

# METRO BRENTWOOD TOWN CENTER URBAN DESIGN OVERLAY

Attachment to Ordinance No. BL2006-1166 as adopted 9.19.2006







## METRO BRENTWOOD TOWN CENTER URBAN DESIGN OVERLAY

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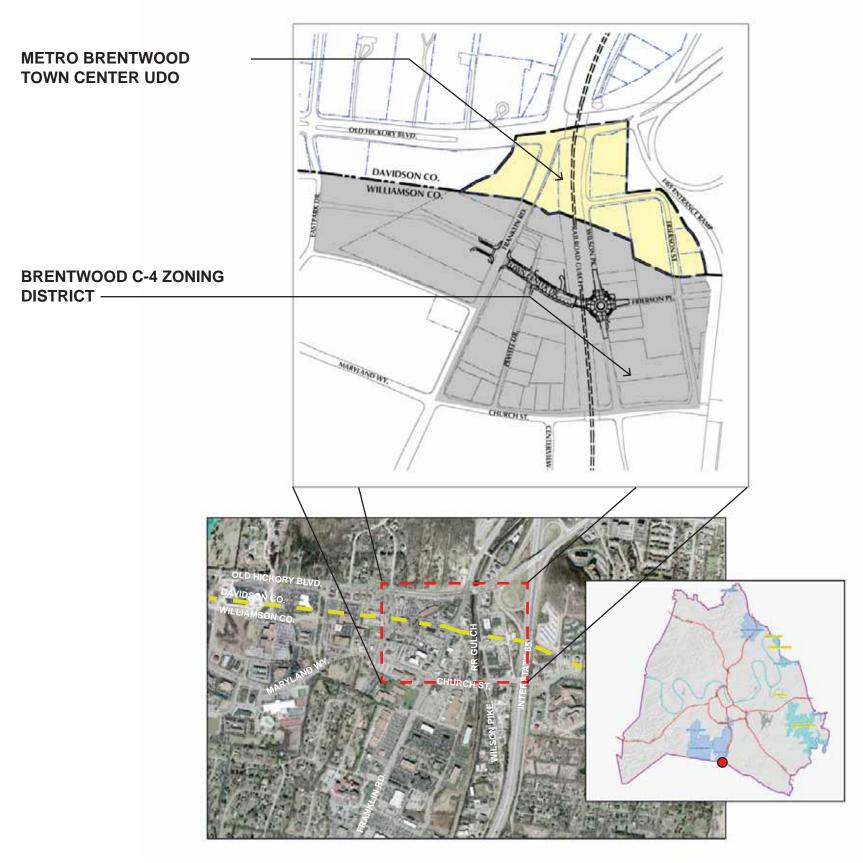


Figure 1.0: Vicinity Map

#### 1.0 SITE DESCRIPTION & PURPOSE

Geographically, the Brentwood Town Center is defined by Old Hickory Boulevard on the North, I-65 on the East, Church Street on the South and properties fronting Franklin Rd. The Williamson and Davidson County line bisect the area. The Metro Brentwood Town Center UDO (yellow area in Figure 1.0) addresses the eight properties located within Davidson County and Brentwood's C-4 Town Center District address the properties within the City of Brentwood (grey area in Figure 1.0). The purpose of this UDO is to provide a consistent development pattern within the Brentwood Town Center Area.

The UDO area is located in Subarea 10 and consists of properties fronting Wilson Pike, Fierson St. and Franklin Road on the southern side of Old Hickory Boulevard. (Fig 1.0). The eight parcels included in the UDO comprise a total of 7.38 acres. The existing context includes a collection of various retail/ office buildings, a post office and a gas station.









#### 2.0 VISION

The vision for the area within the Urban Design Overlay is to create a compact economically viable and vibrant mixed-use development pattern that reinforces and respects the public realm. It further envisioned that the area will seamlessly develop with the Brentwood C-4 district and complement future development within the Brentwood Town Center. The UDO is guided by the following goals:

- 1. Create a development pattern that provides a cohesive experience between the Brentwood C-4 zoning district and the UDO located in Nashville.
- 2. Promote a viable mix of uses that promote living, working, and playing in the town center.
- 3. Establish a Pedestrian-Friendly Environment
- (1) Goal: It is the goal of the UDO to provide a development pattern that provides a cohesive experience between the Brentwood C-4 zoning district and the UDO.

#### Objectives:

- 1. Adopt similar design guidelines to the C-4 zoning district.
- 2. Maintain communication between municipalities during development process.
- 3. Coordinate private infrastructure development between two governments
- (2) Goal: It is the goal of the UDO to promote a viable mix of uses that promote living, working, and playing in the town center.

#### Objectives:

- 1. Rezone the property from CS to MUL in order to provide the opportunity for residential development.
- 2. Promote a mix of uses through parking incentives and density bonuses
- (3) Goal: It is the goal of the UDO to establish a pedestrian-friendly environment.

#### Objectives:

- 1. Provide an active edge at the street by encouraging buildings to be built up to the street
- 2. Create a well designed streetscape
- 3. Provide safe crosswalks at potential conflict points between people and vehicles. Access to properties should be limited and shared where it is appropriate in order to reduce these potential conflicts.

METRO BRENTWOOD TOWNE CENTER UDO \_\_\_\_\_\_\_

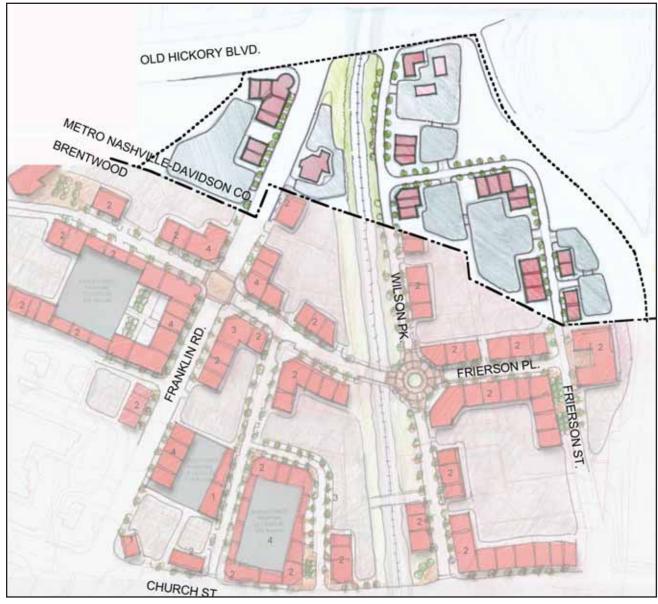


Figure 3.0: Illustrative Concept Plan

#### 3.0 CONCEPT PLAN.

The concept plan extends the town center development pattern established in Brentwood's C-4 zoning district along each of the existing roadways into Nashville-Davison County. Specific plan elements include the following:

- 1. The Town Center utilizes the existing street network
- 2. Building typology allows for a mix of uses where the ground floor is occupied by retail/office uses while the upper floors allow for the opportunity for residential uses.
- 3. All buildings address the streets.
- 4. Street tree plantings, sidewalks, buffer strips, decorative lighting, and street furnishings (i.e. benches, trash receptacles, bike racks) enhance the street and help delineate the public realm.
- 5. On-site parking is located on the side or behind the buildings. Parallel parking is encouraged along Wilson Pike and Frierson Street. It is also encouraged on a limited basis along Franklin Road during non-peak hours.
- 6. The building massing and locations emphasize the corners and entry points to the area.

