



# President George Bush Highway Design Guidelines

## Introduction

The City of Richardson takes a great deal of pride in both the natural and built environment of the community. A long-range vision for the city is established in the Comprehensive Planning Guide, which identifies aesthetics and amenities as vital ingredients that create cultural identity and economic value for the community. Views along highway corridors reveal the character and form of the physical and natural environments of the City and influence its overall image. The President George Bush Highway (PGBH) Design Guidelines are intended to preserve and enhance the natural and built environment through the implementation of landscape amenities and site characteristics that will reinforce the positive image of the City. Elements contained in the US 75 Amenity Planning Guidelines have been integrated into the PGBH Guidelines with the intention of creating a commonality between the two corridors. The recommendations outlined in the PGBH Guidelines will insure clarity, unity and continuity for the properties adjacent to the corridor. It is not the intention of these guidelines to impede creative and unique design solutions but rather to promote consistent, quality design.

## President George Bush Highway

The 1993 Comprehensive Planning Guide for the City of Richardson identified President George Bush Highway as an eight-lane regional highway with frontage roads that provide limited access to adjacent properties. Ultimately, this outer loop will provide linkage east and south to Interstate 20 and 30, and west to Interstate 35 and DFW Airport. Grade separated interchanges with all arterials and a full directional interchange at U.S. 75 are also integral elements of the plan.

In December, 1995, the classification for President George Bush Highway changed to a tollway in order to expedite the construction. It is projected to carry 80,000 vehicles per day (vpd) bi-directionally on the main traffic lanes. Development of this corridor will establish the image for the northern boundary of the City of Richardson.

## Corridor Boundaries and Application

The design standards set forth in this document are intended for properties along President George Bush Highway within the corporate limits of the City of Richardson. The highway extends west from the City of Garland to the City of Dallas along the common boundary between the cities of Richardson and Plano. The overall length of the corridor through Richardson is approximately 4.7 miles. Generally, the corridor can be described as the property with frontage on the highway, extending 300' along the rights-of-way of other public streets, private streets and fire lane easements having a minimum width of 50'.

President George Bush Highway defines the northern border of the City of Richardson, and currently the majority of the adjacent property is vacant. The primary zoning classification for the undeveloped land adjacent to the highway from Jupiter Road west to the University of Texas at Dallas is Planned Developed (PD). The PD district is intended to allow the development of large tracts of land in a manner that will preserve useable open spaces and landscape features. Since the planned development allows for higher densities it should be separate or well buffered from the adjacent properties. Some of the land that borders the eastern end of the corridor has developed as both single-family and multi-family residential. The remainder of the eastern portion of the land, which is presently vacant, will allow for light industrial, commercial and residential development.

The desired development pattern, as outlined by the zoning district regulations and the Comprehensive Planning Guide, will be characterized primarily by low- to mid-rise corporate campus development with provisions for higher density development as well. Ancillary retail and service uses are anticipated to support the employment base in the corridor. Opportunities exist within the corridor to minimize incompatible land uses and to create an attractive and unified appearance for the corridor. This can be accomplished through landscaped open space with a uniform minimum width, incorporating landscape elements.

### Landscaping

Landscape setbacks and screens provide a unified character along a thoroughfare, aid in reducing the visual impact of less appealing, but nonetheless necessary elements, and lessen the negative impact of dissimilar land uses. Within the corridor, a landscaped setback should be provided adjacent to all public streets, private streets and fire lane easements having a minimum width of 50' as defined below:

