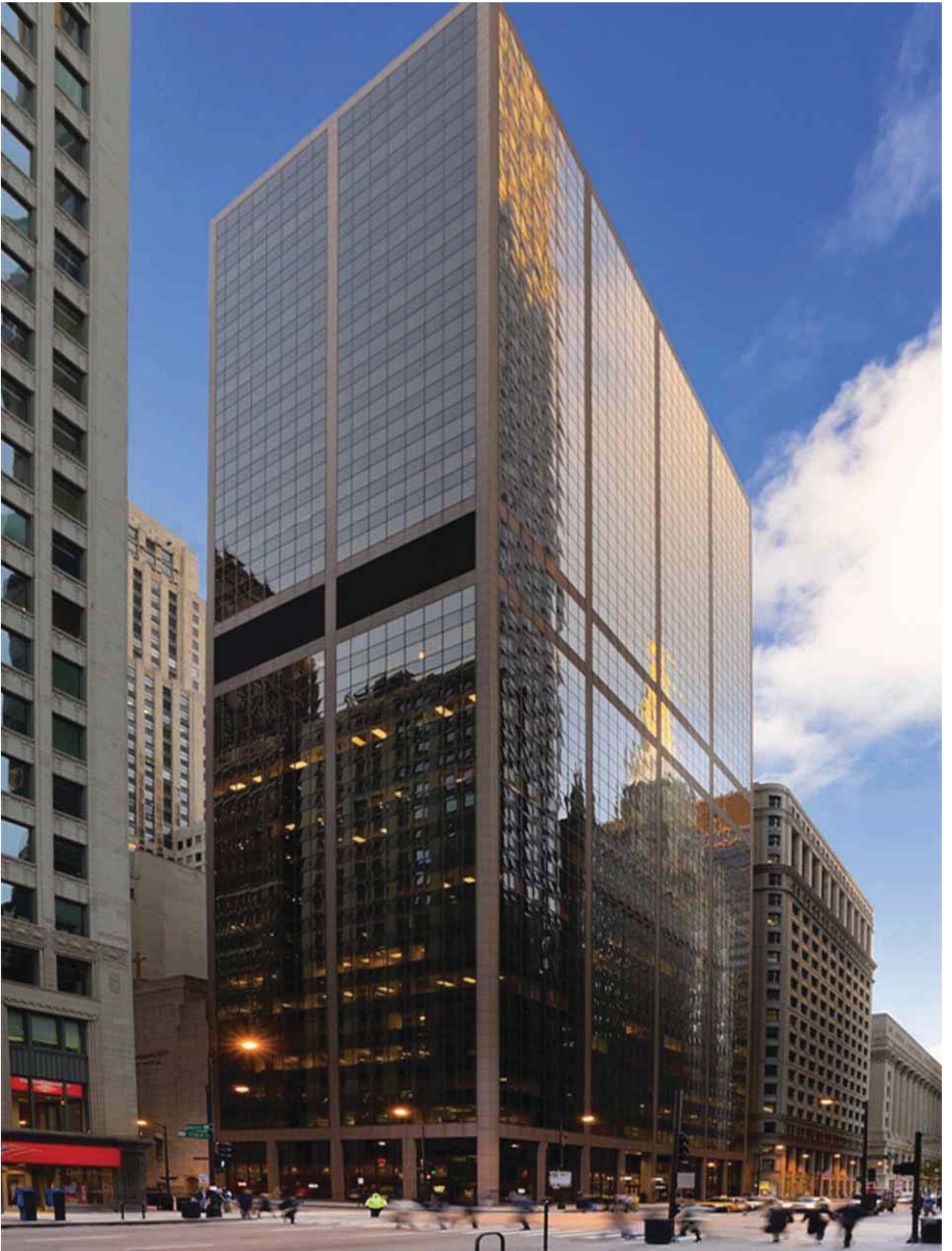


KENNEDY ASSOCIATES
Real Estate Investment Advisors
A National Leader in Responsible Property Investing

Sustainable Tenant Improvement Manual





Introduction

Kennedy Associates (“Kennedy”) is a full-service registered real estate investment advisor, providing expertise to a select number of public, corporate and Taft-Hartley retirement systems, as well as major university endowments. Throughout its history, Kennedy has brought superior value-added results to some of the country’s largest institutional investors as well as open-ended commingled funds and closed partnerships.

Kennedy has developed this Sustainable Tenant Improvement (“TI”) Manual as a means to promote sustainable best practices throughout its portfolio. The Sustainable TI Manual provides minimum design standards and construction practices that are required of all TIs, as well as additional recommended sustainable standards to consider, where feasible, when building out office space.

The manual was developed through a collaborative process to provide a framework to enhance the sustainability of all of Kennedy’s real estate investments on behalf of its clients, in support of the organization’s commitment to Responsible Property Investing (“RPI”). RPI considers the environmental and social ramifications of property investment, development, and property operations in addition to financial considerations.

This manual is intended for multiple audiences and should help asset managers, property managers, and tenants to make the right sustainable choices when evaluating TIs for first and second generation office space, including choices related to water, energy, materials, and the indoor environment. In this way, the TI process can accomplish two goals – satisfying tenant needs while at the same time upgrading building infrastructure and performance with each TI.

The manual was developed with office space in mind, but may be applicable to other types of properties such as industrial parks and retail space. However, each measure would need to be carefully evaluated for applicability to space types other than offices.

How to Use This Manual

Asset managers, property managers/engineers, leasing agents, construction managers, and members of design/construction teams should use this manual as a tool to initiate discussion, educate tenants, and facilitate the implementation of sustainable TIs. When bidding out TI projects, the manual should be provided to contractors, architects, and other responsible parties. It may be appropriate to include some of the requirements and recommendations in various project documents such as the construction contract and work letter.

Where possible, sample products that meet the given sustainability criteria are identified. Kennedy Associates does not recommend or require any specific products or manufacturers as long as the sustainability requirements are met. However, Kennedy suggests using proven companies that provide market-leading services and products. The project team (i.e., property manager, construction manager, architect etc.), in consultation with the Kennedy asset manager, should select the most appropriate sustainable option for the building, given financial, environmental, and social considerations. Property managers may wish to develop tailored lists of vendors that have already been successfully used at the building, or at other buildings within their market.

Key

The following symbols are used throughout the manual:

Level of Importance: _____

-  Building standard requirements to which Kennedy requires that all TIs adhere
-  Additional design standards and construction practices, which are recommended by Kennedy but not required

Responsibility: _____

Regardless of whose ultimate responsibility it is to implement the specifics of any particular measure in this manual, the project team will drive implementation. The property manager and engineer must coordinate with the other responsible parties identified below, sharing the information in this manual and providing other guidance and encouragement.

- T Tenant
- C Contractor
- A/ID Architect/Interior Designer
- MEP Mechanical, Electrical, & Plumbing Engineer
- CA Commissioning Agent

Cost: _____

The following symbols indicate an approximate cost range relative to the market average for a typical TI. However, the actual cost impacts will vary across markets and are often affected by the size and/or magnitude of the TI. Property and asset management teams should use this scale as a gauge for early discussions, but should assess the costs and benefits of each item considering payback, return on investment, tenant interest, and other intangibles, as project specifics are defined.

- \$ Minor or no additional cost
- \$\$ Some additional cost
- \$\$\$* Some additional cost, but will generate cost savings and have a payback
- \$\$\$\$ High additional cost
- \$\$\$\$* High additional cost, but will generate cost savings and have a payback

	
REQUIRED	
RESPONSIBILITY	MEP
COST	\$
DIFFICULTY	
LEED CI	WEp1
LEED EB: O&M	WEp1

 RECOMMENDED	
RESPONSIBILITY	MEP
COST	\$
DIFFICULTY	☞
LEED CI	WEp1
LEED EB: O&M	WEp1

Difficulty:

The following symbols indicate approximate, relative levels of effort (e.g., additional time, research, or consulting expertise required) beyond other, less sustainable practices.

- ☞ No Added Effort or Difficulty
- ☞☞ Moderate Added Effort or Difficulty
- ☞☞☞ High Added Effort or Difficulty

LEED Certification Considerations:

The requirements and considerations in this manual are intended to align with Leadership in Energy and Environmental Design (“LEED”) standards developed by the U.S. Green Building Council (“USGBC”). Use of this manual will enhance the feasibility of certification under either LEED for Commercial Interiors (“LEED CI”) for the TI, or LEED for Existing Buildings: Operations and Maintenance (“LEED EB: O&M”) for the building as a whole. Where applicable, this manual identifies the LEED CI 2009 or LEED EB: O&M 2009 credit corresponding to each requirement or consideration. (There may also be a relationship to LEED for Core & Shell credits, but this manual does not address the Core & Shell rating system.)

Kennedy Associates does not require TIs to be LEED certified and recognizes that LEED certification is not practical for all TIs or buildings. Therefore, this manual does not provide complete LEED requirements and calculations. Project teams interested in pursuing LEED certification should obtain copies of the LEED CI 2009 reference guide to obtain specific LEED CI details and to explore additional sustainable features beyond the contents of this manual. The USGBC’s LEED CI and LEED EB: O&M checklists are attached separately.

Some features within this manual may already be included in the base building design, and others may align with improvements being made to the base building in pursuit of LEED EB: O&M certification. If the building is likely to pursue LEED EB: O&M, property and asset managers may want to take advantage of the TI as an opportunity to upgrade building performance and achieve related LEED EB: O&M credits.

The required measures in this manual are a significant step toward LEED CI certification, providing approximately 5 of 7 LEED CI prerequisites and 14 of 40 points required for minimum certification (with adherence to the detailed LEED CI calculation and documentation requirements). Kennedy encourages project teams to carefully consider the suggestions in this manual, and determine whether any of them may be cost-effective for a specific TI in order to move the project closer to LEED CI certification levels. As a point of reference, implementing all of the required and suggested items in this manual (plus one basic prerequisite), along with providing the required LEED calculations, would facilitate LEED CI certification at the Silver level.

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Checklist

!/+		Status/Notes
Water Efficiency		
!	Reduce Water Use by 20%	
Energy and Atmosphere		
!	Achieve Minimum Energy Performance	
!	Manage Refrigerants	
!	Reduce Lighting Power by 15%	
*	Reduce Lighting Power by 20-35%	
!	Install Lighting Controls	
!	Use 90% ENERGY STAR Appliances	
*	Sub-Meter Tenant Energy Use	
*	Sub-Meter Systems	
*	Practice Commissioning	
*	Purchase Green Power	
Materials and Resources		
!	Install Recycling Station(s)	
!	Divert 50% of Construction Waste	
*	Divert 75% of Construction Waste	
!	Use 10% Recycled Content	
*	Use 20% Recycled Content	
*	Reuse Interior Components	
*	Reuse Materials	
*	Reuse Furniture and Furnishings	
*	Use Regionally Manufactured Products	
*	Use Regionally Extracted Materials	
*	Use Rapidly Renewable Materials	
*	Use Certified Wood	
Indoor Environmental Quality		
!	Achieve Minimum IAQ	
!	Create an IAQ Construction Plan	
*	Create an IAQ Pre-Occupancy Plan	
!	Use Low-Emitting Adhesives/Sealants	
!	Use Low-Emitting Paints/Coatings	
!	Use Low-Emitting Flooring Systems	
!	Use Low-Emitting Composite Wood	
*	Use Low-Emitting System Furniture & Seating	
!	Design HVAC Systems for Thermal Comfort	
*	Provide Individual Comfort Control	
*	Provide Individual Lighting Control	
*	Control Indoor Pollutant Sources	
*	Provide Daylight	
*	Provide Views to the Outdoors	
Sustainable Sites		
*	Install Bicycle Storage & Changing Rooms	

Water Efficiency

Water fixtures and equipment in buildings built prior to 1990 are most likely inefficient and contribute to high water use. Reducing potable water use is an important aspect of sustainable property operations, and is especially important in markets where water is becoming more scarce and/or costly. Upgrading or replacing existing fixtures, and carefully selecting new fixtures, will produce significant water and energy savings and protect regional water resources, typically at a low installation cost. Even newer buildings may contain fixtures that can be upgraded to lower-flow models.



REQUIRED

RESPONSIBILITY	MEP
COST	\$
DIFFICULTY	FB
LEED CI	WEp1
LEED EB: O&M	WEp1 ⁱ

Reduce Water Use by 20%

Although many TIs will not include restrooms, when the opportunity arises, install low-flow/dual-flush toilets and urinals, as well as low-flow faucets and aerators. Many existing fixtures can be upgraded at a low cost with aerators or flush valves. TIs must achieve 20% water reduction below the baseline, which is calculated from federal minimum standard flow and flush rates.

Draw from the suggested list below to achieve a combination of fixture flow rates that will achieve the 20% reduction requirement while providing satisfactory performance (baselines are provided in parentheses):

- Toilets: 1.28 gallons per flush (“gpf”) or dual flush 0.8/1.6 gpf (1.6)
- Urinals: waterless or 0.5 gpf (1.0)
- Showerheads: 1.5-2.0 gallons per minute (“gpm”) (2.5)
- Restroom faucets/aerators: 0.5 gpm (0.5ⁱⁱ)
- Kitchen faucets/aerators: 0.5-2.0 gpm (2.2)

Metered faucets should use no more than 0.25 gallons per cycle.

Look for the EPA WaterSense label on products, and visit the WaterSense Web site to find products and rebates: www.epa.gov/watersense/

Product Suggestions:

- American Standard: www.americanstandard-us.com/microsite/waterefficiency/productListing.aspx
- Delta: www.deltafaucet.com
- Grohe: www.grohewatercare.com/bath.htm
- Kohler Triton Faucet; Kohler Steward Waterless Urinal: www.us.kohler.com/index.jsp
- Moen Envi Showerhead: www.moen.com
- NEOPERL: www.neoperl.com
- Niagara: www.niagaraconservation.com/Aerators.html and www.niagaraconservation.com/Showerheads.html
- Oxygenics: www.oxygenics.com/fivestar-shower.php
- Sloan: www.waterefficiency.com/products.html
- Toto: www.whytology.com/products.html
- Zurn: www.zurn.com/operations/ecovantage/pages/home.asp



ⁱ The baselines and requirements provided in this manual align with LEED CI requirements. Baselines and requirements vary for LEED EB: O&M. If the building is pursuing LEED EB: O&M certification, please refer to the LEED EB: O&M reference guide for calculations and specifications.

ⁱⁱ The 2009 version of the LEED CI rating system has reduced the baseline flow rate for a public restroom faucet to 0.5 gpm. Most projects find that 0.5 gpm is an acceptable flow rate, but reducing the rate further may have a negative effect on performance.

Energy and Atmosphere

A number of components within a TI affect energy consumption over time. In addition to design and construction best practices, tenant equipment selection can contribute to a high-performance work space. The following requirements and recommendations will help reduce energy consumption and costs, while providing a comfortable working environment for occupants.



REQUIRED

RESPONSIBILITY	MEP
COST	\$\$\$*
DIFFICULTY	PP
LEED CI	EAp2
LEED EB: O&M	EAp2

Achieve Minimum Energy Performance

Achieve a minimum level of energy efficiency, in support of the building’s collective efforts to achieve an ENERGY STAR rating of at least 69 (the minimum for LEED EB: O&M certification). A combination of efficient space design; lighting; heating, ventilation, and air conditioning (“HVAC”); and office equipment/appliances is necessary to achieve minimum performance.

Design the TI project to comply with ASHRAE Standard 90.1-2007 (including lighting and HVAC). This includes the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4), and either the prescriptive requirements (Sections 5.5, 6.5, 7.5 and 9.5) or performance requirements (Section 11) of the ASHRAE standard. The standard covers measures related to the insulation and sealing of the building envelope; and minimum efficiency of and controls for HVAC, lighting, and water heating equipment. Visit www.ashrae.org to obtain a copy of the standard.

In addition, provide interior layouts that allow maximum daylight into the space, consider thermal comfort of the prospective occupants, and do not impede airflow.

Additional energy performance requirements for lighting and equipment, the other two components of the associated LEED prerequisite, are provided on pages 14-17.

Manage Refrigerants

The building industry is phasing out ozone-depleting chlorofluorocarbons (“CFCs”) in heating, ventilation, air conditioning, and refrigeration (“HVAC&R”) systems. Implement any of the following strategies that apply to the particular TI:

- When installing new systems and products or replacing existing systems as part of the tenant’s scope of work, the new systems must not contain CFCs. Consider also excluding hydrochlorofluorocarbons (“HCFCs”) from new installed systems. HCFCs are a less hazardous choice than CFCs but also have environmental impacts.
- When reusing existing HVAC&R systems in the tenant’s scope of work, inventory equipment and identify any that use CFC-based refrigerants, with the goal of phasing out the CFC-based refrigerant in the future.

Small HVAC&R units, standard refrigerators, small water coolers and any other cooling equipment that contains less than 0.5 pounds of refrigerant are exempt.

Depending on the volume of refrigerant used in the HVAC&R system, an additional LEED credit may be achievable under the Innovation in Design category.

REQUIRED	
RESPONSIBILITY	MEP
COST	\$
DIFFICULTY	⌘
LEED CI	EAp3
LEED EB: O&M	EAp3



REQUIRED

RESPONSIBILITY	A/ID, MEP
COST	\$
DIFFICULTY	⌘
LEED CI	EAc1.1
LEED EB: O&M	EAc1

Reduce Lighting Power by 15%

Lighting consumes an enormous amount of energy and also creates heat that must be addressed (i.e., cooled) by the HVAC system, requiring additional energy use. Design lighting systems to have a connected lighting power density 15% below that allowed by ASHRAE 90.1-2007. For office space, the ASHRAE allowance is 1.1 watts/SF, so a 15% reduction equates to a lighting power density of approximately 0.935 watts/SF.

Strategies to consider include:

- Use electronic ballasts and high-efficiency lamps. Efficient lamps may include:
 - » 25- or 28-watt T8 fluorescent tubes instead of typical 40-watt T12 fluorescents
 - » Compact fluorescent lights (“CFLs”) or cold-cathode compact fluorescents (CCFLs) instead of typical incandescent or halogen bulbs in any shape or size
 - » Light-emitting diode (“LED”) lamps instead of typical MR-16s
- Provide lower ambient light, but better task lighting, enabling the light to go where it is most needed and avoiding lighting large areas when only small areas need the most light.
- Maximize the availability of natural light by using open office floor plans that give all employees access to light and views.



