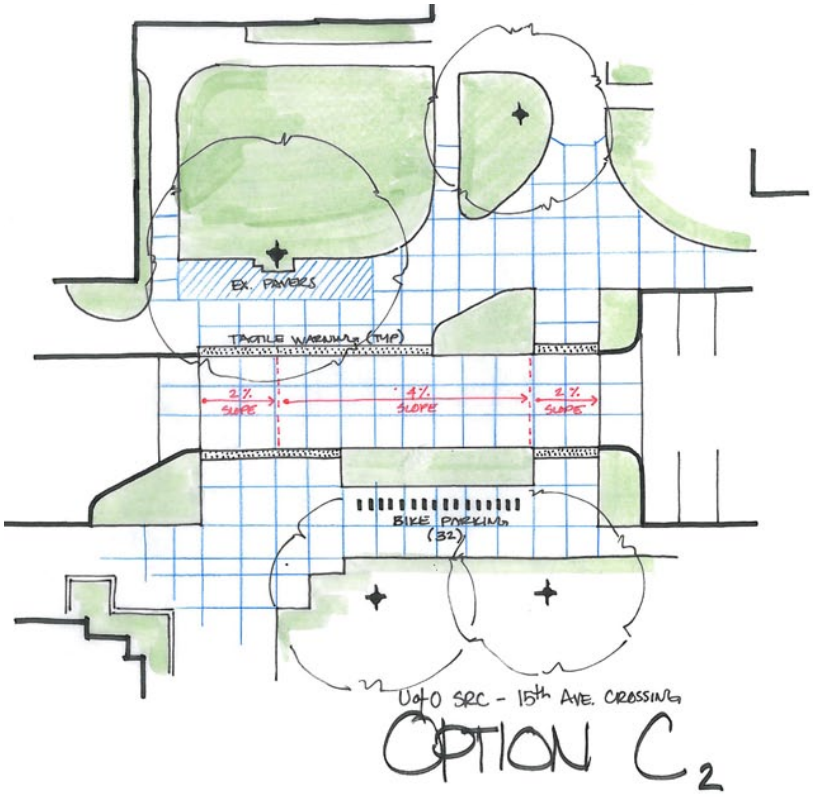
This program was reviewed and refined through a series of focus group meetings and PUG workshops and eventually formed the basis for a series of design options.



Key Design Goals

There are several key design goals and concepts that had a significant impact on the Schematic Design. Initially identified as project priorities, they were refined and expanded upon as follows:

- Rightsizing the natatorium: balancing the program needs with the budget limitations.
- Rightsizing weight and fitness: increasing capacity and opportunities then placing them in appropriate locations.
- Wayfinding: making the building organization and pathways simple to understand and navigate and providing transparency between spaces to highlight activity opportunities.
- Sustainable Design and Education: incorporating energy management and environmental stewardship strategies, then showcasing these strategies so the building itself becomes a student learning opportunity.
- Serving the wide range of individuals in the campus community: serving those with special needs, body or privacy issues to those seeking highly interactive social settings.
- Fitting in with the Campus Community: creating a unique and exciting user experience in a building that fits in with the wider campus structure.
- Unify the new with the existing and create an honest expression of building use and function.



Open space improvement - 15th Avenue Pedestrian Crossing

Code Analysis

A detailed Preliminary Code Analysis was completed by Creighton Engineering and is included in the appendix. Primary findings of this analysis which have driven Schematic Design decisions are as follows:

- Review of documents submitted by architects for the 1999 SRC addition indicate that the existing Esslinger structure was considered a Type III-N fully-sprinklered structure, Leighton Pool and the 1999 SRC were considered a Type II FR fully-sprinklered structures. In comparing the 1999 code requirements with the current 2010 Oregon Structural Specialty Code (OSSC), Esslinger would now be classified as a Type 2-B construction type and Leighton Pool and the 1999 SRC as a Type 1-B construction type.

- At the time of the 1999 SRC project an assumed property line was established at the wall separating the lesser-rated Esslinger Hall from the Leighton Pool / 1999 SRC construction. This assumed property line was established along the west edge of Leighton Pool turning east at the north wall then turning north along the west edge of the SRC entry area. The walls along this line were constructed to a 4-hour fire rating with 3-hour protected openings. Current code would allow this wall to be constructed to meet a 3-hour fire-rating with 3-hour protected openings. All new construction built against the existing Esslinger structure would have to be separated by a continuation of this fire wall.

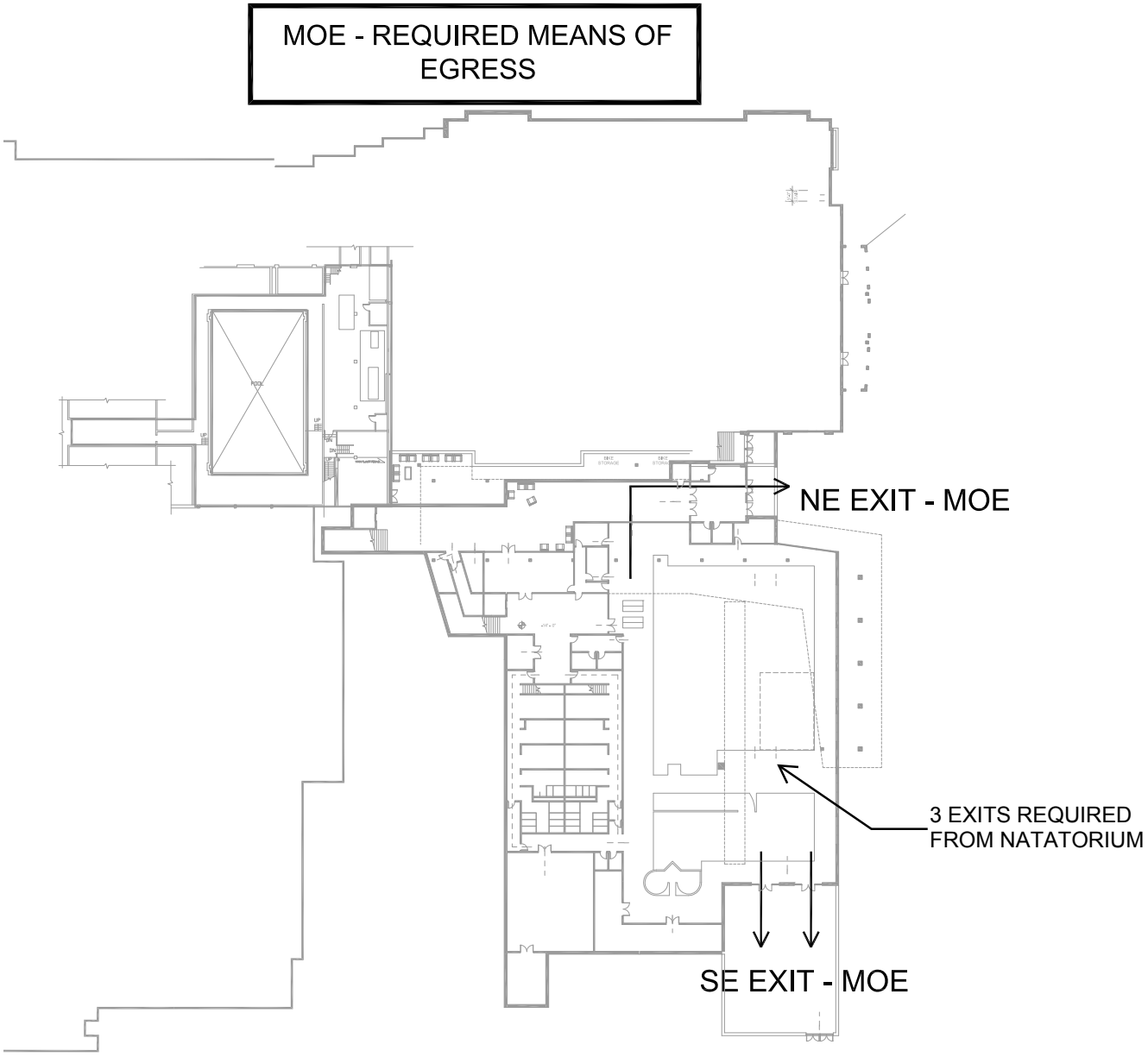
- The existing structures are fully fire-sprinklered, but some upgrades might be required. The new structure would also be fully-sprinklered with quick release heads and will have an emergency voice alarm communication fire alarm system.

- Exiting from the existing building will be impacted by the new construction and safe exiting pathways will need to be provided both during the construction period and as a component of the new design.

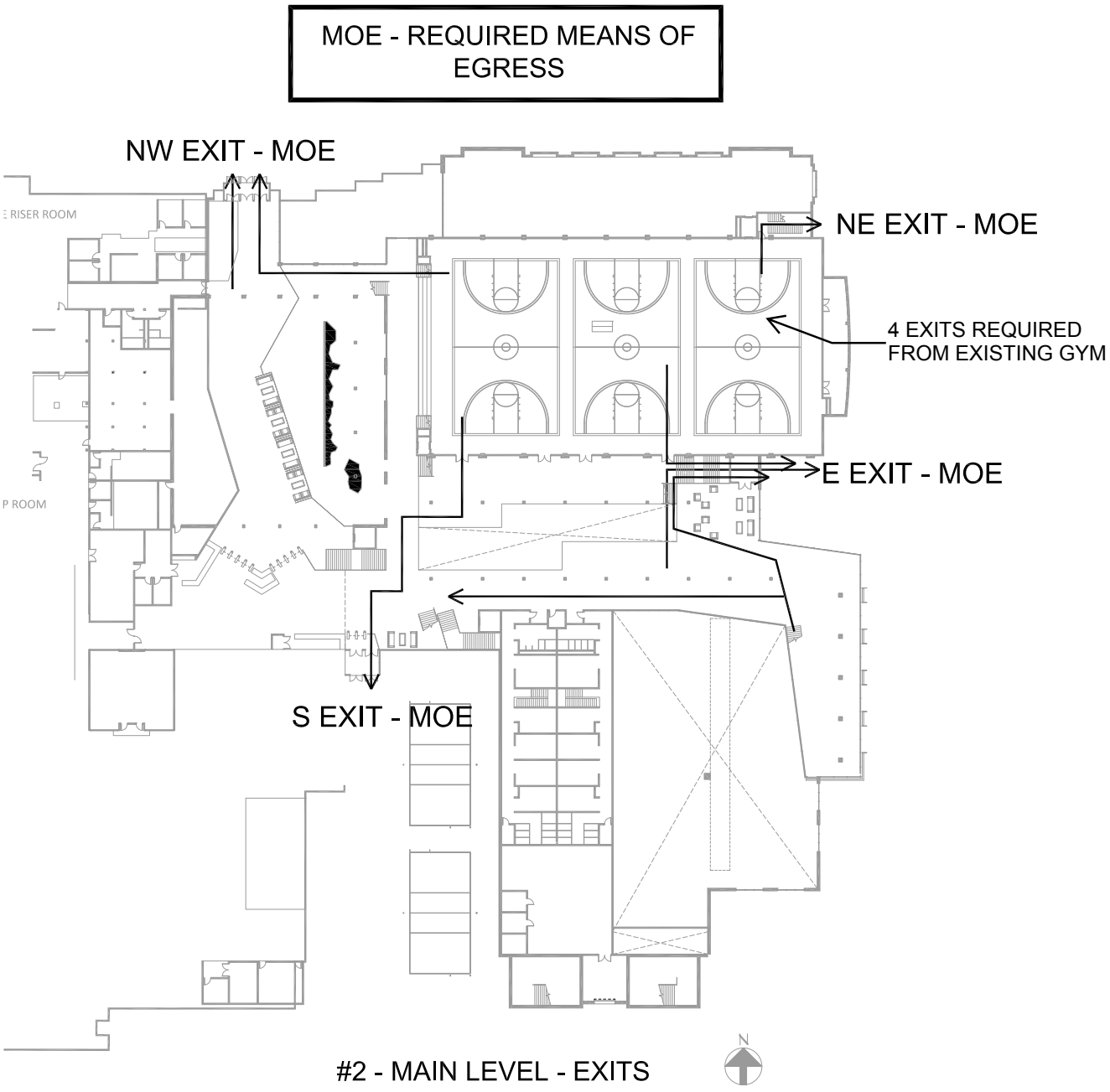
- After the completion of this report, the project will be put on hold for an undetermined amount of time. It is likely that when the Project is submitted for permit review a new code will be in effect. Codes are typically updated every three years with the current code taking effect in April of 2010. Although it is not certain, the expectation is that the code will not change significantly on issues important to this project since the standards for this project are already at a high level. When the new code is adopted the current code analysis will be updated and the design checked and modified to respond to any new standards.

- The proposed code path basics are:

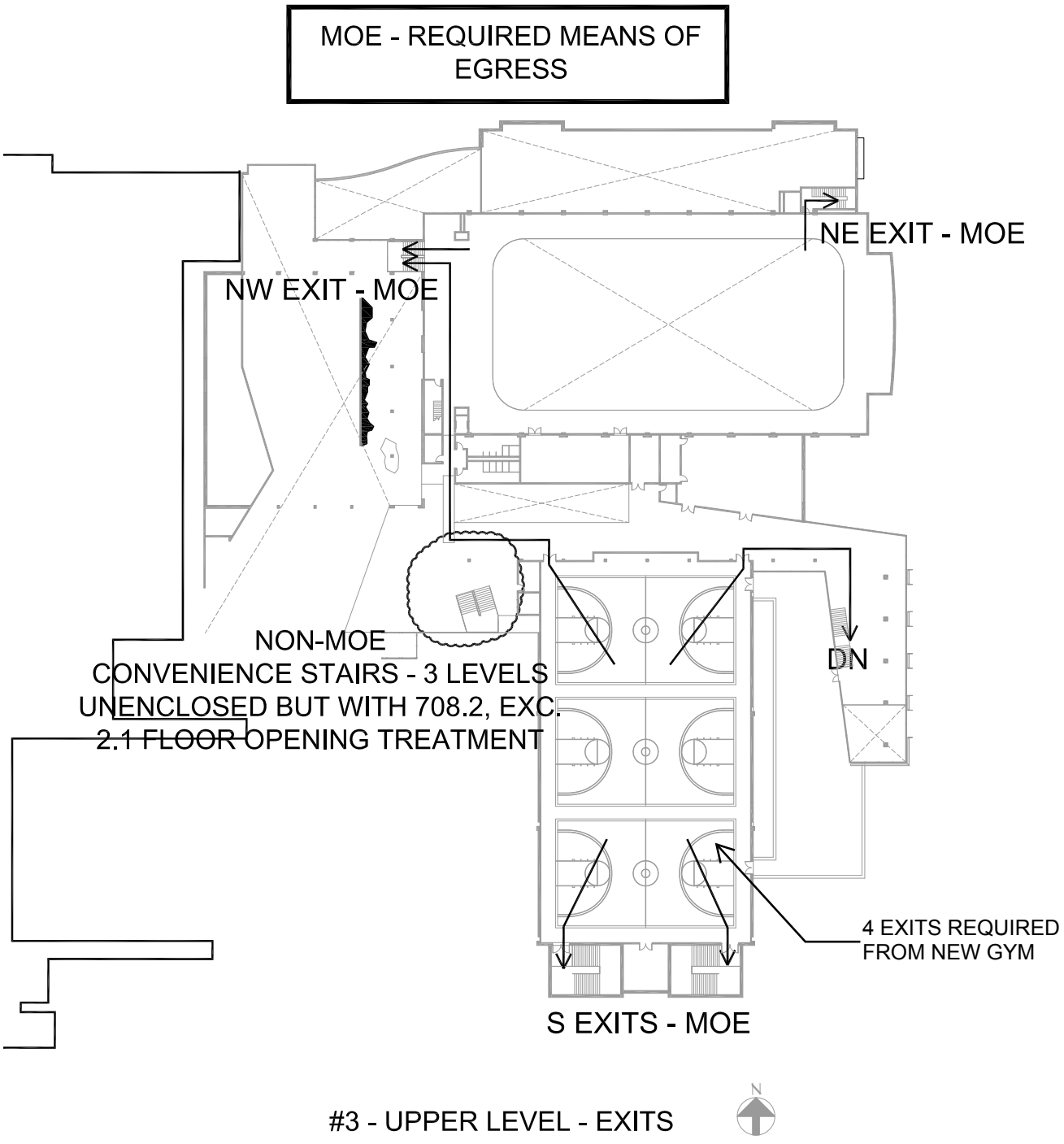
Type of Construction:	1-B. Non-combustible construction
Fire Sprinkled per 903.3.1.1	Yes
Predominate Occupancy	A-3
Bldg Maximum Height	180 FT (160 FT + 20 FT)
Bldg Maximum Stories	Unlimited
Chapter 5 Design Option:	Non-Separated Uses: Occupancies, A-3, A-4, B.
Incidental / Accessory Uses:	None Proposed
Interior Fire Walls:	Existing fire wall to be maintained and extended
Interior Fire Barriers:	There will be no Occupancy Separation fire barriers. Overall there will be very few FBs in this work.
Interior Fire Partitions:	Corridors Non-Rated (Table 1018.1)
Shafts:	1-2 hour shaft; most will be 2 hour due to penetrating 1-hour floor construction
Shaft Opening Protection:	Fire Damper required unless Exc # 1
Shaft Opening Protection:	Smoke Damper required
Manual Fire Alarm System:	Required – with Voice Evacuation Notification
Engineered Smoke Control:	Required for 3 levels open to each other. Not required for 2 levels open to each other after fire alarm initiated floor separation (horizontal fire shutters).
Area Smoke Detection:	Undetermined quantity of area coverage at this time. Will be required for ESC Section 909 (3 levels open to each other)
Exiting	Two – four remote vertical exits required



#1 - LOWER LEVEL - EXITS



#2 - MAIN LEVEL - EXITS



#3 - UPPER LEVEL - EXITS

Project Schedule

The initial project schedule indicated the completion of the design and construction document phases of the work early in 2013 and on-site construction starting in early July 2013. This schedule was based on a successful student vote in November, 2011 that supported the student fee increase to fund the project. The vote failed and the project design has been delayed by the process to obtain student support and OUS Board approval. If the remaining phases of the design proceed by July 2012, the initial targeted construction start of early July 2013 may be met. The length of construction period is assumed to be about 18 month. A more definitive design and construction schedule will be developed once a resumption date of the project is known.

If the project's temporary hold extends beyond early July, the design and construction schedules would move accordingly. Depending on the length of delay there may be issues to address as the project restarts. Upon notification by the University to proceed, the following steps should be taken:

Project Restart Steps:

- Notify Design Team and re-establish management and PUG groups
- Confirm budget with consideration of possible inflation and restart costs
- Affirm program and design direction with PUG
- Review code assumptions against new code requirements (if any)
- Start Design Development phase of work

Once restarted, the design team will proceed with the Design Development (DD) phase of the work. There will be a number of unique tasks to be completed during this phase including the following:

Project Unique Design Development Tasks by UO and/or Design Team:

- Traffic Study: completed by UO to mitigate transportation component of City Systems Development Charges (SDCs)
- 1% for Art: process initiated by UO
- SEED: Design team to coordinate with Glumac (UO consultant)
- Computational Fluid Dynamic (CFD model): determine with UO who will provide model
- Geotechnical analysis of east playing field: determine if field is adequate to support fire department aerial fire truck
- Review current code assumptions against 2012 code when adopted. Of particular interest is possible impact to energy requirements and exit widths.
- Variable Frequency Drives: determine with UO, pool consultant and energy consultants the desire to push the envelope with this energy savings strategy
- Natural ventilation at new Gym: determine with UO and energy consultants the desire to push the envelope with this energy savings strategy

SUSTAINABILITY PLAN

Energy Goals

Using the Oregon Model for Sustainable Development as a guideline, the project team has focused on designing a high performance building with the intent of reducing energy consumption by 35% compared to current Oregon Energy Code compliant facilities. To accomplish this goal, a variety of energy conservation strategies have been adopted and refined during the team's integrated design sessions, including: conserving energy for hot water heating, HVAC&R system options, renewable energy sources, and mix-mode systems that take advantage of passive systems (such as natural light and ventilation) to reduce the energy needs of active systems – artificial light and ventilation as an example. Focusing on "value", the project team has identified and prioritized systems and technologies that can produce a positive return on investment, including: solar thermal technology, intelligent building controls & sensors, and the reuse of waste energy. Additionally, our integrated design sessions, with the assistance of the Energy Studies in Building Laboratory (ESBL), have also refined concepts to optimize passive strategies, such as natural ventilation, thermal mass, and natural lighting.

Energy Programming

The Energy Studies in Building Laboratory (ESBL) produced an energy programming document (refer to appendix for complete document) which took preliminary program and design information and created various matrixes to illustrate beneficial adjacencies. This document suggested either gathering together or separating specific spaces in order to make more efficient use of energy and to take advantage of shared daylighting and natural ventilation and cooling opportunities. Noise control and reverberation concerns between spaces, along with the separation of public and private spaces, were also diagrammed. This information was used as a tool early in the design process to optimize, from an energy standpoint, the organization of the spaces. The plan diagrams used in this study were based on preliminary program analysis and do not reflect the current design.

Daylight Studies

Daylight studies were also conducted by ESBL. Scaled models were created of various portions of the building including the Natatorium, Main Street and East Entry multi-story volume. Sensors placed within the models gathered lighting information representative of actual daylight under various lighting conditions. More regular spaces such as the 3-court gym were also evaluated but were not modeled. These studies informed the design regarding the optimum size and locations of skylights and clerestories.

Sustainability Plan

While not yet fully defined, this project holds great promise that construction waste management (CWM) strategies will be mandated for the construction trades. This includes the separation of construction and demolition debris, as well as waste distribution to recycling and reclaims centers. CWM goals include:

- Divert a minimum of 75% of the projects Construction & Demolition debris from the landfill
- Identify opportunities to reuse construction waste – for example, crushing concrete debris for use as sub-base or clean backfill

In addition to CWM, the project hopes to promote sustainable construction practices. Practices will include, Third Party Commissioning of the building's energy using systems, photographic documentation of the best management practices (BMP's) implemented on the project, and Outdoor Air Flush of the entire facility – Pre Occupancy. Additionally, it will be desirable to select materials that conform to the following principals:

- Locally sourced and sustainably harvested materials
- Materials manufactured with recycled and renewable content
- Healthy materials with low and/or no VOC content

Solar technologies will be utilized on the project. This includes solar thermal collectors and photovoltaic array panels. The project has earmarked 1.5% of the construction budget to pay for solar technologies. An energy model will be initiated during Design Development, and will help to identify the size / capacity of the solar technologies. At this time, we assume a majority of the earmarked funds will be allocated to solar thermal technologies. Solar thermal technologies are a fundamental energy conservation strategy for the project, and will yield a very favorable return on investment (ROI) for the University. Remaining funds will be allocated to additional solar technologies, and will be evaluated based on an informed decision making process - considering life-cycle cost, environmental impact, as well as a technologies value as a demonstration/teaching tool.

The project's bio-climatic design is intended to harmonize with site natural environmental forces, such as: thermal changes, solar capacity, and local wind patterns. As such, the project has planned for thermal mass and operable windows to allow spaces to take advantage of natural ventilation. A CFD analysis (computational thermal dynamics) will be initiated during Design Development. The CFD analysis will allow the design team to "tune" the building's windows and massing to optimize its potential for natural ventilation strategies – thus reducing the facility's energy consumption and carbon footprint. While not yet fully defined, operable wall louvers, operable windows, and roof top ventilators will be fundamental to the success of a natural ventilation strategy. It should be anticipated that these technologies will be implemented in large volume spaces, such as the new three-court gym.

The effective use of natural daylight is a foundational concept of the facility's design. The project team has incorporated both horizontal and vertical glazing strategies into the design. Horizontal glazing (skylights) is the most efficient daylight strategy for large, centrally-located spaces like the gym and atrium. Perimeter spaces will capture daylight from vertical glazing. The project's daylight strategy balances light contribution, thermal performance, as well as human comfort (i.e. glare), to optimize both economic and environmental value for the University. In addition to the window design, the building will utilize intelligent lighting controls that will turn lights off in unoccupied spaces, and lower artificial lighting levels in spaces that have adequate natural lighting. The project goal is to effectively daylight 75% of the occupied spaces. Daylight design, in conjunction with efficient artificial lighting design, could reduce the building's electrical consumption by over 30%.

The project is registered with the US Green Building Council's Leadership in Energy and Environmental Design (LEED) green building rating system. The University has identified a target of achieving LEED Gold Certification. A variety of design and construction strategies contribute toward LEED Certification. Strategies are divided into five primary categories: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Indoor Environmental Quality, and Material Resources. The project team has implemented strategies aimed at improving the performance in each of these categories.

Early project concepts anticipated the demolition of Leighton Pool. As a result of the project team's integrated design approach, Leighton Pool has been identified as an important asset to be repurposed as part of the design of the new facility. Leighton Pool will be covered, and its existing volume will be divided into sections. The pool will provide storage space for a very large quantity of water. Stored water will act as a "thermal battery", helping to condition occupied spaces in the facility. The water temperature will be regulated with a combination of strategies, including waste heat reclamation and solar thermal collectors. Additionally, the pool system will collect and store stormwater from the building's roof and repurpose this water for flushing the toilets and urinals. In summary, conserving the Leighton Pool tank will reduce demolition costs, reduce construction waste, and reduce the need for new construction materials by repurposing the existing space. In addition, the system will reduce amount of stormwater runoff, offset the facility's potable water demand for flushing, provide water for site irrigation, and contribute toward the project's overall energy efficiency goal. The repurposing of Leighton Pool is a great demonstration of the University's commitment to sustainable practices, as well as a great educational opportunity for students and visitors.

Additional comments on sustainable design are included in the individual narratives as they related directly to individual systems such as mechanical, plumbing and electrical.

State Energy Efficient Design (SEED)
The design team will be working in conjunction with the Energy Analyst to provide an analysis of the Oregon Office of Energy's SEED program requirements for the project as well as efficient implementation strategies for cost effective Energy Conservation Measures (ECMs). The University has selected Glumac, as Energy Analyst to provide these services.

Leadership in Energy and Environmental Design (LEED)
The project team has a goal of meeting LEED gold requirements with LEED silver as a contract minimum. The project is now registered with the United States Green Building Council (USGBC) and it will be up to the University to decide if LEED documentation will be collected and submitted in order to receive official certification. Refer to the appendix for the LEED checklist.

Commissioning
The UO intends to hire an outside consultant to provide independent commissioning services. Although the bulk of commissioning services are aimed at checking mechanical and other systems at project completion, they also provide commissioning specifications and can provide systems evaluations during the design phase. It is the recommendation of the design team that this consultant be hired early in the design process so that they can offer early comment on systems selection, design and specifications.

Next Steps
The design team will continue to refine building systems design and materials selection to meet project sustainability goals. Meetings need to be set up between the design team and SEED analyst to review Energy Conservation Measures (ECMs) for the project to determine the project energy savings and costs.

Additionally, meetings will be set up with the CM/GC to review strategies for minimizing construction waste sent to the landfill, and with UO Facilities personnel in order review the range of possible sustainable materials that could be approved for use in the building.

CIVIL NARRATIVE

Existing Conditions

The existing topography at the Student Recreation Center (SRC) site ranges in elevation from approximately 441' at the northeast corner of the existing recreation center at 15th Avenue to 462' at the western edge of the proposed buildings, along the east side of McArthur Court. The site sheds from west to east, with slopes up to 1:1.5.

There are covered tennis courts in the proposed building location. The tennis courts will be demolished, and any underground utilities within the proposed footprint will be re-routed. The existing building sits on a hill of very rocky soil at elevation 455'. This hill will be excavated to field level at 444', at a minimum, and in some places the excavation will reach 14' below field level for the pool and surge tank.

The east side of the site consists of existing turf fields. The fields will be preserved to the extent that is possible.

Site Soils

Based on the soil map, the site consists mostly of Urban land-Hazelair-Dixonville complex, which consists of approximately 8 feet of silty clay over bedrock. The existing bedrock at the site is thought to be generally located at elevation 445', just above the existing fields to the east. Much of the excavation below field level, especially the excavation for the pool, will be rock excavation.

Site Improvements

The proposed project includes a new building for the student recreation center and possibly some improvements to the existing turf field for fire access. This facility will require re-routing existing water, storm drainage, sanitary sewer, power, data, and telephone. Connections for those underground utilities will be provided, as well as water quality treatment for the new roof area and possibly a rainwater harvesting system. See the Electrical Narrative for the power, data, and telephone demolition, re-routing and proposed improvements.

Demolition

The existing covered tennis courts building will be demolished and the hill underneath will be completely excavated. This demolition work will require that the utilities within the proposed development area will be relocated prior to excavation. See the Electrical Narrative for demolition of the existing power, data, and telephone systems.

Any utility relocations and removals will likely require rock excavation because the elevations required for the utilities are within the existing bedrock layer. See geotechnical investigation for existing bedrock location and depth.

Sustainability

The LEED requirements for stormwater quality (Credit 6.2) will be met through the City of Eugene's Stormwater Management requirements. Stormwater treatment can be achieved through pre-engineered mechanical systems, such as water quality manholes, or through vegetative infiltration / filtration, such as planters or rain gardens. To the extent possible, water quality treatment will take place in vegetated facilities.

Opportunities to achieve LEED Credit 6.1 for stormwater quantity could come from the use of the existing Leighton pool for rainwater harvesting. If this option is pursued, overflow storm piping will be installed. See Storm Drainage for more information.

Site Utilities

Domestic Water and Fire Protection

The proposed SRC development area has an existing looped 8-inch water and fire service line that runs around the area on the north, east, and west sides, as well as directly through portions of the development area. Portions of this existing 8-inch line will need to be relocated, including approximately 400 feet of piping under the proposed footprint on the west side that serves the buildings to the north and west. Any laterals that are needed will require minimal new piping because the existing service lines are directly adjacent to the proposed building. The system is already metered and has backflow prevention at 15th Avenue.

Before proposed water line sizes are fully evaluated, the program needs for water and the anticipated flow rates and volumes will need to be more clearly defined. The building's plumbing system demands will need to be determined, as well as expected flow rates and volumes for pools, restrooms, drinking facilities, laundry, etc. The domestic water system must also anticipate water reuse from rainwater harvesting, as discussed in the rainwater harvesting section of this report. For the purposes of this report, it is assumed that the existing water distribution system is adequate to serve the proposed SRC.

One existing fire hydrant will be required to be moved. Depending on the building's final construction type and size, additional fire hydrants may be required to meet Oregon Fire Code. Based on the current building size and footprint, it is assumed that one additional fire hydrant will be required.

Sanitary Sewer

There is an existing 8-inch sanitary sewer line running from west to east along the south side of the proposed development area. Approximately 400 feet of this line will need to be relocated further to the south so that it is not within the building footprint.

The existing line varies between 3' and 5' deep, related to the field elevation, which may be problematic for any waste lines that are needed from the lowest level of the proposed building, especially the pool. A pumping system will most likely be required to drain the pool to the existing sanitary sewer line.

Storm Drainage
The existing storm system runs along all four sides of the development area. Existing roof drains are picked up by 8" lines run from south to north along McArthur Court, then from west to east along the south side of the existing recreation center. A 10" mainline flows from west to east along the south side of the development area. All of these existing pipes flow into a 12" storm pipe that runs from south to north, along the edge of the turf field towards 15th Avenue. The 8" storm drain that is picking up existing roof drains may need to be incorporated into the proposed building's plumbing system and piped within the building footprint. The 12" storm drain line on the east side of the site will need to be relocated as well.

About 750' of storm pipes will need to be removed. Up to 300' of that pipe may be replaced within the building footprint, but approximately 500' of storm pipe will need to be re-installed outside of the building's extents.

If Leighton pool is used for rainwater harvesting, the overflow will be to the east of the pool tank, in the zone between the existing gyms and the new construction to the south. The storm pipe serving the overflow will need to be at least 10".

There are currently no water quality facilities for this site. All new impervious areas, including roof areas, are required to be treated. Treatment for portions of the roof will be achieved through planters, then runoff will flow to the existing conveyance pipes. No infiltration will be available for these planters, as they will most likely be on the roof patio area.

For areas not treated by the planters, a water quality manhole will be required.

Subdrainage
The pool may be below the groundwater level for this area during the winter. If that is the case, subdrainage will be required. Although the storm drainage system is 7-9 feet below field level, it may not be low enough for the pool's subdrainage to gravity drain. A pump system will be required.

Tunnel System
The existing tunnel system provides connections to several utilities through a spur from the main tunnel system that enters the existing SRC on the north side at 15th Avenue. See the mechanical narrative for the details on a possible connection to the tunnel system for utilizing waste heat for the proposed development. No other improvements or connections are anticipated for the tunnel system.

LANDSCAPE NARRATIVE

Existing Site Framework

The University of Oregon's Campus Plan states, "The University of Oregon campus is organized as a system of quadrangles, malls, pathways, and other open spaces and their landscapes. This organizational framework not only functions well, but also serves as a physical representation of the university's heritage." The Student Recreation Center site is located to the immediate south of the 15th Avenue Axis and to the east of the University Street Axis. Although the turf fields to the east of the building site are not designated open space, they do act as outdoor classroom space. Students, faculty, and other users accessing the campus from the neighborhood south of campus heavily use the existing bike/pedestrian path that runs north-south between the turf fields and the building site. This has created a sense of community and connection within this area that the new site improvements will help identify and enhance.

Site Design

The site design will incorporate all requirements and recommendations from the current University of Oregon Campus Plan, Selected Standards for Campus Construction Projects, ADA Accessibility Guidelines, Bicycle Plan, Sustainable Development Initiatives and all other applicable planning documents. The goal for the outdoor spaces surrounding the new Student Recreation Center (SRC) building is to follow a structure and framework that is synonymous with the current campus design. The outdoor rooms will reflect the design excellence from within the building and will encourage all users to gather, move, recreate, relax, and enjoy their surroundings. A new secondary entry plaza will be created on the east side of the new addition that will connect users from the existing bike/pedestrian path to the recreation center. This plaza will also help connect the existing building and new addition while providing users easier access to the adjacent outdoor facilities. Site furnishings (benches, trash receptacles, etc.) that adhere to campus standards will be located at all plazas and other suitable locations throughout the site.

The existing synthetic turf fields located to the immediate east of the building will remain while the bike/pedestrian path will be enhanced to encourage movement in both an east-west and north-south direction. Terraced seating is proposed to be located between the path and the new building area to allow new space for field spectators and outdoor classroom use. The proposed path improvements extend to the southern edge of Field 2 while also extending north into the 15th Avenue Axis (designated open space).

A smaller, more private outdoor space that is accessible only from the SRC will be provided at the southeast corner of the new building that will allow pool users access to the outdoors. This space may be slightly elevated (5"-6") above field grade and will be fenced and buffered with plant bed to allow users to sunbathe and relax without being directly viewed from the adjacent bike/pedestrian path.

Designated Open Space Improvements
In addition to building program elements, the project is required to make Designated Open Space improvements to an area equal to 16% of the new construction area. The new building construction is approximately 115,000 gross square feet making the minimum open space improvement area about 18,400 square feet.

The main area of improvement, at just under 15,000 square feet, will be at a new 15th Avenue pedestrian crossing that will link the Emerald Axis with the bike path along the east side of the SRC that links 15th and 18th Avenues. The vision for the improvements at 15th Avenue is to improve the interaction between pedestrian/bike movement and vehicular traffic, to improve the connection between the path and the Emerald Axis, and to provide users a clear line of movement from the southern edge of campus to the heart of campus. Covered bike parking will be provided in the area and infiltration planters will be added to help treat the currently untreated stormwater runoff from 15th Avenue.

An additional area of just under 6,000 sf is proposed for improvements to the bike path immediately south of the project area. This second area is not currently a Designated Open Space, but is a recognized designated path system important to access through this superblock. This path has been proposed in the recent University Street Study for consideration as a new Designated Open Space.

Parking
Additional vehicle parking is not anticipated for this project. However, existing parking (adjacent to the existing building and at 15th Avenue) will be displaced as a result of the expansion and improvements.

Additional bicycle parking (secure, covered and non-covered spaces) will be provided as part of the expansion project. New bicycle parking will be conveniently located near, but not directly adjacent to the new east and south building entries and at the new 15th Avenue crossing. Existing bicycle hoops located on the south edge of 15th Avenue (near the existing north main building entry) will be augmented by additional hoops to meet the bike parking requirements. Bicycle racks will adhere to campus standards.

Grading
The existing site topography is dramatic with nearly 20’ of elevation change from one end of the project limits to the other (east to west direction). It is anticipated that berming or embankments will be needed along the south elevations. Retaining walls may also be necessary. Aesthetic grading will occur to soften the dramatic grade changes and create visual interest.

Sustainability
The design of the project site will include energy saving and sustainability measures to minimize long-term operating costs, maintenance requirements, and environmental

impact while providing a safe, healthy, and comfortable environment for University of Oregon students, employees, and visitors. The design will incorporate native plantings, stormwater quality measures, and a water-conserving irrigation system.

Landscape

The landscape areas will be planted with combinations of trees, shrubs, and accent plantings. The majority of the plants will be species native to Oregon or will be native "analogue" plants: plants that are adapted to similar climatic and growing conditions to native plants. Native and native analogue plants are acclimated to the unique Willamette Valley climate patterns and adapted to its unique soils leading them to be a lower maintenance alternative to non-natives. The design will accommodate the mature size of the plants and trees selected and will also allow for low ongoing maintenance requirements and reduced life-cycle costs.

Site irrigation will be accomplished with an automatically controlled, underground system. It will be designed and constructed to be as efficient in terms of water usage as possible. The irrigation system will be centrally controlled using components compatible with Toro Sentinel.

ARCHITECTURAL NARRATIVE

The new construction will occupy the area between Esslinger Hall and the playing fields to the east and between the south edge of the existing 1999 Student Recreation center and the enclosed Tennis Center. The outdoor existing covered tennis courts in this area will be removed. Utilities within this footprint will be replaced, relocated, or abandoned as appropriate. The new construction will be three stories in height with the lowest level built into the sloped site slightly above the field level. In addition to maintaining the existing main north building entry there will be a new major at-grade east entry and a minor third entry to the south. This south entry will open into a south-facing courtyard with bike parking, service and delivery area, trash and recycling pick-up as well as outdoor one-half court basketball and a sand volleyball court. If Esslinger is removed in the future, it is likely that the SRC would expand into this open area to replace spaces in Esslinger that they currently occupy. Our intention is that the current plans will accommodate this likely future scenario.

The existing south-end fire lane will be maintained and a walk and landscape buffer will be provided along its edge. The east edge of the site will have a series of wide terraced seats interspersed with landscaping. A portion of this seating and adjacent bike parking will be covered by a cantilevered portion of the building above. At the new east entry will be a large vestibule giving direct access to lockers and toilet rooms available for use from the field. An entry plaza will connect users from the fields and existing bike/pedestrian path to the recreation center and it will help physically connect the existing building with the new addition. Site furnishings (benches, trash receptacles, etc.) that adhere to campus standards will be located at all entry areas and other suitable locations throughout the site.

Plans
There are three levels to this addition.

Lower Level: The lowest level will be about 12” above the adjacent east field level and contains the east entry, a natatorium with a lap pool, leisure pool and spa, a fitness area, wet classroom, offices, a lower level of lockers, gender-neutral changing room and toilet rooms, storage and pool mechanical rooms. The east entry and hall are part of the SRC “Free Zone”, an area accessible to all as distinguished from the “Control Zone” which includes most activity spaces and has limited controlled access. Along the new east entry will be toilet rooms and lockers serving the fields, a lounge, an egress point for the natatorium, and the exit stairs. This level has an outdoor south-facing patio accessed from the natatorium.

The construction of this level will require significant excavation, some of which will be into the rock noted in the civil narrative. For the most part, the new construction is held away from the existing foundations of Esslinger and the 1999 Student Recreation Center. It is assumed that the new north, west and portions of the south wall of this level will be concrete retaining walls with a perimeter drainage system.

Additional excavation will be required for the pools and surge tanks (refer to pool systems narrative). There will be an electrical transformer vault located by the southwest corner of the building that will be accessible from the mechanical room and through a lid to the exterior (refer to the electrical narrative). A new two-stop elevator with opposing doors will connect the lower and main level free zones and another three-stop elevator will connect the lower and upper level control zones.

Main Level: The main level aligns with the existing 1999 SRC main floor level (about 14'-5" above the fields) and includes the main controlled access point along with social spaces, locker rooms and fitness areas. A portion of the floor of the new fitness area will align with the existing 1999 SRC gyms (4'-0" below the main level). New exit stairs from this level to the east will be added to aid exiting from the existing gyms. The existing Leighton pool tank will be covered and repurposed as a storm water retention facility (refer to the structural and mechanical narratives). The existing Leighton pool natatorium structure will be modified and portions of it will be used for an extended main entry area zone and for expanded fitness areas. There will be significant changes to the existing Esslinger locker room area and minor changes elsewhere in Esslinger Hall and the 1999 SRC.

The construction of this level will be primarily trusses and joists supporting a steel deck and concrete floor built to 2-hour fire-rated requirements. There will be an opening in the floor inter-connecting this level with the lower level. This opening will have an automatic horizontal 2-hour rated fire/smoke shutter that when closed will separate the lower level from the main level. The east edge of the main level will be cantilevered out over the east bike path and will be supported by a row of exterior columns.

Upper Level: The upper level is about 14'-6" above the main level and has a three-court gym, group-exercise room, open fitness areas, maintenance room, toilet rooms, and mechanical and storage rooms. There is the potential for an outdoor south- and east-facing patio with an activity space at this level. Completion of this space is not in the budget but will be designated as an additive alternate. The west edge, along with the toilet and mechanical rooms, will be at the existing indoor track level (12'-0" above the main level), and there will be a sloped walk and steps up to the main new gym and fitness level 2'-6" above. There will be a long linear skylight along the east wall of the gym to bring light down into the natatorium below.

The construction of this level will be primarily trusses and joists supporting a steel deck and concrete floor built to 2-hour fire-rated requirements. There will be a floor opening in the fitness area between the new and existing gyms that will line up with the opening in the main level floor below. No horizontal smoke shutter will be required at this level. The east wall of the new gym will act as a very deep truss supported on columns in the natatorium below. From this deep north/south wall-truss will hang the east/west trusses supporting portions of the gym floor and outdoor patio

floors. These trusses will be exposed in the natatorium below and will be made of steel pipe and tubes covered by 2-hour rated intumescent paint.

Roof: For the most part the new roofs are low-slope and will have a single ply membrane roof system over rigid insulation sloping to roof drains and edges. There will be skylights in the roof in the area between the new and existing gyms and monitors with skylights and ventilation openings in the roof over the new gym. Solar water heating panels will be located on the gym roof. At the upper level, an additive alternate roof terrace is proposed along a portion of the east building edge which will be accessible from both the upper level fitness and gym areas for outdoor activities. This patio, if constructed, will have a modular concrete paver system on pedestals that will allow for water permeability and access to roof surfaces as required for roof patching or replacement.

Exterior Elevations

It is the intention of the designers to use existing campus materials and forms as a starting point for developing the building elevations. At the same time, the team recognizes that this is a unique building for and by the students and should reflect a dynamic composition beyond what would be expected of a classroom/office building.

The exterior design intends to satisfy the following four goals:

1. Unify the series of buildings that comprise the existing SRC.
2. Dovetail into the existing character of the Student Recreation Center facility and campus vernacular by creating strong relationships of the following:
    - Post and Beam framed openings prevalent on campus, in particular Esslinger and the SRC addition.
    - Prominent end facades of Gerlinger, Straub, Hayward Field Grandstands, and the 1999 SRC addition.
    - SRC addition rhythm of openings, texture, material, datums, and detail.
3. Follow the global campus character guidelines of the following:
    - High Quality
    - Human Scaled
    - Carefully Detailed
    - Building Meets the Sky
    - Rhythm of Windows
    - Secondary Entrance
    - Operable Windows and Window Details
    - Composition…Base, Body, Cap
    - Details
4. Create an honest expression of building use and function.

This building is an active, dynamic student hub. Although much of the building responds to the immediate and global campus vernacular, special attention was given to the need for transparency to entice student use and portray its active nature.

A glassy east facade captivates this transparency and eastern view. This east facade balances the prominent existing SRC (mostly opaque) gable end and expresses the interior circulation and movement from the core of the building to the eastern view. Sensitive detailing is given to the glass façade creating important relationships of rhythm of openings, prominent datums, materials, and sun control.

Materials

The building will be constructed in accordance with the UO Campus Construction Standards. The list below is a general outline of systems. A more detailed list of materials is included in the Outline Specifications Appendix "G". Based on code requirements, the building will be of non-combustible construction with two-hour fire-rated structural systems. The type and use of individual spaces will determine the type of interior finishes based on concerns for durability, maintenance, acoustics and aesthetics. The Recreation and Wellness Center on the Western Oregon University campus is a good example of the level of quality expected for this project.

Floors:

- Concrete slab-on-grade or concrete on a steel deck system on steel structural framing members.
- Stained and polished concrete in most public areas, ceramic tile at toilet and shower rooms, rubber or vinyl tiles/sheet goods at limited areas, resilient safety flooring at custodial rooms, and carpet finishes at offices.
- Terrazzo flooring in some public areas if budget allows.
- Wood flooring on resilient pads at gyms and new group-exercise rooms.
- Concrete pavers on pedestals over sloped membrane roof at upper patio.
- Resilient court surface at upper patio basketball court – reused from covered tennis court area.

Exterior Walls:

- Concrete or steel stud substrates.
- Brick masonry to match existing, exposed concrete, plaster/cemetitious materials, metal panel finishes.
- Aluminum storefront or curtain-wall, insulated glazing window systems with some operable windows
- Hollow metal doors and steel frames at service and mechanical entries and roll-up door at field storage room.

Interior Walls:

- Steel stud typical, concrete masonry units at natatorium and locker rooms, and painted exposed concrete retaining walls at lower level mechanical and storage rooms.
- Veneer plaster, ceramic tile, or wood paneling wall finishes.
- Wood doors and relites in painted steel frames typical.

Ceiling Systems:

- Exposed painted structural systems at Natatorium and Gym
- Acoustic panels and veneer plaster soffits at most fitness areas.
- Suspended wood slat / veneer plaster at public circulation areas.
- Metal soffit panels at exterior ceiling along east edge over bike path.

Roof Systems:

- Concrete slab over trusses at patio (additive alternate, light weight steel framing at Gym, and possible reuse of covered tennis courts glu-laminated beams at upper level roof areas (except gym).
- Built-up or single-ply membrane roof finish over tapered rigid insulation, possible green roof, solar thermal panels or photovoltaic panels.
- Multi-layer sloped skylights with switched internal louvers for daylight control.

Percent for Art

The Oregon Percent for Art in Public Places Law requires 1% of direct construction funds for new and renovated state buildings with construction budgets of $100,000 or greater for the acquisition of art. The program for selecting the art is administered by the Oregon Arts Commission using their guidelines for this selection. An Art Selection Committee will be formed to include the architect, Campus Planning and Real Estate member, UO facilities manager, SRC representative, three artists or art professionals, and other related individuals as appropriate to the project. In order to integrate the art into the architecture, it is important to start this selection process early in the design process.

With the construction budget established at $35.5 million, the 1% for Art program budget will be $355,000. It is anticipated that the Oregon Arts Commission will be contacted early in the next phase of the design (Design Development Phase) in order to get the selection process started.

Existing glass art panels set at the north and east walls of Leighton Pool were initially funded and installed through the Percent for Art program and will need to be preserved and reset in new locations as part of the Project.

The existing exterior east entry fountain was initially funded and installed through the Percent for Art program. This fountain is not currently functioning and will be repaired under separate funding.

STRUCTURAL NARRATIVE

The new construction will be closely adjacent to the existing Esslinger Hall and connected to the existing Leighton Pool building and existing Student Recreation Center. The structural design for the new project will need to be coordinated with the existing buildings. The foundations for the existing buildings extend past the face of the structures and may be at a depth that will interfere with new construction. Where old and new construction is connected, there will either be a solid structural connection or a joint that will allow relative movement between the two sections.

The structural systems and materials for the new construction were selected based on architectural considerations, structural requirements and cost effectiveness. Because of the size and use of the project, non-combustible materials are generally required. The open spaces required for basketball courts and swimming pools make trussed spans favorable. Steel construction has an advantage in being geometrically adaptable. Concrete's mass can contribute to thermal stability and blocking sound transmission. A full range of construction materials were considered for this project.

The following is a description of the structural systems for the different areas of the project:

Leighton Pool
The existing Leighton Pool building is planned to be used as an entry lobby and expanded fitness area. The existing swimming pool will be covered over and used as a water storage tank.

This building was constructed with concrete walls and a concrete beam and joist roof system. The prior 1998 remodel and addition of the Student Recreation Center removed some of the building walls and added other shear wall elements to restore the loss of strength.

The structural schematic drawings show one potential arrangement of the north and south building walls that will allow the proposed entry lobby function and provide for adequate lateral force resistance. Coordination of these walls with the architectural function is recommended prior to moving beyond the schematic design phase.

The existing pool tank will be covered by precast concrete planks and topped with a concrete slab. The planks will be supported by a concrete beam and column system with foundations placed on top of the existing pool floor to maintain the integrity of the pool tank.

South of Leighton Area
This area is bounded by Leighton Pool on the north, Esslinger Hall on the south and west, and other new construction to the east. A single level structure is anticipated.

The roof structure will consist of steel joists spanning approximately 60 feet in a north/south direction between Leighton and Esslinger. It will be necessary to construct walls for bearing and lateral resistance alongside of the existing walls of Esslinger. A portion of the Esslinger wall foundation is at an elevation higher than the new floor level. This will require that the wall and footing be slightly offset from the existing wall.

The roof structure for this area will have a concrete topping slab to provide a fire separation. The roof structure will have a seismic separation joint to isolate it from Esslinger. This structural separation will facilitate the possible future demolition of Esslinger Hall.

South of Existing Recreation Center Gym Area

This area of the project will contain an entryway to the upper level, a mechanical room, fitness space and open areas to allow natural lighting. The space is somewhat irregular in form with stairs and open spaces, lending itself to structural steel framing. A suggestion has been made to use recycled glu-laminated beams at roof level in this part of the structure; this is potentially possible as well.

The structural system for the existing adjacent gymnasium is relatively flexible. A separation joint will be required between the new construction and the wall of the existing gymnasium. Columns for the new construction may be supported on the existing gymnasium foundations because they are oversized for wind resistance.

New Gymnasium

A new three court gymnasium will be built on the upper level of new construction. It is anticipated that the roof structure will be steel joists with a metal deck. Light monitors and skylights will be part of the roof structure, formed by framed walls and a sloping roof over the main roof plane. The east wall of the gymnasium will be a truss-like structure that serves to support the gym floor and roof over the natatorium. The west wall will have steel columns and metal framing.

Outdoor Court

An open outdoor activity area will be provided (as an additive alternate) over the eastern portion of the natatorium. A paver system and insulation will be installed over the structural deck. A strip skylight will penetrate the structural deck, necessitating horizontal bracing for structural continuity in the diaphragm.

Locker Rooms

Two levels of locker rooms will exist in the area below the new gymnasium. The elevated floor structures will be precast concrete planks with a concrete topping. The interior walls will be concrete masonry for durability and the exterior walls concrete.

Natatorium and Swimming Pools

The new pools will be located on the lowest level of the new construction with the pool deck approximately five inches above the existing field level. The natatorium will be a large, relatively column-free volume, made possible by steel trusses framing the overhead structure. The exterior walls will be concrete masonry with openings for windows and doors.

The structural design of the Student Recreation Center Expansion will be in conformance with applicable building codes and University of Oregon Standards. Special consideration will be given to the minimization of floor vibration and sound transmission. The following is a summary of the project design criteria:

Building code:	2010 Oregon Structural Specialty Code
Design Loads:	ASCE-7
Occupancy Category:	III
Wind:	95 MPH Exposure C I = 1.15
Seismic:	Design Category D I = 1.25
	SS = 0.67 SI = .33
Soil Bearing:	To Be Determined

The attached diagrams identify the structured systems selected for the project schematic design. Further development of the design is necessary, but it is shown that the project is feasible and constructible.

MECHANICAL NARRATIVE

HVAC Design Criteria

Outdoor Design Conditions

System load calculations shall be based on the following outdoor design conditions:

- Summer: 92 degrees F DB / 67 degrees F WB (2009 ASHRAE Handbook of Fundamentals; Eugene, Oregon).
- Winter: 22 degrees F DB (2009 ASHRAE Handbook of Fundamentals; Eugene, Oregon).

Indoor Design Conditions

System will be designed to maintain the following temperature and humidity conditions, in compliance with ASHRAE Std. 55-2004:

Space	Fall/Spring (°F)	Summer (°F)	Winter (°F)	Relative Humidity (%)
Pool	86 ±2	86 ±2	86 ±2	40 to 60
Fitness Rooms	73 ± 2	78 ±2	70 ± 2	No control
Entry, Halls	78 ± 2	80 ±2	70 ± 2	No control
Gym	No cooling	No cooling	70 ± 2	No control

Internal Air Conditioning Loads Assumptions

Lighting: 1.2 watts per square foot. Utilize actual lighting load upon completion of lighting design.

People: 250 BTUH sensible/200 BTUH latent for people at rest. 635 BTUH sensible/1165 BTUH latent for athletic activity (base number of people on ASHRAE standards, Oregon Mechanical Specialty Code, and the Oregon Structural Specialty Code).

Ventilation Rate: ASHRAE Std. 62-2007/Oregon Mechanical Specialty Code.

Acceptable Noise Levels (ASHRAE 2007 Applications Handbook, Chapter 47, Table 42)

Room Type	Maximum RC(N)
Corridors	45
Fitness Rooms, Gym, Pool	45

Code References

Systems shall be designed in accordance with the latest edition of the following codes:

- Energy Policy Act of 2005 (EPACT).
- Energy Star.
- NFPA Standards (most recent adopted edition).
- Oregon Electrical Specialty Code (most recent adopted edition).

- Oregon Energy Code (most recent adopted edition).
- Oregon Mechanical Specialty Code.
- Uniform Plumbing Code (most recent adopted edition).

The following reference standards shall be used for the design:

- AMCA: Air Movement and Control Association International, Inc.
- ANSI: American National Standards Institute.
- ARI: Air Conditioning and Refrigeration Institute.
- ASHRAE: American Society of Heating, Refrigeration, and Air Conditioning Engineers.
- EPA: Environmental Protection Agency.
- NEMA: National Electrical Manufacturer's Association.
- NFPA: National Fire Protection Association:
  - NFPA 90A: Air Conditioning and Ventilating Systems.
  - NFPA 101: Life Safety Code.
- SMACNA: Fire and Smoke Damper Installation Guide.
- SMACNA: Guidelines for Seismic Restraints of Mechanical Systems.
- SMACNA: Standards for Duct Construction.
- UL: Underwriters' Laboratories.
- University of Oregon Campus Construction Standards, May 2011.
- University of Oregon Model for Sustainable Development, June 2011 (target only).

Heating, Ventilating and Air Conditioning
Sustainable Strategies

The project will be designed to achieve Leadership in Energy and Environmental Design (LEED) certification with a goal of attaining enough credits for LEED Gold. As part of the LEED process, an Owner's Project Requirements (OPR) documents will have to be provided by an owner's representative, separate from the design team. The project will go through the State SEED process. Metering of electrical and steam energy of the existing and new building will be required. It is desired by the University to save 35-percent energy beyond current Oregon State Energy Code - a target established by the Oregon Model for Sustainable Development.

- Natural ventilation will be incorporated into new gyms using wall louvers and roof or wall openings.
- New gyms will be heated using radiant floors.
- The existing pool will be used for water storage. It will be used for radiant cooling of entries or hallways and used to store heating water for radiant floors.
- The tunnel system will be cooled with water source heat pumps whose heat will be transferred to the existing pool's heating water storage section.
- Solar thermal heating can be used to heat the existing pool's heating water storage section or the new pool's water.
- Heat recovery from the new natatorium's heated air will be used to pre-heat incoming outside air or provide heated water to the pool.

- Pools will be covered when not in use.
- Displacement ventilation will be used in the new gym and fitness areas to deliver pre-cooled and pre-heated ventilation air directly to occupied zones.
- A night flush cycle will be used to pre-cool large volume spaces, excluding the natatorium.
- Irrigation water may be used to cool radiant slabs.

Hydronic Systems

The proposed University of Oregon Student Recreation Center Addition will be served by new mechanical systems. The existing campus central steam plant will serve the building's heating needs. Heating water for the addition will be generated by a steam to hot water heat exchanger that takes steam from the campus system. The heat exchangers will be a maximum of 6 inches in diameter. Condensate will be metered and returned to the campus system. The heating water will be distributed to hydronic radiant slabs in the new gymnasium, fitness rooms, and lobby. Air handlers with heating water coils serving the new natatorium, gym, and fitness areas will also be served by this heat exchanger. Heating water is distributed throughout the building using pumps with variable speed drives and premium efficiency motors. Existing portions of the building including Esslinger Hall, existing gyms, and fitness rooms will continue to be served by existing steam and heating water coils. Existing steam and condensate piping serving the existing building will be back-fed by new piping. No further modifications to the existing steam system are anticipated.

Cooling will be provided to portions of the addition from the existing campus chilled water system and recovered rainwater. Chilled water is expected to be provided at 48 degrees F with a 15 degree F temperature difference between supply and return water. Irrigation water may also be used for cooling. No modifications to the existing chilled water system serving the existing building are anticipated.

New heating and chilled water equipment will be installed in the existing pool mechanical room. Pumps will be provided with variable frequency drives (VFDs) and premium efficiency motors. The campus chilled water system will be separated from the new building chilled water system using a Delta-P automatic flow control valve.

Airside Systems

An indoor heat recovery unit (HRU) will provide ventilation air, heating, cooling, and exhaust for the new natatorium and locker rooms. The HRU will incorporate a heat pipe heat exchanger, VFD's on supply and exhaust fans, and stainless steel construction. Supply ductwork will be exposed in the natatorium and distributed along perimeter walls to reduce condensation. Return will be ducted as low as possible from the pool deck.

The new fitness areas will be served from an indoor HRU with chilled water and heating water coils. Air will be distributed to the fitness areas using displacement ventilation grilles or active chilled beams. Open fitness areas off of paths of egress

will be supplemented by ceiling fans. The gym will be served by a single HRU with heating coil that delivers only ventilation air to the space. Air in the gym and fitness areas will be distributed as low as possible to the occupied zones. Gym and fitness area ductwork and distribution will be sized for ventilation loads only in order to keep ductwork sizes small and decrease the amount of architectural work to hide them. Mechanical ventilation will be used for times when the outside air conditions are not acceptable for use of natural ventilation in the gym. Enclosed fitness areas, such as Mind/Body, will be mechanically cooled using active chilled beams with supplemental ceiling fans.

Large paddle wheel fans will circulate air above the three basketball courts. Turbine roof vents will be used to enhance natural ventilation through the gym.

No modifications to the existing air handling systems in the existing building are anticipated.

Pool Mechanical Room
The pool mechanical room will be provided with code-required exhaust and make-up air to prevent the build-up of hazardous or obnoxious odors and gases.

Air Distribution
Air will be distributed and exhausted using sheet metal ductwork constructed according to the Oregon Mechanical Specialty Code (OMSC). Displacement ventilation will be used in the new gym and fitness areas. 306 stainless steel ductwork will be used for supply and exhaust to and from the natatorium. Supply ducts will be located to allow even distribution of air and to “wash” perimeter walls. Return inlets will be located as low as possible to the pool deck.

Equipment will be provided with unique tags and labels.

Transfer air and exhaust will be added to the climbing wall area to reduce the amount of chalk dust in the air which affects indoor air quality and filter life.

Air Distribution Equipment
Ductwork:

- Ductwork sheet metal will be galvanized, except in the natatorium.
- Return air duct, supply duct, and general exhaust ducts: SMACNA low pressure duct standards (zero to 2 inches).
- Flexible Ducts: Supply only. Pre-insulated with vapor barrier, used for diffuser connection and in concealed ceiling spaces only. Flexible “Alumaduct” is allowed in exposed areas, maximum of five feet.Insulation for Ductwork:
    - Outside air ducts: R-3.5, 1-inch-thick fiberglass blanket duct wrap with foil facing.
    - Supply ducts: R-6, 1-1/2-inch-thick fiberglass blanket duct wrap with foil facing. Not required while exposed in fully conditioned spaces.

    - Internal duct liner: 1 inch thick.
    - Exhaust ducts: Not insulated except for acoustic liner where required.
- Balancing Dampers: Adjustable balancing dampers in each branch take-off for proper control of balancing of the air distribution system will be provided. All operating levers will be readily accessible and be of extended type so as to not be in contact with insulation. Where dampers are inaccessible for adjustment, ceiling flush mounted concealed damper regulators with rod extension to damper, and die cast gears, as manufactured by Ventlock and Young Regulator, or equal will be provided. Dampers will be Ruskin, Johnson, or equal.
- Seismic Restraints: Piping, ductwork, and equipment will be provided with adequate restraints conforming to the Oregon Structural Specialty Code.
- Testing, Adjusting, and Balancing:
    - An independent testing and balancing contractor will be required (contracted by the University), NEBB or AABC certified to balance all air and water systems and heating and cooling equipment to the required quantities; and to verify the capacity and operating conditions of each piece of equipment.
    - They will submit detailed test procedures, forms, etc. for approval prior to beginning the work.
    - After balancing is complete and all airflows have been balanced to within +/- 5 percent of design airflow, the contractor shall submit three complete balance reports.

HVAC Controls

The system shall consist of series of direct digital controllers interconnected by a local area network. BMS system must offer trending, scheduling, downloading memory to field devices, real-time “live” graphic programs, parameter changes of properties, set point adjustments, alarm/event information, confirmation of operators, and execution of global commands. Fire alarm systems, security systems and elevator systems shall not be controlled by the BMS. The system will be connected to the campus Siemens BMS.

Heating and cooling in each zone shall be controlled by a temperature sensor located in that zone. Radiant heating zones will be controlled by slab temperature sensors.

Occupancy sensors will signal BMS when a zone becomes unoccupied and set back temperature control setpoints. These will also be used to activate HVAC systems after hours during periods of cleaning to improve air quality during occupied hours. Systems will operate at reduced airflows during this time.

Air Systems: Systems supplying heated or cooled air to multiple zones include controls that automatically reset supply air temperature required by building loads or by outdoor air temperature.

Hydronic Systems: Systems supplying heated water to comfort conditioning systems include controls that automatically reset supply water temperatures required by temperature changes responding to changes in outdoor air temperature.

Energy Management and Conservation: HVAC control algorithms include optimized start/stop for air-handling units and all associated equipment. Lighting control shall be accomplished by use of separate control equipment. Optimal start/stop calculates the earliest time systems can be shut down prior to the end of occupancy hours and the latest time systems can start up in the morning with the aim of minimizing equipment run time without letting space conditions drift too far outside of the comfort setpoints.

Maintenance Scheduling: The BMS includes programs for control that switch pumps from operating equipment to stand-by on a scheduled basis.

System Design Considerations: System ability includes logs of data created by user selectable features. The system provides for stand-alone operation of subordinate components. The primary operator workstation shall have a graphical user interface. Standalone control panels and terminal unit controllers can have text-based user interface panels which are handheld or fixed. Ethernet data connections will be provided at all indoor air handler locations from the private network.

Existing HVAC Systems

Existing steam and condensate piping, heat exchangers, and air handlers are to remain active. Piping that is being demolished will be removed back to finished surfaces.

PLUMBING NARRATIVE

Sustainable Strategies
The project will be designed to achieve Leadership in Energy and Environmental Design (LEED) certification with a goal of attaining enough credits for LEED Gold.

Strategies will include:

- Low flow plumbing fixtures.
- Solar thermal systems for heating pool water or radiant floor heating.
- Use of rainwater collected in existing pool for flushing water closets and urinals with heat exchanger.

Scope of Work
Work Included:

- Sanitary waste and vent system.
- Domestic cold water system.
- Domestic hot water system.
- Plumbing fixtures and equipment.
- Seismic bracing of piping and equipment.

Systems shall be designed in accordance with most recent adopted edition of the following codes:

- Oregon Electrical Specialty Code.
- Oregon Mechanical Specialty Code.
- Oregon Plumbing Specialty Code.
- Oregon Structural Specialty Code.

The following reference standards shall be used for the design:

- ANSI: American National Standards Institute.
- ASME: American Society of Mechanical Engineers.
- ASSE: American Society of Sanitary Engineering.
- ASTM: American Society for Testing and Materials.
- AWS: American Welding Society.
- AWWA: American Water Work Association.
- CISPI: Cast Iron Soil Pipe Institute.
- CS: Commercial Standards.
- EPA: Environmental Protection Agency.
- NEMA: National Electrical Manufacturer's Association.
- NFPA: National Fire Protection Association.
- NSF: National Sanitation Foundation.
- PDI: Plumbing and Drainage Institute.
- UL: Underwriters' Laboratory.
- University of Oregon Campus Construction Standards, May 2011.
- University of Oregon Model for Sustainable Development, June 2011 (target only).

Plumbing Systems

Sanitary Waste and Vent System

The domestic waste system will convey waste from the new plumbing fixtures by gravity through soil, waste, and vent piping connected to the building waste line.

Floor drains and floor sinks will be provided with automatic trap primers. Access panels shall be provided for the trap primers. Access panels shall be consistent with the architectural specifications.

Piping provided for both waste and vents shall be no-hub cast iron, service weight. Standard-duty couplings will be provided above grade.

Trap insulation shall be provided at ADA accessible sinks and lavatories. Installation shall be in a neat, workmanlike manner, and shall be approved by the Owner.

Domestic Cold Water System

The domestic cold water system will be distributed through branch piping connected to the new building mains. Each branch pipe shall be provided with a branch shut-off valve (ball valve).

System will be designed to maintain a maximum velocity of 6 fps at design flow conditions. Backflow protection will be provided to protect the water supply, as well as isolate potential areas for contamination within the building.

Piping will be designed so that no fixture has a pressure lower than 35 psi or higher than 75 psi. Booster pump systems are not anticipated.

System will be designed to prevent water hammer conditions by providing shock arrestors for fixtures and quick closing valves. Shock arrestors shall be maintained accessible.

Piping services above grade shall be Type L, hard-drawn copper, 125 psi maximum service pressure, 250 degrees F maximum service temperature. The piping will be provided with fiberglass insulation and molded fitting covers.

Domestic Hot Water System

Hot water will be provided via steam to hot water heat exchanger with a maximum diameter of 6”. Steam will be provided from the campus system. The hot water will be circulated within the system and distributed to all fixtures at 120 degrees F. The recirculation pump will be connected to the BMS for scheduling. A return water sensor will cycle the pump during occupied hours. Point-of-use mechanical mixing valves will be provided to reduce the temperature to a maximum of 110 degrees F at sinks and lavatories.

System will be designed to maintain a maximum velocity of 5 fps at design flow conditions. The hot water circulation piping will be designed to maintain a maximum velocity of 4 fps at design flow conditions.

Piping service shall be Type L, hard-drawn copper pipe, 125 psi maximum service pressure, 250 degrees F maximum service temperature. The piping will be provided with fiberglass insulation and molded fitting covers.

Plumbing Fixtures and Equipment
New, water-conserving plumbing fixtures, equipment, rough-in, and trim will be provided. Wall-mounted fixtures will be provided.

Water closets will be provided with dual-flush flushometer valves with 1.6/1.1 gpf rating. The urinals provided will be rated for 0.125 gpf. The lavatories will be rated at 0.5 gpm. Other sinks will be rated at 1.5 gpm. Shock arrestors will be provided as required by code in readily accessible areas.

Seismic Bracing
Waste, water, gas, storm drain services, and equipment located within the building will be provided with seismic bracing designed specific to the site conditions, location, and building construction. Seismic compensation will be provided for new and existing piping crossing seismic joints.

Rainwater Harvesting / Storage
New roof area will be used for collection to be stored in the existing pool tank after being routed through a storm water diverter. Water will be used for flushing water closets and urinals. The existing surge tank may be reused to treat this water prior to being distributed to plumbing fixtures. An automatic switchover to the potable domestic water system will occur if the rainwater storage tank is inadequate to handle demand. The potable system will be protected by a double-check backflow preventer.

Natatorium
Drainage piping for the natatorium will be provided in polyvinyl chloride (PVC) piping. Storm drain piping exposed to the natatorium environment will also be PVC. Stainless steel hangers and attachments will be used for piping within the natatorium.

ELECTRIC NARRATIVE

Design Criteria

Codes

- Oregon Electrical Specialty Code.
- Oregon Structural Specialty Code.
- ANSI: American National Standards Institute.
- Energy Policy Act (EPACT).
- Energy Star.
- EPA: Environmental Protection Agency.
- NEMA: National Electrical Manufacturer's Association.
- NFPA: National Fire Protection Association (most recent adopted edition).
- Oregon Energy Code.
- UL: Underwriters' Laboratories.
- University of Oregon Campus Construction Standards, May 2011.
- University of Oregon Model for Sustainable Development, June 2011 (target only).

Electrical Systems

Sustainable Strategies

The project will be designed to meet Leadership in Energy and Environmental Design (LEED) Gold standard LEED certification.

The design will incorporate high-efficiency lighting, automated daylighting controls, enhanced energy monitoring and interactive kiosk.

Demolition

All items slated for demolition must be removed complete; no item will be allowed to be abandoned in place.

Power Distribution

The existing service consists of a padmounted 150kVA dry type transformer installed on the south side of the building, this vault and transformer will be removed and replaced. The transformer feeds an existing 800 amp 120/208V service is located in the basement next to the pool equipment room. A primary feeder routed in the west side of the existing tunnel exits the building below grade to the south to feed the 150kVA transformer. Existing secondary conductors travel below grade north/south from the transformer to the 800 amp service. The existing service will remain operational during construction to be demolished when the new service becomes operational. The transformer and below grade feeders will need to be demolished to accommodate the new structural work for the expansion. A temporary 150kVA transformer will need be installed on the eastside of the project with temporary feeders to backfeed the existing Student Recreation Center service.

An existing 600A, 277/480V exterior service is located at the bottom of an exterior stair landing in the southeast corner leading to the recreational soccer fields. This serves existing panels 'F', 'T' and 'T1' which serve field lighting, there is also 400 amp switch for special events. This service will be maintained until a temporary service for the field lighting can be installed. The new service in the expansion will backfeed the field lighting and a new 400 amp switch for special events will be installed on the eastside of the building.

A new oil filled 750kVA, 12.47kV/480V transformer for the normal power distribution will be installed in a new electrical vault on the southeast corner of the new building directly connected to a new electrical room in that location. The primary feeder will be extended from the tunnel. A second oil filled 150kVA, 12.47kV/480V transformer for the standby power distribution will be installed in the same location (see Emergency Systems narrative below).

A new 1200 amp, 277/480V, 3 phase service will be installed in the new Electrical Room in the southeast corner. A 300kVA, 120/208V dry-type transformer will be installed to backfeed the existing 800 amp 120/208V service in the existing building. Advanced electronic metering will be installed to monitor building energy performance as compared to energy design targets. Each breaker in the main distribution panel will be electronically monitored and will report to the Campus monitoring system. Branch panel loads will be separated between lighting, receptacle and HVAC loads for monitoring purposes. The existing loads in Esslinger Hall and the Student Recreation Center will have loads separated in branch panels to allow for separate metering.

All switchboards and panelboards will have copper buses. Provide separate panelboards for all receptacle, HVAC and lighting loads equipped with sub-metering at the main breaker for Campus load monitoring.

Electrical connections to new HVAC units will be provided as required by mechanical design. Duplex receptacles will be replaced in walls where renovations occur. New receptacles will be provided as required by floor and furniture plans; dedicated neutrals will be provided for every circuit. Provide additional duplex receptacles as follows:

- Provide a duplex receptacle on every wall of each office.
- Provide duplex receptacle 12 feet on center in public areas such as lobbies, lounges, exercise, main street and Healthy Oregon.
- Provide a duplex receptacle at each piece of fitness equipment, install receptacle in floor or adjacent wall. Assume a receptacle will be installed 6 feet on center in Fitness areas. Provide provision for data outlet at each location.
- Provide duplex receptacle for digital signage, assume one location for each public gathering space

- Provide duplex receptacle for an interactive Kiosk showing the building energy use may be installed in the lobby area.
- Provide duplex receptacles 30 feet on center in weights, wet classroom, multipurpose, Mind Body Yoga, storage spaces, locker rooms, corridors and similar spaces.

Standby Power
An 80kW generator is located next to the transformer on the south side of the building which serves an existing 400 amp standby distribution. This generator is to remain operational during construction to be demolished when the new standby service becomes operational.

A new 150kVA oil filled utility transformer for standby distribution will be installed in a new vault located on the southwest corner, primary power will be supplied from the existing campus standby 12.47kV distribution. A 600 amp standby distribution board will serve (2) automatic transfer switches (ATS's) located in the new electrical room. The ATS's will serve life safety and standby distribution panelboards. Emergency egress lighting will be provided by fixtures identified as emergency on the drawings. Egress lighting will be provided to meet IBC illumination requirements of 1.0 footcandle average maintained throughout exit pathway.

Standby power is anticipated to serve, HVAC DDC controls, HVAC systems for IDF room, telecommunication active equipment and Owner provided rack mounted UPS's for IT servers.

Lighting
Provide lighting fixtures as specified by RDG. Lutron H-series ballasts are required for all dimming applications. Provide circuiting to all fixture locations. Intercept circuiting affected by remodel in existing areas to remain and re-terminate on new panelboards. Remove existing Hi-mast sports field lighting on the east sports field to accommodate new building footprint and construction staging and access. Remove and re-install existing Hi-mast sports field lighting in conflict with new pathways and field revisions.

Lighting Controls
Public areas such as lobbies and workout areas will have ceiling-mount, combination-type infrared/ultrasonic-type occupancy sensors intertied into a programmable lighting controller. Gyms will be controlled from occupancy sensors only with night light. Provide daylight controls (within 15 feet of the exterior perimeter window walls) via photocell daylight sensors connected to fluorescent electronic dimmable ballasts in all areas with sufficient daylight. Public corridors, install occupancy sensors designed for hallways will be intertied into a building wide programmable lighting controller. In stairwells and restrooms, install ultrasonic-type occupancy sensors. Lutron Grafik Eye 3000 series control in all classrooms, exercise and mind/body rooms.

Natatorium will be controlled via a programmable lighting controller with daylight dimming (or switched if HID or Induction lamp is used) photocell to automatically dim the fixtures when sufficient daylight is present.

Exterior lighting will be controlled via a programmable lighting controller. Extend existing controls to the sports field lighting on the east field that is to be installed to replace the field lighting that is demolished for construction. Re-install and extend existing controls to new fixtures.

Provide switching in each of the following rooms:

- Occupancy sensor in janitor rooms.
- Wall switch in electrical rooms.
- Occupancy sensors in open office areas.
- Switched occupancy sensors in private office areas.
- Occupancy sensors in all storage rooms.
- Dimmable controls in all classrooms, exercise and mind/body rooms.
- Occupancy sensors in laundry rooms.
- Occupancy sensors in locker rooms (both new and existing).

Renewable Energy

Solar thermal water heating is the preferred method to meet the Oregon Renewable Energy Act 1.5% budget expenditure requirements; however a photovoltaic array may also be required to make up a cost deficit to reach the 1.5% target. The size of this array is undetermined at this stage of the design.

LIGHTING NARRATIVE

The University of Oregon Student Recreation Center project, an expansive renovation and addition to the existing facilities to adapt a modern, energetic design, strives to capture the attention of students and make the accessibility to wellness and life style changes available to the entire university campus community. Lighting will be creatively used to accentuate the architectural design and enhance the overall experience within the Recreation Center facilities.

Some of the lighting issues considered when developing the lighting design:

- Light levels will be designed to meet the recommended guidelines for all occupants as stated in the new, 10th Edition of the IESNA Handbook unless otherwise determined by the University. Light levels shall also comply with local codes and ordinances.
- The luminaire style shall correspond with the architectural design and finishes.
- Indirect lighting will be used in many spaces to enhance the volume of the spaces and eliminate potential glare issues.
- Luminaires shall be energy efficient and easily maintained/relamped.
- Light sources shall have a long lamp life and good color rendition.
    - LED or fluorescent lamping sources, unless otherwise noted below
    - Minimize lamp types
- Daylighting will be used in many spaces throughout the facility based upon ongoing work by the ESBL.
- Daylight and occupancy sensors will be used whenever possible to assist with sustainable design.
- Attention to the design of the dimming system and luminaire zone groupings will allow for flexible lighting levels appropriate to the corresponding activities held in the area.
- Dimmable luminaires shall have Lutron H-Series or Hi-Lume ballasts and shall be compatible with the Lutron Grafik Eye system, as specified by the Electrical Engineer.
- The architectural program statement fully defines the lighting solution for each program space, while the following narrative describes the overall common objectives:

Gymnasium

Provide indirect/direct luminaires to achieve a minimum light level of 50 FC at the floor. Light source may include fluorescent, LED, or HID lamping. Areas shall be controlled through a Building Automation System / Dimmable or Multi-Switched / Manual Override. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy. Floor finish, aiming angles, and damage resistant luminaire construction shall also be addressed in the design.

Fitness / Cardio / Weight Rooms
Provide indirect/direct luminaires to achieve a minimum light level of 30 FC at the floor. Areas shall be controlled through a Manual Switch / Occupancy Sensor. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy. Additional task lighting as desired. Direct lighting will be avoided in free weight areas, where users are prone to exercise while looking up into light fixtures.

Natatorium (Pool)
Provide indirect or remote source luminaires to achieve a minimum light level of 50 FC at the floor level. Light source may include fluorescent, LED, or HID lamping. Areas shall be controlled through a Building Automation System / Time Clock / Photocell. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy. Aiming angles (particularly with relation to glare on the water surface) / pool basin / underwater lighting shall also be addressed in the design. Luminaires shall be UL rated for natatorium installations, with no luminaire sources located directly above the pool water.

Multi-Purpose / Group Ex Rooms
Provide direct / indirect / cove luminaires to achieve a minimum light level of 30 FC at the floor. Areas shall be controlled through a Building Automation System / Occupancy Sensor / multi-switched. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy. Additional considerations shall be floor finish / aiming angles / use of mirrors on the walls / and damage resistant design related to the activities to be held in the space. Color changing RGB luminaires may also be considered to enhance the design and participants' experience.

Lockers / Restrooms
Provide direct / lensed / cove luminaires to achieve a minimum light level of 10 FC at the floor. Areas shall be controlled through a Building Automation System / Occupancy Sensor. Luminaires located in wet and / or humid environments shall be sealed and UL rated for wet-location installation.

Circulation / Lobby Areas
Provide direct decorative luminaires and indirect ambient luminaires to achieve a minimum light level of 10 FC at the floor. Additional task lighting at the control desk shall also be used to achieve 30 FC at 2'-6" a.f.f. Areas shall be controlled through a Building Automation System / Preset Dimming System / Occupancy Sensor / Manual Override as appropriate to the space. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy. Color changing RGB luminaires may also be considered to enhance the design and participants' experience.

Back of House (BOH) – Administration, offices, marketing, duplication, mail room, and technology / server room areas, etc.
Provide indirect/direct recessed luminaires to achieve a minimum light level of 30 FC at 2'-6" a.f.f. Additional task lighting as desired. BOH areas shall be controlled through a Building Automation System / Occupancy Sensor / Dual-Level Switching as appropriate to the space. Additional Daylight Sensor may be used in areas with sufficient daylighting contribution to conserve energy.

Exterior
Provide direct luminaires to achieve a minimum light level of 1FC at the ground at night to illuminate the pathway. In-grade fixtures to highlight the building façade. Building mounted lights will only be considered with the Owner's approval. Light sources may include fluorescent, LED, or HID lamping. Areas will be controlled through a Building Automation System / Photocell.

TECHNOLOGY NARRATIVE

Voice, Data, and CATV Horizontal Cabling Infrastructure
This facility will be cabled with 4-pair unshielded twisted pair (UTP) Category 5e voice and data network cabling. The design will be based on University of Oregon approved manufacturers and will require that the successful bidder submit at least a 20-year, end-to-end solution warranty for the completed installation of these products.

Each telecommunications outlet (TO) will consist of four 8-pin connector modules. Each outlet will be capable of delivering voice or data as selected by the Owner. Each TO will also be capable of accepting an RG-6 outlet. These TO locations will be coordinated with the Owner to ensure exact placement as needed.

Voice, Data, and Video Backbone Infrastructure
A new fiber and copper entrance will be extended via the existing tunnel system to a new MDF room located in the lower level of the addition. The existing fiber and copper service entrances in room 87B will be used for redundant backup. This will allow room 87B to be demolished in a future Esslinger Hall remodel. Three (3) four inch conduits will be routed from the new MDF room to the existing room 87B which will now become an IDF with a fiber and copper backbone.

Copper Backbone
A new Intermediate Distribution Frame (IDF) closet will be installed in upper level of the expansion. The voice backbone will consist of 100 ohm Category 3, 24 awg, multipair copper cable. These multipair cables originate from the Main Distribution Frame (MDF). Pair count will be determined at a later time when the final horizontal cabling counts are agreed upon. All voice risers will terminate on wall mounted 110 blocks with overlays to rj-11 patch panels in the equipment racks.

The data backbone will consist of the following: Twenty four (24), Cat6 Augmented cables terminated in the equipment racks in the MDF and upper floor IDF.

A fiber optic cable consisting of 12 single-mode and 12 multi-mode fibers will be installed from the MDF to the IDF and terminated in fiber distribution cabinets. The single-mode terminations shall be fusion spliced to factory pre-connectorized modules utilizing SCUPC connectors. The multi-mode terminations shall be hand polished utilizing either anaerobic or hot-melt ST connectors and mounted in ST panels in the fiber distribution cabinets.

Racks and Rack Wire Management
Rack will be provided to meet Campus Design Standards and the needs of the facility, quantity of racks to be determined by the final horizontal cable count.

Access Control and Intrusion Detection
The access control system will consist of door monitoring, electric latches and card

readers on doors reusing the existing system and expanding to new secure doors where necessary.

Closed Circuit Television (CCTV) Surveillance System
The CCTV Surveillance System will consist of pan, tilt, zoom and fixed cameras in Owner designated public areas to be determined. This will include indoor and outdoor areas to monitor reception desk and front entrance. Digital data storage will be provided. The CCTV System will be integrated with the Access Control System.

Cable TV (CATV) System
The CATV System will consist of Commscope P3-500 cables (or equal) installed within the existing tunnel system to a CATV service entrance in the MDF. Horizontal RG-6 Quadshield cable will be used from the taps to the outlets. Connect to campus distribution via SM fiber to Aurora node media converters.

Each TO described above will be capable of accepting a CATV insert and cable. The CATV insert with be modular and designed to be used in the modular faceplate. The CATV outlet will utilize RG-6 Quadshield coaxial cable. Provide amplifiers and splitters as required to maintain video signal integrity at each TO.

