

## Sustainable Building Design

### **Process and Principles**

The City of West Hollywood has been a consistent advocate for excellence and innovation in sustainable building design and construction. Sustainability is a high priority to our commercial and residential community. To encourage our development community to strive beyond the West Hollywood Municipal Code and 2016 California Green Building Standards Code (2016 CalGreen), a sustainable building design questionnaire is provided during the development permit application process to assist applicants with how they may voluntarily go beyond mandatory code requirements. The answers provided in that questionnaire will help inform the City on how it should approach a future update to its current Green Building Program.

This handout is intended to explain sustainable building design and construction concepts cited in the questionnaire and ensure that the City's intent to encourage the high-quality, sustainable development within West Hollywood is clearly communicated. Each section in this handout corresponds directly with the topics featured in the sustainable building design questionnaire.

#### 1.0 SITE PLANNING & DESIGN

1.1 Plug-in electric vehicles reduce air pollutants from vehicle travel as well as mitigate the negative environmental effects of gasoline use. This section encourages more electric vehicles to operate within the city by promoting the direct installation of electric vehicle charging stations or encouraging ready-to-go electric vehicle supply equipment (EVSE) connections beyond mandatory requirements of 2016 CalGreen in new construction projects.

#### 2.0 WATER EFFICIENCY AND CONSERVATION

2.1 Potable water usage in buildings constitutes a large portion of freshwater consumption. Strategies to reduce potable water use in buildings entail the selection of efficient plumbing fittings, fixtures, and equipment. Additionally, plumbing systems that capture and convey nonpotable water sources (e.g. graywater, recycled water) can also reduce the amount of potable water used by a building annually. This section seeks to ensure that new construction projects thoughtfully consider a combination of indoor water use reduction strategies to support and/or exceed the mandatory requirements of 2016 CalGreen in new development projects throughout the City.

2.2 Outdoor water use can account for the highest percentage of potable water use in a given area. Water-efficient landscaping and climate-tolerant plant selection can reduce or eliminate potable water use and conserve local and regional water resources. Products such as smart or automated irrigation controllers, selection and planting of native or adapted species, and installation of nonpotable water systems can be effective in limiting outdoor potable water needs. This section seeks to ensure that new construction projects thoughtfully consider a combination of



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outdoor water use reduction strategies to support and/or exceed mandatory requirements of the State's 2015 Model Water Efficient Landscaping Ordinance in new development projects.

Several handouts on water efficiency for different property types can be found at the City of West Hollywood's Planning Counter on the second floor of City Hall.

#### **3.0 ENERGY EFFICIENCY**

3.1 According to the US Department of Energy, buildings consume approximately 39% of the energy and 74% of the electricity produced annually in the nation. Energy-efficient buildings reduce the environmental burden associated with producing and using energy. The most effective way to optimize energy efficiency is to use an integrated whole-building approach to energy design, which includes massing and orientation, material selection, construction methods, building envelope, systems and lighting design, and water efficiency. This section seeks to endorse new construction projects throughout the city to consider and strive for exceeding the mandatory requirements of California Energy Code (Title 24 Part 6) by at least 10%.

3.2 A simple definition of Zero Net Energy (ZNE) is a building that generates as much energy as it uses. The State of California has ambitious aspirational goals of new single-family and multifamily residential construction (three stories or less) designed for ZNE performance by 2020 and all new commercial and high-rise multifamily residential (four stories or more) construction designed for ZNE performance by 2030. This section endorses new construction projects throughout the city to consider and strive for zero net energy or ultra-low energy building design. Several handouts on ZNE Design for different property types and users can be found at the City of West Hollywood's Planning Counter on the second floor of City Hall.

3.3 Section 19.20.170(A) of the West Hollywood Municipal Code discusses the protection of solar access for adjacent properties and was adopted to ensure that solar energy systems are protected from shading and enjoy safe operation. This section seeks to ensure new construction projects throughout the city consider the sun and shade impacts of their project on neighboring properties.

#### 4.0 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.1 The concrete industry is one of two largest producers of carbon emissions worldwide, largely due to the very high temperatures necessary for its primary ingredient—cement—to clinker to form. Common products used to replace cement include fly ash, slag, silica fume, and rice hull ash. This section seeks to promote the awareness and benefits of reduced cement content in foundation mix design and advocate that new construction projects throughout the City consider exceeding the mandatory requirements of 2016 CalGreen regarding cement content reduction.



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4.2 Building materials with recycled content reduce virgin material use and solid waste volumes, while not compromising product performance. Post-consumer recycled content is derived from materials that can no longer be used for their original purpose, and pre-consumer recycled content consists of raw material diverted from the waste stream during the manufacturing process. Many commonly used products are available with recycled content, including metals, concrete, masonry, gypsum wallboard, acoustic tile, carpet, ceramic tile, insulation and so on. This section promotes the awareness and benefits of building materials with higher recycled content and advocate that new construction projects throughout the City consider exceeding the mandatory requirements of 2016 CalGreen regarding recycled content value.

#### **5.0 INNOVATION**

5.1 The City of West Hollywood is interested in recording new sustainable design technologies and/or techniques pursued by new construction projects in the City. This section is an opportunity for the design team to share and explain sustainable innovations incorporated into the project, why these specific strategies were selected, and what the project team intends to accomplish with these strategies.

#### 6.0 OTHER

6.1 The City of West Hollywood is interested in learning about any barriers to projects pursuing sustainable design and construction strategies that go beyond the mandatory requirements of the West Hollywood Municipal Code and 2016 CalGreen. This section will assist in identifying potential challenges to consider during future updates of the Green Building Program.