



LEED-NC 2009 New Construction Tracking Matrix  
7/11/2011

Next Milestone: **50% Construction Documents**

UCSD Medical System  
Jacobs Medical Center  
La Jolla, CA 92037

Cannon Design Project Number 003043.11, .12, .15

LEED Section	Points Possible	Points	
		Targeted	Further Analysis
Sustainable Sites	26	21	4
Water Efficiency	10	7	1
Energy & Atmosphere	35	4	3
Materials & Resources	14	5	2
Indoor Environmental Quality	15	11	3
Innovation & Design Process	6	4	2
Regional Priority	4	2	2
<b>Total</b>	<b>110</b>	<b>54</b>	<b>17</b>

This project is targeting LEED Silver certification

This project has potential to meet LEED Gold certification.\*

(Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, Platinum 80-110 points).

\* Pending technical review outcomes, cost analysis, GBCI approval process, and/or feasibility studies.

\*\* LEED submittal/review process to begin at 50% CD, although LEED Online documentation is ongoing.

**Project Team:**

UC San Diego Facilities Design & Construction	Owner's Rep	UCSD
Kitchell	Construction Mgmt	KC
Cannon Design	Architect	CD
EXP	Mechanical	EXP-M
EXP	Electrical	EXP-E
EXP	Plumbing	EXP-P
KPFF	Structural	KPFF
Burkett & Wong	Civil	BW
HLB Lighting Design	Lighting	HLB
Burton & Company	Landscape	BC
Simpson, Gumpertz, & Heger	Curtainwall/Water	SGH
Cini-Little	Food Service	CL
Parallel Solutions	Medical Equip Plan	PS
Sparling	Comm/Low Voltage	SP
Newsom Brown	Acoustics/Vibrations	NB
Cumming Corporation	Cost Estimating	CC
FDE Facility Dynamics	Commissioning	CxA
Ecotype Consulting	LEED Consultant	ECO
Green Building Certification Institute	LEED Verification	GBCI

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**50% Construction Documents**

UCSD Medical System  
Jacobs Medical Center  
La Jolla, CA 92037

LEED Criteria		Points Possible	Y	?	N
<b>Sustainable Sites</b>					
SSp1	Construction Activity Pollution Prevention	P	Y		
SSc1	Site Selection	1	1		
SSc2	Development Density and Community Connectivity	5	5		
SSc3	Brownfield Redevelopment	1			1
SSc4.1	Alternative Transportation: Public Transportation Access	6	6		
SSc4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	1	1		
SSc4.3	Alternative Transportation: Low Emission & Fuel Efficient Vehicles	3	3		
SSc4.4	Alternative Transportation: Parking Capacity	2		2	
SSc5.1	Site Development: Protect or Restore Habitat	1	1		
SSc5.2	Site Development: Maximize Open Space	1	1		
SSc6.1	Stormwater Design: Quantity Control	1	1		
SSc6.2	Stormwater Design: Quality Control	1	1		
SSc7.1	Heat Island Effect: Non-Roof	1	1		
SSc7.2	Heat Island Effect: Roof	1		1	
SSc8	Light Pollution Reduction	1		1	
<b>Subtotals</b>		<b>26</b>	<b>21</b>	<b>4</b>	<b>1</b>
<b>Water Efficiency</b>					
WEp1	Water Use Reduction	P	Y		
WEc1	Water Efficient Landscaping	4	4		
WEc2	Innovative Wastewater Technologies	2			2
WEc3	Water Use Reduction	4	3	1	
<b>Subtotals</b>		<b>10</b>	<b>7</b>	<b>1</b>	<b>2</b>
<b>Energy &amp; Atmosphere</b>					
EAp1	Fundamental Commissioning of Building Energy Systems	P	Y		
EAp2	Minimum Energy Performance	P	Y		
EAp3	Fundamental Refrigerant Management	P	Y		
EAc1	Optimize Energy Performance	19		1	18
EAc2	On-Site Renewable Energy	7			7
EAc3	Enhanced Commissioning	2	2		
EAc4	Enhanced Refrigerant Management	2	2		
EAc5	Measurement & Verification	3			3
EAc6	Green Power	2		2	
<b>Subtotals</b>		<b>35</b>	<b>4</b>	<b>3</b>	<b>28</b>