Wireless Access
Provide full wireless coverage for all public areas. Provide wireless access point with telecommunications outlet (TO) with two 8-pin connector modules and wireless access coverage will be modeled and devices provided by UO NTS for contractor installation.

Digital Signage
Owner designated public areas to be determined will have connections for future digital signage. A telecommunications outlet (TO) with four 8-pin connector modules and CATV outlet will be required at each location. Assume every public gathering area will have one screen. The University will provide digital integration with Department of Public Safety and campus network.

Distributed Antenna Network
Size pathway to accept future distributed Antenna Network. UO NTS will consult on pathway sizing for DAS.

FIRE SUPPRESSION SYSTEMS NARRATIVE

Fire Sprinklers Overview

Project scope is for wet type life safety fire sprinkler system(s) throughout.

The existing UG fire service serving Esslinger will remain in service. The FIRE WALL separating Esslinger from the balance of the existing recreation center building will serve as a sprinkler system boundary until AS - BUILT research deems another choice.

A new UG fire service will be brought into the new construction. Two locations are being considered one at the NE corner of the existing SRC and one location at the south end of the project – entering the pool mechanical room. The NE option is a preferred supply point.

New area sprinklers will be zoned per floor with the likelihood of 2 zones for the two upper floor levels (north and south zones).

Existing sprinklers in Esslinger will be modified (relocated) where demolition or renovation occurs. New sprinklers will be quick response. Interface boundaries with existing standard response sprinklers will be established.

Sprinkler Design Criteria will include areas requiring Light through Ordinary Hazard protection densities.

The project does not include insurance design criteria.

System to comply with university standards for fire risk objectives which includes specific elements to reduce long term inspection and maintenance costs.

Recent changes on the state level have added new requirements for fire sprinklers due to SEISMIC zone “D” status. Coordination with ceilings and ceiling bracing concept is required. Fire sprinkler systems to comply with Zone “D” seismic requirements which include flexible pipe for certain ceilings or expansion (slip) rings around sprinklers.

New fire department pumper connection to be located per discussions with the Eugene Fire Department fire plan analyst. Fire sprinklers will include 7 types+/- throughout the installation:

1. Recessed Quick Response Pendents.
2. Recessed Quick Response Sidewalls.
3. Quick Response Uprights.
4. Concealor Quick Response Pendents.

5. Recessed Quick Response Extended Coverage Pendents.
6. Recessed or Flush Quick Response Extended Coverage Sidewalls.
7. Quick Response Extended Coverage Uprights.

Extended Coverage sprinklers will be utilized where pressures and conditions permit.

Design at this point is considering only steel pipe.

A special note of concern is “floating acoustical or decorative ceilings”. These require multiple levels of sprinklers and high flow rate hydraulic calculations.

We anticipate that the water supply is adequate for fire sprinkler systems without the need for a fire pump.

Sprinkler piping to be concealed above ceilings where ceilings occur. Exposed structure areas to have exposed painted pipe located as aesthetically feasible.

The east side fitness center is cantilevered over an activity area and the exterior underside will be sprinklered.

Activities areas where sprinklers could receive impact will require sprinkler head guards. Sprinklers over the pool will require chlorine protection (wax coating).

Standpipe Systems Overview
The building does not have a standpipe requirement per OSSC Section 905.

Fire Alarm System Overview
A new fire alarm system will be orchestrated that meets code and the university protection philosophy and standards.

The new fire alarm control panel (FACP) will be located at the north entry. The new FACP will be provided to serve new areas and selected existing areas.

This facility will have an occupant load exceeding 1,000. Per OSSC 907.2.1.1 this facility requires an emergency voice/alarm communication fire alarm system - a very different system in terms of number of devices (typically 2X - 4X times the number of devices needed in a standard horn notification system) than standard fire alarm systems. Occupant notification will utilize speakers and combo speaker-strobes.

Current design concept is to maintain or replace the existing fire alarm device style/ type for remodel areas west of the FIRE WALL.

New construction and renovation work will interrupt existing building fire systems therefore requiring temporary or interim equipment in the project or fire watch services.

The new system is to serve new and existing areas east of the FIRE WALL.

Acoustics in this building will require special attention due to large volumes and high ceilings. Some areas may have high ambient noise levels to overcome or high echo factors.

ADA compliance is required for applicable devices.

The fire alarm control panel will supervise fire alarm, sprinkler and smoke control activation devices along with required smoke detection for door release service, elevator equipment, HVAC and Fire Smoke Dampers (FSD's). Shafts will require FSD's.

Redundant equipment is to be avoided if possible. Placement of long term equipment needs consideration for maintenance issues - high ceiling spaces are maintenance problems due to frequent testing/inspection requirements. Device selection must consider device effective lives (many fire alarm devices have 15 year or less effective lives).

As designed, 3 levels open to each other make this building an atrium requiring engineered smoke control.

Options are being reviewed to provide automatic closing horizontal fire shutters to close off the lowest level from the main level therefore changing this structure to a "2 levels open to each other" building. Per the OSSC Section 402.10 Exception 1 this deletes the requirement for Section 909 engineered smoke control.

It is beyond the fire alarm scope to estimate the requirements of an engineered smoke control system (OSSC Section 909). Engineered smoke control systems are mechanical smoke exhaust systems which operate from a Fire Fighters Smoke Control Panel (not the fire alarm control panel). The extent of smoke detection (beam detectors, spot detectors) needed for an engineered smoke control system is an unknown until an engineered smoke control system is designed. Fire modeling is typically required for engineered smoke control systems. (OSSC 909). Fire Fighters Smoke Control Panels are called FFSCP's in the code.

Engineered smoke control systems are independent of fire alarm systems. Engineered smoke control systems are not fire alarm systems.

Mass notification is not a required system and is not proposed.

Esslinger Interface/Integration/Modifications. Mac Court Interface
It is the intent of this project to limit sprinkler and alarm work to "project scope" areas and fringe rooms around the remodel areas. Wholesale modifications in Esslinger are not planned.

No work is proposed in Mac Court.

Specialty 'Non Water" Protection Systems
Specialty water failsafe suppression (pre-action) or gaseous suppression systems for high value/water vulnerable spaces are not proposed.

POOL SYSTEMS NARRATIVE

Design Criteria

Competition / Lap Pool

- Pool Water Surface Area- Approximately 6,852 SF
- Pool Perimeter- 345 linear feet
- Pool Depths- 0'-0" to 6'-7"
- Desired Water Temperature- 80-82 degrees

Recreation / Leisure / Diving Pool

- Pool Water Surface Area- Approximately 4,963 SF
- Pool Perimeter- 309 linear feet
- Pool Depths- 0'-0" to 12'-6"
- Desired Water Temperature- 84-86 degrees

North Hydrotherapy Spa / Social Pool (add alternate)

- Pool Water Surface Area- Approximately 240 SF
- Pool Perimeter- 60 linear feet
- Pool Depths- 3'-6"
- Desired Water Temperature- 102-104 degrees

South Hydrotherapy Spa / Social Pool

- Pool Water Surface Area- Approximately 208 SF
- Pool Perimeter- 58 linear feet
- Pool Depths- 3'-6"
- Desired Water Temperature- 102-104 degrees

Water Collection and Circulation

Both larger pools will feature rim flow, deck level gutter water surface collection which facilitate lounging at the edge of the pool as well as provide ingress and egress for those who do not choose the ladders, stairs, or zero depth areas. Both smaller pools will feature skimmer water surface collection. There will be dual non-entrapment VGB approved main drains in all four bodies of water. Surge chambers will be required for both of the larger pools.

Pool Deck Equipment

Pool deck equipment shall be installed in strict accordance with pertinent codes and regulations and the manufacturer's published recommendations, anchoring firmly and securely for long life under hard use. Contractor shall furnish and install the following deck equipment: handrails at entry ramps; grab rails at in the lap swim area of the pools; two (2) self-directed, hydraulically-powered disabled access lifts. All rail goods shall be manufactured from 316 stainless steel tubing, 1.50" outside diameter, 0.145 wall thickness, with clear powder coat finish. The pool shall also have underwater lights, and rope anchors for swimming lanes. Required competitive equipment shall

include ten (10) starting blocks with associated deck anchors, two fixed cage water polo goals, and two floating cage water polo goals. Two (2) one-meter diving boards will be installed in the main lap pool. Required recreation equipment shall include two (2) water basketball goals with deck anchors and two (2) water volleyball nets with associated deck anchors.

Water Treatment (Each Body of Water Shall Have a Separate System)
Permanent media hi-rate silica sand filters have been requested by maintenance staff as the preferred media for the filtering of foreign substances (dirt, debris, etc.) from the pool water. The approximate filtration system flow rate shall be 15 GPM per square foot of filter area.

Filtration system shall be furnished complete with influent piping manifold, effluent piping manifold, and all necessary valves and fittings as required for normal filter operations. Influent and effluent pressure gauges shall also be provided as part of a fully integrated system.

The Chemical treatment system shall utilize calcium hypochlorite (tablet chlorine) as the primary oxidant. The oxidant feed system shall be capable of providing a constant in-pool chlorine residual of 1 - 15 PPM. The pH shall be controlled through the utilization of muriatic acid. Both chemical feed systems shall be automatically controlled by a single chemical controller with the capacity of monitoring and continually adjusting ORP, PPM, and pH. At the request of maintenance staff to simplify processes between their pools, Pulsar and a Stantrol chemical controller will be used. LMI or approved equal shall be used for muriatic acid feed.

U/V (Ultra Violet sterilization) will also be used. The addition of a UV system will further reduce the risk of pathogens in the water as well as help control chloramines, which can irritate eyes, skin, and throats.

Pool Mechanical
Pool mechanical piping shall consist of Schedule 40 PVC for all below grade piping and Schedule 80 PVC for all above grade piping. Piping shall be sized for velocities not to exceed 6 feet per second for suction piping and 8 feet per second for discharge (return) piping. All underground piping shall have a minimum of 18” of earth cover. Provisions shall be made for automated filling of the pool to compensate for water loss due to splash-out and evaporation.

Pool Heating Analysis
This project assumes that pool covers will be used every day. As a way of further reducing energy costs and dependence on fossil fuels thermal solar heating will be used to heat the pool. While thermal solar heating will not be sufficient to heat the pool year round without relying on another means of pool heating, it, along with the use of pool blankets, will result in a significant reduction in energy use and

associated costs. The option of utilizing a heat recovery system integrated into a dehumidification system is also being explored.

The primary means of heating the pools shall be the campus steam loop in association with shell and tube heat exchangers.

Pool Finishes
Ceramic Tile will be used along the waterline, as lane line markers, targets, depth markers, gutter caps, gutter bullnose, caution markers, water polo course markers, and trim.

Due to concerns with the cost of a tile finish and the required maintenance for a plaster finish each body of water will feature PebbleTech finishes. The spa(s) and Recreational / Leisure / Diving pool will both feature a PebbleSheen finish which will provide the University with very durable and attractive finish. The Competition / Lap pool will feature a PebbleFina finish which is more durable than traditional plaster but features the same smooth finish found in premier lap pool around the world.

Colors for both Ceramic Tile and PebbleTech finishes will be specified during Construction Documents Phase.

Direct Construction Budget / Cost Estimate

The construction budget for the project has been established at $35.5 million. The selected CM/GC has the responsibility to provide the final built project for this amount. They also have the responsibility throughout the design process to review project documents and provide cost estimates. In addition, an independent cost estimator commissioned directly by the UO is tasked with performing concurrent cost analyses. These analyses are required at each stage of the work and once independently completed, are compared and reconciled.

Preliminary estimating completed by the CM/GC and the Independent Estimator together in January 2012 indicated that the project was approximately 13% over budget and 12% over area. The area of the building was reduced in response to this initial estimate.

Schematic Design estimates based on draft information similar to what is included in this report were completed by the CM/GC and the Independent Estimator on March 9, 2012. They were reconciled the following week and it was determined that the project was approximately $4.92 million over budget. Possible value engineering changes were prepared by the design team and presented to the Project Management Group, and scope and cost adjustments were identified in preparation to presenting a balanced project to the PUG at their meeting on April 18, 2012. A summary of these adjustments is included in the following spread sheet and plan diagrams. Cost reduction line items 7a, 8b, 9, 12b,13a, 15, 18, 19, 20, 21, 23 and 24 were approved by the PUG and represent approximately $5.13 million in savings. As a result of these adjustments, the drawings and other information in this report reflect a project that, including project contingencies, is within the $35.5 million budget. Refer to the Appendix “H” for a copy of the CM/GC and the Independent Cost Estimator’s budgets.

As previously noted, at the completion of the Schematic Design the project will be put on hold for an as yet undetermined length of time. It is assumed that, due to inflation, the cost of the project will rise over that time and that the budget will be modified to recognize this change.

UO Budget Reconciliation - Possibilities *** DRAFT * DRAFT * DRAFT ***

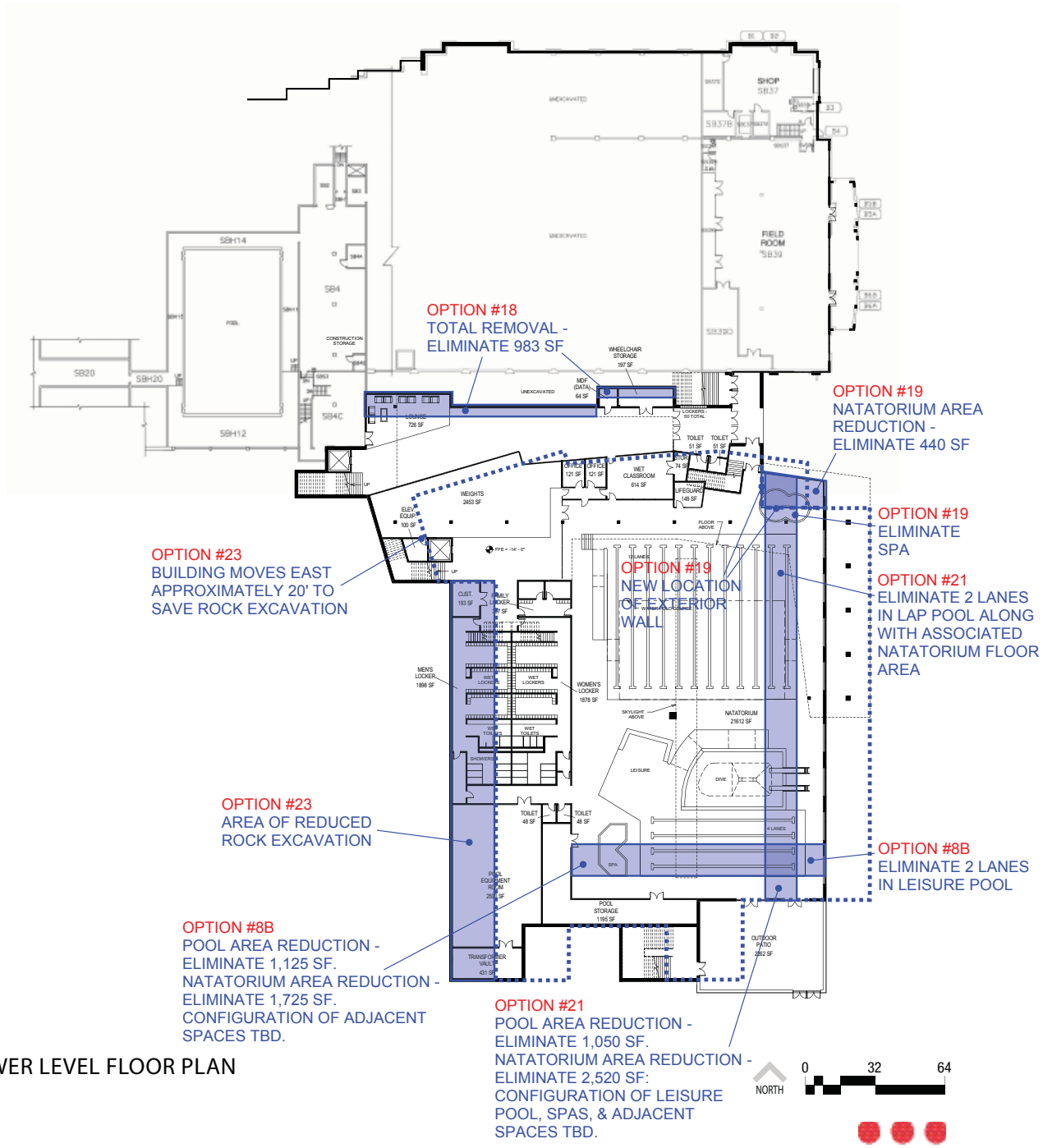
Created March 14, 2012
Updated April 2012

All cost values shown herein reflect the Design Team's best guesstimates, based upon the detail of the HSW and ACC Estimates

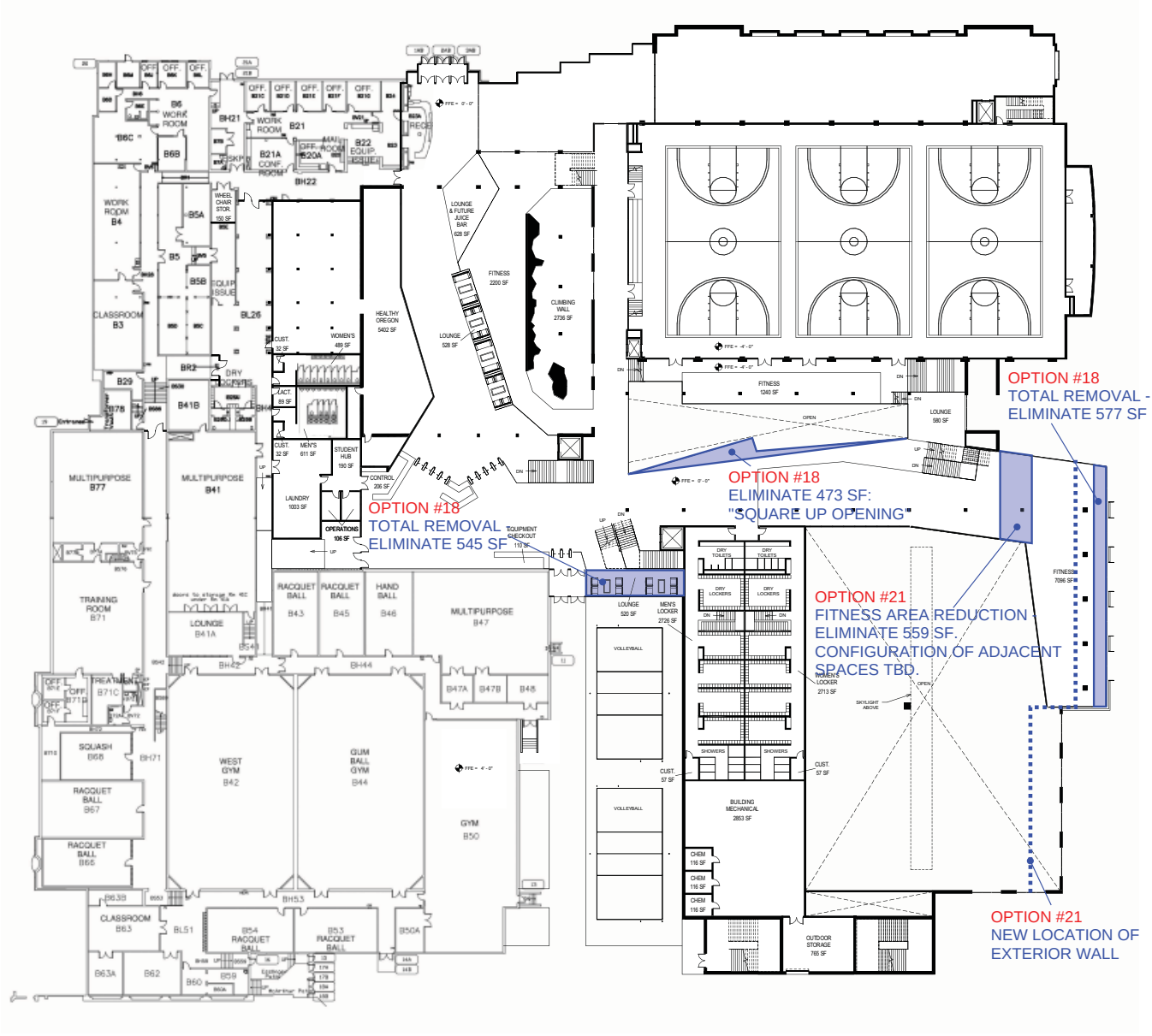
1	Current SD Statement of Probable Cost	$ 40,553,475	Average	
2	HSW Estimate on March 28, 2012 was ~ $40,328,561			
3	ACC Estimate on March 28, 2012 was ~ $40,378,389			
4	Direct Construction Cost, Budgeted	$ 35,500,000		
5	THEREFORE, Target Value of Scope or Design Changes Required	5,053,475	Budget Bust!	
6	*Construction Cost Mark Up (Average between ACC & HSW estimates)*	*1.18*		

	Item Description	Net Cost	Cost with M/U	Accept (Y/N)?	Addt'l Info
7a	**Eliminate Roof Terrace / Outdoor Basketball Court** Eliminates pavers and specialty structure, plus windows & doors, complete Install glass lights above 8' on wall. Assume 8 4' x 4' windows. Eliminate guardrail at parapet, etc. Eliminate all paving, leaving pedestals, etc., complete Eliminate one-half of South Stairway Eliminate all but one door to roof	800,000	$ 944,000	N	
7b	**Eliminate Roof Terrace, Retain Structure for Future Build** Eliminate storefront overlooking deck, substitute metal panel faced exterior wall Install glass lights above 8' on wall. Assume 8 4' x 4' windows. Eliminate all paving, leaving pedestals, etc., complete Eliminate one-half of South Stairway Retain all doors to roof from Gym / Fitness Retain structural design as indicated in SD documents	169,492	$ 200,000	Y	
8a	**Eliminate One Lane in Leisure Pool** This reduces Leisure Pool to 3 lanes only This reduces length of Natatorium by 7', full width	210,000	$ 247,800	N	Diagrammed
8b	**Eliminate Two Lanes in Leisure Pool** This reduces Leisure Pool to 2 lanes only This reduces length of Natatorium by 15', full width	450,000	$ 531,000	Y	Diagrammed
9	**Delete Roof Monitors at Gymnasium** Replace monitors with flat plate skylights or Kalwall ($50k) Retain the Roof Top Ventilators, and Natural Ventilation Uncertain as to how this affects the sidelight windows on Gym (TBD) This keeps $150,000 allowance for "roof / parapet sculpting" at Gymnasium	388,000	$ 457,840	Y	
10	**Reduce Quantity of Site Work (specifically to the south)** Eliminate one half of the exterior seating / seat walls Significantly reduce development south of the SRC	140,000	$ 165,200	N	
11	**Leave Laundry Services in Gerlinger (for now)** Can be located in Esslinger at a later date This reduces the work inside Esslinger Assumes 1,000 NSF @ $125 / SF	125,000	$ 147,500	N	
12a	**Shell Out Dry Locker Rooms in New Construction** Assumes 4,900 NSF @ $150 /SF	735,000	$ 867,300	N	Diagrammed
12b	**Reuse Existing Lockers, placing them in New Construction** Relocate 1,230 Lockers Add 400 New Lockers Eliminate 1,230 Lockers from the Estimate Estimates for Lockers ranged from 150k to 450k. Assume $300k is correct.	340,000	$ 401,200	Y	
12c	**Purchase Lockers with FF&E Funds / Procurement** Requires 1,700 Lockers Estimates for Lockers ranged from 150k to 450k. Assume $300k is correct.	476,000	$ 561,680	N	
13a	**Use Lesser Cost Metal Panels for some of the Exterior Skin** Assume 75% of the 24,600 SF of panels = 18,460 SF Cost reduction for lesser panels is ~ $20 / SF savings	369,200	$ 435,656	Y	

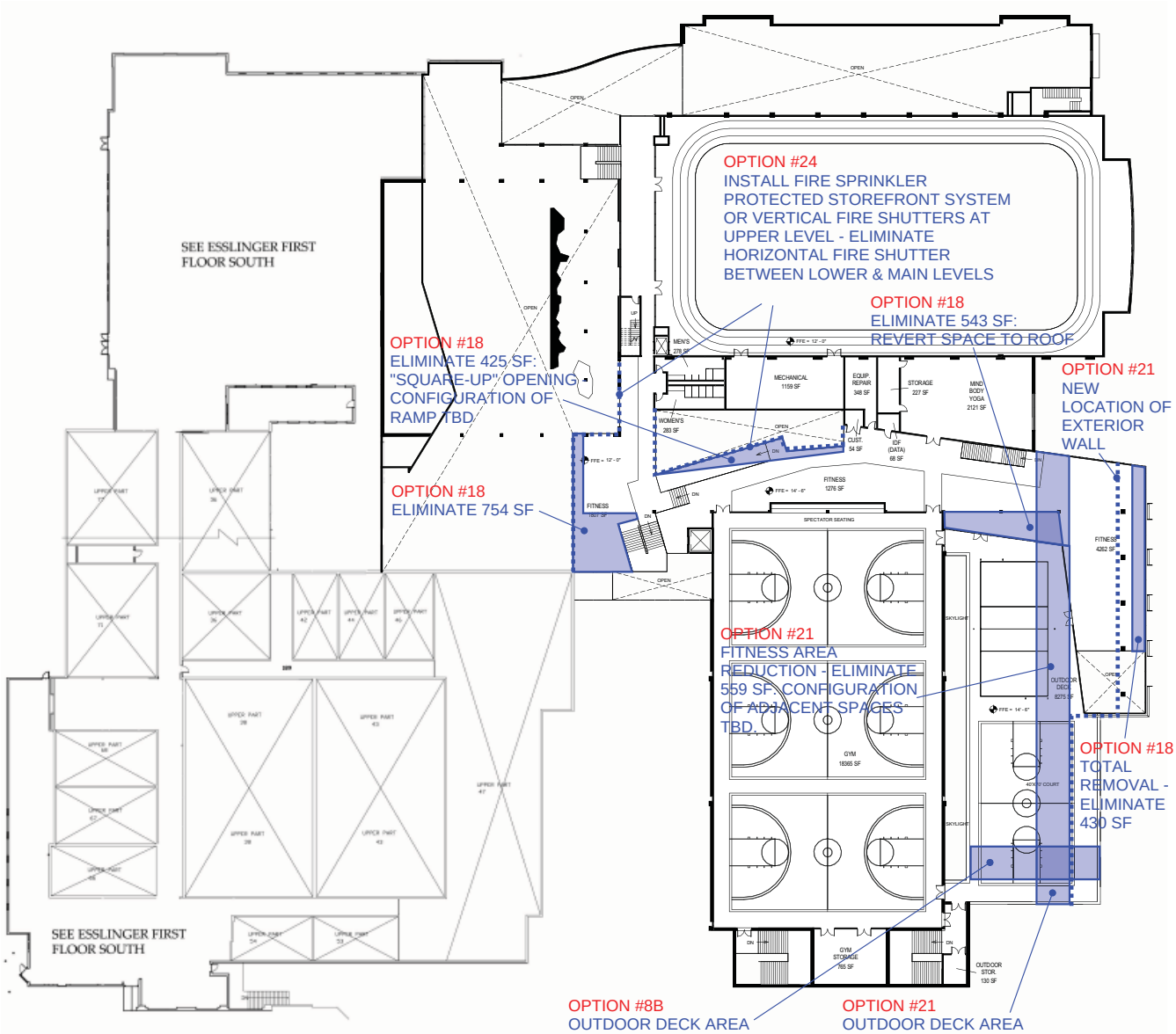
13b	**Use Traditional Stucco in lieu of Metal Panels for some of the Exterior Skin** This mandates traditional construction, not an EIFS system Assume 75% of the 24,600 SF of panels = 18,460 SF Cost reduction for lesser panels is ~ $40 / SF savings	738,400	$	871,312	N	
14	**Delete One Elevator in new Construction** Single elevator must then serve both Free and Control Zones	150,000	$	177,000	N	Diagrammed
15	**Lower the Gymnasium Roof by 4 feet** Top of Roof Deck is currently shown at 35' AFF, yielding ~ 29' clear inside. Wall is reduced by 2,400 SF in area Composite cost of this wall section is ~ $70 / SF, maybe more	168,000	$	198,240	Y	
16	**Reduce Estimating Contingency to a Lesser Value** Both estimates are currently carrying ~ 5% Construction Contingency.	0	$	0	N	
17	**Increase Direct Construction Cost** Changes in the value of interest and time might yield more construction funding Current value is #35.5 M	0	$	0	N	
18	**Eliminate Portions of Gross Building Area** This is in areas of Fitness and Lounge Space (see plan diagrams) This reduces the overall area of Fitness Space by ~ 3,000 NSF 2,535 GSF of "Total Building Removal" (~ $280 / SF) 2,195 GSF of "Partial Removal - low impact on cost (~ $100 / SF)	929,300	$	1,096,574	Y	Diagrammed
19	**Eliminate One Spa (North Spa, specifically, including surrounding deck / Natatorium))** Eliminate Spa (~ 139,000) Eliminate 440 SF of Natatorium (~ $250 / SF)	249,000	$	293,820	Y	Diagrammed
20	**Raise Lower Level of Building out of ground by 1 foot** Results in 13' floor to floor dimension between Lower and Main (was 14') This affects a 44,800 SF floor plate, complete Eliminates ~ 1,660 CY of Rock Excavation (~ $75 / CY) Reduce overall building skin by ~ 740 SF of wall surface This maintains a minimum 10' Ceiling Height in Weights and area under Fitness	175,000	$	206,500	Y	
21	**Eliminate Two Lanes in Lap Pool** This reduces Lap Pool to 10 Lanes This reduces width of Natatorium by 14', full length (180') This shortens Water Polo course, and eliminates option for floating goals. Bldg area is reduced by 2,520 SF, while Water area is reduced by 1,050 SF Rock excavation is reduced by 311 CY	885,000	$	1,044,300	Y	Diagrammed
22	**Eliminate Wet Ramp in Lap Pool** Eliminate Wet Ramp in its entirety Eliminate 540 SF of Natatorium (~ 280 / SF) Reduce quantity of Rock Excavation	199,000	$	234,820	N	Diagrammed
23	**Move Building to the East** (following other changes shown above) If we narrow the natatorium, bring the west building face east This action moves more of the building out of the rock excavation zone This action also increases the Yellow Zone	57,627	$	68,000	Y	Diagrammed
24	**Revise Strategy for Avoiding an Code-Identified Atrium** Horizontal Fire Shutter carries a net burden of ~ $400,000! Reduce shutter size (smaller opening), or use Water Curtain, or Vertical Shutters	169,492	$	200,000	Y	Diagrammed
100	**Aggregate Cost Saving Options Investigated**		**$**	**9,349,742**		
101	Total Value of Items Accepted	*Yellow highlight indicates value exceeds reduction target!*	$	5,133,130		
102	Total Value of Items Declined		$	4,216,612		



LOWER LEVEL FLOOR PLAN



MAIN LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN

LIST OF DRAWINGS

Landscape

Schematic Site Plan
Schematic Site Plan
Open Space Framework Diagram
Existing Parking Space Adjustments
Existing Conditions of Site Improvements

Civil

Utilities
Utilities

Architectural

Lower Level - Phase 1
Main Level - Phase 1
Upper Level - Phase 1
Lower Level - Phase 2*
Main Level - Phase 2*
Upper Level - Phase 2*
Building Elevations
Building Elevations
Building Sections
Building Sections

**Future replacement of Esslinger spaces*

Structural

Lower Level - Phase 1 - Structural
Main Level - Phase 1 - Structural
Upper Level - Phase 1 - Structural
Roof Plan - Phase 1 - Structural

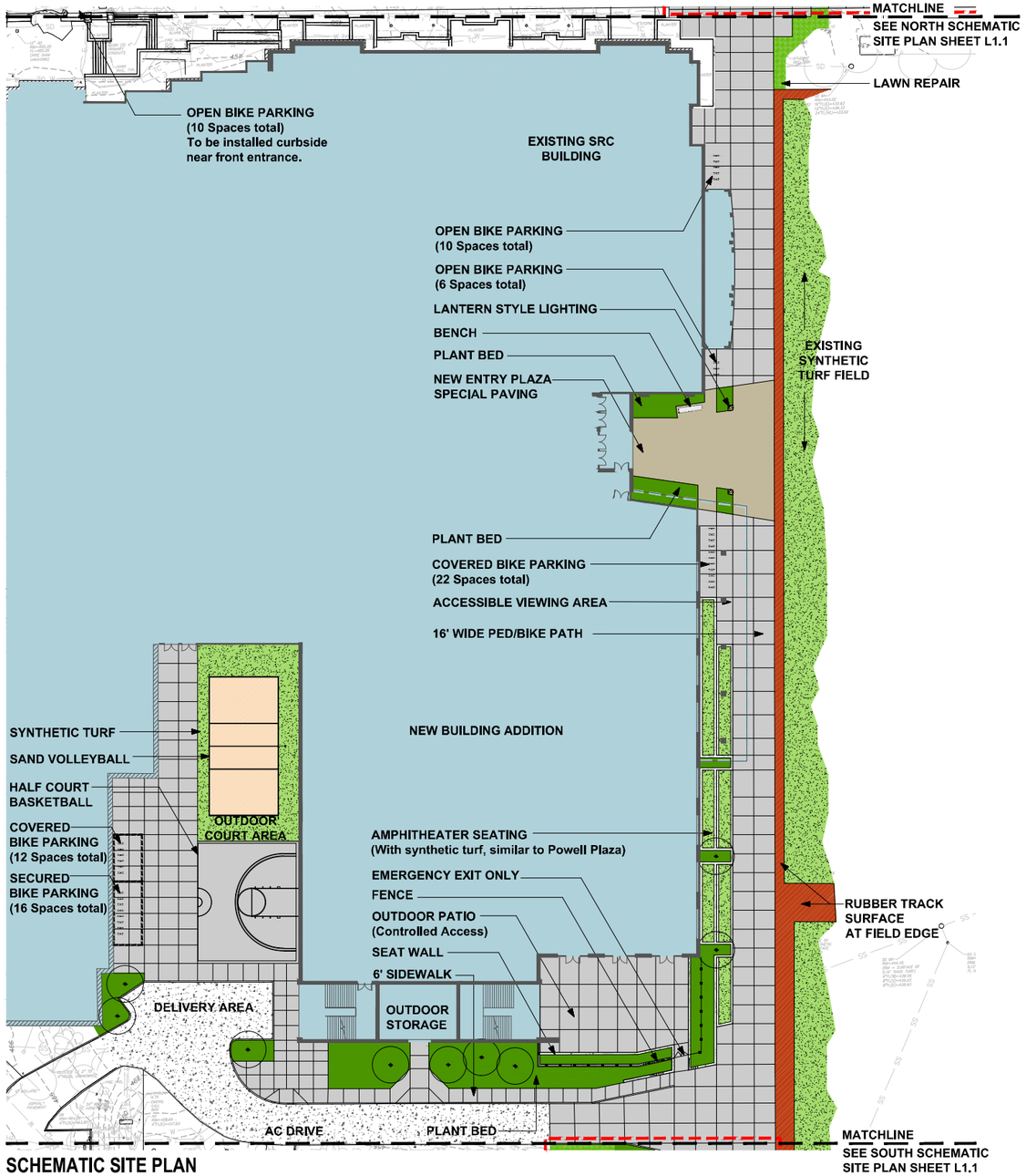
Mechanical

Lower Level - Phase 1 - Mechanical
Main Level - Phase 1 - North - Mechanical
Main Level - Phase 1 - South - Mechanical
Upper Level - Phase 1 - North - Mechanical
Upper Level - Phase 1 - South - Gymnasium - Mechanical
Upper Level - Phase 1 - South - Fitness Area - Mechanical

Electrical

Lower Level - Phase 1 - Electrical
Main Level - Phase 1 - Electrical
One Line Diagram - Electrical

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SCHEMATIC SITE PLAN

LEGEND

- EXISTING ELEMENTS To Remain
- EXISTING LIGHT POLES To Remain
- NEW TREES
- LAWN & PLANT BED REPAIR
- NEW PLANT BED
- FLOW THROUGH PLANTER
- CONCRETE SIDEWALK/PAVING
- AC PAVING
- AC PAVING REPAIR
- SYNTHETIC TURF
- RUBBER SURFACING
- SEAT WALL
- FENCING
- BENCHES
- DETECTABLE PAVING
- POTENTIAL DESIGNATED OPEN SPACE IMPROVEMENT
- SITE LIGHTING
  - Lantern style
- BIKE PARKING
  - 8 Uncovered racks; 16 Spaces total
- COVERED BIKE PARKING
  - 17 Covered racks; 34 Spaces total
- SECURED BIKE PARKING
  - 8 Covered racks; 16 Spaces total

NOTES

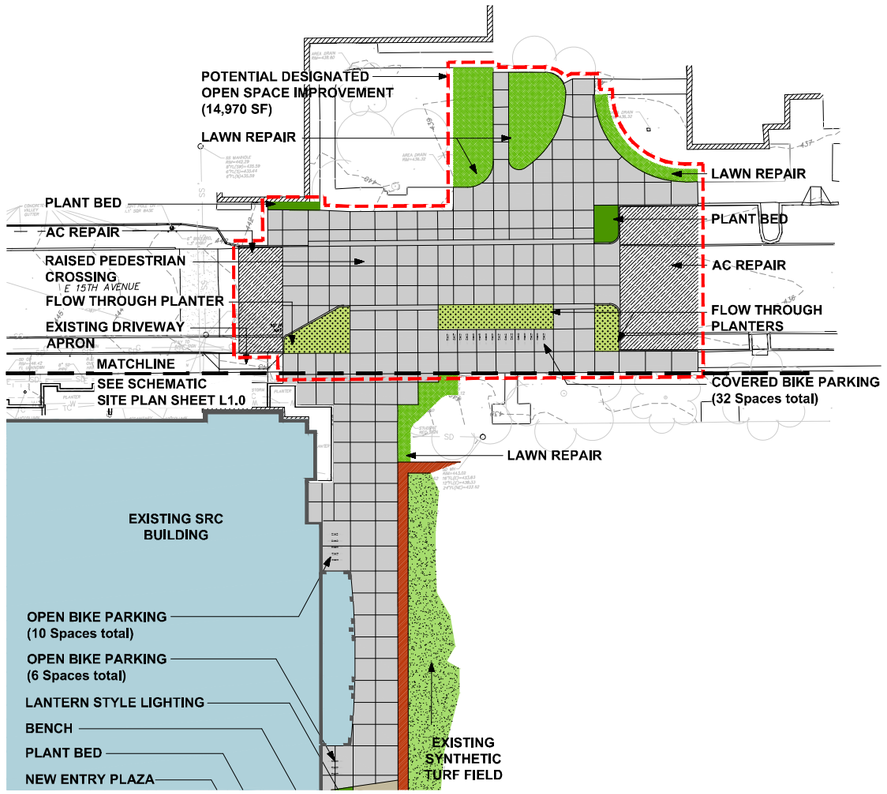
1. All survey information provided by:
   Ford & Associates, LLC
   630 S. Bertelson Road
   Eugene, OR 97402
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Owner's Representative. Notify Owner's Representative prior to performing any excavation within protection areas.
4. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
5. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative's approval prior to installing any related work.
6. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.
7. In addition to improvements shown, repair all areas disturbed or damaged by construction impacts to the condition that existed prior to Construction.

NORTH

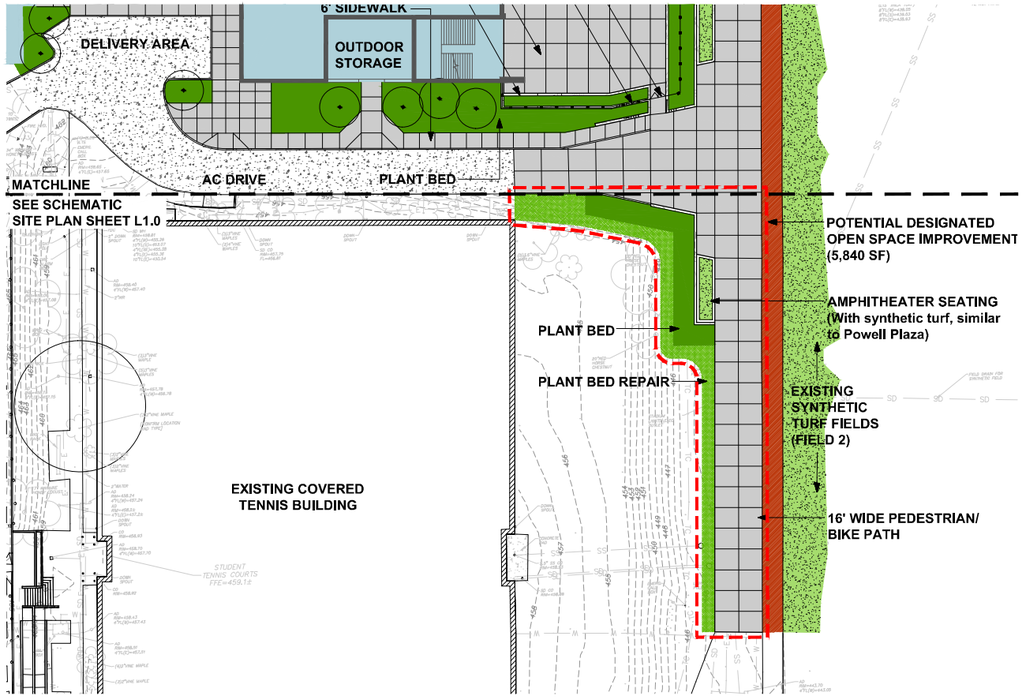
SCALE: 1" = 20' (0' 10' 20' 40')

L1.0 SCHEMATIC SITE PLAN

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NORTH SCHEMATIC SITE PLAN



SOUTH SCHEMATIC SITE PLAN

LEGEND

- EXISTING ELEMENTS To Remain
- EXISTING LIGHT POLES To Remain
- NEW TREES
- LAWN & PLANT BED REPAIR
- NEW PLANT BED
- FLOW THROUGH PLANTER
- CONCRETE SIDEWALK/PAVING
- AC PAVING
- AC PAVING REPAIR
- SYNTHETIC TURF
- RUBBER SURFACING
- SEAT WALL
- FENCING
- BENCHES
- DETECTABLE PAVING
- POTENTIAL DESIGNATED OPEN SPACE IMPROVEMENT
- SITE LIGHTING
  - Lantern style
- COVERED BIKE PARKING
  - 16 Covered racks; 32 Spaces total

NOTES

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   Ford & Associates, LLC
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   Eugene, OR 97402
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
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6. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.
7. In addition to improvements shown, repair all areas disturbed or damaged by construction impacts to the condition that existed prior to Construction.

SCALE: 1" = 20' (0' 10' 20' 40')

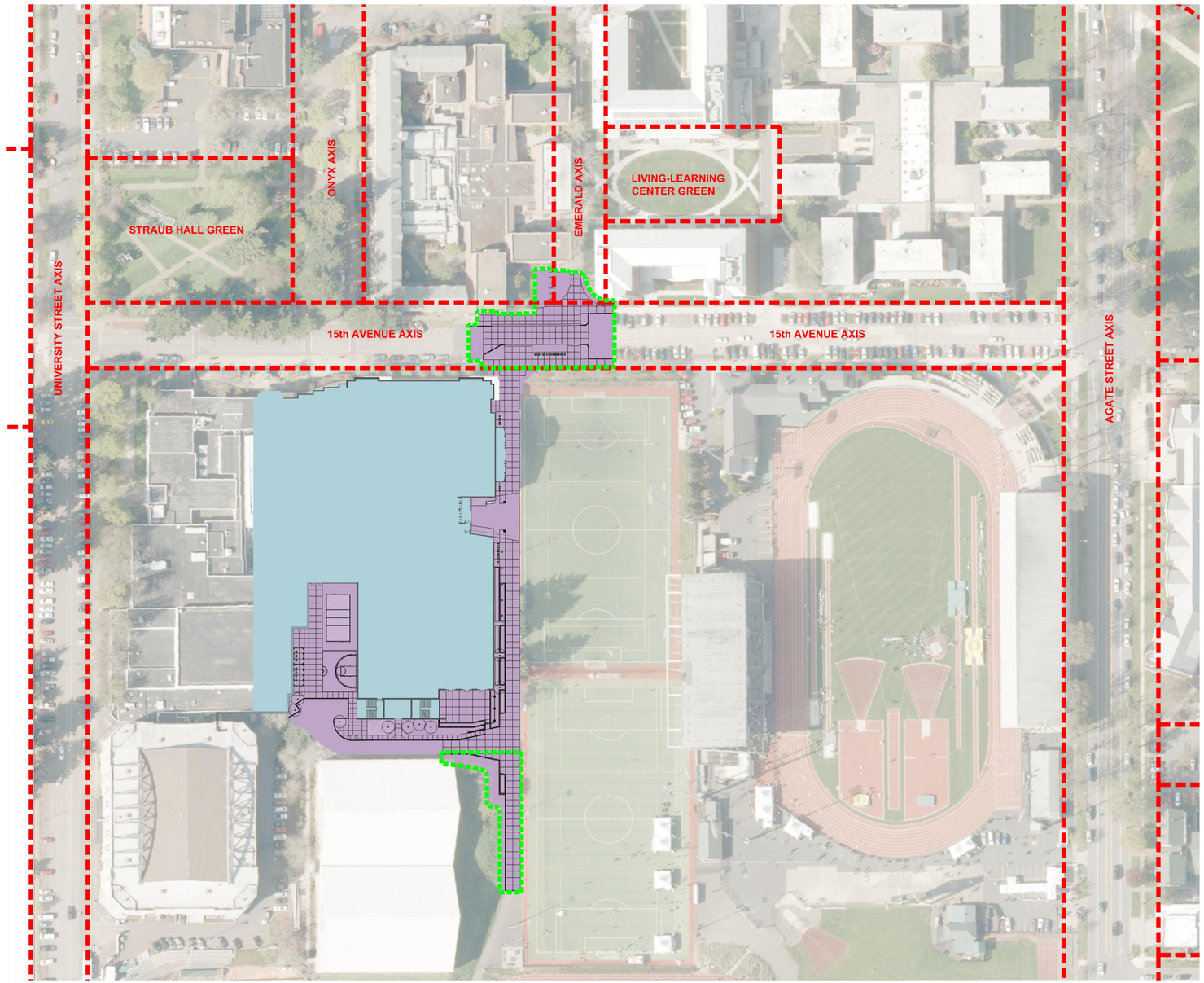
NORTH

L1.1

SCHEMATIC SITE PLAN

RDg... PA

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LEGEND

- PROPOSED BUILDING ADDITION
- PROPOSED SITE IMPROVEMENTS
- APPROXIMATE LOCATION OF DESIGNATED OPEN SPACE FRAMEWORK
  - PER UNIVERSITY OF OREGON'S DESIGNATED OPEN SPACES MAP
- POTENTIAL DESIGNATED OPEN SPACE IMPROVEMENTS OR UNIVERSITY PATHWAY IMPROVEMENTS

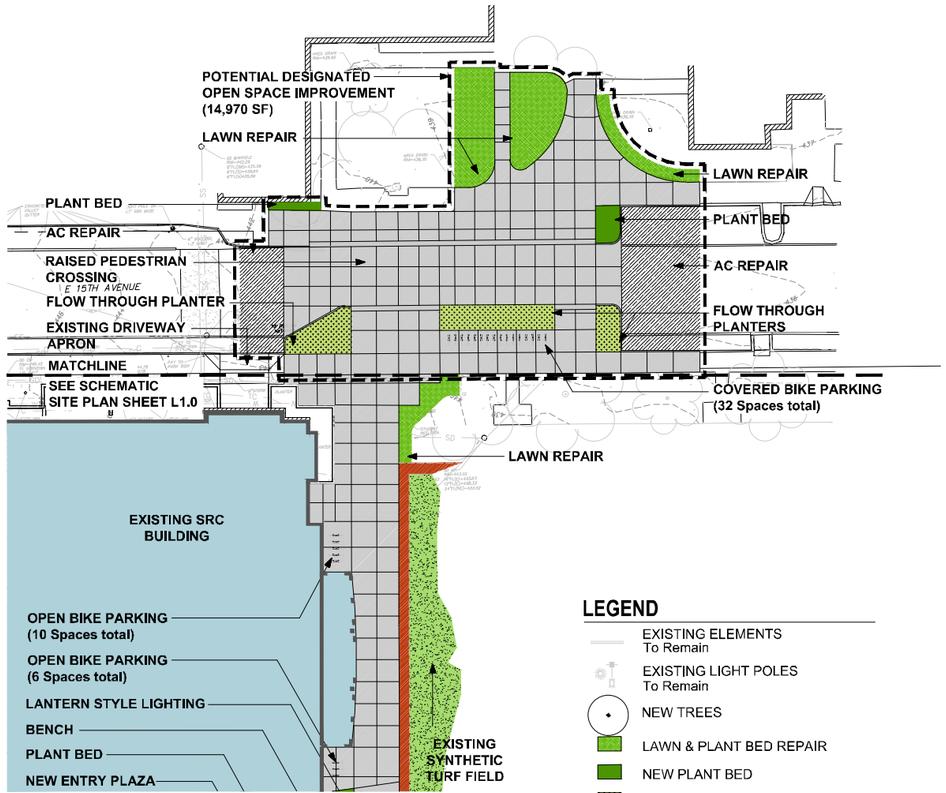
NORTH

SCALE: 1" = 50' (0' 25' 50' 100')

L1.2 OPEN SPACE FRAMEWORK DIAGRAM

STUDENT RECREATION CENTER

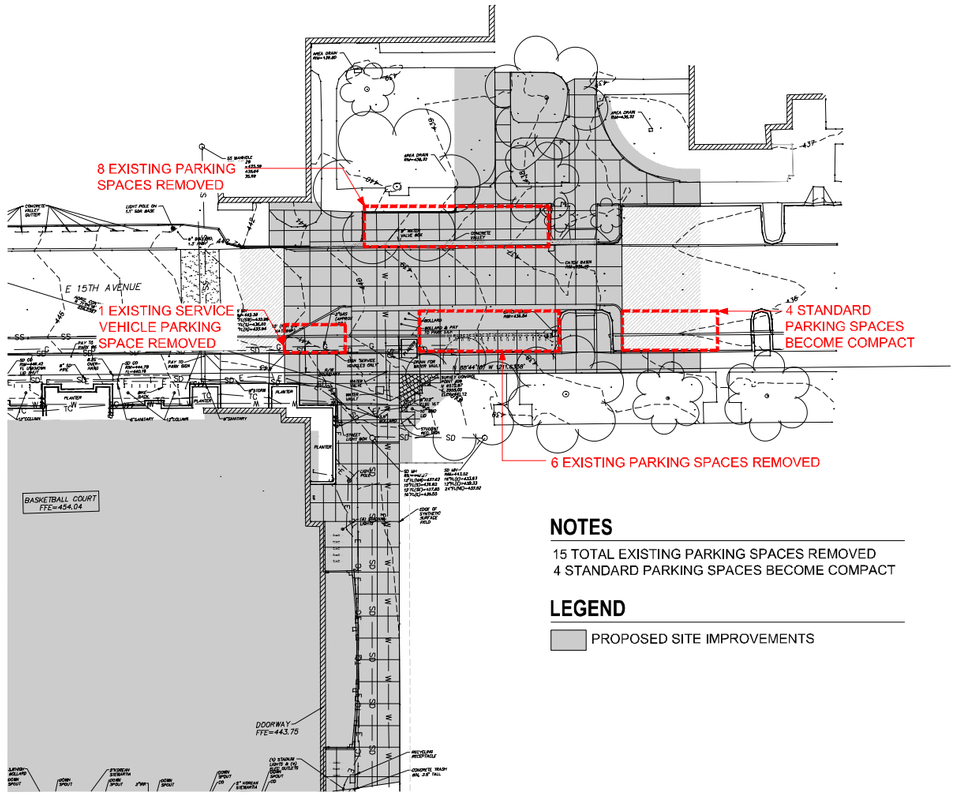
University of Oregon



NORTH SCHEMATIC SITE PLAN
PROPOSED SITE IMPROVEMENTS

LEGEND

- EXISTING ELEMENTS To Remain
- EXISTING LIGHT POLES To Remain
- NEW TREES
- LAWN & PLANT BED REPAIR
- NEW PLANT BED
- FLOW THROUGH PLANTER
- CONCRETE SIDEWALK/PAVING
- AC PAVING
- AC PAVING REPAIR
- SYNTHETIC TURF
- RUBBER SURFACING
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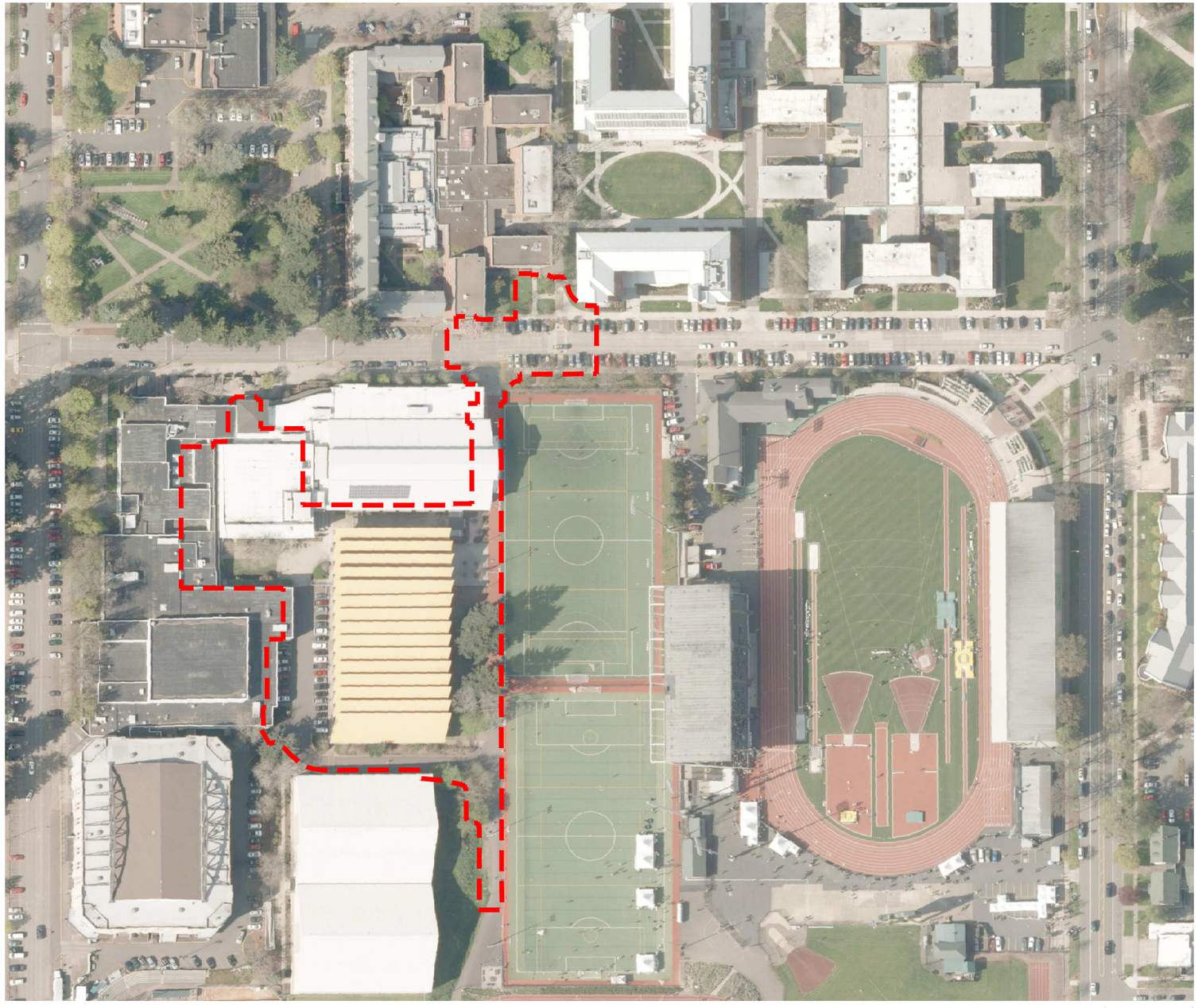
NORTH SCHEMATIC SITE PLAN
EXISTING PARKING SPACE ADJUSTMENTS

NOTES

15 TOTAL EXISTING PARKING SPACES REMOVED
4 STANDARD PARKING SPACES BECOME COMPACT

LEGEND

- PROPOSED SITE IMPROVEMENTS



LEGEND

APPROXIMATE LIMITS OF SITE IMPROVEMENTS

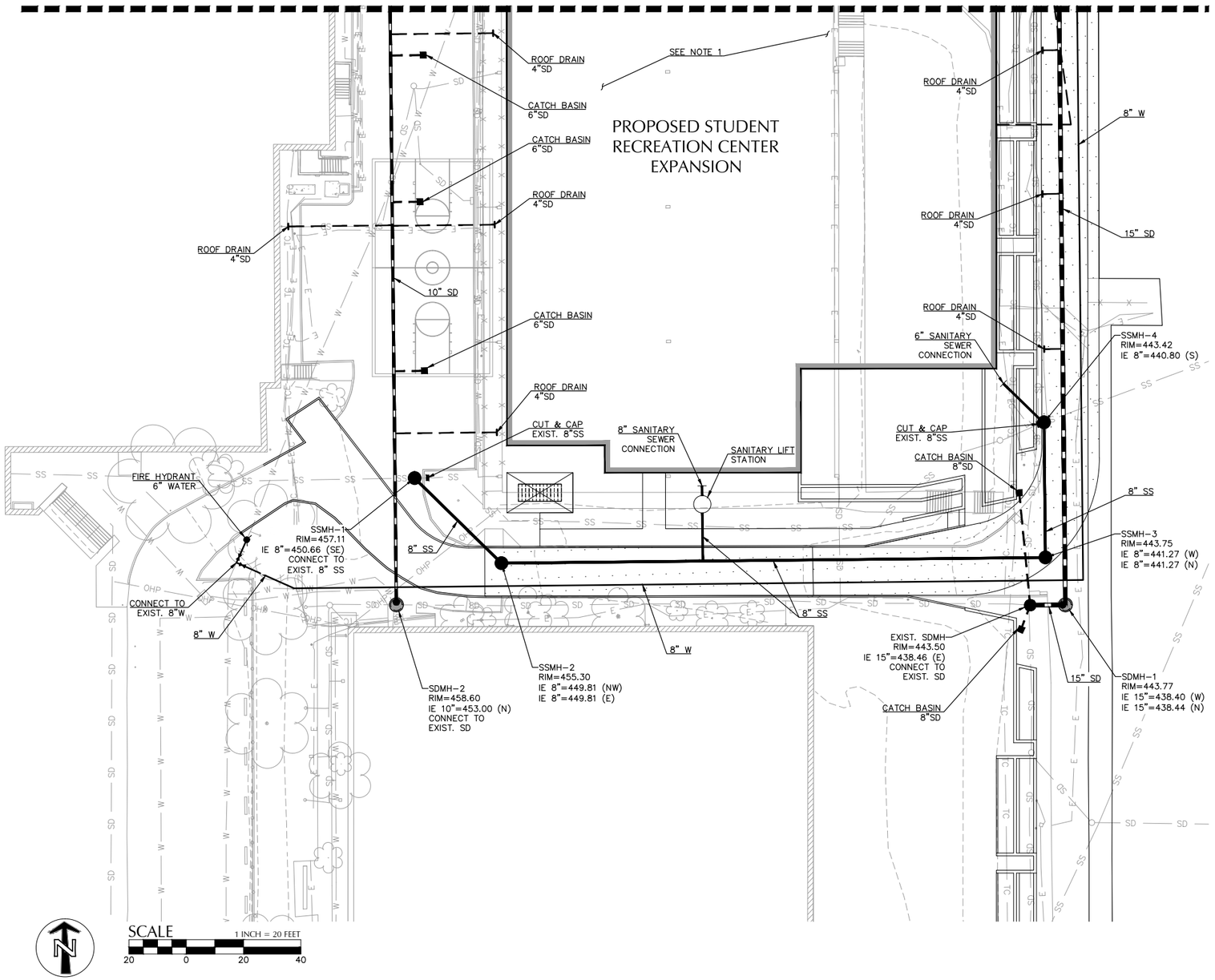
SCALE: 1" = 50' (0' 25' 50' 100')

NORTH

L1.4 EXISTING CONDITIONS OF SITE IMPROVEMENTS

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kpff Consulting Engineers
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New York ◦ Pasadena ◦ Phoenix ◦ Portland ◦ St. Louis ◦ Sacramento
San Diego ◦ San Francisco ◦ Seattle ◦ Tacoma ◦ Walnut Creek



LEGEND

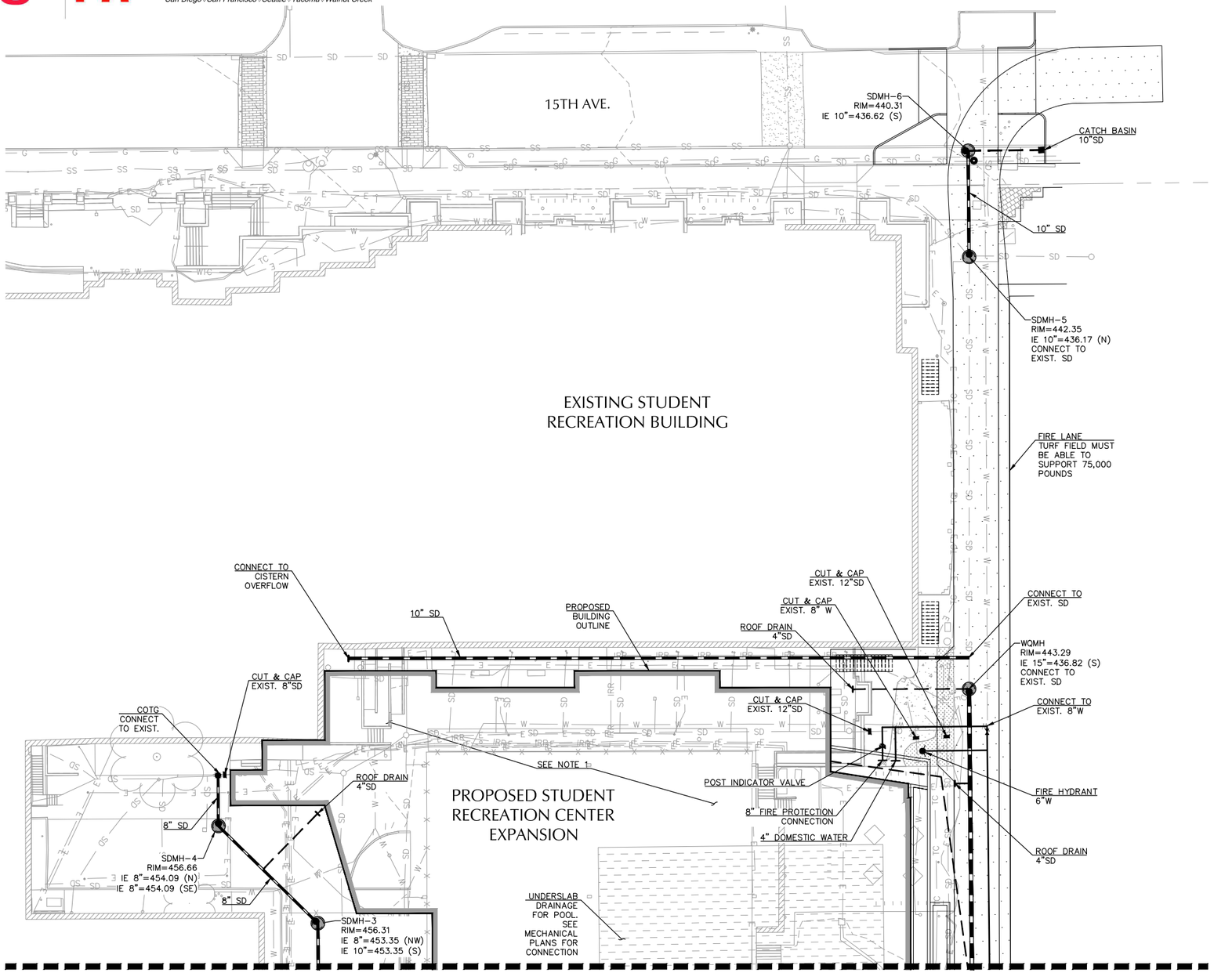
- SD – STORM DRAIN
- SS – SANITARY SEWER
- W – WATER
- SDMH – STORM DRAIN MANHOLE
- CATCH BASIN
- COTG – CLEAN OUT TO GRADE
- SSMH – SANITARY SEWER MANHOLE
- GATE VALVE

NOTES

1. REMOVE ALL UTILITIES WITHIN PROPOSED BUILDING FOOTPRINT AND DEVELOPMENT AREA.
2. FOR DATA, TELEPHONE, AND POWER REMOVAL AND/OR REROUTING, SEE ELECTRICAL PLANS.

RDg... PA

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San Diego ◦ San Francisco ◦ Seattle ◦ Tacoma ◦ Walnut Creek



LEGEND

- SD – STORM DRAIN
- SS – SANITARY SEWER
- W – WATER
- SDMH – STORM DRAIN MANHOLE
- CATCH BASIN
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- SSMH – SANITARY SEWER MANHOLE
- GATE VALVE

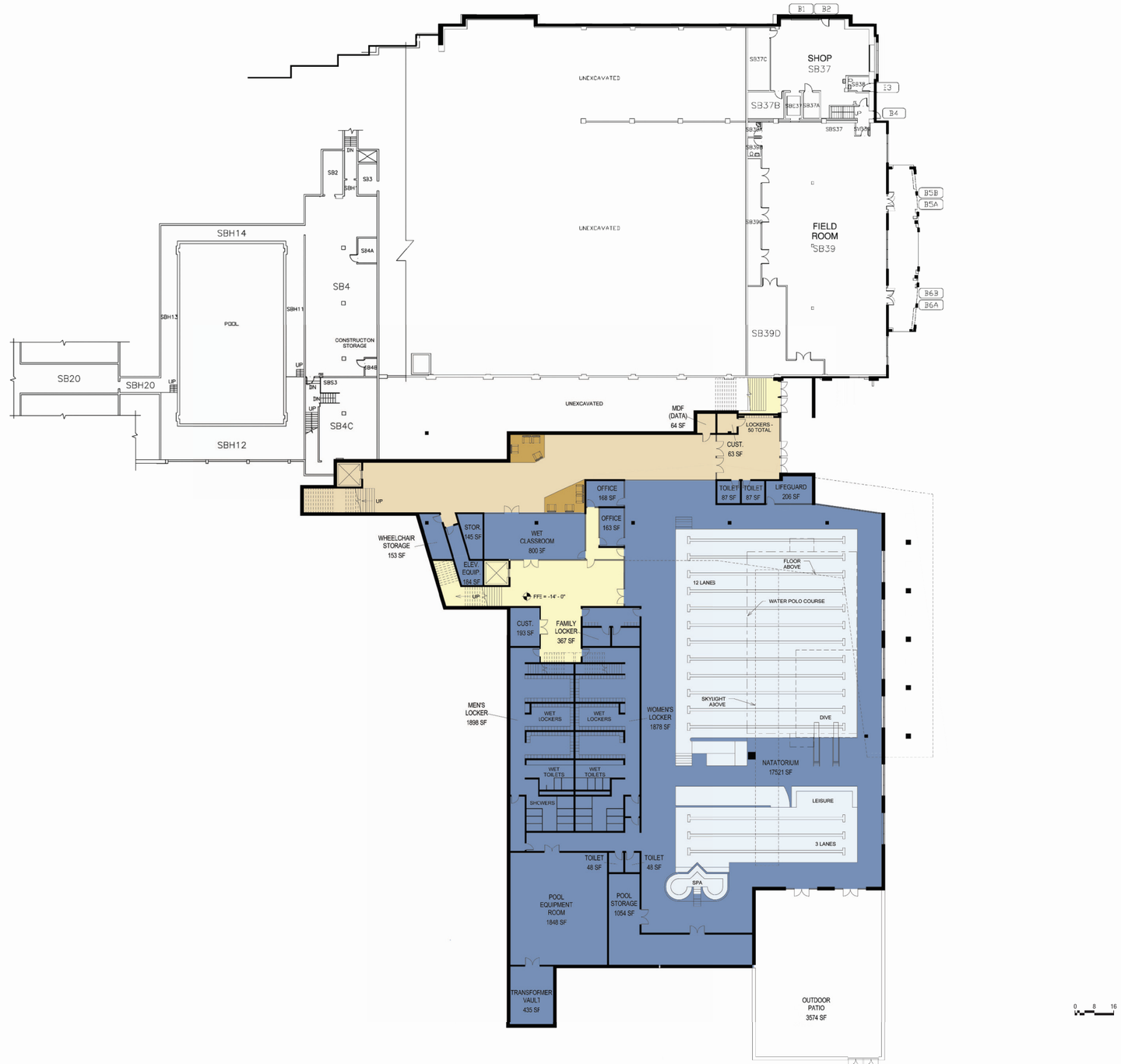
NOTES

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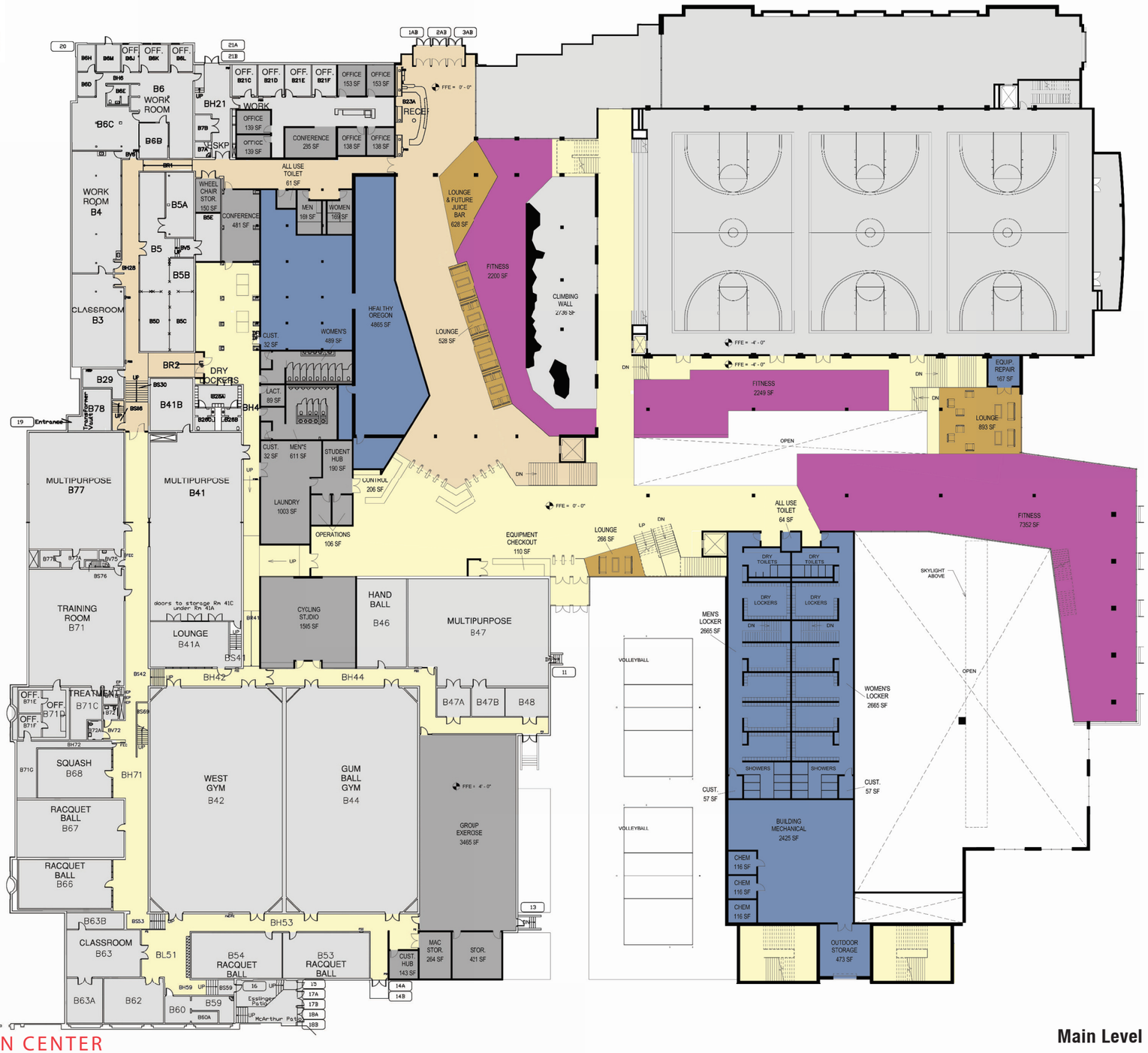
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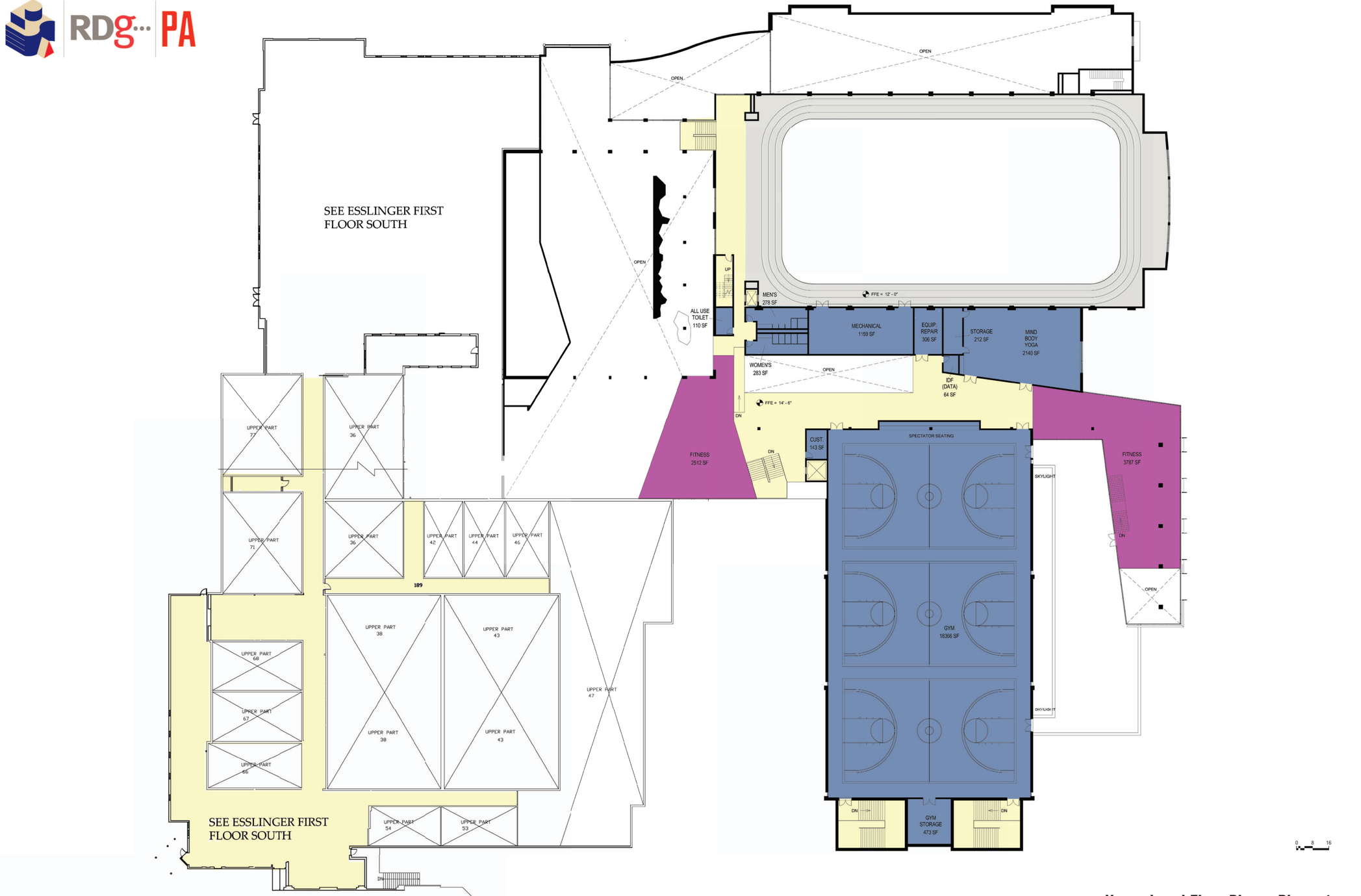
Lower Level Floor Plan – Phase 1



STUDENT RECREATION CENTER

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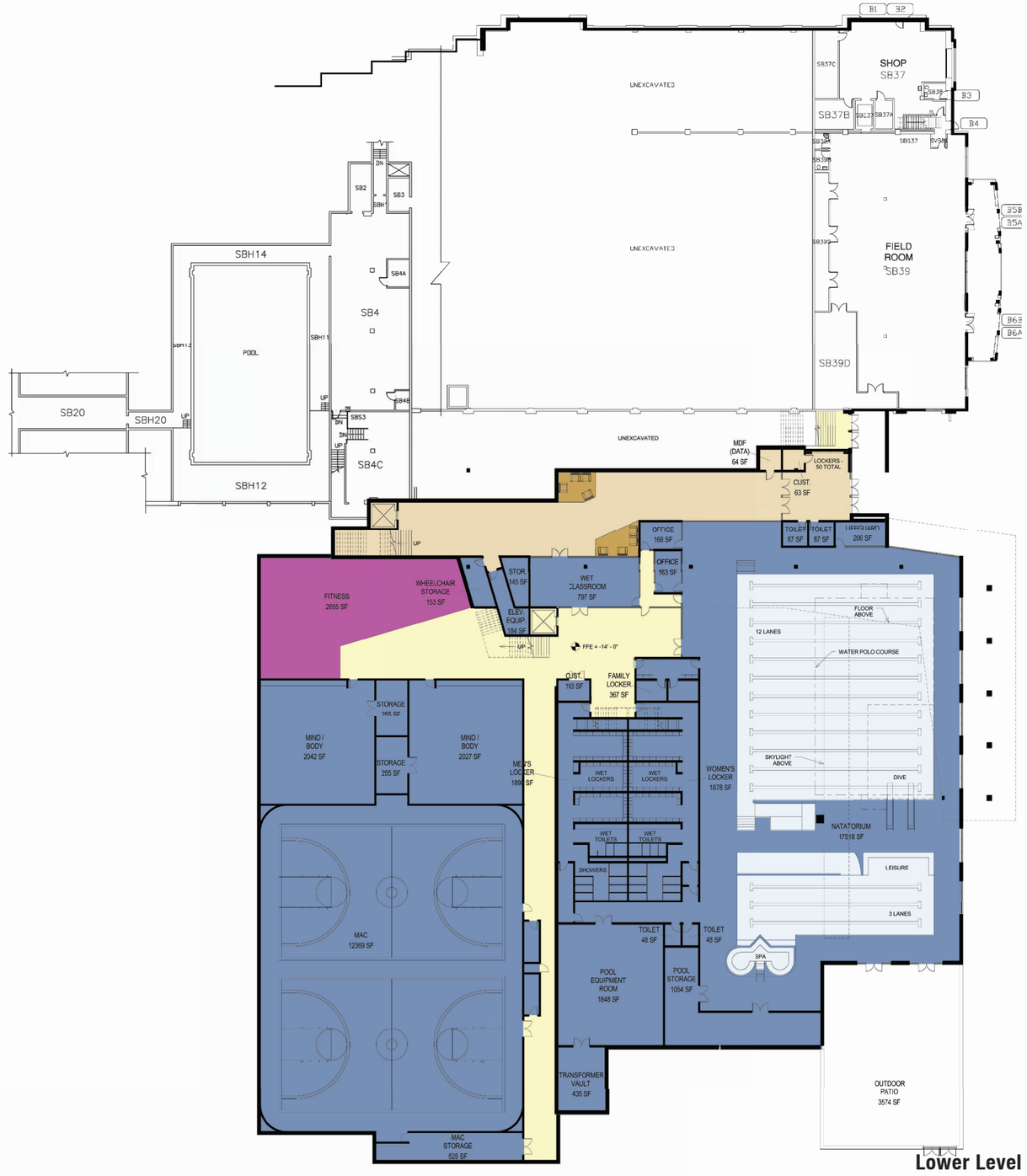
Main Level Floor Plan – Phase 1