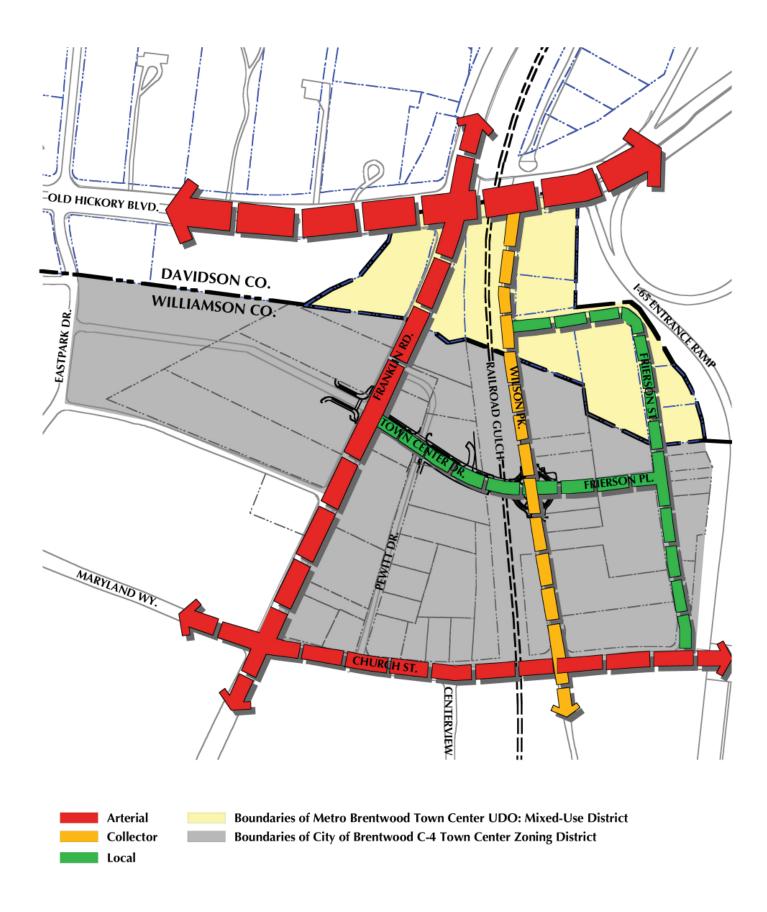


Figure 4.0: Illustrative Concept Plan

#### 4.0 TRANSPORTATION NETWORK PLAN.

The transportation network plan utilizes the existing street infrastructure and does not propose any changes with the exception of future parallel parking on Wilson Pike, Frierson St. and on a limited basis on Franklin Road during non-peak hours. All streets and parallel parking arrangements shall be coordinated between each respective municipality.

To establish a safe, convenient and attractive pedestrian oriented environment within the towne center district, the developer of any property shall be responsible for upgrading any existing substandard streets and other improvements within the existing designated public right-of-way or the primary private access easement fronting the lot if such street or easement is not built to the design standards of the district. The construction standards for the district shall be incorporated in the subdivision regulations of the city and, where applicable, the developer shall be required to dedicate right-of-way abutting the lot to the centerline of the road.

The location and design of all driveways and accesses that allow vehicles to enter public streets from any lot developed in this zoning district shall comply with Public Works' vehicle access control; however, in recognition of a more compact arrangement of mixed use development in the district, Public Works may grant exceptions to the technical standards related to minimum distances of driveways from intersections and property lines and minimum radius of driveway curves. The use of shared driveways and rear service lanes to access public streets shall be encouraged to the greatest extent feasible and practical. Service entrances and overhead doors shall not be permitted to face or access a public street directly.

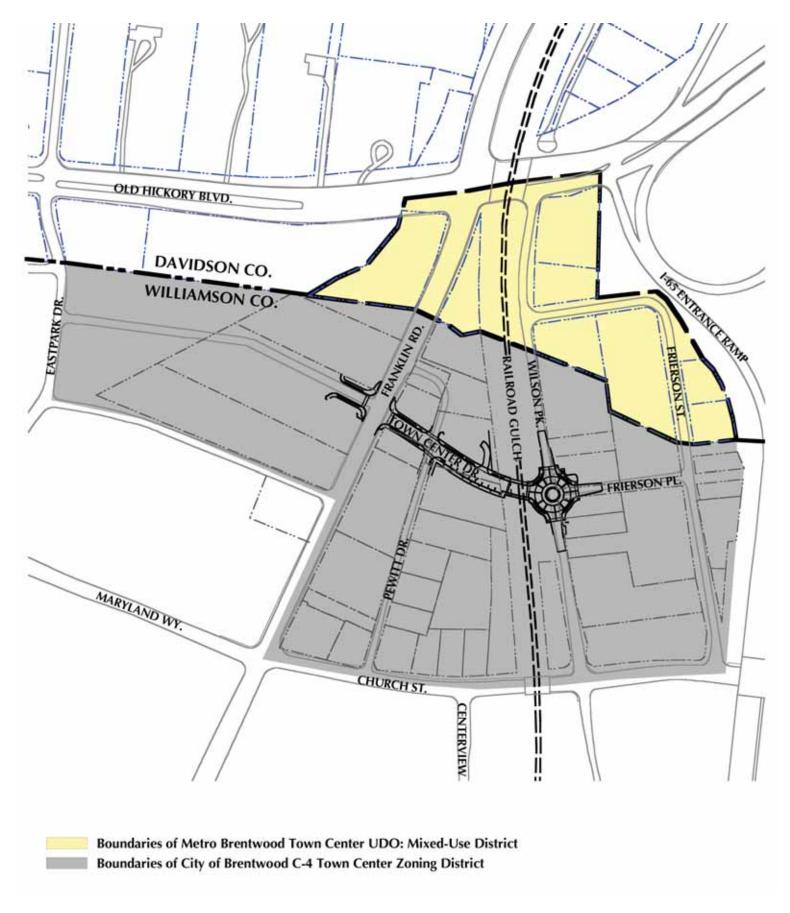


Figure 5.0: Regulating Plan

#### 5.0 BUILDING REGULATING PLAN.

Due to the existing characteristics, goals of the UDO, and the limited properties involved in the UDO, a single district has been established to guide the development. The characteristics of the district are intended to reinforce the goals. The regulations specify the following:

- 1. Massing Floor Area Ratio (FAR) and Location of Architecture
- 2. Access and Parking
- 3. Allowable Percentage of Impervious Area
- 4. Streetscape Design Standards
- 5. Signage Standards

The building standards will insure the appropriate design and implementation of the architecture within the community. The standards are the basis of the Urban Design Overlay, however if certain requirements have not been addressed to the satisfaction of Metro Planning then the requirements of the base zoning.