- A. By ordinance, a Planned Development (PD) or Technical Office (TO-M) district requires a minimum 40' wide landscape setback (measured from the property line, exclusive of right-of-way) adjacent to streets having at least 100' of right-of-way.
- B. In a Planned Development (PD) or Technical Office (TO-M) district, a minimum 15' wide landscape setback (measured from the property line, exclusive of right-of-way) is suggested adjacent to all other public streets, private streets or fire lanes with at least a 50' width.
- C. In a Local Retail (LR-M(1) and (LR-M(2)), Commercial (C-M) or Industrial (I-M(1), I-M(2), IP-M(1), I-FP(1) and I-FP(2)) district a minimum 30' wide landscape setback (measured from the property line, exclusive of right-of-way) is suggested adjacent to streets having at least 100' of right-of-way.
- D. In a Local Retail (LR-M(1) and (LR-M(2)), Commercial (C-M) or Industrial (I-M(1), I-M(2), IP-M(1), I-FP(1) and I-FP(2)) district a minimum 15' wide landscape setback (measured from the property line, exclusive of right-of-way) is suggested adjacent to all other public streets, private streets or fire lanes with at least a 50' width.
- E. By ordinance the Office (O-M) district, other than a PD, requires a minimum 30' wide landscape setback (measured from the property line, exclusive of right-of-way) adjacent to all public streets.
- F. In an Office (O-M) district, other than a PD, a minimum 15' wide landscape setback (measured from the property line, exclusive of right-of-way) is suggested adjacent to private streets or fire lanes with at least a 50' width.
- G. By ordinance a multi-family district, other than a PD, requires a minimum 30' wide landscape setback (measured from the property line, exclusive of right-of-way) adjacent to all public streets.
- H. In a multi-family district, other than a PD, a minimum 15' wide landscape setback (measured from the property line, exclusive of right-of-way) is suggested adjacent to private streets or fire lanes with at least a 50' width.
- I. No impervious surface, except sidewalks and drive approaches, should encroach upon the landscape setback and no driving aisle should be constructed parallel to the highway.
- J. Within the landscape setback, a minimum 5' wide meandering sidewalk should be provided.

Plant material creates and reinforces the character of a development and provides a common thread throughout the corridor. Properly chosen and located, plant material identifies the point of entry to a site, visually breaks-up large expanses of parking, screens undesirable elements and creates a "nice front door" for a development. To

insure a commonality throughout the corridor, the following plant material should be incorporated within the landscape setback:

- A. One canopy tree and one ornamental tree is suggested for every 50' of frontage. Trees are not required to be placed on 50' centers; however, the suggested number of trees based upon this method should be located within the landscape setback.
- B. The primary canopy tree, Live Oak or Red Oak, should represent 50% of the total number of trees.
- C. After the primary canopy tree requirement is met, the secondary canopy tree, Bald Cypress, should represent 25% of the total number of trees.
- D. The primary ornamental tree, Crape Myrtle or Yaupon Holly, should represent 50% of the total number of ornamental trees.
- E. The primary shrub, Dwarf Nandina, should represent 25% of the total number of shrubs used.
- F. The primary ground cover, Asian Jasmine, should represent 10% of the quantity of ground cover used.
- G. All plant material should be chosen from the approved plant list and meet the minimum standards of the Texas Association of Nurseryman Grades and Standards. The installation of material should comply with the standard planting details.

## Approved Plant Material

<b>Canopy Trees</b>	<b>Min. Height/Width</b>	<b>Caliper/Ball Size</b>
<b>Primary</b>		
Live Oak <i>Quercus virginiana</i>	14'/5'	3"/32"
Red Oak <i>Quercus shumardi</i>	14'/5'	3"/32"
<b>Secondary</b>		
Bald Cypress <i>Taxodium distichum</i>	12'/6'	4"/42"
<b>Remainder</b>		
Sweetgum <i>Liquidambar styraciflua</i>	14'/4'	3"/32"
Cedar Elm <i>Ulmus crassifolia</i>	14'/5'	3"/32"
Honeylocust Shademaster <i>Gleditsia triacanthos 'Shademaster'</i>	14'/5'	3"/32"
Golden Raintree <i>Koelreuteria paniculata</i>	10'4'	3"/32"
Texas Ash <i>Fraxinus velutina 'Rio Grande'</i>	14'/4'	3"/32"
Burr Oak <i>Quercus macrocarpa</i>	12'/4'	3"/32"
Escarpment Oak <i>Quercus fusiformis</i>	14'/5'	3"/32"

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### **Ornamental Trees**

*Min. Height/Width*

*Caliper/Ball Size*

#### **Primary**

Yaupon Holly <i>Ilex vomatoria</i>	8'/3'	4 canes/2'
Crape Myrtle <i>Lagerstromia indica</i>	8'/3'	4 canes/2'

#### **Remainder**

Deciduous Yaupon <i>Ilex decidua</i>	8'/3'	4 canes/2'
Native Hawthorn <i>Crataegus spp.</i>	8'/3'	4 canes/2'
Southern Crabapple <i>Malus app.</i>	8'/3'	2 1/2"/25"
Chinese Pistache <i>Pistacia chinensis</i>	8'/3'	2 1/2"/25"
Mexican Plum <i>Prunus Mexicana</i>	8'/3'	2 1/2"/25"
Wax Myrtle <i>Myrica carifera</i>	6'/3'	4 canes/2'