Look for the ENERGY STAR label on CFLs, LEDs, and many types of lighting fixtures. Search for efficient lighting at www.energystar.gov/lighting.

Reduce Lighting Power by 20-35%

Consider improving lighting energy efficiency further through good lighting design. The approximate equivalent watts per square foot for each level of reduction are listed below:

- 20% Reduction: 0.88 watts/SF
- 25% Reduction: 0.825 watts/SF
- 30% Reduction: 0.77 watts/SF
- 35% Reduction: 0.715 watts/SF



RECOMMENDED

RESPONSIBILITY	A/ID, MEP
COST	\$\$\$*
DIFFICULTY	⌘⌘
LEED CI	EAc1.1
LEED EB: O&M	EAc1



REQUIRED

RESPONSIBILITY	A/ID, MEP
COST	\$\$\$*
DIFFICULTY	🔧🔧
LEED CI	EAc1.2
LEED EB: O&M	EAc1

Install Lighting Controls

Lighting controls are a cost-effective energy efficiency solution. Because the need for lighting varies with occupancy and daylight levels, lighting controls save energy by turning off or dimming lights when they are not needed. They also enhance occupant comfort by not over-lighting spaces.

Daylight-responsive controls (also known as photosensors or photocells) sense the amount of daylight present and turn off or dim lights when they are not needed. Occupancy or motion sensors detect movement in a space and respond by either keeping the lights on (when movement is detected) or turning off or dimming lights (when the space is unoccupied). Combination daylight/occupancy sensors are also available.

Choose at least one of the following three strategies:

- Install daylight-responsive controls in regularly occupied spaces that are within 15 feet of windows and under skylights.
- Install daylight responsive controls for 50% of the lighting load.
- Install occupancy sensors for 75% of the lighting load.

Ensure that occupancy sensor “time to off” is set as low as possible – e.g., 3-5 minutes, rather than the pre-set 30-45 minutes.

Product Suggestions:

- Douglas Lighting Control: www.douglaslightingcontrol.com
- Hubbell Lighting: www.hubbellighting.com/greenwise/Control.php
- Leviton: www.leviton.com/OA_HTML/ibeCCtpSctDspRte.jsp?section=15550&minisite=10025
- Lutron: <http://lutron.com/products>
- Sensor Switch: www.sensorswitch.com/OnlineCatalog.aspx
- Wattstopper: www.wattstopper.com

Use 90% ENERGY STAR Appliances

ENERGY STAR products use less energy than typical models. Specify ENERGY STAR qualified equipment and appliances for 90% of the installed equipment and appliances that are eligible for the ENERGY STAR. This includes:



- **Office equipment:** computers, monitors, printers, scanners, copiers, fax machines, digital duplicators, servers, external power adapters, mailing machines, and water coolers
- **Appliances:** refrigerators, freezers, and dishwashers
- **Electronics:** TVs, DVD players, and combination units
- **Commercial food service equipment**

The project team may want to consider including this requirement in the lease, if it is not already specified.

Though the corresponding LEED CI credit requires all appliances and equipment installed at the time of occupancy to be included in the credit calculation, equipment that is being reused from another location is exempt from Kennedy’s requirement. Also excluded from this requirement are HVAC, lighting, and building envelope products, which all should be encompassed in the overall energy efficiency strategy for the TI.

Almost all leading brands carry ENERGY STAR qualified products. Product listings can be found at www.energystar.gov/products.

Wherever Kennedy controls the purchase and installation of appliances and equipment, those purchases will also meet the minimum standard of 90% being ENERGY STAR qualified.

REQUIRED	
RESPONSIBILITY	T, A/ID
COST	\$
DIFFICULTY	Ⓜ
LEED CI	EAc1.4
LEED EB: O&M	EAc1, MRc2



RECOMMENDED

RESPONSIBILITY	MEP
COST	\$\$
DIFFICULTY	⌘
LEED CI	EAc3
LEED EB: O&M	EAc3.2

Sub-Meter Tenant Energy Use

Unless the tenant occupies 100% of the building, consider installing sub-metering equipment so that the tenant has accurate data on their energy use within the tenant space. Also consider negotiating a lease where energy costs are paid by the tenant and not included in the base rent.



RECOMMENDED

RESPONSIBILITY	MEP
COST	\$\$
DIFFICULTY	⌘
LEED CI	EAc3
LEED EB: O&M	EAc3.2

Sub-Meter Systems

For tenants that occupy a significant portion (e.g., more than 75%) of the total building, it may make sense to install continuous metering to isolate and analyze energy performance of the following systems:

- Lighting systems and controls
- Constant and variable motor loads
- Variable frequency drive (“VFD”) operation
- Chiller efficiency at variable loads (kW/ton)
- Cooling load
- Air and water economizer and heat recovery cycles
- Air distribution static pressures and ventilation air volumes
- Boiler efficiencies
- Building-related process energy systems and equipment
- Indoor water riser and outdoor irrigation systems

Engage a qualified contractor to assist with the metering system design and installation.

Practice Commissioning

At a minimum, the engineer and/or contractor should perform basic testing and balancing if any changes are made to HVAC systems during the TI, and should perform a basic tune-up of affected building systems prior to occupancy.

Also consider performing fundamental or enhanced commissioning, as appropriate. Fundamental commissioning is a prerequisite for LEED certification; enhanced commissioning can add value for large TIs that involve complex systems. The larger the size of the TI in relation to the size of the building, the more important and valuable commissioning is, especially where complex systems are being installed.

Consider engaging a designated commissioning authority and include commissioning requirements for HVAC, lighting, hot water, and renewable energy (if applicable) in contract documents. Refer to the LEED CI or LEED EB: O&M reference guide for details about the commissioning process if pursuing LEED certification. A brief overview of the activities associated with fundamental and enhanced commissioning is as follows:

Task	Fundamental Commissioning	Enhanced Commissioning
Designate Commissioning Authority (“CA” or “CxA”)	Required	Required
Document Owner’s Project Requirements (“OPR”)	Required	Required
Develop Basis of Design	Required	Required
Incorporate commissioning requirements into construction documents	Required	Required
Conduct commissioning design review prior to mid-construction documents	N/A	Required
Develop/implement a commissioning plan	Required	Required
Review contractor submittals applicable to systems being conditioned	N/A	Required
Verify installation and performance of commissioned systems	Required	Required
Develop systems manual for commissioned systems	N/A	Required
Verify that requirements for training are completed	N/A	Required
Complete summary commissioning report	Required	Required
Review building operation within 10 months after substantial completion	N/A	Required



RECOMMENDED

RESPONSIBILITY	CA
COST	
Fundamental	\$\$\$*
Enhanced	\$\$\$\$*
DIFFICULTY	
Fundamental	PP
Enhanced	PPPP
LEED CI	EAp1, EAc2
LEED EB: O&M	EAp1, EAc2



RECOMMENDED

RESPONSIBILITY	T
COST	\$
DIFFICULTY	⌘
LEED CI	EAc4
LEED EB: O&M	EAc4

Purchase Green Power

Where not procured by Kennedy, tenants are encouraged to purchase green power that has met Green-e certification requirements. Green power is produced off-site from renewable energy sources such as solar, wind, geothermal, biomass, or low impact hydropower, and delivered to the grid. Purchasing green power helps to reduce the negative impacts of fossil fuel use and support the creation of a robust infrastructure for clean, renewable energy. It also ensures that energy consumed at the building comes from renewable sources, even if not directly produced on site.

Purchasing green power can be done several ways:

- Purchase through the local utility’s green power program, if available
- Buy green power through a Green-e certified power marketer
- Purchase RECs (Renewable Energy Certificates)

Green power purchase costs vary by market and type.

A general suggested guideline is purchasing 50% of power for the first two years of tenancy from a green power source. To estimate the amount of green power to purchase, complete the following calculation:

Project area X expected energy use per SF per year X duration = Suggested purchase amount

e.g., 10,000 sf X 8 kWh/sf/yr X 2 years = 160,000 kWh

For a listing of green power sources, see: www.green-e.org/energy



Materials and Resources

Selecting materials that are harvested and manufactured sustainably or are reused or salvaged from a previous use conserves natural resources, frequently with no additional cost. Sustainable materials are often more durable, and can also contribute to an elegant, aesthetically pleasing space. In addition to choosing sustainable materials, establish procedures to recycle construction and demolition waste as well as future occupant waste, in turn, continuing the “reduce-reuse-recycle” process.



REQUIRED

RESPONSIBILITY	T
COST	\$
DIFFICULTY	FB
LEED CI	MRp1
LEED EB: O&M	MRc7

Install Recycling Station(s)

Provide designated containers and spaces for sorting and storing recyclables within the tenant space. To be the most effective, containers should be provided wherever waste receptacles are provided, and should be clearly labeled as to the recyclable materials they accept. Upon occupying the building, tenants should educate their employees on proper use of the recycling program.

Coordinate with the building's recycling program as far as the accepted recyclables, whether they can be commingled or must be separated, etc. If there is no base building recycling program in place, coordinate with Kennedy and the property manager to implement one.

At a minimum, provide recycling of paper, cardboard, glass, plastics, and metals. Also consider providing recycling containers for ongoing purchases such as toner cartridges, batteries, electronics, and food waste.

Divert 50% of Construction Waste

Instruct the contractor to divert at least 50% (by weight or volume) of construction waste from disposal in landfills. This will encourage the flow of products to be recycled, reduce the strain on overflowing landfills, and reduce the need for virgin materials to be used in the manufacture of new products.

Construction waste management and diversion should be addressed in construction specifications and contracts. Strategies include sending materials to recycling facilities, donating materials to organizations such as Habitat for Humanity or local schools, and reusing materials on site.

Demolition waste created through TI construction activities can contribute to the 50% threshold. Kennedy will endeavor to achieve at least a 50% diversion rate for demolition waste.

	
REQUIRED	
RESPONSIBILITY	C
COST	\$
DIFFICULTY	Ⓜ
LEED CI	MRc2
LEED EB: O&M	MRc9ⁱⁱⁱ

Additional Resources for Developing Construction Waste Management Plans:

- California Integrated Waste Management Board C&D Recycling Toolkit for Contractors: www.ciwmb.ca.gov/ConDemo/Toolkit/default.htm
- Construction Materials Recycling Association database of recyclers: www.cdrecycling.org/find.html and Master Specifications for C&D recycling: www.ciwmb.ca.gov/ConDemo/Specs/CMRA.htm
- Recycling C&D Wastes: A Guide for Architects and Contractors: www.mass.gov/dep/recycle/reduce/cdrguide.pdf and other resources from Massachusetts: www.mass.gov/dep/recycle/reduce/managing.htm
- Resource Venture construction waste management guidelines and fact sheets: www.resourceventure.org/green-your-business/green-building/construction-waste-management/construction-waste-management
- Seattle/King County Contractors' Guide for job-site recycling and waste prevention: www.recyclecddebris.com/rCDd/Resources/Documents/CSRContractorsGuide.pdf
- Whole Building Design Guide database of recyclers: www.wbdg.org/tools/cwm.php and CWM resource page: www.wbdg.org/resources/cwmgmt.php

ⁱⁱⁱ 50% is the minimum diversion rate to earn a LEED CI credit. For LEED EB: O&M, the threshold is different (70%, by volume, of base building elements). If the building is pursuing LEED EB: O&M certification, please refer to the LEED reference guide for credit requirements.



RECOMMENDED

RESPONSIBILITY	C
COST	\$
DIFFICULTY	🔒🔒
LEED CI	MRc2
LEED EB: O&M	MRc9

Divert 75% of Construction Waste

Instruct the contractor to divert a greater proportion (at least 75% by weight or volume to earn an additional LEED CI credit) of construction waste from disposal in landfills. Refer to the requirements and strategies above or in the LEED CI or LEED EB: O&M reference guides.

Use 10% Recycled Content

Using products with recycled content drives the market for these products, reduces landfill waste, promotes natural resource conservation, and uses less energy and water than the processing and production of virgin materials.

Recycled content may include post-consumer and/or pre-consumer materials. Post-consumer material is defined as waste material generated by households or facilities in their role as end-users of the product, which can no longer be used for its intended purpose (such as plastic bottles or aluminum cans). Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. An example of this is sawdust from a lumber mill that a manufacturer purchases to use in its composite wood products.

Select materials, including furniture and furnishings^v, with recycled content such that:

(post-consumer recycled content) +1/2 (pre-consumer recycled content) = at least 10% of total value of all materials used for the project

The recycled content value of a material or product is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value. Mechanical, electrical and plumbing components cannot be included in this calculation.

Product Suggestions:

- 3-Form: www.3-form.com/about-path_to_zero-usgbc_leed.php
- Armstrong BioBased Tile: www.armstrong.com/commflooringna/products/biobased-tile
- Armstrong Ultima Ceiling: www.armstrong.com/commceilingsna/
- Bentley Price Broadloom: www.bentleyprincestreet.com
- Coverings Etc.: www.coveringsetc.com
- LG Floors: www.lgfloors-usa.com
- PaperStone: www.paperstoneproducts.com
- Tandus Carpet Tile: www.tandus.com

^{iv} For all items in this manual that correspond to LEED EB: O&M MRc3, the requirements are different from the associated LEED CI credit. This manual aligns to the LEED CI credit requirement in most cases. LEED EB: O&M MRc3 requires a combination of strategies such that 50% of total purchases (by cost) for facility alterations and additions are considered sustainable. Please refer to the LEED EB: O&M reference guide for specific calculations if the building is pursuing certification.

^v Furnishings consist of miscellaneous items such as casework, countertops, window treatments, entrance mats/rugs, planters, and waste receptacles; whereas furniture refers to standard items such as seating, work stations, and tables.

	
REQUIRED	
RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	Ⓜ
LEED CI	MRc4
LEED EB: O&M	MRc3 ^{iv}

Directories of Green Building Products and Materials:

- BuildingGreen.com – search for products by LEED credit:
www.buildinggreen.com/menus/leedList.cfm
- California Recycled Content Products Directory: www.ciwmb.ca.gov/rcp
- EPA Environmentally Preferable Purchasing: www.epa.gov/opptintr/epp/
- Good to Be Green: www.goodtobegreen.com
- Green Building Pages – search by LEED credit:
www.greenbuildingpages.com/manufacturers/ProductSearch.php
- Green Depot: www.greendepot.com
- Green2Green: www.green2green.org
- Greener Building: www.greenerbuilding.org
- Oikos: http://oikos.com/green_products/index.php

Use 20% Recycled Content

Use materials, including furniture and furnishings, with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer recycled content constitutes at least 20% of the total value of all the materials in the project. Refer to the requirements and strategies above and in the LEED CI or LEED EB: O&M reference guides.



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc4
LEED EB: O&M	MRc3

Reuse Interior Components

Reusing as much as possible of the existing building components can mitigate some of the environmental impacts of TIs by conserving resources, extending the life of the existing building, reducing waste, and minimizing the negative environmental impacts of transporting new materials.

To achieve the corresponding LEED credit, maintain 40% (one point) or 60% (two points) by area of the existing non-structural floors, walls, and ceilings of the tenant space.



RECOMMENDED

RESPONSIBILITY	A/ID, C, T
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc1.2
LEED EB: O&M	None



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc3.1
LEED EB: O&M	MRc3

Reuse Materials

Reuse salvaged or refurbished materials from this or other projects in order to reduce the demand for virgin materials and reduce waste. Consider salvaged materials such as beams and posts, flooring, paneling, doors and frames, cabinetry, brick, and decorative items.

To earn the corresponding LEED CI credits, use 5% (one point) or 10% (two points) reused materials. Percentages are based on cost. Materials reused from the site also count toward the LEED CI credit for diverting construction waste (MRc2).

Materials Exchange Networks:

- Building Materials Reuse Association Directory: www.bmra.org
- California Materials Exchange: www.ciwmb.ca.gov/CalMAX/
- Green Building Resource Guide Salvaged Building Materials Exchange: www.greenguide.com/exchange/index.html
- Reuse Development Organization: www.redo.org/SearchRedo.aspx
- Used Building Materials Exchange: www.build.recycle.net

Many providers of useful salvaged materials will be local or regional, rather than national, organizations, so look for providers in your area.



RECOMMENDED

RESPONSIBILITY	A/ID, T
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc3.2
LEED EB: O&M	None

Reuse Furniture and Furnishings

Use salvaged, reused, or refurbished furniture and furnishings from this and other projects. Consider items such as case pieces, seating, filing systems, decorative lighting, and accessories.

To earn the corresponding LEED CI credit, reused items must constitute 30% of the total furniture and furnishings budget.

Product Suggestions:

- Davies Office Refurbishing: www.daviesoffice.com
- OMWorkspace: www.omworkspace.com

Many providers of salvaged furniture and furnishings are local or regional, rather than national, companies, so be certain to explore the many providers that may be available in your area.

Use Regionally Manufactured Products

Using products manufactured locally or regionally decreases the project's environmental footprint by reducing the transportation required to deliver products to the building, while supporting the local/regional economy. To earn the corresponding LEED CI credit, a minimum of 20% of the combined value of construction and Division 12 (Furniture) materials and products must be manufactured regionally (within 500 miles).



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc5
LEED EB: O&M	None

Use Regionally Extracted Materials

Using products manufactured and extracted locally can further decrease the project's environmental impacts. To earn the corresponding LEED credit, a minimum of 10% of the combined value of construction and Division 12 (furniture) materials and products must be extracted, harvested or recovered, as well as manufactured, within 500 miles of the project. Salvaging the project's own materials may also contribute to the corresponding LEED CI credit (MRc5).



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	☞☞
LEED CI	MRc5
LEED EB: O&M	MRc3



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$\$
DIFFICULTY	☞☞
LEED CI	MRc6
LEED EB: O&M	MRc3

Use Rapidly Renewable Materials

Use building products made from rapidly renewable materials (those harvested on a 10-year or shorter cycle). These may be available for little to no cost premium and can include:

- Wool carpet in place of carpet made from synthetic materials
- Bamboo or cork flooring in place of hardwood
- Linoleum flooring in place of vinyl
- Cotton batt insulation in place of fiberglass
- Wheatboard, strawboard, or sunflower seed board in place of typical composite wood

A reasonable goal, which qualifies for the corresponding LEED CI credit (MRc6), is for the value of rapidly renewable materials to equal at least 5% of the total materials cost. This includes construction materials, furniture and furnishings, and other products.

