

Appendix V-3. Green and Energy-efficient Design Standards

The proposed redevelopment effort will meet or exceed a variety of 'green' and energy-efficient design standards including the 2011 Enterprise Green Communities Criteria and LEED-ND (Neighborhood Development). The following is a discussion of how the new development will meet the mandatory and optional criteria for these standards.

2011 Enterprise Green Communities Criteria (EGCC)

The EGCC Checklist follows this discussion. As the project will meet all mandatory criteria, the narrative below highlights the optional criteria the project is expected to meet. It will substantially exceed the required 35 points from EGCC's optional elements

Integrative Design

Project planning and design will be undertaken using an integrated approach, involving the developer, architect, engineers, landscape architect, green design specialist, contractor, and property manager from the start. Key professionals in each discipline will be LEED-accredited. A Green Development Plan will be prepared outlining and documenting the integrated design process that is the product of regularized "Green Table" multidisciplinary meetings.

Location and Neighborhood Fabric

The redevelopment plan calls for demolishing 136 units on the Washington Village site, at a density of 28 units per acre, and replacing 273 mixed-income units on the original site and two adjacent Day Street parcels, for a new density of 42 units per acre. The demolition and replacement of the functionally obsolete existing structures meets Smart Site Location optional criterion 2.4b for grayfield reuse. The plan also meets optional criterion 2.5 for Compact Development, with a net density of 42 units per acre. This meets the mandatory Compact Development (New Construction) criterion 2.2 for townhouse and multifamily units, at 10 and 15 units per acre respectively.

A substantial reduction in impervious paved surfaces will also be achieved. The proposed new through street and sidewalk network within the development will create an interconnected community, with no dead ends or cul-de-sacs, and walkways linking homes to play areas. The site plan meets optional criterion 2.6 for Walkable Neighborhoods.

Site Improvements

All site improvements will meet the mandatory and optional criteria of this section. Site design, including the use of rain gardens and other surface water management techniques, will address optional Surface Water Management criterion 3.4. Storm drain labels will be provided, meeting optional criterion 3.5

Water Conservation

The project will meet optional criterion 4.1c by utilizing ultra-low-flow water conserving appliances and fixtures. Mandatory criterion 4.2 will be met by using an EPA Water Sense professional to design the irrigation systems at each site, and use only drip irrigation, with appropriate controls.

Energy Efficiency

The project will earn an as yet undetermined number of optional points under criterion 5.5 for Additional Reductions in Energy Use by achieving an Energy Star HERS score of substantially less than the required 80. Approximately 15 optional points are anticipated, corresponding to a HERS rating of 65, based on the HERS ratings of similar new construction by the development team. Furthermore, the apartment buildings will be photovoltaic (PV) ready, partially meeting the requirement of optional criterion 5.6b PV-Ready.

Materials Beneficial to the Environment

The development team will utilize a Demolition and Construction Waste Management and Recycling specification that conforms to Green Communities standards, meeting optional criterion 6.1 for Construction Waste Management. Standards for use of FSC certified wood will meet optional criterion 6.3 Certified Wood. The use of trees and plantings to shade sidewalks, patios, and other areas within 50 feet of a home will qualify for optional criterion 6.5c Reduce Heat Island Effect: Plantings.

Healthy Living Environment

The project will meet all applicable mandatory criteria for new construction in this section. No optional points are anticipated.

Operations and Maintenance

The project will meet all the criteria in this section.



M - MANDATORY
- AVAILABLE OPTIONAL POINTS

2011 Enterprise Green Communities Criteria Checklist

This checklist provides an overview of the technical requirements within the Enterprise Green Communities Criteria. To achieve Enterprise Green Communities Certification, all projects must achieve compliance with the Criteria mandatory measures applicable to that construction type. Additionally, New Construction projects must achieve 35 optional points, Substantial Rehab projects must achieve 30 optional points, and Moderate Rehab projects must also achieve 30 optional points.

1: INTEGRATIVE DESIGN

YES NO MAYBE

M

1.1a Green Development Plan: Integrative Design Meeting(s)

Conduct one or more integrative design meetings and submit a Green Development Plan or equivalent documentation.

YES NO MAYBE

M

1.1b Green Development Plan: Criteria Documentation

Create design and construction documentation to include information on implementation of appropriate Enterprise Green Communities Criteria.

YES NO MAYBE

2

1.2a Universal Design (New Construction only)

Design a minimum of 15% of the dwelling units (no fewer than one) in accordance with ICC/ANSI A117.1, Type A, Fully Accessible guidelines. Kendra, what are code reqs?