### **Shrubs**

*Min. Height/Width*

*Caliper/Ball Size*

#### **Primary**

Dwarf Nandina <i>Nandina domestica 'nana'</i>	12"/10"	2 gal.
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#### **Remainder**

Dwarf Burford Holly <i>Ilex cornuta 'burfordi nana'</i>	12"/12"	2 gal.
Abelia Grandiflora <i>Abelia grandiflora</i>	12"/12"	2 gal.
Barberry <i>Barberry spp.</i>	18"/15"	2 gal.
Red Yucca <i>Hesperaloe parviflora</i>	15"/18"	5 gal.
Texas Sage <i>Leucophyllum frutescans</i>	15"/15"	5 gal.

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Indian Hawthorn <i>Raphiolepis indica</i>	24"/24"	5 gal.
Native Sumac <i>Rhus typhina</i>	30"/48"	10 gal.
Dwarf Crape Myrtle <i>Lagerstromia indica 'nana'</i>	15"/15"	5 gal.
Photenia <i>Photenia fraseri</i>	36"/24"	5 gal.
Dwarf Yaupon Holly <i>Ilex vomitorria 'nana'</i>	10"/10"	2 gal.
Pampas Grass <i>Cortaderia selloana</i>	30"/24"	5 gal.

### **Ground Cover/Vines**

*Min. Height/Width*

*Container*

#### **Primary**

Asian Jasmine <i>Trachelosperum Asiaticum</i>	4"/12"	1 gal.
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#### **Remainder**

Purple Winter Creeper <i>Euonymus coloratus</i>	Can full w/6" runners	1 gal.
Santolina <i>Santolina virens</i>	3"/8"	1 gal.
Trumpet Vine <i>Campsis radicans</i>	18" full on stake	1 gal.
Virginia Creeper <i>Parthenocissus quinquefolia</i>	18" full on stake	1 gal.
Lady Banks Rose <i>Rosa banksiaw lutea</i>	18" full on stake	1 gal.
Wisteria <i>Wisteria sinensis</i>	4' full on stake	5 gal.
Vinca major <i>Vinca major</i>	4"/6"	1 gal.

### **Turf Grass**

*Application*

Common Bermuda <i>Cynodon dactyton</i>	Seed or Hydromulch
Fescues <i>Festuca rubr</i>	Seed or Hydromulch

Landscaping shall be installed in accordance with a landscape plan approved by the City Plan Commission and must be maintained in a healthy, growing condition at all times. Any plant material that dies must be replaced immediately.

The property owner is responsible for regular weeding, fertilizing, pruning and other maintenance necessary for the proper maintenance of the landscaping.

All landscaped areas must be irrigated with an irrigation system capable of providing the proper amount of water for the particular type of plant material used. Irrigation will be provided by an automatic underground sprinkler system equipped with a freeze guard.

### Screening of Parking and Service Areas

Site features such as parking, loading and outdoor storage areas, mechanical and rooftop equipment, refuse storage containers and utility accessories are necessary components of a development. However, additional effort must be taken to reduce their visual impact by screening these site features from adjoining properties and public rights-of-way.

- A. Screening of parking areas should be a minimum of 36" above the grade of the parking lot and adjacent to the parking area. This screen should be opaque and consist of earthen berms, screening shrubs, decorative walls or a combination as follows:
  1. The maximum slope for earthen berms or planting beds shall be 3:1 (the berm must be 3' in width for each 1' in height) and must be curvilinear in design.
  2. Screening shrubs should create an opaque screen using a minimum five gallon container at installation.
  3. Retaining walls may be used to facilitate berming provided that they are not visible from the street.
  4. Any decorative wall must be approved structurally by the City Engineer and aesthetically by the City Plan Commission.
  5. A concrete, pavestone or mulch strip the width of the vehicle overhang is suggested for parking spaces adjacent to a landscape setback. This strip shall be measured from the face of curb to the edge of the landscape bed.
- B. Loading and outdoor storage areas should not be located on the street side of a building and should be screened from view of streets and adjacent properties. The screen may consist of a permanent architectural feature and landscape elements such as walls, berms, trees and shrubs.
- C. All roof-mounted equipment, including fans, vents, air conditioning units and cooling towers, should be screened to eliminate the view from the ground level of adjacent properties. In addition, roof-mounted equipment should be placed and finished in a manner which minimizes its visibility from overhead views from nearby buildings and elevated thoroughfare sections.