STUDENT RECREATION CENTER

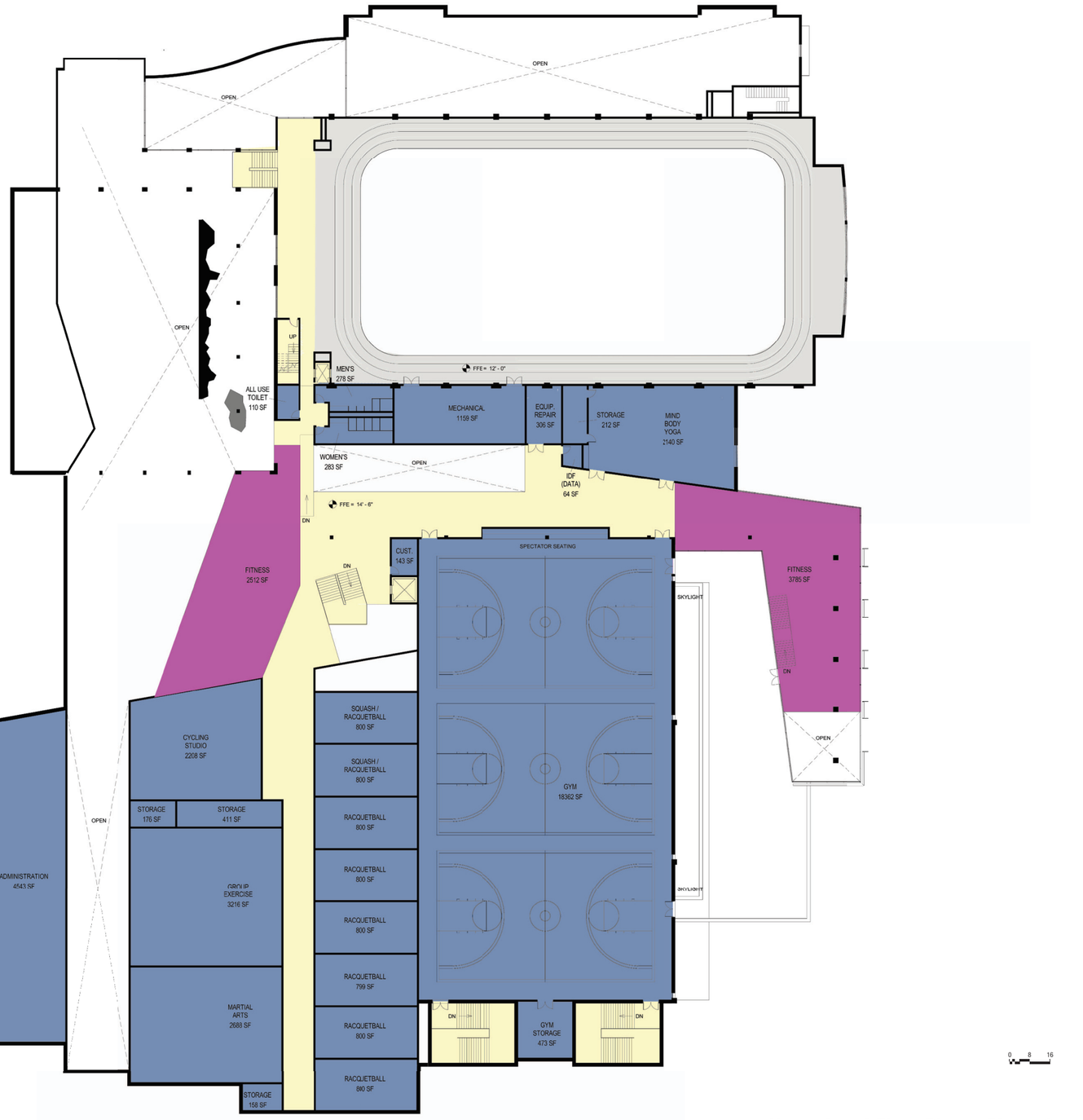
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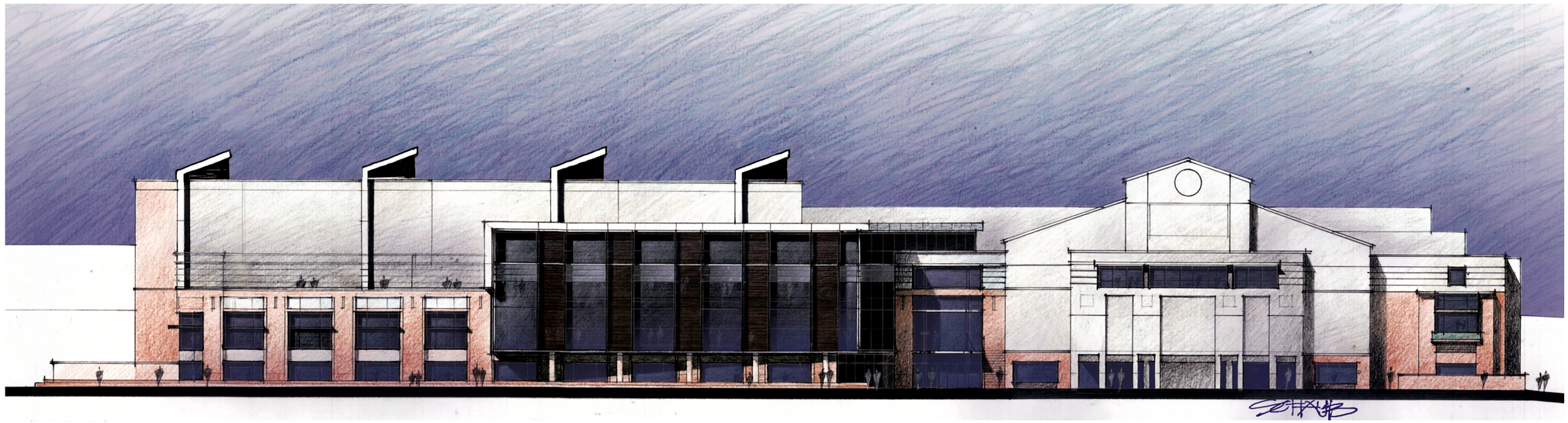
Upper Level Floor Plan – Phase 1



Lower Level Floor Plan – Phase 2


1AB
2AB
3AB
FFE = 0' - 0"
B23A
RECEP
LOUNGE & FUTURE JUICE BAR 628 SF
FITNESS 2200 SF
CLIMBING WALL 2736 SF
HEALTHY OREGON 4865 SF
LOUNGE 528 SF
FFE = -4' - 0"
FFE = -4' - 0"
DN
FITNESS 2246 SF
EQUIP REPAIR 167 SF
LOUNGE 893 SF
OPEN
FFE = 0' - 0"
ALL USE TOILET 64 SF
FITNESS 7348 SF
LOUNGE 266 SF
UP
DN
DRY TOILETS
DRY TOILETS
DRY LOCKERS
DRY LOCKERS
DN
DN
SKYLIGHT ABOVE
MEN'S LOCKER 2665 SF
ADMINISTRATION 3986 SF
OPEN
WOMEN'S LOCKER 2665 SF
SHOWERS
SHOWERS
CUST. 57 SF
CUST. 57 SF
CLASSROOM 1131 SF
ADMINISTRATION 2170 SF
OUTDOOR PURSUITS 1195 SF
OPEN
BUILDING MECHANICAL 2425 SF
CHEM 116 SF
CHEM 116 SF
CHEM 116 SF
OUTDOOR STORAGE 473 SF
0
8
16

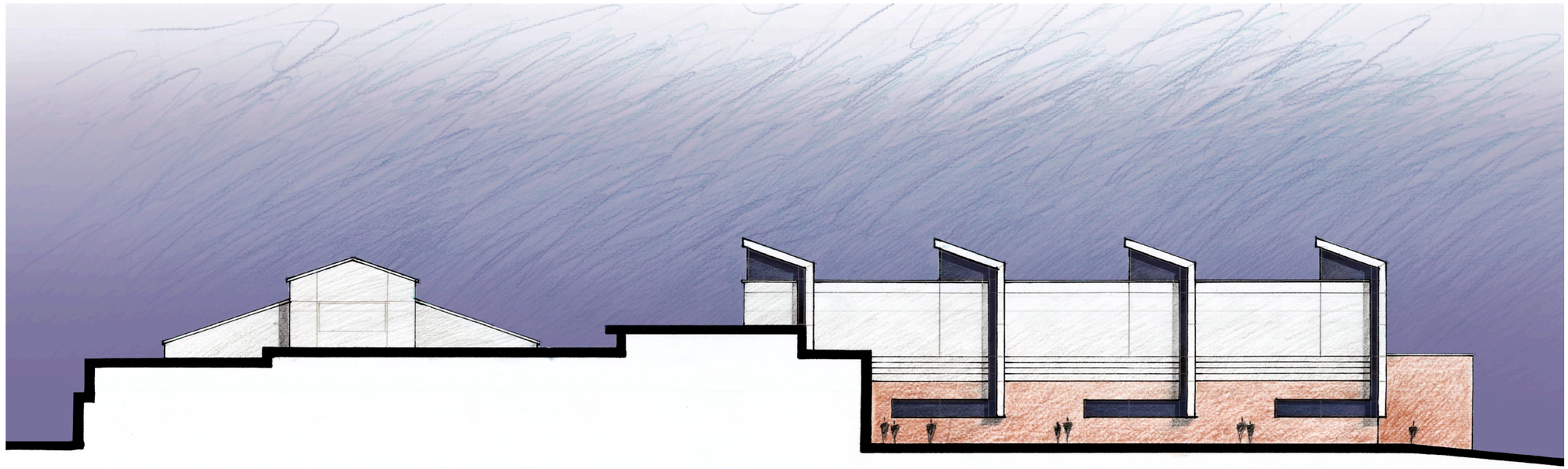

OPEN
OPEN
OPEN
OPEN
UP
MEN'S
278 SF
ALL USE
TOILET
110 SF
FFE = 12' - 0"
MECHANICAL
1159 SF
EQUIP.
REPAIR
306 SF
STORAGE
212 SF
MIND
BODY
YOGA
2140 SF
WOMEN'S
283 SF
OPEN
IDF
(DATA)
64 SF
FFE = 14' - 6"
DN
FITNESS
2512 SF
DN
CUST.
143 SF
SPECTATOR SEATING
SKYLIGHT
FITNESS
3785 SF
DN
OPEN
SQUASH /
RACQUETBALL
800 SF
SQUASH /
RACQUETBALL
800 SF
RACQUETBALL
800 SF
RACQUETBALL
800 SF
RACQUETBALL
800 SF
RACQUETBALL
799 SF
RACQUETBALL
800 SF
RACQUETBALL
880 SF
GYM
18362 SF
SKYLIGHT
CYCLING
STUDIO
2208 SF
STORAGE
176 SF
STORAGE
411 SF
GROUP
EXERCISE
3216 SF
MARTIAL
ARTS
2688 SF
STORAGE
158 SF
OPEN
ADMINISTRATION
4543 SF
DN
GYM
STORAGE
473 SF
DN
0
8
16



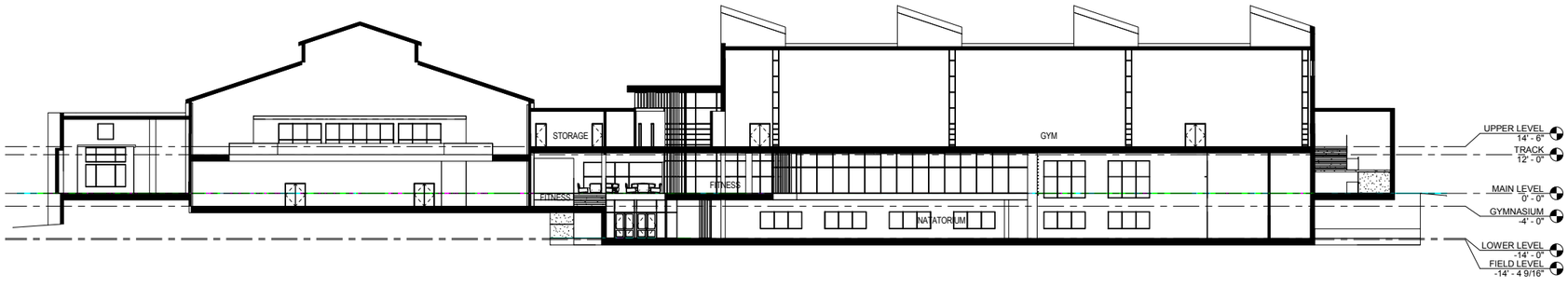
EAST ELEVATION

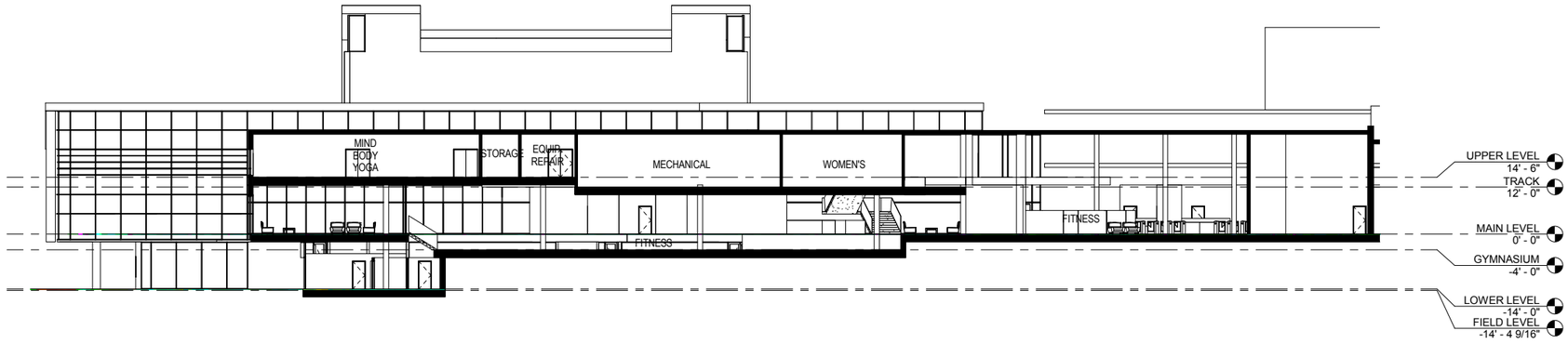


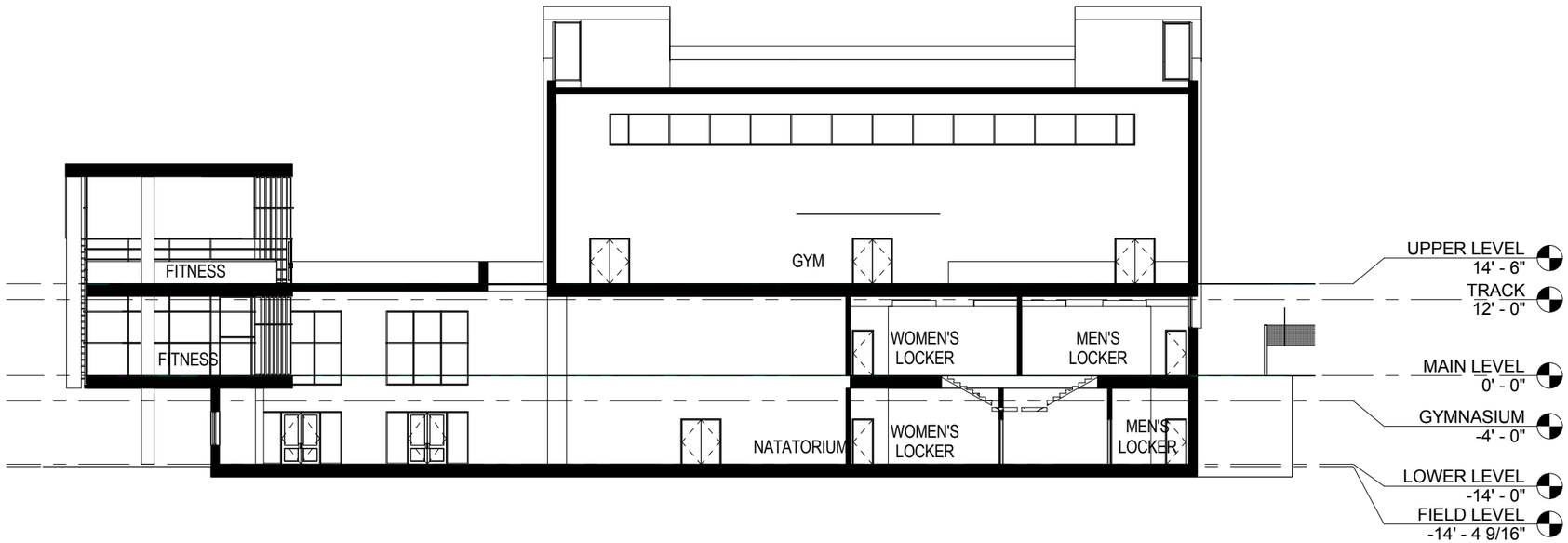
SOUTH ELEVATION

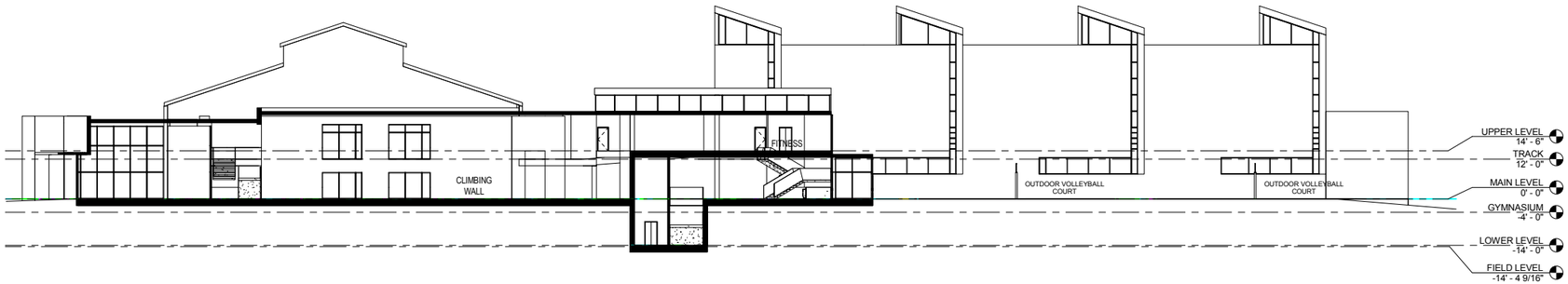


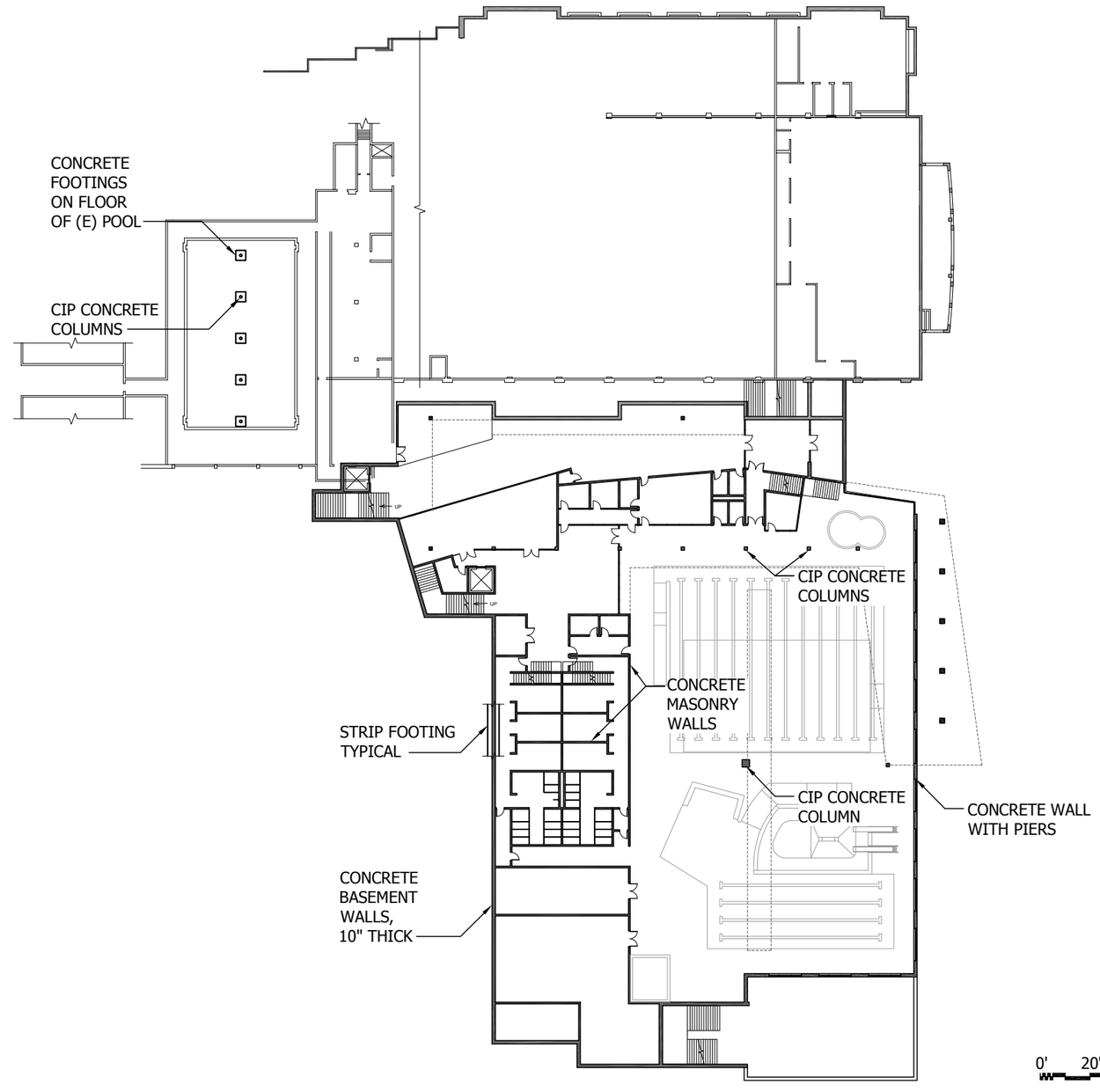
WEST ELEVATION

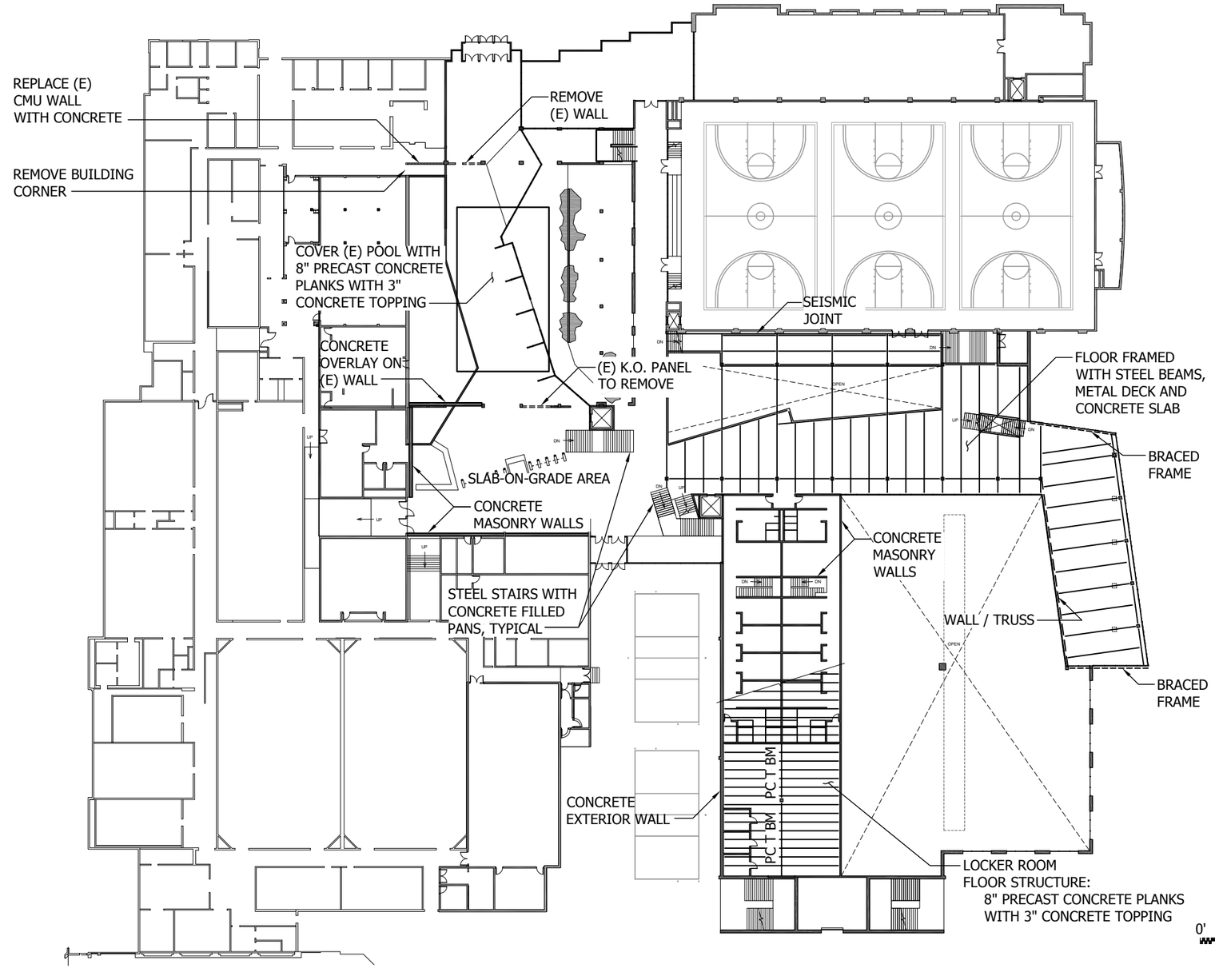

STORAGE
FITNESS
FITNESS
GYM
NATATORIUM
UPPER LEVEL
14' - 6"
TRACK
12' - 0"
MAIN LEVEL
0' - 0"
GYMNASIUM
-4' - 0"
LOWER LEVEL
-14' - 0"
FIELD LEVEL
-14' - 4 9/16"

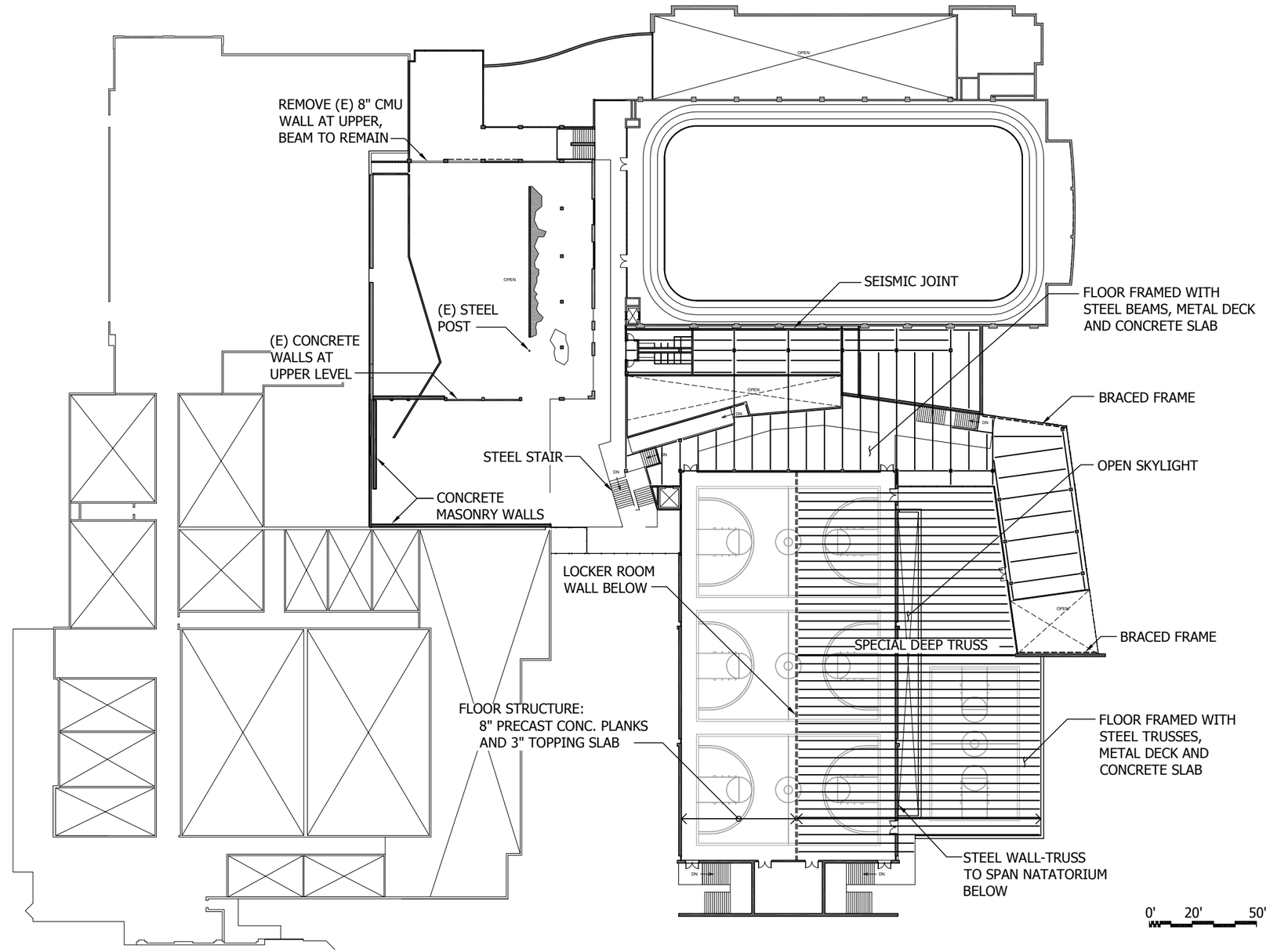

MIND
BODY
YOGA
STORAGE
EQUIP.
REPAIR
MECHANICAL
WOMEN'S
FITNESS
FITNESS
UPPER LEVEL
14' - 6"
TRACK
12' - 0"
MAIN LEVEL
0' - 0"
GYMNASIUM
-4' - 0"
LOWER LEVEL
-14' - 0"
FIELD LEVEL
-14' - 4 9/16"

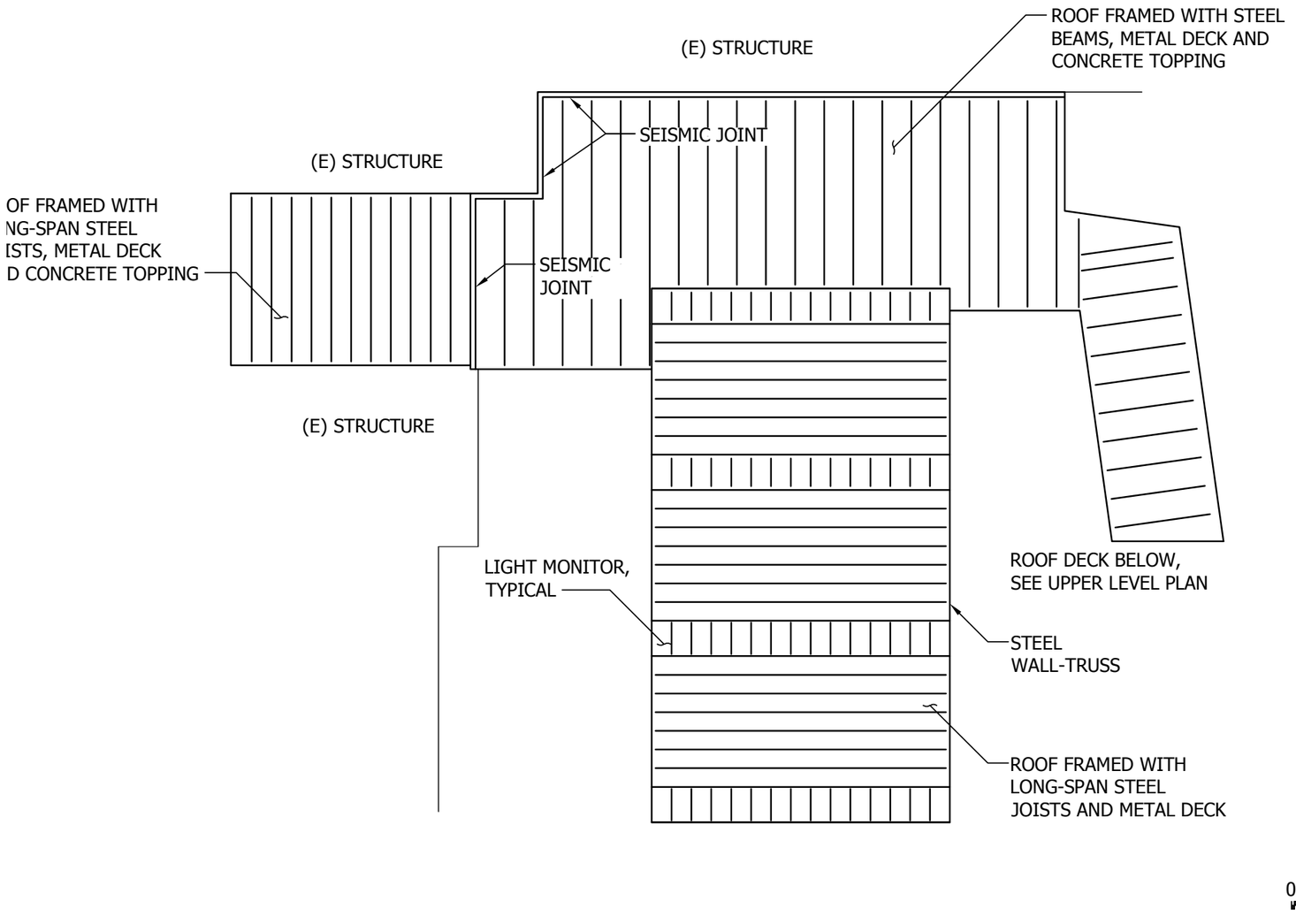

FITNESS
FITNESS
GYM
WOMEN'S LOCKER
MEN'S LOCKER
NATATORIUM
WOMEN'S LOCKER
MEN'S LOCKER
UPPER LEVEL 14' - 6"
TRACK 12' - 0"
MAIN LEVEL 0' - 0"
GYMNASIUM -4' - 0"
LOWER LEVEL -14' - 0"
FIELD LEVEL -14' - 4 9/16"

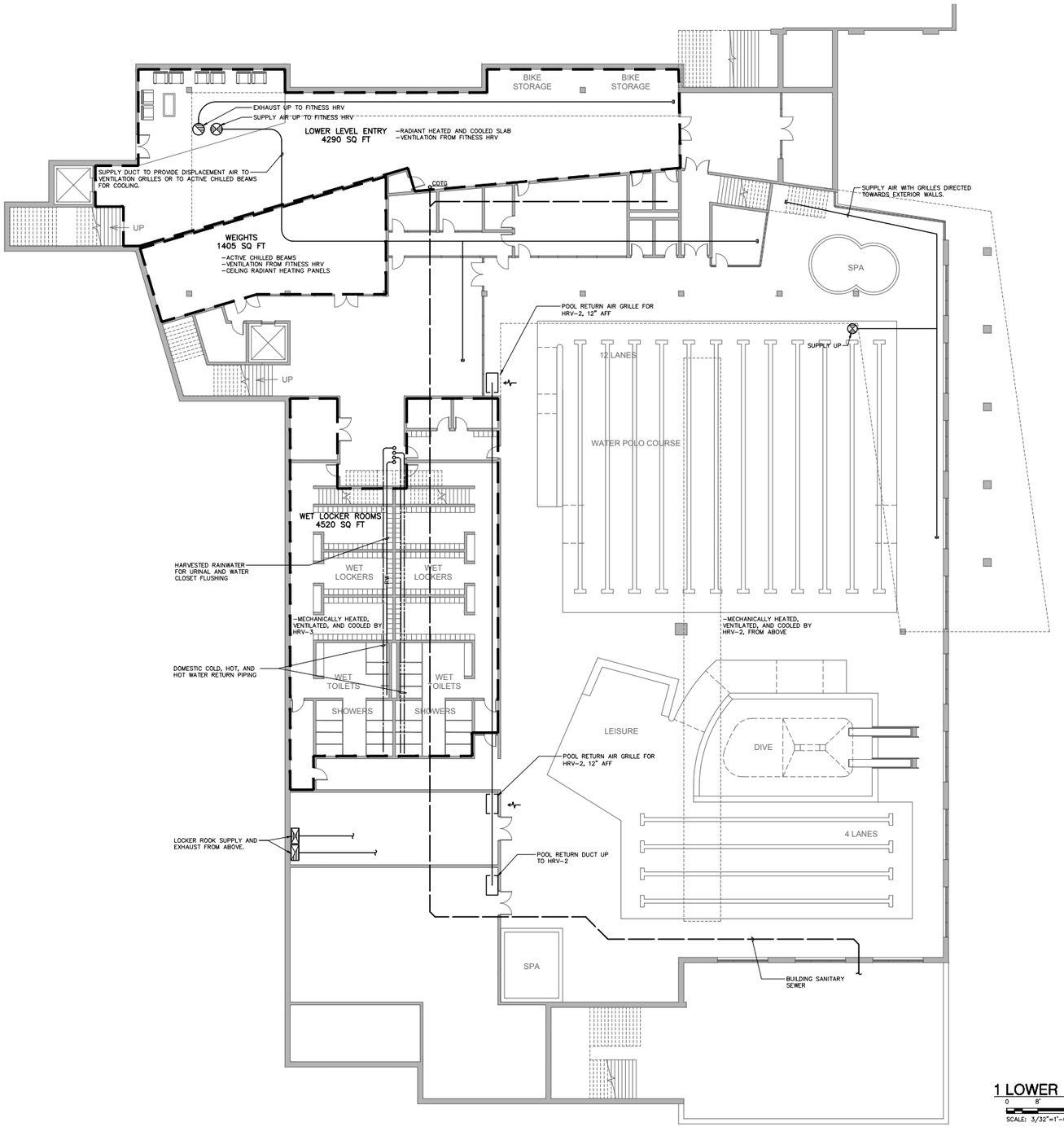

CLIMBING WALL
FITNESS
OUTDOOR VOLLEYBALL COURT
OUTDOOR VOLLEYBALL COURT
UPPER LEVEL 14' - 6"
TRACK 12' - 0"
MAIN LEVEL 0' - 0"
GYMNASIUM -4' - 0"
LOWER LEVEL -14' - 0"
FIELD LEVEL -14' - 4 9/16"


CONCRETE
FOOTINGS
ON FLOOR
OF (E) POOL
CIP CONCRETE
COLUMNS
UP
UP
CIP CONCRETE
COLUMNS
CONCRETE
MASONRY
WALLS
STRIP FOOTING
TYPICAL
CIP CONCRETE
COLUMN
CONCRETE WALL
WITH PIERS
CONCRETE
BASEMENT
WALLS,
10" THICK
0'
20'
50'
NORTH


REPLACE (E)
CMU WALL
WITH CONCRETE
REMOVE BUILDING
CORNER
COVER (E) POOL WITH
8" PRECAST CONCRETE
PLANKS WITH 3"
CONCRETE TOPPING
CONCRETE
OVERLAY ON
(E) WALL
REMOVE
(E) WALL
SEISMIC
JOINT
(E) K.O. PANEL
TO REMOVE
FLOOR FRAMED
WITH STEEL BEAMS,
METAL DECK AND
CONCRETE SLAB
BRACED
FRAME
SLAB-ON-GRADE AREA
CONCRETE
MASONRY WALLS
STEEL STAIRS WITH
CONCRETE FILLED
PANS, TYPICAL
CONCRETE
MASONRY
WALLS
WALL / TRUSS
BRACED
FRAME
CONCRETE
EXTERIOR WALL
PC I BM
PC I BM
LOCKER ROOM
FLOOR STRUCTURE:
8" PRECAST CONCRETE PLANKS
WITH 3" CONCRETE TOPPING
0'
20'
50'
NORTH


REMOVE (E) 8" CMU WALL AT UPPER, BEAM TO REMAIN
(E) CONCRETE WALLS AT UPPER LEVEL
(E) STEEL POST
SEISMIC JOINT
FLOOR FRAMED WITH STEEL BEAMS, METAL DECK AND CONCRETE SLAB
BRACED FRAME
OPEN SKYLIGHT
STEEL STAIR
CONCRETE MASONRY WALLS
LOCKER ROOM WALL BELOW
SPECIAL DEEP TRUSS
BRACED FRAME
FLOOR STRUCTURE: 8" PRECAST CONC. PLANKS AND 3" TOPPING SLAB
FLOOR FRAMED WITH STEEL TRUSSES, METAL DECK AND CONCRETE SLAB
STEEL WALL-TRUSS TO SPAN NATATORIUM BELOW
OPEN
DN
0'
20'
50'
NORTH

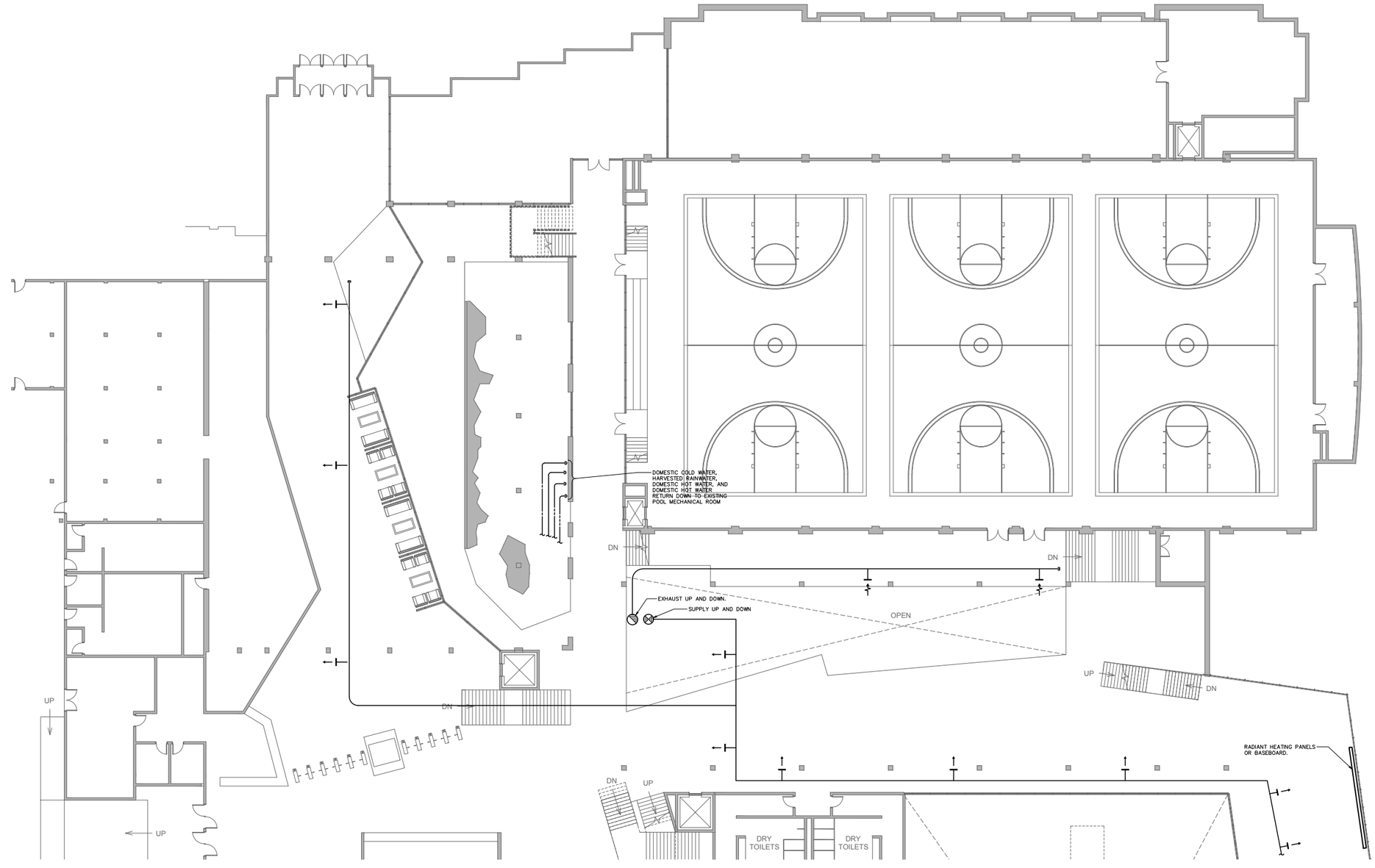

(E) STRUCTURE
ROOF FRAMED WITH STEEL BEAMS, METAL DECK AND CONCRETE TOPPING
SEISMIC JOINT
(E) STRUCTURE
OF FRAMED WITH
NG-SPAN STEEL
ISTS, METAL DECK
D CONCRETE TOPPING
SEISMIC JOINT
(E) STRUCTURE
LIGHT MONITOR, TYPICAL
ROOF DECK BELOW, SEE UPPER LEVEL PLAN
STEEL WALL-TRUSS
ROOF FRAMED WITH LONG-SPAN STEEL JOISTS AND METAL DECK
0'
20'
50'
NORTH



1 LOWER LEVEL - PHASE 1 - MECHANICAL

0 8' 16' 24'

SCALE: 3/32"=1'-0"



1 MAIN LEVEL - PHASE 1 - NORTH

0 8' 16' 24'

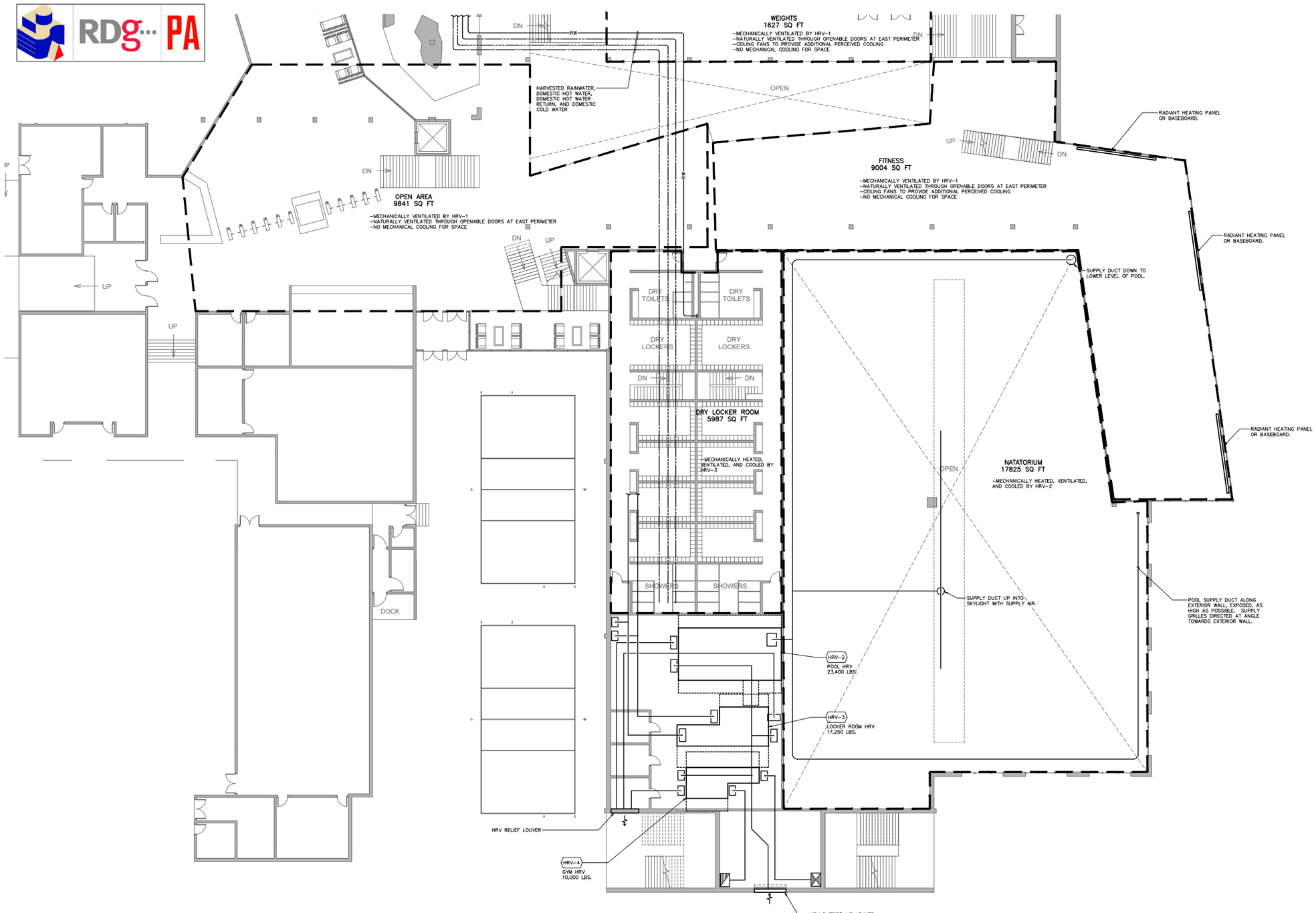
SCALE: 3/32"=1'-0"

STUDENT RECREATION CENTER

University of Oregon

MAIN LEVEL - PHASE 1 - NORTH - MECHANICAL

FILE: 0527MAIN LEVEL-NORTH.DWG — LAYOUT1 | EDIT: 2/24/2012 12:17 PM BY STEVED | PLOT: 2/24/2012 12:41 PM BY STEVE DACUS



1 MAIN LEVEL - PHASE 1 - SOUTH

0 8' 16' 24'

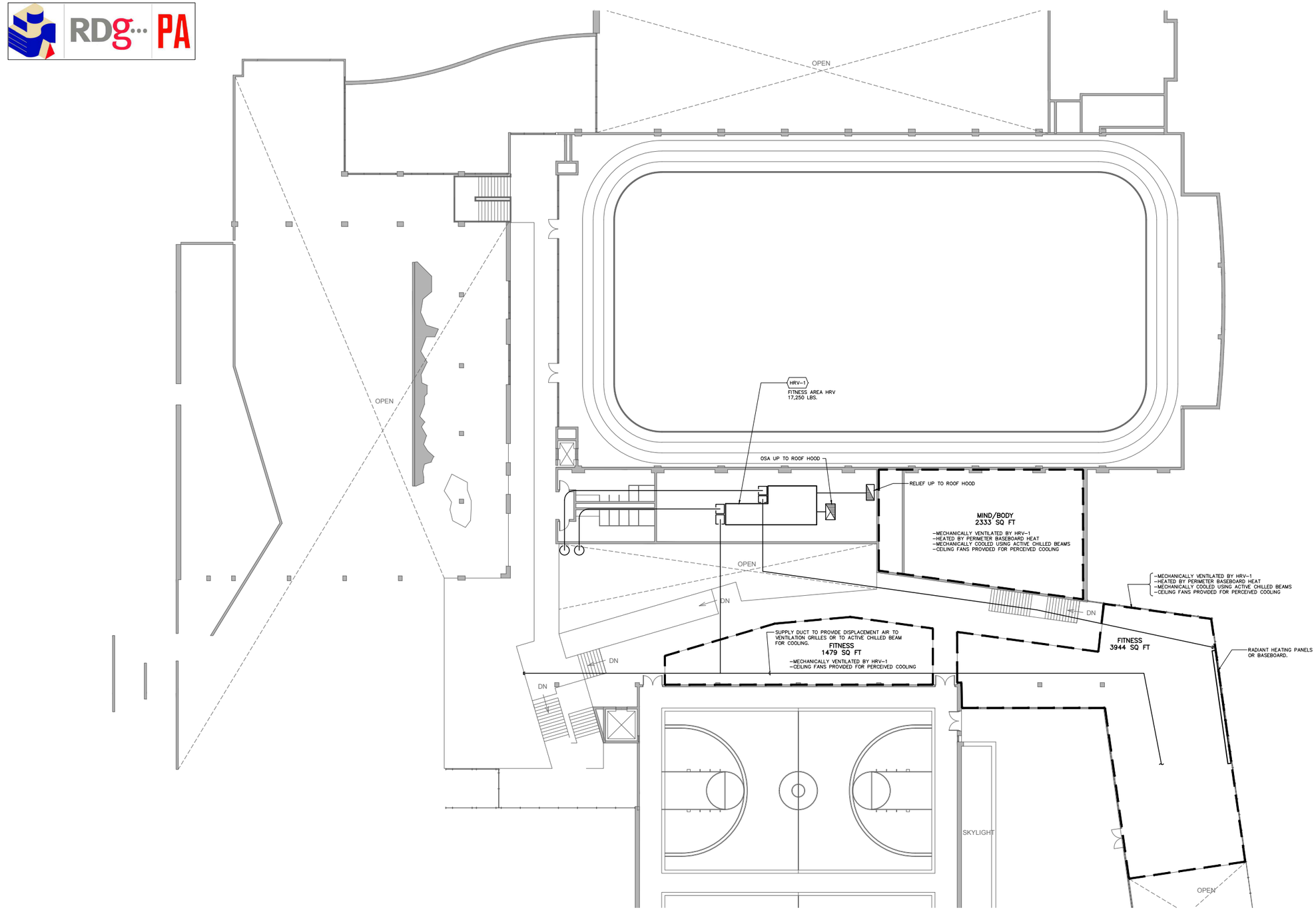
SCALE: 3/32"=1'-0"

STUDENT RECREATION CENTER

University of Oregon

MAIN LEVEL - PHASE 1 - SOUTH - MECHANICAL

FILE: 0527MAIN LEVEL-SOUTH.DWG – LAYOUT1 | EDIT: 2/24/2012 11:34 AM BY JEFFREYG | PLOT: 2/24/2012 12:41 PM BY STEVE



1 UPPER LEVEL - PHASE 1 - NORTH

0 8' 16' 24'

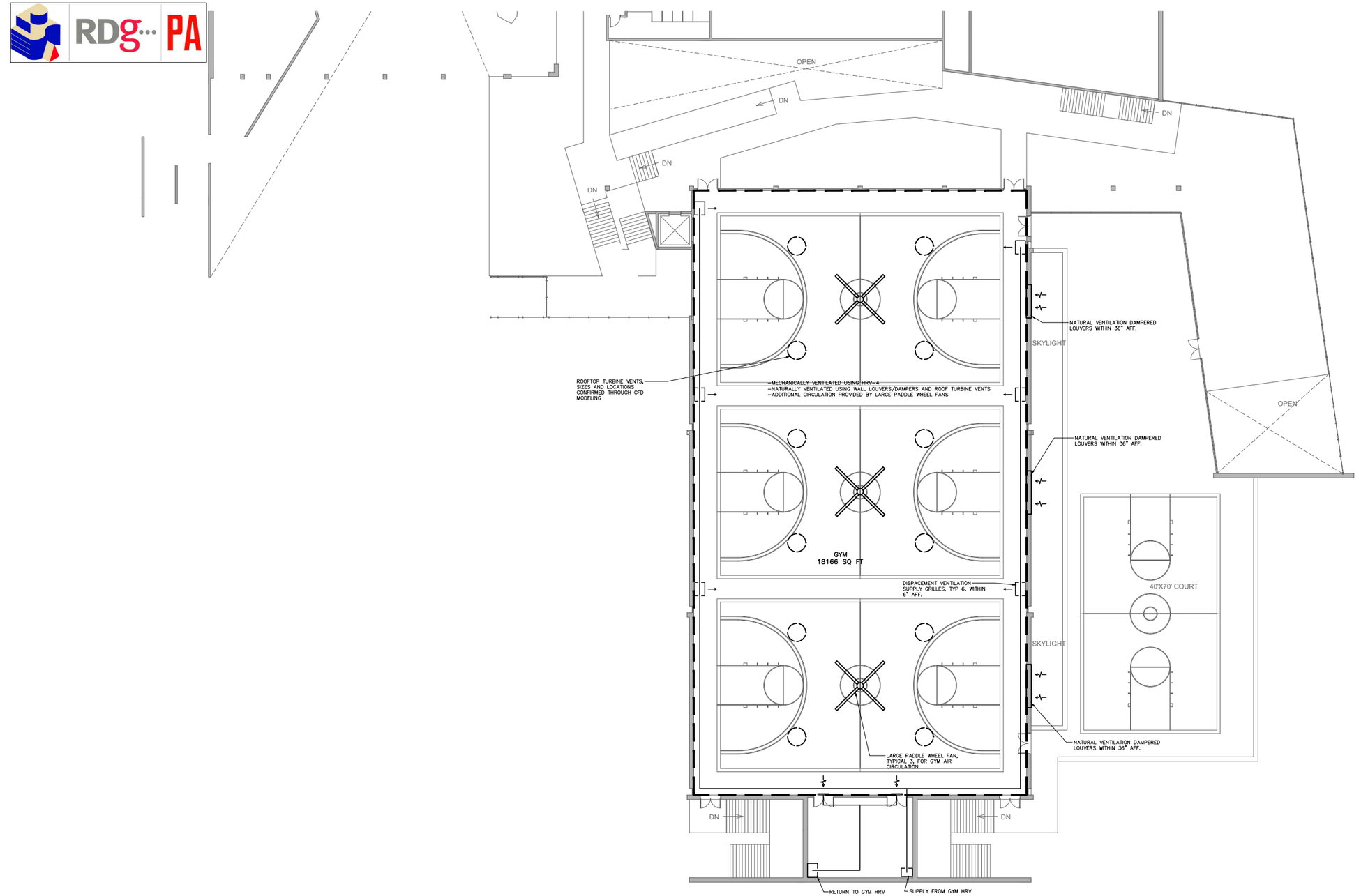
SCALE: 3/32"=1'-0"

STUDENT RECREATION CENTER

University of Oregon

UPPER LEVEL - PHASE 1 - NORTH - MECHANICAL

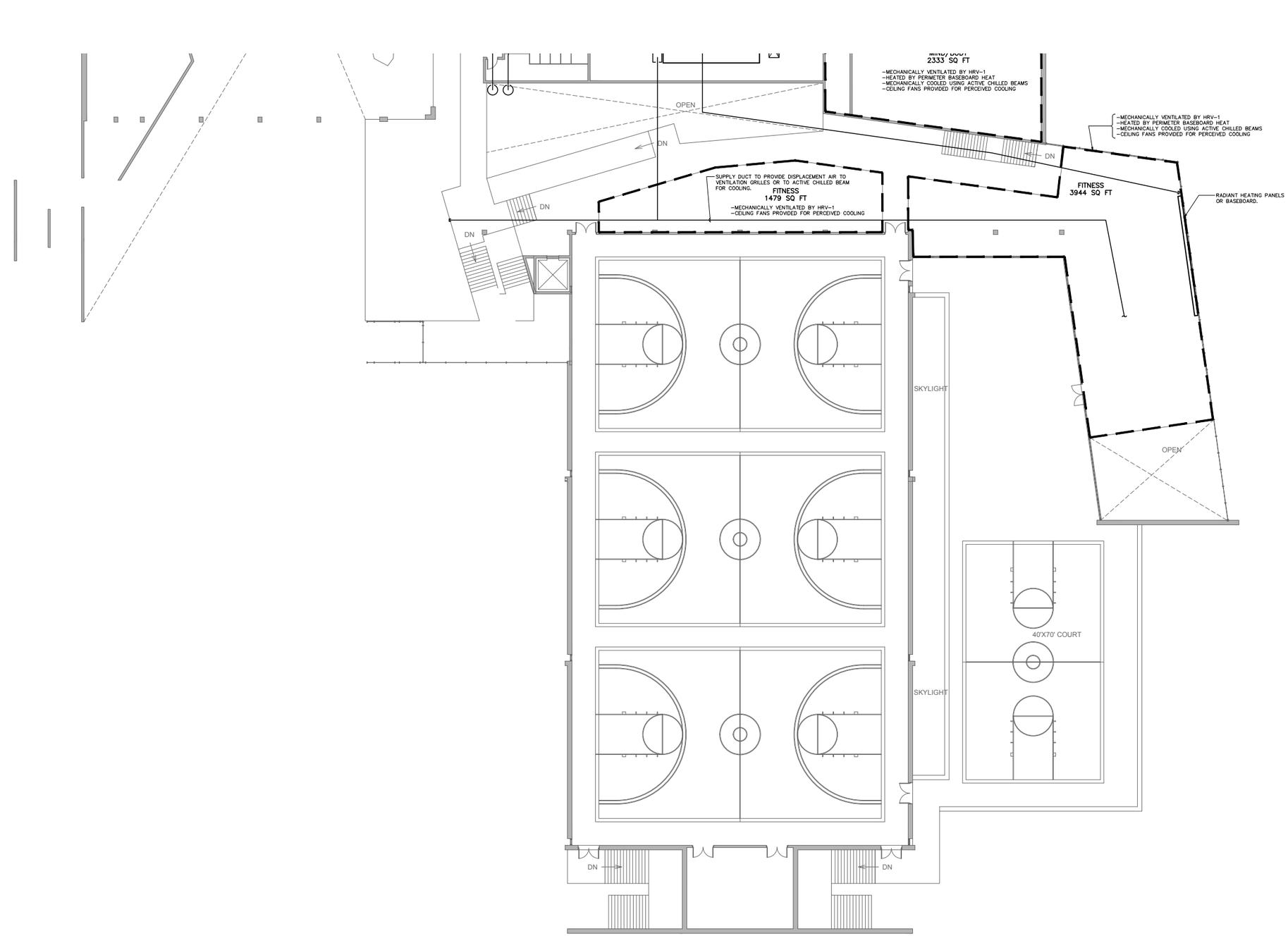
FILE: 0527UPPER LEVEL-NORTH.DWG — LAYOUT1 | EDIT: 2/24/2012 12:16 PM BY STEVED | PLOT: 2/24/2012 12:41 PM BY STEVE DACUS



1 UPPER LEVEL - PHASE 1 - SOUTH (GYMNASIUM)

0 8' 16' 24'

SCALE: 3/32"=1'-0"

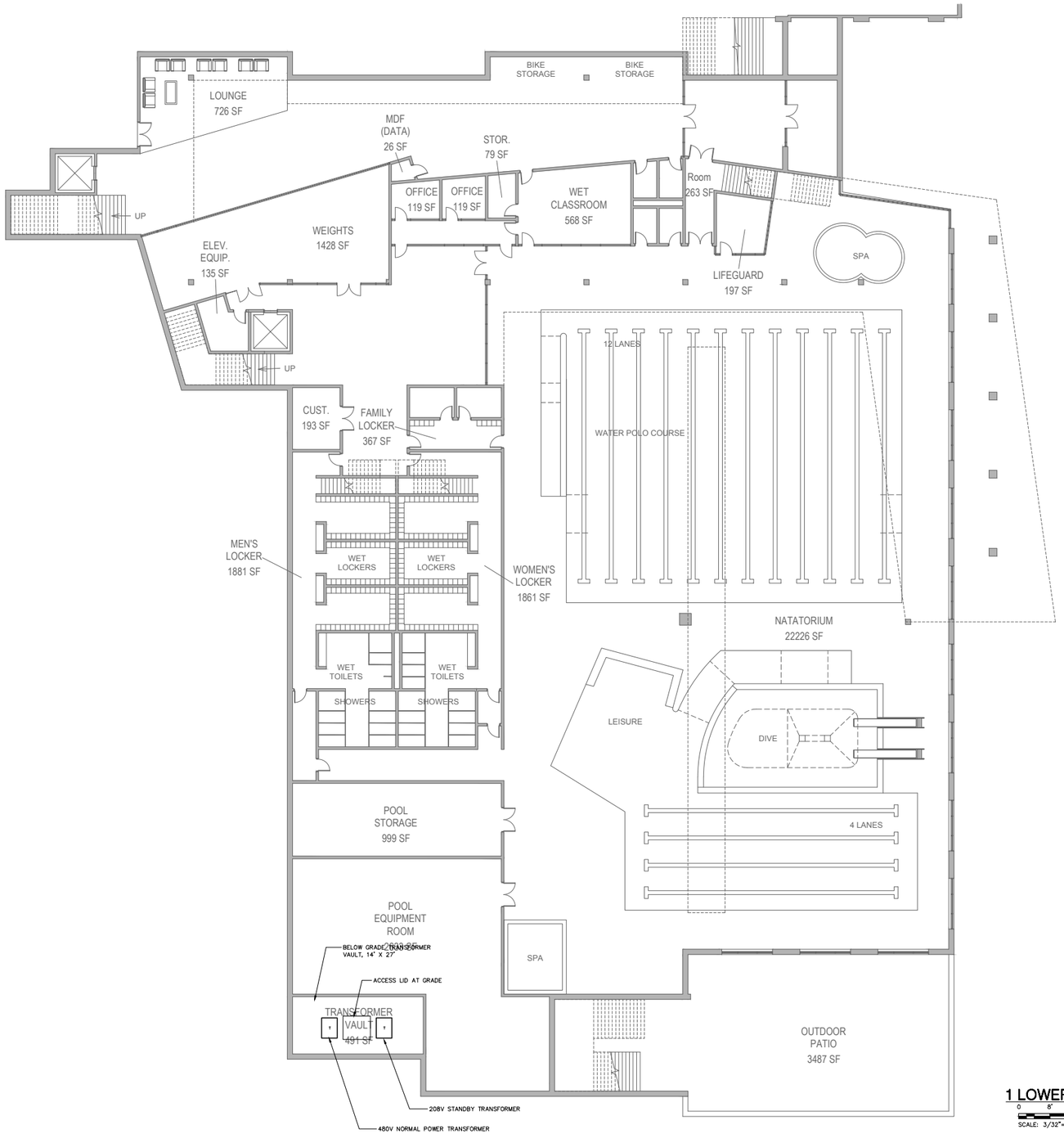


1 UPPER LEVEL - PHASE 1 - SOUTH (FITNESS AREA)

0 8' 16' 24'

SCALE: 3/32"=1'-0"

FILE: 0527UPPER LEVEL-NORTH.DWG — LAYOUT2 | EDIT: 2/24/2012 12:16 PM BY STEVED | PLOT: 2/24/2012 12:41 PM BY STEVE DACUS



1 LOWER LEVEL - PHASE 1 - ELECTRICAL

0 8' 16' 24'

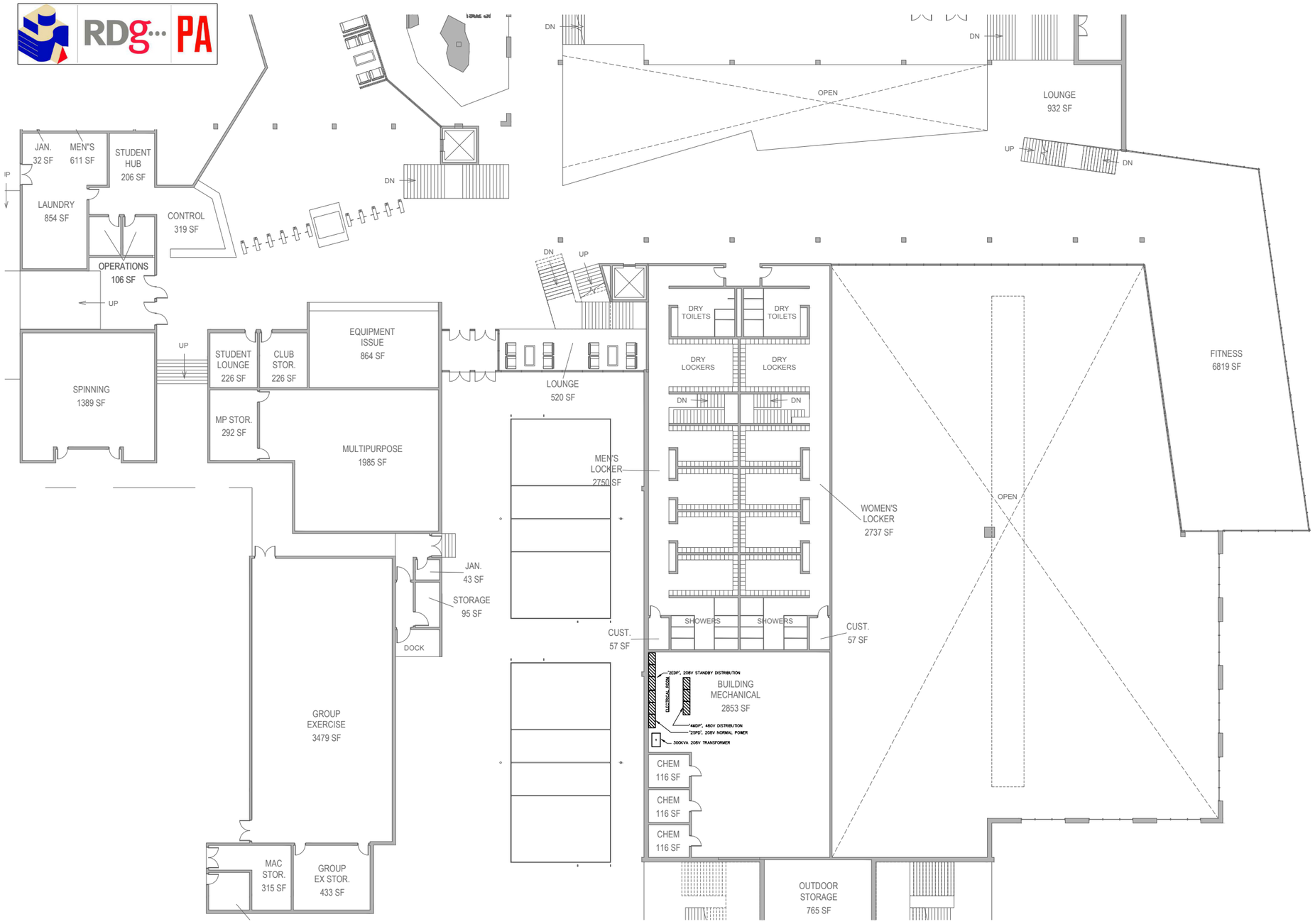
SCALE: 3/32"=1'-0"

STUDENT RECREATION CENTER

University of Oregon

LOWER LEVEL - PHASE 1 - ELECTRICAL

FILE: 0527LOWER LEVEL.DWG – LAYOUT1 | EDIT: 2/24/2012 11:24 AM BY JEFFREYG | PLOT: 2/24/2012 12:40 PM BY CHRIS LARSON



1 MAIN LEVEL - PHASE 1 - SOUTH

0 8' 16' 24'

SCALE: 3/32"=1'-0"

STUDENT RECREATION CENTER

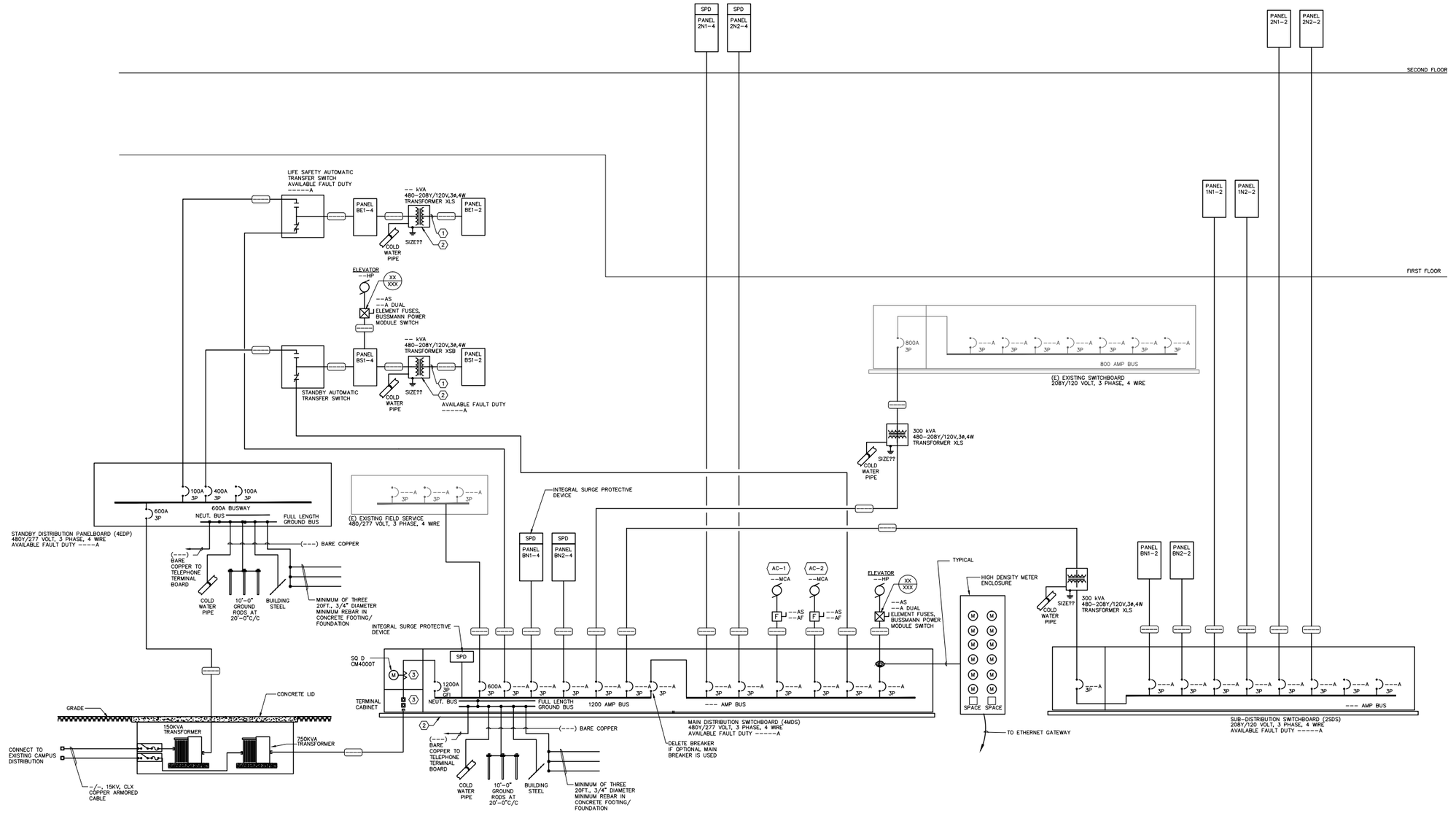
University of Oregon

MAIN LEVEL - PHASE 1 - SOUTH - ELECTRICAL

FILE: 0527MAIN LEVEL-SOUTH.DWG — LAYOUT1 | EDIT: 2/24/2012 11:38 AM BY JEFFREYG | PLOT: 2/24/2012 12:41 PM BY CHRIS

SHEET KEYNOTES

1. INSTALL FEEDER FROM TRANSFORMER SECONDARY TO MAIN BREAKER IN SWITCHBOARD / PANEL, NOT TO EXCEED 25 FEET PER NEC 240.21(C)(6).
2. PROVIDE 3-1/2 INCH HIGH CONCRETE HOUSEKEEPING PAD UNDER TRANSFORMER/SWITCHBOARD.
3. CURRENT TRANSFORMER/TERMINAL CABINET PER POWER COMPANY REQUIREMENTS.



ONE-LINE POWER DISTRIBUTION DIAGRAM

480Y/277 VOLTS, 3 PHASE, 4 WIRE — NOT TO SCALE

FILE: 0527_ONELINE.DWG — LAYOUT2 | EDIT: 2/27/2012 12:53 PM BY CHRISL | PLOT: 2/27/2012 12:53 PM BY CHRIS LARSON

Appendix A	Campus Planning Committee Meeting Minutes
Appendix B	Accessibility Focus Group Meeting Minutes
Appendix C	City of Eugene, Limited Consultation Meeting Minutes
Appendix D	Preliminary Building Code Report
Appendix E	Energy Programming
Appendix F	LEED Checklist
Appendix G	Outline Specifications
Appendix H	Cost Estimating Booklet
Appendix I	Department of Physical Education & Recreation Memorandum of Understanding
Appendix J	SD Report Comments/Responses

APPENDIX A CAMPUS PLANNING COMMITTEE MEETING MINUTES

Appendix B	Accessibility Focus Group Meeting Minutes
Appendix C	City of Eugene, Limited Consultation Meeting Minutes
Appendix D	Preliminary Building Code Report
Appendix E	Energy Programming
Appendix F	LEED Checklist
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Appendix H	Cost Estimating Booklet
Appendix I	Department of Physical Education & Recreation Memorandum of Understanding
Appendix J	SD Report Comments/Responses

UNIVERSITY OF OREGON

January 31, 2012

MEMORANDUM

To: Campus Planning Committee

From: Christine Taylor Thompson, Planning Associate
Campus Planning and Real Estate

Subject: **Record** of the January 18, 2012 Campus Planning Committee Meeting

Attending: Dean Livelybrooks (Chair), G.Z. Brown, Uri Farkas, George Hecht, Gregg Lobisser, Sophie Luthin, Roberta Mann, Jamie Moffitt, Dennis Munroe, Chris Ramey, Greg Rikhoff, Terrie Scharfer, Eric Selker, Theodore Sweeney, Rob Thallon, Laura Willey

Staff: Christine Taylor Thompson (Campus Planning and Real Estate)

Guests: Jane Brubaker (Campus Ops), Bob Beals (Athletics), Gwen Bolden (DPS), Emily Eng (CPRE), Tim King (Campus Ops), Matt Koehler (CMGS), Ali McQueen (CPRE), Gene Mowery (CPRE), Bryan Haunert (PE and Rec), Otto Poticha (Architecture), Jeff Schaub (RDG), Carl Sherwood (Robertson Sherwood)

Agenda:

Jamie Moffitt, new Vice President for Finance and Administration, introduced herself to the committee. She explained that she would assume the role held by her predecessor, Frances Dyke--she would be responsible for reviewing and approving the committee's recommendations on behalf of the president. While she would gladly attend meetings upon request, Jamie said that she would rather not attend in order to give the committee the ability to act independently.

1. Student Recreation Center Expansion and Renovation Project – Check-in

Background: Staff reviewed the status of the project and purpose of the check-in meeting. Gene Mowery, CPRE Project Planner, introduced the project and explained that the focus of today's review would be on the site context, pathways, building massing, and building character.

Carl Sherwood, Robertson Sherwood, reviewed the key circulation routes to and through the facility. The proposal maintains the existing primary building entrance and creates a key interior north/south "free zone" circulation route that provides clear access to all activities, including the athletic fields via a primary east/west pathway. The project, as currently designed, allows for a future phase at a later date; the current project would build upon the site of the covered tennis courts and a future project would fill in the space between the new addition and Esslinger Hall. The proposed layout allows for good daylighting and creates an east façade that takes advantage of

eastern views and establishes an active zone adjacent to the fields and main exterior pathway.

Matt Koehler, CMGS, introduced the proposed site design, which focuses on reinforcing and activating the existing north/south path by making a series of improvements including converting the surface to concrete, emphasizing the east building entry (e.g., create an entry plaza), and creating covered, tiered seating. Bike parking options are being considered; at this time the covered space outside the bonus room is being reserved for about 26 spaces. If more parking is needed, it could possibly go along 15th Avenue. Some trees on the project site would be impacted; the potential to move some is being researched.

The project's open-space enhancement requirement equals about 16,000 square feet. One idea being considered by the design team is the possibility of using some of the open-space enhancement funds to improve the north/south pathway. While not a designated open space, it is an important publically used pathway that merits improvement.

Jeff Schaub, RDG, introduced the building design. The project's goal is to dovetail into the existing character of the Student Recreation Center, in particular respecting the east gable end roof shape and the successful 15th Avenue edge treatment. The proposal accounts for the potential future replacement of Esslinger Hall. It links together many pieces by creating a key north/south interior corridor that provides access to and views of activities and adjacent areas. The proposal also enhances the east entrance. The key exterior design element is the east façade. Three east façade options have been presented to the user group (option 2 was not preferred by the user group because it was more contemporary and less connected to the existing SRC design).

Discussion: Members made the following comments about the initial design:

- Ensure that the project's exterior design does not result in a series of fragmented buildings, in particular in the context of the existing SRC facility, Esslinger Hall, and the EMU.
- Strongly consider integrating solar-heated water to take advantage of the roof space and south-facing orientation. Also, provide an educational element for students in the building (similar to the existing display).
- Better define the east entry; the proposed deep recess is not adequate.
- Ensure that the east façade fits into the fabric of the campus's design and function. As designed, the proposed shape is not found on campus. Use the existing 15th Avenue façade as an example of how the design should connect to the broader campus and Esslinger Hall through the use of materials, a main entry, façade definition, and roof shape.
- Reassess the design and function of the east façade's angled cantilever over the pathway. As designed, it does not seem to relate to the fabric of campus, and it only partially covers the proposed seating area. Recognize the range of important functions the covered space serves and determine how best to address the key functions (consider moving bike parking out of this area).
- Carefully define how best to provide bike access on the north/south pathway (consider bicyclists traveling on the path and bike parking).
- Maintain the focus on improving the north/south pathway.
- Thoughtfully consider how to use open-space enhancement funds (refer to further discussion below).

Jeff said the proposed design is based upon an established budget. It is understood that it may be necessary to respond to future changes in available funding.

Jeff also said the project has the potential to front a new campus green extending from University Street if the Esslinger Hall site is redesigned. A member noted that historic preservation elements would be addressed when future plans for either Esslinger Hall or Mac Court move forward.

The committee discussed the design team's suggestion to use a portion of the project's open-space enhancement requirement to improve the north/south pedestrian pathway, which is not a Campus Plan designated open space. The design team said the pathway is very dynamic and active. It functions like an open space; therefore, it seems appropriate to use open-space enhancement funds to improve the area. This is an opportunity to improve the pathway from 15th Avenue to 18th Avenue.

Staff explained the physical difference between a designated open space and a pathway as described in the *Campus Plan*. A designated open space, such as an axis, may contain pathways, but, more importantly, it has specific dimensions with clear definable boundaries and is part of a larger framework of interconnected open spaces. A pathway's dimensions are flexible as long as it provides a good pedestrian connection between two identified points. Staff added that use patterns in this region are shifting towards academics indicating that it may be time to consider refinements to the larger open-space framework. A member added that tremendous improvement is expected in the upcoming years as decisions are made about the reuse or redevelopment of University Street from 15th Avenue to 18th Avenue. Another member noted that improvements to the southern portion of the pathway near 18th Avenue should be coordinated with future projected development; therefore, money should not be spent on improvements in this area as part of the SRC project.

A member said the merit of spending funds to improve a designated open space is that the space is guaranteed to last. Therefore, it seems that the first step would be to determine if the pathway merits establishment as a designated open space. The intent of the enhancement requirement is to provide funds for projects in "shared" public spaces that do not otherwise have a link to a department or funds. Another member said that the *Campus Plan* seems to give the Campus Planning Committee the flexibility to determine how best to use open-space enhancement funds. It may be better to determine if the pathway merits use of funds and then to address separately the question of whether the pathway should become a designated open space in the context of current and future studies about how the block will redevelop.

Members agreed it would be necessary to bring back a more specific proposal if the project would like to pursue the idea of using funds to improve the pathway versus a designated open space.

Action: No formal action was requested. The committee's comments will be taken into consideration as the proposal is refined and moves forward for further review.

Please contact this office if you have questions.

cc. Vince Babkirk, Campus Operations
Jane Brubaker, Campus Operations
Bob Beals, Athletics
Gwen Bolden, DPS

Darin Dehle, Campus Operations
Ben Eckstein, ASUO
Emily Eng, CPRE
Lisa Gardner, Eugene Planning
Dave Guadagni, Robertson Sherwood
Terri Harding, Eugene Planning
Brent Harrison, SRC
Bryan Haunert, PE and Rec
Dave Hubin, President's Office
Tim King, Campus Ops
Matt Koehler, CMGS
Charlene Lindsay, Campus Ops
Ali McQueen, CPRE
Garrick Mishaga, Campus Ops
Gene Mowery, CPRE
Dennis Munroe, PE and Rec
Jack Patton, RDG
Otto Poticha, Architecture
Jeff Schaub, RDG
Carl Sherwood, Robertson Sherwood
Fred Tepfer, CPRE
Doug Tripp, DPS

UNIVERSITY OF OREGON

February 23, 2012

MEMORANDUM

To: Campus Planning Committee

From: Christine Taylor Thompson, Planning Associate
Campus Planning and Real Estate

Subject: **Record** of the February 16, 2012 Campus Planning Committee Meeting

Attending: Dean Livelybrooks (Chair), Uri Farkas, Natalya Jenney, Elaine Jones, Gregg Lobisser, Janet Lobue, Sophie Luthin, Randall McGowen, Dennis Munroe, Chris Ramey, Eric Selker, Theodore Sweeney, Rob Thallon, Laura Willey

Staff: Christine Taylor Thompson (Campus Planning and Real Estate)

Guests: Emily Eng (CPRE), Matt Koehler (CMGS), Gene Mowery (CPRE), Bryan Haunert (PE and Rec), Otto Poticha (Architecture), Jeff Schaub (RDG), Carl Sherwood (Robertson Sherwood)

Agenda:

1. Student Recreation Center Expansion and Renovation Project – Second Check-in

Background: Staff reviewed the purpose of the second check-in meeting. She summarized prior committee comments and applicable *Campus Plan* policies and patterns as described in the meeting mailing.

