



Professional Registration  
 Missouri  
 Engineering 2005002188-D  
 Surveying 200500319-D  
 Kansas  
 Engineering E-1695  
 Surveying LS-218  
 Oklahoma  
 Engineering 62-54  
 Nebraska  
 Engineering CA2821

THE RESIDENCES AT ECHELON  
 Lee's Summit, Jackson County, Missouri

Project:  
 Residences at  
 Echelon  
 Issue Date:  
 February 10, 2017

M-150 Corridor Overlay  
 Construction Plans for:  
 THE RESIDENCES AT ECHELON  
 Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht  
 MO PE 2006019708  
 KS PE 19071  
 OK PE 25226

REVISIONS

REV 3-21-17
REV 3-24-17
REV 5-3-17
REV 6-5-17
REV 7-3-17
CONT SET. 7-26-17
REV 12-1-17

**Water Quality and Stormwater Management**

**Intent:** Encourage development practices that enhance water quality, reduce water treatment costs, reduce impacts on natural resources, reduce stormwater runoff, and encourage low impact stormwater alternatives.

10	Low Impact Development/Best Management Practices	<ul style="list-style-type: none"> <li>Incorporate on-site stormwater management techniques that are designed to ensure that there is no net increase in stormwater runoff volume, rate, or pollutant loads from new construction. City review and approval of project design and long-term maintenance is required (15 pts).</li> <li>Provide stormwater management techniques as described above that provide at least 50% on-site mitigation (10 pts).</li> </ul>	15	15
11	Parking Lot Landscaping	<ul style="list-style-type: none"> <li>Increase the amount of parking lot landscaping area over the minimum required by at least 10% (5 pts per 10%) in overall square footage.</li> </ul>	20	5
12	Native and/or Drought-tolerant Landscaping	<ul style="list-style-type: none"> <li>Provide native and/or drought-tolerant landscaping for all required landscape areas.</li> </ul>	5	5
13	Water Recycling	<ul style="list-style-type: none"> <li>50% of open space or recreation areas and all required landscaping shall be irrigated only with on-site gray water (10 pts) or with recycled water from a centralized recycling facility (5 pts). On residential lots this may include the use of rainwater collection through rain barrels or cisterns.</li> </ul>	10	10

**Energy**

**Intent:** Promote the design and construction of energy efficient buildings; reduce air, water, and land pollution from energy consumption; reduce the urban heat island effect, and encourage on-site renewable energy production.

14	Solar Oriented Residential Development	<ul style="list-style-type: none"> <li>To maximize the efficiency of solar panels and solar thermal heating and cooling devices, orient lots and/or streets for proper solar orientation as follows:                             <ul style="list-style-type: none"> <li>At least 50 percent of residential lots in the development shall be solar-oriented (5 pts).</li> <li>At least 60 percent of the lineal footage of all streets in the development shall be solar oriented streets (5 pts).</li> </ul> </li> </ul>	10	10
15	Solar Equipped/Solar Ready Homes	<ul style="list-style-type: none"> <li>Residential development may be granted points for solar use/solar-readiness as follows:                             <ul style="list-style-type: none"> <li>Equip at least 50% of all dwellings in the development to be solar ready (10 pts).</li> <li>Install a solar electric or solar hot water system to serve at least 50% of all dwellings in the development (10 pts).</li> </ul> </li> </ul>	20	20
16	Safe Room	<ul style="list-style-type: none"> <li>Safe rooms will be installed in Buildings 1, 3, 5, and the Community Center.</li> </ul>	50	50
17	Green Building Practices	<ul style="list-style-type: none"> <li>Buildings must comply with the standards of one of the following certifications of a suitable equivalent such as certification by a qualified efficiency auditor: Energy Star, The National Green Building Standard, Green Globes, Enterprise Green Communities, IECC, or LEED. (10 pts per Building)</li> </ul>	50	50
18	Locally Sourced Materials	<ul style="list-style-type: none"> <li>Use locally sourced (within 150 roadway miles, 200 airline miles, or 3000 railway miles) construction materials for at least 35% of project material requirements</li> </ul>	10	10
19	Shade Structures - Covered Parking Spaces, Walkways, and Shaded Interior Streets	<ul style="list-style-type: none"> <li>To reduce the heat island effect and enhance walkability for pedestrians, shade structures shall be provided as follows:                             <ul style="list-style-type: none"> <li>At least 50 percent of all off-street parking spaces shall be located under cover. Cover may be provided by a building, a deck, or a shade structure, or parking may be underground. Any cover, roof, or shade used for this requirement must have a minimum Solar Reflectance Index of 29 (30 pts).</li> <li>Shaded sidewalks shall be provided along 100 percent of all building facades adjacent to or facing streets, outdoor gathering spaces, or parking areas (20 pts).</li> <li>Incorporate solar application on top of a shade structure (20 pts).</li> </ul> </li> </ul>	50	30
20	Exterior Lighting	<ul style="list-style-type: none"> <li>Reduce energy use and light pollution                             <ul style="list-style-type: none"> <li>Extinguishing lights for all signage during hours when the business is not open to the public. (5 pts)</li> <li>Using LED bulbs for all signage, parking lot, and security lighting (5 pts).</li> <li>Operating parking lot and security lighting using solar-powered batteries (10 pts).</li> </ul> </li> <li>Base exterior lighting requirements and guidelines are located in Article 7.</li> </ul>	20	10
21	Durable Materials	<ul style="list-style-type: none"> <li>All buildings are constructed of stone, brick, integrally colored masonry or precast concrete.</li> </ul>	10	5

**Waste Reduction and Recycling**

**Intent:** Encourage recycling of household and commercial waste project; reduce the amount of waste hauled to and disposed of in landfills; and promote the reuse of materials.