YES NO MAYBE

2 or 3

1.2b Universal Design (Substantial and Moderate Rehab only)

Design a minimum of 10% of the dwelling units (no fewer than one) in accordance with ICC/ANSI A117.1, Type A, Fully Accessible guidelines [2 points] and, for an additional point, the remainder of the ground-floor units and elevator-reachable units should have accessible unit entrances.

N/A

SUBTOTAL OPTIONAL POINTS

2: LOCATION + NEIGHBORHOOD FABRIC

YES NO MAYBE

M

2.1 Sensitive Site Protection (New Construction only)

Do not locate new development, including buildings, built structures, roads, or other parking areas, on portions of sites that meet any of the following provisions:

- Land within 100 feet of wetlands, including isolated wetlands or streams
- Land on slope greater than 15%
- Land with prime soils, unique soils, or soils of state significance
- Public parkland
- Land that is specifically identified as habitat for any species on federal or state threatened or endangered lists
- Land with elevation at or below the 100-year floodplain Site is in 100-yr FP

YES NO MAYBE

M

2.2 Connections to Existing Development and Infrastructure (New Construction only, except for projects located on rural tribal lands, in colonias communities, or in communities of population less than 10,000)

Locate project on a site with access to existing roads, water, sewers, and other infrastructure within or contiguous to existing development. Connect the project to the pedestrian grid.



M - MANDATORY
- AVAILABLE OPTIONAL POINTS

<p><input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>M</p>	<p>LOCATION + NEIGHBORHOOD FABRIC (CONTINUED)</p> <p>2.3 Compact Development <i>(New Construction only)</i> Design and build the project to a density of at least:</p> <ul style="list-style-type: none"> • <i>Urban/Small Cities:</i> 10 dwelling units per acre, or at least 75% of surrounding net residential density, whichever is greater • <i>Suburban/Mid-Size Towns:</i> 7 dwelling units per acre, or at least 75% of surrounding net residential density, whichever is greater • <i>Rural/Tribal/Small Towns:</i> 5 units per acre for detached or semi-detached housing; 10 units per acre for townhomes; 15 units per acre for apartments
<p><input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>5 or 6</p>	<p>2.4 Compact Development Design and build the project to a density of at least:</p> <ul style="list-style-type: none"> • <i>Urban/Small Cities:</i> 15 dwelling units per acre, or at least 75% of surrounding net residential density, whichever is greater [5 points] Yes • <i>Suburban/Mid-Size Towns:</i> 10 dwelling units per acre, or at least 75% of surrounding net residential density, whichever is greater [6 points] • <i>Rural/Tribal/Small Towns:</i> 7.5 units per acre for detached or semi-detached housing; 12 units per acre for townhomes; 20 units per acre for apartments [6 points]
<p><input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>M</p>	<p>2.5 Proximity to Services <i>(New Construction only)</i> Locate the project within:</p> <ul style="list-style-type: none"> • <i>Urban/Small Cities:</i> a 0.25-mile walk distance of at least two OR a 0.5-mile walk distance of at least four of the list of facilities • <i>Suburban/Mid-Size Towns:</i> a 0.5-mile walk distance of at least three OR a 1-mile walk distance of at least six of the list of facilities • <i>Rural/Tribal/Small Towns:</i> two miles of at least two of the list of facilities
<p><input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>N/A</p> <p>M</p>	<p>2.6 Preservation of and Access to Open Space: Rural/Tribal/Small Towns Only <i>(New Construction only)</i> Set aside a minimum of 10% of the total project acreage as open space for use by residents OR locate project within a 0.25-mile walk distance of dedicated public open space that is a minimum of 0.75 acres</p>
<p><input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>3 max</p>	<p>2.7 Preservation of and Access to Open Space Set aside a percentage of the total project acreage as open space for use by residents: 20% [1 point]; 30% [2 points]; and 40% + written statement of preservation/conservation policy for set-aside land [3 points] Does Ryan Park count? Kendra, what would % be if it counts?</p>
<p><input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>5</p>	<p>2.8 Access to Public Transportation Locate the project within:</p> <ul style="list-style-type: none"> • <i>Urban/Small Cities:</i> a 0.5-mile walk distance of combined transit services (bus, rail, and ferry) constituting 76 or more transit rides per weekday and 32 or more transit rides on the weekend • <i>Suburban/Mid-Size Towns:</i> a 0.5-mile walk distance of combined transit services (bus, rail, and ferry) constituting 60 or more transit rides per weekday and some type of weekend ride option • <i>Rural/Tribal/Small Towns:</i> 5-mile distance of either a vehicle share program, a dial-a-ride program, an employer van pool, or public-private regional transportation
<p><input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE</p> <p>N/A</p> <p>5</p>	<p>2.9 Walkable Neighborhoods: Connections to Surrounding Neighborhood—Rural/Tribal/Small Towns Connect the project to public spaces, open spaces, and adjacent development by providing at least three separate connections from the project to sidewalks or pathways in surrounding neighborhoods and natural areas.</p>