Product Suggestions:

- Armstrong linoleum products: www.armstrong.com/resflram/na/linoleum/en/us/
- Columbia Bamboo Plywood: www.columbiaforestproducts.com
- Eco-Friendly Flooring: www.ecofriendlyflooring.com
- Ecofinishes: www.ecofinishes.com
- EnvironBiocomposites engineered panel products: www.environbiocomposites.com
- Expanko Cork Flooring: www.expanko.com
- Forbo Flooring Systems linoleum products: www.forbo-flooring.com
- Globus Cork: www.corkfloor.com
- GreenSage bamboo products: www.greensage.com
- Kirei bamboo and wheatboard products: www.kireiusa.com
- Plyboo bamboo products: www.plyboo.com
- Sustainable Flooring bamboo and cork products: www.sustainableflooring.com

Also refer to the Directories of Green Building Products listed for “Use 10% Recycled Content” on page 26.

Use Certified Wood

In order to encourage sustainable management of forests, the Forest Stewardship Council (“FSC”) developed a certification system that provides internationally recognized standards and accreditation services to companies, organizations, and communities involved in forestry. The FSC certification ensures that wood products do not come from protected natural forests or habitats and were not treated with highly hazardous pesticides. Refer to www.fsc.org for more information.

Consider choosing FSC-certified wood when installing new wood-based products and materials. To earn the corresponding LEED CI credit, the project must use a minimum of 50% certified wood products out of all new wood-based products including construction materials and furniture/furnishings.

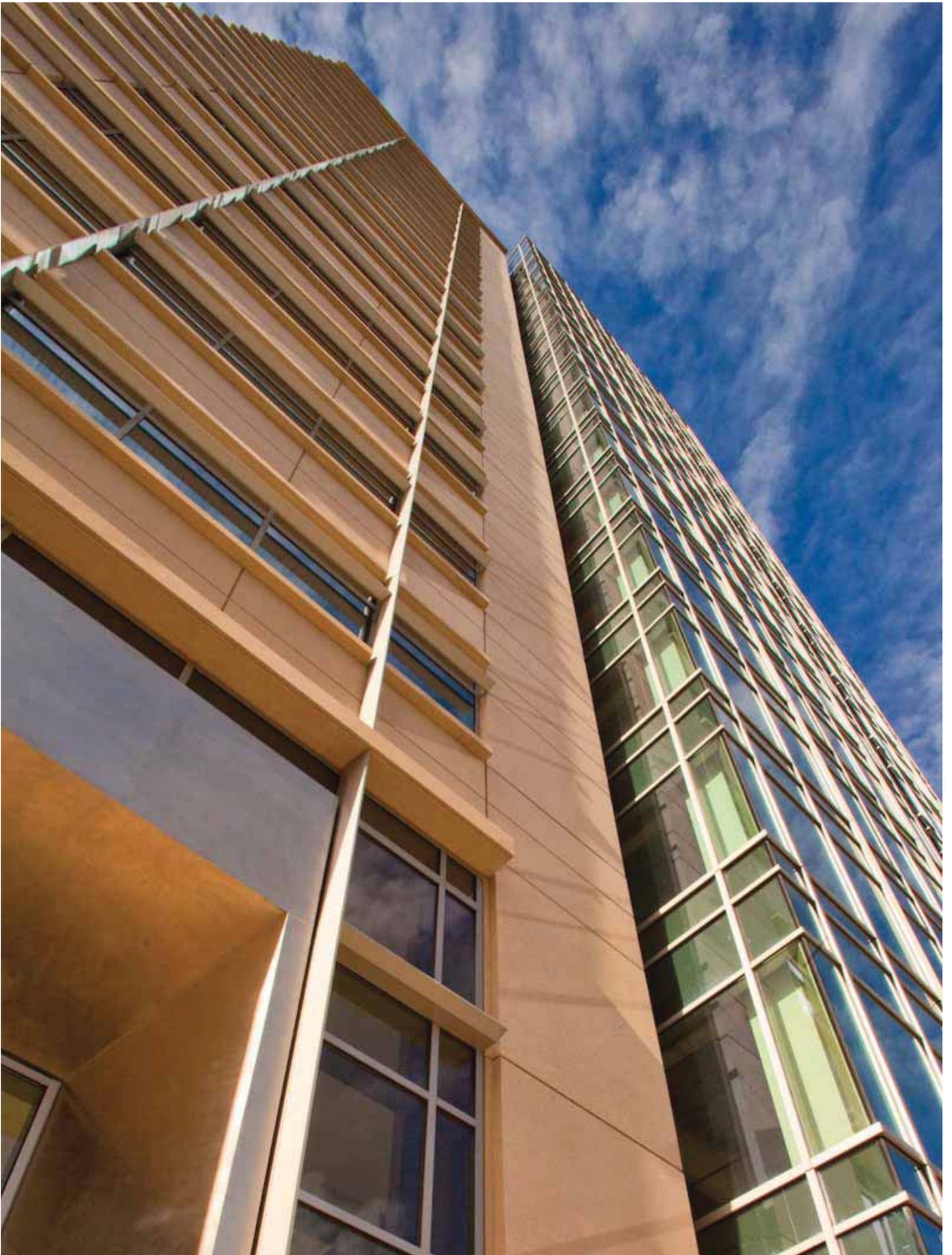
Product Suggestions:

- DuroDesign FSC flooring: www.duro-design.com
- Eco-Friendly Flooring: www.ecofriendlyflooring.com/woods.html
- Knoll FSC Modular Office Furniture: www.knoll.com
- Neil Kelly FSC Cabinets: www.neilkellycabinets.com
- Sustainable Flooring:
www.sustainableflooring.com/index.php?index=certified



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$\$
DIFFICULTY	PP
LEED CI	MRc7
LEED EB: O&M	MRc3



Indoor Environmental Quality

Indoor environmental quality (“IEQ”) is important for occupant health, well being, and comfort. Building systems, space design, finish materials, workplace procedures, cleaning and maintenance practices, and TI construction practices can have a negative effect on IEQ. However, it is relatively simple and cost-effective to mitigate potential negative effects by instituting a plan for Indoor Air Quality management during construction; using environmentally sensitive paints, adhesives, treated woods, and cleaning products; and providing effective air distribution and ventilation systems. Be sure to balance IEQ and energy efficiency, as the two can be synergistic but also have the potential to work against each other when it comes to air distribution and ventilation.



REQUIRED

RESPONSIBILITY	MEP
COST	\$
DIFFICULTY	⌘
LEED CI	IEQp1
LEED EB: O&M	IEQp1

Achieve Minimum IAQ

A major component of overall indoor environmental quality, Indoor Air Quality (“IAQ”) is especially important to occupant health. Design the ventilation systems to meet the minimum requirements of Section 4 through 7 of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality. Modify or maintain the existing building outside-air ventilation distribution system to supply at least the outdoor air ventilation rate required by ASHRAE. If that is not possible, document the applicable space and system constraints, and achieve the maximum possible cubic feet per minute (“cfm”) with a minimum of 10 cfm per person.



REQUIRED

RESPONSIBILITY	C
COST	\$
DIFFICULTY	⌘
LEED CI	IEQ3.1
LEED EB: O&M	IEQ1.5

Create an IAQ Construction Plan

Construction generates dust and off-gassing of harmful chemicals, but much of this can be avoided with a plan for IAQ management during construction. Ensure that the contractor develops and implements an IAQ construction plan that meets the following requirements:

- 2007 Sheet Metal and Air Conditioning Contractors National Association (“SMACNA”) IAQ Guidelines for Occupied Buildings under Construction (www.smacna.org/).
- Protect on-site and installed absorptive materials from moisture damage.
- Use MERV 8 filters at each return air grille if air handlers are to be used during construction. Replace all filtration media prior to tenant occupancy.

Create an IAQ Pre-Occupancy Plan

Many construction materials off-gas after installation. Post-construction cleaning of tenant spaces can also be harmful, especially if solvents are used. One way to mitigate these IAQ risks is to develop an IAQ Pre-Occupancy Plan and implement it after installation of all finishes, furniture and fixtures; after completion of building cleaning; and before occupancy. The plan should include one of the following two measures:

- Install new filtration media and flush out the building by supplying 14,000 cubic feet (“cf”) of air per square foot of space, while maintaining a temperature of at least 60 degrees F and relative humidity no higher than 60%.
- Through air testing (conducted in accordance with testing protocols of the EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air), air contaminants should not exceed the specified amounts in the table below.

Contaminant	Maximum Concentration
Formaldehyde	27 parts per million
Particulates (PM10)	50 micrograms per cu. meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cu. meter
4-Phenylcyclohexene (4-PHC)	6.5 micrograms per cu. meter
Carbon Monoxide	9 ppm and no greater than 2 ppm above outdoor levels



RECOMMENDED

RESPONSIBILITY	MEP, C
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQc3.2
LEED EB: O&M	IEQc1.5



REQUIRED

RESPONSIBILITY	C
COST	\$
DIFFICULTY	Ⓜ
LEED CI	IEQ4.1
LEED EB: O&M	MRc3

Use Low-Emitting Adhesives/Sealants

Over time, materials including adhesives, treated wood, foam, and plastic can release air contaminants, including Volatile Organic Compounds (“VOCs”). This off-gassing can cause respiratory issues and other illnesses.

To promote good IAQ, use building materials and products that conform to the standards in the table below. The VOC contents of a product can be readily obtained from its Material Safety Data Sheet (“MSDS”), provided by the manufacturer.

Architectural Applications	VOC Limit [g/L less water]	Specialty Applications	VOC Limit [g/L less water]
Indoor Carpet Adhesives	50	PVC Welding	510
Carpet Pad Adhesives	50	CPVC Welding	490
Wood Flooring Adhesives	100	ABS Welding	325
Rubber Floor Adhesives	60	Plastic Cement Welding	250
Subfloor Adhesives	50	Adhesive Primer for Plastic	550
Ceramic Tile Adhesives	65	Contact Adhesive	80
VCT & Asphalt Adhesives	50	Special Purpose Contact Adhesive	250
Drywall & Panel Adhesives	50	Structural Wood Member Adhesive	140
Cove Base Adhesives	50	Sheet Applied Rubber Lining Operations	850
Multipurpose Construction Adhesives	70	Top & Trim Adhesive	250
Structural Glazing Adhesives	100		
Substrate Specific Applications	VOC Limit [g/L less water]	Sealants	VOC Limit [g/L less water]
Metal to Metal	30	Architectural	250
Plastic Foams	50	Nonmembrane Roof	300
Porous Material (except wood)	50	Roadway	250
Wood	30	Single-Ply Roof Membrane	450
Fiberglass	80	Other	420

Sealant Primers	VOC Limit [g/L less water]
Architectural Non Porous	250
Architectural Porous	775
Other	750
Aerosol Adhesives	VOC weight (g/L minus water)
General purpose mist spray	65% VOCs by weight
General purpose web spray	55% VOCs by weight
Special purpose aerosol adhesives (all types)	70% VOCs by weight

The source for the VOC limits for non-aerosol adhesives is the South Coast Air Quality Management District (SCAQMD) Rule 1168. For aerosol adhesives, the source is the Green Seal Standard for Commercial Adhesives, GS-36.



REQUIRED

RESPONSIBILITY	C
COST	\$
DIFFICULTY	☞
LEED CI	IEQ4.2
LEED EB: O&M	MRc3

Use Low-Emitting Paints/Coatings

Many paint and stain manufacturers have developed high-quality, cost-competitive products that are either water-based or contain a reduced quantity of VOCs, further enhancing IAQ. Use paints and coatings that meet following standards:

Paints	VOC Limit [g/L]
Flat	50
Non-flat	150
Anti-corrosive/anti-rust	250
Clear Wood Finishes	VOC Limit [g/L]
Varnish	350
Lacquer	550
Sealers	VOC Limit [g/L]
Waterproofing sealers	250
Sanding sealers	275
All other sealers	200
Shellacs	VOC Limit [g/L]
Clear	730
Pigmented	550
Stains	VOC Limit [g/L]
All stains	250
Shellacs	VOC Limit [g/L]
Clear	730

Source: Green Seal Standard GS-11, Paints; Green Seal Standard GS-03, Anti-Corrosive Paints (www.greenseal.org)

Source: South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings

Product Suggestions:

- AFM SafeCoat: www.afmsafecoat.com
- Benjamin Moore: www.benjaminmoore.com/ecoadvantage
- Find a certified paint through Green Seal: www.greenseal.org/findaproduct/paints_coatings.cfm
- Sherwin Williams: www.sherwin-williams.com/pro/sherwin_williams_paint/product_specifications/leed/index.jsp

Use Low-Emitting Flooring Systems

Many carpeting and flooring manufacturers now offer high-quality, cost-competitive products with lower off-gassing potential. Pre-finished wood flooring that has been given time to off-gas is also recommended. Flooring products should conform to the following standards:

Option A:

- All carpet must meet the requirements of the Carpet and Rug Institute (“CRI”) Green Label Plus program (www.carpet-rug.org/commercial-customers/green-building-and-the-environment/green-label-plus/index.cfm), and carpet cushion must meet the requirements of the CRI Green Label program (www.carpet-rug.org/commercial-customers/green-building-and-the-environment/green-label-plus/cushion.cfm).
- All carpet adhesive must have less than 50 g/L VOC content. Other flooring adhesives and finishes must meet the requirements of Low-Emitting Adhesives/Sealants and Paints/Coatings detailed above.
- All hard flooring must be certified as compliant with FloorScore standards (www.rfci.com/int_FS-ProdCert.htm). This includes vinyl, linoleum, laminate, wood, ceramic, rubber, and wall base.

Option B:

All flooring products must meet the testing and product requirements of the California Department of Public Health Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers (www.cal-iaq.org/VOC/), including 2004 Addenda.

Look for synergies among different sustainable elements when purchasing flooring. In addition to low VOC content, sustainable carpeting and wood flooring may be made with recycled content or rapidly renewable materials. Further, look for manufacturers that offer recycling or take-back programs for used flooring products, and consider purchasing carpeting with easily replaceable tiles so that specific worn areas can be replaced as needed. Metropolis Magazine has produced a helpful carpet matrix with examples of brands that meet various environmental criteria:

www.metropolismag.com/PDF_files/2997/SB2_10_07.pdf.

Other product suggestions include:

- InterfaceFLOR: www.interfaceflor.com
- LG Floors: www.lgfloors-usa.com
- Mannington Commercial: www.manningtoncommercial.com

 REQUIRED	
RESPONSIBILITY	A/ID, C
COST	\$
DIFFICULTY	☞
LEED CI	IEQ4.3
LEED EB: O&M	MRc3



REQUIRED

RESPONSIBILITY	A/ID, C
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQ4.4
LEED EB: O&M	MRc3

Use Low-Emitting Composite Wood

Traditionally, composite wood and agricultural fiberboards (e.g., low-, medium-, and high-density fiberboards) are manufactured with binders and resins containing formaldehyde, a known carcinogen. Select composite wood and fiberboard with no added urea-formaldehyde resins wherever these materials are used in the TI, including casework, millwork, and finish panel construction.

Product Suggestions:

- Crystal Cabinets: www.crystalcabinets.com/GreenProducts.htm
- Harring Doors: www.harringdoors.com/leed.html
- Kellogg Cabinets: www.kelloggcabinets.com
- The Millenium Collection: www.millenniumdoors.com/environmental.html
- Neil Kelly Cabinets: www.neilkellycabinets.com
- Pentco: www.pentco.com/page131.htm
- TRS Cabinet Company: www.trscabinets.com/www/prd/home.html
- TruStile Doors: www.trustile.com/techinfo/green.asp?cid=184

When purchasing materials such as composite wood, looking for synergies among different sustainable elements can enable a project to cost-effectively achieve higher levels of sustainability. Many of the products suggested above also include pre-consumer recycled content, may be made with low-VOC adhesives and sealants, and may contain FSC-certified wood, aiding in efforts to achieve other LEED CI credits.

Use Low-Emitting System Furniture & Seating

The materials used in furniture systems (e.g., fiberboard, synthetic fabrics, adhesives, and finishes) can emit VOCs and other harmful substances. To mitigate these potential effects, consider having all systems furniture and seating that has been manufactured, refurbished, or refinished within one year prior to occupancy meet one of the possible standards below. Salvaged/reused furniture greater than one year old is excluded from the associated LEED CI credit requirements, as is occasional furniture.

- **OPTION A:** Greenguard Indoor Air Quality Certified (www.greenguard.org/Default.aspx?tabid=109), which indicates that a product meets performance-based standards for low chemical and particle emissions
- **OPTION B:** Indoor air contaminant concentrations less than or equal to the limits in the table below.

Chemical Contaminant	Emission Limits Systems Furniture	Emission Limits Seating
TVOC	0.5 mg/m ³	0.25 mg/m ³
Formaldehyde	50 parts per billion	25 parts per billion
Total Aldehydes	100 parts per billion	50 parts per billion
4 – Phenylcyclohexene (4-PCH)	0.0065 mg/m ³	0.00325 mg/m ³



RECOMMENDED

RESPONSIBILITY	A/ID, T
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQc4.5
LEED EB: O&M	None



REQUIRED

RESPONSIBILITY	MEP
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQ7.1
LEED EB: O&M	None

Design HVAC Systems for Thermal Comfort

Comfortable building occupants are healthier and more productive. A well-designed HVAC system is able to meet comfort criteria (air temperature, radiant temperature, air speed, and relative humidity) under normal operating conditions. Evaluate these criteria together and coordinate system design with the requirements of “Achieve Minimum IAQ Performance” in order to meet ASHRAE Standard 55-2004, and demonstrate design compliance in accordance with the Section 6.1.1 documentation. Visit www.ashrae.org to obtain a copy of the standard.



RECOMMENDED

RESPONSIBILITY	MEP
COST	\$\$\$
DIFFICULTY	☞☞☞
LEED CI	IEQc6.2
LEED EB: O&M	None

Provide Individual Comfort Control

Building occupants have a wide range of preferred thermal comfort zones. By allowing individuals to adjust their thermal conditions (including temperature and ventilation), tenants can provide improved comfort and satisfaction for their employees.

If pursuing this LEED CI credit, provide temperature and ventilation controls to 50% of occupants, and provide control systems for all shared and multi-occupant spaces (such as conference rooms). Individual controls may include thermostats, diffusers, radiant panels, or operable windows.