Gene Mowery, CPRE Project Planner, introduced the project and explained that the focus of today's review would be on building elevations, in particular the south elevation and the pedestrian/bike pathway on the east side of the facility.

Carl Sherwood, Robertson Sherwood, described the project design's two primary areas of focus, which grew out of *Campus Plan* policies and patterns:

- Architectural Style (*Campus Plan* policy and pattern) – The goal is to unify the series of buildings that comprise the SRC and link to the architectural style of the SRC and the rest of campus.
- Dynamic Building (Project Pattern developed by the User Group) – The goal is to convey an honest expression of activities within the building so as to differentiate it from academic buildings.

Jeff Schaub, RDG, introduced the building design as described in the meeting mailing drawings. The proposal creates a unifying north/south interior corridor that links to the proposed new eastern entry and eastern views. The Design Team has been working to refine the proposed design in response to CPC comments. The proposed architectural design draws upon the following features found in existing campus buildings (Esslinger Hall, the SRC, Gerlinger Hall, EMU Fish Bowl, and Straub Hall):

- SRC northeast corner facade - the proposed entrance is similar in scale and style, creating bookends for the gable end.
- SRC gable end – the proposed large glass façade is similar in scale.
- Use of arcades.
- Rhythm of window openings.
- Established building base, middle, and top - the proposed horizontal datum line at the addition's arcade level establishes a base and other façade elements define a middle and top.
- Use of details such as accent panels

The project fully intends to take advantage of solar heating options. The large roof expanse and building use provides many opportunities to do so. The east entry opening has been widened and the recess shortened to make it feel more welcoming.

As requested by the committee, the angled cantilevered façade was assessed to determine whether it fits the architecture style of the campus. It is thought to be within the university's wide palette of materials and architectural expressions. More importantly, it serves as an honest expression of the building's unique recreational use, thus differentiating it from academic buildings. Also, it takes advantage of northeastern views. Sunscreens (possibly vertical elements) and other shading devises would be used to properly control day lighting and break up the large expanse of glass. Proposed building materials stem from the existing SRC – brick, ceramic tile accents, a standing seam copper roof, and aluminum window panels. However, alternate materials, such as metal panels, are being considered in place of synthetic stucco due to durability concerns (the existing synthetic stucco system is beginning to fail).

Matt Koehler, CMGS, provided updated drawings showing the proposed site improvements in three key areas – the intersection at 15th Avenue and the north/south pathway, along the eastern façade of the addition, and further south along the pathway. The revised drawings further enhance the pathway for both bikes and pedestrians by eliminating the jogs, widening it to 16'-17' along the new SRC edge, installing a consistent paved surface, installing special paving at the new east entrance, adding more terraced seating, and adding required bike parking.

Preliminary bike parking requirements indicate a need for 56 covered bike-parking spaces. About 35-40 spaces would be placed adjacent to the bonus room and next to the new building. Replacing some of the existing covered racks along 15th Avenue with more efficient bike racks would provide another 10-15 spaces. The project would shift the existing 48 uncovered spaces further south near the tables and water fountain.

Matt reminded the committee that the project's open-space enhancement requirement equals about 16,000 square feet. One idea being considered by the design team is using some of the open-space enhancement funds to improve the 15th Avenue and north/south path intersection (about 3,000 sf) and the remaining funds to enhance the north/south pathway, which is not a designated open space (about 12,000 sf). The 15th Avenue improvements (raised crossing and flow through planters) would help transition auto traffic to a narrower road width, provide better protection for pedestrians crossing 15th Avenue, enhance the link to the Emerald Axis, and treat storm water for large portion of 15th Avenue. The proposal would result in the loss of one commercial parking space, one permitted space, and two DPS spaces. Staff clarified that the committee was not being asked to make a determination at this time. A more thorough analysis including detailed information about the *Campus Plan* requirement and possible implications would be provided to the committee before it is asked to consider whether this proposal meets the intent of the *Campus Plan* designated open-space enhancement requirement.

Discussion: The following is a compilation member's comments about the proposed design:

- Refine how much bike parking is needed to meet the needs of the facility (not just required by code) and determine appropriate design solutions.
- Determine how to ensure a safe environment for bicyclists and pedestrians along the north/south path. A wide range of possible solutions was suggested including marking lanes for bikes and peds, widening the path, slowing bike travel speed, and doing nothing for now (wait until the pathway is constructed and then determine whether any changes are required).
- If the project intends to propose a shift of some open-space enhancement funds to improve a non-designated open space (the north/south pathway), demonstrate how a majority of effort will go towards designated open-space improvements. If a small percentage of funds are used outside a designated open space, the proposal may be more acceptable. For example, enlarge the 15th Avenue improvement area to address the entire intersection and better link to the Emerald Axis.
- Ensure that the 15th Avenue intersection improvements respond to bike access needs.
- Add more brick elements to better link the proposed addition to the existing building and the broader campus context, if funding allows.
- Continue to work to make the east main entrance clearer and more defined. Possible solutions include further diminishing the depth of the recess, adding a projection beyond the building façade (this also would provide weather protection), adding landscape features at the pathway's intersection (e.g., lanterns reminiscent of the main SRC entrance), or adding a marquee.
- A pitched roof (versus flat) on the projecting roof elements on the gymnasium is preferred.
- Resolve how the south edge of the natatorium terminates. Ensure that its design is refined in a way that addresses the human scale and relates to the architectural character of the building.
- Consider the potential for a green roof. Take advantage of the multiple flat roofs.
- Ensure that the proposed large glass area is divided into smaller elements to relate to a human scale (e.g., sunscreens, panels, and other elements). Use the southern section of the proposed natatorium's façade as an example of how to break down a building massing into elements that are human scaled.
- The angle in the cantilever does not work within the context of the campus nor does it convey the inside activity. The interior building use does not justify the highly unique character of the proposed angle.
- Consider the importance of providing a design element like the angled cantilever that pushes the envelope for a student facility. There is no use quite like this on campus making this a bold opportunity for the students to make a point (as demonstrated at recreation centers on other campuses).

In addition the Design Team and staff responded to member's questions.

- Jeff explained that replacing existing stucco is not financially possible as part of this project (small areas affected by construction would be included).
- Dennis Munroe, User Group chair, said that he is well aware of the potential to improve the design and quality of the existing covered tennis courts, but this would be part of a future tennis expansion project, not the current project.
- Emily Eng, CPRE, explained that the identified bike parking requirements are preliminary. Further research and assessment is under way to determine the appropriate number of spaces.

Action: No formal action was requested. The committee's comments will be taken into consideration as the proposal is refined and moves forward for further review.

Please contact this office if you have questions.

cc. Vince Babkirk, Campus Operations

Jane Brubaker, Campus Operations
Gwen Bolden, DPS
Darin Dehle, Campus Operations
Ben Eckstein, ASUO
Emily Eng, CPRE
Lisa Gardner, Eugene Planning
Dave Guadagni, Robertson Sherwood
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Gene Mowery, CPRE
Dennis Munroe, PE and Rec
Jack Patton, RDG
Otto Poticha, Architecture
Jeff Schaub, RDG
Carl Sherwood, Robertson Sherwood
Fred Tepfer, CPRE

UNIVERSITY OF OREGON

May 7, 2012

MEMORANDUM

To: Campus Planning Committee

From: Christine Taylor Thompson, Planning Associate
Campus Planning and Real Estate

Subject: **Record** of the April 30, 2012 Campus Planning Committee Meeting

Attending: Dean Livelybrooks (Chair), G. Z. Brown, Carole Daly, Uri Farkas, George Hecht, Elaine Jones, Gregg Lobisser, Janet Lobue, Dennis Munroe, Roxann Prazniak, Chris Ramey, Greg Rikhoff, Terrie Sharfer, Eric Selker, Theodore Sweeney, Rob Thallon, Laura Willey

Staff: Christine Taylor Thompson (Campus Planning and Real Estate)

Guests: David Beckman (Housing), Dan Pelissier (HSW), Emily Eng (CPRE), Anna Galloway (RSA), Dave Guadagni (Robertson Sherwood), Matt Koehler (Cameron McCarthy), Gene Mowery (CPRE), Bryan Haunert (PE and Rec), Charlene Lindsay (Campus Ops), Jack Patton (RDG), Otto Poticha (Poticha Architects), Carl Sherwood (Robertson Sherwood)

Agenda:

1. Student Recreation Center Expansion and Renovation Project – Schematic Design

Background: Staff reviewed prior committee comments as described in the meeting mailing. Also, she summarized the Campus Plan Open Space Enhancement requirements.

Gene Mowery from CPRE, Dennis Munroe from PE and Rec, and Carl Sherwood from Robertson Sherwood introduced the project. They added that the student referendum passed, which demonstrates student support for the project.

Jack Patton from RDG presented the proposed design. He summarized the key project goals as described in both the meeting mailing and the PowerPoint that was presented at the meeting. The design of the addition acknowledges potential future development in the area. It anticipates a second phase, which is expected but not part of the current project. The design responds to the recently completed Rowell Brokaw University Street open space study and the potential replacement of Esslinger Hall.

The addition's east façade would be constructed of metal panels, brick, stone, and glass. Solar shading would be provided on the east glass façade. A light analysis helped determine how to enhance daylighting and where to use solar shading; studies are under way. The exterior vertical shading devices would be constructed of metal mesh. Horizontal shading devices would be constructed of synthetic wood or aluminum. Interior mecho-shades would be used to enhance the shading.

Transparency between the inside and outside would be featured throughout.

Minimal work is proposed for the existing building. Its synthetic plaster finish would be repaired if funds allow.

Jack highlighted changes to the design that have been made in response to committee comments. While reduced in length, the gymnasium roof light monitors have pitched roofs as requested. Solar hot water panels fill the roof span between the light monitors. Brick elements have been added to create a strong base. The east entrance design has been enhanced through landscape elements and a weather protection canopy. Design details have been added to break up the large scale of the addition. A green roof was explored; while desirable it is not included in the project due to budget limitations. The cantilevered portion of the east façade is no longer angled. Its design is purposefully proportioned and scaled to correspond to the existing façade. While the exterior façade better aligns with the overall campus character and the existing Student Rec Center, the interior design pushes the envelope to create an enlivening and unique environment.

Matt Koehler from Cameron McCarthy reviewed the landscape design as described in the meeting mailing. The proposed design would provide the required additional bike parking spaces equaling 11-16 secure spaces, 62 covered spaces, and 30 uncovered spaces. More than the required covered bike parking spaces would be provided.

The project team carefully assessed bike and pedestrian safety along the main north/south path resulting in a straighter, wider the path. The path was widened as much as possible between the existing building façade and field edge. This shared path system is the common approach used throughout campus. Once the project is completed, the functionality would be assessed; additional refinement could be implemented if deemed necessary.

The project is required to improve a minimum of 16,400 square feet of designated open space. The modified proposal includes 15,000 square feet of improvements in the 15th Avenue Axis designated open space, which is substantially more than the earlier proposal. The pathway enhancements have been slightly reduced to equal a total of 5,840 square feet (some of the amphitheater seating along the southern portion of the pathway is no longer included but the design accommodates the potential to construct it in the future). While the pathway currently is not a designated open space, the Rowell Brokaw study indicates its potential to be designated as such in the future. The total area of enhancements is 20,810 square feet.

The enlarged 15th Avenue crossing creates a raised plaza equal to the curb height that spans between the pathway on the east side of the SRC and the Emerald Axis. The design provides space for 32 covered bike parking spaces. The facility would be similar in design to the existing Student Recreation Center covered bike parking but perhaps slightly lighter in structure. The street curbs would be removed and replaced with tactile warning edges. A total of 15 parking spaces for cars and one service space would be removed to make room for the improvements.

The south courtyard design includes secured bike parking, covered bike parking, a covered trash and recycling area, delivery access, an outdoor volleyball court, and a half-court basketball court.

The east entry landscaping has been enhanced including the addition of two entry lanterns. Bike parking has been minimized near in the bonus room entrance as requested. A total of 22 covered bike parking spaces would be provided under the

new east façade overhang.

Discussion: In response to a member's question, the Design Team said that the proposed covered bike parking on 15th Avenue is north of the existing sidewalk. The proposed location is designed to maximize the size of the adjacent planting area yet provide required back-out space for bicyclists.

A member said lighting would be an important element of the proposed expanded 15th Avenue crossing to ensure a safe environment, especially for pedestrians. Design Team members agreed saying that a more careful assessment of lighting would be conducted. Campus standard light fixtures would be used.

The Design Team noted that the proposed eastern entry would be recessed about 30-feet and about 50-60 feet in width.

A member suggested extending the east entrance overhang to accomplish the following goals: call greater attention to the entrance, enlarge the outdoor covered student staging area, and provide more room for covered bike parking. The Design Team said that, following a careful assessment including feedback from UO staff, no additional bike parking is proposed directly adjacent to the east entry doors. This is in line with the UO's policy to provide convenient bike parking that is not immediately adjacent to pedestrian entrances where it impedes pedestrian access.

The Design Team said that the east entrance is recessed too far back to reasonably extend the canopy beyond the main east façade. Also, an extended canopy would detract from second floor views. Other committee members said the proposed canopy meets prior committee requests for a protected entrance; an extended canopy would not be desirable from both a functional or aesthetic perspective.

The Design Team noted that the amount of covered pedestrian space along the east façade would more than double covered space at the existing east end of the SRC, thus providing more than enough space for a staging area.

A member said the proposed widened north/south pathway did not resolve concerns about bike and pedestrian safety. It does not seem to account for the likely increase in bike and pedestrian activity in the area. Currently bike and pedestrian conflicts exist and an increased level of activity would only make the situation worse. Another member indicated that the proposed widened pathway seems appropriate. The shared path approach is used elsewhere on campus—the intent is to create an environment in which bicyclists know that they must slow down and pedestrians know they should be more aware. Other members agreed that the proposed widened pathway would be acceptable as long as the potential remains open to implement other solutions in the future (such as a marked divided bike/ped path).

In response to a member's question, the Design Team said the south courtyard would be accessible from the outside. Direct access and views from inside should deter potential security and vandalism problems.

A member said that it would be important to ensure that the 15th Avenue crossing provides easy access for pedestrians coming from the north/south pathway and heading west across 15th Avenue towards Straub Hall. The Design Team said it has been a challenging design problem. While one of the proposed planters appears to be potentially in the line of travel, it was placed intentionally to ensure that pedestrians stay in the pedestrian zone as long as possible before crossing diagonally within the auto zone. Also, the planter helps define the auto zone for drivers.

Staff confirmed that the project would be responsible for replacing the removed auto parking spaces elsewhere on campus.

A member noted it would be particularly important to ensure that drivers have clear site lines when approaching the 15th Avenue crossing in order to easily see pedestrians, bicyclists, and other autos.

Another member added it would be important to carefully site light fixtures and other landscape features such as waste receptacles in the vicinity of the new 15th Avenue crossing.

Action: The committee agreed, with fifteen in favor and one abstention, that the schematic design for the Student Recreation Center Project is consistent with the *Campus Plan* and recommended to the president that it be approved subject to the following conditions:

1. Carefully assess lighting at the expanded 15th Avenue crossing. Revise the lighting plan as appropriate to ensure a safe environment, especially for pedestrians.
2. Reassess the proposed design for the 15th Avenue crossing to ensure that it provides easy access for pedestrians coming from the north/south pathway and heading west across 15th Avenue towards Straub Hall.
3. Ensure that drivers have clear site lines when approaching the 15th Avenue crossing in order to easily see pedestrians, bicyclists, and other autos.
4. Carefully site landscape features (such as waste receptacles and light fixtures) in the vicinity of the new 15th Avenue crossing.

Please contact this office if you have questions.

cc. Vince Babkirk, Campus Operations
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Gene Mowery, CPRE
Dennis Munroe, PE and Rec
Jack Patton, RDG
Otto Poticha, Architecture
Jeff Schaub, RDG
Carl Sherwood, Robertson Sherwood
Fred Tepfer, CPRE

Appendix A Campus Planning Committee Meeting Minutes

APPENDIX B ACCESSIBILITY FOCUS GROUP MEETING MINUTES

Appendix C City of Eugene, Limited Consultation Meeting Minutes

Appendix D Preliminary Building Code Report

Appendix E Energy Programming

Appendix F LEED Checklist

Appendix G Outline Specifications

Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

UO Student Recreation Center
Accessibility Focus Group Meeting – 1/18/12

Accessibility Group	Andy Fernandez	COE	Eugene Rec	present
	Antonia DeMichiel	UO	Student	present
	Mathew Howard	UO	Student	present
	James Bartik	UO	Student	present
	Molly Rogers	UO	Faculty	present
	Hillary Gerdes	AEC		present
	Shawn Rubio	UO	Club Sports	present
PUG/SRC	Dennis Munroe	UO	PE & Rec	present
	Bryan Haunert	UO	PE & Rec	present
	Brent Harrison	UO	PE & Rec	present
	Peg Rees	UO	PE & Rec	present
	Tiffany Lundry	UO	PE & Rec	present
	Chantelle Russell	UO	PE & Rec	present
Support	Gene Mowery	UO	Planning	present
	Fred Tepfer	UO	Planning	present
Design Team	Carl Sherwood	RSA	Architect	present
	Jeff Schaub	RDG	Architect	present

MEETING MINUTES

Diagrams and other visual information presented at Workshop #5 and this Accessibility Focus Group Meeting showing the current design are available at the UO project web site:
http://pages.uoregon.edu/eeng/src.html

Accessibility Focus Group Comments during/after Presentation of Current Design

1. The bollards at the bike path access point at the north east corner of the site are a problem for wheelchair users due to the location of the bollards and the cross slope of the pavement between the bollards. A flatter area is desired and the bollards should be at the street/driveway edge. A barriers survey is needed.

2. Avoid social isolation by providing the same path for everyone, whenever possible.

3. Provide an inclusive design at north/south path and exterior building site development. All areas are to include access, transfer options, etc

4. The group prefers a ramped access to the lap pool – avoid reliance on lifts. Reliability concerns for lift equipment, user knowledge requirements for lift equipment and the desire for independence all contribute to a preference for ramp access.

5. Locks (such as at Locker rooms) and controls needs to be accessible to users who lack fine motor skills. The hand scanners are a problem for such users.

6. The visually impaired prefer orthogonal corners in buildings. Angular non-rectilinear floor plans can be challenging for this group. They will need cues (walls, floor colors etc) for way-finding. The existing niches in the lounge/hallway Esslinger are a problem. Way-finding should be as intuitive and inclusive as possible.

7. Glare can be a problem particularly walking towards a bright window wall.

8. The existing SRC elevators are hard to find within the building. Locate new elevators directly beside stairs to avoid social isolation.

9. There needs to be accessible fitness and other equipment. Accessible equipment should be placed in the same area as other equipment and not segregated.

10. Secured wheelchair storage for personal equipment is desired (personal track and basketball chairs for use only at the SRC for example).

11. There needs to be space at transfer locations within activity spaces for personal equipment.

12. Fewer doors to navigate through are always preferable.

End of Report

UO Student Recreation Center
Accessibility Focus Group Meeting – 3/7/12

Accessibility	Andy Fernandez	COE	Eugene Rec	
Group	Antonia DeMichiel	UO	Student	
	Matthew Howard	UO	Student	present
	James Bartik	UO	Student	
	Molly Rogers	UO	Faculty	
	Hillary Gerdes	UO	AEC	present
	Shawn Rubio	UO	Club Sports	
	Steve VanDevender	UO	Info Services	present
PUG/SRC	Dennis Munroe	UO	PE & Rec	present
	Bryan Haunert	UO	PE & Rec	present
	Brent Harrison	UO	PE & Rec	present
	Peg Rees	UO	PE & Rec	
	Tiffany Lundry	UO	PE & Rec	
	Chantelle Russell	UO	PE & Rec	
	Kristen Gleason	UO	Club Sports	present
Support	Gene Mowery	UO	Planning	present
	Fred Tepfer	UO	Planning	
	Emily Eng	UO	Planning	present
Design	Carl Sherwood	RSA	Architect	present
Team	Dave Guadagni	RSA	Architect	present

MEETING MINUTES

Diagrams and other visual information presented at Accessibility Focus Group Meeting showing the current design are available at the UO project web site: http://pages.uoregon.edu/eeng/src.html

The Accessibility Focus Group was presented with the very latest plans, sections and elevations of the proposed addition to the Student Recreation Center. Particular attention was paid to the accessible features and accommodations addressed in the plan, including those suggested at the last focus group meeting. The following are comments specific to these current plans:

1. A secure storage room for personal adaptive wheelchairs and other equipment is located near the east entry. It was suggested that this room include locking devices, and that a bench be provided in the room for ease of transfer.

2. The change in the lanes pool to provide an accessible ramp and stair, mitigating the requirement for a lift into this pool, was highly appreciated.

3. It was suggested that a bench be provided at all likely chair transfer locations within activity spaces, with space to temporarily leave the spare chair nearby.

4. Assure that circulation path edges are well marked – this was made in reference to the lounge area located along the path to the stair and elevator at the lower level entry, as well as throughout the fitness areas that are open to circulation paths.

5. The plans of the control area at the main level showed 10 turnstiles, 2 of which were accessible. While the group felt that this might be acceptable if 10 turnstiles are needed, there was a strong preference to go to 8 accessible turnstiles so that all would be accessible. (The User Group members present felt that 8 entry lanes would be the minimum, and favored making them all the same.)

6. An additional secure storage room for personal adaptive chair/equipment was shown the area of old Esslinger – this was favored over locating one within the control area of the SRC.

End of Report

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

APPENDIX C CITY OF EUGENE, LIMITED CONSULTATION MEETING MINUTES

Appendix D Preliminary Building Code Report

Appendix E Energy Programming

Appendix F LEED Checklist

Appendix G Outline Specifications

Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

UO Student Recreation Center
City of Eugene – Limited Consultation Meeting – 2/15/12

City of Eugene	Charlotte Curtis	COE	Plans Examiner	present
	Austin Brushett	COE	Deputy Fire Marshal	present
	Quentin Blattler	COE	CRS Coordinator	present
	Andy Parson	COE	Lead Plumber	present
	Chris Henry	COE	Transportation	present
User Group:	Dennis Munroe	UO	PE & Rec	present
	Bryan Haunert	UO	PE & Rec	present
UO Support	Gene Mowery	UO	Planning	present
	Drew Standridge	UO	EHS	present
Design Team	Jack Patton	RDG	Architect	present
	Dave Guadagni	RSA	Architect	present
	Matt Keenan	KPFF	Civil	present
	Scott Creighton	CEI	Code Consultant	present

MEETING MINUTES

General

1. The intention of this meeting was to discuss with the City of Eugene (COE), Plans Examiners, Fire Marshall, Transportation and Plumbing specialists, etc the current design and possible code compliance issues for the University of Oregon, Student Recreation Center expansion project. Graphic information about the design along with a specific list of questions was previously submitted to the COE when requesting this meeting. Updated diagrams showing the more developed design were distributed and a quick overview of the project scope and design was presented at the beginning of the meeting

2. The following is the list of submitted questions and the discussion they generated. For background information on some of the questions please refer back to the narratives submitted with the meeting application. In addition there are some discussions on three topics that were not included in the original narrative/questions list.

Questions / Discussion:

Code Path

Question 1: We would like to discuss these other requirements with the COE but more importantly will the COE allow us to follow a Mall type code path?

Discussion: The COE does not see the resemblance between the Student Recreation Center project and a Mall. Unless the design team is able to convince the COE that this is indeed a Mall project we should not follow the Chapter 4, Mall code path.

Fire Lanes:

Question 2: Is the existing drive lane at the south end of the project area considered a fire lane and if so would it be possible to eliminate it?

Discussion: The existing south drive lane is considered a fire lane. In order to eliminate this as a fire lane there would need to be a fire vehicle turn-around in the area behind McArthur Court and also east of the Tennis Center since without the connecting south drive segment these both become dead-end fire lanes. These turn-arounds would need to meet Oregon Fire Code requirements for turning radius, hammerheads and allowable back-up lengths.

Question 3: Will the COE allow the fire lane to be on the existing east play fields if they are adequate to support fire truck loads? Note that it appears the current east side fire lane is partially on the fields now.

Discussion: The existing east side fire lane has a paved 16' wide section and it is assumed that an additional 4' wide band along the west edge of the artificial turf playing field is part of the fire lane. The fields would be approved as a fire vehicle access path if the project can provided engineered (stamped) documentation that the field can support the vehicle weight (75,000 pounds). Lines on the field would be required to show designated fire lanes if only a portion of the field met the weight requirements.

Question 4: What are the fire lane widths and set-backs that will be required for this project?

Discussion: A typical fire lane is described in the fire code (Appendix D) as 20 feet wide. Buildings over 30 feet tall (as proposed for the SRC) require aerial fire truck access along one full length of the building such that the fire lane is 26' wide and its edge needs to be between a minimum of 15' and a maximum of 30' from the building. The design team will need to look at 15th Street, University Street and the east fire lane to determine which of them can or could meet this requirement. A minimum of 13'-5" of headroom clearance is required at all fire lanes.

Existing roof/storm drainage:

Question 5: We will not be replacing any impervious area, so do these re-routed roof drains need to be treated?

Discussion: The project can redirect the downspouts but will not need to treat rain water from an existing roof. The project could consider treating existing roof drainage in place of treating new roof drainage or consider treatment of street drainage in place of treating new roof drainage.

Basements:

Question 6: Can the lower level be considered a basement?

Discussion: The lower level does not meet the definition of a basement but is considered a "Story above the Grade Plane" (OSSC 502.1 and 202 definitions). Basically the height of the natatorium means that the lower level can not be considered a basement.

Occupancy Counts (Table 1004.1.1) New Gym:

Question 7: Can we assume a 15 sf/occupant load for the new 3-court gym?

Discussion: The minimum occupancy count for the gyms will be based on 50 sf per occupant as required for exercise rooms per OSSC Table 1004.1.1. The code has specific occupancy counts based on the type of use. 50sf/occ for exercise rooms and either 15 sf/occ or 7 sf/occ for assembly areas are listed in the code. We can propose through the Alternate Materials and Methods (AMM) procedure what we believe to be a realistic/suitable load count based on how the room will be used. Charlotte suggests that

we submit this AMM well in advance of the permit submittal so COE review can be completed before the design is completed.

Occupancy Counts (Table 1004.1.1) Upper Level Patio:

Question 8: We believe an occupant count calculated at 15 sf/occupant will be reasonable for its use. Does the COE agree?

Discussion: - Item not discussed, however the same AMM submittal approach for loading noted in #7 above could be used to determine the loading for this space also.

Plumbing Fixture Counts (Chapter 29)

Question 9: Can we assume these support areas are not included in the area calculations when determining fixture counts?

Discussion: Support spaces such as defined circulation spaces, mechanical and storage rooms and toilet facilities are not counted as part of the area when determining toilet room fixture counts.

Repurposing of Leighton Pool tank:

Question 10: Does the COE have any concerns or special requirements for this use?

Discussion: The COE expects a licensed engineer would be responsible for the design of repurposing the Leighton Pool tank for a repurposed use as rainwater collection tank and as a thermal battery. The conversion and the use of gray-water for flushing would require an alternate Materials and Methods (AMM) submission that shows the project meets the requirements of Oregon Plumbing Specialty Code (OPSC). There is already a state approved AMM, OPSC 08-03, that should be used as a reference/base for our AMM. The pool tank would have to be covered and vented and the water treated if reused inside the building. Once treated any overflow would have to go to the sanitary sewer and not the storm sewer system.

Other Code Issues:

Question 11: Does the COE see any areas of code concern that we have not yet addressed?

Traffic Impact Analysis (TIA) Discussion: A project of this size requires a TIA. Per Chris Henry, questions regarding TIA requirements should be addressed to Kristie Brown, Land Use Analyst (541-682-6041) who could not attend this meeting. Chris provided a TIA Application and noted that this project is exceptional. Users tend to go to the facility as an adjunct to their other activities on campus and so most do not drive specifically to the building. Because of this, the design team might be able to make a case that a TIA is not required.

Mezzanine Discussion: The Design team would like to consider the possibility that the upper floor level excluding the new gym area be considered a mezzanine. For this to be possible the type of separation of the gym from the mezzanine will need to be determined. The COE has not had time to review.

Horizontal Exit Discussion: The Design team would like to consider the possibility of creating a horizontal exit between the new upper level Gym and the adjacent Outdoor Patio. The COE has not had time to review this issue but noted that horizontal exit doors are not allowed to have locks. They also noted that except in hospital situations (where there are patients confined to beds) they typically have not considered horizontal exits within and between parts of a single building. Typically the horizontal exit is between separate buildings. None-the-less the COE is will to consider this possibility.

End of Report

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

Appendix C City of Eugene, Limited Consultation Meeting Minutes

APPENDIX D PRELIMINARY BUILDING CODE REPORT

Appendix E Energy Programming

Appendix F LEED Checklist

Appendix G Outline Specifications

Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

Preliminary Building Code Report

This SD Code Analysis and FSDN is created for the purpose of presenting current assumptions, a proposed code path, design nuances and fire safety components for the project. This document at this point is a DRAFT document.

The project scope work is 90% new construction and 10% remodel in Esslinger Hall.

The role of an FPE is to be highly interactive with all stakeholders as a means of facilitating one or more code compliance strategies. This document is intended to be a "one stop resource library" of fire protection information for informed and expedited decision making.

1.	Building/Project OVERVIEW	Pgs	1 - 2
2.	Proposed Code Path OVERVIEW	Pgs	2 - 3
3.	Building Code Criteria	Pgs	4 - 9
4.	Fire Code Criteria	Pgs	9 - 10

Building/Project OVERVIEW
The use is college recreation facilities. Occupancy to be largely A-3 (predominate occupancy classification).

The new facility is to lie south of the existing Student Rec Center and east of Esslinger Hall. Tennis courts currently occupy much of the space to be utilized are to be demolished.

New work is to add on to the existing Student Recreation Center with matching construction (Type I B). The existing SRC facility is Type II FR (UBC) which translates to Type I B (OSSC) or better.

Site review of existing construction verifies a 4 HR FIRE WALL located at the east side of Esslinger. Existing Esslinger is Type III N or better construction

The FIRE WALL (boundary with Esslinger) is currently rated as 4 HR. per OSSC Table 706.4 this wall rating (separating differing construction types) is sufficient per current code (3 HR required). The existing portion of the wall will retain it's 4 HR rating on drawings. The portion of the wall to be extended will be constructed to 3 HR. NOTE: Opening protectives for 3 HR and 4 HR are the same (3 HR - Table 715.4).

Existing facilities are fully fire sprinkled. New project work will be fire sprinkled throughout. Some sprinkler "zone" adjustments will be required for flow alarm consistency.

Esslinger Hall and the Student Rec Center received a fire alarm upgrade in 1998 utilizing an Edwards Systems Technology (EST) system installed by Landis & Gyr.

Dates and specific(s) of the fire sprinkler installations within Esslinger are unknown at this time. Sprinklers are not likely to be quick response (QR). There is not a code requirement to change out existing sprinklers to QR at this time however new work is required to be QR - which creates "interface" difficulties.

There are no known exiting or code compliance issue with the existing facilities.

Proposed Code Path OVERVIEW:
The project has a funding delay. The year of code of compliance may be the 2013 OSSC. This document is based on 2010 OSSC. "Code Path" requirements rarely change between code cycles.

The proposed code path basics are:

Type of Construction: I B

Fire Sprinkled per 903.3.1.1	Yes
Predominate Occupancy	A- 3
Bldg Maximum Height	180 FT (160 FT + 20 FT)
Bldg Maximum Stories	Unlimited
Chapter 5 Design Option:	Non Separated Uses: Occupancies A- 3, A- 4, B.
Incidental / Accessory Uses:	None Proposed (not an issue with this code path).
Interior Fire Walls:	Existing FW to be retained and extended.
Interior Fire Barriers (FB):	There will be no Occupancy Separation FB's. Overall there will very few FB's in this work.
Interior Fire Partitions:	Corridors Non Rated (Table 1018.1)
Shafts:	Shafts: 1- 2 HR, most will be 2 HR due to penetrating 2 HR floor construction. Excellent opportunity to use Section 716.6.1 (floor line FD option).
Shaft Opening Protection:	Fire Damper Required unless Exc # 1 (22 inch sub duct).
Shaft Opening Protection:	Smoke Damper Required.
Manual Fire Alarm System:	Required - with Voice Evacuation Notification
Engineered Smoke Control:	Required for 3 levels open to each other. Not Required for 2 levels open to each other after fire alarm initiated floor separation (horizontal fire shutters).
Area Smoke Detection:	Undetermined quantity of area coverage at this time. Will be required for ESC Section 909 (3 levels open to each other).
Exiting:	Two - Four remote vertical exits required.

OSSC Section 1016.1 Exception # 3 and # 4 permits unenclosed stairway opportunities.

OSSC Section 708.2 (7) permits two stories open to each other without SHAFTS or ENGINEERED SMOKE CONTROL.

The code path proposed at this time is 100% prescriptive for new work and existing non conforming status retained for non work areas. There are no Alternative Materials or Methods (AMM) design strategies proposed at this time.

Design Options:

A. 3 floors open to each other - Atrium Concept mandates OSSC Section 909 Engineered Smoke Control.

B. Use auto closing fire alarm activated fire shutters to "separate" off 3rd level of common atmosphere. 2 floors open to each other does not require OSSC Section 909 Engineered Smoke Control.

C. 2 floors and a mezzanine level. Design to conform to "mezzanine" criteria. A mezzanine can be 50% of below floor are (505 Exception for Type I or II construction with voice evacuation fire alarm).

At present the best opportunity appears to be to close off the lower level from upper two levels with horizontal fire shutters (Option B).

Building Code Criteria

The following analysis is provided to assist the owner, architect, building and fire code analyst to understand the code path and fire systems (passive, active, alarm) chosen for this facility.

Land Coverage Compliance

Site Acreage:	University Campus
Building Footprint:	Unlimited Area
Percent of Land Cover:	Not Applicable

Chapter 3: Intermingled A-3, A-4, B occupancies.

Proposed design code path is NON SEPARATED USES - Section 508.3.3. Differing Occupancies (R-1, A-3) per this code path require no occupancy separations.

In Unlimited Area (UA) building all permitted occupancies are unrestricted in size (area) which makes the concept of “occupancy separations” moot.

Chapter 4: Special Detailed Occupancy Requirements:
Design Options are not settled - Atrium requirements may apply.

Chapter 5 Area, Height and Stories Analysis
Maximum Allowable Single Floor Area/Maximum Allowable Building Area:

Single Floor or Whole Building “area” accrual calculations are not relevant in a UA building.

Single Floor or Whole Building “side yards/frontage” accrual calculations are not relevant in a UA building.

Single Floor or Whole Bbuilding “sprinkler system” accrual calculations are not relevant in a UA building.

Proposed design code path is NON SEPARATED USES - Section 508.3.3. Differing Occupancies (R-1, A-3). There are no occupancy separations for permitted uses.

In Unlimited Area (UA) buildings ALL permitted occupancies are unlimited in area which makes the concept of “occupancy separations” moot.

Other Criteria
Assembly Occupancy Maximum story location (any floor).

Business Occupancy Maximum story location (any floor).

Section 508 - Table 508.2.5: Sprinkler option is used in lieu of 1 HR Fire Barriers.

Section 508.2. Accessory Occupancies - Not Relevant for a UA building.

Special Treatment Areas:
None. (Normally used for special permissions to avoid Assembly uses in non assembly buildings per Section 303.1)

Chapter 6:
Table 601: This building uses the standard Chapter 6 approach using Type I B construction:

1.	Structural Frame:	2 HR Integrity Protection.
2.	Exterior Bearing Walls	2 HR Integrity Protection.
3.	Interior Bearing Walls	2 HR Integrity Protection.
4.	Interior Non Bearing Walls	0 HR Integrity Protection.
5.	Floor/Clg Construction	2 HR Integrity Protection.
6.	Clg/Roof Construction	1* HR Integrity Protection.

* Footnote b applies for areas of the building where ALL PORTIONS of roof structural steel is above 20 FT above the floor or a fuel load location - roof can be non-rated. Columns from floor to roof must be 1 HR rated.

Table 602:

1.	Exterior Walls: 0 - 30 FT to PL:	Opening Protection Required.
2.	Exterior Walls: 5 to 30 FT to PL:	1 HR FRR Integrity Protection.
3.	Exterior Walls: + 30 FT to PL:	0 HR FRR Integrity Protection.

Chapter 7:

Definition:	FRR = Fire Resistance Rated
Section 705: Exterior Walls	Wall Ratings and Opening Protection - See Chapter 6.
Section 706: Fire Walls:	FIRE WALL Minimum 3 HR Separation required between Esslinger Hall and Student Red Center (new and existing) due to differing Type of Construction. Wall Stability Requirements apply (independent collapse Section 706.2
Section 706: Fire Walls:	NOTE: This is not a PARTY WALL (no openings allowed in PARTY WALLS).
Section 707: Fire Barriers	1- 2 HR fire barriers required for vertical shafts, exit enclosures, elevator equipment room(s), few high hazard rooms.
Section 708: Shaft Enclosures	1- 2 HR shafts. Shafts normally requiring 1 HR for 3 floor connection in this case are required to be 2 HR (shaft penetrates 2 HR floor system). 1 ½ HR Fire Smoke Dampers (FSD's) required at openings except where design utilizes one of the exceptions. Example: sub ducting for continuous exhaust duct openings (Exc # 2).
Section 708: Unenclosed Stairs:	Unenclosed Central Stair to utilize section 708.2 Exception 2.1 - 2X opening size permitted, close spaced sprinklers, 18 inch draft curtain surrounding opening.
Section 708: Elevator Shafts	Elevator openings to have 1 ½ HR auto closing fire door with smoke rating OR area of shaft/elevator lobby to be 2 HR enclosure – 2 HR supported.
Section 708.14: Elev Lobbies	Not Required - Exception # 4.
Section 709: Fire Partitions	None Required.
Section 709: Fire Partitions Egress	Corridors - 0 HR FRR - Table 1018.1 Sprinkled. Doors - No rating, auto closers not required. Construct as a "smoke partition".
Section 710 Smoke Barriers	No smoke barriers
Section 711 Smoke Partitions	No smoke partitions - sprinkled corridors effectively are constructed as smoke partitions.
Section 712 Horiz Assemblies	Floor/Ceilings to be 2 HR throughout.
Section 713 Penetrations	Comply with fire stop systems at FRR membranes.
Section 714 FR Joint Systems	Comply with fire stop systems at FRR membranes.
Section 715 Opening Protectives	Fire Doors, Smoke and Draft Control Doors at Fire Rated membranes. Corridors are not "fire or smoke" rated membranes in this building. Shafts Required - unless Exception used.

Section 716 Duct & AT Openings:	FSD's at shaft openings unless Exception is implemented. FD's required at horizontal membrane openings. Some exceptions may be applied - unknown at this time.
Section 717 Concealed Spaces:	Non combustible concealed spaces - sprinklers or draft stops, fire blocking not required.
Sections 718 – 721:	No Specific Comments.

Chapter 8:

Assembly A-3 Spaces:	Interior Finish Minimum Class C Sprinkled per 903.3.1.1.
Assembly A-3 Egress:	Interior Finish Minimum Class B Sprinkled per 903.3.1.1.
Occupancy B Spaces:	Interior Finish Minimum Class C Sprinkled per 903.3.1.1.
Occupancy B Egress:	Interior Finish Minimum Class C Sprinkled per 903.3.1.1.

Chapter 9:

Section 901, 902:	No Comment
Section 903 Fire Sprinklers:	903.3.1.1 (NFPA 13) system required by Chapter 9. Building IS ELIGIBLE for ALL sprinkler "exceptions". Existing Areas - extent of QR sprinklers is unknown. All wet systems proposed. At this time there is not specific known need for dry or antifreeze systems . IT rooms may require pre- action specialty systems. Sprinkler(s) required in elevator hoist way pits/elevator machine rooms (prescriptive). Existing sprinklers assumed to be adequate (no deficiency). Existing 6" UG Service expected to remain adequate for currently sprinkled areas. New 6" fire service for new construction areas. Sprinkler FDC location to be confirmed. Backflow Prevention to be confirmed. Expected Fire Flow Static: 65 PSI +/-.
Section 903 Fire Area	FIRE AREA Compartmentation Not Required due to sprinklers.
Section 904 Auto Exitinguishing	No Class I cooking hoods/surfaces.
Section 905 Standpipes	Not required (30 FT Rule).
Section 906 Portable Fire Exting.	May be deleted (QR, ""A", B"). University decides.
Section 907 Occupant Notification	907.2.21 Occupant Notification (voice evacuation)

	required due to over 1,000 Occupant Load.
Section 907 Manual Pull Stations	One Manual Pull Box - provided per FD direction.
Section 907 Automatic Detection	Non Atrium Condition - Detection for elevator recall, minor other purposes, HVAC shutdown, FSD's, etc.
Section 907 Automatic Detection	3 Level Open to Each Other Atrium Condition - Detection Throughout all open areas per fire modeling.
Section 908 Emergency Alarm	Not Required.
Section 909 Eng Smoke Control	Required for 3 levels open to each other condition. "Level" can be closed off with horizontal fire shutters on fire alarm with appropriate auto detection.
Section 910 Passive Smoke Vents	Not Required..
Section 911 Fire Command Ctr	3 Level Atrium Condition - Not Required.
Section 911 Fire Command Ctr	2 Level Atrium Condition - Required.
Section 912 Fire Dept Conn	FDC's to be coordinated with Fire Department.
Section 913 Fire Pumps	Not expected to be required.
Section 914 Shaft Marking	Required (signage for emergency responders).
Section 915 Radio Coverage	Section 510 - Over 50,000 SF - Radio Coverage Requirement to be worked out with Fire Dept - NEW REQUIREMENT.

Chapter 10:
Design Approach: Prescriptive Compliance to be provided.

Vertical exit enclosures (VEE's) to be 1 - HR.

Section 1016.1 Exc # 3 and # 4 for unenclosed stairs to be utilized.

Section 708.2 Except 2.1 to be used for stairway opening protective concept wherever possible.

Travel Distance Maximum (A) is 250 FT.

Exiting Concept is not complete at this time.

Section 1025 Horizontal Exit

Upper Gym/Patio concept has been proposed to City.

Oregon Fire Code (OFC) Compliance - Fire Safety Design Narrative Topics:
Building code analysis, fire code analysis, occupancy information, automatic sprinklers, fixed suppression systems, fire alarm systems, electronic detection, sequence of operations, passive components, compartmentation/ FS dampers, smoke control systems, hazardous materials, fire department response, site conditions, water supplies/ site fire flow, site fire hydrants, FDC's, fire fighter risk conditions, fire department access/fire control efficiency, exposing buildings, unusual fire or smoke spread issues, unusual human isolation issues, interior finish ratings, coordination with security, egress compliance and egress efficiency.

FIRE AREA COMPARTMENTATION	Not Required.
DRAFT STOPPING	Not Required.
FIRE SMOKE DAMPERS	Required for SHAFTS or use Exceptions
SECTION 707 SHAFTS	2 HR Required (2 HR Floor Systems) or use Exceptions.
FIRE DEPARTMENT RESPONSE	The Eugene Fire Department is responsible for fire suppression and emergency medical response. The department has numerous stations with the closest being at 17th and Agate, ½ mile away. The fire department is a modern paid staff fire department. Early FD notification is expected via building alarm signal from the sprinkler flow switch, detection or manual pull station.
SITE CONDITIONS	There are no unusual terrain conditions
SITE FIRE FLOW	Expected to be Adequate (Required is 1,500 GPM), Available is 2,500 - 3,000 GPM. The highest sprinkler GPM demand is about 300 GPM (attic) at 40 PSI. The water supply does not significantly change in flow capacity or pressure seasonally. The water supply is considered “year around reliable”. Fire hydrants along North and West streets are public hydrants. Fire hydrants along East and South sides are private fire hydrants (backflow prevention is in place).
SITE FIRE HYDRANTS	Civil Engineer reports 3 plus hydrants in vicinity. One hydrant (south end) to be relocated..
FIRE SPRINKLER FDC	Existing at NW corner of Esslinger to remain. New FDC at SE to be provided along fire lane.
FIRE FIGHTER RISK CONDITIONS	No unusual conditions discernable. No fast spreading fire contents are expected (aerosols, flammable liquids). All flammables expected to be within MEQ limits. No propane or compressed gas containers. Limited combustible concealed spaces. Good Access from 4 sides.
EXPOSING STRUCTURES	Esslinger Hall is not considered an exposing structure due to the FIRE WALL. All other sides have 20 + FT separation.
FPE FIRE RISK ASSESSMENT ISSUES	There are no apparent unusual human isolation situations.

FIRE CODE SUMMARY	There are no special risk hazards expected per OFC detailed occupancy chapters. Issues of open flame devices are handled by university policy.

The building is eligible for all “sprinkler” exceptions, trade-ups, extensions, etc, listed in the OSSC/OSFC/OSMC.

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

Appendix C City of Eugene, Limited Consultation Meeting Minutes

Appendix D Preliminary Building Code Report

APPENDIX E ENERGY PROGRAMMING

Appendix F LEED Checklist

Appendix G Outline Specifications

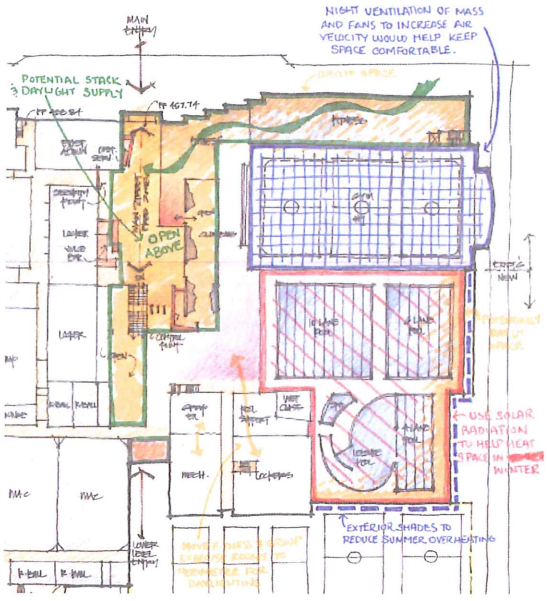
Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

University of Oregon Student Recreation Center

Report #1
Energy Programming Presentation for Integrated Design Workshop 10/26/11



November 2011

University of Oregon Student Recreation Center

Report #1
Energy Programming Presentation for Integrated Design Workshop 10/26/11

Prepared by:
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Department of Architecture
University of Oregon
Eugene, OR 97403
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INTRODUCTION

This report documents the energy programming analysis that the Energy Studies in Buildings Laboratory performed for presentation at the Integrated Design Workshop held on October 26, 2011.

Energy programming aims to discover and develop strategies to take advantage of interactions between climate, use and building and site design. Spaces that have similar heating, cooling, ventilation, and lighting needs and occupant schedules can employ the same energy efficient design strategies. If these spaces are in the same zone these strategies can be most efficiently and economically used. An ideal building design would group together related activities and similar energy zones to improve the efficiency of heating, cooling, ventilation and lighting systems.

Figure 1 shows the design criteria for the energy zones in this analysis.

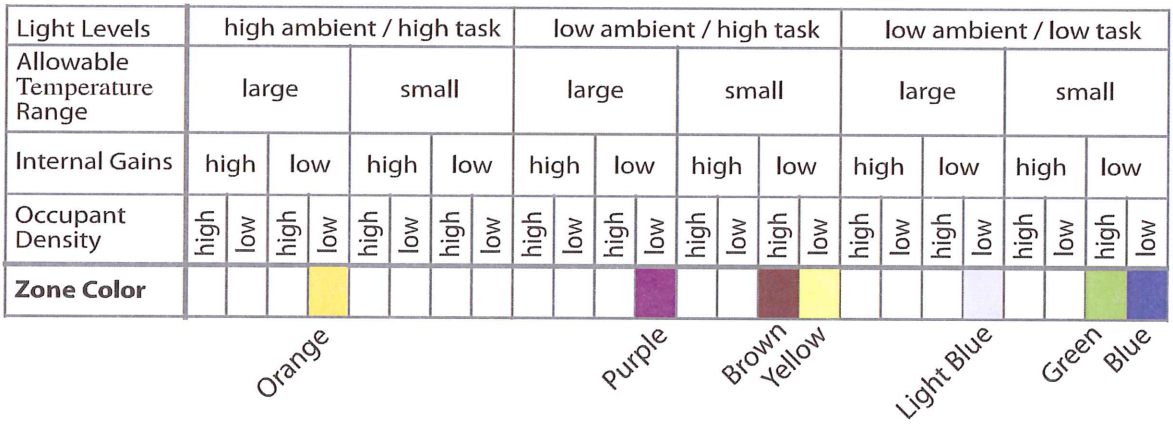


Figure 1, Zone Key

This report is based on the building program dated 10/6/11 and design option diagrams (files dated 10/18/11). These documents have been appended to the report. The design criteria selected for each space is based on limited and schematic information and should be considered preliminary.

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Zone Summary

112,661 SF

40,900 SF

8,570 SF

7,420 SF

2,000 SF

500 SF

300 SF

Space Summary

Priority 1 - Aquatics

- 25 Yds x 25 Meter Pool (e.g.: 10 Lanes @ 25 Yds)
- 25 Yds x 50 Foot Pool (e.g.: 6 Lanes @ 25 Yds)
- Leisure Pool w/ 4 25 Yds Lap Lane
- Women's Locker Room
- Men's Locker Room
- Pool Mechanical
- Wet Classroom
- Natatorium Storage
- Whirlpool
- Family / Unisex / Gender Neutral Locker Rooms
- Wet Classroom Storage
- Steam Room (on Pool Deck)
- Life Guard Room
- Aquatic Director's Offices
- Assistant Aquatic Director's Office

Priority 2 - Court Sports

- Three Court Gymnasium - 84 ft courts
- Three Court Gymnasium Storage
- Spectator Seating

Priority 3 - Weights & Fitness

- Weights & Fitness
- Weight / Fitness Room Storage - New
- Weight and Fitness Control

Other Considerations

- Tennis Expansion
- Administration Suite
- Large Group Exercise
- Medium Group Exercise
- Small Group Exercise
- Social & Informal Study Areas
- Improved Building Entry(Incl Membership Services)
- Juice Bar
- Large Group Exercise - Storage
- Laundry
- Medium Group Exercise - Storage
- Pro Shop (Retail)
- Small Group Exercise - Storage

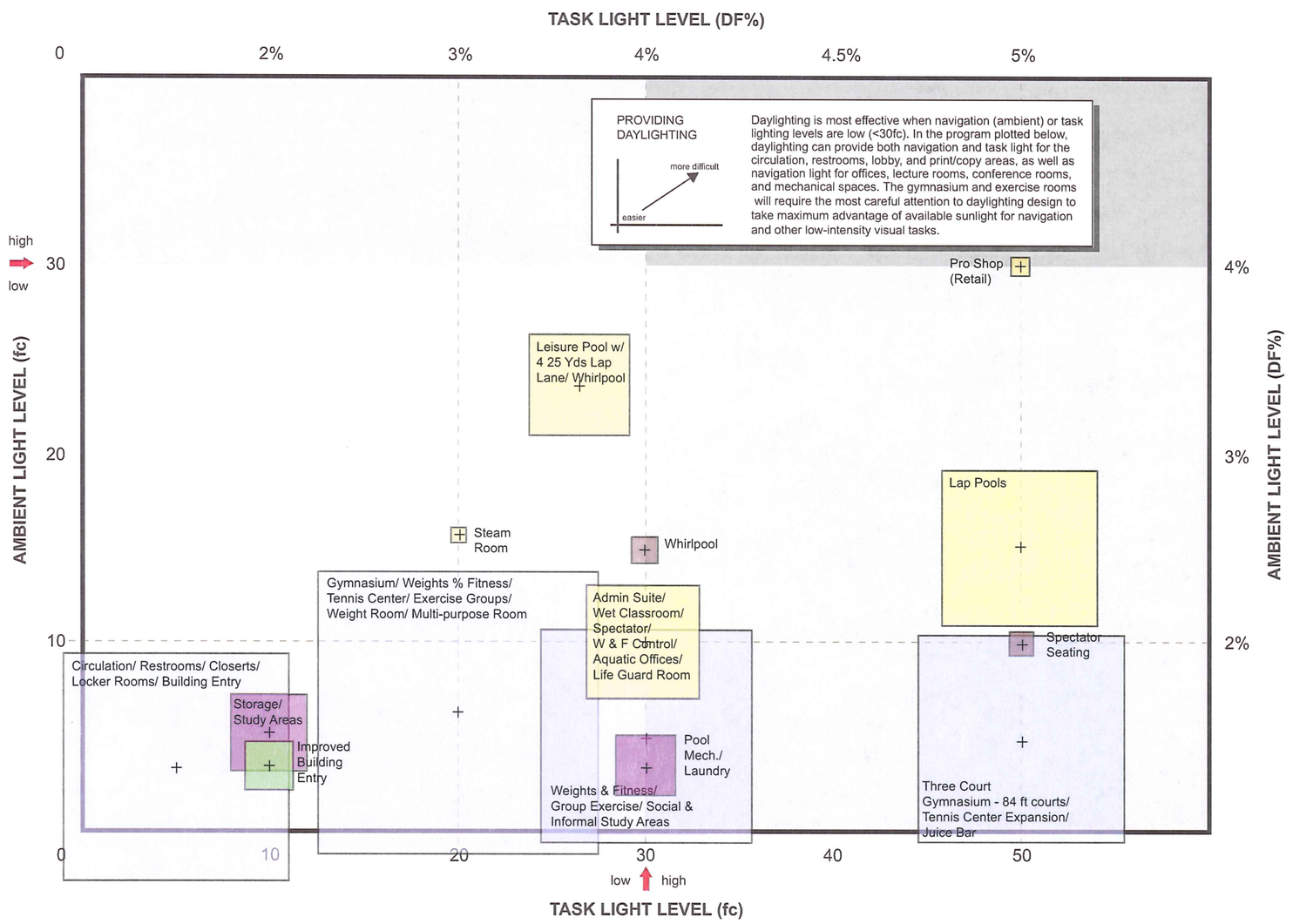
Possible Replacement Spaces

- Weight Room
- Multipurpose Room - Combatives
- Multipurpose Room - Storage
- Club Sports Storage
- Outdoor Pursuits Storage

Public Restrooms/Data/Mech/Elec Closets

Circulation

University of Oregon Student Recreation Center
Light Levels and The Potential for Daylighting

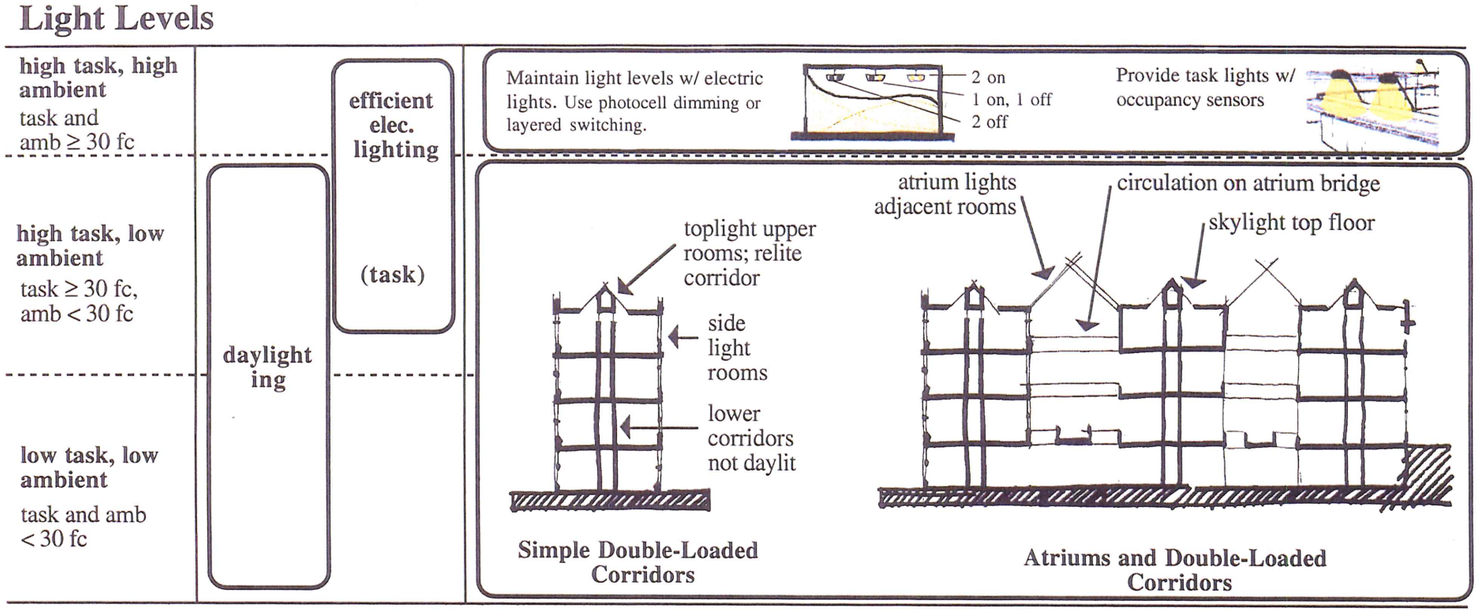


Assumption: Target daylight factor (DF) is based on savings for Portland, OR, daylight hours, and continuous dimming

Assumption: Horizontal glazing has a visible transmissivity of 50% with a 70% maintentance factor. Vertical glazing has a visible transmissivity of 70% with a 90% maintenance factor

Condition	Strategy	Examples of Architectural Implications and Forms

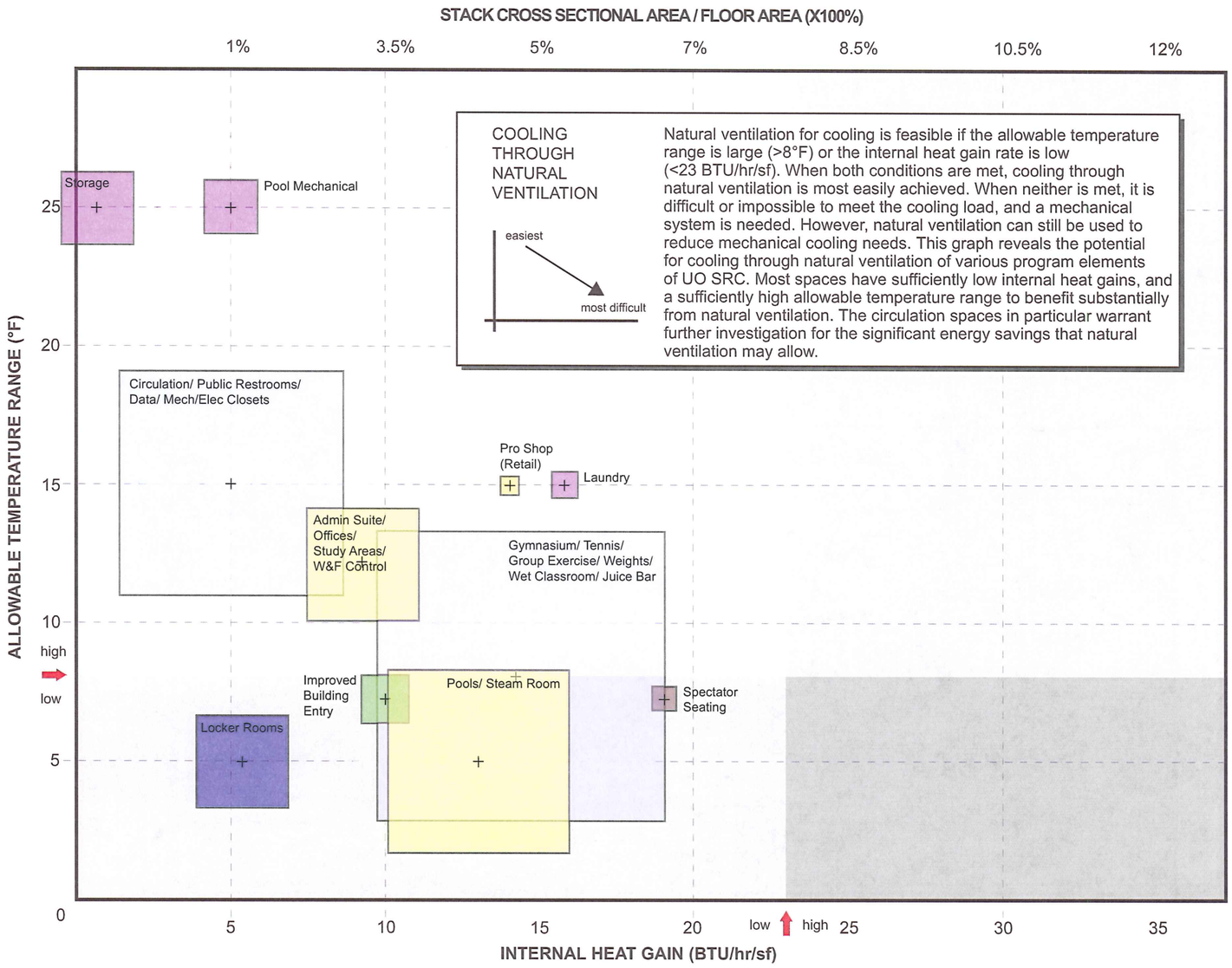
Light Levels



Space Lighting Level Requirements & Potential for Daylighting

Program elements are grouped by lighting requirements and plotted to show the potential for daylighting each group.
The thresholds distinguishing high from low light levels are shown with red arrows.
Specific elements within each group are identified toward the margins.

University of Oregon Student Recreation Center
Potential for Cooling Through Natural Ventilation



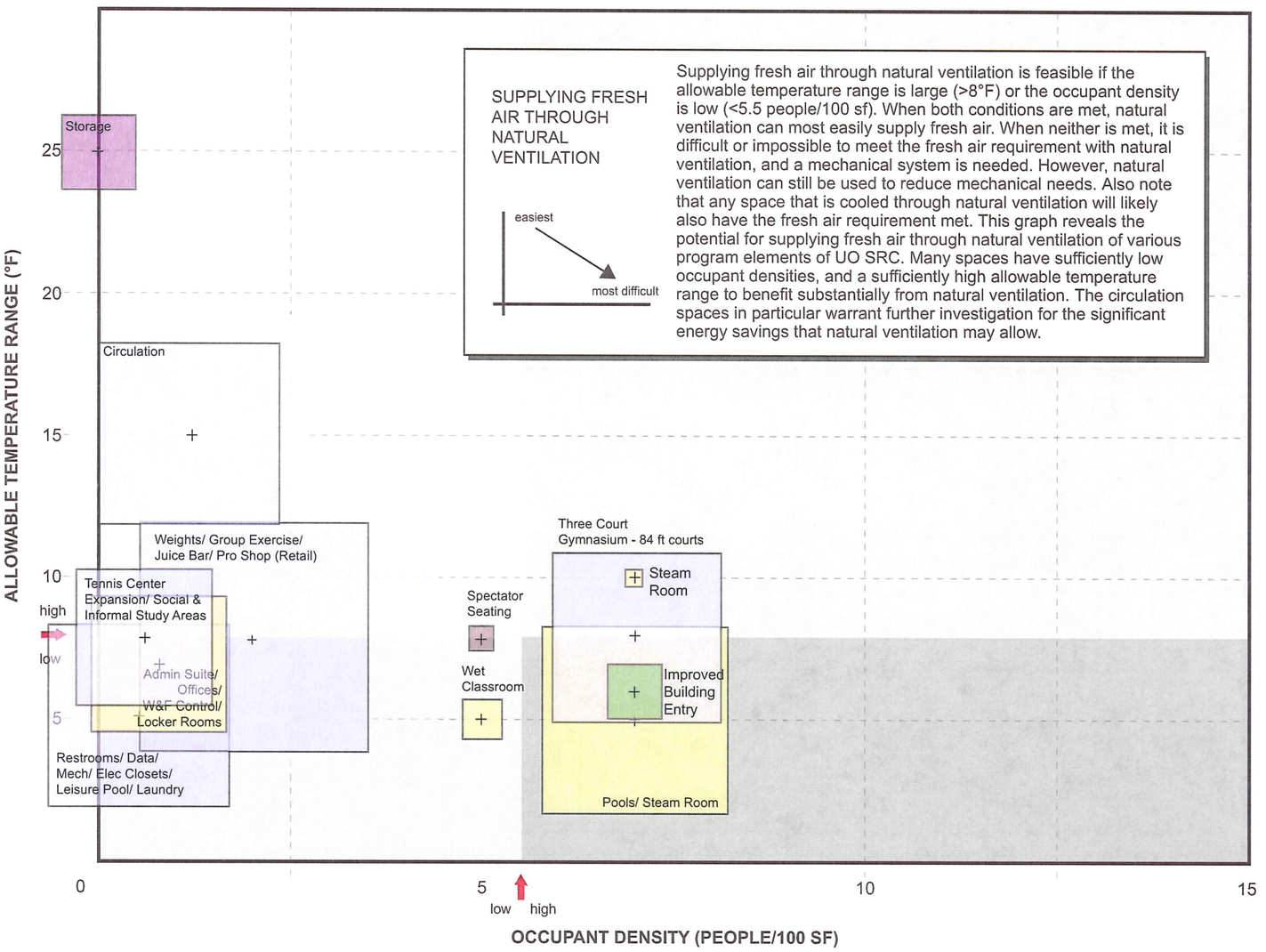
Assumption: Stack height is assumed to be 30 feet.

Condition	Strategy	Examples of Architectural Implications and Forms
Internal Gains	Due to lights, equipment, people. Consider night vent of mass strategy for spaces in "high" zone which are close to the 23 Btu/hr sf threshold.	
high total int. gains ≥ 23 Btu/hr,sf	**efficient outside air**	mechanical (economizer) or natural (cross ventilation) → **efficient introduction of outside air**
	high R-value envelope + low solar gains	high R insulation; double-pane low-e glazing; exterior shading; light-color skin → **high R-value envelope**
low total int. gains < 23 Btu/hr,sf	**night vent of mass**	Mass = exposed concrete ceiling. Night ventilate- provide inlets & outlets
	efficient heating	**Perimeter Radiant Heat**
	optimized envelope	example: insulated louvers → balance energy needs & climate to **optimize envelope**

Potential for Cooling through Natural Ventilation: Allowable Temperature Range vs. Internal Heat Gain

University of Oregon Student Recreation Center

Potential for Supplying Fresh Air Through Natural Ventilation

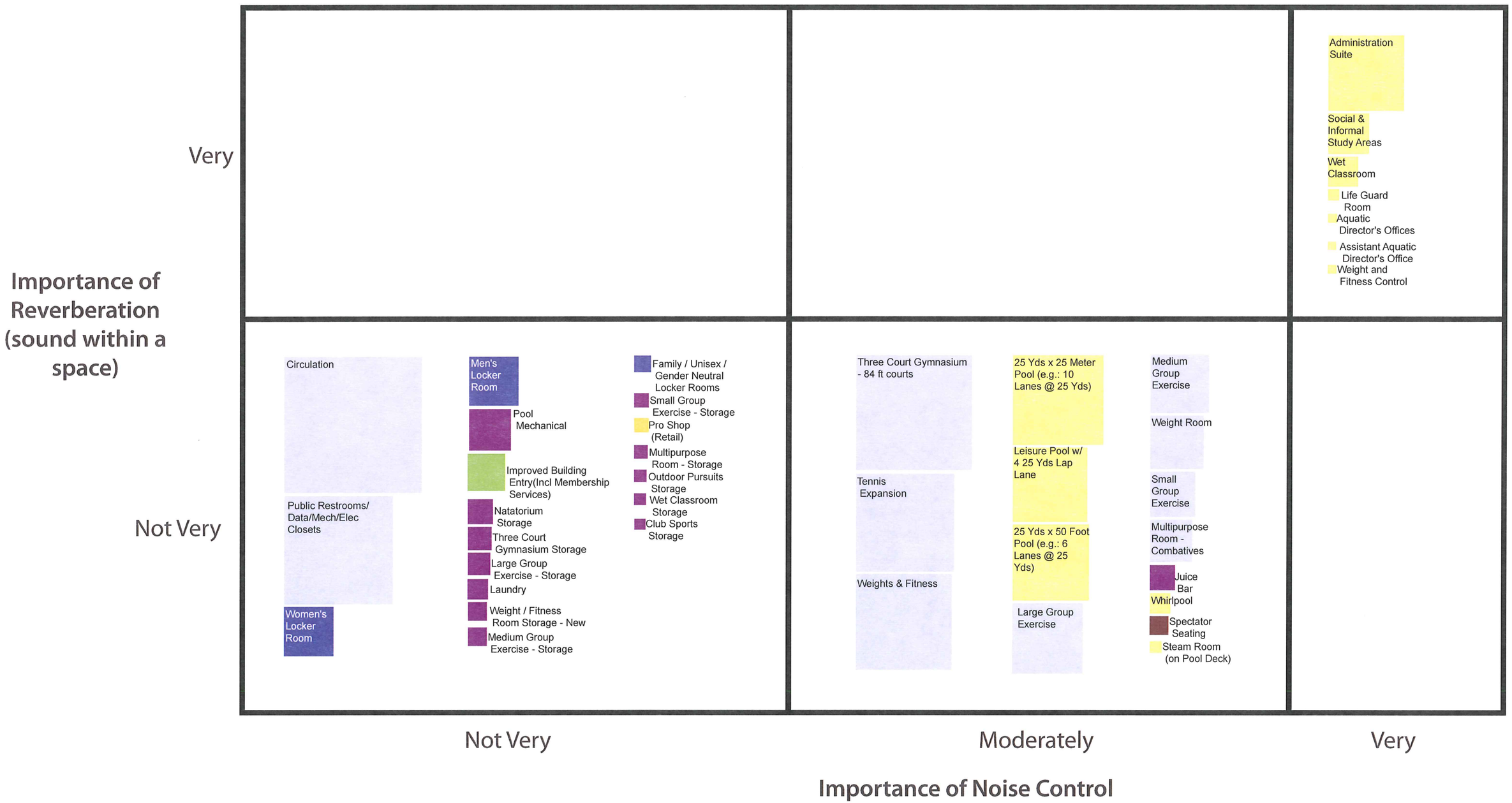


Condition	Strategy	Examples of Architectural Implications and Forms
Occupant Density Consider both heat recovery and day vent strategies for spaces with occupant densities near the 5.5 people/ sf threshold.		
high occ. dens ≥ 5.5 people/100sf	**heat recovery from ventilation air**	HOT stale, WARM fresh, Heat, WARM, COLD outside air, COOL fresh — **Winter** Lecture Hall; COOL stale, COOL fresh, Heat, WARM, HOT outside air, WARM fresh — **Summer** Lecture Hall
low occ. dens < 5.5 people/100sf	**day vent**	Stack Ventilation; Cross Ventilation Openings on opposite walls most effective

Condition	Strategy	Examples of Architectural Implications and Forms
Allowable Temperature Range		
large T(allow) ≥ 8°	**night and day vent**	cross vent room to corridor; cross vent corridor to room; cross vent through rooms; Orient for cross vent; N; 12 mth massive; 9 mth lightweight; stack vent to stair shaft or atrium; vent through rooms; vent through corridor to inner layer; stack vent; typical HVAC; HVAC for special zone
small T(allow) < 8°	**efficient heating and cooling**	Small Variable Air Volume Systems; fan coil unit; Fan Coil Units

Potential for Supplying Fresh Air through Natural Ventilation: Allowable Temperature Range vs. Occupant Density

University of Oregon Student Recreation Center
Acoustics: Noise Control and Reverberation



University of Oregon Student Recreation Center
Public and Private Spaces and Entries

Entries

Primarily Staff

Both

Primarily Public

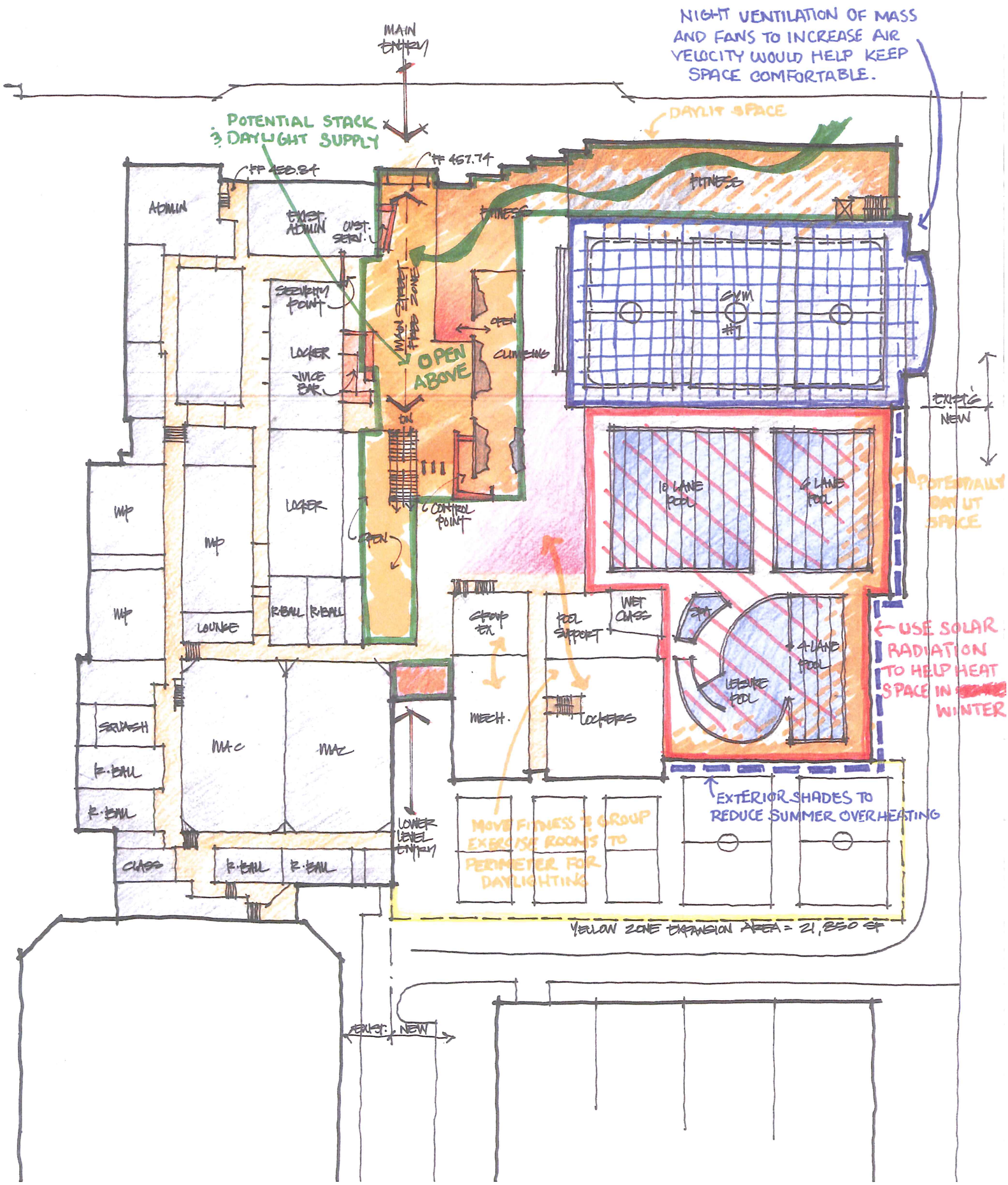
Administration Suite
Pool Mechanical
Natatorium Storage
Three Court Gymnasium Storage
Large Group Exercise - Storage
Laundry
Weight / Fitness Room Storage - New
Medium Group Exercise - Storage
Small Group Exercise - Storage
Multipurpose Room - Storage
Outdoor Pursuits Storage
Wet Classroom Storage
Club Sports Storage
Life Guard Room
Aquatic Director's Offices
Assistant Aquatic Director's Office

Circulation
Public Restrooms/ Data/Mech/Elec Closets
Tennis Expansion
Pro Shop (Retail)
Improved Building Entry (Incl Membership Services)
Juice Bar

Three Court Gymnasium - 84 ft courts
Weights & Fitness
25 Yds x 25 Meter Pool (e.g.: 10 Lanes @ 25 Yds)
Leisure Pool w/ 4 25 Yds Lap Lane
25 Yds x 50 Foot Pool (e.g.: 6 Lanes @ 25 Yds)
Large Group Exercise
Medium Group Exercise
Weight Room
Men's Locker Room
Women's Locker Room
Small Group Exercise
Multipurpose Room - Combatives
Social & Informal Study Areas
Wet Classroom
Spectator Seating
Family / Unisex / Gender Neutral Locker Rooms
Whirlpool
Steam Room (on Pool Deck)
Weight and Fitness Control

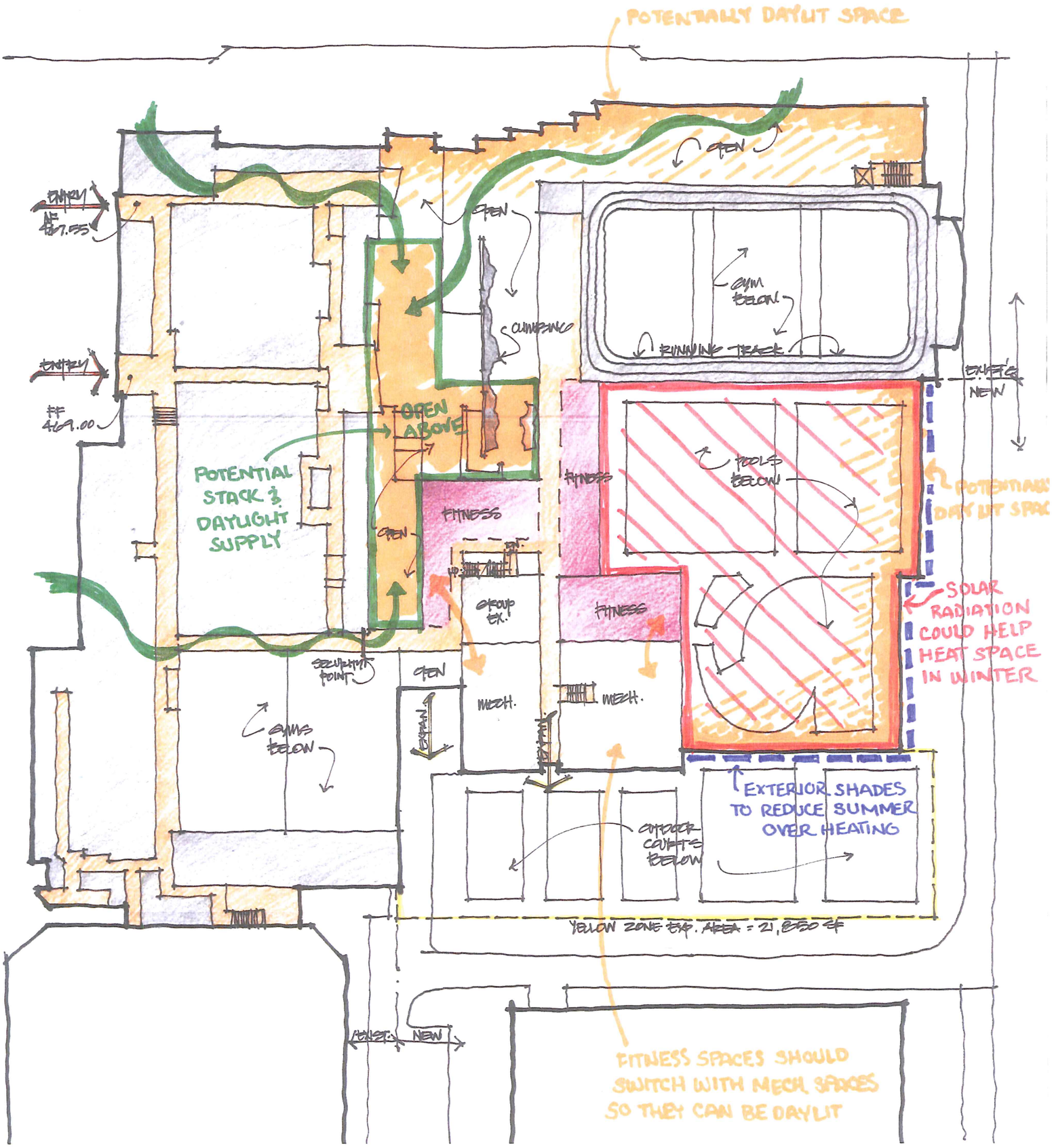
Primarily Public | Both | Primarily Staff