The following is the overall framework of the UDO:

Base Zoning: MUL

Permitted Uses: Per Land Use Table Found in Section 17.08.030 of the Metro

Nashville Zoning Code

Acreage: 7.38 acres

Application of standards: The standards in the UDO shall apply to plans for the following projects:

- a) Additions/Modifications: On a lot with one or more existing buildings, final construction plans are for additions or modifications that front a public right-of-way with a gross floor area that exceeds 25% of the gross floor area of the existing building being modified must comply with the UDO.
- b) New Construction: On a vacant or cleared lot, or portion thereof, final construction plans are for new construction.









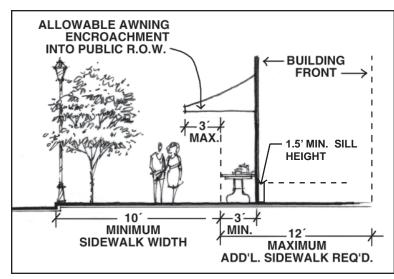


Figure 5.1–Pedestrian access easements on all streets in the UDO with the exception of Franklin Road which requires a minimum usable sidewalk width of eighteen (18) feet.

#### COMMERCIAL/ MIXED-USE DISTRICT

**Bulk Regulations:** 

Setbacks:

Front: Build-to-Line 3ft-12ft Behind Public Sidewalk/ 8-12ft on

Franklin Road

Side: Oft Min.

Rear: 10ft Min.

Max. Height: Min. 2 Stories, 4 Stories Max., 56ft. excluding mechanical

and elevator penthouse enclosures

Encroachment:

Awning: 3ft., Subject to Metro Public Works Mandatory Referral

Process

Balcony: 3ft.

Parking Loading & Access

Requirements:

Parking Per Section 17.20.030, Reduced by 30% if any develop

ment comprises a mix of retail, office, and residential uses

with each comprising at least 20 percent of the overall

development square footage

Location: Structured, Rear, Underground or Side

Pervious Surfaces

Required Open

Space: 10 percent minimum, may include pervious paving materials

#### Additional Standards:

- 1. Residential uses can not occupy the first floor
- 2. Minimum sill height is 18", from highest point of the particular sill.
- 3. Sidewalks shall be constructed in the right-of-way on both sides of the streets serving the Town Center District with a minimum width of 13 to 18 feet. A minimum usable sidewalk width of 18 feet shall be required for all Franklin Road right-of-way and a minimum usable sidewalk width of 13 feet shall be required for all other street right-of-way within the towne center district. A pedestrian access easement shall be required for the section of sidewalk that extends beyond the right-of-way.



Photo 6.1–Although connected, distinct facade treatments help to create individual identities for the buildings along this street.

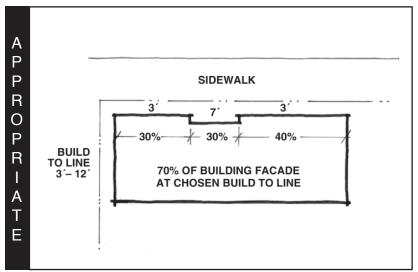


Figure 6.2–Appropriate build-to line along street.

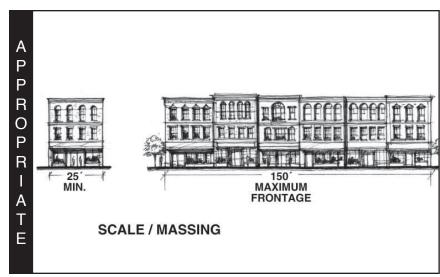


Figure 6.1-Scale/Massing.



Photo 6.2–Although it does front the street appropriately, the scale, materials and massing of this building is not in keeping with the intents of the guidelines.

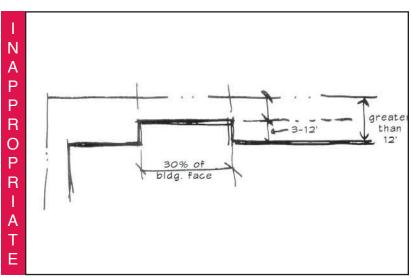


Figure 6.3-Inappropriate build-to line along street

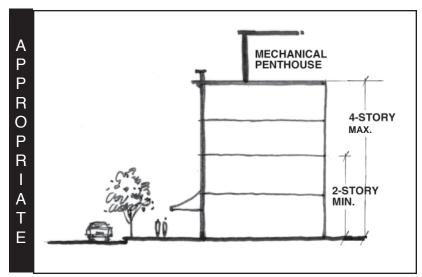


Figure 6.4-Building height

#### **6.0 SITE DESIGN STANDARDS**

For all new development or redevelopment within the UDO, the following technical standards shall apply:

- 1. Standard width of building at designed frontage shall be a minimum of 60 percent of lot width with a minimum required building width of 25 feet. In cases where a 60 percent minimum lot frontage would not allow for vehicular ingress/egress on the site, required on-site parking, and/or pedestrian sidewalk access from the public sidewalk, the minimum frontage may be reduced by the planning staff. Building facades shall be delineated to reduce the apparent bulk of the building and to eliminate the appearance of a continuous façade, using a 1:1.5 ratio of height to façade. For example if a building has a height of 30 feet, then the façade would be broken up in segments no longer than 45 feet in length. Standard width of building at designated frontage; minimum—25 feet, maximum—150 feet (Photo 6.1–6.2, Figure 6.1). Buildings with frontage greater than 150 feet may be approved by the planning staff, provided the building is configured and designed architecturally to appear as more than one distinct building.
- 2. Build-to line, three to twelve feet behind the public sidewalk area located in the right-of-way. At least 70 percent of the building façade shall be maintained on the chosen build-to line (Figures 6.2–6.3).
- 3. Minimum required rear setback yard, ten feet (intended for use as public utility and drainage easements.)
- 4. Minimum required side setback yard, zero. In order to achieve a continuous front building edge in the district, side yards between adjoining buildings shall be minimized to the greatest extent possible.
- 5. Building height, a minimum of two stories and maximum of four stories, with an overall limitation of 56 feet excluding mechanical and elevator penthouse enclosures (Figure 6.4).

#### 6. Maximum lot coverage:

- a. Without the use of parking incentives provided in sub-section b. below, standard floor area ratio (FAR) for each lot shall not exceed .60, or an equivalent of 26,136 square feet of occupied floor space per acre, or the FAR for existing occupied floor space on the lot if such amount is greater.
- b. The maximum adjusted FAR may be increased to .75 FAR, or an equivalent of 32,670 square feet of occupied floor space per acre, if the additional square footage above the standard FAR (in sub-section a. above) and/or adjusted FAR (in sub-section b. above) is allocated for residential units.