This suggestion should be balanced with the energy efficiency goals of the building, since allowing individuals to control temperatures and ventilation has the potential to impact HVAC operations and the associated energy usage. Integrating occupancy sensors into the thermal comfort controls – so that the systems can automatically be set back when the space is unoccupied – can help avoid a potential energy consumption increase.

Provide Individual Lighting Control

Building occupants have different lighting needs at different times. Providing the appropriate level of lighting for different tasks reduces energy use, compared to centrally-controlled overhead lighting, which lights the entire tenant space for the task requiring the highest lighting level. Individual lighting controls also increase occupant satisfaction and comfort with light levels.

Consider providing individual lighting controls for at least 90% of occupants to enable adjustments to suit individual task needs and preferences. This can be achieved cost-effectively through task lighting at individual workstations and offices, allowing the amount of overhead lighting provided to be reduced.

In addition, consider providing separate lighting system controls for all shared multi-occupant spaces (e.g., conference rooms) to enable adjustments. To achieve the greatest level of energy efficiency in combination with controllability, evaluate this suggestion in conjunction with the requirement “Install Lighting Controls” on page 16.



RECOMMENDED

RESPONSIBILITY	A/ID, MEP
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQc6.1
LEED EB: O&M	IEQc2.2

Control Indoor Pollutant Sources

It is important to minimize the pollutants that enter the building from the outside, as well as those that are created within it. Consider implementing the following control measures:

- If the tenant space has entrances leading to the exterior, install walk-off grilles or grates to prevent dirt and particulates from entering the building.
- Provide contaminant drains plumbed for appropriate disposal of hazardous liquid waste in spaces where chemical concentrate mixing occurs for maintenance or laboratory purposes.
- Where hazardous gases or chemicals may be present or used (including janitorial, copying, and printing rooms), provide segregated areas with self-closing doors and deck-to-deck partitions. Also provide separate outside exhausting at a rate of at least 0.5 cfm/SF, with no air recirculation, maintaining a negative pressure compared with the surrounding spaces. (This consideration may add costs to the project.)
- Consider providing regularly occupied areas of the tenant space with new MERV 13 or better air filtration media prior to occupancy.



RECOMMENDED

RESPONSIBILITY	C
COST	\$\$
DIFFICULTY	☞☞
LEED CI	IEQc5
LEED EB: O&M	IEQc3.5 ^{iv}

^{iv} The suggestions in this manual align with the LEED CI credit. The LEED EB: O&M credit requires the first two bullet points to be implemented. Please refer to the LEED reference guides for details.



RECOMMENDED

RESPONSIBILITY	A/ID
COST	\$\$*
DIFFICULTY	☞☞☞
LEED CI	IEQc8.1
LEED EB: O&M	IEQc2.4

Provide Daylight

Several studies have shown a strong connection between access to daylight and employee health and productivity. Open office planning and design is one method for providing ample daylighting to all occupants. Consider locating open work spaces and offices around the perimeter of the tenant space, providing the majority of employees with access to windows, and locating non-regularly-occupied areas (such as conference rooms, employee kitchens, and break rooms) in the interior. Other strategies to consider include lower partition heights, interior glazing, and high ceiling reflectance values. Provide sunlight redirection, interior shading devices, and/or glare control devices to ensure daylight effectiveness.

If pursuing certification via either LEED CI or LEED EB: O&M, please see the reference guide for required daylight thresholds and methods for demonstrating compliance.

Provide Views to the Outdoors

Design the space to maximize occupants' views to the outdoors, providing a direct line of sight to vision glazing from regularly occupied areas wherever possible. Utilize many of the same strategies as the item "Provide Daylight" above, including lower partition heights and interior glazing.

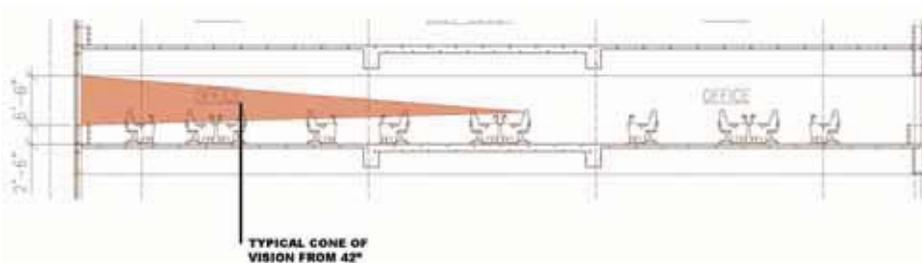
If pursuing certification via either LEED CI or LEED EB: O&M, please refer to the reference guide for methods for demonstrating compliance with the view requirements.

Typical Plan and Section Diagram of View Access Analysis



RECOMMENDED

RESPONSIBILITY	A/ID
COST	\$
DIFFICULTY	☺☺☺
LEED CI	IEQc8.2
LEED EB: O&M	IEQc2.4





Sustainable Sites

The location and configuration of a building have a significant impact on commuting, energy efficiency, occupant well-being, and conservation of natural resources. Buildings sited sustainably give occupants the opportunity to carpool, utilize public transportation, and use less energy and water.

Although TIs rarely involve site work and infrastructure scope, consider reducing negative impacts to the local site and surroundings. Under both the LEED CI and EB: O&M rating systems, site-related credits (including simply being located in a LEED certified base building) can supplement the Sustainable TI Manual requirements and recommendations to aid in achieving certification.



RECOMMENDED

RESPONSIBILITY	A/ID, C
COST	\$\$
DIFFICULTY	☞☞
LEED CI	SSc3.2
LEED EB: O&M	None

Install Bicycle Storage & Changing Rooms

To encourage the use of alternatives to single occupant automobiles, consider incorporating secure bike storage and showers/changing rooms into the TI. Many racks and hanger systems are available for efficient bicycle storage. In shower rooms, consider supplying lockers as well.

A suggested guideline is to provide secure bicycle storage for 5% of employees, and to provide showers for 0.5% of employees.

Product Suggestions:

- Dero Space Saver Bike Rack: www.dero.com/commercial_racks.html
- DuMor Bike Racks: www.dumor.com/bike-racks.shtml

Closing Comments

Additional Considerations

Kennedy encourages project teams and tenants to explore further opportunities for incorporating sustainability into TIs, above and beyond the minimum requirements in this manual. In support of the principles of Responsible Property Investing, Kennedy welcomes creativity in identifying and implementing strategies such as:

- Implementing enough of the suggested items in this manual to qualify for LEED CI certification
- Collaborating with property and asset managers to implement measures that will further the building's progress toward LEED EB: O&M certification
- Pursuing exceptional performance beyond the minimum thresholds identified (e.g., achieving water reductions of greater than 20%, which could qualify the project for additional LEED CI credits)
- Developing sustainability programs for ongoing operational activities, including green cleaning, Integrated Pest Management, occupant education/communication, and enhanced operations and maintenance of equipment

By implementing its own LEED CI Gold certified TI in 2008, Kennedy learned that it is possible to achieve a highly efficient, green TI with very little added cost. The following measures, among others, were included in Kennedy's TI:

- Energy efficient lighting, occupancy sensors and task lighting, resulting in 35% less energy consumed
- Low- and no-flow restroom fixtures, which has reduced water consumption by over 40%
- FSC certified wood
- Purchase of Green-e certified green power
- Use of low-VOC paints, carpets, and sealants
- Bicycle storage, showers, and changing rooms
- Improved access to daylighting and views

Future Updates

The requirements and considerations in this manual are subject to market conditions. Further, sustainable building technologies and practices are constantly evolving; this manual will be updated periodically as the market advances. Kennedy welcomes feedback from project teams. Please email christiang@kennedyusa.com with comments.

Acknowledgments



BetterBricks is the commercial building initiative of the Northwest Energy Efficiency Alliance, which is supported by local electric utilities. Through the BetterBricks initiative, NEEA advocates for changes to energy-related business practices in Northwest buildings. In this era of heightened appreciation for the impact climate change is having on our environment and our economy, energy efficiency is a crucial component in addressing these issues. On betterbricks.com, you'll find the information, tools, training and resources to help your building make a difference to your bottom line and the environment.



Deborah Cloutier and Alison Drucker of JDM Associates collaborated with Kennedy Associates and BetterBricks on the development of the Sustainable Tenant Improvement Manual. JDM Associates is an energy management and environmental consulting firm specializing in real estate. JDM focuses on linking sustainability with financial performance, using cost-effective strategies that are good for the environment and the bottom line. More information about JDM Associates is available at www.jdmgmt.com.



NBBJ is a global architecture, planning and design firm that helps companies and organizations create innovative places. The firm is a leader in using design as a tool to achieve its client's business goals and accomplish change across multiple dimensions—behavioral, relational, organizational, and performance. NBBJ's client roster includes Fortune 500 companies, leading public and civic organizations worldwide and US News & World Report top hospitals. Together, NBBJ's employees and clients have designed communities, buildings, products, environments and digital experiences across the globe that enhance people's lives, improve businesses' bottom lines and contribute to a more sustainable and livable world. NBBJ sees energy efficiency and high-performance sustainable solutions as inherent to good design and they are a signatory of the progressive goals of the 2030 Challenge.

Appendix



LEED 2009 for Commercial Interiors

Project Checklist

Project Name _____

Date _____

Sustainable Sites			Possible Points: 21
Y	N	?	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Site Selection 1 to 5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Development Density and Community Connectivity 6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Alternative Transportation—Public Transportation Access 6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Alternative Transportation—Parking Availability 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.3 Alternative Transportation—Parking Availability 2

Water Efficiency			Possible Points: 11
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Water Use Reduction—20% Reduction
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Water Use Reduction 6 to 11

Energy and Atmosphere			Possible Points: 37
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Fundamental Commissioning of Building Energy Systems
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Minimum Energy Performance
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 3 Fundamental Refrigerant Management
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Optimize Energy Performance—Lighting Power 1 to 5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Optimize Energy Performance—Lighting Controls 1 to 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Optimize Energy Performance—HVAC 5 to 10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Optimize Energy Performance—Equipment and Appliances 1 to 4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Enhanced Commissioning 5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Measurement and Verification 2 to 5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Green Power 5

Materials and Resources			Possible Points: 14
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Storage and Collection of Recyclables
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Tenant Space—Long-Term Commitment 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Building Reuse 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Construction Waste Management 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Materials Reuse 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Materials Reuse—Furniture and Furnishings 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Recycled Content 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Regional Materials 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Rapidly Renewable Materials 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7 Certified Wood 1

Indoor Environmental Quality			Possible Points: 17
Y	N	?	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Minimum IAQ Performance
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Environmental Tobacco Smoke (ETS) Control
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Outdoor Air Delivery Monitoring 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Increased Ventilation 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan—During Construction 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Construction IAQ Management Plan—Before Occupancy 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials—Adhesives and Sealants 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials—Paints and Coatings 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Low-Emitting Materials—Flooring Systems 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.5 Low-Emitting Materials—Systems Furniture and Seating 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Indoor Chemical & Pollutant Source Control 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1 Controllability of Systems—Lighting 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2 Controllability of Systems—Thermal Comfort 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Thermal Comfort—Design 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Thermal Comfort—Verification 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1 Daylight and Views—Daylight 1 to 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2 Daylight and Views—Views for Seated Spaces 1

Innovation and Design Process			Possible Points: 6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Innovation in Design: Specific Title 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Innovation in Design: Specific Title 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Innovation in Design: Specific Title 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Innovation in Design: Specific Title 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.5 Innovation in Design: Specific Title 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 LEED Accredited Professional 1

Regional Priority Credits			Possible Points: 4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Regional Priority: Specific Credit 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Regional Priority: Specific Credit 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Regional Priority: Specific Credit 1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Regional Priority: Specific Credit 1

Total			Possible Points: 110
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Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110



LEED 2009 for Existing Buildings: Operations & Maintenance

Project Checklist

Project Name

Date

0	0	0	Sustainable Sites	Possible Points: 26
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Y	N	?		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 LEED Certified Design and Construction	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Building Exterior and Hardscape Management Plan	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Integrated Pest Management, Erosion Control, and Landscape Management Plan	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Alternative Commuting Transportation	3 to 15
			<input type="checkbox"/> Reduce by 10%	3
			<input type="checkbox"/> Reduce by 13.75%	4
			<input type="checkbox"/> Reduce by 17.5%	5
			<input type="checkbox"/> Reduce by 21.25%	6
			<input type="checkbox"/> Reduce by 25%	7
			<input type="checkbox"/> Reduce by 31.25%	8
			<input type="checkbox"/> Reduce by 37.5%	9
			<input type="checkbox"/> Reduce by 43.75%	10
			<input type="checkbox"/> Reduce by 50%	11
			<input type="checkbox"/> Reduce by 56.25%	12
			<input type="checkbox"/> Reduce by 62.5%	13
			<input type="checkbox"/> Reduce by 68.75%	14
			<input type="checkbox"/> Reduce by 75%	15
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Site Development—Protect or Restore Open Habitat	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Stormwater Quantity Control	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Heat Island Reduction—Non-Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Heat Island Reduction—Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8 Light Pollution Reduction	1

0	0	0	Water Efficiency	Possible Points: 14
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Y	N	?		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1 Minimum Indoor Plumbing Fixture and Fitting Efficiency	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Water Performance Measurement	1 to 2
			<input type="checkbox"/> Whole building metering	1
			<input type="checkbox"/> Submetering	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Additional Indoor Plumbing Fixture and Fitting Efficiency	1 to 5
			<input type="checkbox"/> Reduce by 10%	1
			<input type="checkbox"/> Reduce by 15%	2
			<input type="checkbox"/> Reduce by 20%	3
			<input type="checkbox"/> Reduce by 25%	4
			<input type="checkbox"/> Reduce by 30%	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Water Efficient Landscaping	1 to 5
			<input type="checkbox"/> Reduce by 50%	1
			<input type="checkbox"/> Reduce by 62.5%	2
			<input type="checkbox"/> Reduce by 75%	3
			<input type="checkbox"/> Reduce by 87.5%	4
			<input type="checkbox"/> Reduce by 100%	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Cooling Tower Water Management	1 to 2
			<input type="checkbox"/> Chemical Management	1
			<input type="checkbox"/> Non-Potable Water Source Use	2

0 0 0

Energy and Atmosphere

Possible Points: 35

Y N ?

Y

Prereq 1 Energy Efficiency Best Management Practices

Y

Prereq 2 Minimum Energy Efficiency Performance

Y

Prereq 3 Fundamental Refrigerant Management

Grid for Credit 1

Credit 1 Optimize Energy Efficiency Performance

1 to 18

- ENERGY STAR Rating of 71 or 21st Percentile Above National Median 1
- ENERGY STAR Rating of 73 or 23rd Percentile Above National Median 2
- ENERGY STAR Rating of 74 or 24th Percentile Above National Median 3
- ENERGY STAR Rating of 75 or 25th Percentile Above National Median 4
- ENERGY STAR Rating of 76 or 26th Percentile Above National Median 5
- ENERGY STAR Rating of 77 or 27th Percentile Above National Median 6
- ENERGY STAR Rating of 78 or 28th Percentile Above National Median 7
- ENERGY STAR Rating of 79 or 29th Percentile Above National Median 8
- ENERGY STAR Rating of 80 or 30th Percentile Above National Median 9
- ENERGY STAR Rating of 81 or 31st Percentile Above National Median 10
- ENERGY STAR Rating of 82 or 32nd Percentile Above National Median 11
- ENERGY STAR Rating of 83 or 33rd Percentile Above National Median 12
- ENERGY STAR Rating of 85 or 35th Percentile Above National Median 13
- ENERGY STAR Rating of 87 or 37th Percentile Above National Median 14
- ENERGY STAR Rating of 89 or 39th Percentile Above National Median 15
- ENERGY STAR Rating of 91 or 41st Percentile Above National Median 16
- ENERGY STAR Rating of 93 or 43rd Percentile Above National Median 17
- ENERGY STAR Rating of 95+ or 45th+ Percentile Above National Median 18

Grid for Credit 2.1

Credit 2.1 Existing Building Commissioning—Investigation and Analysis

2

Grid for Credit 2.2

Credit 2.2 Existing Building Commissioning—Implementation

2

Grid for Credit 2.3

Credit 2.3 Existing Building Commissioning—Ongoing Commissioning

2

Grid for Credit 3.1

Credit 3.1 Performance Measurement—Building Automation System

1

Grid for Credit 3.2

Credit 3.2 Performance Measurement—System-Level Metering

1 to 2

40% Metered 1

80% Metered 2

Grid for Credit 4

Credit 4 On-site and Off-site Renewable Energy

1 to 6

3% On-site or 25% Off-site Renewable Energy 1

4.5% On-site or 37.5% Off-site Renewable Energy 2

6% On-site or 50% Off-site Renewable Energy 3

7.5% On-site or 62.5% Off-site Renewable Energy 4

9% On-site or 75% Off-site Renewable Energy 5

12% On-site or 100% Off-site Renewable Energy 6

Grid for Credit 5

Credit 5 Enhanced Refrigerant Management

1

Grid for Credit 6

Credit 6 Emissions Reduction Reporting

1

0 0 0			Materials and Resources	Possible Points: 10
Y	N	?		
Y			Prereq 1 Sustainable Purchasing Policy	
Y			Prereq 2 Solid Waste Management Policy	
			Credit 1 Sustainable Purchasing—Ongoing Consumables	1
			Credit 2.1 Sustainable Purchasing—Durable Goods	1 to 2
			40% of Electric	1
			40% of Furniture	1
			Credit 3 Sustainable Purchasing—Facility Alterations and Additions	1
			Credit 4 Sustainable Purchasing—Reduced Mercury in Lamps	1
			Credit 5 Sustainable Purchasing—Food	1
			Credit 6 Solid Waste Management—Waste Stream Audit	1
			Credit 7 Solid Waste Management—Ongoing Consumables	1
			Credit 8 Solid Waste Management—Durable Goods	1
			Credit 9 Solid Waste Management—Facility Alterations and Additions	1

0 0 0			Indoor Environmental Quality	Possible Points: 15
Y	N	?		
Y			Prereq 1 Minimum IAQ Performance	
Y			Prereq 2 Environmental Tobacco Smoke (ETS) Control	
Y			Prereq 3 Green Cleaning Policy	
			Credit 1.1 Indoor Air Quality Best Management Practices—Indoor Air Quality Management Program	1
			Credit 1.2 Indoor Air Quality Best Management Practices—Outdoor Air Delivery Monitoring	1
			Credit 1.3 Indoor Air Quality Best Management Practices—Increased Ventilation	1
			Credit 1.4 Indoor Air Quality Best Management Practices—Reduce Particulates in Air Distribution	1
			Credit 1.5 Indoor Air Quality Best Management Practices—Facility Alterations and Additions	1
			Credit 2.1 Occupant Comfort—Occupant Survey	1
			Credit 2.2 Controllability of Systems—Lighting	1
			Credit 2.3 Occupant Comfort—Thermal Comfort Monitoring	1
			Credit 2.4 Daylight and Views	1
			Credit 3.1 Green Cleaning—High Performance Cleaning Program	1
			Credit 3.2 Green Cleaning—Custodial Effectiveness Assessment	1
			Credit 3.3 Green Cleaning—Purchase of Sustainable Cleaning Products and Materials	1
			Credit 3.4 Green Cleaning—Sustainable Cleaning Equipment	1
			Credit 3.5 Green Cleaning—Indoor Chemical and Pollutant Source Control	1
			Credit 3.6 Green Cleaning—Indoor Integrated Pest Management	1

0 0 0			Innovation in Operations	Possible Points: 6
Y	N	?		
			Credit 1.1 Innovation in Operations: Specific Title	1
			Credit 1.2 Innovation in Operations: Specific Title	1
			Credit 1.3 Innovation in Operations: Specific Title	1
			Credit 1.4 Innovation in Operations: Specific Title	1
			Credit 2 LEED Accredited Professional	1
			Credit 3 Documenting Sustainable Building Cost Impacts	1

0	0	0	Regional Priority Credits	Possible Points: 4
Y	N	?		
			Credit 1.1 Regional Priority: Specific Credit	1
			Credit 1.2 Regional Priority: Specific Credit	1
			Credit 1.3 Regional Priority: Specific Credit	1
			Credit 1.4 Regional Priority: Specific Credit	1
0	0	0	Total	Possible Points: 110
<p style="text-align: center;"> Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110 </p>				

CONFIDENTIAL

GROSS LEASE
(w/Base Amounts)

THIS LEASE (this "Lease") is made as of _____, 200__, by and between
"Landlord" _____, and
"Tenant" _____.