Spaces



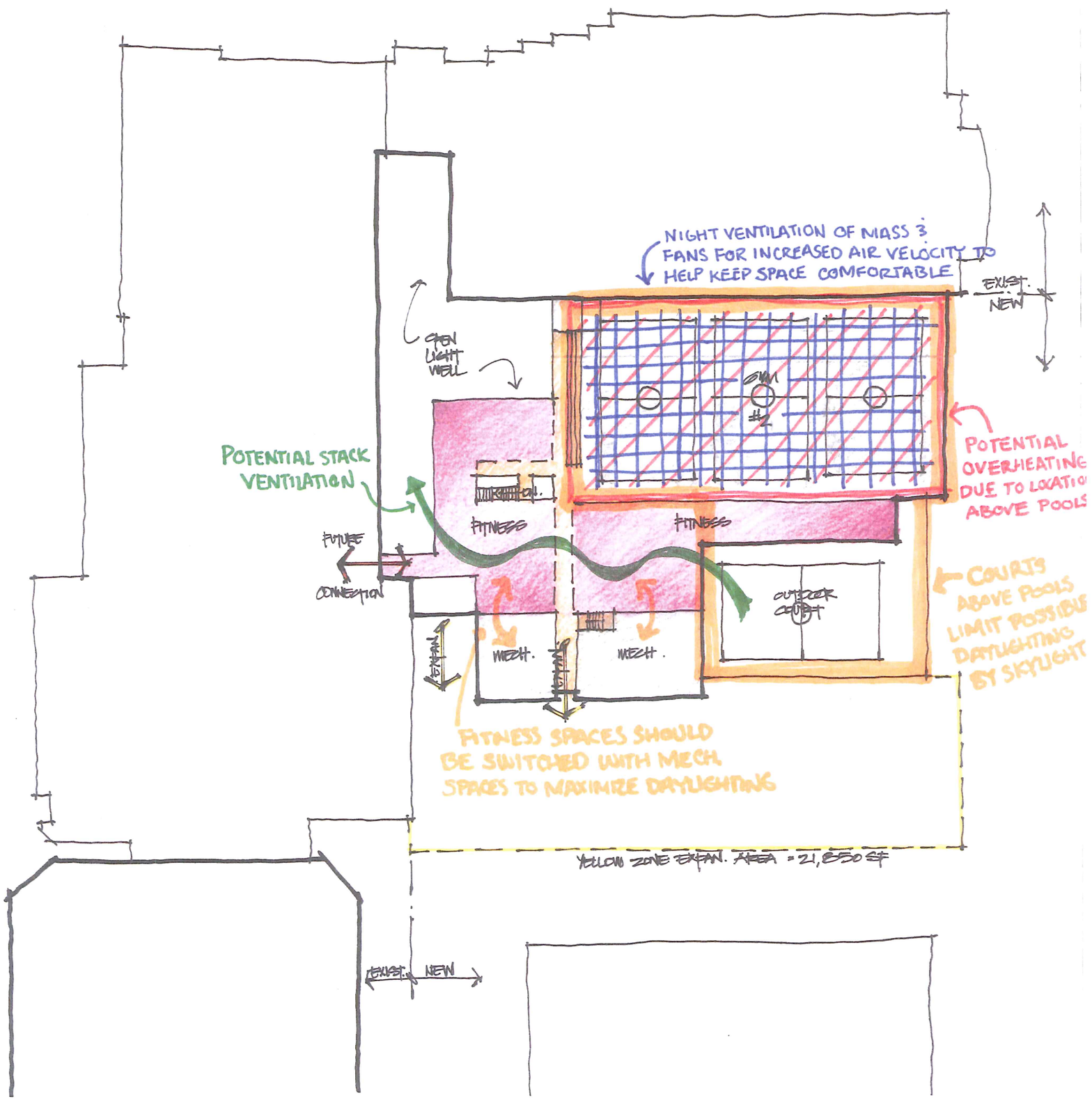
OPTION 1
LEVEL 1

= VENTILATION
= DAYLIGHTING
= HEATING
= COOLING



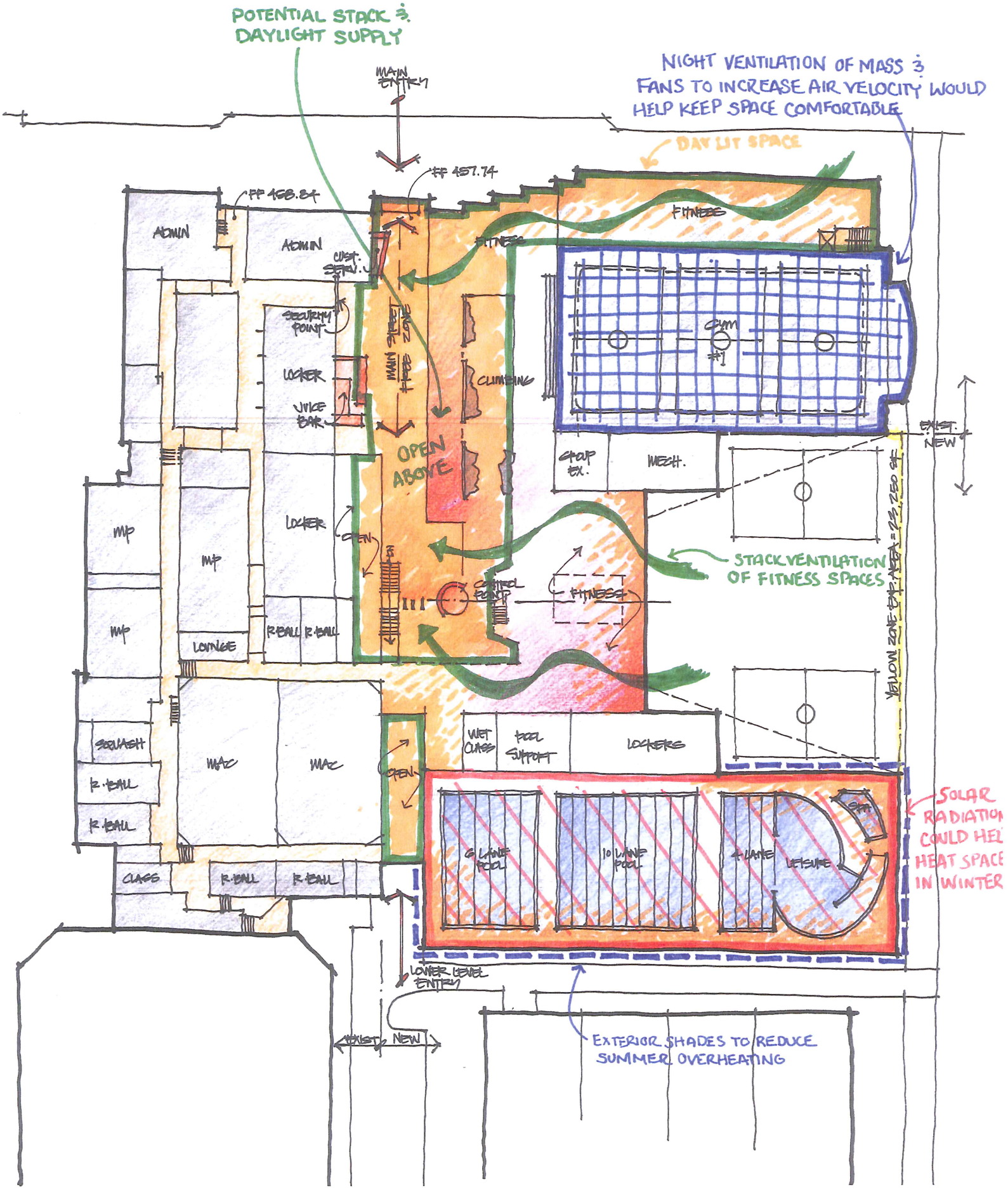
OPTION 1
LEVEL 2

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= DAYLIGHTING
= HEATING
= COOLING



OPTION 1
LEVEL 3

= VENTILATION
= DAYLIGHTING
= HEATING
= COOLING



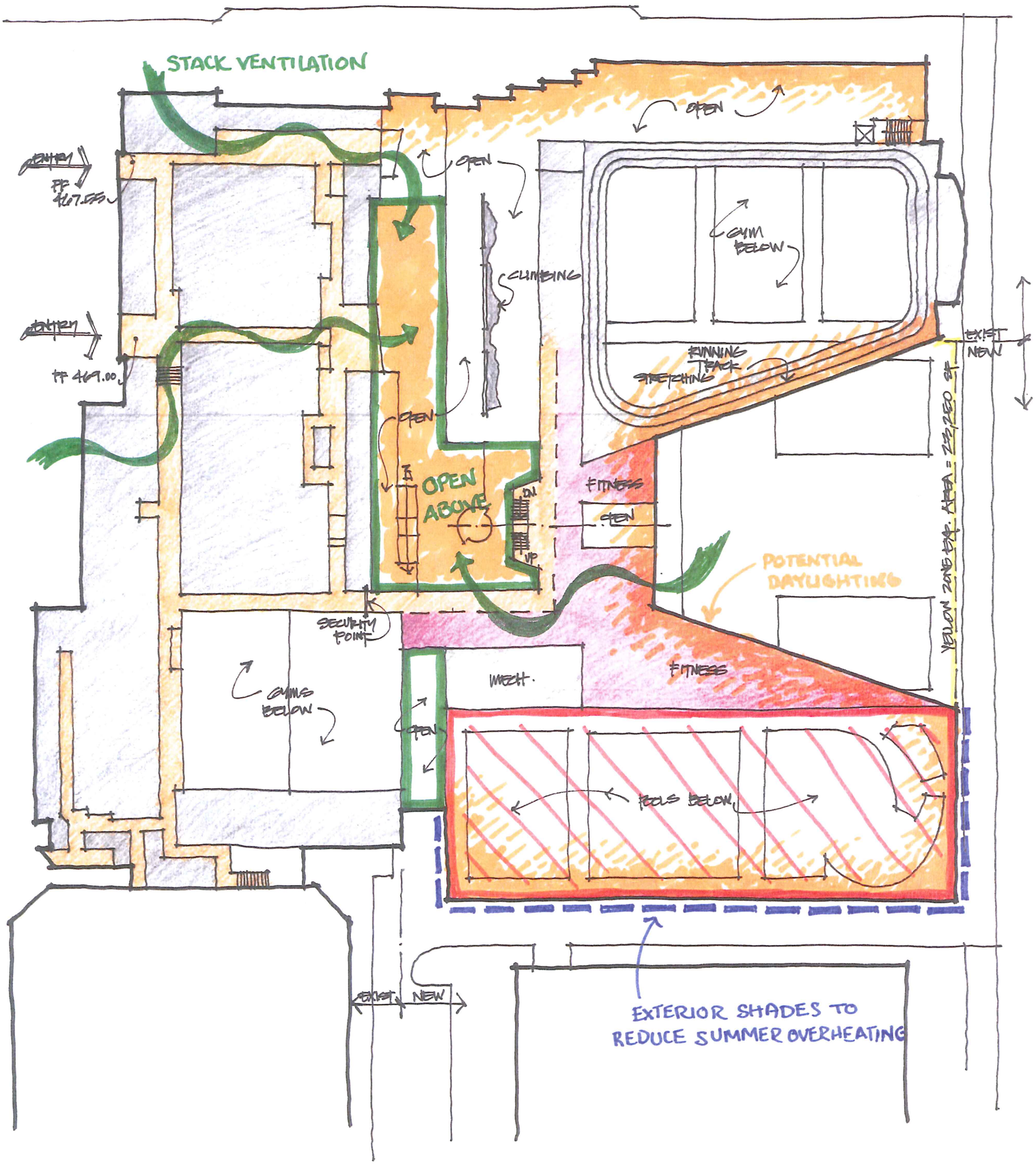
OPTION 2
LEVEL 1

= VENTILATION

= DAYLIGHTING

= HEATING

= COOLING



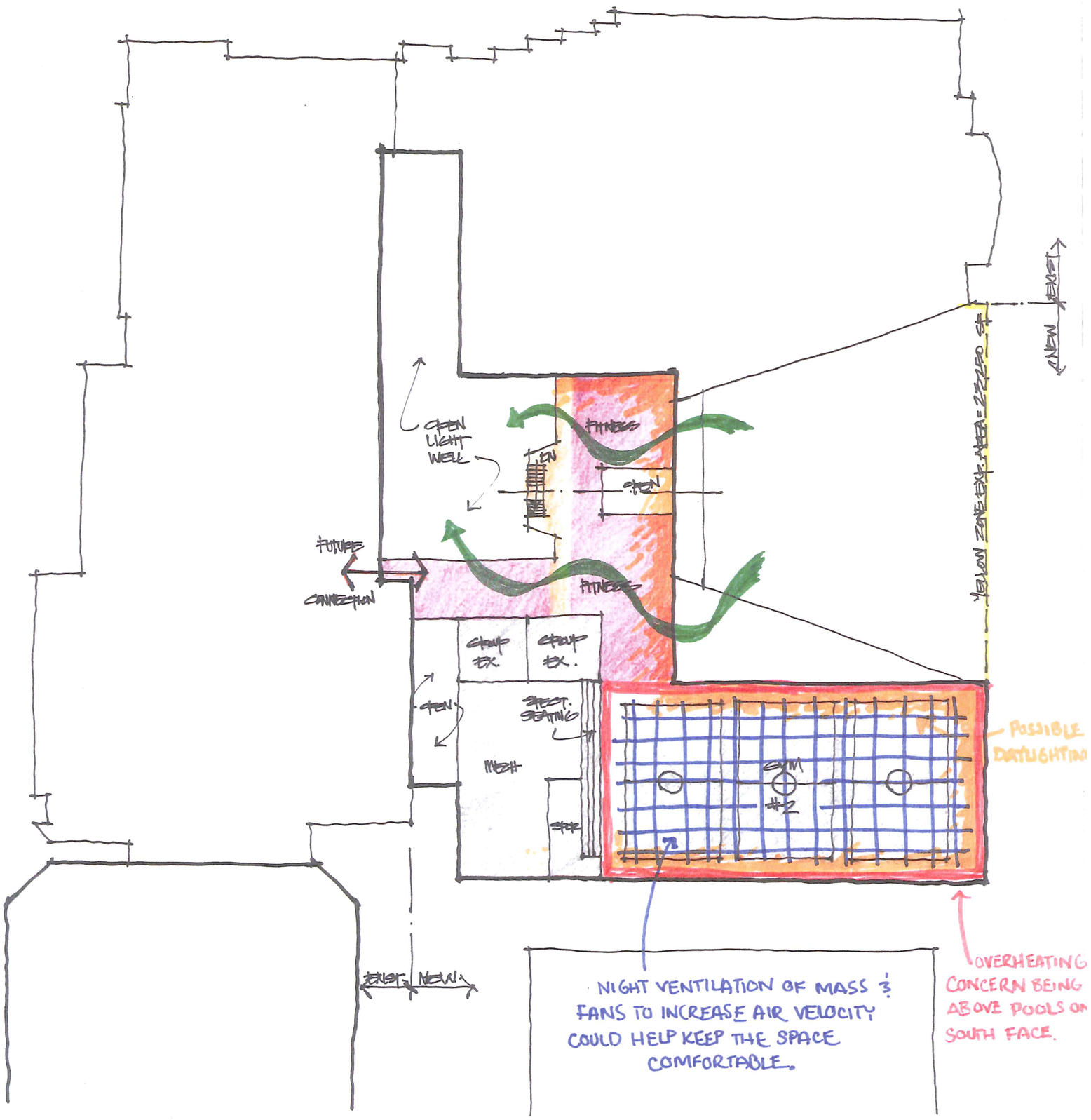
OPTION 2
LEVEL 2

= VENTILATION

= DAYLIGHTING

= HEATING

= COOLING



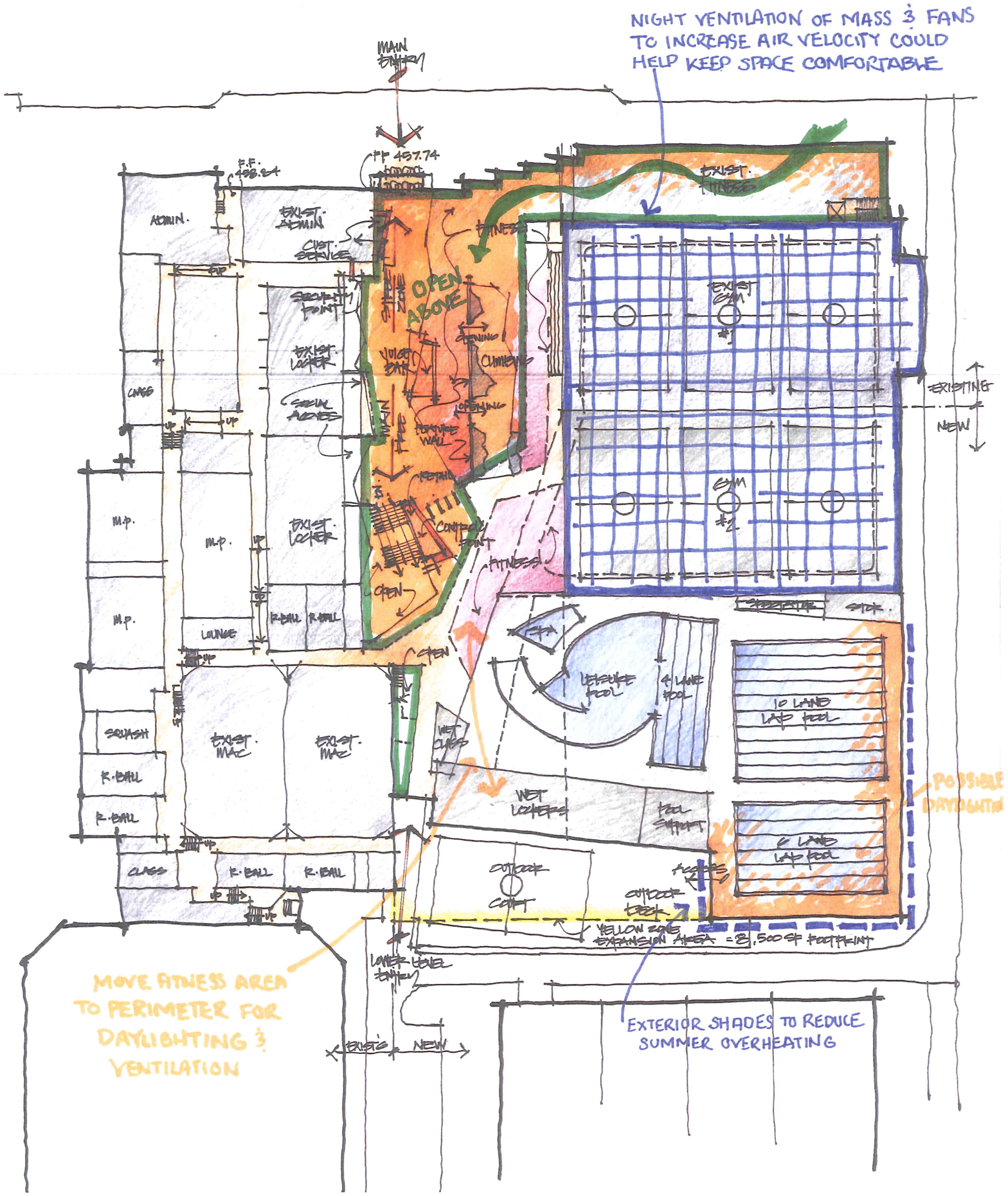
OPTION 2
LEVEL 3

= VENTILATION

= DAYLIGHTING

= HEATING

= COOLING



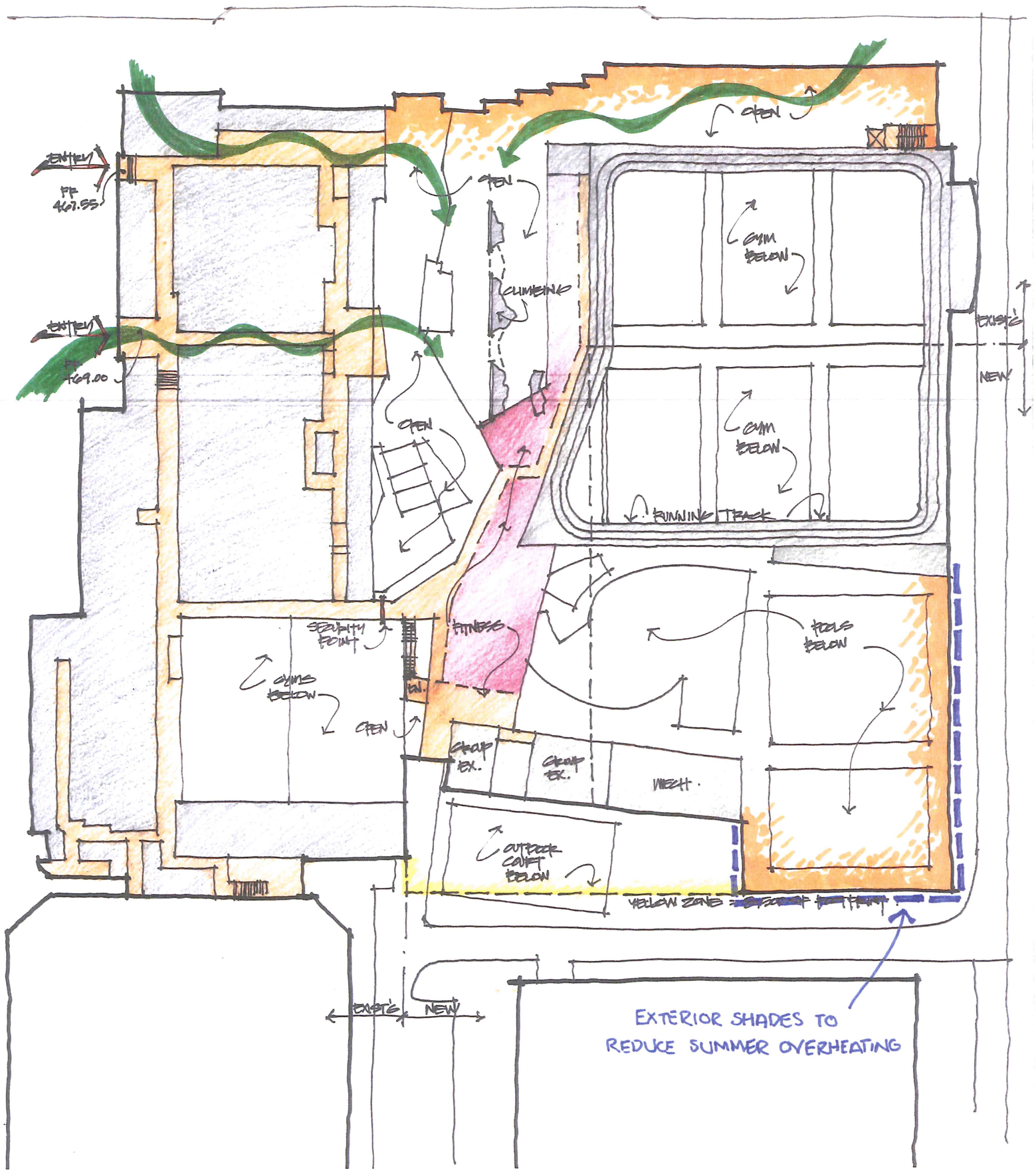
OPTION 3
LEVEL 1

= VENTILATION

= DAYLIGHTING

= HEATING

= COOLING



= VENTILATION

= DAYLIGHTING

= HEATING

= COOLING

OPTION 3
LEVEL 2

PROGRAM AND FLOOR PLAN OPTIONS

The following information was received from the design team and used as the basis for the analysis.

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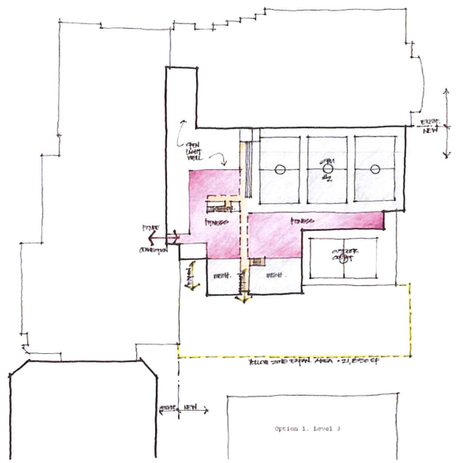
University of Oregon Student Recreation Center
Architectural Building Program Summary
RDG No. 2011.499.00
Created: October 6, 2011

*** DRAFT * DRAFT * DRAFT ***
Workshop No. 1 - Programming

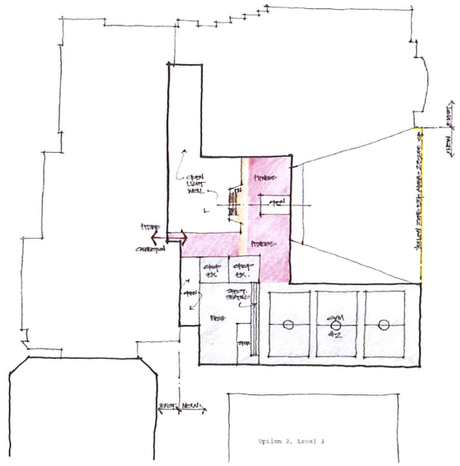
Description				NSF	Extension		Cost / SF	Net Cost	Net to Gross	Gross Cost	Scenario No. 1			Scenario No. 2			Scenario No. 3		
												Area	Cost		Area	Cost		Area	Cost
Grand Total - Best Guess Each Scenario											1		31,794,243	2		36,855,709	3		49,610,344
PRIORITY 1 - AQUATICS									$ 247			1			2			3	
25 Yds x 25 Meter Pool (e.g.: 10 Lanes @ 25 Yds)	6,150	SF Water	1	11,760	11,760	NSF	374	4,394,400	1,072,444	5,466,844	1	11,760	5,466,844	2	11,760	5,466,844	3	11,760	5,466,844
25 Yds x 50 Foot Pool (e.g.: 6 Lanes @ @ 25 Yds)	3,750	SF Water	1	8,400	8,400	NSF	357	2,998,500	766,031	3,764,531	1	8,400	3,764,531	2	8,400	3,764,531	3	8,400	3,764,531
Leisure Pool w/ 4 25 Yds Lap Lane	3,500	SF Water	1	8,000	8,000	NSF	364	2,915,000	729,553	3,644,553	1	8,000	3,644,553	2	8,000	3,644,553	3	8,000	3,644,553
Whirlpool	20	Persons	1	600	600	NSF	410	246,000	54,717	300,717	1	600	300,717	2	600	300,717	3	600	300,717
Steam Room (on Pool Deck)			1	200	200	NSF	265	53,000	18,239	71,239	1	200	71,239	2	200	71,239	3	200	71,239
Pool Mechanical			1	2,500	2,500	NSF	225	562,500	227,985	790,485	1	2,500	790,485	2	2,500	790,485	3	2,500	790,485
Natatorium Storage			1	900	900	NSF	210	189,000	82,075	271,075	1	900	271,075	2	900	271,075	3	900	271,075
Aquatic Director's Offices			1	120	120	NSF	220	26,400	10,943	37,343	1	120	37,343	2	120	37,343	3	120	37,343
Assistant Aquatic Director's Office			1	100	100	NSF	220	22,000	9,119	31,119	1	100	31,119	2	100	31,119	3	100	31,119
Life Guard Room			1	180	180	NSF	235	42,300	16,415	58,715	1	180	58,715	2	180	58,715	3	180	58,715
Men's Locker Room	Replace Exist	Half-Size	540	6.50	3,510	NSF	280	982,800	320,092	1,302,892	1	3,510	1,302,892	2	3,510	1,302,892	3	3,510	1,302,892
Women's Locker Room	Replace Exist	Half-Size	540	6.50	3,510	NSF	280	982,800	320,092	1,302,892	1	3,510	1,302,892	2	3,510	1,302,892	3	3,510	1,302,892
Family / Unisex / Gender Neutral Locker Rooms			2	200	400	NSF	245	98,000	36,478	134,478	1	400	134,478	2	400	134,478	3	400	134,478
Wet Classroom	200	Persons	1	1,300	1,300	NSF	220	286,000	118,552	404,552	1	1,300	404,552	2	1,300	404,552	3	1,300	404,552
Wet Classroom Storage			1	200	200	NSF	200	40,000	18,239	58,239	1	200	58,239	2	200	58,239	3	200	58,239
Demolition Cost @ Leighton Pool			1	1	1		78,500	78,500		78,500	1	1	78,500	2	1	78,500	3	1	78,500
PRIORITY 2 - COURT SPORTS																			
Three Court Gymnasium - 84 ft courts			1	19,344	19,344	NSF	190	3,675,360	1,764,060	5,439,420	1	19,344	5,439,420	2	19,344	5,439,420	3	19,344	5,439,420
Spectator Seating	500	NSF Exist	100	5	500	NSF	210	105,000	45,597	150,597	1	500	150,597	2	500	150,597	3	500	150,597
PRIORITY 3 - WEIGHTS & FITNESS																			
Weights & Fitness	205	Pieces Eq	1	13,300	13,300	NSF	235	3,125,500	1,212,883	4,338,383	1	13,300	4,338,383	2	13,300	4,338,383	3	13,300	4,338,383
Weight / Fitness Room Storage - New			1	500	500	NSF	200	100,000	45,597	145,597	1	500	145,597	2	500	145,597	3	500	145,597
Weight and Fitness Control			1	110	110	NSF	220	24,200	10,031	34,231	1	110	34,231	2	110	34,231	3	110	34,231
PRIORITY 4 - WAYFINDING																			
Wayfinding Improvements			1	1	1		150,000	150,000		150,000	1	1	150,000	2	1	150,000	3	1	150,000
OTHER CONSIDERATIONS																			
Improved Building Entry (Incl Membership Services)	1,150	NSF Exist	1	2,000	2,000	NSF	235	470,000	182,388	652,388		-	-	2	2,000	652,388	3	2,000	652,388
Laundry			1	600	600	NSF	220	132,000	54,717	186,717		-	-	2	600	186,717	3	600	186,717
Juice Bar			1	900	900	NSF	270	243,000	82,075	325,075		-	-	2	900	325,075	3	900	325,075
Pro Shop (Retail)			1	300	300	NSF	290	87,000	27,358	114,358		-	-	2	300	114,358	3	300	114,358
Social & Informal Study Areas			6	400	2,400	NSF	220	528,000	218,866	746,866		-	-	2	2,400	746,866	3	2,400	746,866
Small Group Exercise	25	Persons	2	1,500	3,000	NSF	210	630,000	273,583	903,583		-	-		-	-	3	3,000	903,583
Small Group Exercise - Storage			2	150	300	NSF	200	60,000	27,358	87,358		-	-		-	-	3	300	87,358
Medium Group Exercise	42	Persons	2	2,500	5,000	NSF	210	1,050,000	455,971	1,505,971		-	-	2	5,000	1,505,971	3	5,000	1,505,971
Medium Group Exercise - Storage			2	250	500	NSF	200	100,000	45,597	145,597		-	-	2	500	145,597	3	500	145,597
Large Group Exercise	60	Persons	2	3,600	7,200	NSF	210	1,512,000	656,598	2,168,598		-	-		-	-	3	7,200	2,168,598
Large Group Exercise - Storage			2	360	720	NSF	200	144,000	65,660	209,660		-	-		-	-	3	720	209,660
Administration Suite			1	8,200	8,200	NSF	215	1,763,000	747,792	2,510,792		-	-		-	-	3	8,200	2,510,792
Tennis Center Expansion	6	Exist CTs	2	6,980	13,960	NSF	150	2,094,000	1,273,071	3,367,071		-	-		-	-	3	13,960	3,367,071
POSSIBLE REPLACEMENT SPACES																			
Weight Room	64	Pieces Eq	1	4,170	4,170	NSF	220	917,400	380,280	1,297,680		-	-		-	-	3	4,170	1,297,680
Multipurpose Room - Combatives	43	Persons	1	2,600	2,600	NSF	210	546,000	237,105	783,105		-	-		-	-	3	2,600	783,105

Multipurpose Room - Storage		1	260	260	NSF	200	52,000	23,710	75,710		-	-		-	3	260	75,710
Club Sports Storage		1	170	170	NSF	200	34,000	15,503	49,503		-	-		-	3	170	49,503
Outdoor Pursuits Storage		1	220	220	NSF	200	44,000	20,063	64,063		-	-		-	3	220	64,063
Demolition Costs @ East Bump on Eslinger		1	1	1		78,000	78,000		78,000		-	-		-	3	1	78,000
											-						
Sub Totals				128,737	NSF	247	31,741,660		43,481,452		-						
Net to Gross Ratio	73%			47,615			11,740,066				-						
Gross Area Totals				176,352	GSF	247	43,481,726				-	106,263		132,365			173,166
Bldg Const Cost Subtotal												28,209,358		31,886,330			43,481,452
Bldg Cost / GSF												265		241			251
											-						
Site Construction Items				**Unit**		**Cost / Unit**			**Extension**		-			-		-	
General Site Costs				30,000	SF	20			600,000	1	30,000	600,000	2	30,000	600,000	3	30,000	600,000
Replace Outdoor Basketball	2 Courts			14,400	SF	7			99,360		-	-	2	14,400	99,360	3	14,400	99,360
Repair Fountain at Existing Front Door				1	EA	225,000			225,000		-	-	2	1	225,000	3	1	225,000
Replace Synthetic Turf Field No. 2				1	EA	600,000			600,000		-	-	2	1	600,000	3	1	600,000
Parking Replacement				27	EA	3,500			94,500	1	27	94,500	2	27	94,500	3	27	94,500
Sub Totals									1,618,860			694,500			1,618,860			1,618,860
Total Construction Cost (Building & Site)									**45,100,312**			28,903,858			33,505,190			45,100,312
Design Contingency	10%								4,510,031			2,890,386			3,350,519			4,510,031
Grand Total - Best Guess Each Senario									**49,610,344**	1	106,263	**31,794,243**	2	132,365	**36,855,709**	3	173,166	**49,610,344**

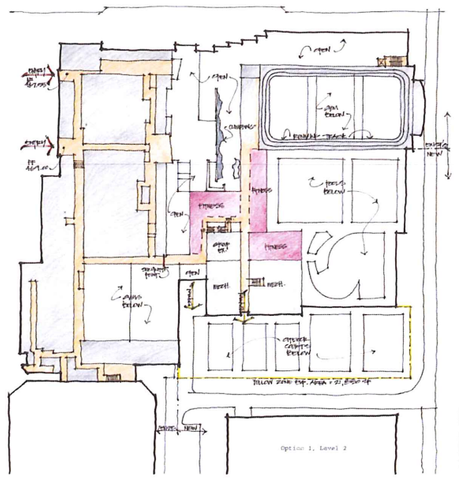
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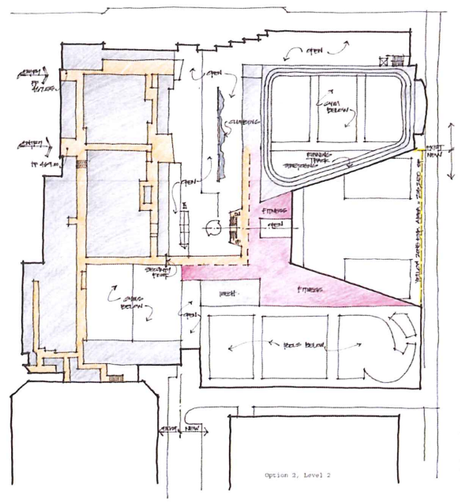
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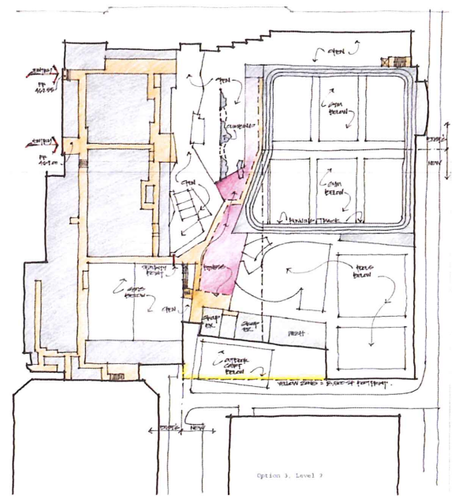
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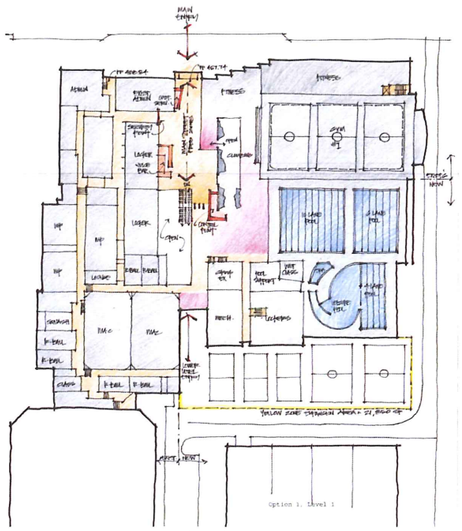
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Level 2

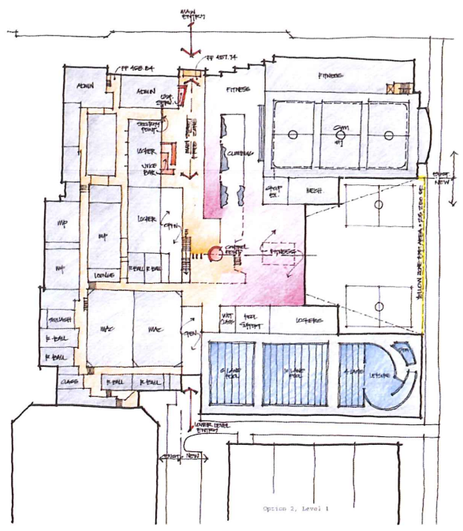


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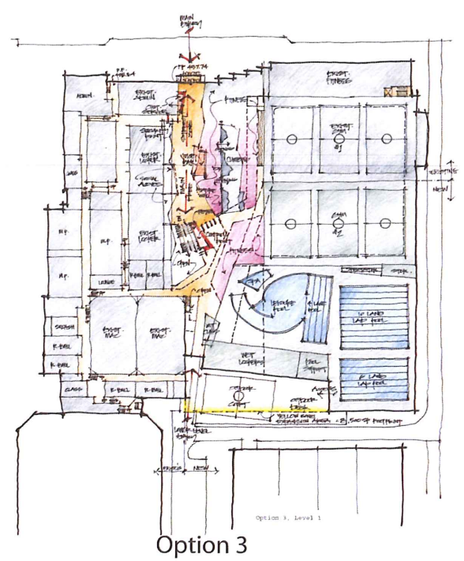
Option 1

Level 1



Option 2

Level 1



Option 3

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

Appendix C City of Eugene, Limited Consultation Meeting Minutes

Appendix D Preliminary Building Code Report

Appendix E Energy Programming

APPENDIX F LEED CHECKLIST

Appendix G Outline Specifications

Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

LEED 2009 for New Construction and Major Renovations

Project Checklist

University of Oregon

Y	?	N			
12	14		**Sustainable Sites**	**Possible Points:**	**26**
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
	1		Credit 3	Brownfield Redevelopment	1
	6		Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
	3		Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
	1		Credit 5.1	Site Development—Protect or Restore Habitat	1
	1		Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
	1		Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1
8	2		**Water Efficiency**	**Possible Points:**	**10**
Y			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
2			Credit 2	Innovative Wastewater Technologies	2
4			Credit 3	Water Use Reduction	2 to 4
17	12	6	**Energy and Atmosphere**	**Possible Points:**	**35**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
12	7		Credit 1	Optimize Energy Performance	1 to 19
	1	6	Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
	2		Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
	2		Credit 6	Green Power	2
4	7	3	**Materials and Resources**	**Possible Points:**	**14**
Y			Prereq 1	Storage and Collection of Recyclables	
	3		Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
	1		Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
1	1		Credit 2	Construction Waste Management	1 to 2
		2	Credit 3	Materials Reuse	1 to 2

Y	?	N			
			Materials and Resources, Continued		
1	1		Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1
10	5		**Indoor Environmental Quality**	**Possible Points:**	**15**
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
	1		Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
	1		Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
	1		Credit 8.2	Daylight and Views—Views	1
4	2		**Innovation and Design Process**	**Possible Points:**	**6**
1			Credit 1.1	Innovation in Design: Green Education	1
1			Credit 1.2	Innovation in Design: Exemplary Performance	1
	1		Credit 1.3	Innovation in Design: Exemplary Performance	1
	1		Credit 1.4	Innovation in Design: Green Cleaning	1
1			Credit 1.5	Innovation in Design: Pool?	1
1			Credit 2	LEED Accredited Professional	1
1	2	1	**Regional Priority Credits**	**Possible Points:**	**4**
1			Credit 1.1	Regional Priority: MRc7	1
	1		Credit 1.2	Regional Priority: WEc2	1
	1		Credit 1.3	Regional Priority: MRc1.1 (75%)	1
		1	Credit 1.4	Regional Priority: SSc5.1	1
56	44	10	**Total**	**Possible Points:**	**110**

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

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Appendix D Preliminary Building Code Report

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Appendix F LEED Checklist

APPENDIX G OUTLINE SPECIFICATIONS

Appendix H Cost Estimating Booklet

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

PROJECT MANUAL - OUTLINE SPECIFICATION

PROJECT:	**University of Oregon** **Student Recreation Center Expansion and Renovation** **RSA #1110** **RDG # 2011.499.00**
OWNER:	**University of Oregon** **Eugene, Oregon**
DATE:	**April 2012**
ARCHITECT:	**Robertson Sherwood Architects pc** **132 East Broadway Suite 540** **Eugene OR 97401** **Phone (541)342-8077 FAX (541)345-4302** **RDG Planning & Design** **301 Grand Avenue,** **Des Moines, Iowa 50309** **Phone: (515) 288-3141 FAX: (515) 288-8631** **Poticha Architects** **1820 Kona Street** **Eugene, OR 97403** **Phone (541)686-9466**
CIVIL ENGINEER	**KPFF**
LANDSCAPE ARCHITECTS	**Cameron McCarthy**
STRUCTURAL ENGINEER:	**M.R.Richards Engineers**
MECHANICAL ENGINEER, **ELECTRICAL ENGINEER,** **TECHNOLOGY ENGINEER**	**Interface Engineers** **Interface Engineers** **Interface Engineers**
LIGHTING ENGINEER	**RDG Planning & Design**
FIRE SUPPRESSION/ALARM	**Creighton Engineering**
AQUATICS CONSULTANT:	**Aquatics Design Group**

PROCUREMENT AND CONTRACTING DOCUMENTS GROUP

00 PROCUREMENT AND CONTRACTING REQUIREMENTS

INTRODUCTORY INFORMATION

00.1 DOCUMENT 00 01 01 – TITLE PAGE
- A. Official Project name and legal address of Owner

00.2 DOCUMENT 00 01 10 – TABLE OF CONTENTS
- A. List of all Documents, Forms and Technical Specification Sections in the Project Manual including identification of the firm responsible for preparing each document.

00.3 DOCUMENT 00 01 15 - LIST OF DRAWINGS
- A. List of all Drawings included in Contract Documents including identification of firm responsible for preparing each Drawing.

PROCUREMENT REQUIREMENTS

00.4 DOCUMENT 0011 00 – INVITATION TO BID
- A. Prepared by CMGC

00.5 DOCUMENT 00 20 00 - INSTRUCTIONS TO BIDDERS & SPECIAL PROVISIONS
- A. Prepared by CMGC

00.6 DOCUMENT 00 30 00 – INFORMATION AVAILABLE TO BIDDERS
- A. Include information available to bidder.
  1. Geotechnical reports and soil boring data
  2. Property surveys, hazardous materials report

00.7 DOCUMENT 00 41 00 - BID FORM
- A. Prepared by CMGC.

CONTRACTING REQUIREMENTS

DOCUMENT B8 - General Conditions for Public Improvement Projects.

00.8 PREVAILAING WAGE RATE
- A. BOLI

00.9 SUBCONTRACTOR FORMS

SPECIFICATIONS GROUP

GENERAL REQUIREMENTS SUBGROUP

01 GENERAL REQUIREMENTS

01.1 SECTION 01 11 00 - SUMMARY
- A. Work covered by Contract Documents.
- B. Type of Contract.
- C. Work phases.
- D. Work under other contracts.
  1. .
- E. Products ordered in advance.
- F. Owner-furnished products.
- G. Use of premises.
- H. Owner's occupancy requirements.
- I. Work restrictions.
- J. Specification formats and conventions.

01.2 SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES
- A. Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Contractor provides schedule of values describing value of each part of the work.
- C. Requirements for Application for Payment
  1. Monthly, first of month to first of month.
  2. Format: AIA Form G702 and G703
- D. Application for Final Payment

01.3 SECTION 01 21 00 – ALLOWANCES
- A. Section includes administrative and procedural requirements for allowances.
- B. Schedule of Allowances:
  1. Allowance No. 1:
  2. Allowance No. 2:

01.4 SECTION 01 22 00 – UNIT PRICES
- A. Section includes administrative and procedural requirements for unit prices.
- B. Schedule of Unit Prices:

01.5 SECTION 01 23 00 – ALTERNATES
- A. Section includes administrative and procedural requirements for alternates.
- B. Schedule of Alternates:

01.6 SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES
- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Minor Changes in the Work: AIA Document G710, “Architects Supplemental Instructions”.
- C. Proposal Request: AIA Document G709, “Proposal Requests”.
- D. Change Order: On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701, “Change Order”.

01.7 SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. Coordination Drawings.
   2. Administrative and supervisory personnel.
   3. Project meetings.
   4. Requests for Interpretation (RFIs).
B. Contractor is responsible for coordination of the work of all trades.
C. Contractor establishes bench marks and elevations.
D. Verify location of all underground utilities, facilities and equipment.
E. Procedure for Preconstruction Meeting:
   1. Scheduled and presided by Owner.
   2. Agenda, minutes and distribution by Architect
F. Procedure for Progress Meetings
   1. Meeting schedule.
   2. Contractor: Write and distribute minutes.
   3. Contractor: Prepare agenda and preside over meeting
   4. Required attendance
G. Pre-Installation Conferences:
   1. Meet for each part of the work specifying a pre-installation conference
   2. Scheduled and presided by Contractor. Contractor writes and distributes minutes.
   3. Agenda by Contractor.
H. Requests for Interpretation (RFI's):
   1. Procedure: Originated by Contractor; submit immediately to Architect on specified form upon discovery of need for interpretation of Contract Documents.
   2. Form:
      a. Hard copy RFI: CSI Form 13.2A or approved equivalent form
      b. Software-Generated RFIs: Adobe Acrobat PDF format.
   3. Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
      a. The following RFIs will be returned without action:
         1) Requests for approval of submittals.
         2) Requests for approval of substitutions.
         3) Requests for coordination information already indicated in the Contract Documents.
         4) Requests for adjustments in the Contract Time or the Contract Sum.
         5) Requests for interpretation of Architect's actions on submittals.
         6) Incomplete RFIs or RFIs with numerous errors.
   4. RFI Log: Contractor shall prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly.

01.8 SECTION 01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Preliminary Construction Schedule.
   2. Contractor's Construction Schedule.
   3. Submittals Schedule.

01.9 SECTION 01 32 23 - CONSTRUCTION STAKING GRADES, LINE & LEVELS

01.10 SECTION 01 33 00 – SUBMITTAL PROCEDURES

A. Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
B. Procedures for contractor's use of Architect's CADD files.
   1. Form: CADD/Electronic File Transfer and Use Agreement for Contractors.

01.11 SECTION 01 40 00 - QUALITY REQUIREMENTS

A. Section includes administrative and procedural requirements for quality assurance and quality control.
B. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
C. Quality Assurance Services:
D. Manufacturer, installer, and fabricator qualification levels required.
E. Testing Agency requirements.
F. Factory-authorized service representative qualifications.
G. Preconstruction testing.
H. Mockups.
I. Quality Control Services:
    1. Testing and inspection procedures and responsibilities.
    2. Individual specification sections designate testing requirements.
    3. Owner will employ and pay for soil compaction, concrete, masonry, and steel testing.
    4. Contractor will employ and pay for all other testing services not described in “A.” above.
    5. Special Tests and Inspection requirements.

01.12 SECTION 014 20 00 - REFERENCES

01.13 SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
B. Temporary electric and lighting:
    1. Equipment and extension of service by Contractor
    2. Cost of energy by Owner.
C. Temporary Heating and Ventilation:
    1. Prior to enclosure - equipment and cost of energy paid by Contractor
    2. After enclosure - Equipment by Contractor; Cost of energy consumed paid by Owner.
D. Telephone: Equipment and use charges paid by Contractor.
E. Facsimile: Required on job. Equipment and use charges paid by Contractor.
F. Temporary Water:
    1. Equipment and extension of service by Contractor
    2. Cost of water consumed paid by Owner.
G. Temporary Sanitary Facilities: Contractor furnishes temporary facilities. Do not use existing facilities.
H. Barriers: By Contractor as needed.
I. Construction Fencing: University standard construction fencing.
J. Site Access: By Contractor
K. Erosion Control: By Contractor as needed.
L. National Pollutant Discharge Elimination System (NPDES) permit requirements.
M. Exterior Enclosures: By Contractor
N. Protection of installed work: By Contractor.
O. Security: By Contractor
P. Street Maintenance: By Contractor for all debris from job site.
Q. Parking: Park within area defined as Construction Limits.
R. Progress Cleaning and Waste Removal: By Contractor
S. Project Identification: Contractor provides 2 signs - 48 x 96 inches with project name and names of Owner, Architect, Engineers and Contractor.
T. Field Offices and Sheds: Contractor provides field office large enough to accommodate Construction Progress Meetings.
U. Removal of Temporary Facilities: By Contractor.
V. Water, dust, noise, pollution control by Contractor

01.14 SECTION 01 57 23 - STORMWATER POLLUTION PREVENTION PLAN

A. Inspections
   1. Inspections shall be provided by the Contractor who shall inspect disturbed areas of the construction site that have not been fully stabilized at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. The SWPPP Inspection Report form in Section 01 57 23.20 - *Stormwater Pollution Prevention Plan - Inspection Report* shall be completed for all inspections.
   2. The Contractor will prepare an inspection report of the pollution control measures. The report will: report the scope of the inspection; provide the name(s) and qualifications of personnel making the inspection; include the date(s) of the inspection; identify any damages or deficiencies in the control measures; identify what actions will be taken to modify pollution control practices; and certified by signature. The SWPPP Inspection Report form will be completed for all inspections.

01.15 SECTION 01 57 23.10 - STORMWATER POLLUTION PREVENTION PLAN CONTRACTOR / SUBCONTRACTOR CERTIFICATION

01.16 SECTION 01 57 23.20 - STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT

01.17 SECTION 01 57 23.30 - STORMWATER POLLUTION PREVENTION PLAN TABLE OF CONTRACTOR / SUBCONTRACTORS IMPLEMENTING EROSION CONTROL MEASURES

01.18 SECTION 01 60 00 – PRODUCT REQUIREMENTS
A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

01.19 SECTION 01 73 00 - EXECUTION
A. Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. Construction layout.
   2. Field engineering and surveying.
   3. General installation of products.
   4. Coordination of Owner-installed products.
   5. Progress cleaning.
   6. Starting and adjusting.
   7. Protection of installed construction.
   8. Correction of the Work.

01.20 SECTION 01 73 29 – CUTTING AND PATCHING
A. Section includes procedural requirements for cutting and patching.

01.21 SECTION 01 77 00 – CLOSEOUT PROCEDURES
A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Inspection procedures.
   2. Warranties.
   3. Final cleaning.

01.22 SECTION 01 78 23 – OPERATION AND MAINTENANCE DATA
A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
   1. Operation and maintenance documentation directory.
   2. Emergency manuals.
   3. Operation manuals for systems, subsystems, and equipment.

4. Maintenance manuals for the care and maintenance of products, materials, and finishes and systems and equipment.

01.23 SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
   1. Record Drawings.
   2. Record Specifications.
   3. Record Product Data.

01.24 SECTION 01 79 00 – DEMONSTRATION AND TRAINING

A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
   1. Demonstration of operation of systems, subsystems, and equipment.
   2. Training in operation and maintenance of systems, subsystems, and equipment.
   3. Demonstration and training videotapes.

01.25 SECTION 01 91 13 – COMMISSIONING REQUIREMENTS

A. Section includes administrative and procedural requirements for Owner selected Commissioning Agent during the construction and close-out phases of the work

SPECIFICATIONS GROUP

FACILITY CONSTRUCTION SUBGROUP

02 EXISTING CONDITIONS

02.1 NOTE: SEE DIVISIONS 31, 32, AND 33 FOR SITE AND INFRASTRUCTURE SUBGROUP SECTIONS.

02.2 SECTION 02 41 16 – STRUCTURE DEMOLITION
- A. Complete removal and legal disposal of designated structures.

02.3 SECTION 02 41 19 – SELECTIVE STRUCTURE DEMOLITION
- A. Work includes demolition, removal, legal disposal of materials and related work including disconnection, capping and removal of utilities.
- B. Remove existing Outdoor Covered Tennis Courts and salvage existing glu-laminated beams for reuse.
- C. See Drawings for demolition of building components designated to be removed.
- D. See Drawings for demolition of exterior facade, structures and components designated to be removed.
- E. Protect work to remain.
- F. Removal of asbestos and other hazardous materials are not included in the Work. Owner will remove asbestos and hazardous materials.
- G. Items to be salvaged for reinstallation:
- H. Items to be salvaged for delivery to Owner:

03 CONCRETE

03.1 SECTION 03 30 00 – CAST-IN-PLACE CONCRETE
- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, vapor barriers, mixture design, placement procedures, and finishes, for the following:
  1. Footings.
  2. Foundation walls.
  3. Slabs-on-grade.
  4. Suspended slabs.
  5. Concrete toppings.
  6. Building frame members.
  7. Building walls.
  8. Exterior stairs and landscape walls.
- B. Quality Standard: ACI 301.
- C. Reinforcement:
  1. Reinforcing Bars: ASTM A615 Gr. 60
  2. Welded Wire Reinforcement: ASTM A185
- D. Concrete Materials:
  1. Portland Cement: ASTM C 150, Type I supplemented with fly ash and ground granulated blast-furnace slag.
  2. Aggregate: Normal weight.

3. Water: Potable
4. Admixtures: Air entraining, Water reducing, Retarding, High range, water reducing.

E. Waterstops: Flexible PVC.
F. Curing Materials: Clear, waterborne, membrane-forming curing
G. Vapor Barrier: ASTM E1745; Class A; extruded, single ply, virgin polyolefin membrane; ASTM E96; 0.036 maximum permeance.
H. Compressive Strength (28 Days):
1. Footings: 3000 psi
2. Foundation Walls: 4000 psi
3. Slabs-on-Grade: 4000 psi
4. Slabs: Normal-weight concrete: 4000 psi
5. Concrete Toppings: 4000 psi
6. Building Frame Members: 4000 psi (5000 psi at some columns)
7. Building Walls: 4000 psi

I. Finishes:
1. Interior floor slabs: Steel trowel finish.
2. Exterior slabs: Non-slip light broom finish

J. Inspections: By Owner-engaged special inspector.

03.2 SECTION 03 33 60 – POLISHED CONCRETE

A. Basis of Design: Dyed and polished concrete floor finish system is based on Retro-Plate 99 as manufactured by Advanced Floor Products, Inc., P.O. Box 50533, Provo, Utah 84605, 888-942-3144.
B. Concrete Dye: AmeriPolish Dye distributed by RetroPlate System
1. Colors: As selected Architect from manufacturer's full color line.

C. Hardening/Sealing Agent: Retro-Plate 99 manufactured by Advanced Floor Products, Inc.
D. Crystallization Process: V2 & V3 products manufactured by VMC Technical applied by a certified applicator only.
E. Grinding Pads: RetroPlate Diamond pads distributed by Advanced Floor Products, Inc.
1. Polish to 800 grit finish.

03.3 SECTION 03 45 00 – PRECAST ARCHITECTURAL CONCRETE

04 MASONRY

04.1 SECTION 04 20 00 - UNIT MASONRY

A. Section includes:
1. Mortar and grout for masonry.
2. Brick and concrete block exterior cavity walls, masonry veneer walls, and interior concrete block walls.
3. Reinforcement, anchorage, flashing, and accessories.

B. Mortar and Grout:
1. Perform work in accordance with ACI 530 and ACI 530.1
2. Mortar Color: Mineral oxide pigment; colors as selected by Architect.
3. Portland/lime mix (no masonry cement permitted).
4. Mortar Type S at load-bearing walls and partitions: ASTM C270
5. Mortar Type N at non-load-bearing walls and partitions: ASTM C270.

C. Masonry Components:
1. Brick: ASTM C216, Grade SW,
a. Type A: Standard modular size; red color.
b. Type B: Custom size and shape; red color.
2. Concrete Masonry Units (CMU): ASTM C90, Type I, Standard weight units; used for masonry wall back-up and interior walls, where indicated.
3. Burnished Concrete Masonry Units (BCMU): Autoclaved, pre-shrunk, high pressure cured, conforming to UBC Standard 21-4, Type I - Moisture Controlled units; factory applied clear acrylic sealer.

4. Prefaced Concrete Masonry Units.
5. Cast Masonry Stone Units: ASTM C73 – Severe Weathering; Calcium silicate masonry units, autoclave cured, with the following physical properties:
   a. Manufacturers / Product: Arriscraft International; Renaissance Masonry Units – Sand Drift.
6. Special Shapes: Provide special shapes, as detailed, for corners, jambs, control joints, headers, bonding, and other special conditions.

D. Reinforcement and Flashing Components:
   a. Vertically reinforced masonry walls for bearing and all exterior walls where detailed.
   b. Horizontal Reinforcing: Ladder-type; 16 inches oc. vertical for all CMU and CMU/brick cavity walls. Hot dipped galvanized.
   c. Thru-Wall Flashing: 5 oz/sq ft sheet copper bonded to and between 2 layers of asphalt impregnated fiberglass fabric.
   d. Cavity Wall Drainage System: “The Mortar Net”
   e. Weeps: Cotton rope weeps; 16 inches on center.

E. Reinforced Unit Masonry:
1. Drawings describe location of Reinforced Unit Masonry. See structural notes for size and placing of reinforcing steel.
2. Low lift grouting - maximum 4 feet.
3. Test grout for compressive strength.

05 METALS

05.1 SECTION 05 12 00 - STRUCTURAL STEEL FRAMING

A. Section includes structural steel and grout.

B. Quality Assurance/Qualifications:
1. Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category Sbd.
2. Welding: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code--Steel."
3. Comply with applicable provisions of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

C. Structural Steel Components:
1. W-Shapes: ASTM A 992/A 992M.
2. Channels, Angles: ASTM A 36/A 36M.
3. Plate and Bar: ASTM A 36/A 36M.
4. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
5. Steel Pipe: ASTM A 53/A 53M, Type E, Grade B.

D. Welding Electrodes: Comply with AWS requirements.

E. Bolts and Fasteners:
1. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.
2. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1, Type B.
3. Headed Anchor Rods: ASTM F 1554, Grade 36 straight.

F. Primer: SSPC-Paint 25, Type II, iron oxide, zinc oxide, raw linseed oil, and alkyd.

G. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

H. Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC's "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design”.

I. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts".

J. Weld Connections: Comply with AWS D1.1.

K. Set structural steel according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design".
L. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."
M. Testing Agency: Owner will engage a qualified independent testing and inspecting agency for special inspection.

05.2 SECTION 05 12 50 - ARCHITECTURALLY EXPOSED STRUCTURAL STEEL

A. This Section includes requirements regarding the appearance and surface preparation of Architecturally Exposed Structural Steel. (AESS)
   1. Refer to division 5 section 'Structural Steel Framing' for all other requirements regarding steel work not included in this section.
   2. This section applies to any members noted on Architectural and Structural drawings as AESS and as scheduled in this Section.
   3. Custom mfr heavy wall steel tube and pipe trusses at the natatorium.

05.3 SECTION 05 21 00 - STEEL JOISTS FRAMING

A. Section includes steel joists with bridging, attached seats and anchors.
   1. K, LH and SLH series steel joists.
   2. KCS-type K-series steel joists.
   3. Joist accessories.
B. Manufacturer Qualifications: A manufacturer certified by the Steel Joist Institute (SJI) to manufacture joists complying with SJI standard specifications and load tables.
C. SJI Specifications: Comply with SJI's "Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders" (hereafter, SJI's "Specifications") that are applicable to types of joists indicated.
D. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
E. Steel: Comply with SJI's "Specifications" for web and steel-angle chord members.
F. Install joists and accessories according to SJI's "Specifications," joist manufacturer's written recommendations.
G. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds.

05.4 SECTION 05 31 00 - STEEL DECKING

A. Section includes:
   1. Roof deck.
   2. Noncomposite form deck.
   3. Composite floor deck
B. Welding: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."
C. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."
D. Steel Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 30.
E. Noncomposite Steel Form Deck: Fabricate ribbed-steel sheet noncomposite form-deck panels to comply with "SDI Specifications and Commentary for Noncomposite Steel Form Deck," in SDI Publication No. 30.
F. Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.
G. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.
H. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 minimum diameter.

I. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.
J. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi not less than 0.0359-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.
K. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 30.
L. Mechanical fasteners may be used in lieu of welding to fasten deck. Locate mechanical fasteners and install according to deck manufacturer's written instructions.
M. Roof Sump Pans and Sump Plates: Install over openings provided in roof deck and weld flanges to top of deck. Space welds not more than 12 inches apart with at least one weld at each corner.
N. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. Weld or mechanically fasten to substrate to provide a complete deck installation.
O. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field special inspections.

05.5 SECTION 05 40 00 – COLD-FORMED METAL FRAMING

05.6 SECTION 05 50 00 - METAL FABRICATIONS
A. Section includes shop fabricated ferrous metal items, galvanized and prime painted
B. Schedule of fabrications:
1. Miscellaneous steel framing and supports.
2. Loose bearing and leveling plates.
3. Loose steel lintels.
4. Steel weld plates and angles.
5. Miscellaneous steel fabrications.
6. Counter supports.
7. Angle supports for non-bearing masonry walls.
8. Roof screen framing.
9. Door frames for overhead doors.
10. Roof and elevator pit access ladders.
11. Metal bollards.
12. Pipe guards.
C. Materials:
1. Metal Surfaces, General: Provide materials with smooth, flat surfaces without blemishes.
2. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304.
3. Steel Tubing: ASTM A 500, cold-formed steel tubing.
4. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40), unless another weight is indicated or required by structural loads.
5. Cast Iron: ASTM A 48/A 48M, Class 30, unless another class is indicated or required by structural loads.
6. Nonferrous Metals:
a. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy 6063-T6.
b. Aluminum-Alloy Rolled Tread Plate: ASTM B 632/B 632M, alloy 6061-T6.
c. Aluminum Castings: ASTM B 26/B 26M, Alloy 443.0-F.
D. Fasteners:
1. Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, at exterior walls. Provide stainless-steel fasteners for fastening aluminum. Select fasteners for type, grade, and class required.
2. Cast-in-Place Anchors in Concrete: Threaded or wedge type; galvanized ferrous castings, either ASTM A 47/A 47 M malleable irons or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, hot-dip galvanized per ASTM A 153/A 153M.
E. Primers:

1. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI #79.
2. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
3. Galvanizing Repair Paint: SSPC-Paint 20, high-zinc-dust-content paint for regalvanizing welds in steel.

F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107.
G. Lintels in Exterior Walls: Galvanize.
H. Steel and Iron Finishes:
1. Hot-dip galvanize items as indicated to comply with ASTM A 123/A 123M or ASTM A 153/A 153M as applicable.
2. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with requirements indicated below for environmental exposure conditions of installed metal fabrications:
a. Exteriors (SSPC Zone 1B) SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
b. Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."
3. Shop Priming: Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting," for shop painting.

05.7 SECTION 05 51 00 – METAL STAIRS
A. Section includes steel stairs with concrete-filled treads, pipe railings, and steel ladders.
1. Risers: Perforated metal.

05.8 SECTION 05 53 00 – METAL GRATINS
A. Section includes metal gratings and access hatches.

05.9 SECTION 05 52 13 – PIPE AND TUBE RAILINGS
A. Section includes interior and exterior metal pipe and tube railings and infill panels.
1. Infill Panel: Stainless steel woven wire mesh.
2. Tempered Glass Infill Panels: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated), Type 1 (transparent flat glass), Quality-Q3; 12 mm thickness

06 WOOD, PLASTICS, AND COMPOSITES

06.1 SECTION 06 10 00 – ROUGH CARPENTRY
A. Section includes roof curbs, parapet and gravel stop blocking, blocking in wall and roof openings, wood furring and grounds, concealed wood blocking for support of wall-mounted accessories, wall cabinets and other items.
B. Section includes wall and roof wood framing materials, plywood, wood treatment (fire and moisture), and accessories including fasteners.
C. Fire and preservative treatment and accessories, including fasteners.

06.2 SECTION 06 16 00 – SHEATHING
A. Gypsum Wall Sheathing: ASTM C1177; Fire-rated, water-resistant treated gypsum core with glass-mat facers:
1. Manufacturer:
a. Georgia Pacific Corporation; DensGlass Gold Fireguard Exterior Guard.
b. BPB America Inc.; GlasRoc Sheathing Type X.
2. Board Thickness: 5/8 inch.
3. Board Size: 48 inches x maximum available length in place.

06.3 SECTION 06 20 00 - FINISH CARPENTRY
A. Section includes finish carpentry items other than shop prefabricated casework including:

B. Interior wood trim.

06.4 SECTION 06 40 23 – INTERIOR ARCHITECTURAL WOODWORK

A. Section includes prefabricated cabinet units, countertops, cabinet hardware, and laboratory casework.
B. AWI Custom Quality.
C. Counters and cabinets - Modular and custom P-LAM faced cabinets with plastic laminate tops. (P-LAM on all exposed faces.)
D. Hardwood Species: White Oak, rift-cut.
E. Medium density wood particleboard panels except at sink cutouts - use medium density wood particleboard with high waterproof resin binders. Tempered hardboard drawer bottoms and backs.
F. Plastic laminate:
   1. Horizontal surfaces: 0.050 inches thick
   2. Postformed surfaces: 0.042 inches thick
   3. Vertical surfaces: 0.028 inches thick
   4. Install laminate backing sheet (undecorated) on all plastic laminate clad panels.
G. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Avonite, Inc.
      b. E. I. du Pont de Nemours and Company.
      c. Formica Corporation.
      d. Samsung; Cheil Industries Inc.
      e. Wilsonart International; Div. of Premark International, Inc.
   2. Solid-Surfacing-Material Thickness: 1/2 inch.
   3. Colors and Patterns: Match Architect's sample.
   4. Integral Sink Bowls: Manufactured by same manufacturer as solid surface countertop; 16 1/2 x 13 x 5 1/4 inches (nominal); E. I. du Pont de Nemours and Company (Corian) Model No. 810 or approved eq

07 THERMAL AND MOISTURE PROTECTION

07.1 SECTION 07 13 26 – SELF-ADHERING SHEET WATERPROOFING

07.2 SECTION 07 14 13 – BUILT –UP ROOFING

A. Section Includes: Built-up Roofing (BUR); molded-sheet drainage panels; insulation; plaza deck pavers and extensive green roof components (Alternate Bid).
   1. Alternate Bid: Provide extensive green roof over approximately 75 percent of roof area in lieu of plaza roof pavers.
B. Built up roofing
   1. BUR system, Tremco, Garland, Siplast. Hot or cold applied, place and green roof approved
C. Rubberized-Asphalt Waterproofing Membrane: Single component; 100 percent solids; hot fluid-applied, rubberized asphalt.
   1. Basis of Design: HydroTech MM6125EV applied in two coats, with a layer of fabric reinforcement between layers, to a thickness of 215 mils
D. Board Insulation: Extruded-polystyrene board insulation complying with ASTM C 578, square or shiplap edged.
   1. Type VII, 60-psi (414-kPa) minimum compressive strength.
E. Plaza Roof Pavers: Hydraulically pressed, concrete units, with top edges beveled 3/16 inch, factory cast for use as roof pavers; absorption not greater than 5 percent, ASTM C 140; no breakage and maximum 1 percent mass loss when tested for freeze-thaw resistance, ASTM C 67; and as follows:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Hanover Architectural Products.
b. Sunny Brook Pressed Concrete.
c. Wausau Tile, Inc.; Terra-Paving Division.
d. Westile Roofing Products.

2. Design: Provide interlocking roof paver unit specifically designed and tested to resist wind uplift pressures indicated.
   a. Size: 24 by 24 (nominal). Manufacture pavers to dimensional tolerances of plus or minus 1/16 inch in length, height, and thickness.
   b. Weight: 22 lb/sq. ft.
   c. Compressive Strength: 7500 psi, minimum.
   d. Colors and Textures: As selected by Architect from manufacturer's full range.
3. Paver Supports: Paver manufacturer's standard SBR rubber, high-density polyethylene, or polyurethane paver support assembly, including fixed-height pedestals, shims, and spacer tabs for joint spacing of 1/8 to 3/16 inch.

F. Extensive Green Roof Materials (Alternate Bid):
1. Protection Course/Root Barrier: Hydroflex 30 and Root Stop
2. Water Retention Layer: Recycled, non-rotting, polypropylene fibers stitched through a polyethylene carrier sheet that is rolled out over the insulation layer; HydroTech Moisture Retention Mat.
3. Drainage/Water Storage/Aeration: 100% recycled polyethylene; HydorTech Gardendrain
4. Filter Fabric: Geotextile filter sheet made of non-rotting, non-woven polypropylene fibers; highly resistant to all natural acids and alkalis, and chemically neutral. HydroTech Systemfilter.
5. Engineered Soil: Lightweight engineered soil; HydroTech LiteTop.

07.3 SECTION 07 18 00 – TRAFFIC COATINGS

07.4 SECTION 07 21 00 – THERMAL INSULATION

A. Section includes rigid board type insulation at foundations and walls.
B. Section includes glass fiber insulation used at stud walls, fill at gaps and voids and as detailed on the Drawings.
C. Board insulation:
1. Below grade walls: R7.5, Extruded polystyrene
2. Mass Walls: R13 Extruded polystyrene or polyisocyanurate adhered to exterior face of inner wythe.
3. Rood decks: R30, Tapered rigid Insulation. Hot mop to roof

D. Exterior walls: R20. No facing.

07.5 SECTION 07 27 26 – FLUID-APPLIED AIR/VAPOR BARRIERS

A. Section includes air/vapor barriers used to minimize air and moisture infiltration on exterior face of CMU cavity wall construction.
B. Air/Vapor Barrier Membrane: Liquid-applied, self-curing, synthetic rubber based elastomeric membrane, spray-applied, minimum total dry film thickness of 0.060 inch (60mil) or greater.
C. Acceptable Materials:
1. Air-Bloc 32, Spray or trowel applied low VOC elastomeric emulsion air/vapor barrier as manufactured by Henry Co.
2. Procor Air/Vapor Barrier fluid applied synthetic latex rubber membrane as manufactured by Grace Construction Products.
3. Rub-R-Wall Airtight Air/Vapor Barrier, liquid applied rubber co-polymer membrane as manufactured by Rubber Polymer Corporation.
4. Air-Shield LM as manufactured by W.R. Meadows

D. Furnish auxiliary materials recommended by air/vapor barrier manufacturer for intended use and compatible with the air/vapor barrier membrane.

07.6 SECTION 07 42 13 – METAL WALL PANELS

A. Section includes prefinished, un-insulated, metal panel system for walls, with fastening devices, related flashings and accessory components.
B. Prefinished Metal Wall Panel:
   1. Exposed fastener, horizontal wall panel system of prefinished, galvanized steel wall panels.
   2. Profile: Corrugated panel; 1/2 inch deep corrugations.
   3. Shop applied flourofinish (polyvinylidene fluoride) in compliance with AAMA 2605.

07.7 SECTION 07 42 19 – METAL PLATE WALL PANELS

A. Section includes open joint, metal plate wall panel assembly.
B. Metal Plate Wall Panel Type A: Flat profile; non-perforated; rain-screen assembly.
   1. Material: Tension-leveled, smooth aluminum sheet, ASTM B 209, 0.120 inch (3.05 mm) thick.
   2. Exterior Finish: To be determined.
C. Metal Plate Wall Panel Type B:
   1. Material: Stainless steel, 0.120 inch (3.05 mm) thick.
   2. Exterior Finish: To be determined.
D. Attachment System Components: Formed from extruded aluminum.
   1. Provide attachment system that allows individual panels to be installed and removed without disturbing adjacent panels.
   2. Include manufacturer's standard subgirts, perimeter extrusions, tracks, and drainage channels, panel stiffeners, panel clips and anchor channels.

07.8 SECTION 07 42 43 – COMPOSITE WALL PANELS

A. Section includes metal-faced composite wall panel system; open-joint, rain-screen design.
B. Basis of Design: Metal Design Systems Series 20 AP Wall Panel Assembly.
C. Aluminum-Faced Composite Wall Panels: Formed with 0.020-inch- (0.50-mm-) thick, ASTM B 209 (ASTM B 209M), alloy aluminum sheet facings.
   1. Panel Thickness: 0.157 inch (4 mm).
   2. Core: Standard.
   3. Surface: Smooth, flat finish.
   4. Exterior Finish: AAMA 620, Two-coat flouropolymer finish containing not less than 100 percent PVDF resin by weight in color coat.
      a. Color: As selected by Architect from manufacturer's full range.
D. Panel Attachment Profiles: Purpose made aluminum extrusions; manufacturer's standard profiles. Provide attachment extrusion full length around panel perimeter; intermittent clips are not acceptable.
E. Fasteners: As recommended by the panel manufacturer; non-corrosive and concealed.

07.9 SECTION 07 53 26 – ELASTOMERIC MEMBRANE ROOFING – FULLY ADHERED

A. Section includes vapor barrier, rigid insulation, tapered insulation, coverboard, TPO membrane, walkway pads, flashing and accessories.
B. Acceptable membrane manufacturers:
   1. Carlise
   2. Firestone
   3. Versico
   4. Diversitech General
C. Membrane:; non-reinforced, 60 mil inch thick, 25 fee wide roll; white color.
D. Coverboard: 1/2 inch Dens-Deck prime; adhered to insulation.
E. Insulation: Polyisocyanurate; R = 30 (tapered at crickets)
F. In-seam sealant system.
G. FM Global approved assembly.
H. Warranty:
   1. 2 year installer's warranty
   2. 15 year membrane manufacturers warranty; no dollar limit.

07.10 SECTION 07 54 00 – THERMOPLASTIC MEMBRANE ROOFING – FULLY ADHERED (ALTERNATE ADHERED SYSTEM)

A. Section includes rigid insulation, tapered insulation, coverboard, PVC or KEE membrane, walkway pads, flashing and accessories.
B. Acceptable Manufacturers:
   1. Sarnafil, Inc.; Sarnafil G410.
   2. FiberTite; FiberTite XT Membrane.
   3. No substitutions.
C. Membrane:
   1. PVC: ASTM D4434, Type II, Grade I, PVC; fiberglass reinforced membrane with a lacquer coating, 0.060 inch thick (minimum), white color.
   2. KEE: ASTM D 6754, 50-mil ethylene interpolymer (EIP) membrane, reinforced with knitted polyester fabric; white color.
D. Insulation: Polyisocyanurate; R = 30 (tapered at crickets)
E. Coverboard: 1/2 inch; Dens-Deck Prime as manufactured by Georgia Pacific Corporation
F. Heat welded seams.
G. FM Global approved assembly.
H. Warranty:
   1. 2 year installer's warranty
   2. 15 year membrane manufacturers warranty; no dollar limit.

07.11 SECTION 07 61 00 – SHEET METAL ROOFING

A. Section includes prefinished, un-insulated, standing seam metal panel system for roofs, with fastening devices, related flashings and accessory components.
B. Nailbase Insulation: R24 (minimum); 5/8 inch OSB sheathing.
C. Underlayment: Self adhered ice and water shield.
D. Finish: Shop applied flourofinish (polyvinylidene fluoride) in compliance with AAMA 2605.
E. Warranty:
   1. Manufacturers twenty (20) year warranty for sheet metal roofing against structural failure, corrosion, and water penetration.
   2. Manufacturers twenty (20) year warranty for metal finish against fading, chipping, chalking, and blistering

07.12 SECTION 07 62 00 – SHEET METAL FLASHING AND TRIM

A. Section includes parapet coping, gravel stops, downspouts, splashguards, counter flashings, reglets and flashing at masonry.
B. All exposed flashings: 24 gage steel with Kynar 500 coating - ColorKlad or equal.
C. Concealed flashings: 24 gage galvanized steel.

07.13 SECTION 07 72 00 – ROOF ACCESSORIES

07.14 SECTION 07 81 00 – APPLIED FIREPROOFING

A. Section includes concealed and exposed sprayed fire-resistive materials (SFRM).
   1. Cementitious SFRM:
      a. Grace, W.R. & Co. - Conn., Construction Products Div.; Monokote Type Z106.
      b. Isolatek International Corp.; Cafco 400.
      c. Pyrok, Inc.; Pyrok-MD.

07.15 SECTION 07 84 13 – PENETRATION FIRESTOPPING

A. Section includes fire, smoke and gas treatment of penetrations through fire-rated assemblies.
B. Materials: Sealant, putty, dams, collars and accessories.
C. Protection shall meet UL test requirements.

07.16 SECTION 07 84 46 – FIRE-RESISTIVE JOINT SYSTEMS

A. Section includes fire, smoke and gas treatment of joints in fire-rated assemblies and joints between fire-rated assemblies and adjacent non-rated assemblies.

B. Materials: Sealant, putty, dams, collars and accessories.
C. Protection shall meet UL test requirements.

07.17 SECTION 07 92 00 – JOINT SEALANTS
A. Section includes joint sealers at all interior and exterior horizontal and vertical joints.
B. Sealant type:
1. Exterior (except at horizontal paving):Two-part polyurethane
2. Exterior paving: One-part pourable polyurethane.
3. Interior wet areas and where clear sealant is detailed: Clear silicone, mildew resistant.
4. Acoustical Sealant: Synthetic rubber, non-hardening.
5. All other Interior joints: One-part polyurethane.
C. Accessories:
1. Closed cell polyethylene foam backer rod.
2. Bituminous fiber joint filler.
3. Bond breaker tape

07.18 SECTION 07 95 00 – EXPANSION CONTROL
A. Section includes elastomeric joint cover assemblies and metal plate covers.

08 OPENINGS

08.1 SECTION 08 11 13 – HOLLOW METAL DOORS AND FRAMES
A. Section includes rated and non-rated, interior and exterior, thermally insulated steel doors and frames.
B. Doors:
1. Exterior: 16 gage galvanized face sheet, thermally insulated.
2. Interior: 18 gage non-galvanized and galvanized, fire-rated where scheduled.
C. Frames:
1. Fully grouted frames at masonry openings.
2. Fire rated where noted.
3. Reinforced and prepared for finish hardware.
4. Deliver to job prime painted, ready for final painting.
5. Hardware locations per National Builders Hardware Association.
6. Fabrication:
a. Fully welded unit-style construction.
b. Reinforced for hardware.
c. Appropriate jamb and floor anchors:
d. 14 gage frames - doors less than 4'-0" wide.
e. 12 gage frames - doors 4'-0" and wider.
D. Finish: Galvanized where indicated; prime painted.

08.2 SECTION 08 11 73 – SLIDING METAL SMOKE / FIRE DOORS
A. Section includes horizontal smoke and fire shutter without egress
B. Basis of Design: McKeon Door Com Horizontal fire shutter H2000 series.

08.3 SECTION 08 14 16 - FLUSH WOOD DOORS
A. Section includes shop finished flush wood doors. Fire-rated and non-rated.
B. Basis of Design: Algoma “Super Novador” - 5-ply.
C. Manufacturers:
1. Algoma Hardwoods Inc.
2. Buell Door Co.
3. Eggers Industries.
4. Graham Manufacturing.
5. Marshfield Door Systems, Inc.
6. VT Industries, Inc.
D. Species/Slice: White Oak, rift-cut.

E. Factory finish.

08.4 SECTION 08 31 13 - ACCESS DOORS AND FRAMES

A. Section includes access doors in walls, floors and ceilings, fire-rated and non-rated for access to building equipment.
B. Access Door Types:
   1. Gypsum board walls and ceilings: 16 gage metal frame with gypsum board panel.
   2. CMU walls: Frame and nominal 1 inch wide exposed flanges of 16 gage steel and door panel of 14 gage steel.
   3. Floor: Aluminum with hinged lid.
C. Cylinder locks

08.5 SECTION 08 33 23 - OVERHEAD COILING DOORS

A. Solid, insulated, motorized overhead coiling door.
B. Prefinished metal slat.

08.6 SECTION 08 41 13 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

A. Section includes exterior prefinished entrance doors, vestibule doors, frames for entrances, transoms, sidelights.
B. Manufacturers:
   1. EFCO,
   2. Kawneer
   3. Pittco Architectural Metals, Inc.
   4. TRACO.
   5. Tubelite Inc.
   6. U S Aluminum
   7. Vistawall Architectural Products
C. Model1 3/4" wide frame x depth as detailed to resist dead and live loads, thermally broken.
D. Finish: Painted aluminum finish.
E. Doors: Monumental (wide stile)
F. VentilatingUnits.

08.7 SECTION 08 44 13 – GLAZED ALUMINUM CURTAIN WALLS

A. Section includes interior and exterior prefinished glazed aluminum curtain walls; integral custom aluminum-framed laminated glass sunscreens; ventilating units.
B. Manufacturers:
   1. EFCO,
   2. Kawneer
   3. Pittco Architectural Metals, Inc.
   4. TRACO.
   5. Tubelite Inc.
   6. U S Aluminum
   7. Vistawall Architectural Products
C. Model: 2 1/2" wide frame x depth as detailed to resist dead and live loads, thermally broken.
D. Finish: Painted aluminum finish.

08.8 SECTION 08 45 13 – STUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

A. This Section includes aluminum-framed assemblies glazed with multiwalled (structured) polycarbonate panels with interior louvers for slope natatorium and gymnasium skylights.
B. Basis of Design: CPI International QuadWall.
   1. Panel Assembly: 2.75 inch double panel with concealed interlocking H battens.
   2. Panel U-Factor: NFRC 100; 0.24 (without batt insulation).
   3. Visible Light Transmittance: 17 percent.
   4. Exterior Panel: 10 mm; clear.
   5. Interior Panel: 8 mm; clear.
   6. Metal Framing Components: ASTM B221, extruded aluminum; fluoropolymer finish.

a. High Performance Organic Coating: Fluoropolymer coating system complying with AAMA 2605 minimum two-coat, with minimum 70 percent polyvinylidene fluoride resin.

08.9 SECTION 08 62 00 – UNIT SKYLIGHTS

A. Section includes thermally-broken aluminum frame, Low-E, insulated glass unit skylights.

08.10 SECTION 08 71 00 - DOOR HARDWARE

A. Owner will provide catalogue information and templates for Owner provided Contractor installed hardware

08.11 SECTION 08 80 00 - GLAZING

A. Section includes glass and glazing for interior doors, sidelights, transoms, exterior entrances and storefronts, spandrel panels windows and mirrors.
B. Glass Types:
   1. Single, Clear: Typical interior glazing
   2. Single, Clear, Tempered: Interior glazing where code requires tempered glass.
   3. Laminated Glass: Kind LA, consisting of two lites of annealed float glass, unless tempered glass is indicated or required by code; translucent polyvinyl butyral interlayer.
   4. FRG-SG – Fire-rated safety glass used in rated doors, sidelights and windows.
      a. Fire-rated, clear and wireless glazing material; CPSC 16CFR1201 (Cat. II) impact safety-rated; passing hose stream test
   5. Clear, Low-E Insulating-Glass (IG-1):
      a. Basis of design: Solarscreen 2000 Low-E Insulating Glass VE-2M.
         1) Visible Light: 70 percent
         2) Shading Coefficient: 0.43
         3) SHGC: 0.37
         4) U-Value (Winter Nighttime): 0.29
         5) U-Value (Summer Daytime): 0.28
      b. Provide tempered glass units where code requires safety glazing.
   6. Interior Butt-Glazed Units: Laminated glass; 3/4 inch thickness, open joint
      a. Office Locations: 1/4 inch, translucent; clear silicone joint sealant.

08.12 SECTION 08 83 00 - MIRRORS

A. Section includes unframed glass mirrors
B. Mirrors: 1/4 inch thick silvered mirror glass.
C. Trim: Stainless steel edge trim
D. Accessories, sealants and adhesives as required for installation.

08.13 SECTION 08 90 00 – LOUVERS AND VENTS

A. Prefinished (Kynar 500) formed steel louvers.
B. Exterior locations.

09 FINISHES

09.1 SECTION 09 21 16 – NON-STRUCTURAL METAL FRAMING

09.2 SECTION 09 21 16.23 – GYPSUM SHAFT WALL ASSEMBLIES

09.3 SECTION 09 23 00 – PORTLAND CEMENT PLASTERING

09.4 SECTION 09 29 00 - GYPSUM BOARD

A. Section includes metal stud wall framing, metal channel and stud ceiling framing, acoustical insulation, gypsum board, tile backer board, taped and sanded joint treatment.
B. Full height partitions with 3" sound insulation batt typical unless otherwise noted.
C. 5/8" thick, fire rated where required by code.