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1. The overall screening height will be the height of the tallest element of roof-mounted equipment.
  2. The outside of the screening device should be painted or finished in a similar color to the building facade, trim or roof surface to minimize the visibility of the equipment and screen the view from ground level.
  3. Roof-mounted equipment and the inside of the screening device should be painted similar to the color of the roof surface in order to minimize the visibility of the equipment and screening device from overhead views.
- D. Refuse storage containers will be screened from public streets and adjacent properties by a minimum 6' high masonry wall.
- E. Utility meters and other utility apparatus, including transformers, should be located to the rear of the structure and screened from the view of public streets and adjoining properties. Screening should not interfere with the safe operation and maintenance of the equipment. Acceptable screening methods include:
1. Landscaping, including trees or an evergreen hedge.
  2. A fence constructed of masonry, native stone, wrought iron or other material approved by the city engineer.
  3. Placement of the equipment underground or interior to the building.
- F. Wall-mounted equipment, including meters (such as banks of electric meters) should be screened from public streets and adjacent properties. All suggested screening will meet clearances required by affected utility companies. Acceptable screening methods include:
1. Landscaping including trees or an evergreen hedge.
  2. A fence constructed of masonry, native stone, wrought iron or other material approved by the city engineer.
  3. Wall-mounted screening devices, such as cabinets, which are architecturally compatible with the building facade.

Visibility triangles shall be maintained in accordance with the City of Richardson's sight guidelines. Nothing in the PGBH Guidelines shall be construed as permitting any obstruction to view; and, no person shall locate a structure or plant material in a manner which will obstruct a view, creating a traffic hazard. Within the visibility triangle, no obstruction shall exceed 30" in height, measured from the top of the curb; however, trees are permitted within the visibility triangle provided that the lowest limbs are trimmed to a minimum height of 7', measured from the top of curb. This restriction shall not apply to structures authorized by the zoning ordinance or to traffic control signs, traffic control equipment, street signs or any utility-related equipment.



## Orientation of Building

### *Building Arrangement*

The arrangement and orientation of the building to the physical layout of the site and its relationship to adjoining properties and thoroughfares provides a visual unity and helps establish the character of an area. The arrangement of buildings and related site features, such as parking lots and loading and service areas, should take into account orientation, setback, alignment, spacing and placement, with consideration to the retention of natural topography and vegetation when applicable. As such:

- A. Building placement should not impede the flow of traffic or accessibility from adjacent thoroughfares or developed property.
- B. Pad sites, generally defined as a free standing building of less than 5,000 square feet, should be limited to one per 5 acres of land area.
- C. Parking structures should consist of colors and materials complementary with the facade of the surrounding buildings. The narrow facade of the parking structure should be oriented to the street to minimize the visual impact.

## Parking and Circulation

### *Driveway Location and Parking Areas*

The location and spacing of a driveway should insure proper and efficient circulation into and around a development, reduce conflicting movements internal and external to the site and promote the smooth flow of traffic on the abutting street. Driveway storage lengths and loading areas should be designed to assure that all queuing movements occur on site.

- A. All drives along President George Bush Highway require approval from the State Department of Highways and Public Transportation. Driveway requests must be submitted to the Planning Department under the site plan approval process. The City is responsible for securing a permit from the State to allow construction of the driveway.
- B. Driveways should be spaced a minimum of 150' from other drives and a minimum of 200' from the intersection of a street. Each platted lot shall be permitted a driveway.
- C. Driveway storage is the distance between the street-right-way line and the near side of the first intersecting interior aisle or parking stall. The minimum length of driveway storage should be:

<b><i>Number of spaces per driveway</i></b>	<b><i>Minimum storage length</i></b>
Less than 50 spaces	20 feet
50 to 200 spaces	50 feet
More than 200 spaces	78 feet

The “number of spaces per driveway” will be calculated by dividing the total number of parking spaces on a platted lot by the number of driveways on the same lot.