Green Agency Ratings: Any one or more of the following ratings, as same may be in effect or amended or supplemented from time to time: The U.S. EPA's Energy Star® rating and/or Design to Earn Energy Star, the Green Building Initiative's Green Globes™ for Continual Improvement of Existing Buildings (Green Globes™-CIEB), the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, LEED EBOM (existing buildings operations and maintenance) and any applicable substitute third party or government mandated rating systems.

1.1 Plans and Specifications

1.1.1 **[NOTE: THIS IS DRAFTED FOR A LANDLORD BUILD-OUT WITH ALLOWANCE; NEEDS TO BE MODIFIED FOR A TENANT BUILD-OUT]** If there are no Plans and Specifications attached as Exhibit C to this Lease, then Tenant's Architect shall prepare the Plans and Specifications for the Tenant Improvements. The Plans and Specifications shall be subject to Landlord's approval, which approval shall not be unreasonably withheld, conditioned or delayed, provided that such Plans and Specifications comply with the requirements of this paragraph 2.4. Tenant acknowledges and agrees that the Tenant Improvements must be designed consistent with the Landlord's sustainability practices and certain Green Agency Ratings (as determined by Landlord), specifically the SMACNA "IAQ Guidelines for Occupied Buildings under Construction" 1995, Chapter 3. Tenant further agrees to engage a third party LEED or Green Globe Accredited Professional or similarly qualified professional with respect to the design and construction of the Tenant Improvements. Tenant agrees that [Landlord will seek and Tenant will maintain] [Tenant will seek and maintain] LEED for Commercial Interiors certification with respect to the Tenant Improvements, and that [Landlord] [Tenant] will register the Premises with the U.S. Green Building Council prior to completion of the Plans and Specifications. If the Plans and Specifications or any amendment thereof or supplement thereto shall require changes in the Building shell, the cost of the Building shell work caused by such Plans and Specifications, amendment or supplement, shall be charged against Tenant. The preceding sentence shall not be construed as requiring that Landlord must approve any Plans and Specifications which specify changes in the Building shell. If Building shell work is permitted by Landlord, the cost thereof shall include all architectural and/or engineering fees and expenses in connection therewith.

1.1.2 Tenant shall not use or operate the Premises in any manner that will cause the Building or any part thereof not to conform with Landlord's sustainability practices or the certification of the Building issued pursuant to any Green Agency Rating.

1.2 Sustainable Building Operations

1.2.1 This Building is or may become in the future certified under certain Green Agency Ratings or operated pursuant to Landlord's sustainable building practices, as

same may be in effect or modified from time to time. Landlord's sustainability practices address, without limitation, whole-building operations and maintenance issues including chemical use; indoor air quality; energy efficiency; water efficiency; recycling programs; exterior maintenance programs; and systems upgrades to meet green building energy, water, Indoor Air Quality, and lighting performance standards. All of Tenant's construction and maintenance methods and procedures, material purchases, and disposal of waste must be in compliance with minimum standards and specifications as outlined by the Green Agency Ratings, in addition to all Governmental Requirements.

1.2.2 Tenant shall use proven energy and carbon reduction measures, including energy efficient bulbs in task lighting; use of lighting controls; daylighting measures to avoid overlighting interior spaces; closing shades on the south side of the building to avoid over heating the space; turning off lights and equipment at the end of the work day; and purchasing ENERGY STAR® qualified equipment, including but not limited to lighting, office equipment, commercial and residential quality kitchen equipment, vending and ice machines; and purchasing products certified by the U.S. EPA's Water Sense® program.

1.3 Recycling and Waste Management: Tenant covenants and agrees, at its sole cost and expense: (a) to comply with all present and future Governmental Requirements regarding the collection, sorting, separation, and recycling of garbage, trash, rubbish and other refuse (collectively, "trash"); (b) to comply with Landlord's recycling policy, as stated in the Rules and Regulations (as such policy may be amended or supplemented from time to time), as part of Landlord's sustainability practices where it may be more stringent than applicable Governmental Requirements, including without limitation, recycling such categories of items designated by Landlord and transporting such items to any recycling areas designated by Landlord; (c) to sort and separate its trash and recycling into such categories as are provided by Governmental Requirements or Landlord's then-current sustainability practices; (d) that each separately sorted category of trash and recycling shall be placed in separate receptacles as directed by Landlord; (e) that Landlord reserves the right to refuse to collect or accept from Tenant any waste that is not separated and sorted as required by Governmental Requirements, and to require Tenant to arrange for such collection at Tenant's sole cost and expense, utilizing a contractor satisfactory to Landlord; and (f) that Tenant shall pay all costs, expenses, fines, penalties or damages that may be imposed on Landlord or Tenant by reason of Tenant's failure to comply with the provisions of this paragraph 2.11.

Operating Costs (net of Property Taxes): All expenses paid or incurred by Landlord for maintaining, operating, owning and repairing any or all of the Land, Building, Premises Parking Area, related improvements, and the personal property used in conjunction with such Land, Building, Premises and related improvements, except for Property Taxes. Included are all expenses paid or incurred by Landlord for: (a) utilities, including electricity, water, gas, sewers, fire

sprinkler charges, refuse collection, Telecommunication Services, cable television, steam, heat, cooling or any other similar service and which are not payable directly by tenants in the Building; (b) supplies; (c) cleaning, painting and janitorial services (including window washing), interior and exterior landscaping and landscaping maintenance (including irrigating, trimming, mowing, fertilizing, seeding and replacing plants), snow removal and other services; (d) access control services, if any; (e) insurance premiums and applicable insurance deductible payments by Landlord; (f) property management fees; (g) compensation (including employment taxes and fringe benefits) of all persons and business organizations who perform duties in connection with any service, repair, maintenance, replacement or improvement or other work included in this subparagraph (not above the level of manager, and to the extent that employees of Landlord or employees of Manager or Landlord's Agents are not assigned exclusively to the Building, then Operating Costs shall include only the portion of their salaries, wages and other personnel costs that Landlord allocates on a rational basis to the Building); (h) license, permit and inspection fees; (i) assessments and special assessments due to deed restrictions, declarations or owners associations or other means of allocating costs of a larger tract of which the Land is a part; (j) rental of any machinery or equipment; (k) audit fees and accounting services related to the Building, and charges for the computation of the rents and charges payable by tenants in the Building (but only to the extent the cost of such fees and services are in addition to the cost of the property management fee); (l) the cost of repairs or replacements; (m) charges under maintenance and service contracts to unrelated third parties; (n) legal fees and other expenses of legal or other dispute resolution proceedings (other than those incurred in lease disputes with tenants); (o) maintenance and repair of the roof and roof membranes, (p) costs incurred by Landlord for compliance with any and all changes, modifications or supplements to any Governmental Requirements that are effective or enacted after the Effective Date, or to increase the efficiency of any electrical, mechanical or other system servicing the Building or the Land; (q) elevator service and repair, if any; (r) business taxes and license fees relating to the Building and not the ownership entity; (s) any other expense or charge which in accordance with generally accepted accounting and management principles would be considered an expense of maintaining, operating, owning or repairing the Building; (t) insurance endorsements or insurance policies purchased in order to repair, replace and re-commission the Building for re-certification pursuant to any Green Agency Rating (or, in the event the Building has not achieved any certification under any Green Agency Rating, such insurance that is purchased in order to facilitate rebuilding the building upon a casualty so as to achieve such certification) or support achieving energy and carbon reduction targets; (u) all costs of maintaining, managing, reporting, commissioning, and recommissioning the Building or any part thereof that was designed and /or built to be sustainable and conform with any Green Agency Rating, and all costs of

applying, reporting and commissioning the Building or any part thereof to seek certification under any Green Agency Rating; and (v) the amortization of costs of capital improvements in accordance with the next sentence. Costs associated with capital improvements installed or constructed by Landlord other than in the initial construction of the Building, whether such were constructed or installed before or after the Effective Date, shall be amortized with interest thereon at the Prime Rate plus two (2) percentage points over the estimated useful life of the capital improvement as reasonably determined by Landlord, but only the annual amortization of principal and interest attributable to the Lease Term shall be an Operating Cost. The capital improvements referred to in the previous sentence shall include (A) the cost of fixtures, furniture, energy-saving and other equipment owned by Landlord and used on site in connection with the Building (including, without limitation, equipment used to maintain other equipment and all tools) and (B) capital expenditures incurred in good faith either to (i) reduce Operating Costs or (ii) to comply with the requirements of any law, order or regulation of any governmental, quasi-governmental, public or other authority not applicable to the Building as of the Effective Date.

1.3.1 Tenant shall not install any supplemental HVAC, space heaters or other utilities or energy-intensive equipment (“Supplemental Utilities Equipment”) in the Premises without Landlord’s prior written consent. In the event that Landlord consents in writing to such installation, Tenant shall be responsible, all at its sole cost and expense, for the installation, maintenance, and repair of any of Supplemental Utilities Equipment, and, at Landlord’s election, shall remove same from the Premises upon the expiration or termination of the Lease Term at Tenant’s sole cost and expense. Tenant agrees that it will maintain and repair any Supplemental Utilities Equipment, and major components thereof, in first-class condition, and any such equipment will be operated on sensors or timers that limit the operation of such Supplemental Utilities Equipment to hours of occupancy in the areas immediately adjacent to the occupying personnel. Tenant shall, at its sole cost and expense, enter into a regularly scheduled preventative maintenance/service contract with a maintenance contractor or the seller of any such Supplemental Utilities Equipment, and upon Landlord’s reasonable request, Tenant will provide Landlord with reasonable evidence of such maintenance and repair. Upon Landlord’s request, at reasonable times and upon prior notice to Tenant (except in the event of an emergency, where no notice is required) Landlord shall have the right to inspect, on not less than a monthly basis, the aforementioned Supplemental Utilities Equipment and major components provided Landlord shall use commercially reasonable efforts to minimize Landlord’s interference with Tenant’s business. Tenant shall not permit any Supplemental Utilities Equipment to disturb or interfere with any of the Building’s systems or any other tenant in the Building, and Tenant will remove, at Tenant’s sole cost and expense, any such Supplemental Utilities Equipment at Landlord’s direction in the event of such disturbance or interference. Landlord reserves the right to separately submeter (or cause Tenant to separately submeter) any Supplemental Utilities

Equipment, all at Tenant's sole cost and expense. Notwithstanding anything herein to the contrary, in the event that any Supplemental Utilities Equipment is required to be removed from the Premises by Tenant pursuant to the terms of this paragraph 3.5.5, Landlord may perform such removal at its election, and Tenant shall reimburse Landlord for any costs relating thereto, or in the event that Tenant performs such removal, Tenant shall be responsible to Landlord for any damage caused to the Premises or Building in connection therewith.

1.3.2 Tenant shall be required to submit to Landlord any electricity consumption data and costs in a format deemed reasonably acceptable by Landlord.

1.4 Maintenance and Repairs by Tenant. Except as is expressly set forth as Landlord's responsibility pursuant to the paragraph captioned "Maintenance and Repair by Landlord," and except as included in the janitorial services set forth in Exhibit F, Tenant shall at Tenant's sole cost and expense keep, clean and maintain the Premises in good condition and repair, including interior painting, cleaning of the interior side of all exterior glass, plumbing and supplemental utility and HVAC fixtures and installations within the Premises (as approved by Landlord in writing), carpets and floor coverings, all interior wall surfaces and coverings (including tile and paneling), window replacement (only if Tenant or Tenant's Agent caused the window to crack or shatter), exterior and interior doors, roof penetrations and membranes in connection with any permitted Tenant installations on the roof, light bulb replacement (which lighting purchases must comply with Landlord's sustainability practices and shall be reported to Landlord in a format suitable to Landlord) and interior preventative maintenance. All maintenance and repairs made by Tenant must comply with Landlord's sustainability practices and any applicable Green Agency Rating, as the same may change from time to time. If Tenant fails to maintain or repair the Premises in accordance with this paragraph, then Landlord may, but shall not be required to, enter the Premises upon twenty-four (24) hours prior written notice to Tenant (or immediately without any notice in the case of an emergency) to perform such maintenance or repair at Tenant's sole cost and expense. Tenant shall pay to Landlord the cost of such maintenance or repair plus a ten percent (10%) administration fee within ten (10) Business Days of written demand from Landlord.

1.5 Tenant Alterations. Without the prior written consent of Landlord, which may be withheld or conditioned in Landlord's sole discretion, Tenant shall not make any alterations, additions or improvements in or to the Premises, or make changes to locks on doors, or add, disturb or in any way change any floor covering, wall covering, fixtures, plumbing, wiring or Telecommunication Facilities (individually and collectively, "Tenant Alterations") Tenant shall deliver to Landlord full and complete plans and specifications for any proposed Tenant Alterations that require Landlord's consent under this paragraph 4.4. All such plans and specifications shall be subject to Landlord's consent, not to be unreasonably withheld, conditioned or delayed. If the Landlord's consent is given, such Tenant Alteration shall be performed at Tenant's expense and, at Landlord's

election, shall be removed by Landlord or by Tenant under Landlord's supervision, at Tenant's expense, upon the expiration or termination of the Lease Term. Tenant shall pay to Landlord all reasonable costs incurred by Landlord for any architectural, engineering, supervisory and/or legal services in connection with any such Tenant Alterations, including, without limitation, Landlord's review of plans and specifications. Without limiting the generality of the foregoing, Landlord may require Tenant (if Landlord has elected to require Tenant to perform the Tenant Alterations) for the duration of such work at Tenant's sole cost and expense, to obtain and provide Landlord with proof of insurance coverage and a payment and performance bond, in forms, amounts and by companies acceptable to Landlord. Should Tenant make any Tenant Alterations without Landlord's prior written consent or without satisfaction of any conditions established by Landlord, Landlord shall have the right, in addition to and without limitation of any right or remedy Landlord may have under this Lease, or at law or in equity, to require Tenant to remove some or all of Tenant Alterations so made, or at Landlord's election, Landlord may remove such Tenant Alterations and restore the Premises at Tenant's expense. In addition, Landlord may require the removal of any Tenant Alterations upon the expiration or termination of the Lease, at Tenant's sole cost and expense, and Tenant shall be liable for any damage in connection therewith. All Tenant Alterations shall be (a) completed in accordance with the plans and specifications approved by Landlord (if Landlord's approval of same is required above); (b) completed in accordance with all Governmental Requirements; (c) carried out promptly in a good and workmanlike manner; (d) of all new materials; and (e) free of defect in materials and workmanship. Any and all Tenant Alterations that affects at least fifty percent (50%) of the Premises will be performed in accordance with Landlord's sustainability practices, (as same may be in effect or amended or supplemented from time to time) and any Green Agency Ratings, as the same may change from time to time. Tenant further agrees to engage a qualified third party LEED or Green Globe Accredited Professional or similarly qualified professional during the design phase through implementation of any Tenant Alterations covered by the preceding sentence, in order to review all plans, material procurement, demolition, construction and waste management procedures to ensure they are in full conformance to Landlord's sustainability practices, as aforesaid, and Tenant agrees to seek and maintain LEED for Commercial Interiors certification for such Tenant Alterations. Tenant shall pay for all damage to the Premises, Building and Land caused by Tenant or Tenant's Agents as a result of the Tenant Alterations. Tenant shall indemnify, defend and hold harmless Landlord and Landlord's Agents from any Claims arising as a result of the Tenant Alterations or any defect in design, material or workmanship of any Tenant Alterations. Nothing contained in this paragraph or the paragraph captioned "Tenant's Work Performance" shall be deemed a waiver of the provisions of the paragraph captioned "Mechanic's Liens."

(f) The proposed assignee or subtenant has a proposed use or operation in the Premises which may or will cause the Building or any part thereof not to conform with the environmental and green building clauses in this Lease.