D. Structural steel studs for specific use areas.
E. Standard 3-5/8" metal studs for other areas.

09.5 SECTION 09 30 00 - TILING

A. Section includes ceramic tile ceiling, floor, wall, and base tile; thick-bed and thin-set installations.
B. Tile Materials:
   1. Ceramic Mosaic Tile: 1 x 1 x 1/4 inch (nominal) unglazed.
C. Accessories:
   1. Edge Trim: Metallic, angle or L-shape, height to match tile and setting bed thickness; finish as selected; Shluter Schiene or approved equivalent.
   2. Waterproof Membrane: ANSI A118.10, liquid-applied, anti-microbial, self-curing, rubber polymer waterproofing membrane with reinforcing fabric; 9235 Waterproofing Membrane as manufactured by Laticrete International, Inc. or PRP M19 Mapelastic L as manufactured by Mapei Corporation.
   3. Wire Reinforcing: 16 gage, 2 x 2 inch welded, galvanized wire mesh.
   4. Cementitious Underlayment (at Concrete Slabs): Self-leveling; 4,000 psi (minimum); TEC TA318 or approved equivalent.
D. Mortar and Grout Materials:
   1. Latex-Portland Cement Mortar (Thin-Set): ANSI A118.4, thin-set bond type.
      a. Laticrete 4237 Latex Thin-Set Mortar Additive with Laticrete 211 Crete Filler Powder.
   2. Latex-Portland Cement Mortar (Thick Bed Mortar): ANSI A118.4, thick bed mortar.
      a. Laticrete 226 Thick Bed Mortar with Laticrete 3701 Mortar Admixture.
   3. Polymer-Modified Grout: ANSI A118.7, liquid-latex admixture; anti-microbial.
      a. Laticrete Tri-Poly Fortified Grout with Laticrete 1776 Grout Admix Plus.
         1) Provide unsanded grout mixture for joints 1/8 inch and narrower.
         2) Provide sanded grout mixture for joints for joints greater that 1/8 inch.
E. Tile Cleaner: Neutral cleaner; approved for materials and installation indicated by tile and grout manufacturer.
F. Tile Joint Sealants: High-performance, neutral cure silicone; ASTM C920, Type S, Grade NS, single component, mildew resistant; color to match adjacent grout color

09.6 SECTION 09 32 13 – MORTAR-BED CERAMIC TILING

A. The pool finishes will be ceramic tile. Racing lane lines with tees on the floor and targets on the walls will be provided in black tile. Cross course floor markings and wall targets will be provided in blue tile. For areas needing special non-slip attention, such as the gutter lip and horizontal surfaces near the pool edge, the abrasive content of the tile will be specified as 7 1/2%. (If the Architect uses tile on the deck, it should also have this abrasive content according to standards established for ADA).

09.7 SECTION 09 51 13 - ACOUSTICAL PANEL CEILINGS

A. Section includes suspended metal grid, acoustical panels, fire-rated and non-rated assemblies.
B. Systems:
   1. Type 1: 24" x 24" scored pattern lay-in acoustical board in an exposed T-grid system.
   2. Type 2: 24" x 24" scored pattern lay-in moisture-resistant acoustical board in an exposed aluminum T-grid system.

09.8 SECTION 09 54 26 – LINEAR WOOD CEILINGS

A. Section includes continuous linear wood ceiling system with concealed suspension system and acoustical insulation.
B. Basis of Design: 9Wood Inc., Model No. 2314-3 Linear Wood.
   1. Species: Maple; quarter sawn.
   2. Fire Rating: Class 1 (A).
   3. Finish: Clear satin lacquer.
   4. Joint Spacing: Random.

5. Perimeter Option: Floating.

C. Acoustical Backing: Soundtex Backing Sheet

09.9 SECTION 09 54 70 – EXTERIOR METAL PANEL SOFFITS

A. Section includes modular metal panels, direct hung, concealed modular grid; accessories including devices for attachments to overhead construction, secondary members, splines, splices, connecting clips, wall connectors, wall trims and all other devices required for a complete installation

B. Basis of Design: “Exterior Illusions” as manufactured by Ceilings Plus (800) 822-3411.

C. Pan Fabrication: Brake die formed from a single sheet and formed with a minimum 1-1/2 inch integral return edge on all panel sides.

1. Aluminum Sheet: Roll-formed aluminum sheet, complying with ASTM B 209; alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
2. Torsion-Spring-Hinged Pans: Designed to be securely retained in preslotted concealed suspension grid by torsion springs.
   a. Heavy-duty torsion springs and clip assemblies shall be mounted to each panel for downward access, without potential for damage to panel face or hinge assembly.
   b. Hinge assembly shall be attached to panel with minimum 2 flush fasteners. Attaching torsion spring directly to panel with fastener will not be accepted.
3. Pan Thickness: Not less than 0.063 inch.
4. Pan Edge Detail: Square.
5. Pan Joint Detail: Butt
6. Pan Size / Pattern: As indicated on Drawings.
7. Pan Face Finish: Painted; color as selected from manufacturers full color line.
8. Panel Penetrations: Cut outs for lightening and sprinklers shall be factory cut.

D. Aluminum Suspension System - General: Supporting grid system shall consist of straight, factory formed aluminum tees of adequate thickness, to support loads. Finish tee to match modular ceiling panels where exposed. Tee shall be factory slotted to accept torsion spring attachment.

1. Structural Classification: Heavy-duty system.
2. Provide system complete with carriers, runners, splice sections, connector clips, alignment clips, leveling clips, hangers, molding, trim, retention clips, load-resisting struts, and other suspension components required to support soffit units and other soffit-supported construction.

E. Color-Coated Finish: Manufacturer's standard powder-coat baked paint complying with coating manufacturer's written instructions for surface preparation, pretreatment, application, baking, and minimum dry film thickness.

09.10 SECTION 09 64 66 - WOOD ATHLETIC FLOORING

A. This Section includes wood sports-floor assemblies.

B. Related Sections: Moisture protection system beneath slab specified in Division 7.

C. Basis of Design Product: The design of the wood athletic flooring is based on Robbins, Inc. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

1. Action Floor Systems LLC.
2. Connor Sports Flooring, Inc.
3. Horner Flooring Company, Inc.
4. Robbins, Inc.
5. Superior Floor Company, Inc.

D. Wood Athletic Flooring Systems:

1. WSF-1 (Activity Rooms): Robbins Sportwood Ultra Star System.
   a. Pads: 7/16” (11mm) Robbins Bio –Pads; 50 durometer.
   b. Plywood - 2 layers of 15/32” (12mm) thick 4’ x 8’ APA structural rated sheathing, Exposure I (CD-X), Fir or Southern Pine.
   c. Fasteners:

1) Subfloor fasteners - 1" (25mm) long, 7/16" (11mm) crown, coated subfloor staples or equivalent.
2) Construction adhesives - PL400 or equivalent.

d. Flooring Adhesive: Sportwood one-component Elastomeric Adhesive. Poly-vinyl acetate (PVA) or chlorinated solvent adhesives shall not be substituted.
e. Wood Flooring: 7/16" x 13/16" x 9" (11mm x 22mm x 229mm) Second & Better, Square Edge, Edge Grain, Kiln Dried, Northern Hard Maple Flooring.
f. Perimeter Base - Robbins 3" x 4" ventilating type. (Specify black or brown)
g. Finishing Materials
1) Robbins oil modified polyurethane sealer and finish.
2) Gameline paint shall be recommended by the finishing materials manufacturer, compatible with the finish.

2. WSF-2 (Gymnasiums): Robbins BioCushion LP Floor System.
a. Robbins Continuous shock absorbing pad.
b. Subfloor
1) Two layers of 15/32" (12mm) thick, 4' x 8' (1.22m x 2.44m) APA Rated Sheathing, Exposure 1 (CD-X), fir or southern pine plywood.
c. Fasteners
1) Flooring: 1" (25mm) 20-gauge staples.
2) Subfloor: 1" length, 7/16" (11mm) crown, coated staples or equivalent.
d. Construction adhesive, PL400 or equivalent.
e. Wood Flooring: 1/2" (11mm) thick x 2-1/4" (57mm) width, Legacy grade, T&G and EM, KD Northern Hard Maple, Continuous Strip® XL_{450} Flooring as manufactured by Robbins and graded in accordance with MFMA-FJ rules.
f. Floor-Finish System: Oil modified polyurethane sealer and finish system of compatible components recommended in writing by flooring manufacturer and MFMA approved.
1) Floor-Sealer: As recommended by manufacturer; factory applied.
2) Finish-Coat Formulation: Formulated for gloss finish and multicoat application.
3) Game-Line and Marker Paint: Industrial enamel compatible with finish coats.

E. Accessories:
1. Vapor Retarder: ASTM D 4397, polyethylene sheet not less than 6 mils thick.
2. Resilient Wall Base: Molded, vented, rubber or vinyl cove base; 4 by 3 by 48 inches; with premolded outside corners.
a. Color: Black.
3. Trowelable Leveling and Patching Compound: Latex-modified, hydraulic-cement-based formulation approved by sports-floor manufacturer.
4. Expansion Plates: Solid metal plate, anchor with stainless steel expansion anchor fasteners at 19 inches o.c. Fasteners shall be countersunk flush with top of aluminum plate, set in ceramic epoxy adhesive; base metal as follows:
a. Thickness: 1/4 inch.
b. Top Surface: Fluted.
c. Base Metal: Aluminum; mill finish.

09.11 SECTION 09 65 13 - RESILIENT BASE AND ACCESSORIES
A. Section includes resilient base.
B. Vinyl coved base. 1/8" continuous roll material.
C. Vinyl transition and reducer strips as required

09.12 SECTION 09 65 19 - RESILIENT TILE FLOORING
A. Section includes resilient tile flooring.
B. 12" x 12" x 1/8" thick vinyl composition tile;

09.13 SECTION 09 65 66 - RESILIENT ATHLETIC FLOORING
A. Section includes resilient athletic floor systems.
B. Resilient Athletic Flooring Systems:

1. RSF-1 (Cardio / Strength Training / Fitness):
    a. Manufacturers – Rubber Athletic Flooring, Tile:
        1) Mondo, “Sport Impact”.
    b. Materials: Tiles, consisting of a base of natural and synthetic rubber vulcanized with mineral aggregates, stabilizing agents and pigmentation. Flooring to be two layers vulcanized together, dual durometer:
    c. Thickness: 3/8 inch.
    d. Tile Size: 24 x 24 inches nominal.

09.14 SECTION 09 68 13 – TILE CARPETING

09.15 SECTION 09 91 00 - PAINTING
A. Section includes surface preparation and field application of paints and coatings.
B. Schedule:
    1. Steel pipe railing - special epoxy.
    2. Exposed structural steel - sprayed-on.
    3. Gypsum board - three coats; primer, sealer, and latex enamel.
    4. Metal door frames - three coats; primer, undercoat, and enamel finish coat.
    5. Concrete block - three coats; surface filler, enamel undercoat, eggshell alkyd enamel.
    6. Concrete block (epoxy) - two coats Glid-Guard.

09.16 SECTION 09 96 00 - HIGH PERFORMANCE COATINGS
A. Section includes special coatings and preparation for interior and exterior surfaces where high performance is required
B. Intumescent coating: Fire resistant paint for exposed structural steel at natatorium trusses and other exposed fire rated structural members. Basis of design: ALBI CLAD- TF. Finish over coating as noted below
C. Exterior Steel: Two coats, 2-part aliphatic acrylic, moisture-curing polyurethane, semi-gloss finish. Tnemec, series 73.
D. Interior Steel in Natatorium: Two coats, 2-part polyamide epoxy, satin finish. Tnemec, series 66.
E. Interior Architectural Metals: Two coats, two-part, aliphatic acrylic, moisture-curing polyurethane, semi-gloss finish. Tnemec, series 73.
F. Interior Masonry in Natatorium, Locker/Shower Rooms, and Toilets: Two coats, 2-part cycloaliphatic amine epoxy, semi-gloss finish. Tnemec, series 83.

10 SPECIALTIES

10.1 SECTION 10 11 00 - VISUAL DISPLAY SURFACES
A. Section includes tack boards, surfaced metal marker boards and related accessories.
B. Porcelain-on-metal marker boards.
C. Plastic impregnated cork tack boards.

10.2 SECTION 10 11 46 - VISUAL DISPLAY FABRICS
A. Section includes plastic-film covered fabrics for use with markers and magnets.
B. Projection Dry Erase Wall Covering: Bi-directional lenticular embossed vinyl surface for projection and dry erase markers. Nu-vu-rite NV60 as manufactured by Walltalkers or approved equivalent.
C. Magnetic Dry Erase Wall Covering: Magnetic, moderate gloss vinyl surface for dry erase markers. Mag-rite MR48-00 as manufactured by Walltalkers or approved equivalent.

10.3 SECTION 10 12 00 – DISPLAY CASES

10.4 SECTION 10 13 00 – DIRECTORIES
A. Provide directories under Allowance No. 2

10.5 SECTION 10 14 00 - SIGNAGE
A. Provide signage under Allowance No. 2.

10.6 SECTION 10 14 53 – TRAFFIC SIGNAGE

10.7 SECTION 10 21 13.19 – SOLID-POLYMER TOILET AND SHOWER COMPARTMENTS
A. Section includes solid-polymer toilet and shower compartments and urinal screens
1. Toilet Compartments and Urinal Screens: Ceiling-supported.
2. Shower Compartments: Floor mounted, overhead braced.

10.8 SECTION 10 21 23 – CUBICLE CURTAINS
A. Section includes cubicle curtains and tracks.

10.9 SECTION 10 26 00 – WALL AND CORNER GUARDS:

10.10 SECTION 10 28 00 - TOILET AND BATH ACCESSORIES
A. Section includes Owner provided contractor installed
B. "Bobrick" quality.
C. All stainless steel - recessed type where applicable.
D. Surface-mounted Multi-roll toilet tissue dispenser, Bobrick Series Model B-2888.
E. Surface-mounted sanitary napkin disposal, Bobrick Series Model B-254.
F. Partition-mounted sanitary napkin disposal, Bobrick Series Model B-354.
G. Recessed sanitary napkin/tampon vendor, Bobrick Series Model B-3500.
H. Soap Dispensers: Counter-mounted Liquid Soap Dispenser, Model B-822.
I. Stainless steel grab bar, 1-1/2" (38 mm) diameter, with snap flange cover, Bobrick B-6806 Series.
J. Mounting kits with stainless steel screws, Bobrick Model B-252-3.
K. Janitor's closet shelf - Bobrick B-224.
L. Handicapped shower seat - Bobrick B-5191.
M. Baby changing stations - Diaper Deck.
N. Stainless Steel Shelf - Bobrick Model B-683.
O. Towel Bars - Bobrick Model B-674.
P. Paper Towel Dispensers - Bobrick Model B-359.
Q. Hat and Coat Hook - B-682.
R. Vinyl Shower Curtain - Bobrick Model 204-2.
S. Stainless Steel Shower Curtain Hooks - Bobrick Model 204-1.
T. Swimsuit Water Extractor: Suitmate Swimsuit Water Extractor; 800-553-3353.

10.11 SECTION 10 41 16 – EMERGENCY KEY CABINETS

10.12 SECTION 10 43 13 – DEFIBRILLATOR UNITS
A. Section includes cabinet and automatic external defibrillator.

10.13 SECTION 10 44 00 – FIRE PROTECTION SPECIALTIES
A. Section includes recessed prefinished metal cabinet and fire extinguishers.
B. Fully-recessed cabinets; all-purpose extinguisher.
1. Flush-panel, aluminum units at Natatorium.
2. Flush-panel stainless steel units elsewhere, unless otherwise indicated.

10.14 SECTION 10 51 13 - METAL LOCKERS
A. Section includes metal locker units with hinged doors, metal trim and filler panels, locker room benches, accessories and hardware.
B. Public Locker Room Lockers:
1. Type: All-welded, athletic metal lockers.
2. Size 15" x 15" x 36" double tier and 15" x 15" X 24" triple tier.
3. Manufacturer DeBourgh, Lyon, List Industries, Penco.

4. Material: Metallic-coated steel sheet.
    a. Body: 16 gauge.
    b. Back: 18 gauge.
    c. Door: 14 gauge with inner panel reinforcement; security vents.
5. Locking System:
    a. Loop for owner provided locks
6. Finish: 3 mm powder coat.

C. Benches: Manufacturer's standard units with laminated hardwood seat approximately 9-1/2 inches wide by 1-1/2 inches thick, in maximum lengths possible and in configuration indicated. Custom steel supports as detailed. Furnish all anchorages. Apply manufacturer's standard penetrating sealer and transparent coating to bench seats.

10.15 SECTION 10 51 19 - PHENOLIC-CORE LOCKERS (OPTION)

A. Section includes solid phenolic lockers and accessories.
B. Warranty: Manufacturer's ten year warranty covering solid phenolic locker components against breakage, corrosion, and delamination from date of substantial completion
C. Size and Configuration:
    1. Size 15" x 15" x 36" double tier and 15" x 15" X 24" triple tier.
D. Panel Material: Decorative papers impregnated with melamine resin on faces with a clear protective overcoat and integrally compression molded with a core consisting of solid phenolic impregnated kraft papers.
    1. Doors: 1/2 inch (13mm) thick panel material with radius corners and polished edges.
    2. Locker Bodies: Tops, bottoms, and any intermediate shelves for multi-tier lockers shall be 1/2 inch (13mm) thick panel material with ventilation holes. Locker backs shall be ¼ inch (6mm) thick panel material and side panels shall be 3/8 inch (10mm) thick panel material. Fasteners shall be applied directly into or through the material. Aluminum or metal profiles for reinforcements shall not be permitted.
    3. Ancillary Panels: End panels, closures, and slanted tops if any shall be 1/2 inch (13mm) thick panel material.
E. Hardware:
    1. Hinges: Type 304, stainless steel. Quantity shall be three for full height doors and two for multi-tier units. Hinges shall be secured by bolts through the door or tapped into the doors as an option.
    2. Locking System:
        a. Loop for owner provided locks
    3. Interior Hooks: Gray nylon colored throughout.
    4. Provide stainless steel limit arm opening no more than 90 degrees.
    5. Exposed Fasteners: Type 304 stainless steel.
F. Door Identification (Identification Plates): Black background with white fonts and surface mounted with permanent adhesive integral with the locking mechanism. Fonts to be 5/8 inch high and up to four alphanumeric characters. Numbering sequence to be provided by architect.
G. Ventilation: Provide front ventilation 1.43 square inches per lineal feet of door perimeter (minimum).
H. ADA Lockers: Provide ADA compliant lockers, at locations indicated on Drawings, with the following provisions:
    1. Provide door decal with international accessibility symbol.
    2. Locate ADA locker such that locking system and hooks are at a maximum height of 48 inches and minimum height of 9 inches above finished floor.
    3. Provide 4 inch stainless steel wire pull in compliance with ADA guidelines.
    4. Provide stainless steel padlock hasp (omit coin/retain type lock on ADA Lockers).
I. Install lockers on concrete base.

10.16 SECTION 10 55 19 – DROP BOXES

A. Section includes wall-mounted receiving box for payment envelopes.

11 EQUIPMENT

11.1 SECTION 11 14 13 – PEDESTRIAN GATES

A. Section includes pedestrian access control gates and turnstiles.
   1. Turnstiles to be wheelchair accessible and two directional.

11.2 SECTION 11 52 13 - PROJECTION SCREENS

A. Recessed projection screens, power operation, glass beaded, heavy duty.

11.3 SECTION 11 52 21 – TV MONITOR MOUNTING SYSTEMS

11.4 SECTION 11 66 00 - ATHLETIC EQUIPMENT (GENERAL)

A. The following equipment is currently being considered for inclusion in this project.

Equipment Description	Contractor Furnished Contractor Installed	Owner Furnished Contractor Installed	Owner Furnish Owner Installed
Motorized fold down, dividing curtain	**x**		
Motorized fold down basketball backboards, rims, and nets.	**x**		
Fold-Down volleyball/badminton standards with referee stand.	**x**		
Fixed scoreboards and scoring control station	**x**		
Tilt-and-roll bleacher seating			**x**
Cardio / Fitness Equipment			**x**
Synthetic floor mats under selected cardio equipment			**x**
Cardio Theater			**x**

11.5 SECTION 11 66 23 – ATHLETIC EQUIPMENT

A. Section includes:
   1. Ceiling suspended, front-braced, forward-folding basketball backstops, electrical operation.
   2. Ceiling suspended, front-braced, forward-folding volley-ball standards; electrical operation.

B. Basis of Design Manufacturer: Porter Athletic Company; 9555 Irving Park Road, Schiller Park, Illinois.
   1. Basketball Backstop:
      a. Model 90950-000 Series Center-Strut Ceiling-Suspended Forward-Fold Back Stop complete with all necessary accessories.
      b. Model 00208-000 Rectangular Glass Backboard.
      c. Model 00222-500 Torq-Flex Goal.
      d. Model 2500 Powr-Touch Control System
      e. Center mast assembly suspended from bottom cord of roof trusses. Diagonally brace frame assembly to structure with folding knee joint braces.
   2. Volleyball System:
      a. Model 91920-100 Power-Net Competition-Type Overhead Supported Fold-Up Volleyball System including judges stand, padding, volleyball net.

11.6 SECTION 11 66 43 – INTERIOR SCOREBOARDS - AQUATIC (TIMING SYSTEM)

A. Timing System and Scoreboard will be owner provided. A Colorado Time System timer and scoreboard will be specified. A Daktronics System will be specified as an alternate system. The scoreboard will display times for 8 lanes plus 3 event information lines and a facility name line.

11.7 SECTION 11 66 45 – SCOREBOARDS (GYMNASIUM)

A. Section includes pre-manufactured scoreboard and wireless controls for court
   1. Basis of Design Manufacturer: Daktronics.
   2. Scoreboard Model: BB-2121 Basketball Scoreboard.
   3. Control Module: Daktronics All-Sport 1600.
      a. 12V remote wireless console.
      b. Battery pack option.

11.8 SECTION 11 66 53 - GYMNASIUM DIVIDER CURTAIN

A. Section includes curtain divider with motorized electric hoist.
B. Basis of Design Manufacturer: Porter Athletic Company; 9555 Irving Park Road, Schiller Park, Illinois.
   1. Model: 90670 Roll-Fold Gymnasium Divider Curtain
   2. Curtain shall be one continuous section.
      a. Bottom to 3-4": Solid.
      b. 3'-4" to 14'-8": Mesh (Fleximesh II).
   3. Mesh: Open polyester interlocking grid weave material coated with polyvinyl chloride; 50% open area and a weight of 9 oz per square yard.
      a. Class A flame retardant - UL 214
   4. Adjustable limit switches for automatic "up" and "down" positions.

12 FURNISHINGS

12.1 SECTION 12 22 00 – CURTAINS AND DRAPES

A. Section includes manually operated drapery and drapery track.

12.2 SECTION 12 24 13 – ROLLER WINDOW SHADES

12.3 SECTION 12 48 13 – ENTRANCE FLOOR MATS AND FRAMES

A. Section includes frame, mat and inserts for recessed floor mat.
B. Recessed carpet-type mats and frames; Balco roll-up or equal.

12.4 SECTION 12 93 00 – SITE FURNISHINGS

A. Section includes bike racks, benches, and trash receptacles.
   1. Bike Rack: The Bike Series II; Model BR8.

13 SPECIAL CONSTRUCTION

13.1 SECTION 13 11 00 – SWIMMING POOLS

A. GENERAL
   1. SUMMARY OF WORK
      a. Introduction: Furnish all labor, materials, equipment and services necessary to construct the following: (1) a 27 meter competition pool, (2) dive tank, (3) whirlpool, (4) recreation pool, and (5) a spa. This work shall include the structure(s) and installation of finishes as well as all products listed in Part 2 of Section 13 11 00.
      b. Work included in this Section: It is the intent of this Section to place the entire responsibility for the construction of the pools (including the construction of the pool shells) under one vested contractor. The contractor will actually do the work noted below. Under this Section the contractor will provide but is not necessarily limited to the following:

1) Provide all equipment and services required for erection and delivery onto the premises of any equipment or apparatus furnished. Remove equipment from premises when no longer required.
2) Layout, excavate, remove from the construction site, replace and grade materials as required beyond the limits of excavation of the pool shells to complete the work described in this section. Reference Earthwork - Section 31.
3) Grade and replace load bearing or high plasticity index soil, pump and dewater as necessary to keep excavations free from water during construction, and provide sub-surface drainage beneath the pump pit, surge tanks, and backwash pit. Reference Earthwork - Section 31.
4) Provide and maintain proper shoring and bracing for existing utilities, sewers and building foundations where required for contractor related excavations. Reference Earthwork - Section 31.
5) Provide all electrical conduit, wiring, junction boxes etc. to all low voltage pool equipment within pool filter/chemical rooms. Reference Electrical - Section 26. (Low voltage is considered less than 115 V.)
6) Furnish and install all necessary piping and valving as shown on the drawings and specified herein.
7) Furnish and install the main drain hydrostatic relief system and a sight sump as shown on the drawings. Reference Earthwork - Section 31.
8) Construct the cast in place or pneumatically applied concrete pool shells and cast in place surge tanks as described in these specifications and detailed on the Drawings, including reinforcement steel, inserts, fittings, main drain sumps and all embedded items (piping, anchors, spargers, etc.) for the pools and spa. Reference Concrete – Section 03 00 00. Before commencing the placement of concrete, verify electrical bonding of pools and spa embedded items and reinforcing steel. Also, coordinate and arrange any required electrical, plumbing and or building inspections. Provide any structure drainage around the pools as shown on the Drawings. Backfill and compact fill around the pool structures, piping trenches and excavations required by this work. Reference Excavation and Fill – Section 31 23 00.
9) Furnish and install a ceramic tile finish in the pools with a slip resistant surface and a vertical tile band. The pools will have a 1'-4" perimeter tile band. Tile areas will be 1" x 1" or 2" x 2" unglazed ceramic mosaic tile. Furnish and install specialty tile for the perimeter tile deck band, end wall parapet, gutter nosing, wall targets, recessed steps, floor lane markings, depth markings and warning signs, water polo markings, stanchion and water polo identification, construction joint installation bands and all other tile installation within the pool structures. Reference Finishes - Section 09 00 00.
10) Depth markings and warning signs for the pool and deck will be required by code in contrasting ceramic tile. Depth markings will be shown in standard and/or metric measurements. "NO DIVING" signs will be provided at all pool areas with a depth of water 5'-0" or less. Depth markers will be provided per code at not more than 25' intervals.
11) Assemble and install the cleaning and maintenance equipment for the pools as specified herein.
12) Provide for the storage of all pool related equipment, materials and systems. All items are the responsibility of the contractor until accepted by owner.
13) Obtain final acceptance by jurisdictional health department(s).
14) Start, test, calibrate and adjust all mechanical equipment, electrical equipment, recirculation, chemical, and other supplied systems including deck, loose, maintenance, and safety equipment. Instruct the Owner's representative in the systems operation and maintenance as described herein.
15) Furnish and install the heating system for the pools. Include all piping, heaters, heat exchangers, booster pumps, controls, gauges, thermostats, control valves and wiring required to draw water from the recirculation line, heat the water and return it back to the recirculation line and interlock with pool recirculation pumps.

2. ALTERNATES
    a. Review the description of Alternates in Division 1 and on the drawings for possible effect upon work in this Section. Alternates related to the Work in this section are described in this division and on the Bid Proposal Form.
3. SUBMITTALS
    a. Six (6) sets of shop drawings and engineering data shall be tabbed, indexed, referenced to the specifications, bound in 3 ring binders and submitted in two stages. Provide 8 ½" x 11" cover sheet for each item submitted identifying item and product number. The first stage will be all embedded items for the pool shells (including piping diagrams) and the second stage all other items. Only complete sets will be reviewed.
4. OPERATION AND MAINTENANCE MANUALS AND CLOSE-OUT SUBMITTALS

    a. Detailed operation and maintenance information shall be supplied for all equipment requiring maintenance or other attention. The equipment supplier and/or contractor shall prepare an operation and maintenance manual for all equipment. Parts lists and operating and maintenance instructions shall be furnished.
5. WARRANTIES
    a. The contractor warrants to the Owner and Architect that materials and equipment furnished under the contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the work will be free from defects not inherent in the quality required or permitted, and that the work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized may be considered defective. The contractor's warranty may exclude remedies for damage or defect caused by abuse, improper or insufficient maintenance, improper operations, modifications not executed by the contractor or improper wear and tear under normal use. If required by the Architect, the contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. All warranties shall be for a period of one year from the date of substantial completion or the owner begins using the pool unless otherwise specified.
6. RECORD DRAWINGS
    a. Provide a complete set of record drawings of the entire pool system including all sub-systems. All record drawings shall be prepared in accordance with the requirements of Section 01720 and shall be a complete, stand alone set. The CONTRACTOR shall be permitted to obtain original documents and copy them for this purpose only. Furnish the record set on 30 inch x 42 inch mylar, 3-1/2 inch computer diskettes, or compact disk (AutoCAD Release 12, 13, 14, 2000 or compatible software).

B. PRODUCTS
1. OVERFLOW SYSTEM
    a. It is the intent of the specifications that the perimeter overflow system and surface cleaning be maintained under all conditions of normal operation and that no water be discharged to waste except when cleaning the filters or emptying the pools.
    b. Concrete Perimeter Overflow System: A fully recessed, 24" deep gutter will be used for the competition pool and the dive tank perimeter overflow system. A deck level, 12" deep gutter will be used for the recreation pool perimeter overflow system. These gutter systems shall also include PVC grating. Gutter shall be a continuous concrete and tile overflow channel as detailed and shown on the drawings shall be installed on the pools. The bottom of the trough shall be level throughout.
    c. Skimmer Overflow System: Provide skimming system for the Whirlpool and Spa consisting of units as shown on the drawings. Skimmers shall be so located as to insure maximum skimming action. The skimmer shall be of sturdy, corrosion-resistant materials.
2. PUMPING EQUIPMENT:
    a. Horizontally mounted centrifugal pumps shall be utilized for all the pool recirculation and feature pumps, and shall be certified by the National Sanitation Foundation (NSF) and bear the certification mark. Pump casing shall be cast iron fitted with a replaceable bronze case wear ring. Pump impeller shall be enclosed type of cast

bronze, statically and dynamically balanced, and trimmed for the specified design conditions. Provide a hair and lint strainer, for each pump, of fiberglass or epoxy coated stainless steel construction with a clear observation top. Pressure gauges shall be installed on the discharge of the pumps and compound gauges shall be provided at the intake port of the pumps, after the hair and lint strainer.

3. FILTRATION EQUIPMENT
    a. Horizontal, high rate, pressure sand filters will filter the competition pool and dive tank water every 5.5 hours, the recreation pool every 3 hours, and the whirlpool and spa every 15 minutes, at a rate not to exceed 15 gallons per minute per square foot. An eleven-foot minimum (12 ft. desirable) high ceiling in the filter room should be provided for ample clearance for the filters and piping above. Filters will backwash individually.
    b. Filter Face Piping and Pool Piping – PVC Schedule 80 piping will be used throughout the pool piping system (8" or smaller) because of its non-corrosive quality; however, only molded fittings are recommended. All flanges should be reinforced with a steel ring molded into the flange to avoid cracking due to vibration. Heat exchanger by-pass piping should be copper or stainless steel.
4. RECIRCULATION FITTINGS
    a. Main drain outlets will be concrete sumps with 12 gauge stainless steel frames with PVC grating. One sump will be deeper to facilitate draining the pools via a separate line and dedicated pump.
    b. Furnish and install hydrostatic relief valves consisting of a cast bronze body and valve plate complete with valve seat gasket, stamped brass top cover plate and a 2 inch PVC water collection tube in each of the main pool sumps.
    c. The stainless steel converters shall be fabricated from 316 stainless steel.
    d. Wall inlet fittings shall be Sta-Rite No. 8429-0000 or Hayward Model SP-1419C (1/2 inch opening) Cycolac directional inlet mounted in Hayward Model SP-1022S, Paddock or Swimtime equal.
    e. Static water line inlet fitting for the automatic water level controller shall be provided consisting of a Cycolac body, grate and construction shield. The body shall have a 1-1/2 inch solvent weld connection and provided with an integral molded "knock-out" membrane to facilitate line pressure testing.
    f. The outlet fitting grate from the fill funnel into the pools shall be a Hayward SP-1026 mounted in a Hayward Model SP-1022S or equal.
    g. Adjustable floor inlet fittings will be provided each consisting of an ABS plastic body and adjusting top plate with a positive locking device.
    h. Water surface agitators for the springboards and platforms will be provided and connected to the filtered water supply piping.
    i. Valve box covers and frames that are not specified on the drawings or specifically identified as another size or material shall be nickel bronze with polished scored top, vandal proof screws or approved equal.
    j. Anti-vortex plates shall be provided at the suction points of the main recirculation pumps in the surge tanks. Each plate shall be connected to the suction pipe via a PVC flange and shall be 24 in. x 24 in. x 1 in. thick.
    k. Hydrotherapy inlet fittings shall be provided consisting of a cast bronze or Cycolac venturi body with 1-1/2 inch water inlet pipe connections and 1/2 inch air intake connection. A 1/8-inch IPS thread shall be provided in the inlet throat to permit hydrostatic pressure testing of piping system.
5. PIPING SYSTEMS
    a. Exposed piping in the filter room and surge tank will be Schedule 80 PVC for strength and resistance to corrosion. All piping below the floor of the pool shell shall be encased in concrete and will be Schedule 40 PVC.
    b. All valves will be identified in the filter room. Valves will be described as to their function and referenced in the operating instruction manual and wall mounted piping diagram to be prepared by the contractor.
6. CHEMICAL TREATMENT SYSTEMS

a. Calcium Hypochlorite (Chlorinator Briquettes): Calcium hypochlorite will provide the primary chemical sanitizing for the pools. The halogen requirement of the pools will be automatically monitored and controlled by a Strantrol or Chemtrol chemical controller capable of monitoring 0 to 6 parts per million of chemical and showing Oxidation Reduction Potential (ORP) in addition to the two traditional readings of sanitizer and pH.
b. pH Buffering System (Muriatic Acid): Chemical feeders for muriatic acid shall be peristaltic type pumps. Two (2) fifteen (15) gallon acid drums or one (1) 55 gallon acid tank by LMI shall be provided. Chemical feed pumps shall be furnished and connected to the filtered water return lines to the pools as shown on the pool plans. The pumps shall be capable of feeding a solution to the pools to maintain pH level against the back pressure involved and shall be fully adjustable while in operation.
c. Ultraviolet Dechloramination and Disinfection System:It is the intent of these specifications that the swimming pool water be routinely monitored and treated by UV sterilization in the range of 220nm to 400nm to kill bacteria, viruses, molds and their spores and to continuously remove chloramines. The concentration of free chlorine residual shall at all times meet the requirements of the Health Department authority having jurisdiction over the swimming pool. Any proposed UV system must have a UL listing on the complete system, and be listed under NSF Standard 50.

7. WATER CHEMISTRY MONITORING AND CONTROL SYSTEMS
   a. A programmable chemical automation system shall be furnished for the pools for continuous monitoring of water chemistry (ORP/HRR, PPM, pH and Temperature), Langelier Saturation Index, and for automatic control of the chemical feeders, heater, and water level. Installation of the system shall be as specified by the manufacturer and no exceptions shall be taken. A factory-authorized representative shall provide training to the owner and the training shall be video taped per 13150 specifications.
8. FLOW METER AND WATER METER
   a. Flow meters will be installed in the filtered water return lines to the pools and installed in the backwash piping. Signet flow meters will be specified.
   b. A water meter shall be furnished by the contractor and installed by the plumbing contractor. The water meter shall be installed downstream of the slow closing solenoid valve located at the fresh water supply over the fill funnel as shown on swimming pool drawings. The water meter shall have a non-corrodible main case, measuring chamber, and hermetically sealed register.
   c. Refill flow meter shall be installed on dilution piping to backwash tank. Flow meter shall be one piece meter body of injected molded polysulfone adapters, viton o-ring seals, and 316 stainless steel floats and float guide, impact resistant machined acrylic plastic body.
9. WATER LEVEL CONTROLLERS
   a. An automatic water level controller will be provided to maintain the correct water level in the pools at all times. It will consist of a proximity switch type control unit and a coaxial control wire to be connected to the plumbing system's make up water solenoid valve. A manual fill valve will also be available to bypass the automatic system.
10. INSERTS AND ANCHOR SOCKETS
    a. Anchors for grab rails and stair railings will be provided.
    b. Anchors for backstroke stanchions and water polo goals will be provided.
    c. Heavy-duty cup anchors for all swimming lanes will be provided.
    d. Anchors for starting blocks will be provided.
    e. Anchors for the handicap lift will be provided.
    f. Anchors for the diving board stands will be provided.
    g. Anchors for bulkhead locations shall be furnished by the bulkhead manufacturer and installed into the gutter system by the contractor.
11. DECK EQUIPMENT
    a. Grab rails and recessed steps for the pools will be provided as required. These will be provided by stainless steel grab-rails set in chrome plated bronze wedge anchors

and escutcheons with set screws. Recessed tile steps in the pool wall will be provided.

b. Backstroke and recall rope stanchions will be provided. The backstroke stanchions will be fitted with pennants and the recall stanchions with a rope.
c. Starting platforms will be provided for the competition pool. These may be removed from the deck when not in use. Diving from the starting platforms should be restricted to supervised practice or competition of athletic teams. 13 starting platforms (12 required, 12 plus 1 spare) with slip-resistant surfaces shall be provided.
d. Deck mounted water polo goals will be provided.
e. Lifeguard chairs to meet the minimum standards of state regulations will be provided in portable (wheeled) units that may be stored out of the way during periods when lifeguards are not required.
f. Two 1-meter springboards. Durafirm stands will be specified with 16' Maxiflex "B" Boards.
g. Surge tank access hatch shall be furnished and installed as shown on the Drawings. The access hatch shall be a single door 2 ft.-6 in. x 2 ft.6 in with 1" fillable pan to receive ceramic tile and grout or concrete deck fill. The frame shall be 1/4 inch extruded aluminum with built in neoprene cushion and continuous anchor flange. Door shall be ¼" aluminum plate reinforced with aluminum stiffeners as required.
h. Surge tank ladder rungs shall be 1/2 inch Grade 60 steel encased with co-polymer polypropylene plastic.
i. Handicap lift(s) will be provided to meet ADA guidelines.

12. LOOSE EQUIPMENT
    a. 6" diameter lane markers will be provided with an adequate number of storage reels.
    b. Lane Line Storage Reel shall be fabricated from a heavy-duty aluminum reel joined together by a 1-1/2 inch aluminum axle. This unit must ride easily on four hard rubber wheels.
    c. 31" octagonal pace clocks will be provided on portable carts with battery power.
    d. Lifeline shall be 3/4 inch blue and white polyethylene rope with floats that are 5 inch diameter by 9 inch long. Floats to be spaced on five foot centers.
    e. Deck mounted basketball goal and water polo goal shall be provided, with one ball per unit.
    f. Hanging Nets (2 required) shall be furnished to span the width of the pool to protect the interior walls of the natatorium during water polo.
13. MAINTENANCE EQUIPMENT
    a. Wall brush shall be a flexible polyethylene material with five (5) rows of nylon bristles. Pool brush holder shall be permanent mold cast aluminum with hydrofoil flap.
    b. Skimming Net head shall consist of one-piece molded plastic frame with a reinforced, integral handle bracket suitable for quick attachment to a standard 1¼ or 1 ½ inch diameter handle using bolts and wing nut.
    c. Adjustable telescopic and stainless steel poles to shall be provided.
    d. Testing kit to feature liquid reagents, color comparator, waterproof instructions and treatment charts, chemistry guide and watergram. Test kit to have the ability to test for free and total chlorine (0.5 – 5.0 ppm), bromine (1-10 ppm), pH (7.0 – 8.0), acid and base demand, total alkalinity, calcium hardness and cyanuric acid.
    e. Vacuum Cleaner shall be provided with pump and strainer.
    f. Robotic Pool Cleaner: Provide one electric motor driven automatic robot swimming pool vacuum device.
    g. Stainless steel Cleaner will be provided (one (1) required per body of water).
14. SAFETY EQUIPMENT
    a. Ring Buoys and Extension Ropes shall be provided.
    b. Life hook and an aluminum extension pole shall be provided.
    c. Spineboards shall be provided with head immobilizer, head strap, body straps, side roll ups, adhesive strips and required staples.
    d. First Aid Kit shall be a 24 unit kit per American Red Cross standards as manufactured by Swift First Aid, or equal.
    e. Rescue tube for each lifeguard chair.

f. Safety Eye Wash Station shall be a self-contained system in which eyewash bottles are securely positioned in a portable holder. Eyewash bottles shall be 32 ounces and easily removable from case, and shall contain a sterile, saline solution with the ability to neutralize a varying quantity acids or caustics.
g. Safety Eyeglasses dispenser station containing ten (10) pairs of safety glasses shall be provided.

15. THERMOMETERS
    a. Portable thermometer shall be a molded ABS plastic tube body type with the ability to measure temperature in both degrees Fahrenheit and Celsius. A 3 ft. polyethylene cord is to be attached to thermometer.
    b. In-Line thermometer to be near the heating loop and shall have a 9 inch adjustable angle with a minimum 6 inch stem.
    c. Digital temperature indicator shall be a 115 volt, wall mounting case, sensor and a stainless steel immersion well.
16. FINISHES
    a. Furnish and install a ceramic tile finish in the pools with a slip resistant surface with a vertical tile band. Furnish and install specialty tile for the perimeter tile deck band, end wall parapet, gutter nosing, wall targets, recessed steps, floor lane markings, depth markings and warning signs, stanchion and water polo identification, construction joint installation bands and all other tile installation within the pool structures. Reference Mortar-Bed Ceramic Tiling - Section 09 32 13.
17. WATERPROOFING
    a. The interior surfaces of the surge tanks, gutter troughs and backwash pit coating shall be a high build epoxy or pre-blended, cementitious waterproofing coating/mortar consisting of hydraulic binders, selected aggregates and a synthetic polymer intended for the protection of concrete masonry surfaces. Waterproofing coating shall be Vandex, Planiseal 88 or equal.
18. SEALANTS
    a. Sealants shall be installed by the contractor.
19. WATER FEATURES AND SUPPORT EQUIPMENT
    a. Water features such as the waterfall, and water sprays shall be provided and installed by the contractor complete with pumping equipment.

C. EXECUTION
1. EQUIPMENT AND SYSTEMS INSTALLATION
    a. The contractor shall assemble and install all equipment, special parts and accessories as shown on pool drawings, specifications and shop drawings of the equipment suppliers.
    b. SPC shall furnish all anchors and inserts to be imbedded in the deck including all fittings, inserts and structure sleeves and required anchorage's as shown on the plans and as indicated in this Section of specifications. Equipment shall be set true and plumb, using factory jigs where available. Removable equipment items shall be easily removable from anchors and shall fit without noticeable wobble.
    c. Provide templates for all equipment anchors. Provide anchor bolts of the size and spacing as required by the equipment manufacturer. All anchor bolts shall be stainless steel Type 316 and of a length capable of adequate anchorage into rough slab-on-grade allowing for finish deck tile and setting bed. Anchors shall be set and cast into place during building concrete work. Inspect all anchor settings for horizontal and vertical alignment prior to placing concrete.
    d. The contractor is to install all equipment and systems in accordance with manufacturer's directions. Equipment shall all be assembled and in place for final observation.
    e. All items necessary to complete this Section are shown on the plans or described in the specifications including items that may be purchased by the Owner. Items are detailed and specified as a guide for dimensional purposes. The contractor must make provisions accordingly and submit shop drawings and submittals based on that data.

14 CONVEYING EQUIPMENT

14.1 SECTION 14 24 00 - HYDRAULIC ELEVATORS

A. Section includes elevator cab, hoistway rails and supports, hydraulic cylinder and PVC sleeve, microprocessor controls and machine room equipment; ADA compliant.
   1. Hydraulic Elevator System: One unit; hydraulic holeless type with cylinder in hoistway; with motor and pump adjacent to the hoistway. Elevator equipment to meet UO standards and maintenance requirements.

B. Manufacturers:
   1. KONE Inc.
   2. Otis Elevator Co.
   3. Schindler Elevator Corp.
   4. ThyssenKrupp Elevator.

C. System Description – Elevator 01 Free side:
   1. Capacity: 3000 pounds.
   2. Number of Stops: 2
   3. Double sided – two door cab
   4. Maximum Rise:
   5. Clear Car Inside Dimensions: 6'-8" x 4'-9".
   6. Car Height: 7’-11”
   7. Car Speed: 150 feet per minute.
   8. Door Width: 3’-6”
   9. Door Height: 7’-0”

D. System Description – Elevator 02 control side:
   1. Capacity: 4500 pounds.
   2. Number of Stops: 3
   3. Maximum Rise:
   4. Clear Car Inside Dimensions: 5’-8" x 7'-10".
   5. Car Height: 7’-11”
   6. Car Speed: 150 feet per minute.
   7. Door Width: 4’-6”.
   8. Door Height: 7’-0”

E. Elevator Finishes:
   1. Car and Hoistway Doors: Satin stainless steel.
   2. Hoistway Door Frames: Satin stainless steel.
   3. Car Side and Rear Wall Panels: Satin stainless steel.
   4. Car Front Wall (Return Panel): Stainless steel.
   5. Car Floor Finish: Tile.
   6. Car Ceiling Finish: Flush, plastic-laminate panels, with incandescent downlights.

F. Features:
   1. Reduced current starting.
   2. Blanket hooks and one complete set of full-height protective blankets.
   3. Card-reader operation.
   4. Independent service for service elevator.
   5. Standby powered lowering.

G. Warranty Period: One year from date of Substantial Completion.

H. Maintenance Service: One year from date of Substantial Completion; 7-day-per-week emergency callback service.
   1. Response Time: Two hours or less

SPECIFICATIONS GROUP

FACILITY SERVICES SUBGROUP

21 FIRE SUPPRESSION

21.1 REFER TO FIRE SUPPRESSION AND FIRE ALARM NARRATIVE

22 PLUMBING

22.1 REFER TO PLUMBING NARRATIVE

23 HEATING VENTILATING AND AIR CONDITIONING (HVAC)

23.1 REFER TO HVAC NARRATIVE AND DRAWINGS

24 INTEGRATED AUTOMATION

24.1 SEE ATTACHED DIVISION 25 SECTIONS.

25 ELECTICAL

25.1 REFER TO ELECTRICAL AND LIGHTING NARRATIVES AND DRAWINGS

25.2 SECTION 26 05 00 - COMMON WORK RESULTS FOR

25.3 SECTION 26 05 43 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

A. Duct
   1. Provide Type "EB" 5" PVC conduits equal to Carlon No. 68716, "EB" 4" PVC conduits equal to Carlon No. 68715, and "EB" PVC 2" duct equal to Carlon No. 68711, except as otherwise noted for electrical duct banks.
   2. Rigid galvanized steel shall be provided for 90° elbows and conduits stubbed through concrete.

B. Concrete Encasement
   1. The required 28-day compressive strength of conduit encasement concrete may be 2,500 psi. The slump may be 7" maximum and 5" minimum.
   2. Electrical ductbank encasement concrete to be red-dyed.

C. Marking
   1. Place a continuous red warning tape within the trench backfill about 12 inches above the concrete encased duct bank or 12" above the direct bury conduits. Center tape over the centerline of the construction.

25.4 SEE ATTACHED FOR REMAINING DIVISION 26 SECTONS

26 COMMUNICATIONS

26.1 REFER TO TECHNOLOGY NARRATIVE

SPECIFICATIONS GROUP

SITE AND INFRASTRUCTURES SUBGROUP

31 EARTHWORK

31.1 SECTION 31 22 20 – SITE DEMOLITION

31.2 SECTION 31 20 00 – EARTH MOVING (EARTHWORK)

A. Section includes the following:
   1. Preparing subgrade for slabs-on-grade, lawns and grasses and exterior plants.
   2. Excavating and backfilling for buildings and structures.
   3. Drainage course for slabs-on-grade.
   4. Subsurface drainage backfill for walls and trenches.

B. Soil Materials:
   1. Description of types and uses of existing soils (based on soil boring logs, soils report and geotechnical and structural engineer evaluation). The following are examples only. Soil types will be revised when borings and report are completed.
   2. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
   3. Subsoil Type S1: Existing fill. Dark Brown clay
   4. Subsoil Type S2: Existing soil. Gray, sandy, clay.
   5. Subsoil Type S3: Imported structural fill clay material.
   6. Topsoil Type S4: Existing, reused, topsoil.
   7. Topsoil Type S5: Imported topsoil.
   8. Stockpiling requirements. Topsoil reuse must be approved by University. If there is extra topsoil, stockpile as directed by Owner.

C. Structural Planting Soil: Provide structural planting soil in place of subgrade material at locations indicated on Drawings.
   1. Structural Planting Soil Mix:
      a. ASHTO #4 gravel; 100 lbs calculated dry weight.
      b. Shredded clay loam; 15 to 18 lbs.
      c. Hydrogel; Cross-linked, potassium copolymer used to bind mixture during mixing process; 0.03 lbs.
      d. Water; +/- 10 including the water calculated in the gravel and soil.

D. Aggregate Materials
   1. Aggregate Type A1: Crushed limestone - non-free-draining. IDOT 4120 Class A, crushed stone.
   2. Aggregate Type A2: Porous backfill - free-draining sand. IDOT 4131.
   3. Aggregate Type A3: Sub-base material for concrete slab-on-grade - free-draining. IDOT 4121.
   4. Aggregate Type A4: 3/8 inch pea gravel, natural stone.
   5. Aggregate Type A5: Landscape Gravel - 1 to 2 inch diameter, natural stone.
   6. Engineered Fill: Pit or quarry run rock, crushed rock, crushed gravel and sand or sand that is fairly well graded between coarse and fine sizes. It should be free of clay balls, roots, organic matter, or other deleterious materials with a maximum particle size of 4 inches with less than 12 percent passing the No. 200 sieve.
   7. Bedding Course: Well graded, granular material that is free of organic matter and other deleterious material with a maximum particle size of ¾-inch and less than 8 percent passing the No. 200 sieve.

8. Subbase Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
9. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

E. Rough Grading:
1. Strip and stockpile topsoil.
2. Cutting, grading, filling, rough contouring, and “Engineered Fill” for site structures and building pad.
3. Schedule of compaction requirements.
4. Compaction testing requirements.
5. Provide erosion control.

F. Excavating and Fill:
1. Excavating requirements for building foundations, slabs on grade and site structures.
2. Footing and subslab evaluation and bearing pressure capacity testing by Soils Engineer prior to placing concrete.

G. Backfilling:
1. Schedule of acceptable backfill materials for each condition.
2. Interior slab on grade: 4 inch fill Type A3, compact to 98%
3. Interior side of foundation walls: Fill Type A2 or A3, each lift compacted to 98%
4. Exterior side of foundation walls, retaining walls: Fill Type S2 or S3 to sub-grade elevation compacted to 95%
5. Fill under grass areas: Fill Types S1, S2 or S3 to 6 inches below finish grade, compacted to 95%.
6. Fill under landscaped areas: Fill Types S1, S2 or S3 to 12 inches below finish grade, compacted to 85%.
7. Fill under asphalt and concrete paving: Compact subsoil to 95%. Install Subbase Course and Base Course type crushed rock per plans and ODOT requirements.
8. Fill over-excavation at footings and column pads: Fill Type A1 or A3.
9. Fill over drainage piping gravel cover: Fill Type A4, to 30 inches below grade, compacted to 95%.
10. Compaction requirements.
11. Compaction testing requirements.

H. Trenching:
1. Work Includes: Trench excavation, backfilling and compaction.
2. Schedule of fill material:
3. Storm and Sanitary Piping: Cover pipe and pipe bedding with Bedding Course to 12” over top of pipe. Fill to grade with Satisfactory Soils or, if under a roadway, with Engineered Fill.
4. Duct Bank and Electrical Conduit: Cover duct and bedding with Fill Type S1, S2 or S3, to sub-grade elevation, compacted to 95%.

I. Landscape Grading:
1. Section includes: Final grade topsoil for finish landscaping
2. Topsoil: Fill Type S4 or S5
3. Depth:
   a. Sod Areas: Topsoil; 4 inches, minimum.
   b. Planting Beds: Amended soil; 12 inches, minimum.
   c. Tree Beds: Structural planting soil.
4. Maintain completed work to prevent damage and to repair erosion.

31.3 SECTION 31 23 16.13 - TRENCH EXCAVATION AND BACKFILL

A. Field Quality Control
1. Compaction Testing Frequency shall be based on the following: 1 test per 100 linear feet (30.5m) per 8" (200mm) lift.

31.4 SECTION 31 23 16.29 - OVEREXCAVATION AND BACKFILL FOR UNSUITABLE PIPE BEDDING MATERIAL

31.5 SECTION 31 23 19 - DEWATERING

31.6 SECTION 31 25 00 - EROSION AND SEDIMENTATION CONTROL
- A. Work Includes:
  1. Furnishing, installing, maintaining, and removing temporary control measures as needed to prevent the discharge of silty or polluted storm water from the construction site.
- B. Regulations:
  1. The erosion control must meet the requirements of the DEQ 1200-C permit and the City of Eugene's regulations, including:
     a. Weekly monitory and inspection log by an approved inspector, who assesses the runoff quality
     b. Dewatering operations must include water quality, provided mechanically or by other approved method
     c. If area of disturbance is greater than 5 acres, permit is subject to public notice
     d. Updating erosion control plans throughout the project, to be approved by the City of Eugene

31.7 SECTION 31 31 16 – TERMITE CONTROL

31.8 SECTION 31 50 00 – EXCAVATION SUPPORT AND PROTECTION

32 EXTERIOR IMPROVEMENTS

32.1 SECTION 32 12 16 – ASPHALT PAVING

32.2 SECTION 32 13 13 – CONCRETE PAVING
- A. Portland cement concrete sidewalks, drives and drive approaches, parking lot pavement, and curbs and gutters.
- B. Testing by Contractor.
- C. Specific pavement thicknesses as required by soils engineer.
- D. PCC Mix Requirements: 4,000 PSI compressive strength at 28 days, air-entrained 5-8%, crushed limestone aggregate.

32.3 SECTION 32 13 73 – CONCRETE PAVING JOINT SEALANTS

32.4 SECTION 32 14 14 – UNIT PAVING ON CONCRETE PAVING BASE
- A. Section includes concrete pavers set on bituminous setting bed over concrete paving base.
- B. Materials:
  1. Concrete Pavers: 7 7/8 x 3 7/8 x 2 3/8 inch, 8,000 psi average compressive strength, 5% maximum water absorption, red color; Hollandstone Concrete Paver as manufactured by Borgert Products, Inc. St. Joseph, MN 800-622-4952.
  2. Bituminous Setting Bed: 7% ASTM D3381, viscosity grade AC10 or AC20 asphalt cement; 93% dried, fine aggregate.
- C. Neoprene-Modified Asphalt Adhesive: 75% solids, solvent based mastic coat (Varsol); 2% neoprene base.
- D. Joint Sand: ASTM C33; clean, non-plastic, natural or manufactured from crushed rock.

32.5 SECTION 32 84 00 – PLANTING IRRIGATION

32.6 SECTION 32 92 00 – TURF AND GRASSES

32.7 SECTION 32 92 23 – SODDING

32.8 SECTION 32 93 11 – TREES, SHRUBS, AND GROUNDCOVER
- A. Section includes plants, planting soils, tree stabilization, landscape edgings, tree grates.
- B. Tree Grates: Neenah R-8813

32.9 SECTION 32 93 24 – PERENNIAL PLANTS

33 UTILITIES

33.1 SECTION 33 05 10 - SITE PREPARATION FOR BURIED UTILITIES

33.2 SECTION 33 11 22 - WATER AND CHILLED WATER MAINS
- A. Restrained Joint Ductile Iron Pipe (RJ-DIP)
  1. Minimum Thickness: Special Thickness Class 52 for pipe up to and including 24" in diameter.
  2. Acceptable Products: The University prefers a manufactured restrained joint pipe for buried piping:
     a. Griffin Pipe Products Company: Snap-Lock STET Restrained Joint Pipe
     b. Clow Pipe: Super Locke Pipe Fitting
     c. US Pipe: TR Flex
     d. American Pipe - Flex Ring
  3. Field Cut Restrained Joints shall conform to:
     a. MJ DIP: EBAA Iron Megalug Series 1100
- B. Fittings for DIP Pipe
  1. Fittings (Tees, Bends, etc.)
     a. Shall conform to either ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 ductile iron mechanical joint, minimum working class pressure for underground piping with Megalug restraining glands: 24" or less diameter - 350 working pressure.
  2. Flanged fittings ANSI A21.10 or ANSI A21.53, Class 250 for above ground piping or as shown on Plans.
  3. Bolts and Nuts - Cor-Blue T-Bolts by NSS Industries required on all fittings and Megalugs.

33.3 SECTION 33 31 00 - SANITARY SEWERAGE
- A. PVC Sewer Pipe and Fittings: According to the following:
  1. PVC Sewer Pipe and Fittings, NPS 4 to NPS 15: ASTM D 3034, SDR 35, for solvent-cemented or gasketed joints.
     a. Gaskets: ASTM F 477, elastomeric seals.

33.4 SECTION 33 41 00 - STORM UTILITY DRAINAGE PIPING
- A. PVC Sewer Pipe and Fittings NPS 15 and Smaller: ASTM D 3034, SDR 35, with bell-and-spigot ends for gasketed joints with ASTM F 477, elastomeric seals.
- B. Corrugated PE Drainage Pipe and Fittings NPS 10 and Smaller: AASHTO M 252, Type S, with smooth waterway for coupling joints.
  1. Soiltight Couplings: AASHTO M 252, corrugated, matching tube and fittings.
- C. Corrugated PE Pipe and Fittings NPS 12 and Larger: AASHTO M 294, Type S, with smooth waterway for coupling joints.
  1. Soiltight Couplings: AASHTO M 294, corrugated, matching pipe and fittings.

33.5 SECTION 33 46 00 – SUBDRAINAGE
- A. Section includes under-slab and foundation drainage system; filter aggregate and bedding.
- B. Pipe: Polyvinyl Chloride Pipe: ASTM D2729; plain end, with required fittings; perforated pipe at subdrainage system; unperforated through sleeved walls.
- C. Perimeter Drainage: At exterior side of basement foundation walls and at elevator shaft foundation walls. Locate 6 inch diameter drain pipe 12 inches minimum below basement floor slab elevation.

D. Pool Subsurface Drainage: Maximum 25 feet spacing perpendicular to outside walls and tied to perimeter footing drain tile and sump. Locate 4 inch diameter drain pipe 12 inches minimum below basement floor slab elevation.
E. Basement Floor Slab Drainage: Maximum 30 feet spacing perpendicular to outside walls and tied to perimeter footing drain tile and sump. Locate 4 inch diameter drain pipe 12 inches minimum below basement floor slab elevation.

END OF OUTLINE SPECIFICATION

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

Appendix C City of Eugene, Limited Consultation Meeting Minutes

Appendix D Preliminary Building Code Report

Appendix E Energy Programming

Appendix F LEED Checklist

Appendix G Outline Specifications

APPENDIX H COST ESTIMATING BOOKLET

Appendix I Department of Physical Education & Recreation Memorandum of Understanding

Appendix J SD Report Comments/Responses

Howard S. Wright
a Balfour Beatty company

Direct Construction Summary

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG		

Description					**Total**
New Addition				$	37,982,470
Leighton Pool Renovation (Fitness/Climbing Wall)				$	1,578,983
Miscellaneous Renovations (Locker Room Area)				$	453,120
Replace Existing Parking Spaces	42 ea	$	5,000.00	$	210,000
Site Work at 15th Street				$	103,988
Project Total				**$**	**40,328,561**

Alternates

Escalation from mid 2013 to mid 2014	3.00%	$	1,209,857
Replace Existing Fire Alarm		$	229,830
Wayfinding Improvements	deleted from project	$	-
Miscellaneous Esslinger Renovations	deleted from project	$	-
Repair Fountain at Existing Front Door	deleted from project	$	-
Replace Existing Field Turf	deleted from project	$	-

Howard S. Wright
a Ballour Beatty company

New Construction - Recap

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG	GSF:	117,589

System		Unit Cost	Total
General Requirements		$ 12.98	$ 1,526,280
Sitework		$ 12.24	$ 1,439,290
Foundations		$ 9.58	$ 1,126,715
Substructure		$ 6.44	$ 757,567
Superstructure		$ 31.12	$ 3,659,081
Exterior Closure		$ 37.03	$ 4,354,044
Roofing		$ 15.49	$ 1,822,026
Interior Construction		$ 46.27	$ 5,441,245
Special Construction (Pools)		$ 28.55	$ 3,357,434
Conveying Systems		$ 6.83	$ 803,659
Mechanical		$ 37.07	$ 4,359,002
Electrical		$ 25.13	$ 2,955,332
Subtotal		$ 268.75	$ 31,601,676
Estimating Contingency	5.00%	$ 13.44	$ 1,580,084
Contractors Contingency	2.50%	$ 6.72	$ 790,042
Subtotal		$ 288.90	$ 33,971,802
Escalation to July 2013	2.50%	$ 7.22	$ 849,295
General Conditions	6.00%	$ 17.77	$ 2,089,266
GM/GC Fee	1.95%	$ 6.12	$ 719,752
Builder's Risk Insurance	0.25%	$ 0.80	$ 94,075
P&P Bond	0.68%	$ 2.20	$ 258,281
Total - New Construction		**$ 323.01**	**$ 37,982,470**

Area Recap

Lower Level	45,626	sf
Main Level	34,328	sf
Upper Level	37,635	sf
Total	**117,589**	**sf**

HSW / ACC VARIANCE REPORTS

Howard S. Wright
a Balfour Beatty company

Direct Construction Summary Variance

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG		

Description			Total	ACC	Variance
New Addition			$ 37,982,470	$ 37,997,707	$ 15,237
Leighton Pool Renovation (Fitness/Climbing Wall)			$ 1,578,983	$ 1,588,528	$ 9,545
Miscellaneous Renovations (Locker Room Area)			$ 453,120	$ 504,838	$ 51,718
Replace Existing Parking Spaces	42 ea	$ 5,000.00	$ 210,000	$ 210,000	$ -
Site Work at 15th Street			$ 103,988	$ 120,932	$ 16,944
Project Total			**$ 40,328,561**	**$ 40,422,005**	**$ 93,444**
Alternates					
Escalation from mid 2013 to mid 2014	3.00%		$ 1,209,857	$ 1,202,732	$ (7,125)
Replace Existing Fire Alarm			$ 229,830	$ 241,082	$ 11,252
Wayfinding Improvements	deleted from project				
Miscellaneous Esslinger Renovations	deleted from project				
Repair Fountain at Existing Front Door	deleted from project				
Replace Existing Field Turf	deleted from project				

Howard S. Wright
a Balfour Beatty company

New Construction Variance

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect:	RSA/RDG	GSF:	117,589

System		Unit Cost	Total	ACC	Variance
General Requirements		$ 12.98	$ 1,526,280	$ 1,542,972	$ (16,692)
Sitework		$ 12.24	$ 1,439,290	$ 1,531,799	$ (92,509)
Foundations		$ 9.58	$ 1,126,715	$ 1,028,499	$ 98,216
Substructure		$ 6.44	$ 757,567	$ 757,557	$ 10
Superstructure		$ 31.12	$ 3,659,081	$ 3,671,307	$ (12,226)
Exterior Closure		$ 37.03	$ 4,354,044	$ 4,384,543	$ (30,499)
Roofing		$ 15.49	$ 1,822,026	$ 1,741,592	$ 80,434
Interior Construction		$ 46.27	$ 5,441,245	$ 5,477,269	$ (36,024)
Special Construction (Pools)		$ 28.55	$ 3,357,434	$ 3,323,311	$ 34,123
Conveying Systems		$ 6.83	$ 803,659	$ 759,461	$ 44,198
Mechanical		$ 37.07	$ 4,359,002	$ 4,337,242	$ 21,760
Electrical		$ 25.13	$ 2,955,332	$ 2,967,068	$ (11,736)
Subtotal		$ 268.75	$ 31,601,676	$ 31,522,620	$ 79,056
Estimating Contingency	5.00%	$ 13.44	$ 1,580,084	$ 1,576,131	$ 3,953
Contractors Contingency	2.50%	$ 6.72	$ 790,042	$ 909,047	$ (119,005)
Subtotal		$ 288.90	$ 33,971,802	$ 34,007,798	$ (35,996)
Escalation to July 2013	2.50%	$ 7.22	$ 849,295	$ 827,469	$ 21,826
General Conditions	6.00%	$ 17.77	$ 2,089,266	$ 2,100,000	$ (10,734)
GM/GC Fee	1.95%	$ 6.12	$ 719,752	$ 726,783	$ (7,031)
Builder's Risk Insurance	0.25%	$ 0.80	$ 94,075	$ 90,066	$ 4,009
P&P Bond	0.68%	$ 2.20	$ 258,281	$ 245,591	$ 12,690
Total - New Construction		**$ 323.01**	**$ 37,982,470**	**$ 37,997,707**	**$ (15,237)**

Area Recap

Lower Level	45,626	sf
Main Level	34,328	sf
Upper Level	37,635	sf
Total	**117,589**	**sf**

HSW ESTIMATE DETAIL

Howard S. Wright
a Balfour Beatty company

New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity		Unit Price	Price	Comments
GENERAL REQUIREMENTS					
Staging & Site Access					
Staging					
Fabric at Staging	39,000	sf	$0.39	$15,220	
Rock at Staging	722	cy	$39.02	$28,184	
Fence	750	lf	$9.76	$7,317	
Temporary Road					
Cut to Stockpile	1,331	bcy	$9.76	$12,984	
Shoring	1,000	sf	$34.15	$34,146	
Fabric	15,400	sf	$0.39	$6,010	
Rock	376	cy	$39.02	$14,691	
Street Entrance	1	ls	$9,756.10	$9,756	
Site Requirements	15,400	sf	$0.98	$15,024	
Softball Pedestrian Pathway					
Clay	46	cy	$48.78	$2,258	
Grading	2,500	sf	$1.46	$3,659	
Main Pedestrian Pathway					
Jersey Barrier	300	lf	$14.63	$4,390	
Fence	600	lf	$9.76	$5,854	
Restore Field					
Fill from Stockpile	1,597	tcy	$24.39	$38,952	
Remove Shoring	50	lf	$97.56	$4,878	
Remove Rock	1,099	cy	$14.63	$16,078	
Repair Street Entrance	1	ls	$9,756.10	$9,756	
Repair Fence	1	ls	$9,756.10	$9,756	
Restore Irrigation	54,400	sf	$0.34	$18,576	
Topsoil	54,400	sf	$0.49	$26,537	
Seed	54,400	sf	$0.49	$26,537	
Site Requirements	15,400	sf	$0.49	$7,512	
				$318,074	
Fencing & Barricades	700	lf	$9.76	$6,829	
Tower Crane/Hoist	9	mos	$85,000.00	$765,000	
Multi-Trade Scaffolding	56,891	sf	$2.44	$138,759	
Temporary Roof	52,054	sf	$0.98	$50,784	
Final Cleaning	117,589	sf	$0.35	$40,980	
Temp Sanitation	18	mos	$1,951.22	$35,122	
Temporary Heat	1	ls	$97,560.98	$97,561	
Temporary Power	1	ls	$73,170.73	$73,171	
Subtotal				**$1,526,280**	

Howard S. Wright
a Balfour Beatty company

New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity		Unit Price	Price	Comments
SITEWORK					
Survey & Layout	1	ls	$29,268.29	$29,268	
Site Demolition					
Demo Tennis Court Canopy Structure	37,800	sf	$4.88	$184,390	
Demo Hardscape	100,000	sf	$0.49	$48,780	
Demo Retaining Walls, Stairs, Storage	1	ls	$48,780.49	$48,780	
Earthwork					
Remove Landscaping & Trees	11,000	sf	$1.95	$21,463	
Site Grading	56,000	sf	$1.95	$109,268	Non-Footprint Areas
Prep for Flatwork	30,606	sf	$2.44	$74,649	
Prep for Curbs	1,076	lf	$4.88	$5,249	
Prep for Walls	1,053	lf	$19.51	$20,546	
Erosion Control Measures	1	ls	$9,756.10	$9,756	
Fire & Domestic Water					
Demo Existing Lines	400	lf	$24.39	$9,756	
8" Fire Water Piping	365	lf	$73.17	$26,707	
6" Fire Water Piping	245	lf	$63.41	$15,537	
4" Domestic Water Piping	120	lf	$53.66	$6,439	
Premium for Trench Rock Excavation	324	cy	$97.56	$31,653	Assume 24" x 72" average trench
Fire Hydrants	2	ea	$2,926.83	$5,854	
Connect to Existing	2	ea	$1,463.41	$2,927	
Sanitary Sewer					
Demo Existing Lines	400	lf	$24.39	$9,756	
8" Sanitary Piping	330	lf	$53.66	$17,707	
Premium for Trench Rock Excavation	147	cy	$97.56	$14,309	Assume 24" x 72" average trench
Sanitary Manholes	3	ea	$3,414.63	$10,244	
Lift Station	1	ea	$24,390.24	$24,390	
Storm Drainage					
Demo Existing Lines	750	lf	$24.39	$18,293	
15" Storm Piping	365	lf	$73.17	$26,707	
10" Storm Piping	245	lf	$63.41	$15,537	
8" Storm Piping	120	lf	$53.66	$6,439	
4" & 6" Storm Piping	345	lf	$43.90	$15,146	
Premium for Trench Rock Excavation	597	cy	$97.56	$58,266	Assume 30" x 72" average trench
10"/15" Storm Piping at 15th Avenue	400	lf	$97.56	$39,024	Includes Street Cut & Patch
Catch Basins	5	ea	$1,365.85	$6,829	
Storm Drain Manholes	9	ea	$3,414.63	$30,732	
Connect to Existing	2	ea	$1,463.41	$2,927	
Site Concrete					
Pedestrian/Bike Path	24,480	sf	$4.39	$107,473	
Premium for Entry Plaza	3,261	sf	$5.37	$17,498	
Exterior Stairwells Flatwork	0	sf	$4.39	$0	Changed to Enclosed/SOG
Sidewalks at South Entry	3,000	sf	$4.39	$13,171	300 lf x 10 ft
16" Curb	1,076	lf	$11.71	$12,597	Added Curbs at Volleyball Courts
Seat Wall	376	lf	$97.56	$36,683	Assume 18" x 30"
Seat Wall Footing	28	cy	$365.85	$10,190	Assume 24" x 12"
Amphitheatre Seating Walls	677	lf	$102.44	$69,351	Assume 8" x 36"
Amphitheatre Seating Wall Footing	50	cy	$365.85	$18,347	Assume 24" x 12"
Amphitheatre Seating Flatwork	3,126	sf	$4.39	$13,724	
Asphalt Concrete Paving	3,792	sf	$2.44	$9,249	Replace due to Utility Work
Outdoor Basketball Court	0	sf	$14.63	$0	Changed to Sand Volleyball
Landscaping & Irrigation					
Berms & Planters	8,468	sf	$4.88	$41,307	
Outdoor Court Area	5,364	sf	$3.41	$18,316	Area Reduced for Volleyball
Sand Volleyball Courts	8,000	sf	$1.95	$15,610	(2) @ 50' x 80' (30' x 60' + 10' perim)
Site Furnishings					
Removable Bollard	1	ea	$1,951.22	$1,951	
Bike Hoops	47	ea	$195.12	$9,171	94 spaces
Covered Bike Shelters	680	sf	$39.02	$26,537	34 spaces x 20 sf
Secure Bike Storage	200	sf	$48.78	$9,756	
Green Screen at Entry	1	allow	$9,756.10	$9,756	
Outdoor Patio Furnishings	1	allow	$9,756.10	$9,756	
Basketball Standards	0	ea	$4,390.24	$0	Outdoor Courts are for Volleyball
Artificial Turf at Amphitheatre Seating	3,126	sf	$5.85	$18,299	
Ornamental Fencing	119	lf	$195.12	$23,220	Deleted at SE Corner
Replace Synthetic Turf Field No. 2	70,000	sf	$0.00	$0	No longer part of this project
Subtotal				**$1,439,290**	

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New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity		Unit Price	Price	Comments
FOUNDATIONS					
Spread & Wall Footings	941	cy	$341.46	$321,219	Reduced from .010 to .008 cy/gsf
Mass Excavation & Offhaul					455' >> 444' +12" = 12'0"
First 10' - Soils	16,899	cy	$16.10	$272,025	
Final 24" - Rock Excavation	3,380	cy	$97.56	$329,727	
Reinforcing Steel	75,257	lbs	$0.63	$47,724	80 lbs/cy
Footings Excavation - Rock Excavation	1,411	cy	$97.56	$137,665	
Footing Backfill	941	cy	$19.51	$18,355	
Subtotal				**$1,126,715**	
SUBSTRUCTURE					
Earthwork					
Temporary Shoring at Gymnasium	0	sf	$48.78	$0	Design will avoid
Perimeter Backfill	720	cy	$30.00	$21,600	
SOG Base Course - 6"	779	cy	$40.00	$31,160	
Perimeter Foundation Drains	1,047	lf	$20.00	$20,940	
Substructure Concrete					
Slab On Grade					
Lower Level	31,836	sf	$4.50	$143,262	Added Enclosed Stairwells
Main Level	10,210	sf	$4.50	$45,945	Added Enclosed Stairwells
Elevator Pit	2	ls	$6,341.46	$12,683	
Foundation Walls - 10" thick CIP	9,210	sf	$35.00	$322,350	
Substructure Reinforcing Steel					
Slab On Grade	50,455	lbs	$1.00	$50,455	1.20 lbs/sf
Foundation Walls	55,260	lbs	$1.00	$55,260	6.00 lbs/sf
Foundation Wall Waterproofing	9,210	sf	$5.85	$53,912	
Subtotal				**$757,567**	
SUPERSTRUCTURE					
Main Level					
Concrete					
Basement Walls	0	sf	$0.00	$0	w/ Substructure
Typical Columns	36	cy	$731.71	$26,016	24" x 24"
Slab-On-Metal Deck	15,163	sf	$2.93	$44,380	
Topping Slab at Planks	8,580	sf	$2.93	$25,112	
Reinforcing Steel					
Typical Columns	18,000	lbs	$0.63	$11,415	75 lbs/lf
Welded Wire Mesh	23,743	sf	$0.49	$11,582	
Precast Concrete Planks	8,580	sf	$7.80	$66,966	
CMU Walls - Locker Rooms	0	sf	$0.00	$0	w/ Interior Construction
Main Level Steel Framing	61	tons	$2,250.00	$137,250	8 lbs/sf
Metal Floor Deck	15,163	sf	$2.44	$36,983	
Steel & Precast Plank Erection	23,743	sf	$5.00	$118,715	
Floor Seismic Joint	168	lf	$195.12	$32,780	
Fireproofing	15,163	sf	$2.44	$36,983	Primary Members Only
Upper Level & Low Roof					
Concrete					
Perimeter Walls - 10" thick w/ Piers	0	sf	$34.15	$0	changed to CMU
Natatorium Column	10	cy	$731.71	$7,439	36" x 36"
Slab-On-Metal Deck	36,998	sf	$2.93	$108,287	
Topping Slab at Planks	9,680	sf	$2.93	$28,332	
Reinforcing Steel					
Natatorium Column	6,100	lbs	$0.63	$3,868	200 lbs/lf
Welded Wire Mesh	46,678	sf	$0.49	$22,770	
Precast Concrete Planks	9,680	sf	$7.80	$75,551	
CMU Walls - Locker Rooms	0	sf	$0.00	$0	w/ Interior Construction
Upper Level Steel Framing					
Over Natatorium - Steel	46	tons	$2,250.00	$102,504	5 lbs/sf
Over Natatorium - Long Span Joists	91	tons	$2,000.00	$182,230	10 lbs/sf
Balance of Upper Level	75	tons	$2,250.00	$168,975	8 lbs/sf
Wall Truss - Natatorium NE Wall	23	tons	$2,750.00	$61,875	500 lbs/lf
Metal Floor Deck	18,775	sf	$2.44	$45,793	
Metal Floor Deck - Acoustical	18,223	sf	$4.88	$88,893	Standard Punched (Epic is Excluded)
Steel & Precast Plank Erection	46,678	sf	$5.00	$233,390	
Floor Seismic Joint	236	lf	$195.12	$46,049	
Fireproofing	18,775	sf	$2.44	$45,793	Primary Members Only
Intumescent Fireproofing	18,223	sf	$9.76	$177,785	at Natatorium Trusses

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New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity	Unit Price	Price	Comments
Roof Level				
Concrete				
Slab-On-Metal Deck	41,859 sf	$2.93	$122,514	
Reinforcing Steel				
Welded Wire Mesh	41,859 sf	$0.49	$20,419	
CMU Walls - West Roof Support	5,928 sf	$17.56	$104,101	
Roof Level Steel Framing				
Over Gymnasium - Steel	53 tons	$2,250.00	$119,340	5 lbs/sf
Over Gymnasium - Long Span Joists	53 tons	$2,000.00	$106,080	5 lbs/sf
Balance of Upper Level	105 tons	$2,250.00	$235,457	5 lbs/sf
Wall Truss - Gymnasium East Wall	78 tons	$2,750.00	$214,500	750 lbs/lf
Metal Floor Deck	20,643 sf	$2.44	$50,349	
Metal Floor Deck - Acoustical	21,216 sf	$4.88	$103,493	Standard Punched (Epic is Excluded)
Steel Erection	41,859 sf	$5.00	$209,295	
Fireproofing	41,859 sf	$3.50	$146,507	Primary Members Only
Intumescent Fireproofing	0 sf	$10.00	$0	
All Areas				
Miscellaneous Iron	114,517 sf	$1.46	$167,586	
Miscellaneous Concrete	114,517 sf	$0.98	$111,724	
Subtotal			**$3,659,081**	
EXTERIOR CLOSURE				
Cladding				
Brick Veneer	14,363 sf	$28.41	$408,053	Qnty from model
Ledger Angles	1,436 lf	$34.15	$49,044	
Masonry Sealer	14,363 sf	$1.22	$17,516	
Metal Panels or Precast	24,614 sf	$50.00	$1,230,700	Qnty from model; UP is an allowance
Stucco Soffits	3,140 sf	$26.00	$81,640	Changed from Metal Panels
Masonry				
Perimeter Walls - 8" thick w/ Pilasters	6,641 sf	$16.00	$106,256	
Bracing, Rough Bucks, Embeds, etc.	6,641 sf	$4.00	$26,564	
Perimeter Walls - 8" thick w/ Pilasters	66,410 lbs	$0.45	$29,885	10 lbs/sf - install w/ masonry
Punched Openings	2,353 sf	$60.00	$141,180	Qnty from model
Storefronts	433 sf	$60.00	$25,980	Qnty from model
Curtainwall	12,579 sf	$80.00	$1,006,320	Qnty from model
Vertical Mesh Fins	302 lf	$97.56	$29,463	Qnty from model
Horizontal Louvers	1,800 sf	$73.17	$131,707	Qnty from model
Clerestory Windows	1,375 sf	$63.41	$87,195	Qnty from model
Aluminum Entry Doors - Pairs	8 opng	$7,317.07	$58,537	
Hollow Metal Doors - Pairs	7 opng	$2,926.83	$20,488	
Overhead Coiling Door	1 opng	$3,902.44	$3,902	
Power Openers	1 LS	$50,000.00	$50,000	
Caulking	1 ls	$48,000.00	$48,000	
Flashing	117,589 sf	$0.99	$115,990	
Backup				
Struct Studs, Sheathing, Insulation, Wrap				
Finish One Face	29,199 sf	$20.00	$583,980	
Finish Both Faces	0 sf	$19.51	$0	Stairwell Enclosed - Not Required
Soffits	2,319 sf	$18.00	$41,742	
Damproofing at Concrete Walls	11,622 sf	$2.44	$28,346	
Masonry Flashings	14,363 sf	$1.46	$21,019	
Exterior Wall Seismic Joints	72 lf	$146.34	$10,537	
Subtotal			**$4,354,044**	

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New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity		Unit Price	Price	Comments
ROOFING					
Low Roof					
Membrane Waterproofing	8,755	sf	$11.00	$96,305	
Roof Pavers	8,755	sf	$19.51	$170,829	Added at Rooftop Courts
Rooftop Courts	2,800	sf	$4.88	$13,659	Reinstall Existing
Skylight	1,440	sf	$73.17	$105,366	Kalwall
Rough Carpentry	10,195	sf	$0.98	$9,946	
Parapet Cap Flashing	171	lf	$48.78	$8,341	
Flashing & Sheet Metal	10,195	sf	$0.98	$9,946	
Main & Upper Roofs					
Membrane Roofing & Rigid Insulation	37,699	sf	$11.00	$414,689	
Roof Monitors					
Curbs	912	lf	$73.17	$66,732	
Vertical Framing, Sheathing, Insul, Wrap	0	sf	$14.63	$0	
Metal Panels	0	sf	$48.78	$0	
Curtainwall	784	sf	$78.05	$61,190	
Sloped Framing, Sheathing, Insulation	0	sf	$14.63	$0	
Tube Steel Framing	33	tons	$4,390.24	$143,824	
Kalwall	6,552	sf	$78.05	$511,376	
Louvers/Ventilators	0	ea	$9,756.10	$0	
Rough Carpentry	41,859	sf	$0.98	$40,838	
Parapet Cap Flashing	1,387	lf	$48.78	$67,659	
Flashing & Sheet Metal	41,859	sf	$0.98	$40,838	
Roof Seismic Joint	310	lf	$195.12	$60,488	
Subtotal				**$1,822,026**	
INTERIOR CONSTRUCTION					
Division 3 - Concrete					
Concrete - Stained & Polished	22,485	sf	$5.85	$131,620	
Concrete - Sealed	11,254	sf	$1.46	$16,469	
Concrete - Pool Deck	0	sf	$0.00	$0	Changed to Tile
Division 4 - Masonry					
Locker Room CMU Walls - Lower Level	13,398	sf	$15.61	$209,140	
Locker Room CMU Walls - Main Level	14,268	sf	$15.61	$222,720	
Division 5 - Metals					
Division 6 - Wood & Plastics					
Rough Carpentry	117,589	gsf	$0.49	$57,735	
Control Station	40	lf	$750.00	$30,000	
Equipment Checkout Station	40	lf	$750.00	$30,000	
Locker & Restroom Vanity Counters	128	lf	$500.00	$64,000	
Miscellaneous	1	ls	$24,390.24	$24,390	
Wood Paneling at Gymnasium	6,912	sf	$9.76	$67,434	to 12' AFF
Division 8 - Openings					
Interior Storefronts	5,337	sf	$43.90	$234,307	Assume 9'0" tall in all locations
Aluminum Entry Doors - Singles	6	opng	$3,902.44	$23,415	
Aluminum Entry Doors - Pairs	9	opng	$7,317.07	$65,854	
Mirrors at Vanities	512	sf	$9.76	$4,995	
Full Height Mirrors at Mind Body Yoga	810	sf	$9.76	$7,902	
Hollow Metal Doors - Singles	33	opng	$1,756.10	$57,951	
Hollow Metal Doors - Pairs	13	opng	$2,926.83	$38,049	
Horizontal Fire Shutter at Atrium	3,200	sf	$121.95	$390,244	
Division 9 - Finishes					
Partitions					
Standard Partitions	6,407	sf	$7.80	$50,006	
Plumbing Chases	182	sf	$11.71	$2,131	
Elevator Shafts	2,085	sf	$11.71	$24,410	
Interior Storefront Headers	3,016	sf	$9.76	$29,424	
Gypboard at Structural Studs	29,199	sf	$3.41	$99,704	
Ceilings					
Gypboard Ceilings	3,588	sf	$8.29	$29,754	Added Showers
Clouds at Locker Room Dry Areas	9,180	sf	$19.51	$179,122	
Natatorium Ceiling - Low	3,859	sf	$19.51	$75,298	Assume to be Cement Plaster
Acoustical Treatment at Natatorium	1	allow	$14,634.15	$14,634	
Fitness Areas	18,084	sf			
Wood Slat Ceilings	12,055	sf	$31.22	$376,345	67% of Area
Veneer Plaster	0	sf	$9.76	$0	
Paint Exposed Structure	18,084	sf	$0.98	$17,643	
Public Circulation Areas	27,866	sf			