Materials & Resources					
MRp1	Storage & Collection of Recyclables	P	Y		
MRc1.1	Building Reuse: Maintain Existing Walls, Floors, & Roof	3			3
MRc1.2	Building Reuse: Maintain Interior Non-Structural Elements	1			1
MRc2	Construction Waste Management	2	2		
MRc3	Materials Reuse	2			2
MRc4	Recycled Content	2	1	1	
MRc5	Regional Materials	2	1	1	
MRc6	Rapidly Renewable Materials	1			1
MRc7	Certified Wood	1	1		
Subtotals		14	5	2	7
Indoor Environmental Quality					
EQp1	Minimum IAQ Performance	P	Y		
EQp2	Environmental Tobacco Smoke Control	P	Y		
EQc1	Outdoor Air Delivery Monitoring	1	1		
EQc2	Increased Ventilation	1			1
EQc3.1	Construction IAQ Management Plan: During Construction	1	1		
EQc3.2	Construction IAQ Management Plan: Before Occupancy	1	1		
EQc4.1	Low-Emitting Materials: Adhesives & Sealants	1	1		
EQc4.2	Low-Emitting Materials: Paints & Coatings	1	1		
EQc4.3	Low-Emitting Materials: Carpet Systems	1	1		
EQc4.4	Low-Emitting Materials: Composite Wood & Agrifiber Products	1	1		
EQc5	Indoor Chemical & Pollutant Source Control	1	1		
EQc6.1	Controllability of Systems: Lighting	1	1		
EQc6.2	Controllability of Systems: Thermal Comfort	1	1		
EQc7.1	Thermal Comfort: Design	1	1		
EQc7.2	Thermal Comfort: Verification	1		1	
EQc8.1	Daylight and Views: Daylight 75% of Spaces	1		1	
EQc8.2	Daylight and Views: views for 90% of Spaces	1		1	
Subtotals		15	11	3	1
Innovation & Design Process					
IDc1.1	Innovation: Buildings That Educate	1		1	
IDc1.2	LEED Pilot 1: Life-Cycle Assessment (LCA) of Building Assemblies and	1	1		
IDc1.3	Innovation: Reduced Mercury in Lamps	1		1	
IDc1.4	Innovation: Construction IAQ Management Plan: Green Cleaning	1	1		
IDc1.5	Innovation: Potable Water Use Reduction: Measurement & Verificatio	1	1		
IDc2	LEED Accredited Professional	1	1		
Subtotals		6	4	2	0
Regional Priority					
RPc1 (SSc)	Alternative Transportation: Public Transportation Access	1	1		
RPc1 (SSc)	Heat Island Effect: Non-Roof	1	1		
RPc1 (WEc)	Innovative Wastewater Technologies	1			
RPc1 (WEc)	Water Use Reduction	1		1	
RPc1 (EAc)	On-Site Renewable Energy	1			
RPc1 (EQc)	Daylight and Views: Daylight 75% of Spaces	1		1	
Subtotals		4	2	2	0
<b>Total</b>		<b>110</b>	<b>54</b>	<b>17</b>	<b>39</b>

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This project has potential to meet LEED Gold certification.

(Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, Platinum 80-110 points).

Sustainable Sites - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
SSp1	C	Construction Activity Pollution Prevention	SWPPP contains construction Erosion and Sedimentation Control plan.	prereq	prereq	prereq
SSc1	D	Site Selection	Site is contained within boundaries of existing surface parking lot.	1	1	0
SSc2	D	Development Density and Community Connectivity	Community Services: 1. restaurant (Tacone) 2. community center (Lawrence Family JCC) 3. park (Mandel-Weiss) 4. Aquatics Center 5. bank (La Jolla Bank) 6. day care (La Jolla Country Day School) 7. school (Preuss School) 8. hotel (Hyatt La Jolla) 9. salon (Elias Salon) 10. health club (The Sporting Club) High density housing located in various places within radius.	5	5	0
SSc3	D	Brownfield Redevelopment	Site is not a brownfield.	1	0	0
SSc4.1	D	Alternative Transportation: Public Transportation Access	Project site is served by Campus Shuttle and MTS routes 201 and 202 with 1/4 mile. Project complies.	6	6	0
SSc4.2	D	Alternative Transportation: Bicycle Storage & Changing Rooms	Staff showers and changing rooms are provided. Team is calculating final FTE & peak occupancy to determine bike storage counts.	1	1	0
SSc4.3	D	Alternative Transportation: Low Emission & Fuel Efficient Vehicles Option 2	Team is coordinating an East Campus-wide approach that marks 5% of all stalls in each parking lot, both temporary and permanent, as preferred for clean air vehicles. This will be incorporated into campus parking design standards so that compliance is maintained even as parking configurations change.	3	3	0