(g) **Sustainability Practices.** The Building is or may become certified under a Green Agency Rating (as hereinafter defined) or operated pursuant to Landlord's sustainable building practices, as the same may be in effect or modified from time to time. Landlord's sustainability practices address, without limitation, whole-building operations and maintenance issues including chemical use, indoor air quality, energy efficiency, water efficiency, recycling programs, exterior maintenance programs, and systems upgrades to meet green building energy, water, indoor air quality, and lighting performance standards. Tenant shall not use or operate the Premises in any manner that will cause the Building or any part thereof not to conform with Landlord's sustainability practices or the certification of the Building by a Green Agency Rating, provided that Tenant has received a copy of Landlord's sustainability practices and/or the Building's certification requirements by a Green Agency Rating. Landlord reserves the right to change electricity providers for the Building at any time and to purchase green or renewable energy. Provided that Tenant has received a copy of Landlord's sustainability practices and/or the Building's certification requirements by a Green Agency Rating, all construction, maintenance and repairs made by Tenant shall comply with Landlord's sustainability practices and with the minimum standards and specifications as outlined by the Green Agency Rating in addition to all Governmental Requirements. Tenant shall endeavor to use proven energy and carbon reduction measures, including energy efficient bulbs in task lighting; use of lighting controls; daylighting measures to avoid overlighting interior spaces; closing shades on the south side of the Building to avoid over-heating the space; turning off lights and equipment at the end of the work day; and purchasing Energy Star qualified equipment, including but not limited to lighting, office equipment, kitchen equipment, vending and ice machines; and purchasing products certified by the U.S. EPA's WaterSense program. Notwithstanding the foregoing that may be to the contrary, nothing herein shall require Tenant to replace any of its fixtures, equipment or machinery currently installed in the Premises. As used herein, "Green Agency Rating" means any one or more of the following ratings, as the same may be in effect or amended or supplemented from time to time: the U.S. EPA's Energy Star rating and/or Design to Earn Energy Star, the Green Building Initiative's Green Globes for Continual Improvement of Existing Buildings (Green Globes-CIEB), the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, LEED EBOM (existing buildings operations and maintenance) and any applicable substitute third party or government mandated rating systems.

Select Kennedy Green Lease Language:

a) **Utility Bills:** In order to assist Landlord in monitoring the energy efficiency of the Building, on Landlord's request, Tenant shall timely deliver to Landlord a copy of Tenant's utility bills for the Premises and such other information related to Tenant's use of utilities as may reasonably be requested.










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Responsible Property Investing

“Responsible Property Investing is a strategic approach that considers the environmental impact and social implications of real estate investments and operations, and hinges on the principles of sound and transparent governance. Being proactive in this regard allows us to better address risk and enhance asset value over the long-term.” — Gary Whitelaw, CEO, Bentall Kennedy

Bentall Kennedy’s approach to Responsible Property Investing (RPI) is market-leading, comprehensive and adaptable to individual client portfolio performance objectives. Our integration of environmental, social and governance (ESG) considerations into real estate investment management aims to enhance our performance as a fiduciary and strengthen our ability to add value to our clients’ assets.

The principles of RPI are firmly embedded in our business practices and form a central part of our investment strategy. They are also fundamental to ongoing asset and property management, as well as client reporting. Our focus on RPI is supported by dedicated senior staff and internal resources in Canada and the US, and a corporate culture of conservation and sustainability. Our commitment to addressing real estate’s environmental and social impacts is reflected in the strategic relationships we establish with clients, customers and service providers, and the partnerships we forge in the communities where we do business.

Bentall Kennedy is a signatory to the United Nations Principles for Responsible Investment (UN PRI) and the UN Environmental Programme Finance Initiative (UNEP FI). Ongoing collaboration with like-minded organizations, including the RPI Center at Harvard University, enables us to continue to advance our ESG practices. We are also active in many organizations and industry associations that support RPI. We share best practices, successes, challenges, and lessons learned through our experience with our peers, and speak regularly at industry conferences in North America and abroad.





- > Learn about our awards
- > View related news coverage

Predecessor company publications

- > Jantzi Sustainability / Bentall Assessment
- > Bentall Sustainability Report
- > Kennedy RPI Report 2009
- > UNEP FI Principles for Responsible Investment 2010 Kennedy Assessment
- > Survey Response



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Environmental

Our belief in the importance of Responsible Property Investing (RPI) directly affects how we manage our corporate activities and positively influences our delivery of asset management, leasing, property management and development services. Bentall Kennedy actively engages with our employees, clients, investors, tenants and communities on environmental matters, and we are diligent in working to reduce use of energy and water, as well as waste and greenhouse gas emissions.

Greening Our Company

We recognize that our corporate activities carry an environmental burden and choose to lead by example. Bentall Kennedy is committed to being a carbon neutral company and we disclose our emissions publicly. Our carbon neutrality is achieved through employee engagement activities, including our Caught Green Handed and Urban Forest Restoration programs, and the purchase of green power and carbon offsets. We provide our employees ongoing sustainable education, professional accreditation and technical training opportunities with a view to ensuring those involved with our real estate portfolios understand and adhere to the principles of RPI.

Greening our Portfolio

Sustainably developed and managed assets create value and mitigate risk. They offer a means to reduce operating costs and reduce functional obsolescence, and often have a competitive leasing advantage, resulting in quicker lease-up and greater tenant retention. To meet environmental goals, Bentall Kennedy employs a range of sustainable policies, processes and technologies.

Property development emphasizes innovative, market-leading green building design and construction practices. To date, we have certified or are in the process of certifying six million square feet of new development and redeveloped projects representing \$1.8 billion in value under the Leadership in Energy and Environmental Design (LEED®) rating systems and programs.

Property operations leverage new technologies to advance our RPI practices, including customized, proprietary software tools that track and measure key performance indicators. In managing our performance, we focus on increasing energy and water efficiency, and reducing waste and emissions. Purchasing decisions across our managed portfolio consider environmental criteria and utilize green specifications. Sustainable practices are communicated to tenants through education and training, green leases and our green tenant improvement design guide.

Asset sustainability, transparency, quality control and market differentiation are all enhanced by third-party recognition. These include certifications under the Building Owners and Managers Association Building Environmental Standards (BOMA BEST) program in Canada and the LEED® for Existing Buildings rating system administered by US and Canadian Green Building Councils in their respective jurisdictions. Bentall Kennedy also participates in the US Environmental Protection Agency’s ENERGY STAR® program. More than 43.4 million square feet in some 325 buildings collectively valued at \$9.6 billion have been certified under these initiatives.



> www.bentallkennedy.com/ForeverGreen

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Social

The social aspects of Responsible Property Investing include a focus on health and safety and community and tenant involvement, support of charitable organizations and philanthropic initiatives, and the use of Responsible Contractors and suppliers.

Health and Safety

Bentall Kennedy is dedicated to the protection of our employees and occupiers of our managed buildings, and to the prevention of occupational illness and injury. We recognize that the underlying philosophy of a strong occupational health and safety system is one of individual responsibility. To this end, we promote health and safety awareness, training, leadership and accountability, and integrate health and safety considerations into our daily business activities.

Community and Tenant Involvement

We uphold best-in-class community and tenant engagement standards to ensure the buildings we manage are productive and positive places to work, live and play. At the property level, we engage tenant support of sustainable initiatives through a range of communication avenues, special events and ongoing programs.

Community Giving and Participation

We support and engage with the communities in which we live and work. It is our employees—their time, effort and compassion—that enable Bentall Kennedy to give back to our communities. Our commitment to our communities is realized through donations of money, volunteer hours and fundraising.

We focus our charitable donations on providing food and shelter in the communities in which we operate and on supporting initiatives that address environmental issues. Our community giving also supports the registered charities in which our employees choose to be involved through both our donation matching program and the two paid volunteer days we give each employee annually.

Responsible Contractors and Suppliers

Bentall Kennedy engages contractors who pay fair wages and benefits, promote fair working arrangements and provide appropriate training for workers. Our corporate Responsible Contracting Policy embodies the values we expect from service providers at the properties we develop and manage, and supports our objective to foster economic health and growth in the communities where we do business. We believe that using responsible contractors results in better constructed and maintained buildings that are more desirable to tenants.

- > [View Bentall Kennedy Responsible Contracting Policy](#)
- > [View CalPERS Investment Policy](#)
- > [View Multi-Employer Property Trust Responsible Contractor Policy](#)



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Governance

Our dedication to meeting the highest fiduciary and performance standards is supported by strong and diligent corporate governance.

Bentall Kennedy's business is overseen by a predominantly independent Board of Directors. Corporate governance policies emphasize transparency and are regularly updated to ensure we remain aligned with current best practices. Strategic planning outlines key drivers that impact our business, establishes opportunities and identifies risk mitigation strategies. To ensure ethical practices, we have a comprehensive Code of Business Conduct and a Conflict of Interest Policy. We have also adopted an Environmental Policy that exceeds regulatory requirements. Responsible Property Investing considerations, policies, plans, and processes are integrated into our investment decision-making process and ongoing management of our portfolio.



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Real Estate Investment Advisors

Kennedy Associates Real Estate Counsel, LP, a full-service registered real estate investment advisor, brings over 32 years of entrepreneurial real estate investment expertise to a select number of public, corporate and Taft-Hartley retirement systems, as well as major university endowments. Throughout its history, Kennedy has brought superior value-added results to some of the country's largest institutional investors as well as closed-end partnerships and one large open-ended commingled fund.

In 2006, Kennedy formed a strategic partnership with Canada's largest real estate advisor Bentall Capital, who along with their management team and two large Canadian institutional investors purchased a majority interest in the firm. Together, Bentall and Kennedy are the second largest advisor of North American institutional real estate providing their clients a platform that covers the Continent with 14 offices. Find out more about Bentall at www.bentall.com.



[Kennedy Real Estate Outlook—Spring 2010](#)

Responsible Property Investing

Kennedy is a global leader in [Responsible Property Investing \(RPI\)](#), which considers Environmental, Social and Governance considerations in developing, owning and managing commercial real estate in addition to fiduciary goals.



[PRESS RELEASE—Kennedy Becomes Investment Advisor to Largest Portfolio of Volume Certified LEED for Existing Buildings](#)

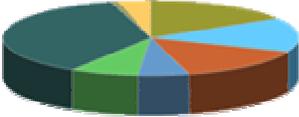
[Click here to access Kennedy's Responsible Contractor Program](#)

"Building operations are nearly 40% of the solution to the global climate change challenge," said Rick Fedrizzi, president, CEO and founding Chair, USGBC. "Kennedy Associates demonstrates exemplary leadership by showing the business world how building green, throughout an entire organization, can be possible and profitable."

**Kennedy Awarded ENERGY STAR
Award 2010 Partner of the Year**



Click [here](#) for the **2009 Kennedy RPI Report**.

Kennedy at a Glance	Kennedy Portfolio by Region	Kennedy Portfolio by Type																														
<p>Assets under management: \$6.2 billion</p> <p>Institutional Investors: 330 +</p> <p>Buildings in Portfolio: 500 +</p> <p>Invested since inception: \$15 + billion</p> <p>Total Dispositions: \$4.3 billion</p>	 <table border="1"> <tbody> <tr><td>Pacific</td><td>35%</td></tr> <tr><td>Northeast</td><td>16%</td></tr> <tr><td>Mideast</td><td>16%</td></tr> <tr><td>East North Central</td><td>14%</td></tr> <tr><td>Mountain</td><td>8%</td></tr> <tr><td>West North Central</td><td>6%</td></tr> <tr><td>Southwest</td><td>5%</td></tr> <tr><td>Southeast</td><td>1%</td></tr> </tbody> </table>	Pacific	35%	Northeast	16%	Mideast	16%	East North Central	14%	Mountain	8%	West North Central	6%	Southwest	5%	Southeast	1%	 <table border="1"> <tbody> <tr><td>Office</td><td>48%</td></tr> <tr><td>Industrial</td><td>21%</td></tr> <tr><td>Multi-family</td><td>15%</td></tr> <tr><td>Hospitality</td><td>5%</td></tr> <tr><td>Retail</td><td>5%</td></tr> <tr><td>Land</td><td>3%</td></tr> <tr><td>Medical Office</td><td>3%</td></tr> </tbody> </table>	Office	48%	Industrial	21%	Multi-family	15%	Hospitality	5%	Retail	5%	Land	3%	Medical Office	3%
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Responsible Property Investing

Environmental: Sustainable Development Re Development and High Performance Property Operations

Kennedy is an industry-leader in sustainable development and high-performance property operations. As a USGBC member, Kennedy has played an active role in cost-effectively developing green buildings in urban and suburban locations, continually seeking to incorporate innovation in both design and construction. Kennedy has more than \$2.0 billion in LEED certified assets representing million sf within its portfolio and has created the nation's first LEED for Existing Building Operations and Maintenance (EBO M) volume certification program by an investment advisor. Kennedy's Asset Management team proactively seek to improve energy efficiency, water conservation and waste management for all operating assets in order to reduce operating expenses, while reducing each asset's carbon footprint. As a 200 and 2010 ENERGY STAR Partner of the Year, Kennedy benchmarks 22 million sf of commercial space within its energy management program monthly, achieving a 200 reduction of 24 million kwh's and ENERGY STAR building labels representing more than 10.6 million sf and \$1.5 billion.

Social and Governance

Kennedy understands that real estate investing has social and economic impacts on local communities, the building trades involved in construction, and building occupants. Kennedy works exclusively with Responsible Contractors and development companies that honor fair labor laws and foster positive work environments. Independent economic research indicates that Kennedy's real estate investment activities on behalf of the Multi-Employer Property Trust in 200 , created \$13.3 billion in economic activity, produced 103,000 jobs (including almost 5,000 "green" jobs) and \$5.5 billion in personal benefits from 1 82 through 2008. To promote healthy and productive indoor environmental quality for building occupants, Kennedy utilizes various sustainable operations programs like green cleaning and tools such as its green lease and sustainable tenant improvement manual to protect occupants from harmful materials and contaminants.

A key component of RPI is proper governance and transparency. Kennedy has integrated RPI into its investment acquisitions decision making, ongoing asset management, and regular reporting structure. Kennedy publishes RPI reports to inform its clients of ongoing RPI activities affecting their assets, while using its website and industry publications to promote RPI to the real estate industry. In addition, as a United Nations Environment Programme Finance Initiative Property Working Group Member, Principles for Responsible Investment Signatory, and RPI Center Co-Founder, Kennedy seeks to fully disclose its RPI performance, while sharing best practices. Carbon neutral as a company, Kennedy promotes RPI internally through the LEED Gold certification of its Seattle Headquarters, annual forest restoration events, an employee Commute Challenge, and sustainable employee education program resulting in almost 50% of Kennedy's professional staff becoming LEED Accredited.

RPI Papers Research:

[UNEP FI CEO Briefing Paper](#)

UNEP FI: [Building Responsible Property Portfolios](#)

[RPI and Responsible Contracting Policies](#)

[RPI Center Metrics White Paper](#)

[RPI Center Quarterly](#)

RPI and Kennedy:

[Kennedy Sustainability Policy](#)

[Kennedy Volume Certification Press Release 5-04-10](#)

[RPI 2008 White Paper](#)

[Better Bricks Article on RPI](#)

[CoStar Study Finds Energy Star, LEED Bldgs. Outperform Peers](#)

[RREEF Global Greening Trends 2008](#)

[Second Rooftop in Southern California Edison's Massive Solar Panel Installation Program](#)

[Now Generating Power in China](#)

[Urban Land Institute \(Dec 0 \) LEED EB: O M Press release Kennedy receives 2008](#)

[FT ULI Sustainable Cities Award](#)

[CoStar Group: 200 ENERGY STAR Partner of the Year](#)

RPI Kennedy Asset Case Studies:

[Ardea](#)

[Octagon Case Study](#)

[USGBC Brewery Block Case Study](#)

[McGraw Hill Commercial Real Estate Market Summary Highlighting: Kennedy and Rivergate III](#)

[Kennedy Awarded ENERGY STAR Award 2010 Partner of the Year](#)



For more information, please e-mail [Bob Ratliffe at BobR@kennedyusa.com](mailto:BobR@kennedyusa.com) or [Christian Gunter at ChristianG@kennedyusa.com](mailto:ChristianG@kennedyusa.com).

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2010 Report

Introduction

Few investment advisors offer as much to investors as Kennedy when it comes to Responsible Property Investing (“RPI”). RPI is a sophisticated strategy that integrates Environmental, Social, and Governance (“ESG”) considerations into real estate investment and management as an integral part of its fiduciary duties.

RPI acknowledges that ESG issues can affect investment performance, and proactive management of these issues will address risk and enhance asset value over the long term. The diagram below illustrates Kennedy’s vision of ESG integration within RPI and its impact on asset performance.

ESG practices within real estate as an asset class are recognized globally through the United Nations (“UN”) Principles for Responsible Investment (“PRI”). According to the UN, the PRI was developed to help investors integrate consideration of ESG issues into investment decision-making and ownership practices, thereby improving long-term returns to beneficiaries.

Along with Kennedy, the PRI includes institutional signatories who are some of the world’s largest owners, investment managers, and professional service providers with combined assets under management of \$22 trillion (U.S.).

For over three decades, Kennedy has provided the nation’s leading public, corporate, and Taft-Hartley retirement plans, as well as endowments and sovereign funds, with a means to invest in commercial real estate that achieves a range of competitive risk-adjusted returns and social and environmental goals and benefits.

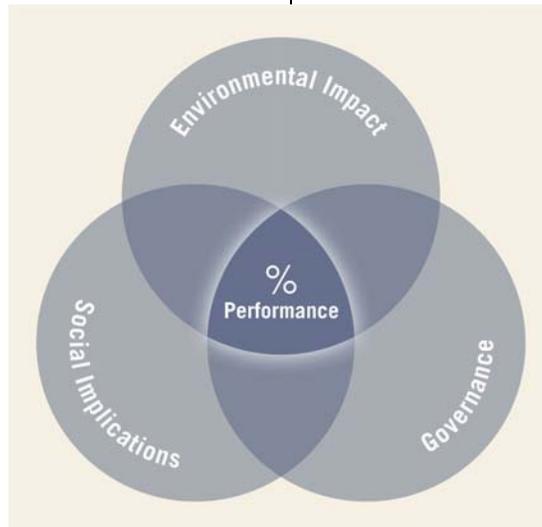
RPI is embedded into our business practices and a central theme of our investment approach, portfolio and asset management, tenancing strategies, and client reporting.

We have internal resources and senior staff dedicated to our RPI efforts, contributing to a corporate culture of sustainability. Kennedy seeks to replicate RPI “best practices” while creating innovative proprietary tools to ensure the success of its RPI programs.

Kennedy diligently works to cost-effectively improve the sustainability of its clients’ real estate portfolios to protect, as well as enhance, asset value.

This commitment enables us to establish strategic relationships with clients, tenants, customers, and service providers, while forging strong partnerships through our stewardship in the communities where we do business.

Kennedy actively engages in strategies to minimize risk of future building obsolescence and value loss. This is achieved by optimizing property operations in the dynamic regulatory environment while anticipating tenant values and priorities and evolving investor sentiment.