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New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description	Quantity		Unit Price	Price	Comments
Acoustic Panels	18,575	sf	$19.51	$362,448	67% of Area
Veneer Plaster	0	sf	$9.76	$0	
Paint Exposed Structure	27,866	sf	$0.98	$27,186	
Tiling					
Bathrooms & Lockers					
Ceramic Tile Floors	11,314	sf	$16.59	$187,647	
Ceramic Tile Base	1,766	lf	$13.66	$24,121	
Ceramic Tile Walls	6,300	sf	$13.66	$86,049	Wet Walls Only
Natatorium					
Ceramic Tile Floors	9,483	sf	$19.51	$185,034	
Ceramic Tile Base	664	lf	$13.66	$9,069	
Ceramic Tile Wainscot	5,312	sf	$13.66	$72,554	
Flooring					
Wood Flooring - Activity	2,208	sf	$11.71	$25,850	
Wood Flooring - Gymnasium	18,585	sf	$11.71	$217,580	
Resilient	539	sf	$4.88	$2,629	
Rubber Athletic Flooring	17,843	sf	$12.00	$214,116	Added at Main Level north of Atrium
Carpet	379	sy	$39.02	$14,799	
Painting	117,589	sf	$2.45	$288,676	
Division 10 - Specialties					
Visual Display Surfaces & Fabrics	1	allow	$9,756.10	$9,756	
Display Case	1	allow	$24,390.24	$24,390	
Directories & Signage	1	allow	$48,780.49	$48,780	
Toilet Partitions	19	ea	$1,170.73	$22,244	
Urinal Screens	4	ea	$487.80	$1,951	
Shower Compartments	30	ea	$1,170.73	$35,122	
Cubicle Curtains	1	allow	$4,878.05	$4,878	
Toilet & Bath Accessories	1	ls	$9,756.10	$9,756	OFCI per Specs
Emergency Key Cabinets	2	ea	$487.80	$976	
Defibrillator Units	3	ea	$2,439.02	$7,317	1 per floor
Fire Protection Specialties	38	ea	$268.29	$10,195	1 per 3000 sf
Metal Lockers - 15" x 15" x 36"	762	ea	$330.00	$251,460	Counts per 3.21.12 memo
Metal Lockers - 15" x 15" x 24"	888	ea	$250.00	$222,000	Counts per 3.21.12 memo
Locker Benches	192	lf	$97.56	$18,732	16 loc x 12 lf
Division 11 - Equipment					
Access Control Gates & Turnstiles	1	allow	$97,560.98	$97,561	Salvage Existing ?
Projections Screens	1	allow	$9,756.10	$9,756	
TV Monitor Mounts	1	allow	$9,756.10	$9,756	
Ceiling Mount Elec Op Basketball Backstops	6	ea	$9,756.10	$58,537	
Ceiling Mount Elec Op Volleyball Standards	3	ea	$0.00	$0	Deleted - Floor Inserts OFCI
Aquatic Timing System	0	ea	$0.00	$0	OFOI
Basketball Scoreboards	3	ea	$4,878.05	$14,634	Score & Time Only
Natatorium Water Polo Scorboard	1	ea	$4,878.05	$4,878	
Gym Divider Curtains	2	ea	$24,390.24	$48,780	
Wall Mats	6	loc	$2,439.02	$14,634	
Division 12 - Furnishings					
Window Treatments	8,583	sf	$21.46	$184,210	Elec Op Mecho Shades
Entrance Floor Mats & Frames	789	sf	$48.78	$38,488	
Subtotal				**$5,441,245**	
SPECIAL CONSTRUCTION					
Pools & Spas	1	ls	$2,942,800.00	$2,942,800	
Surge Tanks, etc.	1	ls	$48,780.49	$48,780	
Rock Excavation	5,000	cy	$73.17	$365,854	
Subtotal				**$3,357,434**	
CONVEYING SYSTEMS					
Elevator - 2 stop	1	ea	$58,536.59	$58,537	$186,586
Elevator - 3 stop	1	ea	$78,048.78	$78,049	
Adder for Non-Proprietary Components	1	ls	$50,000.00	$50,000	
Floor Opening Railings - Main Level	472	lf	$243.90	$115,122	$617,073
Floor Opening Railings - Upper Level	334	lf	$243.90	$81,463	
Stairwell Railings	400	lf	$195.12	$78,049	Moved from Conveying Systems
Locker Room Stairs	4	flts	$6,341.46	$25,366	
New Gymnasium Exit Stairs	10	flts	$9,756.10	$97,561	
Existing Gymnasium Exit Stairs	2	flts	$9,756.10	$19,512	
Monumental Stairs	10	flts	$20,000.00	$200,000	
Subtotal				**$803,659**	

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New Construction - Detail

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG	GSF:	117,589

Description		Quantity		Unit Price	Price	Comments
MECHANICAL						
Fire Protection		117,589	sf	$2.70	$317,543	
Plumbing & HVAC		117,589	sf	$34.37	$4,041,459	Allowance
	Subtotal				**$4,359,002**	
ELECTRICAL						
Electrical & Low Voltage		117,589	sf	$23.70	$2,787,218	CCE budget
Site Elect		117,589	sf	$0.60	$70,553	
Site Lighting Allowance		1	allow	$97,560.98	$97,561	
	Subtotal				**$2,955,332**	

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Renovations

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG		

Description	Quantity		Unit Price	Price	Comments
LEIGHTON POOL (GRIDS 9-15 / A-G)					
Interior Demolition	14,200	sf	$4.88	$69,268	Deleted work east of Climbing
Remove Knockouts & Windows	1	ls	$48,780.49	$48,780	
Structural Lid at Existing Pool	3,520	sf	$43.90	$154,537	
Other Structural Modifications	1	ls	$243,902.44	$243,902	per Narrative - not enough info to price
Modify Gymnasium Bleachers/Stairs	0	loc	$14,634.15	$0	Not required
Interior Construction					
Concrete -Stained & Polished	4,582	sf	$5.85	$26,821	Deleted Healthy Oregon & Exist. Gym
Interior Storefronts	1,674	sf	$43.90	$73,493	Assume 9'0" tall at Lounge/Fitness Only
Aluminum Entry Doors - Pairs	0	opng	$7,317.07	$0	Deleted work east of Climbing
Hollow Metal Doors - Singles	1	opng	$1,756.10	$1,756	
Full Height Demising Wall - Gyp One Side	1,955	sf	$7.80	$15,259	
Interior Storefront Headers	0	sf	$9.76	$0	None Required
Fitness & Circulation Area Ceilings	8,540	sf	$19.51	$166,634	Allowance - All Ceilings Are High
Rubber Athletic Flooring	2,811	sf	$9.76	$27,424	Deleted Healthy Oregon
Carpet	127	sy	$39.02	$4,973	Deleted work east of Climbing
Painting	14,200	sf	$2.44	$34,634	
Climbing Floor Mats	3,019	sf	$0.00	$0	Existing or OFOI ??
Entrance Floor Mats & Frames	202	sf	$48.78	$9,854	
Fire Protection	14,200	sf	$2.44	$34,634	
Mechanical	14,200	sf	$10.73	$152,390	Allowance
Electrical	14,200	sf	$17.56	$249,366	
Subtotal				$1,313,725	
Estimating Contingency	5.00%			$65,686	
Contractors Contingency	2.50%			$32,843	
Subtotal				$1,412,254	
Escalation to July 2013	2.50%			$35,306	
General Conditions	6.00%			$86,854	
GM/GC Fee	1.95%			$29,921	
Builder's Risk Insurance	0.25%			$3,911	
P&P Bond	0.68%			$10,737	
Total				**$1,578,983**	
MISCELANEOUS RENOVATIONS					
Healthy Oregon	2,379	sf	$34.15	$81,234	
Laundry, Student Hub, etc.	2,756	sf	$107.32	$295,766	
Subtotal				$377,000	
Estimating Contingency	5.00%			$18,850	
Contractors Contingency	2.50%			$9,425	
Subtotal				$405,275	
Escalation to July 2013	2.50%			$10,132	
General Conditions	6.00%			$24,924	
GM/GC Fee	1.95%			$8,586	
Builder's Risk Insurance	0.25%			$1,122	
P&P Bond	0.68%			$3,081	
Total				**$453,120**	
REPLACE EXISTING FIRE ALARM					
Replace Existing Fire Alarm	1	ls	$191,219.51	$191,220	
Estimating Contingency	5.00%			$9,561	
Contractors Contingency	2.50%			$4,781	
Subtotal				$205,562	
Escalation to July 2013	2.50%			$5,139	
General Conditions	6.00%			$12,642	
GM/GC Fee	1.95%			$4,355	
Builder's Risk Insurance	0.25%			$569	
P&P Bond	0.68%			$1,563	
Total				**$229,830**	

Howard S. Wright
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Site Work at 15th Street

Project:	**UO Student Rec Center**	Estimate No.:	2.3
Location:	Eugene, OR	Date:	28-Mar-2012
Owner:	UO	Estimator:	BJ/DRP
Architect	RSA/RDG		

Description	Quantity	Unit Price	Price	Comments
SITEWORK				
Add'l Work at 15th Street - 3/6/12 email				
Site Demolition	9,900 sf	$0.98	$9,659	
Site Grading	9,900 sf	$1.95	$19,317	
Prep for Flatwork	6,690 sf	$2.44	$16,317	
Vehichle Loaded Concrete	3,470 sf	$4.39	$15,234	
Sidewalks	3,220 sf	$4.39	$14,137	
Planting Beds	1,910 sf	$4.88	$9,317	
Landscape Repairs	1,300 sf	$1.95	$2,537	
Subtotal			$86,518	
Estimating Contingency	5.00%		$4,326	
Contractors Contingency	2.50%		$2,163	
Subtotal			$93,007	
Escalation to July 2013	2.50%		$2,325	
General Conditions	6.00%		$5,720	
GM/GC Fee	1.95%		$1,971	
Builder's Risk Insurance	0.25%		$258	
P&P Bond	0.68%		$707	
Total			**$103,988**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date: *Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

DIRECT CONSTRUCTION COST SUMMARY

Component	Area		$ / SF	Total	
New Addition Estimate	117,525	sf	$322.94 /sf	$37,953,934	
Fitness/Climbing Wall Area Remodel Est.	17,200	sf	$92.36 /sf	$1,588,641	
Locker Room Area Remodel Estimate	6,800	sf	$74.25 /sf	$504,874	
Subtotal				$40,047,449	
Replace Parking Spaces	*42*	*ea*	*$5,000.00 / ea*	*210,000*	
06 | Add Site Work @ 15th Street				120,940	
TOTAL DIRECT CONSTRUCTION COST	141,567	sf	$285.22 /sf	**$40,378,389**	
Budget				35,500,000	verify
Indicated Surplus / (Deficit)				(4,878,389)	

ALTERNATES			
01 | Upgrade Membrane Roof	Add ±	118,658	
02 | Add Green Roof	Add ±	34,873	
03 | Upgrade Lockers	Add ±	165,632	
04 | Add Wayfinding Improvements Allowance per previous narrative	*Add ±*	*0*	*deleted 3/13 meeting*
05 | Escalation from July 1, 2013 to July 1, 2014 - Base Bid (Alts NIC)	Add ±	1,201,423	@ ± 2.5% per year
06 | Add Site Work @ 15th Street	Add ±	see above	
07 | Replace Field # 2 Synthetic Turf	*Add ±*	*0*	*deleted 3/13 meeting*
08 | Upgrade Natatorium Skylight	Add ±	82,572	
09 | Miscellaneous Esslinger Renovations	Add ±	0	w/ above ????
10 | Repair Fountain @ Existing Front Door	*Add ±*	*0*	*deleted 3/13 meeting*
11 | Replace Existing Fire Alarm	Add ±	241,099	

The above estimates are for direct construction cost only. They do not include furnishings & equipment, architect and engineer design fees, consultant fees, inspection and testing fees, plan check fees, state sales tax, hazardous material testing and removal, financing costs, nor any other normally associated development costs.

The above estimates assume a competitive subcontractor bids, with at least three qualified bidders in each of the major sub-trades.

The above estimates assume a construction start date of: July 2013. If the start of construction is delayed beyond the date above, the estimates must be indexed at a rate of 3 to 4% per year compounded.

This is a probable cost estimate based on in-progress documentation provided by the architect. The actual bid documents will vary from this estimate due to document completion, detailing, specification, addendum, etc. The estimator has no control over the cost or availability of labor, equipment, materials, over market conditions or contractor's method of pricing, contractor's construction logistics and scheduling. This estimate is formulated on the estimator's professional judgment and experience. The estimate makes no warranty, expressed or implied, that the quantities, bids or the negotiated cost of the work will not vary from the estimator's opinion of probable construction cost.

The cost / unit costs include 1% sub guard bond cost, layout and dust & barrier protection.

Structural steel quantities adjusted per architect and engineer input. ACC dose not necessarily agree with these modifications, but this estimate reflects the directive given by the design team.

The exterior enclosure quantities are quantities provided by the design team.

Student Recreation Center	***Architectural Cost Consultants, LLC***	Estimate Date: Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
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Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

SUMMARY	**New Building Addition**	**Fitness / Climbing Area Remodel**	**Locker Room Area Remodel**	**Totals**	

DIRECT CONSTRUCTION COSTS	**$/SF**	**Cost**	**$/SF**	**Cost**	**$/SF**	**Cost**		**Comments**
Area - SF		117,525		17,200		6,800	141,525	sf
001 | GENERAL REQUIREMENTS	13.13	$1,542,972	1.97	$33,875	1.97	$13,393	1,590,240	
A10 | FOUNDATIONS	8.75	1,028,499	0.56	9,634	0.00	0	1,038,133	
A20 | BASEMENT CONSTRUCTION	6.45	757,557	0.00	0	0.00	0	757,557	
B10 | SUPERSTRUCTURE	30.91	3,632,746	7.38	126,921	0.00	0	3,759,667	
B20 | EXTERIOR CLOSURE	37.31	4,384,543	0.00	0	0.00	0	4,384,543	
B30 | ROOFING	14.82	1,741,592	0.00	0	0.00	0	1,741,592	
C10 | INTERIOR CONSTRUCTION	20.54	2,413,934	10.97	188,628	11.82	80,358	2,682,920	
C20 | STAIRS	5.27	619,425	3.17	54,464	0.00	0	673,889	
C30 | INTERIOR FINISHES	21.84	2,566,171	21.57	370,993	16.81	114,293	3,051,457	
D10 | CONVEYING SYSTEMS	1.19	140,036	0.00	0	0.00	0	140,036	
D20 | PLUMBING SYSTEMS	0.00	w /D30 hvac	0.68	11,685	0.43	2,899	14,584	
D30 | HVAC SYSTEMS	34.24	4,023,658	11.16	191,916	7.85	53,403	4,268,977	
D40 | FIRE PROTECTION SYSTEMS	2.67	313,584	1.52	26,058	1.52	10,302	349,944	
D50 | ELECTRICAL SYSTEMS	25.25	2,967,068	9.58	164,818	12.84	87,282	3,219,168	
E10 | EQUIPMENT	2.07	243,614	0.65	11,110	0.00	0	254,724	
E20 | FURNISHINGS	2.16	253,550	0.29	5,050	0.00	0	258,600	
F10 | SPECIAL CONSTRUCTION	28.28	3,323,311	0.00	0	0.00	0	3,323,311	
F20 | SELECTIVE DEMOLITION	2.14	251,219	7.13	122,679	8.36	56,880	430,778	
G10 | SITE PREPARATION	3.03	355,622	0.00	0	0.00	0	355,622	
G20 | SITE IMPROVEMENTS	5.21	612,532	0.00	0	0.00	0	612,532	
G30 | SITE MECHANICAL UTILITIES	2.66	312,426	0.00	0	0.00	0	312,426	
G40 | SITE ELECTRICAL UTILITIES	0.00	w/ D50 Elect	0.00	0	0.00	0	0	
G90 | OTHER SITE CONSTRUCTION	0.00	0	0.00	0	0.00	0	0	
SUB-TOTAL	**267.89**	**$31,484,059**	**76.62**	**$1,317,831**	**61.59**	**$418,810**	**$33,220,700**	
Estimating Contingency 5.00%	13.39	1,574,203	3.83	65,892	3.08	20,941	1,661,035	
Index To Construction Start 2.50%	7.03	826,457	2.01	34,593	1.62	10,994	872,043	
General Conditions 6.20%	17.87	2,100,000	5.11	87,900	4.11	27,935	2,215,835	
Builders Risk Insurance 0.25%	0.77	89,962	0.22	3,766	0.18	1,197	94,924	
Subcontractor Bond 0.00%	0.00	0	0.00	0	0.00	0	0	incl. w/ cost / unit above
CMGC Bond 0.68%	2.09	245,308	0.60	10,268	0.48	3,263	258,839	
Contractors Contingency 2.50%	0.00	908,000	2.21	38,006	1.78	12,078	958,084	
CMGC Fee 1.95%	6.18	725,946	1.77	30,386	1.42	9,657	765,988	
TOTAL DIRECT CONSTRUCTION COST	**315.22**	**$37,953,934**	**92.36**	**$1,588,641**	**74.25**	**$504,874**	**$40,047,449**	

New Addition Estimate

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date: *Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
001 | GENERAL REQUIREMENTS						1.01475
lay down area / staging / fencing	*1*	*sum*	*339,941.70*	*339,942*		*per HSW*
material / man hoisting	9	mo	76,106.35	684,957		allowance
temporary heat	1	sum	101,475.14	101,475		allowance
temp sanitation	18	mo	2,029.50	36,531		
temp lighting	*117,525*	*sf*	*0.76*	*89,444*		*verify if in HSW elect number*
final cleaning	117,525	sf	0.397	46,704		
temp roof	*1*	*sum*	*50,737.57*	*50,738*		
temp window protection	14,932	sf	2.03			*w/ cost / unit*
layout	*117,525*	*sf*	*0.76*			*w/ cost / unit*
temp dust & protection barriers	*117,525*	*sf*	*0.51*			*w/ cost / unit*
temp weather protection	30	wk	1,623.60	48,708		
multi-trade scaffolding	*60,584*	*sf*	*2.38*	*144,473*		
Sub-total	117,525	sf	13.13	/sf	1,542,972	
SUB-TOTAL 001 | GENERAL REQUIREMENTS			13.13	/sf	**$1,542,972**	
A10 | FOUNDATIONS						
Excavation & Fill						
basement excavation	*19,937*	*cy*	*8.12*	*161,849*		
premium for rock excavation	*3,323*	*cy*	*83.21*	*276,506*		*above cost of mass excavation*
elevator pit excavation - rock	*97*	*cy*	*101.48*	*9,843*		
pools excavation - rock	*5,000*	*cy*	*0.00*	*0*		*w/ pools below*
footing excavation - rock	*783*	*cy*	*101.48*	*79,404*		*assume all rock excavation*
haul & disposal	*25,817*	*cy*	*10.15*	*261,973*		
footing backfill	470	cy	20.30	9,529		
basement perimeter backfill	1,600	cy	20.30	32,472		
fill @ raised outdoor patio area	778	cy	20.30	15,785		
Sub-total	117,525	sf	7.21	/sf	$847,361	
Forming						
continuous wall footing	*4,500*	*sf*	*5.83*	*26,257*		
spread footings	720	sf	6.09	4,384		
Sub-total	117,525	sf	0.26	/sf	30,641	
Reinforcing Steel						
continuous wall footing	*20,600*	*lbs*	*0.81*	*16,723*		*assume 75#/cy*
spread footings	2,800	lbs	0.81	2,273		assume 75#/cy
Sub-total	117,525	sf	0.16	/sf	18,996	
Redi-Mix Concrete						
3000 psi	*313.0*	*cy*	*96.40*	*30,174*		
Sub-total	117,525	sf	0.26	/sf	30,174	
Placing						
continuous wall footing	*275.0*	*cy*	*25.37*	*6,976*		
spread footings	38.0	cy	24.35	925		
pump / transport concrete	313.0	cy	*30.44*	9,529		
Sub-total	117,525	sf	0.15	/sf	17,430	
Finishing						
float footing tops	5,060	sf	0.46	2,311		
Sub-total	117,525	sf	0.02	/sf	2,311	
A10 | FOUNDATIONS - Continued						

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
Foundation Drainage						
6" perf drain pipe @ perim. found/elev pit	1,200	lf	12.18	14,612		
4" underslab drain pipe @ basement	44,000	sf	1.52	66,974		
Sub-total	117,525	sf	0.69	/sf	81,586	
SUB-TOTAL A10 | FOUNDATIONS			8.75	/sf	**$1,028,499**	
A20 | BASEMENT CONSTRUCTION						
Excavation & Fill						
level & grade	50,700	sf	0.25	12,862		
6" gravel under slab	986	cy	*35.52*	35,019		
vapor barrier	55,770	sf	0.25	14,148		
Sub-total	117,525	sf	0.53	/sf	$62,029	
Forming						
basement walls	*19,380*	*sf*	*9.13*	*176,993*		
columns	1,400	sf	10.15	14,207		
slab on grade @ lower level	44,000	sf	0.51	22,325		assume 5" sog
slab on grade @ main level	6,700	sf	0.51	3,399		assume 5" sog
Sub-total	117,525	sf	1.85	/sf	216,924	
Reinforcing Steel						
basement walls	*50,300*	*lbs*	*0.81*	*40,834*		*assume 120/160#/cy*
columns	1,900	lbs	0.81	1,542		assume 100#/cy
slab on grade @ lower level	44,000	lbs	0.81	35,719		assume 1#/sf
slab on grade @ main level	6,700	lbs	0.81	5,439		
Sub-total	117,525	sf	0.71	/sf	83,534	
Redi-Mix Concrete						
4000 psi	*1,047.0*	*cy*	*101.48*	*106,244*		
Sub-total	117,525	sf	0.90	/sf	106,244	
Placing						
basement walls	*315.0*	*cy*	*86.25*	*27,170*		
columns	19.0	cy	91.33	1,735		
slab on grade @ lower level	713.0	cy	24.35	17,364		
slab on grade @ main level	109.0	cy	24.35	2,655		
pump / transport concrete	1,047.0	cy	*30.44*	31,873		
Sub-total	117,525	sf	0.69	/sf	80,797	
Finishing						
set screeds	50,700	sf	0.15	7,717		
cure slabs	50,700	sf	0.25	12,862		
trowel slabs	50,700	sf	0.86	43,731		
sealer	50,700	sf	0.56	28,296		
sawcut control joint at sog	50,700	sf	0.20	10,290		
break wall ties, patch & plug	*19,380*	*sf*	*2.28*	*44,248*		
waterproofing @ below grade walls	10,000	sf	6.09	60,885		
Sub-total	117,525	sf	1.77	/sf	208,029	
Shoring & Underpinning						
shore/underpinning @ NW corner	*0*	*sf*	*152.21*	*0*		*deleted per 3/13 meeting*
Sub-total	117,525	sf	0.00	/sf	0	
SUB-TOTAL A20 | BASEMENT CONSTRUCTION			6.45	/sf	**$757,557**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	*Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date:	27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date:	28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time:	4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start:	01-Jul-13

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
B10 | SUPERSTRUCTURE						
Floor Construction						
Forming						
topping slab on precast planks	21,250	sf	0.51	10,782		3" topping
topping slab on metal deck	76,750	sf	0.51	38,941		assume 3" topping
walls	*8,570*	*sf*	*9.13*	*78,268*		
columns	1,610	sf	10.15	16,337		
Sub-total	117,525	sf	1.23	/sf	144,328	
Reinforcing Steel						
topping slab on precast planks	21,250	lbs	0.81	17,251		assume 1#/sf
topping slab on metal deck	76,750	lbs	0.81	62,306		assume 1#/sf
walls	*22,300*	*lbs*	*0.81*	*18,103*		
columns	2,200	lbs	0.81	1,786		assume 100#/cy
Sub-total	117,525	sf	0.85	/sf	99,446	
Redi-Mix Concrete						
4000 psi	*1,488.0*	*cy*	*101.48*	*150,995*		
Sub-total	117,525	sf	1.28	/sf	150,995	
Placing						
topping slab on precast planks	207.0	cy	23.34	4,831		
topping slab on metal deck	1,120.0	cy	25.37	28,413		
walls	*139.0*	*cy*	*86.25*	*11,989*		
columns	22.0	cy	91.33	2,009		
pump / transport concrete	1,488.0	cy	30.44	45,299		
Sub-total	117,525	sf	0.79	/sf	92,541	
Finishing						
set screeds						
topping slab on precast planks	21,250	sf	0.15	3,235		
topping slab on metal deck	76,750	sf	0.15	11,682		
cure slabs						
topping slab on precast planks	21,250	sf	0.25	5,391		
topping slab on metal deck	76,750	sf	0.25	19,471		
trowel slabs						
topping slab on precast planks	21,250	sf	0.86	18,329		
topping slab on metal deck	76,750	sf	0.86	66,200		
break wall ties, patch & plug	*8,570*	*sf*	*2.28*	*19,567*		
Sub-total	117,525	sf	1.22	/sf	143,875	
Precast Hollow-Core Planks						
8" floor plank @ locker room area	21,250	sf	10.15	215,635		
precast support beams	131	lf	253.69	33,233		allowance, size?
Sub-total	117,525	sf	2.12	/sf	248,868	
Shotcrete						
shotcrete @ exist pool/south wall	*595*	*sf*	*24.35*	*14,491*		*assume 35' H, verify thickness*
wall prep & dowelingto existing	*595*	*sf*	*10.15*	*6,038*		*assume 24" oc.*
upgrade exist footing - allowance	17	lf	507.38	8,625		verify if required
Sub-total	117,525	sf	0.25	/sf	29,154	
Structural Steel - Beams, Columns, Etc.						
floor structure	*196.5*	*ton*	*3,348.68*	*658,016*		*use 8.0 # / sf per engineer*
Note ACC believes this to be too aggressive # /sf						
premium for truss @ natatorium, AESS	*127.5*	*ton*	*3,957.53*	*504,585*		*engr memo not clear, verify*
roof framing	*97.8*	*ton*	*3,145.73*	*307,652*		*use 5.0 # / sf per engineer*
Note ACC believes this to be too aggressive # /sf						

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
B10 | SUPERSTRUCTURE - Continued						
Structural Steel - Beams, Columns, Etc. - continued						
metal deck						
floor	49,130	sf	3.04	149,564		
roof	19,610	sf	2.69	52,733		
acoustic roof @ gym	*19,500*	*sf*	*3.86*	*75,193*		*vulcraft type*
acoustic floor @ natatorium	*8,010*	*sf*	*4.82*	*38,609*		*galvanized, prefinished*
acoustic roof @ natatorium	*8,490*	*sf*	*3.86*	*32,738*		*galvanized, prefinished*
shear studs	9,471	ea	5.07	48,054		
misc. bracing, baseplates, connections, etc.	20.0%	of	1,867,144	373,429		
floor expansion joint @ main level	180	lf	121.77	21,919		
floor expansion joint @ upper level	240	lf	121.77	29,225		
Sub-total	117,525	sf	19.50	/sf	2,291,717	
Fireproofing						
intumescent paint @ natatorium	*18,000*	*sf*	*10.15*	*182,655*		*@ exposed truss/joists*
spray-on						
2 hr @ exposed steel framing	0	sf	0.00	0		verify if required
2 hr @ floor/ceiling framing	*49,130*	*sf*	*4.06*	*199,419*		
1 hr @ roof deck/framing	*19,610*	*sf*	*2.54*	*49,748*		*if <20' abv floor*
Sub-total	117,525	sf	3.67	/sf	431,822	
SUB-TOTAL B10 | SUPERSTRUCTURE			30.91	/sf	**$3,632,746**	
B20 | EXTERIOR CLOSURE						
Walls						
8" cmu backup @ natatorium area	*5,300*	*sf*	*16.24*	*86,051*		
pilasters	*300*	*vlf*	*76.11*	*22,832*		
r/s	*15,450*	*lbs*	*0.81*	*12,542*		
face brick						
veneer	*14,363*	*sf*	*28.41*	*408,096*		*quantity per Arch*
masonry relieving angles	*14,363*	*sf*	*2.79*	*40,081*		
water repellent	*14,363*	*sf*	*0.76*	*10,931*		
scaffold / hoisting - multi trade	*60,584*	*sf*	*0.00*	*0*		*w/ general requirements above*
precast concrete						
window sills	212	lf	76.11	16,135		
carpentry						
miscellaneous blocking & framing	117,525	sf	0.28	33,360		
fasteners & hardware	1	sum	1,170.00	1,170		
metal stud framing						
misc. metals	117,525	sf	0.74	86,736		
stud framing - 6" - 18 ga. (1-sided clad)	*7,100*	*sf*	*7.61*	*54,036*		
stud framing - 6" - 18 ga. (2-sided clad)	*1,110*	*sf*	*7.61*	*8,448*		
stud framing - 12" - 18 ga.	*20,400*	*sf*	*12.18*	*248,411*		*@ gym*
misc steel supports	*20,400*	*sf*	*5.07*	*103,505*		*verify requirements*
skin						
metal panel wall cladding	*24,614*	*sf*	*50.74*	*1,248,854*		*quantity per Arch*
sheathing						
ext. gyp sheathing	*9,320*	*sf*	*1.78*	*16,551*		
gyp bd interior	*7,100*	*sf*	*2.28*	*16,211*		
rigid insulation						
below grade walls, R-7.5 (1 1/2")	10,000	sf	1.52	15,221		
ext. walls, R-13 (2")	*38,977*	*sf*	*2.03*	*79,104*		*assumed @ all cladding*
batt insulation						
under floor	*3,140*	*sf*	*1.27*	*3,983*		
walls, 6" (R-21)	*27,500*	*sf*	*0.81*	*22,325*		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
B20 | EXTERIOR CLOSURE - Continued						
weather barrier						
dampproofing @ cmu backup walls	*5,300*	*sf*	*1.01*	*5,378*		
weather barrier, fluid-applied	*9,320*	*sf*	*4.06*	*37,830*		*AirBloc 32*
vapor barriers	*9,320*	*sf*	*0.61*	*5,674*		
flashing						
miscellaneous	117,525	sf	0.97	113,424		
seismic joints						
vertical	30	lf	126.84	3,805		
Sub-total	117,525	sf	22.98	/sf	2,700,694	
Exterior Soffits						
metal panel	*0*	*sf*	*30.44*	*0*		*revised to plaster*
cement plaster w/ framing	*3,140*	*sf*	*20.30*	*63,726*		
Sub-total	117,525	sf	0.54	/sf	63,726	
Windows						
storefront	*433*	*sf*	*57.59*	*24,938*		*quantity per Arch*
alum punched windows	*2,353*	*sf*	*57.59*	*135,517*		*quantity per Arch*
alum storefront @ clerestory	*1,375*	*sf*	*57.59*	*79,191*		*quantity per Arch*
premiun for narrow windows	*536*	*sf*	*45.66*	*24,476*		*add to unit price above*
alum curtain wall	*12,579*	*sf*	*77.89*	*979,756*		*quantity per Arch*
operable windows premium - allow.	15	ea	1,014.75	15,221		verify if required
polycarbonate windows @ gym	*0*	*sf*	*60.89*	*0*		*revised to curtain wall?*
polycarbonate screen wall @ deck	*0*	*sf*	*60.89*	*0*		*not required - assume net*
window testing	1	sum	25,368.78	25,369		
Sub-total	117,525	sf	10.93	/sf	1,284,468	1,284,923
Sun Control Devices						
vertical metal mesh sunshades	*754*	*sf*	*101.48*	*76,487*		*per 3D model - incl substrcture*
horizontal louvers w/ brackets, 8" W	*1,980*	*lf*	*45.66*	*90,414*		*per 3D model, clarify*
Sub-total	117,525	sf	1.42	/sf	166,901	
			92.72			
Doors, Frames & Hardware (includes installation)						
alum, 6' x 8' H (pair)	9	ea	5,073.76	45,664		
HM, 6' x 7' H (pair)	5	ea	2,841.30	14,207		
paint / finish door & frame	10	lvs	91.33	913		
power assist openers	5	ea	10,147.51	50,738		allowance, verify
Sub-total	117,525	sf	0.95	/sf	111,522	
Overhead & Coiling Doors						
coiling door, motorized	*70*	*sf*	*55.09*	*3,856*		
Sub-total	117,525	sf	0.03	/sf	3,856	
Louvers						
wall louvers - by mechanical	0	sf	35.52	0		
Sub-total	117,525	sf	0.00	/sf	0	
Caulking & Sealants						
caulking / firestopping	117,525	sf	0.45	53,376		
Sub-total	117,525	sf	0.45	/sf	53,376	
SUB-TOTAL B20 | EXTERIOR CLOSURE			37.31	/sf	**$4,384,543**	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
B30 | ROOFING						
Miscellaneous Carpentry						
miscellaneous blocking & framing	53,582	sf	1.01	54,372		
blocking @ parapet caps	720	lf	2.03	1,461		
blocking @ roof edge	2,920	lf	2.03	5,926		
Sub-total	117,525	sf	0.53	/sf	61,759	
Insulation						
rigid insulation						
roof R-30	47,030	sf	2.79	131,240		
tapered insulation - allowance	9,000	sf	2.54	22,832		
Sub-total	117,525	sf	1.31	/sf	154,072	
Roofing						
TPO membrane roofing, 60 mil, adhered	38,800	sf	7.61	295,293		
1/2" gyp cover board	38,800	sf	0.76	29,529		
protective walkway pads - allowance	4,000	sf	6.09	24,354		
tie-in to exist roof/walls	230	lf	15.22	3,501		not including exp. joint conditions
waterproofing @ upper level deck	8,230	sf	12.18	100,217		fluid-applied, HydroTech
conc roof pavers @ upper level deck	*8,230*	*sf*	*18.27*	*150,325*		w/ pedestal system
reinstall exist resil court surface	2,800	sf	5.07	14,207		@ upper level roof deck
metal roof	*0*	*sf*	*30.95*	*0*		*NIC per architects*
kalwall	*6,552*	*sf*	*81.18*	*531,892*		*change to kalwall - 3/13 meeting*
east entry canopy - allowance	*370*	*sf*	*55.81*	*20,650*		*allowance*
temporary roof / protection - allowance	*1*	*sum*	*0.00*	*0*		*w/ gen requirements above*
Sub-total	117,525	sf	9.96	/sf	1,169,968	
Skylights						
polycarbonate skylight @ natatorium	1,350	sf	86.25	116,443		
metal framed skylights - allowance	500	sf	126.84	63,422		verify if required
Sub-total	117,525	sf	1.53	/sf	179,865	
Flashing & Sheet Metal						
scuppers - allowance	15	ea	304.43	4,566		
flashing						
prefin metal parapet cap	720	lf	15.22	10,959		
prefin roof edge @ metal roof	1,000	lf	12.18	12,177		
prefin roof edge/fascia @ memb. roof	720	lf	15.22	10,959		
st. steel roof edge/wall base	1,200	lf	15.22	18,266		
modify/replace d.s. @ exist gym	9	ea	202.95	1,827		
modify/replace d.s. @ courtyard area	5	ea	507.38	2,537		
miscellaneous	53,582	sf	0.56	29,905		
Sub-total	117,525	sf	0.78	/sf	91,196	
Roof Accessories						
roof expansion joint cover	310	lf	202.95	62,915		
roof hatch	1	ea	1,522.13	1,522		
roof ladder	2	ea	1,522.13	3,044		
safety tie-off system - allowance	1	sum	15,221.27	15,221		allowance verify if required
Sub-total	117,525	sf	0.70	/sf	82,702	
Caulking & Sealants						
caulking / firestopping	1	sum	2,029.50	2,030		
Sub-total	117,525	sf	0.02	/sf	2,030	
SUB-TOTAL B30 | ROOFING			14.82	/sf	**$1,741,592**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	*Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date:	27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date:	28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time:	4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start:	01-Jul-13

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C10 | INTERIOR CONSTRUCTION						
Miscellaneous Metals						
elevator pit ladder	2	ea	388.14	776		
miscellaneous	117,525	sf	0.74	86,736		
Sub-total	117,525	sf	0.74	/sf	87,512	
Rough Carpentry						
miscellaneous blocking & framing	117,525	sf	0.51	60,048		
Sub-total	117,525	sf	0.51	/sf	60,048	
Caulking & Sealants						
caulking / firestopping	117,525	sf	0.45	53,376		
Sub-total	117,525	sf	0.45	/sf	53,376	
Partitions						
cmu walls						
8" cmu @ lower level	*13,000*	*sf*	*16.24*	*211,068*		
8" cmu @ main level	*14,175*	*sf*	*16.24*	*230,146*		
r/s	*23,099*	*lbs*	*0.81*	*18,752*		
full height partitions						
6" studs, 5/8" gyp (2), insul.	*10,000*	*sf*	*8.32*	*83,210*		
6" studs, 5/8" gyp (1), insul.	*1,500*	*sf*	*6.04*	*9,057*		
6" CH studs, 5/8" gyp (2), 1" gyp	*2,735*	*sf*	*12.18*	*33,304*		*assumed @ elev shafts*
accessories, misc. bracing, etc.	1	sum	27,611.65	27,612		
Sub-total	117,525	sf	5.22	/sf	613,149	
Doors, Frames & Hardware (includes installation)						
alum, 3' x 8' H	6	ea	2,536.88	15,221		
alum, 6' x 8' H (pair)	9	ea	5,073.76	45,664		
HM, 3' x 7' H	9	ea	1,522.13	13,699		
HM, 6' x 7' H (pair)	8	ea	3,044.25	24,354		
wood/HM, 3' x 7' H	23	ea	1,319.18	30,341		
wood/HM, 6' x 7' H (pair)	5	ea	2,638.35	13,192		
access doors	1	sum	5,073.76	5,074		
paint HM door frame	28	ea	50.74	1,421		
paint HM door & frame	25	lvs	91.33	2,283		
Sub-total	117,525	sf	1.29	/sf	151,249	
Sliding Fire Shutters						
horizontal fire shutter @ main level	3,210		126.84	407,169		McKeon H2000, 2 hr
Sub-total	117,525	sf	3.46	/sf	407,169	
Relites & Sidelites - Alum. Frame						
lower level natatorium area	2,400	sf	45.66	109,593		
main level / upper natatorium	2,250	sf	45.66	102,744		
main level vestibule	675	sf	45.66	30,823		
Sub-total	117,525	sf	2.07	/sf	243,160	
Relites & Sidelites - Frameless/Butt-Glazed						
natatorium offices, 1/4" glass	150	sf	26.38	3,958		
Sub-total	117,525	sf	0.03	/sf	3,958	
Mirrors						
wall mirrors @ yoga/fitness areas - allow.	*500*	*sf*	*15.22*	*7,611*		
Sub-total	117,525	sf	0.06	/sf	7,611	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C10 | INTERIOR CONSTRUCTION - Continued						
Architectural Wood Casework						
lower level						
locker rooms & toilet rooms						
solid surface lav. countertop	46	lf	152.21	4,600		
main level						
locker rooms & toilet rooms						
solid surface lav. countertop	65	lf	152.21	9,894		
equipment checkout						
reception/work desk	40	lf	761.06	30,443		
control desk						
reception/work desk	46	lf	761.06	35,009		
circulation areas						
display cases - allowance	*1*	*sum*	*25,368.78*	*25,369*		
upper level						
public toilet rooms						
solid surface lav. countertop	14	lf	152.21	2,131		
Sub-total	117,525	sf	0.91	/sf	107,446	
Toilet Partitions - Solid Plastic						
ADA	*6*	*ea*	*1,735.22*	*10,411*		*ceiling supported*
standard	*13*	*ea*	*1,349.62*	*17,545*		
urinal screen	4	ea	639.29	2,557		ceiling supported
ADA shower compartments	6	ea	1,278.59	7,672		floor mounted
standard shower compartments	24	ea	994.46	23,867		
Sub-total	117,525	sf	0.53	/sf	62,052	
Toilet Accessories (includes installation)						
ADA toilet grab bars	6	sets	116.70	700		CFCI
ADA shower grab bars	6	sets	116.70	700		CFCI
mirror, 2' x 3'	6	ea	157.29	944		CFCI
mirror, 4' H	*500*	*sf*	*15.22*	*7,611*		*CFCI*
paper towel dispenser / receptacle	*16*	*ea*	*76.11*	*1,218*		*OFCI*
janitor tool holder	*4*	*ea*	*15.22*	*61*		*OFCI*
sanitary napkin dispenser	*3*	*ea*	*76.11*	*228*		*OFCI*
sanitary napkin disposal	*13*	*ea*	*20.30*	*264*		*OFCI*
folding shower seat	*6*	*ea*	*50.74*	*304*		*OFCI*
shower curtain rod	*6*	*ea*	*15.22*	*91*		*OFCI*
shower curtain & hooks	*6*	*ea*	*10.15*	*61*		*OFCI*
toilet paper dispenser	*25*	*ea*	*15.22*	*381*		*OFCI*
seat cover dispenser	*25*	*ea*	*30.44*	*761*		*OFCI*
soap dispenser	*35*	*ea*	*40.59*	*1,421*		*OFCI*
baby changing stations	2	ea	405.90	812		CFCI
electric hand/hair dryer	34	ea	1,217.70	41,402		CFCI
swimsuit water extractor - allowance	4	ea	1,522.13	6,089		CFCI
Sub-total	117,525	sf	0.54	/sf	63,048	
Visual Display Systems						
dry erase wall covering allowance	1	sum	2,029.50	2,030		
Sub-total	117,525	sf	0.02	/sf	2,030	
Signage Systems						
directories - allowance	*1*	*ea*	*1,014.75*	*1,015*		
signs, ada & code required	*117,525*	*sf*	*0.42*	*49,723*		
Sub-total	117,525	sf	0.43	/sf	50,738	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C10 | INTERIOR CONSTRUCTION - Continued						
Wall Protection & Corner Guards						
corner guards - allowance	50	ea	126.84	6,342		
Sub-total	117,525	sf	0.05	/sf	6,342	
Fire Extinguisher & Cabinets						
FEC	20	ea	238.47	4,769		
Sub-total	117,525	sf	0.04	/sf	4,769	
First Aid Equipment						
defibrillator w/ cabinet	*3*	*ea*	*1,522.13*	*4,566*		*verify qty*
Sub-total	117,525	sf	0.04	/sf	4,566	
Lockers						
double tier 12" x 18" x 30" ht.	*381*	*frame*	*659.59*	*251,303*		*all-welded*
triple tier 15" x 18" x 20" ht.	*296*	*frame*	*761.06*	*225,275*		*all-welded*
conc locker base	*1,137*	*sf*	*0.00*	*0*		*with above unit $*
Sub-total	117,525	sf	4.06	/sf	476,578	
Locker Benches						
9 1/2" wide lam. wood - allowance	200	lf	45.66	9,133		
Sub-total	117,525	sf	0.08	/sf	9,133	
SUB-TOTAL C10 | INTERIOR CONSTRUCTION			20.54	/sf	**$2,413,934**	
C20 | STAIRS						
Stairs						
steel framing w/ conc fill treads	*1,425*	*lf*	*142.07*	*202,443*		*w/ perf metal risers*
precast treads	*1,425*	*lf*	*50.74*	*72,301*		*allowance*
steel framing w/ checker plate	*650*	*lf*	*101.48*	*65,959*		*bidder design, incl railings*
railings						
floor opening guardrail	*885*	*lf*	*253.69*	*224,514*		*unit cost allow. per Arch*
stair guardrail w/ handrail	*120*	*lf*	*202.95*	*24,354*		*unit cost allow. per Arch*
stair handrail - wall mounted	*340*	*lf*	*38.56*	*13,111*		*stl pipe*
finishes						
paint exposed structure & railings	*11*	*flights*	*1,522.13*	*16,743*		*assume no finish @ gym stairs*
Sub-total	117,525	sf	5.27	/sf	619,425	
SUB-TOTAL C20 | STAIRS			5.27	/sf	**$619,425**	
C30 | INTERIOR FINISHES						
Wall Finishes						
base						
ceramic tile						
@ natatorium	760	lf	12.18	9,255		
@ restrooms/showers	*3,100*	*lf*	*12.18*	*37,749*		*tile under lockers deleted*
4" vinyl	3,800	lf	1.88	7,134		
4" vented rubber base @ wood floors						
@ gym	*570*	*lf*	*2.03*	*1,157*		
@ yoga	*200*	*lf*	*2.03*	*406*		
integral coved base @ safety floor	150	lf	5.58	837		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C30 | INTERIOR FINISHES - Continued						
Wall Finishes - continued						
coverings						
ceramic wall tile						
@ natatorium	*4,000*	*sf*	*12.18*	*48,702*		*assume 8' H*
@ public restrooms	304	sf	12.18	3,702		assume 4' H
@ natatorium restrooms	492	sf	12.18	5,991		assume 4' H
@ locker room restrooms	1,008	sf	12.18	12,274		assume 4' H
@ locker room showers	2,048	sf	12.18	24,939		assume 8' H
frp @ jan/cust.	200	sf	8.12	1,624		
wood paneling - allowance	2,000	sf	35.52	71,033		define sf
acoustical wall treatment						
@ natatorium - allowance	*1*	*sum*	*12,988.82*	*12,989*		
@ gym - allowance	*1*	*sum*	*0.00*	*0*		*50K per 3/12 mtd delete per 3/21*
wall protection						
@ lower gym walls, up to 12' H	*6,540*	*sf*	*10.15*	*66,365*		
@ higher gym walls, above 12' H	*12,540*	*sf*	*5.07*	*63,625*		
paint walls	*78,000*	*sf*	*0.54*	*41,950*		
high perform. prem @ locker rm area	*32,000*	*sf*	*2.38*	*76,308*		*incl block filler*
high perform. prem @ natatorium cmu	*6,000*	*sf*	*2.38*	*14,308*		
Sub-total	117,525	sf	4.26	/sf	500,348	
Floor Finishes						
ceramic tile						
@ natatorium, mud set	*8,400*	*sf*	*17.25*	*144,906*		*not incl 13,800 sf pool areas*
@ restrooms/showers	*9,720*	*sf*	*14.21*	*138,087*		*tile under lockers deleted*
wood flooring						
@ activity rooms, WSF-1	2,100	sf	10.15	21,310		Robbins Sportwood Ultra Star
@ gym, WSF-2	18,380	sf	10.15	186,511		Robbins BioCushion LP
basketball court striping	3	ea	507.38	1,522		
volleyball court striping	3	ea	304.43	913		
resilient flooring						
rubber athletic tile, RSF-1	24,000	sf	12.18	292,248		Mondo Sport Impact
sheet vinyl safety floor @ jan/cust.	360	sf	6.09	2,192		
carpet tile						
@ office & lounge areas	277	sy	40.59	11,237		
concrete floor finish						
stained/polished @ public areas	21,220	sf	5.58	118,432		Retro-Plate 99
clear sealer @ support areas	11,100	sf	0.56	6,195		
floor finishes protection	32,320	sf	1.27	40,996		
Sub-total	117,525	sf	8.21	/sf	964,549	
Ceilings						
suspended cloud ceilings						
@ locker rms	*4,400*	*sf*	*20.30*	*89,301*		*assume 2/3 of area*
@ circ. areas	*16,600*	*sf*	*20.30*	*336,902*		*assume 2/3 of area*
@ fitness areas	*11,840*	*sf*	*32.47*	*384,455*		*assume 2/3 of area*
suspended veneer plaster ceilings						
@ locker rm shower/restrooms	*2,600*	*sf*	*12.18*	*31,660*		
@ other areas	*6,500*	*sf*	*12.18*	*79,151*		
veneer plaster fascia						
@ natatorium	*400*	*sf*	*15.22*	*6,089*		
paint ceilings						
exposed struct. @ cloud ceiling areas	*49,015*	*sf*	*1.01*	*49,738*		*assume 100% of areas*
exposed struct. @ service areas	*14,000*	*sf*	*1.01*	*14,207*		
exposed struct @ gym	*19,500*	*sf*	*1.01*	*19,788*		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C30 | INTERIOR FINISHES - Continued						
Ceilings - continued						
veneer plaster ceilings	*9,100*	*sf*	*0.66*	*6,002*		
veneer plaster fascia	*400*	*sf*	*0.66*	*264*		
high-performance paint ceilings						
exposed struct. @ natatorium	*16,500*	*sf*	*5.07*	*83,717*		
Sub-total	117,525	sf	9.37	/sf	1,101,274	
SUB-TOTAL C30 | INTERIOR FINISHES			21.84	/sf	**$2,566,171**	
D10 | CONVEYING SYSTEMS						
Elevators - Holeless Hydraulic						
passenger hydraulic elevator						
elevator #1, 3000#	*2*	*stop*	*25,368.78*	*50,738*		*campus std, non-proprietary*
2-sided premium	*1*	*sum*	*2,029.50*	*2,030*		
elevator #2, 4500#	*3*	*stop*	*25,368.78*	*76,106*		
cab finishes	*2*	*ea*	*4,059.01*	*8,118*		
card reader controls	*2*	*ea*	*1,522.13*	*3,044*		
Sub-total	117,525	sf	1.19	/sf	140,036	
SUB-TOTAL D10 | CONVEYING SYSTEMS			1.19	/sf	**$140,036**	
D20 | PLUMBING SYSTEMS						
Storm Drainage Systems						
c.i. no hub above grd 3"	120	lf	30.44	3,653		
c.i. no hub above grd 4"	840	lf	34.01	28,572		
c.i. no hub above grd 6"	360	lf	54.12	19,482		
c.i. no hub under grd 6"	110	lf	56.83	6,251		
dn-1) overflow nozzles	8	ea	630.83	5,047		
rd-1/od-1) roof drains and overflows 4"	16	ea	541.15	8,658		
excavation and backfill	110	lf	76.11	8,372		
Sub-total	117,525	sf	0.68	/sf	80,035	
Waste Drainage Systems						
c.i. waste & vent ag 2"	2,130	lf	24.12	51,377		
c.i. waste & vent ag 3"	945	lf	30.32	28,653		
c.i. waste & vent ag 4"	240	lf	42.62	10,229		
c.i. waste & vent ug 2"	630	lf	22.41	14,116		
c.i. waste & vent ug 3"	276	lf	28.94	7,988		
c.i. waste & vent ug 4"	1,320	lf	38.59	50,940		
fd-1&2) floor drain standard c.i. 4"	20	ea	309.50	6,190		
fs-1) floor sink	1	ea	669.74	670		
floor cleanout 4"	18	ea	249.63	4,493		
wall cleanout 4"	12	ea	155.26	1,863		
sleeves	32	ea	86.25	2,760		
trap primers	20	ea	182.66	3,653		
excavation and backfill	742	lf	76.11	56,471		
Sub-total	117,525	sf	2.04	/sf	239,403	
Domestic, Hot & Cold Water						
l-cu dist. piping 1/2"	1,260	lf	14.06	17,721		
l-cu dist. piping 3/4"	1,980	lf	17.56	34,759		
l-cu dist. piping 1"	480	lf	20.90	10,034		
l-cu dist. piping 1-1/4"-1-1/2"	330	lf	25.72	8,489		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D20 | PLUMBING SYSTEMS - Continued						
Domestic, Hot & Cold Water - continued						
l-cu dist. piping 2"-2-1/2"	600	lf	34.50	20,701		
l-cu dist. piping 3"	140	lf	41.60	5,825		
rainwater piping from filtration equipment	644	lf	34.50	22,219		
wall hydrants	6	ea	159.32	956		
valves / balancing valves	6	ea	126.84	761		
backflow preventer and assoc. piping	1	sum	3,602.37	3,602		
Sub-total	117,525	sf	1.06	/sf	125,067	
Piping Insulation						
piping insulation - domestic h&c	7,002	lf	11.16	78,158		
Sub-total	117,525	sf	0.67	/sf	78,158	
Plumbing Fixtures - Commercial						
wc-1) wall hung dual flush valve w.c	13	ea	1,315.12	17,097		
wc-2) wall hung dual flush valve ada w.c.	12	ea	1,315.12	15,781		
u-1) urinal waterless - wall hung	4	ea	1,162.91	4,652		
u-2) urinal waterless - wall hung - (ada)	3	ea	1,162.91	3,489		
l-1) lavatory - countertop	16	ea	854.42	13,671		
l-2) lavatory - wall hung	6	ea	1,000.54	6,003		
add for electronic sensors on lav faucets	1	sum	4,566.38	4,566		
ms-1) mop sink	4	ea	862.54	3,450		
df-1) drinking fountain hi/lo	3	ea	2,151.27	6,454		
shwr-1) shower complete	24	ea	1,141.60	27,398		assumes tiled
shwr-2) shower complete ada	6	ea	1,369.91	8,219		assumes tiled
flashings (vtr's) 2'-4"	18	ea	228.32	4,110		
Sub-total	117,525	sf	0.98	/sf	114,890	
Condensate Piping						
condensate piping	220	lf	16.24	3,572		
Sub-total	117,525	sf	0.03	/sf	3,572	
Plumbing Equipment						
rainwater collection / filt. system equip.	1	sum	43,126.93	43,127		
equipment interconnect piping	1	sum	5,581.13	5,581		
steam to h.w. heat exch. w/ 500 gal. tank	1	ea	11,415.95	11,416		
rhwp-1) in line recirc. pump 3/4"	1	ea	446.49	446		
sp-1) sump pump-elev. & discharge piping	2	ea	2,536.88	5,074		
rigging	1	sum	1,522.13	1,522		
adjust to 35.00 / sf allowance for mechanica	*117,525*	*sf*	*0.97*	*113,999*		*per 3/13 meeting*
Sub-total	117,525	sf	1.54	/sf	181,165	
Sub OH & P						
oh & p	12.00%	of	822,290.00	98,675		
Sub-total	117,525	sf	0.84	/sf	98,675	
SUB-TOTAL D20 | PLUMBING SYSTEMS			7.84	/sf	**$920,965**	
D30 | HVAC SYSTEMS						
Insulation						
ductwork fg ash 1-1/2" thick	10,725	sf	2.72	29,167		
piping	2,966	lf	13.19	39,127		
Sub-total	117,525	sf	0.58	/sf	68,294	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D30 | HVAC SYSTEMS - Continued						
Piping Connections						
heat exchangers	1	ea	2,892.04	2,892		
duplex condensate pump	1	ea	964.01	964		
chilled water "zone" connections	17	ea	1,166.96	19,838		
pumps centrifugal	4	ea	1,075.64	4,303		
hrc coil connections	4	ea	1,217.70	4,871		
expansion tanks 3/4"	1	ea	202.95	203		
Sub-total	117,525	sf	0.28	/sf	33,071	
Hydronic Water Piping & Equipment						
hws/r piping	1,920	lf	44.29	85,044		
chws/r piping	726	lf	45.18	32,798		
ft) finned turn - sterling type	320	lf	167.43	53,579		
chilled beams - active	4,797	sf	42.62	204,446		assume 25 to 30% of rms rqrd.
in-slab heating water hepex	25,910	lf	5.03	130,409		
manifold header piping assemblies	25	ea	1,168.99	29,225		
steam & condensate piping	200	lf	87.27	17,454		
steam & cond. piping u/g coming in	15	lf	198.89	2,983		
steam pressure reducing station	1	ea	7,610.64	7,611		
interconnect piping - steam & cond.	1	sum	10,147.51	10,148		
plate & frame heat exchanger	1	ea	7,306.21	7,306		
campus chilled water piping to pumps	1	sum	6,595.88	6,596		
centrifugal pumps	2	ea	2,181.72	4,363		
in-line pumps	2	ea	1,684.49	3,369		
duplex condensate pump & receiver	1	ea	5,885.56	5,886		
et-1) expansion tank	1	ea	1,166.96	1,167		
cuh-1) cabinet unit heater	2	ea	1,278.59	2,557		
chem-aqua water filtration system	1	sum	5,581.13	5,581		
condensate meter	1	sum	659.59	660		
steam trap assemblies	2	ea	2,344.08	4,688		
make-up piping	120	lf	21.31	2,557		
Sub-total	117,525	sf	5.26	/sf	618,427	
HRV - Air Handling Units / Fans						
hrv-1) heat recovery / ventilation unit	1	sum	271,880.30	271,880		
hrv-2) heat recovery / ventilation unit	1	sum	153,747.01	153,747		
hrv-3) heat recovery / ventilation unit	1	sum	51,639.68	51,640		
hrv-4) heat recovery / ventilation unit	1	sum	156,688.77	156,689		
vfd's (total h.p. of all equip.-incl. pumps)	120	hp	228.32	27,398		
large blade ceiling fans	14	ea	2,181.72	30,544		
medium size blade ceiling fans	4	ea	1,887.44	7,550		
3-ton split system with refer piping	1	ea	6,595.88	6,596		
rigging	1	sum	3,247.20	3,247		
Sub-total	117,525	sf	6.04	/sf	709,291	
Supply/Return/Gen. Exhaust Ductwork						
exhaust duct	4,200	lbs.	8.12	34,096		
ss round duct over natatorium	31,960	lbs.	14.21	454,040		
seismic bracing	1	sum	2,536.88	2,537		
galv. rect. & spiral duct r/a / exh / osa	20,997	lbs.	8.12	170,454		
Sub-total	117,525	sf	5.63	/sf	661,127	
Exhaust Fans						
individual small exhaust requirements	4	ea	1,522.13	6,089		
Sub-total	117,525	sf	0.05	/sf	6,089	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D30 | HVAC SYSTEMS - Continued						
Flexible Duct						
insulated flex duct to diffusers	120	lf	9.53	1,143		
Sub-total	117,525	sf	0.01	/sf	1,143	
Air Distribution Devices						
standard perf. diffuser	43	ea	68.80	2,958		
r/a and exhaust grills	26	ea	76.11	1,979		
displacement diffusers	6	ea	361.25	2,168		
rooftop turbine ventilator	12	ea	887.91	10,655		
volume dampers	87	ea	52.77	4,591		
access panels	4	ea	167.43	670		
terminal units	2	ea	725.55	1,451		
natural vent. dampers w/ louvers - large	3	ea	5,378.18	16,135		
fire/smoke dampers	6	ea	625.41	3,752		
hrv - osa & relief louvers w/ auto dampers	2	ea	1,166.96	2,334		
Sub-total	117,525	sf	0.40	/sf	46,693	
Misc HVAC						
commissioning support	1	sum	5,073.76	5,074		
bim	1	sum	40,590.05	40,590		
ddc controls	1	sum	533,759.21	533,759		
air & water balancing	1	sum	46,703.93	46,704		
Sub-total	117,525	sf	5.33	/sf	626,127	
Sub OH & P						
oh & p	12.00%	of	2,770,262.00	332,431		
Sub-total	117,525	sf	2.83	/sf	332,431	
SUB-TOTAL D30 | HVAC SYSTEMS			26.40	/sf	**$3,102,693**	
D40 | FIRE PROTECTION SYSTEMS						
Fire Sprinklers						
wet system w/ quick response heads	117,525	sf	2.67	313,584		
Sub-total	117,525	sf	2.67	/sf	313,584	
SUB-TOTAL D40 | FIRE PROTECTION SYSTEMS			2.67	/sf	**$313,584**	
D50 | ELECTRICAL SYSTEMS						
Miscellaneous						
mobilization, tools, equipment, permits	1	sum	63,637.09	63,637		
on-site supervision/support	1	sum	156,718.20	156,718		
temp power	1	sum	43,928.59	43,929		
Sub-total	117,525	sf	2.25	/sf	264,284	
Main Service/Distribution Panels:						
transformers - 150 & 750 kva	1	sum	78,121.65	78,122		
primary feeders/duct banks	1	sum	88,332.08	88,332		
transformer secondary feeds	1	sum	44,878.39	44,878		
main switchgear/grounding/metering	1	sum	72,660.26	72,660		
testing/commissioning/arc flash/coordinatior	1	sum	19,233.60	19,234		
distribution panels/transformers/metering	1	sum	129,886.14	129,886		
feeders	1	sum	182,837.90	182,838		
Sub-total	117,525	sf	5.24	/sf	615,950	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D50 | ELECTRICAL SYSTEMS - Continued						
Branch Wiring/Devices:						
supports/strut/fire caulking	1	sum	35,380.32	35,380		
duplex receptacles	250	ea	308.69	77,172		
floor boxes	20	ea	688.61	13,772		
misc connections	40	ea	296.81	11,873		
wp gfci receptacles	25	ea	463.03	11,576		
elevator modules/connections	2	ea	7,052.32	14,105		
Sub-total	117,525	sf	1.39	/sf	163,878	
Lighting:						
gymnasium	98	ea	1,365.35	133,804		
fitness/weight	95	ea	1,116.02	106,022		
natatorium	60	ea	2,890.98	173,459		
locker/rr	110	ea	878.57	96,643		
circulation/lobby	150	ea	712.36	106,853		
electrical/mech/storage	50	ea	379.92	18,996		
exterior decorative poles/façade lighting	1	sum	174,527.08	174,527		
circuiting / home runs	1	sum	156,718.20	156,718		
controls/daylighting	1	sum	67,673.77	67,674		
Sub-total	117,525	sf	8.80	/sf	1,034,696	
Mechanical/Equipment/Plumbing Connections:						
misc. small connections	18	ea	985.43	17,738		
pump connections/starters	8	ea	1,614.67	12,917		
hrv connections	4	ea	2,042.09	8,168		
ceiling fan connections	4	ea	664.87	2,659		
circ/conn split system	1	ea	2,184.56	2,185		
circ/conn ef	4	ea	1,163.51	4,654		
circ/conn fsd	20	ea	403.67	8,073		
pool/spa equipment connections	1	sum	26,119.70	26,120		
pool/spa grounding	1	sum	18,046.34	18,046		
Sub-total	117,525	sf	0.86	/sf	100,560	
Voice/Data/Communication:						
telecomm service to building	1	sum	28,434.85	28,435		
mdf/idf room build out	1	sum	15,155.36	15,155		
cables/terminations	300	ea	249.32	74,797		
backbone mdf to idf	1	sum	22,075.90	22,076		
conduits/pathways/rough in	1	sum	39,179.55	39,180		
catv cabling	30	ea	421.48	12,644		
cctv ip cameras	16	ea	3,989.19	63,827		
rough-in for owner pa / sound systems	*117,525*	*sf*	*0.2537*	*29,815*		*per 3/13 meeting*
Sub-total	117,525	sf	2.43	/sf	285,929	
Fire Alarm:						
pull stations	1	ea	522.39	522		
smoke detectors	52	ea	563.95	29,325		
notification	120	ea	593.63	71,236		
fsd	6	ea	866.70	5,200		
remote annunciator	1	ea	1,448.46	1,448		
flow/tamper/pressure switch	3	ea	985.43	2,956		
modules/relays	20	ea	842.95	16,859		
nac panels	2	ea	2,920.66	5,841		
fa panel/programming/testing	1	sum	76,934.39	76,934		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D50 | ELECTRICAL SYSTEMS - Continued						
Fire Alarm: - continued						
temp fa connections	1	sum	11,635.14	11,635		
connection to campus fa system	1	sum	10,210.43	10,210		
Sub-total	117,525	sf	1.98	/sf	232,166	
Door Access System:						
door locations-add to existing system	*10*	*ea*	*2,968.15*	*29,681*		***qty per elect. Engineer***
Sub-total	117,525	sf	0.25	/sf	29,681	
SUB-TOTAL D50 | ELECTRICAL SYSTEMS			23.20	/sf	**$2,727,144**	
E10 | EQUIPMENT						
Gym Equipment						
tilt & roll bleachers, OFOI	1	sum	0.00	0		
backboards						
main baskets, susp/forward fold	6	ea	7,306.21	43,837		Porter 90950
outdoor baskets, portable	*2*	*ea*	*7,610.64*	*15,221*		
wall mats	720	sf	8.63	6,210		
divider curtain, motorized (2)	7,000	sf	4.26	29,834		quote per Porter rep #90670
roof deck net backstop, retractable	*150*	*lf*	*15.22*	*2,283*		
volleyball standards, motorized/fold-down	*0*	*ea*	*10,350.46*	*0*		*deleted*
volleyball standards, floor-mounted	*3*	*ea*	*152.21*	*457*		*OFCI*
floor sleeves	*6*	*ea*	*76.11*	*457*		*OFCI*
central control station	1	ea	0.00	0		included in above items
gymnasium scoreboards	*3*	*ea*	*5,818.58*	*17,456*		*per daktronics, 5234.00 / ea*
natatorium timer/scoreboard, OFCI	1	ea	1,014.75	1,015		OFCI
cardio / fitness equipment, OFOI	1	sum	0.00	0		
cardio equipment floor mats, OFOI	1	sum	0.00	0		
Sub-total	117,525	sf	0.99	/sf	116,770	
Security Equipment						
access control gates & turnstiles - allow.	*1*	*ea*	*101,475.14*	*101,475*		
kiosk/control desk @ entry - allowance	1	ea	5,073.76	5,074		
Sub-total	117,525	sf	0.91	/sf	106,549	
Audio-Visual Equipment						
allowance	*1*	*sum*	*20,295.03*	*20,295*		*allowance, verify*
Sub-total	117,525	sf	0.17	/sf	20,295	
SUB-TOTAL E10 | EQUIPMENT			2.07	/sf	**$243,614**	
E20 | FURNISHINGS						
Window Treatment						
horiz louver blinds @ int. relites	0	sf	3.30	0		verify if required
manual roller shades @ ext. windows	*2,353*	*sf*	*8.12*	*19,102*		*assume @ punched windows*
motorized roller shades @ ext. windows	*12,330*	*sf*	*18.27*	*225,214*		*assume @ curt. wall, east/south*
Sub-total	117,525	sf	2.08	/sf	244,316	
Floor Mats & Frames						
walk-off mat, recessed	260	sf	35.52	9,234		verify qty
Sub-total	117,525	sf	0.08	/sf	9,234	
SUB-TOTAL E20 | FURNISHINGS			2.16	/sf	**$253,550**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date: *Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
F10 | SPECIAL CONSTRUCTION						
Swimming Pools						
pools & spas	*1*	*sum*	*2,942,778.92*	*2,942,779*		*per HSW/Anderson Pool Works*
rock excavation	*5,000*	*cy*	*76.11*	*380,532*		*per HSW*
Sub-total	117,525	sf	28.28	/sf	3,323,311	
SUB-TOTAL F10 | SPECIAL CONSTRUCTION			28.28	/sf	**$3,323,311**	
F20 | SELECTIVE DEMOLITION						
Structure Demolition						
remove tennis court structure	*38,000*	*sf*	*5.05*	*191,788*		*use HSW # per 3/13 meeting*
remove cmu storage building	400	sf	5.07	2,030		
remove canopy/trellis structure	450	sf	20.30	9,133		
remove conc columns/footings	4	ea	202.95	812		
haul & disposal	1	sum	20,376.30	20,376		
Sub-total	117,525	sf	1.91	/sf	224,139	
Exterior Façade Demolition						
gymnasium/south wall						
remove sunshades	7	ea	202.95	1,421		
remove downspouts	9	ea	152.21	1,370		
remove canopy @ entrance	150	sf	20.30	3,044		
remove conc columns/footings	2	ea	202.95	406		
remove entry doors & sidelite	80	sf	5.07	406		
remove windows	500	sf	4.06	2,030		
remove conc entry porch, ramps & walls	0	sf	0.00	0		see site demolition
misc. demolition allowance	1	sum	2,536.88	2,537		
haul & disposal	1	sum	1,121.40	1,121		
Sub-total	117,525	sf	0.10	/sf	12,335	
pool/courtyard area						
remove downspouts/scuppers	5	ea	202.95	1,015		
remove doors & frames	4	ea	76.11	304		
remove metal stairs	1	flight	3,044.25	3,044		
remove storefront window @ pool	160	sf	5.07	812		
remove louver	10	sf	5.07	51		
remove wall infill panels (3)	510	sf	3.55	1,811		
sawcut conc walls @ new openings	90	lf	20.30	1,827		
remove conc wall @ new openings	140	sf	10.15	1,421		
misc. demolition allowance	1	sum	2,536.88	2,537		
haul & disposal	1	sum	1,923.30	1,923		
Sub-total	117,525	sf	0.13	/sf	14,745	
SUB-TOTAL F20 | SELECTIVE DEMOLITION			2.14	/sf	**$251,219**	
G10 | SITE PREPARATION						
Site Demolition						
pavement						
sawcut a.c. pavement	1,065	lf	2.03	2,161		
remove a.c. pavement	20,500	sf	0.56	11,441		
remove a.c. pavement @ tennis courts	29,000	sf	0.76	22,071		
remove conc. pavement	15,250	sf	1.27	19,344		
remove conc. patio/porch	150	sf	7.10	1,065		
remove conc. ramp	310	sf	5.07	1,573		

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G10 | SITE PREPARATION - Continued						
Site Demolition - continued						
remove conc. curb	725	lf	2.54	1,839		
remove conc. stairs on grade	380	sf	5.07	1,928		
haul & disposal	1	sum	6,142.20	6,142		
Sub-total	117,525	sf	0.57	/sf	67,564	
fence/walls						
remove conc. retaining walls & footings	330	lf	25.37	8,372		
remove chain link fence @ tennis courts	560	lf	3.04	1,705		
remove 10' wood wall @ tennis court	360	lf	5.07	1,827		
remove stl pipe gate w/ turnstile	17	lf	10.15	173		
haul & disposal	1	sum	1,207.70	1,208		
Sub-total	117,525	sf	0.11	/sf	13,285	
furnishings/misc.						
remove bike racks	28	ea	35.52	994		
remove benches	6	ea	101.48	609		
remove stl pipe handrails	140	lf	5.07	710		
remove light bollard	8	ea	136.99	1,096		
remove light poles	10	ea	355.16	3,552		
haul & disposal	1	sum	696.10	696		
Sub-total	117,525	sf	0.07	/sf	7,657	
landscape						
remove small/medium trees	24	ea	355.16	8,524		
remove large trees	13	ea	507.38	6,596		
strip/clear landscape areas	24,000	sf	0.15	3,653		
haul & disposal	1	sum	1,877.30	1,877		
Sub-total	117,525	sf	0.18	/sf	20,650	
water utilities						
remove water line	552	lf	12.18	6,722		
cut & cap water line	2	ea	507.38	1,015		
remove fire hydrant	1	ea	507.38	507		
Sub-total	117,525	sf	0.07	/sf	8,244	
sanitary sewer utilities						
cut & cap sewer line	2	ea	355.16	710		
Sub-total	117,525	sf	0.01	/sf	710	
storm sewer utilities						
remove sewer line	1,200	lf	12.18	14,612		
cut & cap sewer line	2	ea	355.16	710		
remove precast manhole	3	ea	761.06	2,283		
remove catch basin	2	ea	355.16	710		
remove area drain	5	ea	304.43	1,522		
Sub-total	117,525	sf	0.17	/sf	19,837	
Grading / Site Excavation & Fill						
mobilization	1	sum	5,073.76	5,074		
site grading & earthwork	*54,574*	*sf*	*3.55*	*193,827*		
Sub-total	117,525	sf	1.69	/sf	198,901	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G10 | SITE PREPARATION - Continued						
Erosion & Sedimentation Controls						
fencing / maintenance	1	sum	10,147.51	10,148		allowance
concrete wash down area	1	sum	3,551.63	3,552		
truck wheel out wash down	1	sum	5,073.76	5,074		
Sub-total	117,525	sf	0.16	/sf	18,774	
SUB-TOTAL G10 | SITE PREPARATION			3.03	/sf	**$355,622**	
G20 | SITE IMPROVEMENTS						
Base Courses						
6" base course	156	ton	17.76	2,770		
2" leveling course	52	ton	17.76	923		
4" base course at 4" conc. pavement	757	ton	17.76	13,444		
8" base course at 8" conc. pavement	46	ton	17.76	825		
4" base course at concrete curbs	20	ton	17.76	349		
Sub-total	117,525	sf	0.16	/sf	18,311	
Asphalt Paving						
3" ac pavement @ south entry area	74	ton	96.40	7,172		3,840 sf
ac pavement patch @ 15th ave	10	ton	126.84	1,229		500 sf
Sub-total	117,525	sf	0.07	/sf	8,401	
Concrete Pavement						
4" concrete pavement (ped/bike)	25,700	sf	4.06	104,316		
upgrade finish @ shaded area/entry	3,300	sf	2.03	6,697		verify requirements
4" concrete pavement (outdoor patio)	2,600	sf	6.09	15,830		
8" concrete pavement (vehicular)	970	sf	8.12	7,874		
conc amphitheater seating w/ synth. turf	2,640	sf	15.22	40,184		
conc stair on grade	54	lf	35.52	1,918		
Sub-total	117,525	sf	1.50	/sf	176,819	
Curbs & Gutters						
concrete curb, vertical	410	lf	12.68	5,201		
Sub-total	117,525	sf	0.04	/sf	5,201	
Athletic & Recreational Surfacing						
repair/replace rubber track border	715	lf	12.18	8,707		verify if required
sand volleyball courts	3,550	sf	5.07	18,012		
Sub-total	117,525	sf	0.23	/sf	26,719	
Fences & Gates						
fence @ outdoor patio	125	lf	126.84	15,855		allowance, assume ornamental
fence @ court/south entry	*0*	*lf*	*126.84*	*0*		*deleted*
gates, 6' x 7' H (pair)	*2*	*ea*	*2,029.50*	*4,059*		*court/south entry deleted*
fence @ courtyard bike storage	60	lf	126.84	7,611		allowance, assume ornamental
Sub-total	117,525	sf	0.23	/sf	27,525	
Retaining & Site Walls						
flow through planter wall/curb	6.1	cy	761.06	4,642		
planter walls	102.7	cy	761.06	78,161		
seat walls	93.9	cy	761.06	71,464		
Sub-total	117,525	sf	1.31	/sf	154,267	

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G20 | SITE IMPROVEMENTS - Continued						
Site Furnishings						
bike racks	46	ea	279.06	12,837		
bike shelters east of exist bldg.	290	sf	55.81	16,185		
bike shelter @ courtyard	200	sf	55.81	11,162		
benches - allowance	5	ea	1,217.70	6,089		
trash receptacles - allowance	3	ea	1,014.75	3,044		
Sub-total	117,525	sf	0.42	/sf	49,317	
Landscape Irrigation						
new planter & lawn areas	15,760	sf	1.52	23,989		
controller / bf / etc.	1	sum	3,551.63	3,552		
Sub-total	117,525	sf	0.23	/sf	27,541	
Planting						
green screen trellis	500	sf	15.22	7,611		
planter area	1,200	sf	7.10	8,524		
plant bed area	6,600	sf	5.07	33,487		
flow thru planter area	600	sf	25.37	15,221		
planted berm area	5,360	sf	5.07	27,195		
lawn area @ volleyball area	2,000	sf	1.27	2,537		
exist seeded lawn/add new trees - allow.	11,230	sf	2.03	22,791		
exist landscape area - repair	700	sf	1.52	1,065		
Sub-total	117,525	sf	1.01	/sf	118,431	
SUB-TOTAL G20 | SITE IMPROVEMENTS			5.21	/sf	**$612,532**	
G30 | SITE MECHANICAL UTILITIES						
Water Utilities						
4" DIP, AWWA C151	12	lf	50.74	609		
6" DIP, AWWA C151	30	lf	60.89	1,827		
8" DIP, AWWA C151	635	lf	76.11	48,328		
gate valve	3	ea	862.54	2,588		
PIV	1	ea	2,536.88	2,537		
hydrant assemblies	2	ea	2,536.88	5,074		
thrust blocks	7	ea	101.48	710		
connect to existing	2	ea	1,522.13	3,044		
trenching @ rock - premium/allowance	*1*	*sum*	*5,073.76*	*5,074*		*allowance, should be minimal*
Sub-total	117,525	sf	0.59	/sf	69,791	*per inverts*
Sanitary Sewerage Utilities						
6" pvc piping	20	lf	35.52	710		
8" pvc piping	300	lf	45.66	13,699		
sanitary lift station	1	sum	42,619.56	42,620		
excavation for above	1	sum	14,206.52	14,207		
precast manholes	3	ea	2,790.57	8,372		
connection to existing	2	ea	2,029.50	4,059		
cleanouts	1	ea	456.64	457		
trenching @ rock - premium/allowance	*1*	*sum*	*10,147.51*	*10,148*		*allowance, should be minimal*
Sub-total	117,525	sf	0.80	/sf	94,272	*per inverts*

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G30 | SITE MECHANICAL UTILITIES - Continued						
Storm Drainage Utilities						
site drainage systems						
4" pvc piping	230	lf	30.44	7,002		
6" pvc piping	30	lf	35.52	1,065		
8" pvc piping	110	lf	45.66	5,023		
10" pvc piping	640	lf	52.77	33,771		
15" pvc piping	355	lf	65.96	23,415		
precast manholes	8	ea	2,790.57	22,325		
water quality manhole	1	ea	15,221.27	15,221		
catch basins	6	ea	1,014.75	6,089		
cleanouts	1	ea	456.64	457		
connection to cistern overflow	1	ea	1,014.75	1,015		
connection to existing	5	ea	1,522.13	7,611		
trenching @ rock - premium/allowance	*1*	*sum*	*25,368.78*	*25,369*		*allowance,*
Sub-total	117,525	sf	1.26	/sf	148,363	
SUB-TOTAL G30 | SITE MECHANICAL UTILITIES			2.66	/sf	**$312,426**	
G40 | SITE ELECTRICAL UTILITIES						
Electrical Utilities						
site demo	1	sum	11,278.96	11,279		
boring/trenching	1	sum	55,811.32	55,811		
telecomm conduits	1	sum	31,343.64	31,344		
transformer vault	1	sum	26,689.58	26,690		
temp transformer/feeders	1	sum	84,295.39	84,295		
demo generator/em service	1	sum	10,210.43	10,210		
relocate field lighting- pole unit	*2*	*ea*	*10,147.51*	*20,295*		*allowance, verify scope*
Sub-total	117,525	sf	2.04	/sf	239,924	
SUB-TOTAL G40 | SITE ELECTRICAL UTILITIES			2.04	/sf	**$239,924**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date: *Rev 3/28/12*
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

New Addition Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G90 | OTHER SITE CONSTRUCTION						
Other Site Construction						
no work required		ea	0.00	0		
Sub-total	117,525	sf	0.00	/sf	0	
SUB-TOTAL G90 | OTHER SITE CONSTRUCTION			0.00	/sf	**$0**	
SUB-TOTAL			267.89	31,484,059	**$31,484,059**	
Estimating Contingency			*5.00%*	*1,574,203*		
Index To Construction Start	*01-Jul-13*		*2.50%*	*826,457*		*@ ± 2.5% per year*
General Conditions			6.20%	2,100,000		
Builders Risk Insurance			*0.25%*	*89,962*		*per HSW*
Subcontractor Bond			0.00%	0		*incl. w/ cost / unit above*
CMGC Bond			0.68%	245,308		
Contractors Contingency			*2.50%*	*908,000*		
CMGC Fee			1.95%	725,946	6,469,875	20.55%
TOTAL DIRECT CONSTRUCTION COST						
New Addition Estimate	**117,525**	**sf**	**$322.94**	**/sf**	**$37,953,934**	
Lower Level	45,060	sf				
Main Level	34,295	sf				
Upper Level	38,170	sf				

Fitness / Climbing Wall Area Remodel Estimate

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date:	27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date:	28-Mar-12
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Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start:	01-Jul-13

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
001 | GENERAL REQUIREMENTS						1.01
final cleaning	17,200	sf	0.35	6,080		
layout	17,200	sf	0.86	14,766		
temp dust & protection barriers	17,200	sf	0.76	13,029		
Sub-total	17,200	sf	1.97	/sf	33,875	
SUB-TOTAL 001 | GENERAL REQUIREMENTS			1.97	/sf	**$33,875**	
A10 | FOUNDATIONS						
Forming						
spread footings	*160*	*sf*	*8.11*	*1,297*		
columns	*160*	*sf*	*12.67*	*2,028*		
Sub-total	17,200	sf	0.19	/sf	3,325	
Reinforcing Steel						
spread footings	*500*	*lbs*	*1.22*	*608*		assume 75#/cy
columns	*300*	*lbs*	*1.22*	*365*		
Sub-total	17,200	sf	0.06	/sf	973	
Redi-Mix Concrete						
3000 psi	10.0	cy	96.40	964		
Sub-total	17,200	sf	0.06	/sf	964	
Placing						
spread footings	*7.0*	*cy*	*44.55*	*312*		
columns	*3.0*	*cy*	*111.53*	*335*		
pump / transport concrete	*10.0*	*cy*	*65.79*	*658*		
Sub-total	17,200	sf	0.08	/sf	1,305	
Finishing						
float footing tops	80	sf	0.46	37		
allowance for exist conditions	1	sum	3,030.00	3,030		
Sub-total	17,200	sf	0.18	/sf	3,067	
SUB-TOTAL A10 | FOUNDATIONS			0.56	/sf	**$9,634**	
A20 | BASEMENT CONSTRUCTION						
Basement Construction						
no work required		sf	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL A20 | BASEMENT CONSTRUCTION			0.00	/sf	**$0**	
B10 | SUPERSTRUCTURE						
Forming						
topping slab on precast planks	3,160	sf	0.51	1,603		3" topping
wall @ exist pool area	*1,750*	*sf*	*10.65*	*18,634*		
Sub-total	17,200	sf	1.18	/sf	20,237	
Reinforcing Steel						
topping slab on precast planks	3,200	lbs	0.81	2,598		assume 1#/sf
wall @ exist pool area	4,600	lbs	0.81	3,734		assume 160#/cy
Sub-total	17,200	sf	0.37	/sf	6,332	