22	Waste Management	<ul style="list-style-type: none"> <li>Submit a comprehensive waste management plan for the management of construction wastes and wastes from the operation of the development once complete.</li> <li>The plan shall emphasize reduction, reuse, and recycling of waste.</li> <li>The plan shall prevent loss of soil during construction by runoff or wind erosion, sedimentation of any sewer or receiving streams, and air pollution from dust or particulate matter.</li> <li>Copies of the plan shall also be submitted with the application for development approval, and shall also be provided to all tenants.</li> </ul>	5	5
23	Construction Waste Reduction	<ul style="list-style-type: none"> <li>Submit documentation that at least 50% of non-hazardous construction and demolition debris has been recycled/salvaged.</li> </ul>	5	5
24	Recycling Stations and Kitchen Recycling	<ul style="list-style-type: none"> <li>Incorporate recycling/re-use facilities to facilitate and encourage waste reduction:                             <ul style="list-style-type: none"> <li>Provide a centrally located recycling/re-use station for all residents and businesses that allows for sorting and storage of materials, including paper, glass, plastics, and metals (5 pts).</li> <li>Design space in the kitchen to accommodate compost, garbage, and recycling bins and install appropriate receptacles for these three purposes in every dwelling unit (5 pts).</li> </ul> </li> </ul>	5	5

**Project:** Aldersgate Methodist Church Date: 08/05/2016

Table 6-1: Menu of Sustainability Options

Ref. #	CATEGORY	SITE OR BUILDING DESIGN FEATURE	MAXIMUM POINTS	POINTS
<b>Multi-Modal Transportation</b>				
<b>Intent:</b> Promote public health by encouraging daily physical activity associated with alternative modes of transportation such as walking, bicycling, and the use of public transit; promote safe and efficient circulation within the community for all modes; and promote energy savings and reduced greenhouse gas emissions associated with the use of alternative modes:				
1	Pedestrian Access	<ul style="list-style-type: none"> <li>Where a development encompasses a block or more of land and is enclosed by fences, perimeter walls, solid landscaping, or retaining walls, provide public pedestrian access through the perimeter at an average interval of not less than 200 linear feet and that in no instance exceeds 300 linear feet.</li> </ul>	5	5
2	Bicycle Facilities	<ul style="list-style-type: none"> <li>Provide bicycle parking in close proximity to building entrances (5 pts).</li> <li>Include enhanced facilities to encourage the use of bicycles for transportation:                             <ul style="list-style-type: none"> <li>Provide lockers for all bicycle parking (5 pts).</li> <li>Provide showers and clothing lockers for bicycle commuters (3 pts).</li> <li>Provide indoor bicycle lockers (3 pts).</li> </ul> </li> </ul>	10	10
3	Livable Streets	<ul style="list-style-type: none"> <li>Project streets are designed and/or retrofitted to meet livable street standards including bicycle accommodations, safe pedestrian crossings that incorporate curb extensions or median islands where necessary, and public transit pull-outs where appropriate.</li> </ul>	35	35
4	Parking Maximum	<ul style="list-style-type: none"> <li>Limit automobile parking spaces provided to the minimum number of spaces required by Table 12-1, Minimum Parking by Use. For example, for a 20,000 square foot medical office space, provide no more than 40 parking spaces (standard is 5 spaces per 1,000 gfa).</li> </ul>	5	5
5	Electrical Vehicle (EV) Charging Stations	<ul style="list-style-type: none"> <li>Provide a Mode 3 or 4 Type 4 electrical vehicle charging station with public access (2 pts per station).</li> </ul>	10	2
6	Park and Trails	<ul style="list-style-type: none"> <li>Provide on-site park land, open space, or trail connections totaling at least 15% of the parcel size (5 pts).</li> <li>Provide on-site trail or pedestrian pathway improvements through on-site parks or open space (5 pts).</li> </ul>	10	10
7	Landscaping Irrigation	<ul style="list-style-type: none"> <li>Provide an automatic underground irrigation system to water site landscaping that meets the following standards:                             <ul style="list-style-type: none"> <li>System design is surface drip system, subterranean drop system, micro-spray, or a combination of these systems; provided that a hose bib system may be used for irrigation when a landscape area is less than 1,000 square feet in size and when all portions of the area are within 50 feet of a hose attachment; and</li> <li>The system shall be equipped with timers and scheduled to operate during evening or early morning hours to minimize evaporation rates.</li> </ul> </li> </ul>	10	10
<b>A Healthy Community</b>				
<b>Intent:</b> Encourage local production of food and availability of healthy food choices and offer safe alternatives for children to walk and bike to school.				
8	Food Supply - Community Gardens	<ul style="list-style-type: none"> <li>Provide fenced, illuminated, and centrally located community gardens space for residents with access to one spot per 10,000 square feet of garden space.</li> <li><b>Incentive:</b> Garden space provided pursuant to this option shall receive double credit towards any common open space requirement up to a maximum of 25% of total requirement.</li> </ul>	5	5
9	Safe Routes to School	<ul style="list-style-type: none"> <li>Within a new residential subdivision, map and mark safe routes to school that meet standards set by National Safe Routes to School.</li> </ul>	5	5

REV 3-21-17  
 Planning Review  
 1. Relocated the monument signs to be outside the easements.

Fire Review  
 2. Fire driving lanes have been labeled on the plans.

REV 3-24-17  
 1. Removed ramp.  
 2. Added Stair.