M = MANDATORY
= AVAILABLE OPTIONAL POINTS

<input type="radio"/> YES <input checked="" type="radio"/> NO <input type="radio"/> MAYBE	7 max	LOCATION + NEIGHBORHOOD FABRIC (CONTINUED)	2.10 Smart Site Location: Passive Solar Heating/ Cooling Demonstrate a building with a passive solar design, orientation, and shading that meet specified guidelines. <i>Select one:</i> <ul style="list-style-type: none"> • Single building—New Construction [7 points] • Multiple buildings—New Construction [7 points] • Moderate or Substantial Rehab [7 points]
<input type="radio"/> YES <input checked="" type="radio"/> NO <input type="radio"/> MAYBE	2	2.11 Brownfield or Adaptive Reuse Site	Locate the project on a brownfield or adaptive reuse site. <i>Select either:</i> adaptive reuse site [2 points] or brownfield remediation [2 points]
<input type="radio"/> YES <input type="radio"/> NO <input checked="" type="radio"/> MAYBE	6	2.12 Access to Fresh, Local Foods	Pursue one of three options to provide residents and staff with access to fresh, local foods, including neighborhood farms and gardens; community-supported agriculture; proximity to farmers market.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	4	2.13 LEED for Neighborhood Development Certification	Locate the project in a Stage 2 Pre-Certified LEED for Neighborhood Development plan or a Stage 3 LEED for Neighborhood Development Certified Neighborhood Development.

SUBTOTAL OPTIONAL POINTS

3: SITE IMPROVEMENTS

<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	3.1 Environmental Remediation	Conduct an environmental site assessment to determine whether any hazardous materials are present on site.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	3.2 Erosion and Sedimentation Control <i>(Except for infill sites with buildable area smaller than one acre)</i>	Implement EPA's Best Management Practices for erosion and sedimentation control during construction.
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE N/A	M	3.3 Low-Impact Development <i>(New Construction only)</i>	Projects located on greenfields must meet the list of low-impact development criteria.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	3.4 Landscaping	Provide new plants (including trees, shrubs, and ground cover) such that at least 50% of area available for landscaping is planted with native or adaptive species, all new plants are appropriate to the site's soil and microclimate, and none of the new plants is an invasive species.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	3.5 Efficient Irrigation and Water Reuse	If irrigation is utilized, install an efficient irrigation or water reuse system.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	2 or 6	3.6 Surface Stormwater Management	Retain, infiltrate, and/or harvest stormwater on site. <i>Select only one:</i> partial stormwater retention [2 points] or full stormwater retention [6 points] 2 points - partial stormwater retention

SUBTOTAL OPTIONAL POINTS



M = MANDATORY

= AVAILABLE OPTIONAL POINTS

4: WATER CONSERVATION		
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	4.1 Water-Conserving Fixtures Install or retrofit water-conserving fixtures in all units and any common facilities with the following specifications: Toilets—1.28 gpf; Urinals—0.5 gpf; Showerheads—2.0 gpm; Kitchen faucets—2.0 gpm; Bathroom faucets—1.5 gpm
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	6 max	4.2 Advanced Water-Conserving Appliances and Fixtures Install or retrofit water-conserving fixtures in all units and any common facilities with the following specifications: Toilets—1.2 gpf; Showerheads—1.5 gpm; Kitchen faucets—1.5 gpm; Bathroom faucets—0.5 gpm. <i>Select any, or all, of the options:</i> <ul style="list-style-type: none"> • Toilets [2 points] • Showerheads [2 points] • Faucets—kitchen and bathroom [2 points]
<input type="radio"/> YES <input type="radio"/> NO <input checked="" type="radio"/> MAYBE	4 max	4.3 Water Reuse Harvest, treat, and reuse rainwater and/or greywater to meet a portion of the project's water needs. <ul style="list-style-type: none"> • 10% reuse [1 point] • 20% reuse [2 points] • 30% reuse [3 points] • 40% reuse [4 points]
SUBTOTAL OPTIONAL POINTS		
5: ENERGY EFFICIENCY		
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	5.1a Building Performance Standard: Single family and Multifamily (three stories or fewer) <i>(New Construction only)</i> Certify the project under ENERGY STAR New Homes.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	5.1b Building Performance Standard: Multifamily (four stories or more) <i>(New Construction only)</i> Demonstrate compliance with EPA's Multifamily High-Rise program (MFHR) using either the prescriptive or the performance pathway.
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE N/A	M	5.1c Building Performance Standard: Single family and Multifamily (three stories or fewer) <i>(Substantial and Moderate Rehab only)</i> Demonstrate that the final energy performance of the building is equivalent to a Home Energy Rating System (HERS) Index of 85.
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE N/A	M	5.1d Building Performance Standard: Multifamily (four stories or more) <i>(Substantial and Moderate Rehab only)</i> Demonstrate that the final energy performance of the building is equivalent to ASHRAE 90.1-2007.
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	15 max	5.2 Additional Reductions in Energy Use Improve whole-building energy performance by percentage increment above baseline building performance standard for additional points.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	5.3 Sizing of Heating and Cooling Equipment Size heating and cooling equipment in accordance with the Air Conditioning Contractors of America (ACCA) Manuals, Parts J and S, or ASHRAE handbooks.
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE	M	5.4 ENERGY STAR Appliances If providing appliances, install ENERGY STAR-labeled clothes washers, dishwashers, and refrigerators.