#### 7. Pervious Area:

a. A minimum of ten percent of the lot shall be pervious. The location of this area may include, private sidewalks, open patios and outdoor seating areas that are constructed with pervious pavements. In addition, land in the district that is dedicated to the city for public parks or plazas areas may count toward this requirement. (Photo 6.1, Figure 6.1)

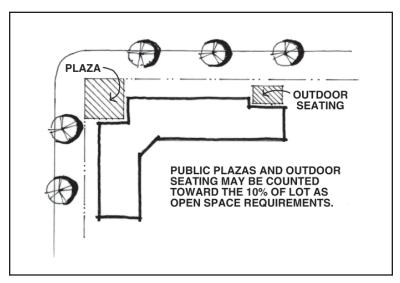


Figure 6.1–Public plazas and outdoor seating may count toward the 10 percent open space requirements.



Photo 6.1–This open courtyard provides seating for an adjacent restaurant and counts toward the 10 percent open space.

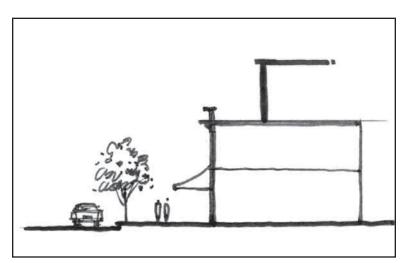


Figure 6.2–To create the appearance of uniform building height along a street, upper floors may be stepped back from the build-to-line.



Photo 6.2



Photo 6.3–The large blank wall and signage of this facade are not in keeping with the design intent of the UDO. Large, monolithic, box-like structures should be avoided.



Photo 6.4–Although this building has contiguous frontage along the street edge, it is articulated to create the impression of a series of smaller buildings.

- b. The open space shall not include any area on the lot used for surface parking, driveways and alleys or located at the rear or less visible areas of the building; however, areas of significant natural vegetation located anywhere on the lot may be used to meet this requirement, provided the planning staff determines that such preservation will provide overall benefit to the lot and district. t.
- 8. Height variations. All buildings that are attached or adjacent within a block should be similar in height to the greatest extent feasible (Photo 6.2). The planning staff may require the upper stories of a building that will be taller than the average building height on a block to be recessed further back from the front build-to line (Figure 6.2). The above height limitations and restrictions do not prohibit the use of an architectural feature such as a tower, cupola, etc., located above the roof line, provided the feature is in character with the architecture of the building and area; the total height of the building and feature does not exceed four stories (plus mechanical/elevator penthouse); and the feature is not designed or used for placement of elevated wall signs.
- 9. Scale/massing. Individual buildings should use human-scaled/pedestrian oriented architectural features. Individual buildings should clearly articulate the first story and primary entrances, with display windows encouraged for retail stores (Photo 6.4). The ground floor should be clearly delineated from the upper stories and the upper floors from the top of the front facade roof line. Large blank walls in pedestrian areas greater than 35 feet in length and large monolithic box-like structures should be avoided (Photo 6.4). Larger buildings should be designed to divide the mass of the facility to create a visual impression of a series of smaller buildings or sections. (Photo 6.4) Windows, doors, shutters, columns, masonry detailing, and variations in the front roof line, building wall recesses and variations in colors and materials should be used to break up the mass of a single building.

METRO BRENTWOOD TOWNE CENTER UDO \_\_\_\_\_\_\_

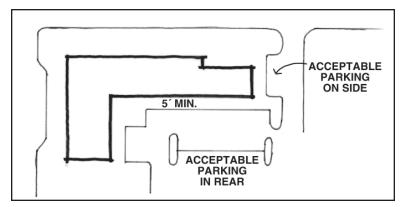


Figure 7.1–Diagram of acceptable parking areas to the side and rear of a corner building.



Photo 7.1–This parking area is located behind this retail development, but does not meet the screening requirements outlined in the UDO.

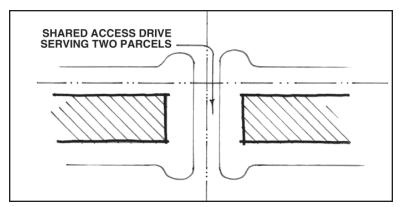


Figure 7.2–Shared parking lots and joint access drives, as shown in the figure above, are encouraged in the UDO.



Photo 7.2–Surface parking lots abutting an intersection are discouraged in the UDO. It is more appropriate to anchor the corner with a building as shown in Figure 9.1 and locate parking in the rear or the opposite side not facing the corner.



Photo 7.3—While an attempt has been made to provide ground level retail and minimize the "garage" appearance of this parking structure, the overall facade is too repetitive and does not achieve the goals of the development standards.

#### 7.0 PARKING:

- a. On-site parking. The number, size and design of all parking spaces and internal access ways shall comply with the off-street parking requirements set forth in Section 17.20.030 of the Zoning Code, except as follows:
  - On-site parking lots and loading areas shall be located to the rear or sides of buildings. (Figure 7.1 & Photo 7.1). In cases where the building fronts more than one street, the developer shall determine the principal frontage of the building subject to the approval of the planning staff.
  - For any development that provides a mix of retail, office, and residential
    uses with each use occupying a minimum of 20 percent of the overall development square footage, the standard off-street parking requirements set
    forth in Section 17.20.030 of the Zoning Code may be reduced by 30 percent.
  - 3. The maximum grade in the parking and driveway areas shall be five percent.
  - 4. The minimum pavement width of any driveway shall be 24 feet for two-way traffic and 15 feet for one-way traffic with angled parking spaces.
  - 5. With the exception of designated passenger drop off areas and loading and unloading spaces, the minimum distance between any building and any internal driveway shall be ten feet, while the minimum distance between any building and any parking space shall be five feet.
  - 6. No surface parking lot should abut a street intersection. (Photo 7.2).
  - 7. On-site deck parking structures are encouraged where the topography is advantageous, provided the exterior finishes of the structure are compatible with the building. (Photo 7.3).
  - 8. Shared parking lots and joint access driveways that serve multiple businesses and land uses are encouraged and shall be located at the rear and/or side of the developments, with common access to the public streets. In such arrangements, the individual businesses may not reserve specific spaces within the lot by signs or other methods. (Figure 7.2).
  - Designated parking spaces for any residential dwellings shall be located on the same lot with a minimum requirement of one parking space per residence. Such spaces may be reserved by signs or other methods.



Photo 7.4—Masonry screen walls as shown in the photo above and in Figure 10.1 are required at all sections of surface parking abutting the frontage line of any lot.