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
B10 | SUPERSTRUCTURE - Continued						
Redi-Mix Concrete						
4000 psi	62.0	cy	101.48	6,291		
Sub-total	17,200	sf	0.37	/sf	6,291	
Placing						
topping slab on precast planks	*31.0*	*cy*	*40.51*	*1,256*		
wall @ exist pool area	*31.0*	*cy*	*111.50*	*3,457*		
pump / transport concrete	*62.0*	*cy*	*55.69*	*3,453*		
Sub-total	17,200	sf	0.47	/sf	8,166	
Finishing						
set screeds @ topping slab	3,160	sf	0.15	481		
cure slabs @ topping slab	3,160	sf	0.25	802		
trowel slabs @ topping slab	3,160	sf	0.86	2,726		
sealer	3,160	sf	0.56	1,755		
upgrade exist footing @ new wall - allow.	25	lf	757.50	18,938		allowance
Sub-total	17,200	sf	1.44	/sf	24,702	
Precast Hollow-Core Planks						
8" floor plank @ exist pool lid	3,160	sf	10.15	32,066		
precast support beams	75	lf	253.69	19,027		allowance, verify size
rigging	*1*	*sum*	*10,100.00*	*10,100*		*allowance*
Sub-total	17,200	sf	3.56	/sf	61,193	
SUB-TOTAL B10 | SUPERSTRUCTURE			7.38	/sf	**$126,921**	
B20 | EXTERIOR CLOSURE						
Exterior Closure						
no work required		sf	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL B20 | EXTERIOR CLOSURE			0.00	/sf	**$0**	
B30 | ROOFING						
Roofing						
no work required		sf	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL B30 | ROOFING			0.00	/sf	**$0**	
C10 | INTERIOR CONSTRUCTION						
Rough Carpentry						
miscellaneous blocking & framing	17,200	sf	0.45	7,817		
Sub-total	17,200	sf	0.45	/sf	7,817	
Caulking & Sealants						
caulking / firestopping	17,200	sf	0.40	6,949		
Sub-total	17,200	sf	0.40	/sf	6,949	
Partitions						
6" studs, 5/8" gyp (2), insul.	*660*	*sf*	*8.32*	*5,492*		
12" studs, 5/8" gyp (1), insul.	*5,180*	*sf*	*12.83*	*66,444*		*@ healthy Oregon area*
misc. framing/finish allowance	1	sum	2,020.00	2,020		
Sub-total	17,200	sf	4.30	/sf	73,956	

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C10 | INTERIOR CONSTRUCTION - Continued						
Doors, Frames & Hardware (includes installation)						
alum, 3' x 6' H (pair)	*1*	*ea*	*3,535.00*	*3,535*		*doors @ gym deleted*
HM, 3' x 7' H	1	ea	1,522.13	1,522		
access doors	1	sum	303.00	303		
paint HM door & frame	1	lvs	91.33	91		
Sub-total	17,200	sf	0.32	/sf	5,451	
Relites & Sidelites - Alum. Frame						
west side of exist gym	*0*	*sf*	*45.45*	*0*		*deleted*
west side of exist gym, track level	*0*	*sf*	*45.45*	*0*		*deleted*
lounge area	*1,900*	*sf*	*45.45*	*86,355*		*assume 10' H*
exist fitness/corridor	140	sf	45.45	6,363		
Sub-total	17,200	sf	5.39	/sf	92,718	
Signage Systems						
signs, ada & code required	17,200	sf	0.10	1,737		
Sub-total	17,200	sf	0.10	/sf	1,737	
SUB-TOTAL C10 | INTERIOR CONSTRUCTION			10.97	/sf	**$188,628**	
C20 | STAIRS						
Stairs						
steel framing w/ conc fill treads	221	lf	141.40	31,179		w/ perf metal risers
conc stairs & landing @ exist gym	*0*	*ea*	*4,040.00*	*0*		*deleted*
railings						
floor opening guardrail	*37*	*lf*	*253.69*	*9,386*		*unit cost allow. per Arch*
stair guardrail w/ handrail	*50*	*lf*	*202.95*	*10,148*		*unit cost allow. per Arch*
stair handrail - wall mounted	20	lf	35.35	707		stl pipe
stair guardrail w/ handrail @ gym	*0*	*lf*	*85.85*	*0*		*deleted*
finishes						
paint exposed structure	2	flights	1,522.13	3,044		
Sub-total	17,200	sf	3.17	/sf	54,464	
SUB-TOTAL C20 | STAIRS			3.17	/sf	**$54,464**	
C30 | INTERIOR FINISHES						
Wall Finishes						
base						
4" vinyl	1,600	lf	1.88	3,004		
coverings						
paint walls	35,000	sf	0.54	18,824		
Sub-total	17,200	sf	1.27	/sf	21,828	
Floor Finishes						
resilient flooring, RSF @ fitness areas	*5,700*	*sf*	*12.12*	*69,084*		*Mondo Sport Impact*
safety mats @ climbing wall	*2,500*	*sf*	*0.00*	*0*		*assume exist to remain/reused*
carpet tile @ lounge areas	138	sy	40.59	5,581		
replace carpet @ gym risers	*0*	*sy*	*45.45*	*0*		*deleted*
floor finish @ public areas - allowance	7,500	sf	6.06	45,450		
patch/match wood floor @ gym - allow.	*1*	*sum*	*0.00*	*0*		*deleted*
prep exist floors	17,000	sf	1.01	17,170		
Sub-total	17,200	sf	7.98	/sf	137,285	

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C30 | INTERIOR FINISHES - Continued						
Ceilings						
suspended cloud ceilings @ circ. areas	*9,715*	*sf*	*20.30*	*197,166*		*assume 2/3 of area*
paint exposed struct. @ cloud areas	*14,500*	*sf*	*1.01*	*14,714*		
Sub-total	17,200	sf	12.32	/sf	211,880	
SUB-TOTAL C30 | INTERIOR FINISHES			21.57	/sf	**$370,993**	
D10 | CONVEYING SYSTEMS						
Elevators						
no work required		sf	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL D10 | CONVEYING SYSTEMS			0.00	/sf	**$0**	
D20 | PLUMBING SYSTEMS						
Waste Drainage Systems						
c.i. waste & vent ag 2"	34	lf	24.01	816		
c.i. waste & vent ag 3"	10	lf	30.18	302		
c.i. waste & vent ag 4"	12	lf	42.42	509		
c.i. waste & vent ug 2"	23	lf	22.30	513		
c.i. waste & vent ug 3"	60	lf	28.81	1,728		
c.i. waste & vent ug 4"	20	lf	38.41	768		
fd-1) floor drain standard c.i. 4"	1	ea	308.05	308		
floor cleanout 4"	1	ea	248.46	248		
wall cleanout 4"	1	ea	154.53	155		
sleeves	2	ea	85.85	172		
trap primers	1	ea	181.80	182		
excavation and backfill - hand digging	1	sum	5,757.00	5,757		
Sub-total	17,200	sf	0.67	/sf	11,458	
Domestic, Hot & Cold Water						
assume water to be roughed in & completed under t.i.		lf	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
Plumbing Fixtures - Commercial						
s-1) sink - future juice bar	0	ea	732.25	0		
flashings (vtr's) 2'-4"	1	ea	227.25	227		
Sub-total	17,200	sf	0.01	/sf	227	
SUB-TOTAL D20 | PLUMBING SYSTEMS			0.68	/sf	**$11,685**	
D30 | HVAC SYSTEMS						
Insulation						
ductwork fg ash 1-1/2" thick	3,412	sf	2.71	9,236		
Sub-total	17,200	sf	0.54	/sf	9,236	
Supply/Return/Gen. Exhaust Ductwork						
exhaust duct	1,440	lbs.	8.08	11,635		
galv. rect. & spiral duct r/a /s/a / osa	9,550	lbs.	8.08	77,164		
Sub-total	17,200	sf	5.16	/sf	88,799	

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D30 | HVAC SYSTEMS - Continued						
Flexible Duct						
Insulated Flex duct to diffusers	175	lf	9.48	1,660		
Sub-total	17,200	sf	0.10	/sf	1,660	
Air Distribution Devices						
standard perf. diffuser	35	ea	68.48	2,397		
r/a and exhaust grills	10	ea	75.75	758		
volume dampers	45	ea	52.52	2,363		
terminal units	8	ea	722.15	5,777		
Sub-total	17,200	sf	0.66	/sf	11,295	
Misc HVAC						
commissioning - assist	1	sum	1,515.00	1,515		
bim	1	sum	2,323.00	2,323		
ddc controls	1	sum	72,316.00	72,316		
air & water balancing	1	sum	4,772.25	4,772		
Sub-total	17,200	sf	4.71	/sf	80,926	
SUB-TOTAL D30 | HVAC SYSTEMS			11.16	/sf	**$191,916**	
D40 | FIRE PROTECTION SYSTEMS						
Fire Sprinklers						
modify/relocate exist system	17,200	sf	1.52	26,058		allowance
Sub-total	17,200	sf	1.52	/sf	26,058	
SUB-TOTAL D40 | FIRE PROTECTION SYSTEMS			1.52	/sf	**$26,058**	
D50 | ELECTRICAL SYSTEMS						
Miscellaneous						
mobilization, tools, equipment, permits	1	sum	5,553.99	5,554		
on-site supervision/support	1	sum	5,672.16	5,672		
temp power	1	sum	1,890.72	1,891		
demo	1	sum	2,836.08	2,836		
Sub-total	17,200	sf	0.93	/sf	15,953	
Distribution:						
distribution panels	1	sum	4,088.68	4,089		
feeders	1	sum	8,744.58	8,745		
supports/strut/fire caulking	1	sum	2,552.47	2,552		
duplex receptacles	40	ea	307.24	12,290		
misc. connections	5	ea	295.43	1,477		
Sub-total	17,200	sf	1.69	/sf	29,153	
Lighting:						
light fixtures	60	ea	933.54	56,013		
controls	1	sum	9,689.94	9,690		
Sub-total	17,200	sf	3.82	/sf	65,703	
Voice/Data/Communication:						
cables/terminations	35	ea	248.16	8,685		
conduits/pathways/rough in	1	sum	2,930.62	2,931		
catv cabling	5	ea	419.50	2,098		
cctv ip cameras	4	ea	3,970.51	15,882		
Sub-total	17,200	sf	1.72	/sf	29,596	

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D50 | ELECTRICAL SYSTEMS - Continued						
Fire Alarm:						
smoke detectors	16	ea	490.41	7,846		
notification	11	ea	519.95	5,719		
nac panels	1	sum	2,906.98	2,907		
fa panel/programming/testing	1	sum	5,577.62	5,578		
Sub-total	17,200	sf	1.28	/sf	22,050	
Door Access System:						
door locations-add to existing system	1	sum	2,363.40	2,363		
Sub-total	17,200	sf	0.14	/sf	2,363	
SUB-TOTAL D50 | ELECTRICAL SYSTEMS			9.58	/sf	**$164,818**	
E10 | EQUIPMENT						
Gym Equipment						
repair/modify climbing walls	1	sum	10,100.00	10,100		verify requirements
floor & wall pads	1	sum	1,010.00	1,010		verify requirements
Sub-total	17,200	sf	0.65	/sf	11,110	
SUB-TOTAL E10 | EQUIPMENT			0.65	/sf	**$11,110**	
E20 | FURNISHINGS						
Furnishings						
lounge furniture - allowance	1	sum	5,050.00	5,050		
Sub-total	17,200	sf	0.29	/sf	5,050	
SUB-TOTAL E20 | FURNISHINGS			0.29	/sf	**$5,050**	
F10 | SPECIAL CONSTRUCTION						
Special Construction						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL F10 | SPECIAL CONSTRUCTION			0.00	/sf	**$0**	
F20 | SELECTIVE DEMOLITION						
Interior Demolition						
pool/north entrance area						
remove control desk	20	lf	50.50	1,010		
remove turnstiles	4	ea	151.50	606		
remove security gates	2	ea	101.00	202		
remove diving boards	2	ea	505.00	1,010		
remove raised pool edge/curb	150	lf	50.50	7,575		
remove pool ladders	4	ea	101.00	404		
remove start platforms	6	ea	50.50	303		
remove doors & frames	3	ea	75.75	227		
remove relites	400	sf	3.54	1,414		
remove stud walls	500	sf	2.02	1,010		
remove portion of cmu walls	1,800	sf	4.55	8,181		assumes 15' H, verify
shore walls as required	120	lf	75.75	9,090		
sawcut conc walls @ new opening	20	lf	20.20	404		
remove conc wall @ new opening	25	sf	15.15	379		

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
F20 | SELECTIVE DEMOLITION - Continued						
Interior Demolition - continued						
remove tile floor @ entry area	2,000	sf	1.52	3,030		
remove tile floor @ pool	8,000	sf	1.52	12,120		
remove wall tile @ pool	600	sf	1.52	909		
repair/replaced damaged walls	600	sf	2.53	1,515		
remove ceiling	*10,000*	*sf*	*0.56*	*5,555*		*verify if required*
remove wood bleachers	1	sum	1,010.00	1,010		
misc. demolition allowance	1	sum	15,150.00	15,150		
haul & disposal	1	sum	10,665.60	10,666		
Sub-total	17,200	sf	4.75	/sf	81,770	
west end of gymnasium/climbing area						
remove guardrails @ climbing area	70	lf	10.10	707		
remove wood bench @ guardail	30	lf	5.05	152		
remove guardrails @ gym seating	*0*	*lf*	*10.10*	*0*		
remove stl framed stairs & railings	2	flights	3,030.00	6,060		
remove lockers	15	frame	35.35	530		
remove cubby storage	30	lf	12.12	364		
remove gym bleacher rails	*0*	*lf*	*10.10*	*0*		*deleted*
sawcut conc gym seating/risers	*0*	*lf*	*25.25*	*0*		*deleted*
remove conc gym seating/risers	*0*	*sf*	*10.10*	*0*		*deleted*
remove conc gym stairs (2)	*0*	*sf*	*10.10*	*0*		*deleted*
remove doors & frames	9	ea	75.75	682		
remove stud walls	2,800	sf	2.02	5,656		
remove flooring	5,400	sf	0.61	3,272		
remove ceiling	*5,400*	*sf*	*0.56*	*3,000*		
misc. demolition allowance	1	sum	15,150.00	15,150		
haul & disposal	1	sum	5,335.95	5,336		
Sub-total	17,200	sf	2.38	/sf	40,909	
SUB-TOTAL F20 | SELECTIVE DEMOLITION			7.13	/sf	**$122,679**	
G10 | SITE PREPARATION						
Site Preparation						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL G10 | SITE PREPARATION			0.00	/sf	**$0**	
G20 | SITE IMPROVEMENTS						
Site Improvements						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL G20 | SITE IMPROVEMENTS			0.00	/sf	**$0**	
G30 | SITE MECHANICAL UTILITIES						
Site Mechanical Utilities						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL G30 | SITE MECHANICAL UTILITIES			0.00	/sf	**$0**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date: Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date: 27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date: 28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time: 4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start: 01-Jul-13

Fitness/Climbing Wall Area Remodel Est.	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G40 | SITE ELECTRICAL UTILITIES						
Site Electrical Utilities						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL G40 | SITE ELECTRICAL UTILITIES			0.00	/sf	**$0**	
G90 | OTHER SITE CONSTRUCTION						
Other Site Construction						
no work required		sum	0.00	0		
Sub-total	17,200	sf	0.00	/sf	0	
SUB-TOTAL G90 | OTHER SITE CONSTRUCTION			0.00	/sf	**$0**	
SUB-TOTAL			76.62	1,317,831	**$1,317,831**	
Estimating Contingency			*5.00%*	*65,892*		
Index To Construction Start	*01-Jul-13*		*2.50%*	*34,593*		*@ ± 2.5% per year*
General Conditions			6.20%	87,900		
Builders Risk Insurance			*0.25%*	*3,766*		*per HSW*
Subcontractor Bond			0.00%	0		*incl. w/ cost / unit above*
CMGC Bond			0.68%	10,268		
Contractors Contingency			*2.50%*	*38,006*		
CMGC Fee			1.95%	30,386	270,810	20.55%
TOTAL DIRECT CONSTRUCTION COST						
Fitness/Climbing Wall Area Remodel Est.	**17,200**	**sf**	**$92.36**	**/sf**	**$1,588,641**	
Main Level	15,600	sf				
Upper Level	1,600	sf				

Locker Room Area Remodel Estimate

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date:	27-Feb-12
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Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
001 | GENERAL REQUIREMENTS						1.01
final cleaning	6,800	sf	0.35	2,404		
layout	6,800	sf	0.86	5,838		
temp dust & protection barriers	6,800	sf	0.76	5,151		
Sub-total	6,800	sf	1.97	/sf	13,393	
SUB-TOTAL 001 | GENERAL REQUIREMENTS			1.97	/sf	**$13,393**	
A10 | FOUNDATIONS						
Foundations						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL A10 | FOUNDATIONS			0.00	/sf	**$0**	
A20 | BASEMENT CONSTRUCTION						
Basement Construction						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL A20 | BASEMENT CONSTRUCTION			0.00	/sf	**$0**	
B10 | SUPERSTRUCTURE						
Superstructure						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL B10 | SUPERSTRUCTURE			0.00	/sf	**$0**	
B20 | EXTERIOR CLOSURE						
Exterior Closure						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL B20 | EXTERIOR CLOSURE			0.00	/sf	**$0**	
B30 | ROOFING						
Roofing						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL B30 | ROOFING			0.00	/sf	**$0**	
C10 | INTERIOR CONSTRUCTION						
Rough Carpentry						
miscellaneous blocking & framing	6,800	sf	0.45	3,091		
Sub-total	6,800	sf	0.45	/sf	3,091	

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C10 | INTERIOR CONSTRUCTION - Continued						
Caulking & Sealants						
caulking / firestopping	6,800	sf	0.40	2,747		
Sub-total	6,800	sf	0.40	/sf	2,747	
Partitions						
6" studs, 5/8" gyp (2), insul.	5,900	sf	8.32	49,094		
Sub-total	6,800	sf	7.22	/sf	49,094	
Doors, Frames & Hardware (includes installation)						
HM, 3' x 7' H	2	ea	1,522.13	3,044		
wood/HM, 3' x 7' H	9	ea	1,319.18	11,873		
wood/HM, 6' x 7' H (pair)	1	ea	2,638.35	2,638		
access doors	1	sum	303.00	303		
paint HM door frame	2	ea	50.74	101		
paint HM door & frame	10	lvs	91.33	913		
Sub-total	6,800	sf	2.78	/sf	18,872	
Architectural Wood Casework						
restrooms						
solid surface lav. countertop	*0*	*lf*	*152.21*	*4,600*		*NIC exist to remain*
Sub-total	6,800	sf	0.68	/sf	4,600	
Toilet Partitions - Solid Polymer						
ADA	*0*	*ea*	*1,735.22*	*0*		*NIC exist to remain*
standard	*0*	*ea*	*1,349.62*	*0*		*NIC exist to remain*
urinal screen	*0*	*ea*	*639.29*	*0*		*NIC exist to remain*
Sub-total	6,800	sf	0.00	/sf	0	
Toilet Accessories (includes installation)						*NIC exist to remain*
ADA toilet grab bars	*0*	*sets*	*116.70*	*0*		*CFCI*
mirror, 4' H	*0*	*sf*	*15.22*	*0*		*CFCI*
paper towel dispenser / receptacle	*0*	*ea*	*76.11*	*0*		*OFCI*
janitor tool holder	*0*	*ea*	*15.22*	*0*		*OFCI*
sanitary napkin dispenser	*0*	*ea*	*76.11*	*0*		*OFCI*
sanitary napkin disposal	*0*	*ea*	*20.30*	*0*		*OFCI*
toilet paper dispenser	*0*	*ea*	*15.22*	*0*		*OFCI*
seat cover dispenser	*0*	*ea*	*30.44*	*0*		*OFCI*
soap dispenser	*0*	*ea*	*40.59*	*0*		*OFCI*
electric hand/hair dryer	*0*	*ea*	*1,217.70*	*0*		*CFCI*
Sub-total	6,800	sf	0.00	/sf	0	
Signage Systems						
signs, ada & code required	6,800	sf	0.25	1,717		
Sub-total	6,800	sf	0.25	/sf	1,717	
Fire Extinguisher & Cabinets						
FEC	1	ea	237.35	237		
Sub-total	6,800	sf	0.03	/sf	237	
SUB-TOTAL C10 | INTERIOR CONSTRUCTION			11.82	/sf	**$80,358**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	Rev 3/28/12
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Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start:	01-Jul-13

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
C20 | STAIRS						
Stairs						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL C20 | STAIRS			0.00	/sf	**$0**	
C30 | INTERIOR FINISHES						
Wall Finishes						
base						
ceramic tile @ restrooms	245	lf	12.18	2,983		
4" vinyl	900	lf	1.88	1,690		
integral coved base @ safety floor	50	lf	5.58	279		
coverings						
ceramic tile @ restrooms	980	sf	12.18	11,933		assume 4' H
frp @ jan/cust.	100	sf	8.12	812		
paint walls	12,000	sf	0.54	6,454		
Sub-total	6,800	sf	3.55	/sf	24,151	
Floor Finishes						
ceramic tile @ restrooms	1,100	sf	14.21	15,627		
sheet vinyl safety floor @ jan/cust.	70	sf	6.09	426		
flooring to be determined	5,630	sf	5.05	28,432		
prep exist floors	6,800	sf	1.01	6,868		
Sub-total	6,800	sf	7.55	/sf	51,353	
Ceilings						
suspended gyp board ceiling system	*1,100*	*sf*	*8.08*	*8,888*		
paint gypboard ceilings / fascias	1,100	sf	1.01	1,116		
suspended 2 x 2 ACT	*5,700*	*sf*	*5.05*	*28,785*		verify requirements
Sub-total	6,800	sf	5.70	/sf	38,789	
SUB-TOTAL C30 | INTERIOR FINISHES			16.81	/sf	**$114,293**	
D10 | CONVEYING SYSTEMS						
Elevators						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL D10 | CONVEYING SYSTEMS			0.00	/sf	**$0**	
D20 | PLUMBING SYSTEMS						
Waste Drainage Systems						
c.i. waste & vent ag 2"	*0*	*lf*	*24.01*	*0*		*delete all work exist to remain*
c.i. waste & vent ag 3"	*0*	*lf*	*30.18*	*0*		
c.i. waste & vent ag 4"	*0*	*lf*	*42.42*	*0*		
c.i. waste & vent ug 2"	*0*	*lf*	*22.30*	*0*		
c.i. waste & vent ug 3"	*0*	*lf*	*28.81*	*0*		
c.i. waste & vent ug 4"	*0*	*lf*	*38.41*	*0*		
fd-1) floor drain standard c.i. 4"	*0*	*ea*	*308.05*	*0*		
floor cleanout 4"	*0*	*ea*	*248.46*	*0*		
wall cleanout 4"	*0*	*ea*	*154.53*	*0*		
sleeves	*0*	*ea*	*85.85*	*0*		

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D20 | PLUMBING SYSTEMS - Continued						
Waste Drainage Systems - continued						
trap primers	*0*	*ea*	*181.80*	*0*		*delete all work exist to remain*
excavation and backfill - hand digging	*0*	*sum*	*9,090.00*	*0*		
Sub-total	6,800	sf	0.00	/sf	0	
Domestic, Hot & Cold Water						
l-cu dist. piping 1/2"	*0*	*lf*	*14.00*	*0*		*delete all work exist to remain*
l-cu dist. piping 3/4"	*0*	*lf*	*17.47*	*0*		
l-cu dist. piping 1"	*0*	*lf*	*20.81*	*0*		
l-cu dist. piping 1-1/4"-1-1/2"	*0*	*lf*	*25.60*	*0*		
l-cu dist. piping 2"-2-1/2"	*0*	*lf*	*34.34*	*0*		
interior hose bibbs	*0*	*ea*	*65.65*	*0*		
valves / balancing valves	*0*	*ea*	*126.25*	*0*		
backflow preventer and assoc. piping	*0*	*sum*	*3,585.50*	*0*		
Sub-total	6,800	sf	0.00	/sf	0	
Piping Insulation						
piping insulation - domestic h&c	*0*	*lf*	*11.11*	*0*		*delete all work exist to remain*
Sub-total	6,800	sf	0.00	/sf	0	
Plumbing Fixtures - Commercial						
wc-1) wall hung dual flush valve w.c	*0*	*ea*	*1,308.96*	*0*		*delete all work exist to remain*
wc-2) wall hung dual flush valve ada w.c.	*0*	*ea*	*1,308.96*	*0*		
u-1) urinal waterless - wall hung	*0*	*ea*	*1,157.46*	*0*		
u-2) urinal waterless - wall hung - (ada)	*0*	*ea*	*1,157.46*	*0*		
l-1) lavatory - countertop	*0*	*ea*	*850.42*	*0*		
l-2) lavatory - countertop ada	*0*	*ea*	*888.80*	*0*		
add for electronic sensors on lav faucets	*0*	*sum*	*2,525.00*	*0*		
s-1) sink for lact. room	*0*	*ea*	*732.25*	*0*		
ms-1) mop sink	*0*	*ea*	*858.50*	*0*		
wb-1) washing machine box	*3*	*ea*	*252.50*	*758*		
df-1) drinking fountain hi/lo	*1*	*ea*	*2,141.20*	*2,141*		
flashings (vtr's) 2'-4"	*0*	*ea*	*227.25*	*0*		
Sub-total	6,800	sf	0.43	/sf	2,899	
Condensate Piping						
condensate piping	*0*	*lf*	*16.16*	*0*		*delete all work exist to remain*
Sub-total	6,800	sf	0.00	/sf	0	
Plumbing Equipment						
wh-1) electric water heater	*0*	*sum*	*2,181.60*	*0*		*delete all work exist to remain*
rhwp-1) in line recirc. pump 3/4"	*0*	*ea*	*444.40*	*0*		
rigging	*0*	*sum*	*505.00*	*0*		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL D20 | PLUMBING SYSTEMS			0.43	/sf	**$2,899**	
D30 | HVAC SYSTEMS						
Insulation						
ductwork fg ash 1-1/2" thick	786	sf	2.71	2,128		
Sub-total	6,800	sf	0.31	/sf	2,128	
Supply/Return/Gen. Exhaust Ductwork						
galv. rect. & spiral duct r/a / exh / osa	2,420	lbs.	8.08	19,554		
Sub-total	6,800	sf	2.88	/sf	19,554	

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D30 | HVAC SYSTEMS - Continued						
Flexible Duct						
insulated flex duct to diffusers	40	lf	9.48	379		
Sub-total	6,800	sf	0.06	/sf	379	
Air Distribution Devices						
standard perf. diffuser	8	ea	68.48	548		
r/a and exhaust grills	2	ea	75.75	152		
volume dampers	10	ea	52.52	525		
terminal units	2	ea	722.15	1,444		
Sub-total	6,800	sf	0.39	/sf	2,669	
Misc HVAC						
commissioning - support	1	sum	1,010.00	1,010		
bim	1	sum	2,525.00	2,525		
ddc controls	1	sum	24,038.00	24,038		
air & water balancing	1	sum	1,099.89	1,100		
Sub-total	6,800	sf	4.22	/sf	28,673	
SUB-TOTAL D30 | HVAC SYSTEMS			7.85	/sf	**$53,403**	
D40 | FIRE PROTECTION SYSTEMS						
Fire Sprinklers						
modify/relocate exist system	6,800	sf	1.52	10,302		allowance
Sub-total	6,800	sf	1.52	/sf	10,302	
SUB-TOTAL D40 | FIRE PROTECTION SYSTEMS			1.52	/sf	**$10,302**	
D50 | ELECTRICAL SYSTEMS						
Miscellaneous						
mobilization, tools, equipment, permits	1	sum	3,190.59	3,191		
on-site supervision/support	1	sum	2,836.08	2,836		
temp power	1	sum	1,217.15	1,217		
demo	1	sum	1,701.65	1,702		
Sub-total	6,800	sf	1.32	/sf	8,946	
Distribution:						
supports/strut/fire caulking	1	sum	2,316.13	2,316		
duplex receptacles	32	ea	307.24	9,832		
misc. connections	5	ea	295.43	1,477		
Sub-total	6,800	sf	2.00	/sf	13,625	
Lighting:						
light fixtures	56	ea	809.46	45,330		
controls	1	sum	4,017.78	4,018		
Sub-total	6,800	sf	7.26	/sf	49,348	
Voice/Data/Communication:						
cables/terminations	20	ea	248.16	4,963		
conduits/pathways/rough in	1	sum	1,890.72	1,891		
catv cabling	4	ea	419.50	1,678		
Sub-total	6,800	sf	1.25	/sf	8,532	

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
D50 | ELECTRICAL SYSTEMS - Continued						
Fire Alarm:						
smoke detectors	4	ea	490.41	1,962		
notification	6	ea	519.95	3,120		
fa panel/programming/testing	1	sum	1,748.92	1,749		
Sub-total	6,800	sf	1.00	/sf	6,831	
SUB-TOTAL D50 | ELECTRICAL SYSTEMS			12.84	/sf	**$87,282**	
E10 | EQUIPMENT						
Equipment						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL E10 | EQUIPMENT			0.00	/sf	**$0**	
E20 | FURNISHINGS						
Furnishings						
no work required		sf	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL E20 | FURNISHINGS			0.00	/sf	**$0**	
F10 | SPECIAL CONSTRUCTION						
Special Construction						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL F10 | SPECIAL CONSTRUCTION			0.00	/sf	**$0**	
F20 | SELECTIVE DEMOLITION						
Structure Demolition						
remove flooring	6,800	sf	0.61	4,121		
remove ceilings	6,800	sf	0.56	3,777		
remove walls	6,800	sf	3.54	24,038		
remove lockers	1	sum	1,010.00	1,010		
remove toilet partitions	1	sum	353.50	354		
remove plumbing fixtures, piping	1	sum	1,010.00	1,010		
remove/reconfigure ramp	1	sum	10,100.00	10,100		allowance
misc. cut / patch	1	sum	5,050.00	5,050		
haul & disposal	1	sum	7,420.00	7,420		
Sub-total	6,800	sf	8.36	/sf	56,880	
SUB-TOTAL F20 | SELECTIVE DEMOLITION			8.36	/sf	**$56,880**	
G10 | SITE PREPARATION						
Site Preparation						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL G10 | SITE PREPARATION			0.00	/sf	**$0**	

Student Recreation Center University of Oregon Eugene, Oregon Robertson Sherwood / RDG Planning & Design Schematic Design Probable Cost Estimate - REVISION #4	*Architectural Cost Consultants, LLC* James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA 8060 SW Pfaffle Street, Suite 110 Tigard, Oregon 97223-8489 Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Estimate Date: Rev 3/28/12 Document Date: 27-Feb-12 Print Date: 28-Mar-12 Print Time: 4:20 PM Constr. Start: 01-Jul-13

Locker Room Area Remodel Estimate	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
G20 | SITE IMPROVEMENTS						
Site Improvements						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL G20 | SITE IMPROVEMENTS			0.00	/sf	**$0**	
G30 | SITE MECHANICAL UTILITIES						
Site Mechanical Utilities						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL G30 | SITE MECHANICAL UTILITIES			0.00	/sf	**$0**	
G40 | SITE ELECTRICAL UTILITIES						
Site Electrical Utilities						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL G40 | SITE ELECTRICAL UTILITIES			0.00	/sf	**$0**	
G90 | OTHER SITE CONSTRUCTION						
Other Site Construction						
no work required		sum	0.00	0		
Sub-total	6,800	sf	0.00	/sf	0	
SUB-TOTAL G90 | OTHER SITE CONSTRUCTION			0.00	/sf	**$0**	
SUB-TOTAL			61.59	418,810	**$418,810**	
Estimating Contingency			*5.00%*	*20,941*		
Index To Construction Start	*01-Jul-13*		*2.50%*	*10,994*		*@ ± 2.5% per year*
General Conditions			6.20%	27,935		
Builders Risk Insurance			*0.25%*	*1,197*		*per HSW*
Subcontractor Bond			0.00%	0		*incl. w/ cost / unit above*
CMGC Bond			0.68%	3,263		
Contractors Contingency			*2.50%*	*12,078*		
CMGC Fee			1.95%	9,657	86,064	20.55%
TOTAL DIRECT CONSTRUCTION COST **Locker Room Area Remodel Estimate**	**6,800**	**sf**	**$74.25**	**/sf**	**$504,874**	
Main Level	6,800	sf				

Alternates

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ALTERNATES	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
01 | Upgrade Membrane Roof						**1.01475135**
Alternate One						
upgrade TPO roof to PVC or EIP memb.	38,800	sf	$2.54	$98,431		
Sub-total	117,525	sf	0.84 /sf		$98,431	
SUB-TOTAL 01 | Upgrade Membrane Roof				98,431	**$98,431**	
Markups			20.55%	20,227	20,227	20.55%
TOTAL DIRECT CONSTRUCTION COST 01 | Upgrade Membrane Roof	**117,525**	**sf**	**$1.01 /sf**		**$118,658**	
02 | Add Green Roof						
Alternate Two						
delete roof pavers/pedestals - 75% area	(4,073)	sf	$18.27	($74,386)		assume same waterproofing
add extensive green roof	4,073	sf	25.37	103,314		
Sub-total	117,525	sf	0.25 /sf		$28,928	
SUB-TOTAL 02 | Add Green Roof				28,928	**$28,928**	
Markups			20.55%	5,945	5,945	20.55%
TOTAL DIRECT CONSTRUCTION COST 02 | Add Green Roof	**117,525**	**sf**	**$0.30 /sf**		**$34,873**	
03 | Upgrade Lockers						
Alternate Three						
upgrade metal lockers to phenolic core	677	frame	$202.95	$137,397		
Sub-total	117,525	sf	1.17 /sf		$137,397	
SUB-TOTAL 03 | Upgrade Lockers				137,397	**$137,397**	
Markups			20.55%	28,235	28,235	20.55%
TOTAL DIRECT CONSTRUCTION COST 03 | Upgrade Lockers	**117,525**	**sf**	**$1.41 /sf**		**$165,632**	
04 | Add Wayfinding Improvements Allowance per previous narrative						
way finding improvements	*0*	*sum*	*$150,000.00*	*$0*		*deleted 3/13 meeting*
Sub-total	117,525	sf	0.00 /sf		$0	
SUB-TOTAL 04 | Add Wayfinding Improvements Allowance per previous narrat				0	**$0**	
Markups			20.55%	0	0	#DIV/0!
TOTAL DIRECT CONSTRUCTION COST 04 | Add Wayfinding Improvements Allowa	**117,525**	**sf**	**$0.00 /sf**		**$0**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	Rev 3/28/12
University of Oregon	James A. Jerde, AIA - Stanley J. Pszczolkowski, AIA	Document Date:	27-Feb-12
Eugene, Oregon	8060 SW Pfaffle Street, Suite 110	Print Date:	28-Mar-12
Robertson Sherwood / RDG Planning & Design	Tigard, Oregon 97223-8489	Print Time:	4:20 PM
Schematic Design Probable Cost Estimate - REVISION #4	Phone (503) 718-0075 Fax (503) 718-0077 www.archcost.com	Constr. Start:	01-Jul-13

ALTERNATES	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
05 | Escalation from July 1, 2013 to July 1, 2014 - Base Bid (Alts NIC)						
New Addition Estimate				37,953,934		
Fitness/Climbing Wall Area Remodel Est.				1,588,641		
Locker Room Area Remodel Estimate				504,874		
Sub-total	117,525	sf	340.76 /sf		$40,047,449	
SUB-TOTAL 05 | Escalation from July 1, 2013 to July 1, 2014 - Base Bid (Alts N				40,047,449	**$40,047,449**	
Index To Construction Start	01-Jul-14		3.00%	1,201,423	1,201,423	@ ± 2.5% per year 3.00%
TOTAL DIRECT CONSTRUCTION COST 05 | Escalation from July 1, 2013 to July 1,	**117,525**	**sf**	**$350.98 /sf**		**$41,248,872**	
06 | Add Site Work @ 15th Street						
Alternate Four						
demolition incl haul & disposal	9,900	sf	1.27	12,558		
earthwork / flagging / barricades / clean	9,900	sf	2.79	27,627		
add 4" sidewalk	3,220	sf	4.06	13,070		
4" base course	77	tons	17.76	1,370		
add 8" concrete pavement (vehicular)	3,470	sf	8.12	28,169		
8" base course	166	tons	17.76	2,953		
add plant bed	1,910	sf	5.07	9,691		allowance, verify scope
landscape irrigation	1,910	sf	1.52	2,907		
add landscape repair	1,300	sf	1.52	1,979		allowance, verify scope
Sub-total	117,525	sf	0.85 /sf		$100,324	
SUB-TOTAL 06 | Add Site Work @ 15th Street				100,324	**$100,324**	
Markups			20.55%	20,616	20,616	20.55%
TOTAL DIRECT CONSTRUCTION COST 06 | Add Site Work @ 15th Street	**117,525**	**sf**	**$1.03 /sf**		**$120,940**	
07 | Replace Field # 2 Synthetic Turf						
demolition / removal	*0*	*sf*	*$1.52*	*$0*		*delete scope 3/13 meeting*
grading / repair rock	*0*	*sf*	*0.76*	*0*		*delete scope 3/13 meeting*
new turf	*0*	*sf*	*4.82*	*0*		*delete scope 3/13 meeting*
Sub-total					$0	
SUB-TOTAL 07 | Replace Field # 2 Synthetic Turf				0	**$0**	
Markups			20.55%	0	0	#DIV/0!
TOTAL DIRECT CONSTRUCTION COST 07 | Replace Field # 2 Synthetic Turf					**$0**	

Student Recreation Center	*Architectural Cost Consultants, LLC*	Estimate Date:	Rev 3/28/12
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ALTERNATES	Quantity	Unit	Cost / Unit	Cost	Sub-totals	Comments
08 | Upgrade Natatorium Skylight						
upgrade polycarb. skylight to internal louvered type	*1,350*	*sf*	*$50.74*	*$68,496*		*to be verified*
Sub-total					$68,496	
SUB-TOTAL 08 | Upgrade Natatorium Skylight				68,496	**$68,496**	
Markups			20.55%	14,076	14,076	20.55%
TOTAL DIRECT CONSTRUCTION COST 08 | Upgrade Natatorium Skylight					**$82,572**	
09 | Miscellaneous Esslinger Renovations						
allowance	1	sum	$0.00	$0		define
Sub-total					$0	
SUB-TOTAL 09 | Miscellaneous Esslinger Renovations				0	**$0**	
Markups			20.55%	0	0	#DIV/0!
TOTAL DIRECT CONSTRUCTION COST 09 | Miscellaneous Esslinger Renovations					**$0**	
10 | Repair Fountain @ Existing Front Door						
allowance	*0*	*sum*	*$186,645.04*	*$0*		*delete 3/13 meeting*
Sub-total					$0	
SUB-TOTAL 10 | Repair Fountain @ Existing Front Door				0	**$0**	
Markups			20.55%	0	0	#DIV/0!
TOTAL DIRECT CONSTRUCTION COST 10 | Repair Fountain @ Existing Front Door					**$0**	
11 | Replace Existing Fire Alarm						
allowance	1	sum	$200,000.00	$200,000		
Sub-total					$200,000	
SUB-TOTAL 11 | Replace Existing Fire Alarm				200,000	**$200,000**	
Markups			20.55%	41,099	41,099	20.55%
TOTAL DIRECT CONSTRUCTION COST 11 | Replace Existing Fire Alarm					**$241,099**	

Appendix A Campus Planning Committee Meeting Minutes

Appendix B Accessibility Focus Group Meeting Minutes

Appendix C City of Eugene, Limited Consultation Meeting Minutes

Appendix D Preliminary Building Code Report

Appendix E Energy Programming

Appendix F LEED Checklist

Appendix G Outline Specifications

Appendix H Cost Estimating Booklet

APPENDIX I DEPARTMENT OF PHYSICAL EDUCATION & RECREATION MEMORANDUM OF UNDERSTANDING

Appendix J SD Report Comments/Responses

Department of Physical Education and Recreation
Memorandum of Understanding

To: Bob Beals, Associate Athletic Director
From: Bryan Haunert, Associate Director for Physical Education and Recreation
Subject: Use of Howe Extension for SRC Expansion staging area
Date: Thursday, March 1, 2012

This MOU results from conversations between the Department of Physical Education and Recreation and the Athletic Department regarding the use of Howe Extension for a staging area when construction of the proposed Student Recreation Center expansion takes place. With the exact dates not known at this time, this document serves as an understanding that Howe Extension will be available during the duration of the construction project, and final dates will be worked out at a later date.

The conditions of this agreement include:

- Utilization of approximately the southern two-thirds of the field for project staging, including location of trailers for the project.
- Installation of a fence dividing the field into the staging area and playing area (playing area being approximately 100 feet by 100 feet).
- Creation of a walkway leading from the northeast corner of Howe Extension to Field 2 for use by softball during specified events.
- Use of a Physical Education and Recreation Field (yet to be determined) when support space is needed for events that specifically need a separate playing surface for team activities.
- Events scheduled on any Physical Education and Recreation Field due to the need for support space will be scheduled at the beginning of Winter Term to minimize conflict with other scheduled events.
- Upon completion of the project and termination of the staging area, the project funding will pay for restoration of the field, including fence repairs, restoration of irrigation, topsoil, seed and any other repairs needed to bring the field back to the condition prior to use

Once a project schedule is determined, Physical Education and Recreation and the Athletic Department will meet to discuss the timeline associated with the field. At this time, specific dates will be added to the MOU.



3/1/12

Bryan Haunert, Associate Director of Physical Education and Recreation — Date

Bob Beals

3/1/12

Bob Beals, Associate Athletic Director — Date

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Appendix I Department of Physical Education & Recreation Memorandum of Understanding

APPENDIX J SD REPORT COMMENTS/RESPONSES

Appendix J

University of Oregon, Student Recreation Center

A draft version of the schematic design program, narratives, outline specifications and drawings were provided on February 28, 2012 to the PUG, Campus Planning and Real Estate, Capital Construction and Operations for review and comment. Their comments and design team responses follow:

STUDENT RECREATION CENTER EXPANSION AND RENOVATION
100% SCHEMATIC DESIGN REVIEW COMMENTS
May 30, 2012

COMMENTS KEY
- User Group or User Group member
- PE&Rec Staff
- Ops, FS, CapCon, NTS, EHS, etc.
- Project Planner (Gene Mowery or Emily Eng)

NO.	ENTRY BY	SHEET #	COMMENT/ISSUE		RESPONSE	RESPONSE BY	STATUS
1	Gene Mowery (GM)	general	Generally noted that comments expressed in Workshop 6 may not be incorporated/implemented in the SD comment review set of drawings likely due to minimal time between the end of Workshop 6 and release of the SD comment review set. Some of the comments from Workshop 6 will likely be repeated in this list, while others may not.		Understood	JH / JP	NA
2	Greg Lobisser	general	Leighton Pool contains interior windows that are part of 1% for Art program - think about relocation		Concur. We plan to look at reusing this glass along the east side of main street. This could render them in a similar location to where they are today, and would part of a visually desirable separator between the Free and Control Zones in that area.	JH / JP	Open
3	User Group	site plan	No need for fence and gate at south end of outdoor court area between new addition and Esslinger.		Understood. This will be removed, and this change was recently reflected in the SD estimates.	JH / JP	Closed
4	GM & EE	site plan	General note: It is understood that bike parking solutions are in flux and in current development taking the next few comment entries into consideration.		Understood.	CM	NA
5	Workshop 6	site plan	Investigate compromise to natural daylight if covered bike parking installed at Bonus Room east window locations		Bike parking is not to be covered at Bonus Room windows. Revision will show in the next submittal.	CM	Closed
6	Workshop 6	site plan	Bike parking directly adjacent to east side entry creates conflict with pedestrians		Bike parking has been removed from this location in the current design.	CM	Closed
7	Workshop 6	site plan	Consider locating some of the covered bike parking under overhang area		Concur. Approximately 22 spaces have been located under overhang.	CM	Closed
8	Workshop 6	site plan	Do not believe there is a need for 54 bike parking spaces at south end of path near track.		Agree. Will reduce the quantity for the next submittal.	CM	Closed
9	Workshop 6	site plan	Consider expanded scope for Open Space Enhancement at 15th Av & Emerald Axis node		Options for 15th Ave & Emerald Axis node Open Space Enhancements have been provided for review by the University and the general approach approved by the Campus Planning Committee.	CM	Closed
10	Workshop 6	site plan	Consider secure bike parking where covered bike parking is shown in area between new addition and Esslinger.		Concur.	CM	Closed
11	GM	site plan	Where is the waste & recycling collection location proposed?		Outside waste collection and recycling will be in a covered spot adjacent to the service parking area at the south west end of the south courtyard.	RDG	Closed
12	GM & EE	plans-all levels	Would be prudent to test designated social spaces with rough preliminary furniture layouts to confirm allotted area dimensions are appropriate/work with adjacent activity		Understood. The current set of drawings now contain furniture layouts as described.	JH / JP	Closed
13	BH/PE&Rec staff	plan-lower level	Weights area is dwindling in size with each revision - concerned it will not accommodate need		Weights and fitness area have been reviewed and revised.	JH / JP	Closed
14	BH/PE&Rec staff	plan-lower level	Not apparent if storage for handicap patron equipment/wheelchairs is accommodated - confirm or provide (combined issue with main level)		The current drawings define spaces for this storage in the following locations. A) In free zone, near north entry, inside Esslinger at Room B5e, for 150 NSF. B) In free zone, near east entry and on the north wall of the public corridor, for 190 NSF.	JH / JP	Closed
15	Workshop 6	plan-lower level	Interior bike storage will require navigation through the main east entry and two sets of doors - not ideal		Concur. This has been removed from the current design.	JH / JP	Closed
16	Workshop 6	plan-lower level	Provision for storing pool blankets that lends to ease of placing and retracting not apparent		We have determined the amount of pool blankets required and have provided enough space in storage rooms to accommodate.	JH / JP	Closed
17	Workshop 6	plan-lower level	Confirm locker count		The current drawings have been modified to accommodate the entire count of new lockers requested for this facility! This includes lockers of both 12 and 15 inch width as approved in recent communications.	JH / JP	Closed
18	Workshop 6	plan-lower level	Locker Rooms: Passing through toilet area to enter showers not ideal		The current drawings have been revised to eliminate this undesirable situation. We have created separate entry areas into both spaces - you no longer go through one to get to the other.	JH / JP	Closed

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NO.	ENTRY BY	SHEET #	COMMENT/ISSUE		RESPONSE	RESPONSE BY	STATUS
19	Bryan/Dennis	plan-lower level	Is area in SW corner of natatorium large enough for seating for parents during lessons?		Due to budget concerns the Natatorium has been reduced in area and the spectator areas minimized.	JH / JP	Closed
20	Bryan/Dennis	plan-lower level	Is pool storage large enough for large equipment (pool covers, lane line reels, etc)		The Architectural Program calls for 1,000 NSF which should be suitable for the items you describe, and the current design provides 1,700 NSF.	JH / JP	Closed
21	Bryan/Dennis	plan-lower level	Is old surge tank still needed?		This is still TBD, and a decision will be rendered in Design Development when the details of the cistern are figured out.	JH / JP	Open
22	Bryan/Dennis	plan-lower level	How much room is between lap pool and rec pool? How many bleachers on wheels could be placed there?		Refer to Item 19 above	JH / JP	Closed
23	Bryan/Dennis	plan-lower level	Need more discussion on individual vs. gang shower		Concur. The design currently shows space for all showers to be private, but we are mindful that the University would like a combination of Gang and Private, specifically in the Men's Locker Rooms. This is a good detail to resolve in Design Development, as we currently have space for either.	JH / JP	Open
24	Bryan/Dennis	plan-lower level	Is hallway leading into pool from LR's wide enough for shower heads to place in hall?		No, nor would we recommend them there. Deck showers would be better placed in the open area of the Natatorium.	JH / JP	Closed
25	GM	plan-lower level	The elevator door would ideally be in the east side allowing better entry/exit and more room for weights		In this plan configuration (affect all three levels), the door must open to the north or south. We can look for alternatives but propose to leave this arrangement for Schematic Design, and we have improved the connectivity and circulation to the north side of the elevator, presently.	JH / JP	Closed
26	EE & GM	plan-lower/main level	Concerned there are not enough toilets/urinals in locker rooms - losing capacity compared to existing locker rooms and considering number of user expansion? Realize there are a number of toilets scattered about facility, but need to think through expected use patterns.		Understood. We have completed a toilet count based on code requirements for the new areas of construction and the plans indicate we have an adequate number of fixtures. Fixtures are remaining in the Esslinger area and new ones added in the addition. We reviewed toilet rooms and gender neutral toilet rooms with PUG and have them distributed throughout project.	JH / JP	Closed
27	EE	plan-lower/main level	What is amount of space per person in locker rooms compared to existing? Sufficient to avoid overcrowded conditions?		The space per locker for patrons is higher in the new lockers rooms than it is in the old! In the Men's room we have 3.32 SF / Locker, up from 2.87. The increase for Women's is even better.	JH / JP	Closed
28	EE	plan-lower/main level	Grooming areas at end of locker bays - confirm enough clearance to avoid bottlenecks		Clearance is currently okay and can be refined and more detailed in Design Development.	JH / JP	Open
29	EE	plan-lower/main level	No gender neutral locker/toilet rooms on Main Level - question whether Lower Level is too remote: needs further discussion		They remain inside existing Esslinger, on and serving the Main Level.	JH / JP	Closed
30	EE	plan-main level	Appears that there is no toilet access, or easy access to toilet, in the Main Street Free Zone - consider adding.		Concur. These have been added to the Free Zone in what is now the north end of the existing Women's Locker Room, opposite existing equipment check-out.	JH / JP	Closed
31	Greg Lobisser	plan-main level	There is a lot of area in the "Main Street" / "Free Zone" - be sure it is activated and welcoming (GM: same comment applies to lower level east entry)		Main Street, as well as the lower level Free Zone, contain a number of lounge / social spaces that will help to activate these areas by encouraging users to occupy them. They also have a great deal of openness and visual access to some of the more active fitness spaces in the building. This will also help to create an active and welcoming feel to these areas.	JH	Closed
32	Workshop 6 / GM	plan-main level	Structural beams cross through opening in floor - janitorial issue to keep clean (saw sim situations during rec center tour). Prefer opening with no beams crossing through the space. May look better aesthetically as well - cleaner look. Same issue applies to upper level.		Effort will be made to eliminate beams that cross through floor openings. However, some structure may be required at the large opening in the main floor level to accommodate horizontal smoke closures required to separate it from the lower level.	JH	Open

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NO.	ENTRY BY	SHEET #	COMMENT/ISSUE		RESPONSE	RESPONSE BY	STATUS
33	Bryan/Dennis	plan-main level	Per previous discussion, the main office area, B21, needs to have 8 offices.		We understand the request, but understood this is not part of the SD Documents because this work is being funded form a different source, possibly at a different time.	JH / JP	Closed
34	Bryan/Dennis	plan-main level	Dry lockers (B26) in existing building need to be in "Free Zone"		We have added a gender neutral room adjacent to the toilet rooms noted in 30 above.	JH / JP	Closed
35	Bryan/Dennis	plan-main level	Need some sort of barrier between 2 sand volleyball courts		A barrier may create a division of space. We will study this further as we refine the design.	CM	Open
36	Bryan/Dennis	plan-main level	Rock wall area does not have any storage with both current closets being demo'd		The majority of the equipment could be house at the Equipment Checkout area. The interior of the bouldering wall could also be utilized by incorporating a service door…if one does not currently exist. If these areas are not adequate, additional program space should be allocated for this function.	RDG	Open
37	Bryan/Dennis	plan-main level	What is the space in gray between Healthy Campus and men's rest room?		This space is part of the area allocated for Healthy Oregon. It will be indicated in blue in the revised floor plans.	JH	Closed
38	Bryan/Dennis	plan-main level	Custodial closets in existing restrooms on Esslinger side might be too small		Minimal work is anticipated in Esslinger. If necessary and funding allows this will be reviewed during the Design Development Phase.	RDG	Open
39	BH/PE&Rec staff	plan-main level	Revise gate/turn style configuration to V-shape for better visual monitoring		The entry turnstiles have been reconfigured to allow better visual monitoring.	JH	Closed
40	BH/PE&Rec staff	plan-main level	Afraid congestion point is being created between Equipment Checkout and entry gates		The entry turnstiles and equipment checkout counter have been reconfigured to allow greater clearance through this area.	JH	Closed
41	BH/PE&Rec staff	plan-main level	Concerned that fitness area at south wall of (e) gym may not be wide enough to appropriately accommodate weights area - test layout.		An additional 4' was added to this width to accommodate a flexible scheme.	JH	Closed
42	BH/PE&Rec staff	plan-main level	Would like access to fitness area at south wall of (e) gym from both ends - don't have access on east end		An stair has been added to allow access to this fitness area from the Lounge above the east entrance.	JH	Closed
43	BH/PE&Rec staff	plan-main level	Not apparent if storage for handicap patron equipment/wheelchairs is accommodated - confirm or provide (combined issue with lower level)		The current drawings define spaces for this storage in the following locations. A) In free zone, near north entry, inside Esslinger at Room B5e, for 150 NSF. B) In free zone, near east entry and on the north wall of the public corridor, for 190 NSF.	JH / JP	Closed
44	Workshop 6 / GM	plan-main level	Provide future" juice bar" layout to test area "Main Street" set aside for this purpose		The program calls for 900 sf for the sales, storage, and seating areas of the juice bar. The plans outline about 630 sf with more than 500 sf of adjacent seating. Part of the proposed location is above a tunnel. Note that this is an unfunded program element	RDG	Closed
45	Workshop 6 / GM	plan-main level	Provide weight / equipment layout to test areas set aside for this purpose		The floor plans have been provided to several fitness equipment providers to propose layouts for fitness and weight equipment.	JH	Closed
46	GM	plan-main level	Noted that many of the renovations to Esslinger space shown in Workshop 6 are not shown in current plans, such as rooms BL26, B45, B46, B47, & B50 - assuming due to cost concerns: confirm this is correct assumption.		Correct. We are aware of the program needs, but currently understand this is not to be part of the SD Documents at this time.	JH / JP	Closed
47	GM	plan-main level	The "free standing walls" east of the fitness area Lounge obstruct the view; why not use this area as floor space (sim to floor above)?; consider as stretching area or even glassed in programmable space instead of lounge area? Could be a more semi-private fitness area, but still have a great view.		Agreed. These areas need to be utilized and allow appropriate views to the east. This will be addressed.	RDG	Open
48	Bryan/Dennis	plan - 3rd level	Is one set of double doors leading from 3 court gym to terrace enough for large events? Seems there should be an entrance east of the 3 court gym entrance that goes directly onto the terrace		An additional entrance has been included at the wall north of the outdoor deck area. There are currently 4 entrances/exits to the outdoor deck - 2 from the gym and 2 from the fitness area.	JH	Closed

STUDENT RECREATION CENTER EXPANSION AND RENOVATION
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NO.	ENTRY BY	SHEET #	COMMENT/ISSUE		RESPONSE	RESPONSE BY	STATUS
49	Workshop 6	plan - 3rd level	Consider moving the mechanical room to rooftop penthouse in order to capture floor area for activity space. Potentially use (e) stair at SW corner of indoor track to access (would need to vet this with UO Facility Services). Another option may be to extend one of the two new elevators to the roof and create rooftop mech penthouse at that location.		Rooftop mechanical units would require an enclosed penthouse and elevator access. This is an additional cost and since we are not short on program space at this level so do not recommend this change.	RSA	Closed
50	Workshop 6 / GM	plan - 3rd level	Provide fitness equipment layout to test areas set aside for this purpose		The floor plans have been provided to several fitness equipment providers to propose layouts for fitness and weight equipment.	JH	Closed
51	GM	plan - 3rd level	What do you have in mind for the Mind Body Yoga room staging area? Doesn't appear to be planned for.		The Mind Body Yoga Room staging area will be balanced with the fitness equipment layout. The equipment layout should allow for adequate staging.	RDG	Closed
52	GM	plan - roof	Clarify where metal roofing is proposed - gym monitor roofs? Other locations?		The only proposed location for metal roofing is at the roof monitors above the gym.	JH	Closed
53	GM	Section 1: N-S	Should we expect an update to reflect current plans?		The section reflects the current plan.	JH	Closed
54	GM	Sections: model	It is my understanding that ESBL has done a day lighting study for the natatorium. Is the design team planning to conduct daylight studies with ESBL for all major spaces, i.e.. the gym, fitness areas, "Main Street", "Great Hall"?		We are working with ESBL to provide daylight studies for these areas.	JH	Open
55	GM	Elevations	Clarify finish exterior wall material for the gym volume that was designated for the estimate - Metal Wall Panel types (reference to spec sections 07.5-07.7), exposed concrete, stucco, or other material.		Currently, the estimates and exterior images reflect the use of a prefinished aluminum panel system for the walls of the gym and roof monitors.	JH	Closed
56	Workshop 6	Elevations	Note: Review drawings do not reflect potential revisions discussed in Workshop 6 - it is understood that design team is working on elevation development during the review period and comments may be added to this document upon review of updates.		Elevations have been updated and presented and approved at the schematic design level by both to PUG and CPC	RDG	Closed
57	GM	Narrative: Arch	Plans, Main Level, 2nd paragraph, last sentence: explain what is meant by "by lines of wall"		The narrative has been updated	RSA	Closed
58	GM	Narrative: Arch	Plans, Upper Level and Materials, Floors: reuse of existing resilient court flooring on the roof patio noted - confirm condition of material and whether this material is what SRC envisioned as the finished material. What are other options?		The use of Sports Floor system is recommended by the design team and the reuse of the existing Sports Floor material has been verified with the Dennis and Bryan so long as it is still in good condition by the time of its placement.	RSA	Open
59	GM	Narrative: Arch	Roof clarifications: the narrative states there are no program areas on the roof - the roof patio is a program area. Roof "structure" is flat (although we may want to think about sloping structure where it makes sense).		The narrative has been updated	RSA	Closed
60	GM	Narrative: Arch	Floors: Terrazzo as alternate floor material in select areas? Tour group experienced the attractiveness this floor material can add and it would be worth discussing potential areas of installation and associated up charge compared to proposed stained & polished concrete.		Agreed. A discussion of the use of terrazzo and its relative cost can occur during the design development phase of the work.	RSA	Open
61	GM	Narrative: Arch	Energy Goals Associated with LEED: expand on the "strategies" - describe how they work in our project.		Described Mixed-Mode systems, and how they work to reduce active energy loads by using passive strategies. Changes made to narrative.	RDG	Closed
62	GM	Narrative: Arch	Sustainability Plan: spell out "BMP's"		Changes made to narrative.	RDG	Closed
63	GM	Narrative: Arch	Sustainability Plan: in "solar technology" paragraph, there is no specific requirement in OMSD for solar technology, so "compliance" is not correct, and I'm not sure why most of the technology references are capitalized.		We will justify all renewable strategies based on life cycle cost. Reference to OMSD and Compliance have been removed. Narrative has been updated.	IEI	Closed
64	GM	Narrative: Arch	Sustainability Plan, 4th paragraph: clarify that "fenestrations" are windows.		Narrative has been updated.	RDG	Closed
65	GM	Narrative: Arch	Sustainability Plan, 5th paragraph: clarify what "louvered controlled skylights" means - are they meant to open? Louver shading devices in association with skylights? Also, "Gym" is misspelled.		Narrative has been updated.	RDG	Closed

STUDENT RECREATION CENTER EXPANSION AND RENOVATION
100% SCHEMATIC DESIGN REVIEW COMMENTS
May 30, 2012

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66	GM	Narrative: Civil	Storm drainage: it is noted that up to 300' of 10" storm pipe will need to be installed in 15th Ave because the current storm mains are not sufficient to handle the overflow from large storms. Assuming the use of Leighton Pool for rainwater harvesting is the only trigger for this, does the cost of the new storm pipe outweigh the use of the existing pool basin?		The proposed 10-inch storm overflow for Leighton Pool, currently shown in 15th Avenue, will be changed. Instead of installing a new 10-inch overflow drain down 15th Avenue, the overflow will be conveyed east from Leighton Pool to the existing storm main that runs north-south along the west side of the intramural fields. The overflow line will be routed either east through new building area or around west and south side of the new building area.	KPFF	Closed
67	GM	Narrative: Land pg 2	Sustainability: It's noted that the project will include "energy saving and sustainability measures" and than you list a few at the end of the paragraph - is this the extent of the list? Would like more specifics on what is proposed, including more particular information on storm water quality measures.		We are simply stating that we will be as sustainable in our design process as possible. We don't believe we can (at SD level) get too specific. We have listed a few potentials, however throughout the design process we will look for sustainable options.	CM	Open
68	GM	Narrative: Struct pg 1	Leighton Pool, 4th paragraph notes that the foundation for the columns holding up the conc planks will be placed on top of the existing pool floor - how is cracking of the pool basin prevented? Also, I suspect you will need to drill into the existing pool floor to place dowels at foundation locations - what are the measures taken to prevent leakage at those locations?		Foundation on pool slab will be designed for minimal bearing pressures. Dowels to be waterproofed	MRR	Closed
69	GM	Narrative: Struct pg 1	Leighton Pool: how complete of an analysis has been done of the current condition of the pool basin and any piping that will remain for the intended re-use? Has it been determined that the existing basin will provide the use longevity similar to the new addition without significant maintenance?		The structural engineer has not performed an analysis of the existing pool tank.	MRR	Closed
70	GM	Narrative: Struct pg 2	New Gymnasium: notes that there are north facing light monitors while it is my understanding the day lighting strategy is south facing skylight in the monitors per ESBL - please clarify.		Final design of monitors will follow the architectural design.	MRR	Closed
71	GM	Narrative: Struct pg 2	New Gymnasium: notes that the west wall will have steel columns and metal framing - has concrete been considered for its massing qualities since the gym is not mechanically cooled?		Steel structure of west wall will be similar to east wall, unless directed otherwise by project team.	MRR	Open
72	GM	Narrative: Struct pg 2	Locker Rooms: Why choice of concrete planks for the floor structure? Massing? Reduction of obstruction for ductwork?		The advantages of concrete planks include speed of construction and relatively thin structural depth.	MRR	Closed
73	GM	Narrative: Struct	Drawings: don't match current plans - cantilevered east face, Esslinger renovation area.		Structural drawings will be updated to match the architectural drawings available at the time of submittal.	MRR	Closed
74	GM	Narrative: Struct sht 2,3	Drawings, Main & Upper Levels: steel beams cross through floor openings creating janitorial maintenance issue. Ideally the beams do not cross through the openings.		Understood. Please note: Fire curtain rails will pass thru opening where needed.	MRR	Open
75	GM	Narrative: Struct sht 2,3	Drawings, Main & Upper Levels: concrete masonry walls are noted being constructed against existing Esslinger walls in the infill area - clarify need. Is it for roof support, seismic bracing, other? Other materials/systems considered?		The CMU walls are required for roof support and seismic bracing. Bearing wall type construction is required to allow foundation construction adjacent to the existing building. CMU walls allow one sided construction adjacent to the existing construction.	MRR	Closed
76	GM	Narrative: Struct sht 3	Drawings, Upper Level discussion point: have opportunity to install floor structure in infill area over turnstile area if benefits project now or future.		Point taken.	MRR	Closed
77	GM	Narrative: Struct sht 3	Drawings, Upper Level: the gymnasium has two different floor structure systems: concrete planks on the west half and steel trusses with metal deck on the east half (conc topping slab over both) - will the two different systems effect performance of wood finish floor or the feel of the floor as users move from one to the other? What is the effect to the radiant heat system when considering the different mass of each side?		Alternative construction: Long span trusses in the plank section also.	MRR	Open
78	GM	Narrative: Struct sht 3	Drawings, Upper Level: the gymnasium has two different floor structure systems: concrete planks on the west half and steel trusses with metal deck on the east half (conc topping slab over both) - what is the effect to the radiant heat system when considering the different mass of each side?		The heat transfer affect will be the same but the reaction time will differ and will be accounted for in the final design	IEI	Closed

STUDENT RECREATION CENTER EXPANSION AND RENOVATION
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May 30, 2012

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79	GM	Narrative: Mech pg 1	Indoor Design Conditions: UO internal note - what are temperatures currently maintained in SRC spaces? Are the ones recorded in narrative what we want? Confer w/ Jeff Madsen.		UO Internal Issue.	IEI	Open
80	GM	Narrative: Mech pg 1	Add "Mind/Body" rooms to Acceptable Noise Level chart and find out what is acceptable to SRC staff.		We recommend NC-30 however this may be difficult with hard surfaces. Acoustic analysis will likely be needed by an acoustical engineer.	IEI	Open
81	GM	Narrative: Mech pg 2	HVAC general comment: Explain why specific systems were chosen for specific areas. For instance, I would like the User Group, myself, and others to understand why a radiant floor hydronic system is proposed for gym, fitness rooms, and lobby, but not for spaces like the pool deck, locker rooms, and the cardio and weights areas.		Zones with concrete and no mats are recommended to have radiant slabs. This will provide even distribution of heating and cooling at occupant level. The locker rooms and pool require air systems to provide exhaust and make-up air so they are better suited not to have radiant floors.	IEI	Closed
82	GM	Narrative: Mech pg 2	Sustainable Strategies: the target energy savings is 35% above code, as prescribed in the UO Oregon Model for Sustainable Design, not the 30% entry in the text.		This has been edited.	IEI	Closed
83	GM	Narrative: Mech pg 2	Sustainable Strategies: radiant floors are also listed for lobby and fitness rooms in the Hydronic Systems section, not just the gym.		Only fitness room that may fall in this category is the Mind/Body yoga room. All other fitness areas will have machines that will block radiant slabs from doing their job.	IEI	Closed
84	GM	Narrative: Mech pg 3	Hydronic Systems: are there two heating systems serving the gym, fitness rooms, and lobby - radiant floor and air handler unit?		There is only one system providing space heating. This is radiant slabs or perimeter radiant panels or baseboard heat from the hydronic system. The HRV's will provide only conditioning of ventilation air, not space heating.	IEI	Closed
85	GM	Narrative: Plumb pg 8	Rainwater Harvesting / Storage: Provide stormwater diverter before rainwater enters the existing pool tank to avoid having to take excess pool water to the sani-sewer system, per discussion with City.		This has been added to the narrative.	IEI	Closed
86	GM	Narrative: Elec pg 10	Power distribution, bullet list of duplex receptacles: question about floor receptacles in fitness areas: instead of individual floor receptacles at 6' o.c., has design team ever seen or considered a trough/floor chase type system? Seems this could provide some flexibility, get chords out of the way, "cleaner look", etc.		There is no commercial trench solution for a fitness area, we did successfully use a custom detail/product at OHSU. My concern is it could not be used on the upper level.	IEI	Open
87	GM	Narrative: Elec pg 10	Power distribution, bullet list of duplex receptacles: list notes receptacles at 30' o.c. in weights areas - consider 6' o.c. for flexibility should a weights area convert to fitness in future? Discuss with SRC staff.		Changed to 6' o.c.	IEI	Closed
88	Del McGee	Narrative: Elec pg 11	Do not call the Standby distribution / Emergency Distribution. The emergency system is feed from the standby distribution panel by way of transfer switch.		All references changed.	IEI	Closed
89	GM	Narrative: Elec pg 11	Lighting: last sentence notes installing new Hi-mast sports field lighting - is there a reason why we would not reuse the existing poles and lights? Will new addition footprint require building mounted field lights, and if so, where on building would they be located and what will be the effect on the east elevation?		Changed to remove and re-install existing lighting.	IEI	Open
90	GM	Narrative: Elec pg 11	Lighting Controls: discuss/confirm with SRC staff the proposal that gyms will be controlled from occupancy sensors only.		We can change to a switched low voltage system if required. However, we have a meeting note to provide occupancy sensor. Direction not resolved at 04/09/12 meeting	IEI	Open
91	GM	Narrative: Elec pg 11	Lighting Controls, first paragraph, last sentence: I believe we will want to add the Exercise and Mind/Body rooms to Lutron Grafik Eye 3000 list - confirm with SRC staff. Also, there are no new conference rooms in the addition.		Changed to Grafik Eye control in these rooms.	IEI	Closed
92	GM	Narrative: Elec pg 11	Lighting Controls, switching bullet list: add Laundry Room and Locker Rooms (new & (e)) to the list; include Exercise and Mind/Body rooms to dimmable controls - confirm with SRC staff. Also, there are no new conference rooms in the addition.		Changed in the narrative	IEI	Closed
93	GM	Narrative: Tech pg 12	Provide full name for MDF, IDF, CCTV, and CATV for those reading the narrative that may not be familiar with the abbreviations.		Changed in the narrative	IEI	Closed

STUDENT RECREATION CENTER EXPANSION AND RENOVATION
100% SCHEMATIC DESIGN REVIEW COMMENTS
May 30, 2012

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94	GM	Narrative: Tech	pg 12	What has been assumed for the number of locations for Access Control and Intrusion Detection and CCTV Surveillance System (what was provided to the estimators)?		This has not be determined yet. At a minimum all exterior doors, MDF, IDF and Mechanical Room should have detection and access control, this should cover the estimate since all these doors will most likely not need access control and would allow a few to	IEI	Open
95	GM	Narrative: Lightg	pg 1	IESNA light levels: UO internal note - review and confirm light levels listed; may require testing in existing spaces.		With regard to overall light levels, we still seek guidance from the UO regarding specific criteria for these levels. We note that the Tenth Edition of the IESNA Lighting Handbook now recognizes a variety of light levels based upon three major occupant visual age ranges. (We could in some cases cut the SRC level by 50%.) We recommend addressing all lighting levels at the start of Design Development.	RDG	Open
96	GM	Narrative: Lightg	pg 1	4th bullet points: want to emphasize need to design lighting for ease of access for relamping fixtures.		Understood. Lighting design considerations for "…easily maintained/relamped" luminaires include addressing the accessibility of luminaires/lamps, longevity of lamp life (to lessen the frequency of relamping), and minimizing the quantity of lamp types in the project.	RDG	Open
97	GM	Narrative: Lightg	pg 2	Multi-purpose/Group Ex Rooms: I would assume that there would be a direct lighting issue in these rooms, particularly the Mind/Body Rooms, as was noted in the Weights area where users may be facing the ceiling during workouts - confirm with SRC staff.		Agreed. This is why we stated the use of indirect and cove luminaires in the narrative – as well as potential daylight contribution - as means to achieve the required light levels. Direct lighting would be used in situations where direct glare would not be an issue – such as accent lighting at storage cubbies or in areas where users would not be looking directly into fixtures. The narrative was phrased to cover the overall architectural design of the space as well as to allow for greater flexibility of lighting conditions in multi-functional spaces.	RDG	Closed
98	GM	Nar: Fire Sys	gen	Correct typos and misspellings		Corrected	CEI	Closed
99	GM	Nar: Fire Sys	pg 1	Third paragraph notes two locations considered for new UG fire service: which one was used for the estimate (installation cost implication question)?		South, into the pool mechanical room	CEI	Closed
100	GM	Nar: Fire Sys	pg 1	Explain what is meant by "The project does not include insurance design criteria"		Design is to Life Safety Requirements. No insurance requirements involved	CEI	Closed
101	GM	Nar: Fire Sys	pg 3	It states "ADA compliance is required for applicable devices" - I can think of manual pull stations: what other devices?		Manual pull stations. No other	CEI	Closed
102	GM	Nar: Fire Sys	pg 3	Narrative describes option of automatic closing horizontal fire shutter to close off lower level - will want written confirmation that this is acceptable to the City.		CEI will write letter to City of Eugene. Note that during our predevelopment meeting with the city they stated that they would accept the shutters if the system met the required ratings. There is a chance that we will switch from a horizontal to vertical controls during the DD phase.	CEI	Open
103	GM	Nar: Code/FSDN	gen	Correct typos and misspellings		Corrected	CEI	Closed
104	GM	Nar: Code/FSDN	pg 2	5th paragraph notes that the SRC received a fire alarm upgrade in 1988 - the SRC came into existence with the addition to Esslinger Hall built in 1998-99, so upgrade to SRC in 1988 is not correct. It is likely Esslinger Hall/Leighton Pool.		Typo error now corrected	CEI	Closed
105	GM	Nar: Code/FSDN	pg 3	Exiting notes "Two-Four remote vertical exits required" - shouldn't we know exact requirement based on plans/occupancy loads we are working with?		Issue of Horizontal Exit is not yet resolved	CEI	Open
106	GM	Nar: Code/FSDN	pg 4	Insert building footprint sf		Will comply	CEI	Closed
107	GM	Nar: Code/FSDN	pg 4	Chapter 3 & 5 description include occupancy type "R-1" which is a residential occupancy not applicable to project		Typo - Removed from narrative	CEI	Closed
108	GM	Nar: Code/FSDN	pg 9	Section 1025 Hori Exit: report status of proposal to City		Will follow up letter to City of Eugene	CEI	Open
109	GM	Plans: Mech	lower	location of radiant slab manifolds?		This is a detail that can be flushed out later in design	IEI	Open
110	GM	Plans: Mech		Seeing placement of wall or baseboard radiant heat panels in fitness areas makes me wonder if they will be subject to damage, particularly in weights areas, and may not be the best installation solution.		Radiant heating panels and baseboard heat is definitely not recommended for areas with free weights. We show them only at the perimeter of fitness areas that will only have machines.	IEI	Closed

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111	Dennis Mitchell /Del McGee	One-Line Diagram-elec	Dennis and Del placed electronic accessed comments on the electrical one-line diagram plan - see attachment		These comments have been incorporated into the drawings.	IEI	Closed
112	FS - Zone A		Mechanical room should not be place underground. Mechanical rooms should have exterior access for equipment removal and installation.		The main mechanical room with HRV's is located on the main level.	IEI	Closed
113	FS - Zone A		Mechanical Room #1159 should not open on to track door for safety reasons; if equipment needs to be pulled out, it would have to be across the track		The mechanical equipment will be designed to be pulled apart in sections if they ever need to be replaced. The users state they will close or allow barracade at track if necessary.	IEI	Closed
114	FS - Zone A		Proper maintenance access must be provided for all mechanical equipment including damper actuators.		We have shown clearances for HRV's on the plans. Maintenance access will be a primary concern moving forward in design.	IEI	Open
115	FS - Zone A		Provide sufficient slope to roofs for proper drainage		Concur	RSA	Closed
116	FS - Zone A		What kind of access is there to "switched internal louvers" at skylights?		Access will be verified during the Design Development phase	RSA	Open
117	FS - Zone A		If the existing pool mechanical room is revised, it must be ventilated to comfort to temperature and humidity standards.		This mechanical room may be cooled with a water source heat pump fed with water coming from the hot side of the old pool.	IEI	Closed
118	FS - Zone A		It would be better not to have to pump the pump to drain it. Install a gravity drain.		Drainage will be by gravity as much as possible. Sump pumps will be provided with stand-by electrical power.	IEI	Closed
119	FS - Zone A		All pumps for the pool and storm drainage and sub drainage (existing drains by gravity)		Drainage will be by gravity as much as possible. Sump pumps will be provided with stand-by electrical power.	IEI	Closed
120	FS - Zone A		Make sure all aspects of remodel are according to campus standards.		Campus standards are listed as a reference in our narrative	IEI	Closed
121	FS - Zone A		Why heat the rain water before flushing toilets and urinals		Rainwater will be stored in a separate area of the existing pool from the warmer water stored by the water source heat pumps.	IEI	Closed
122	FS - Zone A		Central thermostatic mixing valve station rather than individual ones; shower will need to be mixed water as well.		This is a design detail that can be worked out later in design.	IEI	Open
123	FS - Zone A		.125 gpf urinals do not provide adequate scouring action to clear 2" cast iron drain of salts (urea).		If this is the UO's desire, they will not be used. However, this will have an impact on water conservation.	IEI	Open
124	FS - Zone A		(page 29) Drainage and water pipe in mechanical area of pool?		Piping in the pool mechanical room must be compatible with chemicals used in treating the pool. It is thought that the environment in the pool mechanical room will be much less corrosive than the current pool mechanical room that has an open surge tank and inadequate ventilation.	IEI	Closed
125	FS - Zone A		(page 3) Pool mechanical room- include equipment to maintain a reasonable room temperature and humidity		Exhaust will be provided. Are there specific temperature and humidity requirements desired by UO?	IEI	Open
126	FS - Zone A		(page 3) Active chill beams must be approved by Campus Operations Zone A personnel.		UO facilities staff will be able to have input on specifications and submittals when we reach that point in the design.	IEI	Open
127	FS - Zone A		(page 3) Campus chill water varies in temperature and may not be as low as 48 degrees Fahrenheit. Winter- use maybe be in lower 50's degrees.		These design temperatures are adequate for chilled beam designs and dehumidification.	IEI	Closed
128	FS - Zone A		Back-up pumps (pool, HVAC, condensate, etc.) for emergency change out or redundant, in line		Redundant pumps will be provided for HVAC and domestic water applications.	IEI	Closed
129	FS - Zone A		Dry storage area for electrical parts and filters.		Location to be determined in Design Development. It is understood that an area must be provided to store air filters and replacement parts away from corrosive pool chemicals.	IEI	Open
130	FS - Zone A		Roof-Patio: Recommend BUR not membrane which can be used green or not and have approved systems for both green and patio designs, Siplast, Garland, Tremco. (30 year systems, cold process, BUR)		OK. This level of detail will be addressed during the design development phase of the work.	IEI	Open

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131	FS - Zone A		Solar panels: Permanent supports for solar panels-adjustable brackets. Integral part of roof.		Will be detailed latter in project	RSA	Open
132	FS - Zone A		Rain water harvesting- Green roof over BUR system provides filtration. (alternatives must be approved by campus or zone personnel and meet campus standards.		Final system development and approval for any alternates if required will be completed during the design development phase	RSA	Open
133	FS - Zone A		Section 7.1 – Self adhering sheet waterproofing? Location?		Place holder specification. Location to be determined in Design Development if necessary.	RSA	Open
134	FS - Zone A		Section 7.2: BUR system, Tremco, Garland, Siplast. Hot or cold applied, place and green roof approved.		Information added. Final systems selection will occur during the DD phase	RSA	Open
135	FS - Zone A		Section 7.3, C.3- Attachment of tapered insulation-hot mop to deck. Final measure against moisture intrusion.		Note has been added to specification but detailing will occur latter in project.	RSA	Open
136	FS - Zone A		Section 7.4: Footing and wall/floor junction-continuous coating with reinforced sheets to prevent below ground water infiltration. Recommend Tremco or Grace.		Specification and details to cover this type off condition will be developed further as the project advances.	RSA	Open
137	FS - Zone A		Section 7.9: PVC roofing manufactures. Not Sannfil or Fiberlite-new product or changed. Product needs 15 year application record with no problems, no product changes. Recommend.		Roofing material selection has not been finalized. Final selected materials will be made according to UO standards and with UO facilities review.	RSA	Open
138	FS - Zone A		Section 9.8: Exterior soffits-gaps or spacing minimal *Starlings nest in soffits through wall soffit gap. Rigid venting not plastic, sealed openings		OK. This level of detail will be addressed during the design development phase of the work.	RSA	Open
139	FS - Zone A		Temporary heating ventilation equipment provided by contractor. No existing systems will be used for construction heat/ventilation.		This is a specification item that will be included as the design progresses.	IEI	Open
140	Don Neet		Strongly recommend the use of campus steam for heating the pool water via a steam heat exchanger, in lieu of the use of boilers. If spec a heat exchanger that has a maximum diameter of 6" we will not need yearly permits from the state.		We have made this change	IEI	Closed
141	FS, EHS		Fully consider the potential issues in repurposing existing pool as a cistern, including longevity of the pool shell, maintenance, operations costs, etc., in comparison with other options. The re-use/sustainability story is understood as a desirable thing, but if it is setting us up for maintenance issues/costs in the future it may not be worth re-purposing. (similar comment by GM - item 69)		We agree that further analysis needs to be done .	IEI	Open
142	Jeff Hite	Narrative: Tech pg 12	CCTV Surveillance System: This system will be integrated with the campus private network.		The change has been made	IEI	Closed
143	Jeff Hite	Narrative: Tech pg 13	CATV System: The current CATV system is distributed throughout campus on SM fiber to Aurora node media converters. The CATV backbone in the SRC shall be Commscope P3-500 or equivalent hardline.		The change has been made	IEI	Closed
144	Jeff Hite	Narrative: Tech pg 13	Wireless Access: delete - "and wireless transmitter conforming to IEEE 802.11n standards."; replace with - "Wireless access coverage will be modeled and devices provided by UO NTS."		The change has been made	IEI	Closed
145	Jeff Hite	Narrative: Tech pg 13	Distributed Antenna Network: add - "UO NTS will consult on pathway sizing for DAS."		The change has been made	IEI	Closed
146	Drew Standridge	Nar: Fire Sys & FSDN	Has there been any development in the code path as it relates to mezzanine space, shuttered floor opening, or isolation from "atrium" space since the consultation meeting with COE?		The project will not include a mezzanine. Where will be a 2-hour fire rated horizontal fire shutter to separate the lower level from the upper levels. This limits the atrium to a 2 story volume so far as the code is concerned. No smoke control will be required. When the shutter is open the Atrium will be three story.	RSA	Closed

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147	GM	rendering-interior	The rendering produced for the referendum information showing the area north of the gym reveals design concern in which the connecting area between the atrium/Main Street space and the east edge fitness space is not appealing as a workout area: the space is too narrow to successfully accommodate circulation and an appropriate concentration of fitness space. The people working out there would be on display within an island. Serves as caution to thoroughly test spaces for proposed intended use.		This is a correct assessment. This interior rendering was crafted specifically for the student referendum and takes liberties with its representation of the design, striving for an appealing illustration as an overriding priority. It is not completely accurate. The equipment layout and its spatial relationship to the control point and circulation path(s) will be scrutinized and continually developed once the layout if formalized.	RDG	Open
148	GM	rendering-exterior	The renderings produced for the referendum information showing the east facade show that the vertical mesh shades don't contribute a great deal of shading in comparison to glazed area - tends to be more decorative. Has ESBL studied/modeled this section of the building and commented on appropriate glazing area? Is there spandrel glazing? If so, what sections? Were other skin solutions using materials other then curtain wall system considered? Personally I would like to see other options besides the curtain wall. I think it would benefit the User Group to see options - they've only been presented slight variations of the curtain wall solution.		Concur. A number of different strategies will be utilized to appropriately address glare, heat gain, and views through the east curtainwall including spandrel, ceramic frit, deep curtainwall framing, horizontal exterior screening, vertical exterior screening, and roof overhang. Although the exterior rendering was produced primarily to support the student referendum and is not completely accurate, additional screening beyond what is shown in the illustration may be necessary. Further study on daylighting and sunshading will reveal this need. This will be addressed in the Design Development phase.	RDG	Open