Sustainable Sites - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
SSc4.4	D	Alternative Transportation: Parking Capacity Option 4	Adjacent East Campus Parking Garage will provide most of the parking for the JMC, however, parking will also be provided by multiple existing lots. We are not designing to meet this credit, however, the shared parking scheme may grant us compliance. We will study the entire East Campus, using ITE parking counts, to determine.	2	0	2
SSc5.1	D	Site Development: Protect or Restore Habitat	UCSD Open Space Policy will qualify the project, using credit Case 2. LEED Campus Application Guide will allow protected habitat located outside of LEED boundary, in the arroyo to the south of the Central Plant.	1	1	0
SSc5.2	D	Site Development: Maximize Open Space Option 2	UCSD Open Space Policy will qualify the project, using credit Case 2. LEED Campus Application Guide will allow open space located outside of LEED boundary, in the arroyo to the south of the Central Plant.	1	1	0
SSc6.1	D	Stormwater Design: Quantity Control Option 2	Pursuing credit Case 2. JMC design features considerable landscaping where there is currently paved surface parking. Stormwater volumes will be reduced by at least 25%.	1	1	0
SSc6.2	D	Stormwater Design: Quality Control	Stormwater will be treated via detention basins to the south of the Central Plant prior to release into the arroyo (natural waterway).	1	1	0
SSc7.1	C	Heat Island Effect: Non-Roof	Light-colored pavers have been specified, however, they may require testing to determine SRI values.	1	1	0
SSc7.2	D	Heat Island Effect: Roof	Requires coordination with helicopter consultant to insure that glare won't be an issue for helipad.	1	0	1

Sustainable Sites - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
SSc8	D	Light Pollution Reduction	Project is in LZ3 environmental lighting zone. Designing for the lowest possible LPD that meets campus standards and security needs. Using full cutoff fixtures throughout exterior. Providing sweep controls for non-emergency lighting in fenestrated spaces, although patient rooms will likely not have sweep controls. We may not achieve this credit unless direct line of sight to interior luminaires is sufficiently constrained by glass frit, overhangs, light shelves, fins, and screens. Evaluation is ongoing.	1	0	1
				26	21	4

Water Efficiency - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
WEp1	D	Water Use Reduction	CIR submitted and approved to verify exemption of patient room toilet/bedpan washers (and all other clinical use fixtures) from calcs, since those fixture types are not addressed by 1992 EP Act. Prefer use of 1.28 GPF waterclosets, but can't find any meeting other design requirements. Opting for 1.1/1.6 GPF dual-flush. Also specifying 0.125 GPF urinals & 0.5 GPM sensor lavs at non-clinical toilets. Low-flow pre-rinse spray valves at food services areas.	prereq	prereq	prereq
WEc1	D	Water Efficient Landscaping	Using reclaimed water for irrigation. Additional conservation measures include no use of turfgrass, predominantly drip irrigation, weather-satellite controllers. Irrigation on terraces will require potable water due to OSHPD prohibition on bringing reclaimed water into the building. We will seek an exemption due to this code constraint.	4	4	0
WEc2	D	Innovative Wastewater Technologies	Not allowable by code.	2	0	0
WEc3	D	Water Use Reduction	See WEp1 above.	4	3	1
				10	7	1

Energy & Atmosphere - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
EAp1	C	Fundamental Commissioning of Building Energy Systems	Commissioning Provider under contract with UCSD.	prereq	prereq	prereq
EAp2	D	Minimum Energy Performance	OSHPD ventilation rates makes this difficult. Using high-performance glazing curtain wall, high efficiency lighting, and high-efficiency central plant to achieve. Not anticipating much more than LEED minimum.	prereq	prereq	prereq
EAp3	D	Fundamental Refrigerant Management	New central plant will use R-134a. Also coordinating with food service and medical equipment to account for equipment refrigerant.	prereq	prereq	prereq
EAc1	D	Optimize Energy Performance	See EAp2 above.	19	0	1
EAc2	D	On-Site Renewable Energy	Photovoltaics are provided as "district energy" plant on top of new East Campus Parking Garage (not in project). Those renewable energy credits are being allocated to other UCSD East Campus projects. The JMC Bed Tower does not have adequate roof space to accommodate PV.	7	0	0
EAc3	C	Enhanced Commissioning	Provided by UCSD Commissioning Provider. 50% construction document review is underway.	2	2	0
EAc4	D	Enhanced Refrigerant Management	See EAp3 above.	2	2	0
EAc5	D	Measurement & Verification	Although the building automation system will accommodate some level of measurement and verification, we are not pursuing the full LEED scope due to budgetary constraints.	3	0	0
EAc6	C	Green Power	Pursue only if necessary for points. Preliminary estimate: \$50,000 for 2 points, \$100,000 for 3 points.	2	0	2
				35	4	3