Bentall and Kennedy

In 2006, Kennedy formed a strategic partnership with Canada's largest real estate advisor, Bentall Capital ("Bentall"), when Bentall's management team and two large Canadian institutional investors purchased a majority interest in the firm. At the end of 2010, a full integration will be complete and the combined entity will be known as Bentall Kennedy. Together, we become the second largest advisor (by equity) in North American institutional real estate management, providing clients with an advisory and services platform covering the U.S. and Canada.

To ensure RPI alignment of a combined Bentall Kennedy platform, a comprehensive review of sustainability and related activities of both companies was completed during the first half of 2010. The Bentall Kennedy RPI Assessment ("Assessment") utilized ESG metrics (Jantzi Sustainalytics) to benchmark the 2009 ESG performance of leading Canadian real estate companies (including Bentall). It revealed that Bentall and Kennedy both possess a strong overarching commitment to RPI resulting in considerable alignment in the advancement of ESG performance between the companies and in comparison to global RPI leaders.

Through the remainder of 2010 and into 2011, Bentall Kennedy will complete recommended actions and draft policies from the Assessment to ensure ongoing RPI global leadership.

RPI Trend Summary

The following are RPI trends that Bentall Kennedy is tracking. Some trends are market-driven while others result from social and demographic changes, emerging technologies, and new public policies. Kennedy will proactively work to address advancements in RPI which shape our business to mitigate risk, create value, and demonstrate global leadership.

In aggregate, the most prominent trends have the potential to bifurcate the market creating a differentiation between sustainable, high-performance, Class-A buildings and non-sustainable and inefficient buildings deemed functionally obsolete. Current RPI trends that Bentall Kennedy believes will have a meaningful impact on its portfolio include:

- Expanded institutional capital investment requiring RPI fundamental criteria
- Public policy (i.e., local, state, and federal) incenting/regulating ESG performance
- Growing tenant/user demand for green buildings with RPI characteristics
- Greater emphasis on portfolio measurement and reporting of ESG efforts
- Increased emphasis on transparency and governance
- Enhancing reputation and brand through RPI integration

Report Scope Parameters and Content

The 2010 Kennedy Associates RPI Report provides ESG-related disclosure to key stakeholders including clients, development partners, property-management providers, consultants, industry associations, academics, policy makers, and others involved in commercial real estate. Similar to Kennedy's 2009 RPI Report, the 2010 RPI Report provides a general update of Kennedy's RPI activities, programs, and accomplishments in ESG categories as of mid-year 2010. Given the breadth of Kennedy's RPI program, significant information was considered for inclusion in the 2010 RPI report. However, emphasis was placed on identifying content deemed most relevant and material to key stakeholders and Kennedy's ESG disclosure efforts. Although Kennedy's RPI report does utilize some sustainable reporting guidelines and performance indicators used by the Global Reporting Initiative ("GRI"), it should not be considered or evaluated as a GRI report.

RPI: Environment

During 2010, Kennedy updated its Sustainability Policy, establishing specific goals in areas of energy, water, waste, CO₂ reduction, and indoor environmental quality, among others. The Sustainability Policy also reiterates Kennedy's commitment to the use of third-party certifications like Leadership in Energy and Environmental Design ("LEED")

bestowed by the U.S. Green Building Council ("USGBC"), and emphasizes the importance of ongoing sustainable education. Kennedy's Sustainability Policy has resulted in the creation of plans and procedures for new development and ongoing property operations.

Sustainable Development

As the pursuit of green building practices has grown, green building regulations have expanded and tenant preferences have evolved concurrently. Kennedy continues to believe that the most attractive Class-A assets are built sustainably with high levels of operational efficiency and the use of innovative design and construction best practices. These findings align with ongoing academic research which indicates that green buildings:

- Command higher in-place rental rates
- Experience lower operating expenses and greater levels of efficiency
- Achieve greater occupancy, attracting some of the nation's top tenants

Larger macro social and economic trends continue to propel the sustainable development and property operations market forward, even during one of the most significant real estate downturns and economic recessions in U.S. history. The growth and maturity of the green building market in materials, technology, and experience is witnessed by falling costs associated with sustainable development (often less than 1%).

Kennedy strives to achieve LEED Silver certification (as a minimum) for all new development and re-development; a policy that has been successfully achieved since its inception. Eight new development projects received final LEED certification in 2010 as detailed in the following table:



222 Main, Salt Lake City, Utah – LEED Gold

Kennedy: LEED New Development Portfolio (\$1 billion MV/4 million SF)

Project Name	LEED Level	Market	Type	SF
360 State Street	Platinum	New Haven, CT	Multi-family	367,938
222 Main	Gold	Salt Lake City, UT	Office	421,608
Patriots Plaza II	Gold	Washington, D.C.	Office	321,502
Patriots Plaza III	Gold	Washington, D.C.	Office	380,078
Milestone IV	Gold	Washington, D.C.	Office	156,637
100 Burlington	Gold	Boston, MA	Office	160,887
The Ardea	Gold	Portland, OR	Multi-family	356,056
Brewery Block II	Gold	Portland, OR	Office	219,965
1900 16th Street	Gold	Denver, CO	Office	407,526
The Café at West Hills	Gold	Los Angeles, CA	Amenity	13,500
Lake Vista 7	Silver	Dallas, TX	Office	240,000
Rivergate III	Silver	Portland, OR	Industrial	573,420
The Octagon	Silver	New York, NY	Multi-family	376,959
				3,996,076



LEED certification is based on the implementation of sustainable design, construction, and operations in areas such as sustainable sites, energy and atmosphere, water efficiency, materials/resources, indoor environmental quality, and sustainable innovation.

Case Studies

The following case studies of select LEED projects illustrate the environmental, social, and economic value of sustainable development projects.

Patriots Plaza II-III

Patriots Plaza Phase II and III (“Patriots II-III”) consist of two 12-story, Class-A office buildings totaling 701,600 SF. Major tenants include United States Department of Agriculture (“USDA”) and the Federal Bureau of Investigation (“FBI”). Patriots II-III achieved substantial completion in October 2009 and was awarded LEED Core and Shell Gold certification during 1Q10. It is transit-oriented with easy access to three MetroRail stations and the Virginia Railway Express. The project’s numerous sustainable design and construction features include:

- Energy-efficient lighting, building envelop and HVAC systems, and the use of renewable energy
- A water treatment system to maximize water conservation and eliminate the need for irrigation water using municipal potable water
- Low-flow toilets and water faucets that reduce water use by more than 40%
- Use of over 20% recycled and regional building materials
- Preferred parking for fuel efficient vehicles

In addition to lower operating expenses and lifecycle costs resulting from the asset’s sustainable features, recent leasing successes at the asset further demonstrate the financial benefits of LEED certification. As the nation’s largest tenant, the General Services Administration (“GSA”) now requires that any building that the GSA considers for occupancy be LEED certified, with preference given for higher levels of certification. The LEED Gold certification for Patriots II-III was a key determining factor when the GSA, on behalf of the USDA and the FBI, was seeking to relocate in late 2009 and 2010.

The FBI signed a long-term lease for 180,000 SF at Patriots Plaza II following a 330,000 SF lease signed by USDA at Patriots Plaza III during 4Q09. The USDA lease was the largest signed in Washington, D.C., in 2009 and was named “Best Urban Office Lease” by the *Washington Business Journal*. With the USDA and FBI leases, Patriots Plaza II-III reached 72% occupancy in less than six months of shell completion and well ahead of pro forma.



Patriots Plaza, Washington, D.C. – LEED Gold



360 State Street

360 State Street is a recently-completed 500-unit, 367,900 SF mixed-use, multi-family project in New Haven, Connecticut. It has been featured in numerous media sources including the *New York Times*. 360 State Street received the first LEED Platinum certification within the USGBC's Neighborhood Development ("ND") rating system pilot program during 1Q10. LEED ND certification emphasizes principles of smart growth, urbanism, and green design prior to, during, and post-construction. 360 State Street is a transit-oriented infill development in the heart of downtown New Haven, located on a brownfield site with historical significance. In addition, the project includes a substantial number of affordable housing units.



360 State Street, New Haven, Connecticut – LEED Platinum

Sustainable components of 360 State Street include:

- Use of a fuel cell to meet 88% of the project's electricity use and heat the building through waste-heat recovery and re-use
- Real-time energy monitoring, providing building tenants ongoing consumption and cost data
- Significant waste diversion and use of local and recycled materials
- High-performance glazing and enhanced insulation to reduce energy cost and heat gain
- Deployment of HVAC energy efficiency and load optimization technologies such as high-efficiency heat pumps, chillers, boilers, and use of variable speed drives
- Use of ENERGY STAR appliances, occupancy sensors, and high-efficiency lighting

High-Performance Property Operations

According to the U.S. Department of Energy, buildings account for 73% of electricity consumption and 39% of energy use in the U.S. In comparison to new development, existing buildings make up the largest component of the built environment, typically comprising 98% of all building stock with substantial emissions associated with ongoing operations. Consequently, Kennedy has placed specific emphasis on improving the performance of its operating portfolio, knowing that in many cases the greatest energy savings are available in existing, low-performing buildings. The following sections highlight key Kennedy RPI programs and tools deployed on behalf of its clients to improve building operating performance and sustainability.



Kennedy has a robust energy management program that proactively uses ENERGY STAR resources and tools to track key performance indicators including energy, water, and CO₂. An ENERGY STAR partner since 2005, each month we track each eligible operating office and industrial asset within ENERGY STAR Portfolio Manager (a software monitoring tool). Kennedy is currently benchmarking more than 21 million SF of office, medical office, and industrial/warehouse space in Portfolio Manager. Through the first half of 2010, Kennedy received the ENERGY STAR label for 63 office and industrial assets representing 10.7 million SF and more than \$1.5 billion in value.

ENERGY STAR

As the *only* investment advisor awarded the prestigious ENERGY STAR Partner of the Year in 2009 and 2010, Kennedy works to reduce energy use by meaningful levels each year at each asset within its portfolio. Kennedy requires its property management providers to implement operations and maintenance best practices and encourages proactive tenant energy conservation outreach. Kennedy’s Executive Committee has made achieving the ENERGY STAR label a top priority for its asset management team and, more significantly, has stressed the ongoing importance of using ENERGY STAR to improve the performance of high-energy consumption buildings. Select 2009 ENERGY STAR benchmarking portfolio performance highlights include:

- An average ENERGY STAR portfolio rating of 77 compared to 69 in 2008
- A -6.0% reduction in source energy use, compared to -4.5% in 2008
- A reduction in site energy intensity (kBtu/psf) from 63.2 to 59.2 (-6.3%)
- Estimated electricity savings of 23.6 million kWh and approximately \$2.4 million (www.eia.doe.gov); sufficient to power over 1,500 homes for one year
- A reduction of 17,665 metric tons of CO₂ equal to the annual emissions of 3,235 cars (EPA’s Greenhouse Gas Equivalent Calculator)



Gates Plaza, Denver, Colorado
ENERGY STAR Labeled
LEED Gold



Mission Trails, San Diego, California
ENERGY STAR Labeled

Medical Office Building (“MOB”) Sustainability Program

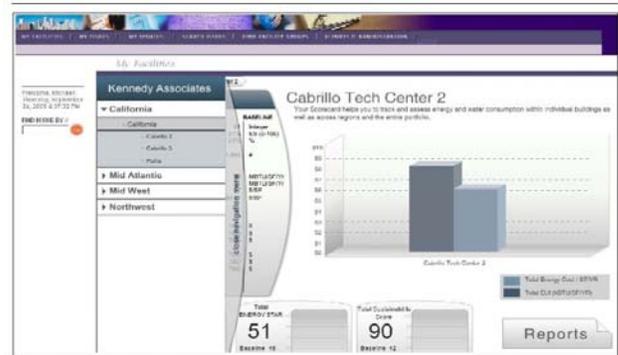
Medical office buildings can be extremely large energy users, given the wide range of medical uses. Because of this, Kennedy specifically targeted this property type for analysis during 2010 to increase energy efficiency and overall sustainability, and launched its MOB Sustainability Program during 1Q10 that utilizes:

- Comprehensive energy audits and site visits
- ENERGY STAR benchmarking and property team training
- Capital improvement project analysis and planning
- Sustainable gap assessments to identify key opportunities for future LEED certification

Kennedy expects the pilot project, given financially-recommended capital improvements and operational changes, to increase energy efficiency in most MOB assets by 25%, resulting in projected energy savings of 8.8 million kWh and \$428,750 annually given an investment of \$1.5 million—an estimated 39% IRR.



The Care Group Medical Office Building, Indianapolis, Indiana



Key Performance Indicator (“KPI”) Dashboard

In 2010, Kennedy expanded its portfolio performance analysis activities to better evaluate the financial and environmental performance of assets implementing RPI strategies. In an effort to strengthen monthly KPI measurement, Kennedy developed and launched a proprietary Dashboard with the McKinstry Company that:

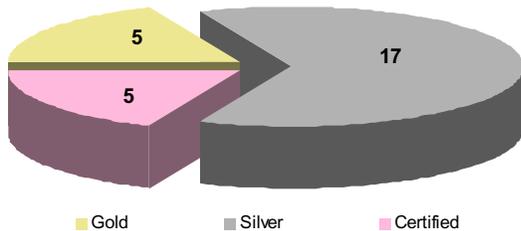
- Covers more than 2.3 million SF in four regions
- Tracks energy, water, waste, and CO₂
- Monitors actual performance as compared to baselines and annual reduction targets

Kennedy will evaluate expanded use of the Dashboard or a proprietary performance measurement and capital project tracking tool used by Bentall.

LEED Existing Building Operations and Maintenance (“EB: O&M”) Certification

Over the past two years, Kennedy has developed one of only two pre-certified volume EB: O&M certification programs in the country. EB: O&M certification has enabled Kennedy to expand and standardize best practices. Kennedy’s EB: O&M program encompasses procedures, policies, and processes that are implemented portfolio-wide in a scalable manner. During 2010, Kennedy’s EB: O&M volume program was successful in the simultaneous certification of 27 buildings including five Gold, 17 Silver, and five Certified.

Kennedy’s 2010 EB: O&M Certified Buildings



Kennedy EB: O&M certified buildings represent approximately 5.2 million SF of Class-A office space in eight markets nationally and almost \$1 billion in value. Kennedy’s volume EB: O&M certification was the first by an investment advisor nationally and the largest by a single owner (MEPT).

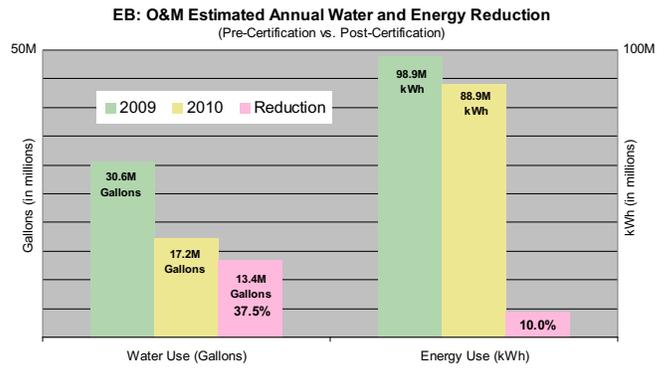
Key EB: O&M certification highlights include:

- Average ENERGY STAR score of 85
- 35% greater energy efficiency than the national average
- \$974,500 in estimated energy savings*
- 37% reduction in water use resulting in 13.4 million gallons saved or \$100,000 annually
- Portfolio sustainable policies, plans, and procedures
- Proprietary “toolkits” and education/training modules
- Energy audits and indoor air quality testing/balancing
- Purchase of 18.4 million kWh hours of Green-e Certified renewable energy



20 North Clark Street
Chicago, Illinois – LEED Gold
ENERGY STAR Labeled

* Energy savings estimate based on actual reduction of more than 9.5 million kWh (Portfolio Manager) and electricity pricing from the Department of Energy at www.eia.doe.gov.



Kennedy expects to achieve EB: O&M volume certification in early 2011 for 17 additional MEPT office buildings representing almost 2.4 million SF and over \$425 million in value. With certification of the second group of MEPT office buildings, 74% of the MEPT office portfolio (by SF) will have achieved LEED certification (i.e., NC, CS, and EB: O&M).

Renewable Energy

Kennedy continues to pursue accretive renewable energy opportunities for its clients’ assets. In addition to the current one-megawatt solar array completed in 2009 with Southern California Edison (“SCE”) at MEPT’s Centrepointe Chino II, Kennedy finalized negotiations with SCE during 2Q10 for a second solar roof lease at Haven Gateway. SCE plans to construct a 1.0- to 1.5-megawatt solar array.

The Haven Gateway project is expected to be operational by early 2011 and will produce enough energy to power 600 homes. Kennedy will continue to work with utilities and private solar developers to find additional assets in California and other states that are able to host solar arrays via solar roof leases. Each solar installation meets Kennedy’s RPI goal of encouraging the use and generation of renewable energy while also creating numerous “green collar” jobs for building trade members.



Solar panel array at Centrepointe Chino II, Chino, California
ENERGY STAR Labeled

Green Leasing and Sustainable Tenant Improvements

Kennedy expanded the use of its green office lease during 2010. The green lease promotes sustainable property operations and occupancy by promoting tenant waste management, sustainable purchasing, green cleaning, and expanded energy and CO₂ reduction efforts while encouraging sustainable tenant build-out. The lease and related building rules/policies are important tenant engagement tools that strengthen portfolio RPI performance but are flexible enough to meet various market conditions.

Kennedy published its Sustainable Tenant Improvement Manual (“TI Manual”) for its Class-A office portfolio during 2010 in partnership with the Northwest Energy Efficiency Alliance’s Better Bricks Initiative.

The TI Manual brings a new level of sustainable portfolio consistency to the tenant improvement process for Kennedy’s office portfolio. The TI Manual sets new requirements for all first-generation space and applicable second-generation build-out in areas

of energy, water, materials, and indoor environmental quality. The TI Manual positions most tenant improvement projects to meet most LEED

Commercial Interior (“CI”) prerequisites and 35% of points needed for CI certification at little to no cost.