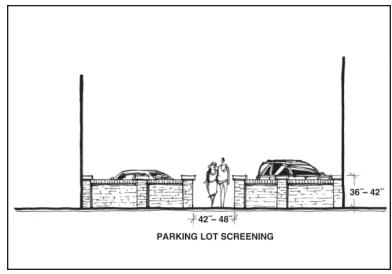


Figure 7.3



Photo 7.5–On-street parking serves as a buffer between the pedestrian and adjacent lanes of traffic.

- b. Parking lot screening. Screening walls shall be built along any section of a surface parking lot that abuts the frontage line of the lot. (Photo 7.4, Figure 7.3) Screening walls shall be between 36 and 42 inches in height above the grade of the abutting sidewalk and shall be faced on both sides with a masonry veneer that is similar to the material on the building. The wall shall have an opening between 42 and 48 inches wide at a location that encourages safe pedestrian movement between the parking area and sidewalk.
- c. Green space for parking lots shall meet the requirements setforth in Section 17.24.00 Landscape, Buffering and Tree Placement
- d. Street parking. On-street parallel or angled parking shall be encouraged within the street design and right-of-way for non-arterial roads in the district (Photo 7.5) under the following parameters:
  - 1. A uniform on-street parking plan shall be incorporated for all lots located within the same block or an acceptable length of street.
  - 2. The developer shall be responsible for dedication of additional right-of-way on the lot for the on-street parking spaces and the associated cost for additional pavement and drainage improvements built to Metro Public Works' standards.
  - 3. On-street parking spaces constructed or funded by the developer shall be counted toward the overall parking requirement for the property.
  - 4. In no event shall more than 20 percent of the required parking spaces for the lot be allocated to onstreet parking spaces.

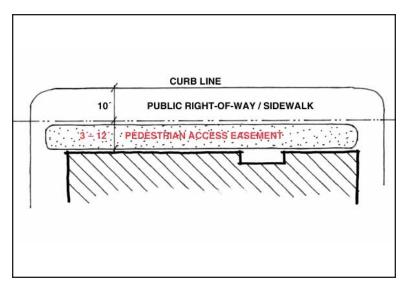


Figure 8.1-Pedestrian access easement and right-of-way.

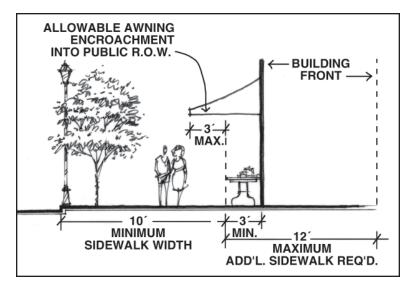


Figure 8.2–Pedestrian access easements on all streets in the UDO with the exception of Franklin Road which requires a minimum usable sidewalk width of eighteen (18) feet.

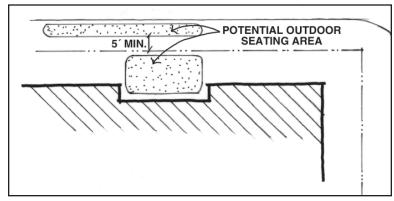


Figure 8.3—Outdoor seating is permitted in the pedestrian access easement, as long as a minimum 5′-0″ clearance is maintained.



Photo 8.2—An area for pedestrian movement is maintained while still allowing public dining and seating areas both adjacent to the building as well as along the street.



Photo 8.2–In this scenario, the pedestrian sidewalk separates the building and the outdoor dining area giving the public a more direct relationship with the first floor retail storefronts.

#### **8.0 STREETSCAPE**

#### Sidewalks

- a. Sidewalks shall be constructed in the right-of-way on both sides of the streets serving the towne center district with a minimum width of 13 to 18 feet. A minimum usable sidewalk width of 18 feet shall be required for all Franklin Road right-of-way and a minimum usable sidewalk width of 13 feet shall be required for all other street right-of-way within the towne center district. A pedestrian access easement shall be required for the section of sidewalk that extends beyond the right-of-way (Figure 11.1 and Figure 11.2). The sidewalks in the district shall be constructed to a uniform design standard for the district approved by the planning staff.
- b. Sidewalk cafes and similar outdoor seating areas may be permitted by the planning staff on the public and private sidewalk areas, subject to the use being incidental to the adjacent indoor restaurant. A minimum five foot wide clearance area shall be maintained at all points on the sidewalk fronting the building to accommodate pedestrian movement and comply with all Metro Health Department Regulations. (Photo 8.1–8.2 and Figure 8.3).

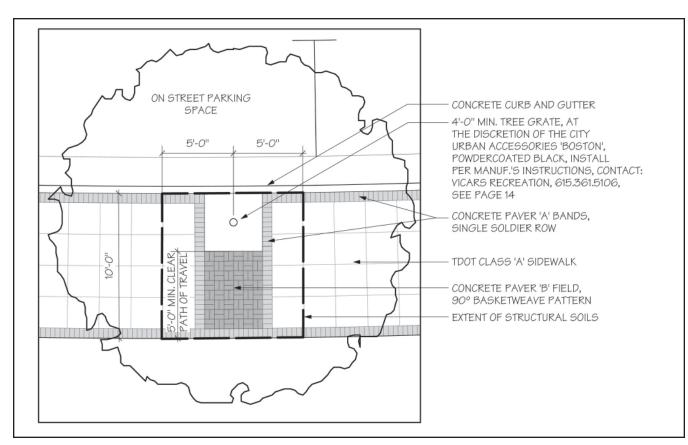


Figure 8.4-Sidewalk Detail Plan-Field paver pattern for sidewalk adjacent to on street parking (permanent or temporary).

Suggested patterns for new sidewalks in the Metro Brentwood Town Center UDO. Variations of these patterns based on specific site conditions may be approved by the planning staff.

CONCRETE PAVER "A"

Color: Brown Finish: Natural

2 3/8" for typical sidewalks

CONCRETE PAVER "B"

Color: B92156 Finish: Tudor

2 3/8" for typical sidewalks

Manufacturer: Hanover Pavers

4" x 8"

Pavers shall be butt jointed and secured in accodance with

the manufacturer's recommendations.

RUBBER EXPANSION JOINT MATERIAL

Color: Black

Manufacturer: Reflex

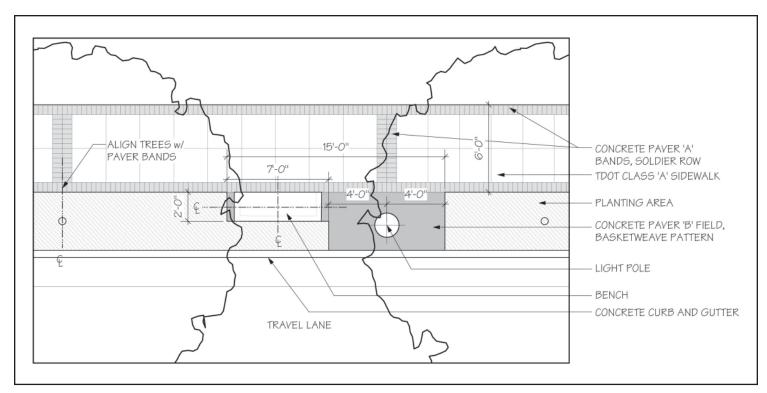


Figure 8.5–Sidewalk Detail Plan-Bench layout for sidewalk adjacent to travel lane.