M = MANDATORY
= AVAILABLE OPTIONAL POINTS

<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>ENERGY EFFICIENCY (CONTINUED)</p> <p>5.5a Efficient Lighting: Interior Units Follow the guidance appropriate for the project type: install the ENERGY STAR Advanced Lighting Package (ALP); OR follow the ENERGY STAR MFHR program guidelines, which require that 80% of installed lighting fixtures within units must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; OR if replacing, new fixtures and ceiling fans must meet or exceed ENERGY STAR efficiency levels.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>5.5b Efficient Lighting: Common Areas and Emergency Lighting Follow the guidance appropriate for the project type: use ENERGY STAR-labeled fixtures or any equivalent high-performance lighting fixtures and bulbs in all common areas; OR if replacing, new common space and emergency lighting fixtures must meet or exceed ENERGY STAR efficiency levels. For emergency lighting, if installing new or replacing, all exit signs shall meet or exceed LED efficiency levels and conform to local building codes.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>5.5c Efficient Lighting: Exterior Follow the guidance appropriate for the project type: install ENERGY STAR-qualified fixtures or LEDs with a minimum efficacy of 45 lumens/watt; OR follow the ENERGY STAR MFHR program guidelines, which require that 80% of outdoor lighting fixtures must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; OR if replacing, install ENERGY STAR compact fluorescents or LEDs with a minimum efficacy of 45 lumens/watt.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>5.6a Electricity Meter <i>(New Construction and Substantial Rehab only)</i> Install individual or sub-metered electric meters in all dwelling units.</p>
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE N/A	<p>5.6b Electricity Meter <i>(Moderate Rehab only)</i> Install individual or sub-metered electric meters in all dwelling units.</p>
<input type="radio"/> YES <input type="radio"/> NO <input checked="" type="radio"/> MAYBE 12 max	<p>5.7a Renewable Energy Install photovoltaic (PV) panels, wind turbines, or other electric-generating renewable energy source to provide a specified percentage of the project's estimated energy demand.</p>
<input type="radio"/> YES <input type="radio"/> NO <input checked="" type="radio"/> MAYBE 1 or 2	<p>5.7b Photovoltaic/Solar Hot Water Ready Site, design, engineer, and/or plumb the development to accommodate installation of photovoltaic (PV) or solar hot water system in the future.</p>
<input type="radio"/> YES <input checked="" type="radio"/> NO <input type="radio"/> MAYBE 5	<p>5.8 Advanced Metering Infrastructure Site, design, engineer, and wire the development to accommodate installation of smart meters and/or be able to interface with smart grid systems in the future.</p>
<p>SUBTOTAL OPTIONAL POINTS</p>	

6: MATERIALS BENEFICIAL TO THE ENVIRONMENT

<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>6.1 Low/No VOC Paints and Primers All interior paints and primers must be less than or equal to the following VOC levels: Flats—50 g/L; Non-flats—50 g/L; Floor—100 g/L</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>6.2 Low/No VOC Adhesives and Sealants All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>6.3 Construction Waste Management Commit to following a waste management plan that reduces non-hazardous construction and demolition waste by at least 25% by weight through recycling, salvaging, or diversion strategies.</p>



M - MANDATORY
- AVAILABLE OPTIONAL POINTS

MATERIALS BENEFICIAL TO THE ENVIRONMENT (CONTINUED)

YES NO MAYBE

5
max
3

6.4 Construction Waste Management: Optional

Determine percentage of waste diversion and earn all points below that threshold:

- 35% waste diversion [1 point] **Yes**
- 45% waste diversion [1 point] **Yes**
- 55% waste diversion [1 point] **Yes**
- 65% waste diversion [1 point]
- 75% waste diversion [1 point]

YES NO MAYBE

5

6.5 Recycling Storage for Multifamily Project

Provide one or more easily accessible, permanent areas for the collection and storage of materials for recycling.

