

## **PROPERTY ACQUISITION AND DISPOSITION DIVISION RESIDENTIAL DESIGN & PERFORMANCE STANDARDS**

### **I. Introduction**

The Property Acquisition and Disposition Division (“PADD”) has developed design standards for new and renovation construction to ensure that all projects conform to current applicable regulations, and to promote good design quality within budget. For each project, the goal is to achieve the highest quality product within the cost constraints of the project.

Major goals of these design and generic specifications are to guide and encourage the creation of design standards that:

- Are compatible with and complementary to the surrounding neighborhood.
- Result in high quality, cost effective construction.
- Result in low maintenance costs and energy efficiency for homeowners and renters.
- Use interior and exterior space to enhance the quality of life of the residents and neighbors.

### **II. Procedures**

For vacant and improved lots, developer shall provide a copy of the permitted set of plans for PADD review. Specifications for all equipment/appliances/products shall also be provided for review if not contained in the permit set of plans. Prior to settlement, a copy of the approved permitted set of plans shall be provided to PADD.

### **III. Guidelines**

Developers are responsible for and must be in compliance with all applicable regulatory requirements. PADD will not review projects for compliance with other regulations.

### **IV. Building Permits and Codes**

It is the responsibility of the developer to be aware of and satisfy all local codes, regulations, ordinances, and to obtain all required authorizations, waivers, permits, etc., necessary to begin construction. Developer shall be responsible for applying for and obtaining any building permit(s) necessary for the project development, including any use and occupancy permit(s) when applicable. Developer shall furnish PADD with verification or approval from all agencies having jurisdiction and authority over the project.

### **V. Public Utilities**

For gas, water/sewer, and electrical services, the developer shall contact the various utility companies and departments to determine where service entrances to the property and building can be best made if additional service is required.

## **VI. General Energy Requirements**

All new buildings should be designed to meet the National Energy Five Star efficiency performance standard of 86, exceeding ASHRAE 90.1 by thirty (30%) percent or local energy codes, whichever is more stringent. Procedures used for this Five Star rating shall comply with National Home Energy Rating Systems guidelines. For additional information and a list of manufacturers who meet Energy Star requirements see contact information below.

- Energy Star Hotline: 1-888-STAR-YES (782-7937)
- Email: [info@energystat.gov](mailto:info@energystat.gov)
- Energy Star Site Map: [www.epa.gov/nrgystar/sitemap.html](http://www.epa.gov/nrgystar/sitemap.html)

## **VII. Neighborhood Compatibility**

PADD will review all house designs and site plans for compatibility with the existing neighborhood. Prime areas of review will be the site of the building, building proportions, parking layouts, exterior detail and landscaping.

## **VIII. Construction Site Security**

Developer shall be responsible for all construction site security. Developer shall maintain adequate site security for the properties, at all times, during the development stage through final completion of construction and the sale of the properties.

## **IX. Public Sidewalks**

Developer shall maintain, repair and/or replace public sidewalks adjacent to the properties, during the development stage through final completion of construction and the sale of the properties.

## **X. Performance Standards**

Green Building Standards: The District of Columbia is committed to sustainable development practices that maximize energy efficiency and provide healthy living environments. This is particularly true for residents of affordable housing developments who will benefit from lower monthly utility bills and improved health. An integrated design process incorporates sustainability up-front, uses a holistic and total-systems approach to the development process, and promotes good health and livability through the building's life cycle. The performance standards include certain mandatory "green design and construction" practices, including the use of the Green Communities Standards, 2008.

Quality Control: All inspections, test and other quality control measures required by the local jurisdiction or the contract documents shall be the responsibility of the developer. Developer shall provide PADD with copies of any test and/or inspection results.

Warranties: Upon any sale of the properties, developer shall provide the new owner copies of all warranties for materials and equipment. Developer shall warrant work for three (3) years from the date of sale of the properties. For new homes it is recommended that the developer provide a homeowner's warranty. The developer shall provide this information in a Homeowner's Warranty and Maintenance Book that includes the names, addresses, phone number and contact people for all sub-contractors whose work is being warranted.

Insulation: The insulation standard applies to all new construction and in the cases of rehabilitation, those areas where the space was exposed during rehabilitation. Basement insulation shall have an R-19 rating; roof and attic insulation shall have an R-30 rating; and exterior wall insulation shall have an R-21 rating.