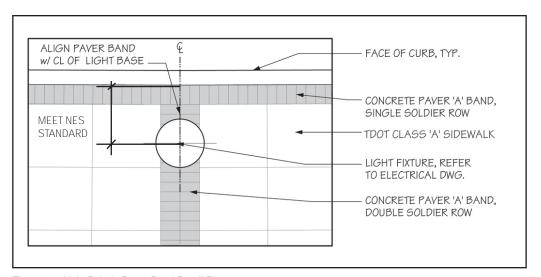


Figure 8.6-Light Pole in Paver Band Detail Plan

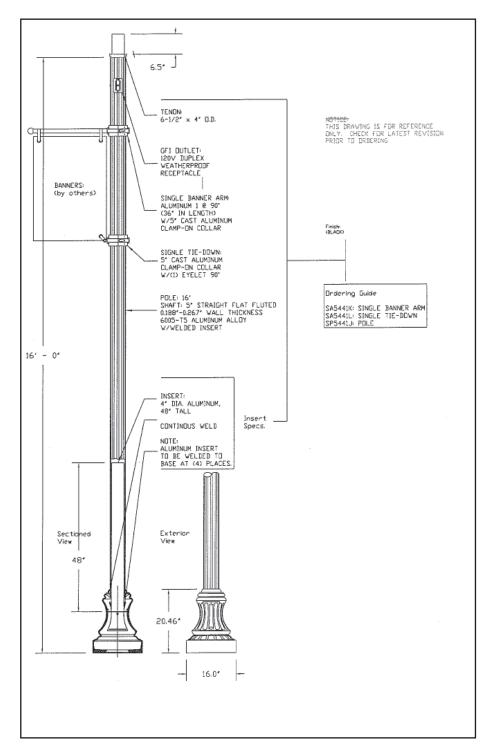


Figure 8.7–This is the specification for the approved street light for the UDO.

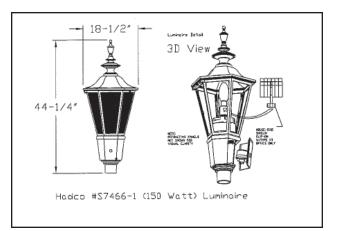


Figure 8.8-Pole mount lighting detail.

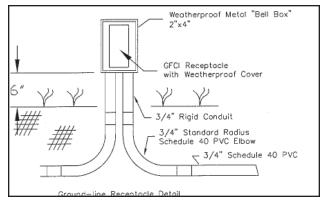


Figure 8.9—Ground-line receptacle installation detail. This receptacle shall be used only by or with the authorization of the City.



Photo 8.3—Consistent exterior street lighting helps to reinforce the character of a neighborhood and promote a safe and pleasant pedestrian experience.

#### Lighting

- a. Street. To maintain adequate visibility for pedestrians and drivers at night and to provide a distinct identity within the towne center district, the developer or property owner shall install ornamental street lighting in the area of the development fronting a public street. The lighting levels shall be a uniform IES design standard for the district approved by the planning staff. The poles shall be no greater than 16 feet in height and located in the sidewalk behind the curb to meet NES standard sepcifications (Figure 8.6).
- b. Lot area. Adequate outside lighting shall be provided to cover private parking areas and other open areas on the rear and side areas of the lot. Such lighting shall be designed for security purposes but shall be arranged to minimize unnecessary glare and reflection on adjacent lots and public streets. The planning staff may require the submission of a lighting plan by a qualified professional engineer to ensure that the illumination as designed and installed meets this objective.

#### LIGHT SPECIFICATION

Manufacturer: HADCO

Pole: #SP5441J

Single Banner Arm: #SA5441K Single Tie Down: #SA5441L

Light: S7466-1 (150 Watt) Luminaire

Finish: Black

All lights in the public right-of-way shall meet Nashville Electric Service standard

specifications.



Photo 8.4—The photo and diagram to the right (Figure 14.1) both show the correct installation of a tree grate with structural soil. Urban trees are especially vulnerable to the stress created by their environments. In order to help ensure their survival, special considerations must be given to the size and types of areas in which they are planted. Photo above for installation demonstration only; preferred tree grate appears below.

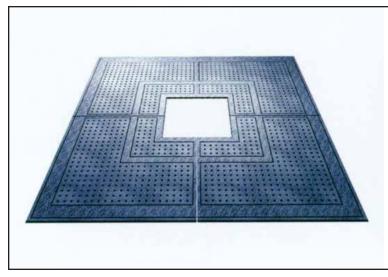


Photo 8.5–Tree Grate.

Manufacturer: Urban Accessories

Style: Boston, not less than 4ft x 4ft
Finish: Black Powder Coated

Material: Cast Iron

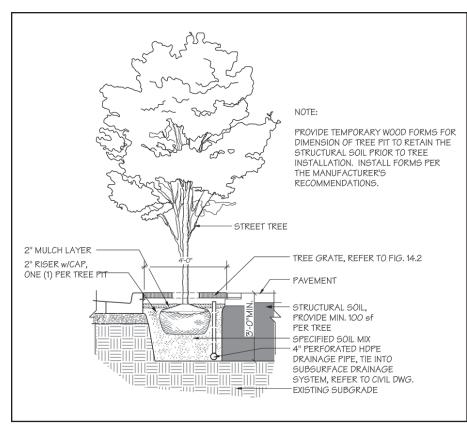


Figure 8.10-Section: tree in structural soils.

All trees should be planted in at least 100 s.f. of soil surface area with a depth of at least 3 ft. that has not been compacted. Alternatively; a structural soil system could be utilized that includes either CU Soil or Expanded Slate Soil Mix.

The CU Soil is a patented soil mix by Cornell University and can be only be installed by licensed contractors. It is a soil mixture made up of crushed stone, clay loam, and a hydrogel stabilizing agent. The mixture creates an interlocking framework of gravel. The cavities created by the framework are filled with soil. This allows for roots, air, nutrients, and water to pass through. The hydrogel is used to provide a consistency to the mix adhering the soil to the gravel. This mixture can be compacted to a sufficient level for pavements while maintaining a root zone for the tree. The Expanded Slate Soil Mix is similar to this system, and can provide similar benefits mentioned above.