YES NO MAYBE

5
max

6.6 Recycled Content Material

Incorporate building materials that are composed of at least 25% post-consumer recycled content or at least 50% post-industrial recycled content. *Select from the following:*

- Framing materials [1 point]
- Exterior materials: siding, masonry, roofing [1 point]
- Concrete / cement and aggregate [1 point]
- Drywall / interior sheathing [1 point]
- Flooring materials [1 point]

YES NO MAYBE

5
max

1

6.7 Regional Material Selection

Use products that were extracted, processed, and manufactured within 500 miles of the home or building for a minimum of 50% of the building material value (based on cost). *Select any or all of these options:*

- Framing materials [1 point]
- Exterior materials: siding, masonry, roofing [1 point]
- Concrete / cement and aggregate [1 point] **Yes**
- Drywall / interior sheathing [1 point]
- Flooring materials [1 point]

YES NO MAYBE

5

6.8 Certified, Salvaged, and Engineered Wood Products

Commit to using wood products and materials of at least 25% that are (by cost): FSC-certified, salvaged products, or engineered framing materials without urea-formaldehyde binders.

YES NO MAYBE

1 or 3

6.9a Reduced Heat-Island Effect: Roofing

Use Energy Star-compliant roofing or install a "green" (vegetated) roof for at least 50% of the roof area. *Select only one: cool roof [3 points] or green roof [1 point]*

YES NO MAYBE

2

6.9b Reduced Heat-Island Effect: Paving

Use light-colored, high-albedo materials and/or an open-grid pavement, with a minimum solar reflectance of 0.3, over at least 50% of the site's hardscaped area.

SUBTOTAL OPTIONAL POINTS

7: HEALTHY LIVING ENVIRONMENT

YES NO MAYBE

M

7.1 Composite Wood Products that Emit Low/No Formaldehyde

All composite wood products must be certified compliant with California 93120. If using a composite wood product that does not comply with California 93120, all exposed edges and sides must be sealed with low-VOC sealants.



M = MANDATORY
= AVAILABLE OPTIONAL POINTS

HEALTHY LIVING ENVIRONMENT (CONTINUED)

<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.2 Environmentally Preferable Flooring Do not install carpets in entryways, laundry rooms, bathrooms, kitchens/ kitchenettes, utility rooms, and all rooms of ground-connected floors. Any carpet products used must meet the Carpet and Rug Institute's Green Label or Green Label Plus certification for carpet, pad, and carpet adhesives. Any hard surface flooring products used must be either ceramic tile, unfinished hardwood floors, <i>OR</i> in compliance with the Scientific Certification System's FloorScore program criteria.</p>
<input type="radio"/> YES <input type="radio"/> NO <input checked="" type="radio"/> MAYBE 4	<p>7.3 Environmentally Preferable Flooring: Alternative Sources Use non-vinyl, non-carpet floor coverings in all rooms of building.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.4a Exhaust Fans: Bathroom <i>(New Construction and Substantial Rehab only)</i> Install Energy Star-labeled bathroom fans that exhaust to the outdoors, are connected to a light switch, and are equipped with a humidistat sensor, timer, or other control (e.g., occupancy sensor, delay off switch, ventilation controller).</p>
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE 6 N/A	<p>7.4b Exhaust Fans: Bathroom <i>(Moderate Rehab only)</i> Install Energy Star-labeled bathroom fans that exhaust to the outdoors, are connected to a light switch, and are equipped with a humidistat sensor, timer, or other control (e.g., occupancy sensor, delay off switch, ventilation controller).</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.5a Exhaust Fans: Kitchen <i>(New Construction and Substantial Rehab only)</i> Install power-vented fans or range hoods that exhaust to the exterior at the appropriate cfm rate, per ASHRAE 62.2, or install a central ventilation system with rooftop fans that meet efficiency criteria.</p>
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE 6 N/A	<p>7.5b Exhaust Fans: Kitchen <i>(Moderate Rehab only)</i> Install power-vented fans or range hoods that exhaust to the exterior at the appropriate cfm rate, per ASHRAE 62.2, or install a central ventilation system with rooftop fans that meet efficiency criteria.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.6a Ventilation <i>(New Construction and Substantial Rehab only)</i> Install a ventilation system for the dwelling unit capable of providing adequate fresh air per ASHRAE requirements for the building type.</p>
<input type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE 5 N/A	<p>7.6b Ventilation <i>(Moderate Rehab only)</i> Install a ventilation system for the dwelling unit capable of providing adequate fresh air per ASHRAE requirements for the building type.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.7 Clothes Dryer Exhaust Clothes dryers must be exhausted directly to the outdoors using rigid-type duct work.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.8 Combustion Equipment Specify power-vented or direct vent equipment when installing new space and water-heating equipment in New Construction and any Substantial and Moderate Rehab projects.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.9a Mold Prevention: Water Heaters Provide adequate drainage for water heaters that includes drains or catch pans with drains piped to the exterior of the dwelling.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.9b Mold Prevention: Surfaces In bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.</p>
<input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> MAYBE M	<p>7.9c Mold Prevention: Tub and Shower Enclosures Use non-paper-faced backing materials such as cement board, fiber cement board, or equivalent in bathrooms.</p>