Developer shall also provide insulation for exposed cold water pipes and water heater systems.

Roofing: Developer shall provide a twenty (20) year warranty for asphalt shingle roofs and at least a ten (10) year manufacturer's warranty for a built-up asphalt roof.

Exterior Doors: Wood doors must comply with AWI's Architectural Woodwork Quality Standards Illustrated. All glass-in doors shall be insulated.

Windows: Wood windows must be double-glazed with U-factor of .52 or lower with maximum solar heat gain of .60 or lower. Vinyl windows must be insulated and double-glazed. U-factors and solar heat gain same as wood windows.

Indoor Air Quality: Selected developers shall comply with the following requirements:

Use of low/no voc paints, adhesives and sealants; all adhesives must comply with Rule 1186 of the South Coast Air Quality Management District and sealants must comply with Regulation 8, Rule 51, of the Bay Area Air Quality Management District.

- Installation of Green Label Certified Floor Coverings.
- Ventilation system must provide a minimum of 15 cubic feet per minute of fresh air per occupant.
- Installation of carbon monoxide detectors.
- Installation of Energy Star-labeled bathroom exhaust fans, with access to an exterior exhaust system and equipped with a humidity sensor or timer, or have continuous operation.
- Installation of Energy Star-labeled kitchen power vented exhaust fans or range hoods with access to an exterior exhaust system.
- Installation of clothes dryer exhaust with direct exterior exhaust system.

- Developer shall use lead-safe work practices during any renovation, remodeling, painting and demolition for all properties built prior to 1978.

Standards can be found at [www.greenseal.org/standards/paints.htm](http://www.greenseal.org/standards/paints.htm)

Appliances: Developer shall equip all units with Energy Star rated appliances, with a design score of at least 86. Developer shall equip each affordable dwelling unit with the following new appliances: a range (gas or electric); frost-free refrigerator/freezer; range hood (vented or non-vented); and garbage disposal. Optional equipment: dishwasher, washer/dryer, and trash compactor.

Sump Pumps: Recommended. If not provided, developer shall provide a detailed explanation outlining why sump pumps are not included.

Water Heaters: Developers shall use tankless hot water heaters or install conventional water heaters in rooms with drains or catch pans piped to the exterior of the dwelling and with non-water sensitive floor coverings. Developer shall use a gas or electric fired 40-gallon “energy saver” water heater with a minimum 5 year warranty and energy factor of .92 or better.

Plumbing Fixtures: Install water-conservation fixtures with the following specifications for all new and replacement plumbing fixtures:

- Toilets: 1.6 GPF (gallons per flush or better)
- Showerheads: 2.0 GPM (gallons per minute) or better
- Kitchen Faucets 2.0 GPM or better
- Bathroom Faucets: 2.0 GPM or better

Use of Low Impact Development methods such as rain gardens, rain barrels, pervious paving, and green roofs, etc

Furnaces: Minimum 90 AFUE or greater, central air minimum efficiency level of 12 SEER.

Electrical: Provide minimum 100 amps, single-phase 110/220 volt, 3-wire electrical service with 100amp, 20-breaker panel.

Smoke Detectors: As per code with battery back up.

Lighting: Install Energy-Star labeled lighting fixtures or Energy Start Advanced Lighting Package in all interior units, and use Energy Start or high efficiency commercial grade fixtures in all commercial areas and outdoors. Developer shall also install daylight sensors or timers on all outdoor lighting (where applicable) and individual or sub-metered electrical meters (where applicable).

Water Drainage: Developer shall provide drainage of water to the lowest level of concrete away from windows, walls and foundations. Foundation walls should be carefully waterproofed on the exterior to avoid moisture migration.

Waste: Recycle construction debris & demolition materials, where appropriate.

Integrated Pest Management: Developer shall seal all wall, floor and joint penetrations to prevent pest entry. Provide rodent and corrosion proof screens (e.g. cooper or stainless steel mesh) for large openings.

Materials: >25% of materials shall consist of renewable or recycled content. For more information about high-performance sustainable design & construction practices contact the District's Office of Planning at (202) 442-7600.

Additional information on sustainable residential development can be found at [www.greencommunitiesonline.org](http://www.greencommunitiesonline.org).