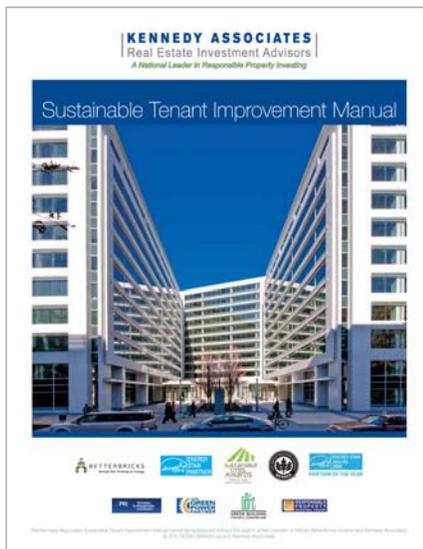
If tenants desire CI certification, Kennedy’s Sustainable TI Committee has developed a unique program with tools and resources to facilitate “turn-key” LEED-CI volume certification. Kennedy will use a leading LEED-CI consultant to provide technical assistance and quality control through the design/construction process and coordinate the required LEED submittals for interested tenants at select assets. The small cost of each LEED-CI certification is expected to be folded into each TI allowance, which will be piloted during 2010

for all new leases at MEPT’s LEED Gold certified 1900 16th Street in Denver, Colorado.

Kennedy’s green lease and TI Manual provide a means to apply sustainable best practices at a portfolio, asset, and individual tenant level.



1900 16th Street, Denver, Colorado – LEED Gold



Item	Status/Notes
Water Efficiency	
Reduce Water Use by 20%	
Energy and Atmosphere	
Attain Minimum Energy Performance	
Reduce Lighting Power by 10%	
Reduce Lighting Power by 20-30%	
Use 30% ENERGY STAR Appliances	
Sub-Meter Tenant Energy Use	
Sub-Meter Systems	
Practice Commissioning	
Purchase Green Power	
Materials and Resources	
Install Recycling Stations	
Divert 65% of Construction Waste	
Use 10% Recycled Content	
Use 20% Recycled Content	
Reuse Interior Components	
Reuse Materials	
Reuse Furniture and Furnishings	
Use Regionally Manufactured Products	
Use Regionally Extracted Materials	
Use Locally Harvested Materials	
Use Certified Wood	
Indoor Environmental Quality	
Attain Minimum IAQ	
Create an IAQ Construction Plan	
Create an IAQ Pre-Occupancy Plan	
Use Low-Emitting Adhesives/Sealants	
Use Low-Emitting Paints/Coatings	
Use Low-Emitting Flooring Systems	
Use Low-Emitting Composite Wood	
Use Low-Emitting System Furniture & Seating	
Design HVAC Systems for Thermal Comfort	
Provide Individual Control	
Provide Individual Lighting Control	
Control Indoor Pollutant Sources	
Provide Daylight	
Provide Views to the Outdoors	
Sustainable Sites	
Install Bicycle Storage & Changing Rooms	

RPI: Social



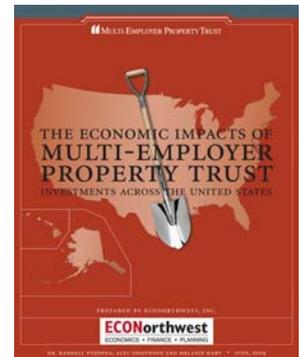
Real estate investment and operations have both social and economic impacts. Therefore, Kennedy works exclusively with Responsible Contractors and development companies that honor fair labor laws and maintain positive work environments. This approach ensures that prevailing wages and benefits are paid while promoting economic health in the communities where Kennedy invests its clients' equity. Kennedy was intimately involved in the creation of the MEPT Responsible Contractor Policy ("RCP"), but has also helped several of its separate account clients with the drafting of their RCP policies.

We believe the use of Responsible Contractors ensures that the projects of Kennedy's clients are built and maintained with the highest-quality craftsmanship in a given market, thus maintaining the value better and longer than other assets. This high-quality level of work is acquired through training for most Responsible Contractors that consists of years of apprenticeship programs, classroom, jobsite, and worksite safety training, and ongoing journeyman training. The creation of many clean technology and green collar jobs has been a valuable ancillary benefit to Kennedy's RPI focus.

Performance: MEPT Jobs Report Summary

Kennedy's RCP has a direct and indirect multiplier affect on each community when a real estate asset is developed. Based on the June 2009 analysis titled "The Economic Impacts of Multi-Employer Property Trust Investments Across the United States" by ECONorthwest, an economic consulting firm, MEPT has created 67 million job hours in the construction industry and 119 million job hours for other industries across the country based on an investment of \$6.3 billion in new-construction commercial real estate since its inception in 1982. In addition, MEPT investments have:

- Created an estimated \$278.1 million in state personal income taxes. In addition, the study reveals that state and local governments benefited from \$163.5 million in sales tax revenue
- Generated \$13.3 billion in economic activity and almost 103,000 jobs in the local communities where MEPT properties are located



In addition, MEPT development projects created \$5.5 billion in wages and benefits paid nationally and generated nearly 5,000 "green jobs" for the construction, technical, and professional service sectors.

Tenant Well-Being

With RPI, social considerations also include providing tenants with safe, productive, and healthy environments to live, work, and play. To achieve these goals, Kennedy:

- Has implemented portfolio green cleaning and pest management programs
- Uses low-emitting materials in tenant build-out (i.e., low-VOC paint, carpets, etc.)
- Constructs buildings that provide views and day-lighting for occupants and amenities such as bike storage, showers, gyms, and other services appealing to tenants



Each Kennedy asset also employs use of an Indoor Air Quality Plan ("IAQ"), a prerequisite for LEED: EB: O&M certification. Each IAQ plan includes a manual, regular training, and an identified IAQ manager. At the property level, Kennedy also promotes sustainability through best-in-class community and tenant engagement strategies, communication avenues, special events, and ongoing programs.

RPI: Governance

Good Governance

Our dedication to meeting the highest fiduciary and performance standards is supported by leading-edge corporate governance and transparency. Accordingly, Kennedy has integrated RPI into its investment/acquisition decision-making, ongoing asset management, and regular reporting structure, with an unyielding commitment to fiduciary principles.

Kennedy's governance structure, along with carefully crafted policies, plans, and procedures, are utilized to meet ESG goals. As such, Kennedy has created strategies that are employed at each stage of the investment process to ensure its acquisition and ongoing asset management activities create value while appropriately managing and mitigating risk. In terms of organizational structure, Kennedy is managed by an independent Board of Directors with highly-experienced representation from outside the company to ensure adequate oversight.

Policies and Procedures

Kennedy's Executive and Investment Committees provide additional checks and balances for investment and ongoing operations decision-making that incorporate RPI goals and objectives. Kennedy's Sustainability Policy helps direct real estate investment by setting goals in ESG categories. As part of its RPI strategy, all investment opportunities are:

- Vetted by its Investment Committee through utilization of an RPI screen and ESG metrics
- Analyzed during due diligence through an RPI checklist
- Communicated via a RPI assessment to Kennedy's Executive Committee and the client for approval

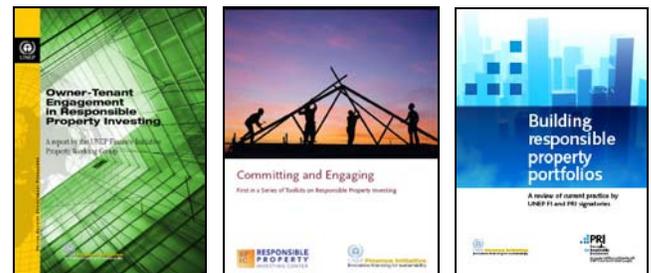
The Annual Business Plan for each of our operating assets also highlights RPI activities that further ongoing sustainable operations and maintenance practices, and provides an ESG framework for ongoing asset and property management. Kennedy has also implemented sustainable property operations and maintenance policies in order to meet sustainable goals covering energy, water, waste, purchasing, and green cleaning, among others.

Transparency and Reporting

Kennedy publishes RPI reports to inform its clients of ongoing RPI activities in ESG categories affecting their assets, while using its website and industry publications to promote RPI. In addition, as a PRI signatory, Kennedy completes an annual UN disclosure detailing how it meets the six PRI Principles in ESG areas. As a mainstream investment manager ("IM"), Kennedy's aggregate PRI adoption average, as compared to all IMs globally, ranked in the top quartile for 2010. The full Kennedy PRI disclosure for 2010 is available via the UN PRI's website at www.unpri.org.



As a member of the Property Working Group, Kennedy has helped the UN develop RPI white papers and technical toolkits promoting the PRI within the real estate sector covering: green building and finance, tenant engagement, RPI investment strategy, and portfolio management, among others. Kennedy representatives also have contributed as PRI conference panel participants for the property sector and Kennedy will be involved as a co-sponsor of, and panel participant at, the "2010 PRI in Person" in San Francisco, California.



In addition to regular financial reporting, Kennedy utilizes property environmental benchmarking and reporting to assess ESG performance through:

- Use of ENERGY STAR Portfolio Manager customized reporting and the KPI Dashboard
- Monthly property management input of building energy, water, and natural gas consumption data
- Distribution of monthly ENERGY STAR reports created by Kennedy’s ENERGY STAR Committee to the asset management team



As part of its annual ENERGY STAR Partner of the Year application, Kennedy details how its energy management program aligns with ENERGY STAR’s Guidelines for Energy Management and provides comprehensive portfolio performance data from benchmarking, energy efficiency, and CO₂ emission reduction efforts.

Client Outreach

In terms of outreach, Kennedy portfolio managers actively engage with respective clients on RPI issues affecting its real estate assets. Kennedy also works closely with Landon Butler & Company that provides investor relations for MEPT and informs clients and consultants of Kennedy’s RPI-related priorities and initiatives through regular publications and the MEPT Annual Report. At the property level, Kennedy annually seeks ESG disclosure from its property management providers.

RPI Leadership

Kennedy is actively involved in organizations and associations that support the advancement of RPI within the commercial real estate industry. Kennedy works with industry groups by sharing best practices, successes, challenges, and “lessons learned” and speaking regularly at industry conferences in North America and abroad, typically highlighting Kennedy’s ESG activities and the importance of RPI.



Kennedy is actively involved with the RPI Center (“RPIC”) at Harvard University (an organization it helped co-found) which includes participating as a member of the RPI Center Steering Committee. Kennedy continues to assist the RPI Center with efforts to measure and report RPI industry best practices, publish academic RPI/ESG-related white papers, and participate in RPIC events including being a panelist at the 2010 RPI Conference in New York, New York.

Additionally, Kennedy provides RPI leadership within industry organizations including the:

- Urban Land Institute’s RPI Council
- National Council of Real Estate Investment Fiduciaries
- Institute of Real Estate Management
- National Association of Real Estate Investment Managers

Kennedy also works closely with green building and energy efficiency organizations such as the U.S. Green Building Council, ENERGY STAR, and the Northwest Energy Efficiency Alliance.

When communicating with clients and responding to RFPs for investment advisory services, Kennedy prominently highlights its RPI activities and the importance of RPI/ESG as a core component of Kennedy’s expertise, fiduciary responsibilities, and role as an investment advisor.



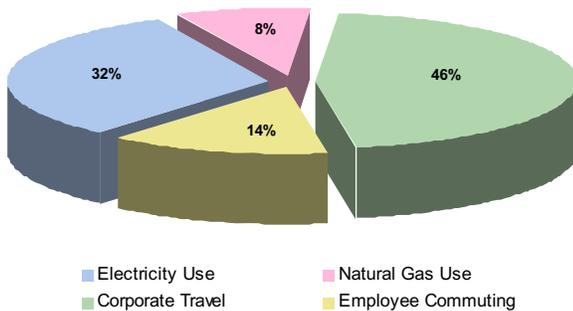
Other RPI Highlights

At a corporate level, Kennedy measures (Scopes 1-3) as well as offsets its corporate carbon footprint annually through the purchase of Green-e Certified renewable energy (i.e., wind) and verified emissions offsets from Renewable Choice (www.renewablechoice.com).



Kennedy voluntarily discloses its annual greenhouse gas emissions as a part of the Carbon Disclosure Project; a summary by source is provided below.

2009 Corporate Kennedy Emissions by Source (MTCO₂e)



We strongly believe in supporting a wide range of charitable organizations and philanthropic initiatives. It is our employees – their time, effort, and compassion – that enables Kennedy to give back to its communities across a myriad of causes held together by a single idea: We are active in the communities in which we live and work in every region across the country.

Our commitment to RPI is also reflected in various company-wide sustainable initiatives that include recycling, sustainable products purchasing, and annual tree planting/restoration

projects through ongoing partnerships with Friends of the Cedar River Watershed and the Cascade Land Conservancy.

In 2009, Kennedy’s watershed restoration effort along the Cedar River resulted in the planting of 810 native trees and shrubs, restoration of 1.5 acres of habitat (including 50 feet of shoreline), and an estimated removal of 600 tons of CO₂ from the atmosphere.



In addition to minimizing greenhouse gases, Kennedy’s efforts will help improve wildlife habitat, promote healthy salmon spawning grounds, and minimize erosion along the Cedar River.

Our 2010 Commute Challenge resulted in more than 17,000 “green commuting miles,” a 13% increase over 2009. Kennedy also sponsors an annual Bike to Work team called Suits on Wheels comprised of Kennedy employees. Finally, Kennedy works to train its employees in leading RPI best practices through its sustainable employee education program. To date, the program has resulted in almost 70% of its asset management team becoming LEED Accredited Professionals.

If you would prefer to receive this report electronically, contact:
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 206.623.4739 • christiang@kennedyusa.com

Our mission is to deliver outstanding investment returns to our clients, best-of-class service to our tenants, personal and professional growth for our team, and solid financial results for our company as we continuously strive to improve and remain one of the nation’s most respected real estate investment advisory firms that is having a positive impact on the health of the planet.

KENNEDY ASSOCIATES
 Real Estate Investment Advisors
A National Leader in Responsible Property Investing

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**EPA NAMES Kennedy Associates
2010 ENERGY STAR® PARTNER OF THE YEAR**

Kennedy Associates earns prestigious award for the second straight year by protecting the environment through energy efficiency

Seattle, WA, March 15, 2010 – The U.S. Environmental Protection Agency (EPA) has named Kennedy Associates as a 2010 ENERGY STAR Partner of the Year for outstanding energy management and reductions in greenhouse gas emissions. Kennedy Associates' accomplishments will be recognized at an awards ceremony in Washington, D.C. on March 18, 2010.

"Kennedy Associates continues to stand out among institutional real estate investors for their portfolio-wide commitment to strategic energy management and Responsible Property Investing," said Alyssa Quarforth, U.S. EPA ENERGY STAR Program Manager for Commercial Properties.

"Kennedy Associates has shown diligence in benchmarking energy use each month, and has demonstrated innovation in developing creative policies, tools, and approaches to achieve even greater energy performance improvements."

Kennedy Associates, an ENERGY STAR Partner since 2005 and 2009 ENERGY STAR Partner of the Year recipient, will be honored for its comprehensive energy management program and commitment to save energy across its portfolio of commercial real estate assets, which resulted in millions in estimated savings during 2009. The award highlights the work of Kennedy Associates' ENERGY STAR Committee, details its creation of a Sustainable Tenant Improvement Guide to increase office energy efficiency, expansive use of energy audits, and strategic retrofits, as well as creation of various technical tools and training measures to help property and asset management team members monitor, analyze, and report on ENERGY STAR benchmarking activities and energy efficiency improvements.

"As a national leader in Responsible Property Investing, Kennedy Associates is focused on reducing energy use and CO₂ emissions each year through its

strong partnership with ENERGY STAR” said Mike McKee, CEO of Kennedy Associates. “Increasing energy efficiency across our real estate portfolio not only reduces operating expenses for Kennedy Associates and its tenants, but increases asset financial performance helping achieve the triple bottom line: people, planet, and profit.”

An institutional real estate advisor to the Multi-Employer Property Trust and select public, corporate, university endowments, and Taft-Hartley retirement systems, Kennedy Associates’ 2009 monthly benchmarking activities across 22 million square feet resulted in a 6.0 percent reduction in portfolio energy use (compared to 4.5 percent in 2008), and the reduction of 17,600 metric tons of CO₂. In addition to an average portfolio ENERGY STAR rating of 77, Kennedy Associates has received the ENERGY STAR label for 60% of its benchmarked portfolio representing \$1.5 billion in market value.

Across the United States, top companies and organizations are continuing to promote strategic energy management through participation in ENERGY STAR. Last year alone, Americans with the help of ENERGY STAR saved \$17 billion on their energy bills and reduced greenhouse gas emissions equivalent to those of 30 million vehicles.

The 2010 Partner of the Year Awards recognize efforts to use energy efficiently in facility operations and to integrate superior energy management into overall organizational strategy. Award winners are selected from more than 17,000 organizations that participate in the ENERGY STAR program.

About Kennedy Associates

Kennedy Associates, a full-service registered investment advisor, brings more than 30 years of entrepreneurial real estate investment expertise to a select number of public, corporate, and Taft-Hartley retirement systems as well as major university endowments and sovereign wealth funds. Kennedy Associates has invested in, and managed, \$13 billion in development, redevelopment, and existing properties. They have been a global leader in Responsible Property Investing, which considers environmental and social ramifications as well as fiduciary responsibilities in managing real estate investments. Kennedy Associates has practiced many RPI principles since the company’s inception in 1978, including the use of Responsible Contractors, achieving (or seeking to achieve) Leadership in Energy and Environmental Design (LEED) certification for buildings representing \$2.3 billion in value and being carbon-neutral as a company. Kennedy Associates has been an active ENERGY STAR Partner since 2005, is benchmarking more than 22 million square feet of office and industrial space each month, and has received ENERGY STAR labels for buildings representing \$1.5 billion in market value. www.kennedyusa.com

Kennedy is America’s largest privately-held institutional real estate advisor. The firm is owned by its leadership team and Canada’s largest advisor Bentall along with two institutional investors, the Caisse de Depot and the British

Columbia Investment Management Corporation.

About ENERGY STAR

ENERGY STAR was introduced by the U.S. Environmental Protection Agency in 1992 as a voluntary market-based partnership to reduce greenhouse gas emissions through increased energy efficiency. Today, ENERGY STAR offers businesses and consumers energy-efficient solutions to save energy, money, and help protect the environment for future generations. More than 17,000 organizations are ENERGY STAR partners committed to improving the energy efficiency of products, homes, buildings, and businesses. For more information about ENERGY STAR, visit www.energystar.gov or call toll-free 1-888-STAR-YES (1-888-782-7937).

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