M = MANDATORY
= AVAILABLE OPTIONAL POINTS

HEALTHY LIVING ENVIRONMENT (CONTINUED)

YES NO MAYBE

M

7.10 Vapor Barrier Strategies *(New Construction and Rehab Projects with foundation work only)*
Install vapor barriers that meet specified criteria appropriate for the foundation type.

YES NO MAYBE

M

7.11 Radon Mitigation *(New Construction and Substantial Rehab only)*
For New Construction in EPA Zone 1 and 2 areas, install passive radon-resistant features below the slab. For Substantial Rehab projects in those Zones, test for the presence of radon and mitigate if elevated levels exist.

YES NO MAYBE

M

7.12 Water Drainage *(New Construction and Rehab projects replacing assemblies called out in Criterion only)*
Provide drainage of water away from windows, walls, and foundations by implementing list of techniques.

YES NO MAYBE

M

7.13 Garage Isolation
Follow list of criteria for projects with garages, including: provide a continuous air barrier between the conditioned (living) space and any garage space to prevent the migration of any contaminants into the living space, and install a CO alarm inside the house in the room with a door to the garage and outside all sleeping areas.

YES NO MAYBE

M

7.14 Integrated Pest Management
Seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate sealing methods to prevent pest entry.

YES NO MAYBE

M

7.15 Lead-Safe Work Practices *(Substantial and Moderate Rehab only)*
For properties built before 1978, use lead-safe work practices consistent with the EPA's Renovation, Repair, and Painting Regulation and applicable HUD requirements.

YES NO MAYBE

9

7.16 Smoke-Free Building
Implement and enforce a no smoking policy in all common, individual living areas, and with a 25-foot perimeter around the exterior of all residential buildings.

SUBTOTAL OPTIONAL POINTS

8: OPERATIONS + MAINTENANCE

YES NO MAYBE

M

8.1 Building Maintenance Manual *(All Multifamily Projects)*
Provide a building maintenance manual that addresses maintenance schedules and other specific instructions related to the building's green features.

YES NO MAYBE

M

8.2 Resident Manual
Provide a guide for homeowners and renters that explains the intent, benefits, use, and maintenance of green building features.

YES NO MAYBE

M

8.3 Resident and Property Manager Orientation
Provide a comprehensive walk-through and orientation for residents and property managers using the appropriate building maintenance or resident's manual.

YES NO MAYBE

12

8.4 Project Data Collection and Monitoring System
Collect and monitor project performance data on energy, water, and, if possible, healthy living environments for a minimum of five years.

SUBTOTAL OPTIONAL POINTS

TOTAL OPTIONAL POINTS

LEED Neighborhood Development Certification

The narrative below describes the various credits that the project is expected to meet. The LEED ND Checklist follows this discussion.

Smart Location and Linkage (SLL)

The project is located on a previously developed infill site and is located more than 400 feet from the water's edge. No imperiled species or ecological community is currently on the site, and the land is not an agricultural protection district. The redevelopment will comply with the National Flood Insurance Program (NFIP) requirements for developing any portions that lie within a 100 year high or moderate risk floodplain, as mapped by FEMA. The project site is within ¼ mile walk distance of bus stops which provide more than 76 daytime trips and 60 weekend-day trips.

Washington Village is an urban infill development site that is within ½ mile of a transit hub. As a transit oriented development the redevelopment will encourage minimal personal automobile use amongst residents and the site and building design will greatly improve the pedestrian environment for the surrounding community. The new buildings and site design will supply ample bicycle parking for residents and visitors, supporting resident's access to alternative modes of transportation. To promote bicycling and transportation efficiency, and to support public health, the redevelopment will provide at least one secure bike parking space for each residential unit. The redevelopment also may incorporate a bike path along Raymond Street, connecting to Water Street. No site disturbance over 15% will occur. The site has no significant habitat or wetland and water body conservation.