Materials & Resources - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
MRp1	D	Storage & Collection of Recyclables	Loading dock has clearly marked area for collection of recyclables. Recycling and trash staging areas are located on all floors. Dual chutes are provided for trash & recyclables. All built-in trash receptacles have separate space for recyclables. Recycling plan is coordinated with Facilities & Services.	prereq	prereq	prereq
MRc1.1	D	Building Reuse: Maintain Existing Walls, Floors, & Roof	Since the renovation portion of the existing Thornton Hospital is partial, and because building systems are separate, we are omitting Thornton renovation from LEED project scope. This required some coordination with GBCI.	3	0	0
MRc1.2	D	Building Reuse: Maintain Interior Non-Structural Elements	See above.	1	0	0
MRc2	C	Construction Waste Management	Kitchell is handling construction/demolition waste management, and has set a goal of 95% diversion. A CDWM Plan has been developed and will guide the process.	2	2	0
MRc3	C	Materials Reuse	Not feasible for this project.	2	0	0
MRc4	C	Recycled Content	We are seeking to maximize recycled content while considering the effect on budget and material performance. We performed an analysis using an early-phase cost model and determined that 10% recycled content by cost was achievable with non-exotic materials: steel, insulation, acoustic ceiling tile, particleboard, etc. Specifications require LEED submittals for all materials likely to contain any recycled content. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	2	1	1
MRc5	C	Regional Materials	We will attempt to capture this credit with concrete, site materials, glazing, rebar (the recycled content portion of steel), and drywall. Specifications require LEED submittals for all materials likely to contain any regional content. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	2	1	1

Materials & Resources - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
MRC6	C	Rapidly Renewable Materials	Not pursuing due to cost/performance issues.	1	0	0
MRC7	C	Certified Wood	All non-recycled wood is specified to be FSC certified. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	1	1	0
				14	5	2

Indoor Environmental Quality - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
EQp1	D	Minimum Indoor Air Quality Performance	ASHRAE 62.1-2007 does not address healthcare occupancies, so we will default to ASHRAE 170, per LEED for Healthcare.	prereq	prereq	prereq
EQp2	D	Environmental Tobacco Smoke Control	UCSD Med Center smoking policy is compliant.	prereq	prereq	prereq
EQc1	D	Outdoor Air Delivery Monitoring	We are providing wall-mounted CO2 monitors in all zones with occupant density equal to or exceeding 25 per 1000 sf and direct outflow measurement device capable of measuring air intake flow on all mechanical ventilation systems where 20% or more of the design supply airflow serves zones with occupant density less than 25 per 1000 sf.	1	1	0
EQc2	D	Increased Ventilation	We will not pursue this credit. ASHRAE 170 ventilation rates are adequate, and it is critical that we meet minimum energy efficiency requirements.	1	0	0
EQc3.1	C	Construction IAQ Management Plan: During Construction	Kitchell is handling CIAQ management. A CIAQ Plan has been developed and will guide the process.	1	1	0
EQc3.2	C	Construction IAQ Management Plan: Before Occupancy	Kitchell is accommodating the building flush out (BFO) in the construction schedule. We will likely begin moving into the building (but not yet fully occupying) following delivery of 3500 cf/sf of outside air.	1	1	0
EQc4.1	C	Low-Emitting Materials: Adhesives & Sealants	All adhesives and sealants have been identified and specified accordingly. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	1	1	0
EQc4.2	C	Low-Emitting Materials: Paints & Coatings	All paints and coatings have been identified and specified accordingly. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	1	1	0
EQc4.3	C	Low-Emitting Materials: Carpet Systems	All carpet systems and resilient floors have been identified and specified accordingly. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	1	1	0