#### Landscape

a. Street trees. Trees shall be planted in the sidewalk area in designated tree wells or tree/planting beds in front of the building between the street curb and the travel zone of the sidewalk at a spacing of every 30–40 linear feet. Each street tree shall be planted in topsoil or structural soils with a minimum of one hundred square feet of surface area and a minimum depth of three feet for the root zone. The location and placement of street trees shall be coordinated in a manner as to not interfere with street lighting. Trees which are in the public right-of-way or pedestrian paths of travel shall also comply with any ADA clearance requirements, both at grade and at the tree canopy. The type, caliper and location for the trees shall be determined by the planning staff based on a uniform design standard that is subject to review and recommendations from the tree committee. The trees shall be suitable for urban conditions and provide minimum interference to the operation of businesses, pedestrian use of the sidewalk and the effectiveness of street lighting. A power source shall be provided for seasonal lighting and/or for up- lighting of the trees.

Recommended tree list for the street trees in the Metro Brentwood Town Center UDO district.

LARGE STREET TREES - recommended 3" caliper minimum

Quercus nuttallii, Nuttall Oak

Quercus phellos Hightower, Willow Oak

Ulmus americana Princeton, Princeton Elm

Ulmus parvifolia Bosque, Bosque Elm (or other varieties of Chinese Elm)

Zelkova serrata Green Vase, Green Vase Zellcore

SMALL STREET TREES - recommended 3" caliper minimum

Acer buergeranum, Trident Maple

Crataegus phaenopryum, Washington Hawthorne

Crataegus viridius 'Winter King,' Green Hawthorne

Nyssa sylvatica, Forum Black Gum

The Metro Urban Forester may authorize additional trees to be added to this list.



Photo 8.6–In both image 15.1 and 15.2, the street trees, landscaping, and furniture help to define the edge of the pedestrian walkway and create spaces for people to linger and enjoy the neighborhood.



Photo 8.8-Approved bench for use in the UDO.



Photo 8.10-Approved bollard for use in the UDO.



Photo 8.7

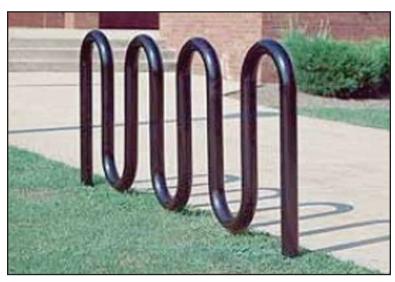


Photo 8.9-Approved bike rack for use in the UDO.



Photo 8.11-Approved trash cans for use in the UDO.

#### Street Furniture

- a. Street furniture. The planning staff may require the developer to provide benches, trash receptacles, bollards, and/or bicycle racks to serve the business on the right-of-way abutting the business. The type of street furniture shall meet the uniform design standard for the district as approved by the planning staff.
- b. Landscaping. Attractive low maintenance landscaping geared to scale of development in the district and urban conditions shall be incorporated into the designated open space and parking areas of the lot to the greatest extent feasible. Acceptable plantings shall include trees planted in locations with sufficient growing space to reach full maturity, hedges, flower beds, planters, fountains, etc. An irrigation system shall be provided to ensure long-term survival of the plantings.
- c. A minimum five foot wide clearance area shall be maintained at all points on the sidewalk fronting the building to accommodate pedestrian movement and comply with all Metro Health Department Regulations. (Photo 8.1–8.2 and Figure 8.3).

#### STREET FURNITURE SPECIFICATIONS

BENCH Manufacturer: Landscape Forms Style: Plainwell, Metal Slates Finish: Black Powder Coated Notes: Add Center Arm Rest	TRASH RECEPTACLE Manufacturer: Landscape Forms Style: Plainwell, Metal Slates Finish: Black Powder Coated Notes: Matching Dome Lid
BIKE RACK Manufacturer: Dumor Style: 125 Bike Rack Finish: Black Powder Coated Notes: Embedded Support	BOLLARD Manufacturer: Landscape Forms Style: Anapolis 6" Finish: Black Powder Coated Notes: No Light

The planning department staff may approve acceptable alternatives which are reasonably consistent with the design intent of these specifications.



Photo 9.0–Wall signs shall be mounted flat against the building facade and complement the overall appearance of the building.



Photo 9.2–Small signs, less than 8 sq. ft. in size, may be suspended away from the building near the main entrance to each business as shown in photos 9.3 and 9.4.



Photo 9.4—The garage entrance in this image is designed to blend into the rest of the building facade.



Photo 9.1—The signage in this image does not meet the size requirements of the sign regulations set forth in the zoning regulations. In addition, this building would not comply with various other design guidelines of the UDO including the use of materials, storefront glazing, and large bays of windowless walls which repeat along the street front.



Photo 9.3



Photo 9.5—The vehicular access in this photo is paved in a similar manner to the adjacent sidewalks to create a more pedestrian-friendly and visually appealing environment. The black bollards compliment the other street furniture and control the vehicular traffic flow while still allowing the passage of pedestrian traffic across the entire width of sidewalk.

#### 9.0 SIGNAGE

The visual transfer of business advertising and other information through the use of external signs shall be conveyed under the following guidelines:

- a. Wall signs shall be mounted flat against the facade of the building facing a public street and installed in locations that do not detract from the design and appearance of the building (Photo 9.1). The location shall be approved by the planningstaff as a part of the site plan approval process.
- b. For the benefit of pedestrians, an additional sign not to exceed eight square feet shall be permitted. The sign may be suspended from the canopy or balcony, or bracketed from the building over the sidewalk near the main entrance to each business. Such signs shall not be internally illuminated. and shall have a minimum clearance 8 feet from the sidewalk (Photo 9.3–9.4).
- c. For any new development or redevelopment of property approved by the planning staff in this district, freestanding monument signs or pole signs shall not be permitted.
- d. Temporary display signs such as sandwich boards shall be permitted in conjunction with temporary uses and shall not exceed eight square feet per side. Such signs shall be removed each day at the close of business (Photo 16.4).

#### TABLE 9.0 SIGNAGE STANDARDS

PERMANENT ON-PREMISE SIGN TYPES	MIN. HEIGHT	MAX. HEIGHT	MAX. DISPLAY SURFACE
Building Sign Projecting	8ft	14ft	8 square feet
Signage on Awning	9ft	14ft	50% of the of the Surface Area of the Awning in the Same Plane
Signage on Awning-Side	9ft	14ft	Counts Toward Projected Building Sign
Building Wall Mounted	8ft	1ft Below the Cornice or Eave Line	50 square feet



Photo 10.1-Masonry screen wall at ground level mechanical equipment.



Photo 10.2–Masonry should be the primary material for screen walls at dumpsters and other equipment. When possible, these areas should also be screened overhead to protect views from neighboring uses.

#### **10.0 SCREENING**

Ground and roof level electrical transformers, heat and air conditioning equipment, communication equipment and similar facilities shall be screened from public view (Photo 10.1).

Each site shall provide an acceptable method for solid waste storage and disposal either on-site or nearby that is located to the rear of the property if possible and screened from direct public view by durable brick or masonry materials that complement the exterior treatment of the building. When possible, waste storage areas should also have overhead screening or some sort of roof structure that is compatible with the main building structure roof. (Photo 10.2) The area shall be maintained in compliance with county health department regulations.