Neighborhood Pattern & Design (NPD)

The redevelopment will provide safe, appealing, and comfortable street environments that support public health by encouraging daily physical activity. Principal building entries will face onto public streets, the minimum building height-to-street ratio will be at least 1:3, Continuous sidewalks will be provided on both sides of streets, and significantly less than 20% of the building frontage will be faced with garages. The redevelopment will be a Compact Development, with 42 units per acre proposed, and well connected to the surrounding neighborhood, with a primary intersection central to the site, and a new street breaking up the scale of the existing Washington Village superblock. The majority of the building facades will be located less than 25 feet from the back of the sidewalk, entries will occur at an average of 75 feet or less along the length of building face, and active windowed (not blank) ground level facades will contribute to the vibrant streetscape.

Additional elements include on-street parking on at least 70% of street edges, raised ground level units (stoops) and minimal driveways. The project is located within a short walk of various diverse land uses, including places of worship and restaurants. All new surface parking spaces will be located at sides or rear of buildings, and half-level below-grade parking also achieves credit points. Shared car parking spaces may be included in the redevelopment.

Across the street from the existing Washington Village site, the 2.2 acre Ryan Park will become a resource for social networking, civic engagement, and physical activities. The relationship between the park and the proposed Community Center will be programmed and encouraged. As part of the programming of the Park, a new Community Garden is proposed that will be cooperatively maintained, in partnership with the Friends of Ryan Park and Fodor Farm, the nearby working farm.

The project will aim to provide tree-lined and shaded streets, with trees spaced no more than 40 feet apart, on at least 60% of the new and existing street edges. At least 40% of the length of sidewalks will be shaded within ten years of installation. New trees will not be invasive in the project context area, In addition to planting new trees, care has been taken to maintain and save as many of the existing old-growth trees on the site as is reasonably possible.

The redevelopment will not achieve points for Mixed-Income Diverse Communities, because the existing affordable housing units are exempt from requirement calculations. All of the new housing will be designed and built to maximize Visitability and Universal Design. Throughout the new homes, numerous livability elements will

be incorporated, including, but not limited to, lever door handles, cabinet loop handles, single lever faucet handles, easy rocker switches, and motion detector lighting in public areas. In addition, to provide easy passage, the design will incorporate minimum 32 inch clear door widths, covered front porches, and color contrasting signage and tread/riser coloring. Kitchen and bathroom flooring will be solid surface. All kitchen cabinetry in the buildings with elevators will have removable base cabinets to allow adaptation for accessibility.

While the project is still in the early phase of the redevelopment process, the team has engaged in extensive community outreach. The team has already met with a range of city agencies and stakeholders, and has conducted numerous public meetings. Adjacent property owners, local leaders and residents have participated in the creation of the vision for the redevelopment.

Green Infrastructure and Buildings

At least one of the new buildings will become certified through LEED for Homes, and more than 90% of the project scope will demonstrate at least 10% improvement over ANSI/ASHRAE/IESNA Standard 90.1-2007. The newly constructed residential and mixed-use buildings will offer energy star appliances, lighting and low-flow fixtures as part of the residential units. The design will also incorporate operable and high-quality insulated glass allowing residents to control air movement within each unit. The redevelopment team will consider ways to improve the sustainability of the Project in regard to its mechanical systems. These efforts will likely include not using CFCs or HCFCs in the buildings' cooling equipment, saving energy across systems with energy efficient equipment and appropriate insulation, as well as offering high efficiency lighting with occupancy sensors where practicable. These systems will most likely be central district systems, to maximize efficiency. The team will investigate potential renewable energy source applications for the larger Transformation Plan site, such as photovoltaic or solar thermal. Across the site, non-light-polluting bollards will direct light as needed. Internal to the buildings, lights in common spaces will be on movement activated sensors.

Best Management Practices will be developed to limit site erosion and pollution during construction. As noted above, the site is being designed in order to preserve existing old-growth trees as much as possible, and to maintain as much pervious land as is reasonably possible, with a goal of 10%. A stormwater management plan will be implemented, to retain on-site rainfall volume. Raingardens and swales will be instrumental in managing stormwater. The construction goal is to implement a construction waste management plan to recycle at least 50% of the debris generated on-site.

The team will work with the City of Norwalk to incorporate, where possible, energy efficient infrastructure, including streetlights, to achieve a measured energy reduction. Each building will include a recycling or reuse room, a dropoff location for paints, oils, and batteries.

Innovation and Design Process & Regional Priority Credits

A LEED Accredited Professional will be a principal member of the redevelopment team. The team predicts the potential of achieving up to three Regional Priority credits, which will be investigated as the redevelopment continues.