Indoor Environmental Quality - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
EQc4.4	C	Low-Emitting Materials: Composite Wood & Agrifiber Products	All composite wood has been identified and specified accordingly. All LEED submittals will be reviewed and approved for LEED compliance by Ecotype.	1	1	0
EQc5	D	Indoor Chemical & Pollutant Source Control	Providing permanent walk-off grates at all major entrances, minimum 10' long along POT. We are identifying all rooms containing chemicals capable of airborne contamination. Chemicals for clinical use are typically well protected, so we are primarily concerned with cleaning chemical storage. All identified rooms will have hard ceilings, door closers, exhaust, and negative pressure.	1	1	0
EQc6.1	D	Controllability of Systems: Lighting	Providing user controllable lighting in patient rooms, private offices, and other single-occupant occupied spaces. Providing task lighting at workstations in multi-occupant office spaces. Multi-scene dimming (minimum two modes: general and A/V) provided in conference and other multi-user rooms.	1	1	0
EQc6.2	D	Controllability of Systems: Thermal Comfort	All patient rooms have individual comfort controls (VAV).	1	1	0
EQc7.1	D	Thermal Comfort: Design	All occupied spaces to meet ASHRAE 55 requirements, except for spaces with overriding programmatic requirements (i.e. ORs). Will submit CIR if deemed necessary.	1	1	0
EQc7.2	D	Thermal Comfort: Verification	LEED requires permanent temperature and humidity monitoring, along with thermal comfort survey. The building automation system is currently set up to monitor temperature, and we are investigating cost of humidity monitoring.	1	0	1
EQc8.1	D	Daylight and Views: Daylight 75% of Spaces	We are coordinating final glazing performance with design team and curtainwall manufacturer. We will determine compliance using simple LEED calculation approach first, then model any spaces that appear close to compliance by calculation. Any remaining spaces that do not comply by modeling will be checked in field by photometer.	1	0	1

Indoor Environmental Quality - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
EQc8.2	D	Daylight and Views: views for 90% of Spaces	The provision of views to outdoors was a driver of the facility design, however, the necessarily deep floorplan of a hospital makes it very difficult to achieve this credit. Calculations are pending.	1	0	1
				15	11	3

Innovation & Design Process - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
IDc1.1	D	Innovation: Buildings That Educate	<p>With UCSD, the design team is coordinating an educational program that includes 2 of these three, at minimum:</p> <ol style="list-style-type: none"> <li>1. A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings. This program may include windows to view energy saving mechanical equipment or signs to call attention to water conserving landscape features</li> <li>2. The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the USGBC for sharing with other projects</li> <li>3. An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example.</li> </ol> <p>Since this credit doesn't have a significant design component, we are tabling until a later date.</p>	1	0	1
IDc1.2	D	LEED Pilot 1: Life-Cycle Assessment (LCA) of Building Assemblies and Materials	<p>The project was accepted to participate in this LEED pilot credit program. We will be performing a life cycle assessment (LCA) on major envelope and structural materials. Results will be shared with USGBC and used to craft a possible future LEED credit.</p>	1	1	0
IDc1.3	C	Innovation: Reduced Mercury in Lamps	<p>We are "borrowing" this credit from both LEED for Existing Buildings and LEED for Healthcare. However, the fluorescent lighting industry is currently moving towards low-mercury as a standard (at least one major manufacturer produces only low-mercury lamps). We are concerned (and hopeful) that by completion of the project in 2017, low-mercury lighting will no longer be innovative.</p>	1	0	1

Innovation & Design Process - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
IDc1.4	C	Innovation: Construction IAQ Management Plan: Green Cleaning	Providing Green Cleaning requirements in specifications and CIAQ Plan. Requirements include cleaning products that meet Green Seal GS-37, floor cleaners complying with SCAQMD, and supplies meeting minimum guidelines of US EPA Comprehensive Procurement Guidelines. Final cleaning plan will be approved by Ecotype.	1	1	0
IDc1.5	C	Innovation: Potable Water Use Reduction: Measurement & Verification	This is a "borrowed" credit from LEED for Healthcare. We will provide submetering at: incoming domestic water, purified water system, and filter backwash water. Also, we will provide water submetering for at least three of the following: laboratories, dietary department, central sterile & processing, laundry, radiology & imaging, surgical suites, outdoor irrigation, steam boiler make-up, closed loop hydronic make-up, DHW cold water make-up. We are assessing which uses are projected to consumer the most water, and submeter those at minimum. A water measurement and verification plan will be developed.	1	1	0
IDc2	C	LEED Accredited Professional	There are many LEED accredited professionals on the project. We will designate the nicest one to upload his or her certificate.	1	1	0
				6	4	2

Regional Priority, 92037 - JMC

50% Construction Documents

Credit	Design / Const	Description	Strategy Summary	Points		
				Possible	Targeted	Pending
RPc1 (SSc4.1)	D	Alternative Transportation: Public Transportation Access	See SSc4.1.	1	1	0
RPc1 (SSc7.1)	D	Heat Island Effect: Non-Roof	See SSc7.1.	1	1	0
RPc1 (WEc2)	D	Innovative Wastewater Technologies	See WEc2.	1	0	0
RPc1 (WEc3 40%)	D	Water Use Reduction	See WEc3.	1	0	1
RPc1 (EAc2 1%)	D	On-Site Renewable Energy	See EAc2.	1	0	0
RPc1 (EQc8.1)	D	Daylight and Views: Daylight 75% of Spaces	See EQc8.1.	1	0	1
				4	2	2