With a predicted total of 40 credits and 8 "maybe" credits, the team feels confident that the redevelopment will achieve compliance and will be "LEED Certifiable" under the LEED for Neighborhood Development rating system.



LEED 2009 for Neighborhood Development Project Scorecard

Project Name: Washington Village Redevelopment - South Norwalk Connecticut

Yes ? No

10	5		Smart Location and Linkage	27 Points Possible
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Y				Prereq 1	Smart Location	Required
Y				Prereq 2	Imperiled Species and Ecological Communities	Required
Y				Prereq 3	Wetland and Water Body Conservation	Required
Y				Prereq 4	Agricultural Land Conservation	Required
Y				Prereq 5	Floodplain Avoidance	Required
6	2			Credit 1	Preferred Locations	10
				Credit 2	Brownfield Redevelopment	2
2	2			Credit 3	Locations with Reduced Automobile Dependence	7
	1			Credit 4	Bicycle Network and Storage	1
				Credit 5	Housing and Jobs Proximity	3
1				Credit 6	Steep Slope Protection	1
1				Credit 7	Site Design for Habitat or Wetland and Water Body Conservation	1
				Credit 8	Restoration of Habitat or Wetlands and Water Bodies	1
				Credit 9	Long-Term Conservation Management of Habitat or Wetlands and Water Bodies	1

Yes ? No

18			Neighborhood Pattern and Design	44 Points Possible
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Y				Prereq 1	Walkable Streets	Required
Y				Prereq 2	Compact Development	Required
Y				Prereq 3	Connected and Open Community	Required
4				Credit 1	Walkable Streets	12
5				Credit 2	Compact Development	6
2				Credit 3	Mixed-Use Neighborhood Centers	4
				Credit 4	Mixed-Income Diverse Communities	7
1				Credit 5	Reduced Parking Footprint	1
				Credit 6	Street Network	2
				Credit 7	Transit Facilities	1
				Credit 8	Transportation Demand Management	2
1				Credit 9	Access to Civic and Public Spaces	1
1				Credit 10	Access to Recreation Facilities	1
1				Credit 11	Visitability and Universal Design	1
1				Credit 12	Community Outreach and Involvement	2
1				Credit 13	Local Food Production	1
1				Credit 14	Tree-Lined and Shaded Streets	2
				Credit 15	Neighborhood Schools	1

Yes ? No

8 3

Green Infrastructure and Buildings

29 Points Possible

Y		
Y		
Y		
Y		
	1	
1		
	1	
1		
1		
1		
1		

Prereq 1	Certified Green Building	Required
Prereq 2	Minimum Building Energy Efficiency	Required
Prereq 3	Minimum Building Water Efficiency	Required
Prereq 4	Construction Activity Pollution Prevention	Required
Credit 1	Certified Green Buildings	5
Credit 2	Building Energy Efficiency	2
Credit 3	Building Water Efficiency	1
Credit 4	Water-Efficient Landscaping	1
Credit 5	Existing Building Use	1
Credit 6	Historic Resource Preservation and Adaptive Reuse	1
Credit 7	Minimized Site Disturbance in Design and Construction	1
Credit 8	Stormwater Management	4
Credit 9	Heat Island Reduction	1
Credit 10	Solar Orientation	1
Credit 11	On-Site Renewable Energy Sources	3
Credit 12	District Heating and Cooling	2
Credit 13	Infrastructure Energy Efficiency	1
Credit 14	Wastewater Management	2
Credit 15	Recycled Content in Infrastructure	1
Credit 16	Solid Waste Management Infrastructure	1
Credit 17	Light Pollution Reduction	1

Yes ? No

1

Innovation and Design Process

6 Points

1		

Credit 1.1	Innovation and Exemplary Performance: Provide Specific Title	1
Credit 1.2	Innovation and Exemplary Performance: Provide Specific Title	1
Credit 1.3	Innovation and Exemplary Performance: Provide Specific Title	1
Credit 1.4	Innovation and Exemplary Performance: Provide Specific Title	1
Credit 1.5	Innovation and Exemplary Performance: Provide Specific Title	1
Credit 2	LEED® Accredited Professional	1

Yes ? No

3

Regional Priority Credit

4 Points

1		
1		
1		

Credit 1.1	Regional Priority Credit: Region Defined	1
Credit 1.2	Regional Priority Credit: Region Defined	1
Credit 1.3	Regional Priority Credit: Region Defined	1
Credit 1.4	Regional Priority Credit: Region Defined	1

Yes ? No

40 8

Project Totals (Certification estimates)

110 Points

Certified: 40-49 points, **Silver:** 50-59 points, **Gold:** 60-79 points, **Platinum:** 80+ points