Photo11.8—The buildings above meet the design standards which require 75 percent of the exterior facade (excluding windows, trim, and doors) to be covered in a durable, attractive masonry material.



Photo 11.10–Dimensional cornice treatments over upper level decks as shown in photos 21.3 and 21.4 help to create visual interest along the roof line of this street facade. Ground level awnings help accentuate individual framed windows and highlight entrances.



Photo 11.12–Horizontal ribbon windows and reflective vertical glass curtain wall as shown in this photo are discouraged in the UDO.



Photo 11.9-All glass buildings, as shown above, are prohibited in the UDO.



defined by the guidelines. Individual framed windows cover more than 15% of the wall area and ground floor windows are more than 18" above the finished floor.

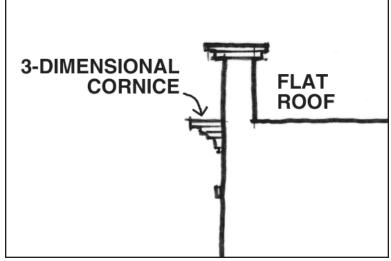


Figure 11.3-Three-dimensional cornice

#### 11.0 ARCHITECTURAL STANDARDS

- 1. Exterior materials and details. High quality materials which are durable and attractive should be used on all buildings. All publicly visible sides of the building should have a minimum of 75 percent of the exterior facades (excluding windows, trim and doors) covered in brick, cast stone, cultured stone, or an alternative masonry material acceptable to the planning staff (Photo 11.8–11.9). Split faced block may be used in the true service areas in combination with the above materials if it is integrally colored, not stained or painted. Concrete panels, prefabricated metal panels, fluted concrete cinder block, cementitious sheathing materials and similar imitation masonry materials, and stucco finishes should be avoided as the main exterior material.
- 2. Roofing. All new buildings should have flat roofs located behind parapet walls with three dimensional cornice treatments (Figure 11.3). Simple gable or hipped roofs may also be integrated into the overall roof design.
- 3. Window/door openings. The first floor facing a public street or park should have windows covering at least 40 percent of the wall area. All upper floors should have windows covering 25% of the wall area. Buildings should have clearly defined and highly visible customer entrances, which should be recessed or framed by a sheltering element such as an overhang, arcade, portico or other roof form (Photo 11.10). Individual framed windows should be provided instead of continuous horizontal "ribbon or band" type windows. Reflective glass, glass curtain walls and other continuous, floor-to-ceiling windows should also be avoided on all floors (Photo 11.12). Windows shall have a minimum sill height of 18 inches off of finished floor (Photo 11.11). The patterns of window openings and details of bays should be used to create a sense of scale and add visual interest to building facades. Wall openings should not span vertically more than one story.

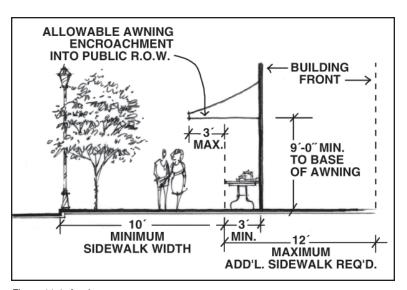


Figure 11.4-Awnings.

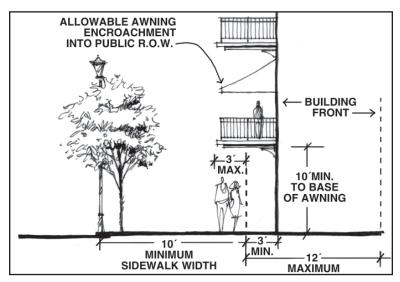


Figure 11.5-Balconies.



Photo 11.15–In this example, awnings are used at both the ground and second levels to provide shelter and architectural interest. In addition, balconies on the second floor meet the height and depth requirements of the UDO.

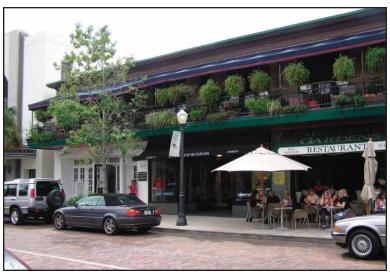


Photo 11.13—A second level restaurant balcony is covered by a large awning. This balcony would be permitted to be enclosed from December through March subject to the approval of the planning staff.



Photo 11.14—The roofed balconies of these second story residential units extend out past the building facade and help to create a sheltered entry to the retail on the lower level.

- 6. Awnings. The design of awnings, including the selection of material and color, should complement the architectural style and character of the building. Large buildings with multiple storefronts should have compatible, though not necessarily identical, awnings. Striping may be allowed on awnings, provided there are no more than 2 colors which should be in keeping with the overall character of the district. Awnings may not be back lit. Awnings should be made of fabric and may project up to three feet into the public right-ofway with the bottom of the canopy at least nine feet above the sidewalk (Figure 11.4). This requires a mandatory referral by Metro Public Works Department.
- 7. Balconies. Balconies may horizontally extend forward from the upper floors of the building facade up to three feet into the public right-of-way with the bottom of the balcony at least ten feet above the sidewalk (Figure 11.14). Balconies may have roofs but are required to be open air, non-heated and cooled areas of the buildings. Seasonal enclosure of balconies may be permitted from December through March, subject to approval by the planning staff provided such enclosures are removed during the remaining months of the year (Photo 11.13). This space shall not count toward the floor area ratio (FAR) limitations for the lot.

## **APPENDIX A**

TRAFFIC REVIEW LETTER
PREPARED FOR THE CITY OF BRENTWOOD, TN
RPM Transportation Consultants
December 2004



December 22, 2004

Mr. Mike Walker, City Manager City of Brentwood P.O. Box 788 Brentwood, TN 37024-0788

Re: Brentwood Towne Center

Brentwood, TN

#### Dear Mike:

As you already know, we have been working with the City of Brentwood and its consultants, Earl Swensson Architects and Hawkins Partners, to evaluate the traffic impacts of redeveloping the area known as Brentwood Towne Center. In 2003, we conducted a Traffic Impact Study for this project, and we have recently conducted additional analyses based on different development scenarios. A brief summary of our evaluations is provided below.

The Traffic Impact Study for Brentwood Towne Center, dated December, 2003, analyzed the traffic impacts of redeveloping the area bound by Old Hickory Boulevard, Franklin Road, Church Street, and Interstate 65 (I-65). The analyses that were conducted for this study were based on the following assumptions:

- 1. The floor area ratio (FAR) for the study area would be 0.38.
- 2. Developments within the study area would consist of 66% retail uses and 34% office uses.
- A 20% reduction factor could be applied to the trip generation values to account for existing trips within the study area, as well as internal, non-motorized, and transit trips to the future development.
- 4. One public parking structure would be provided.
- 5. Restaurants were not considered to be part of the proposed development. Any restaurants that are constructed will increase trip generation values and parking needs.

As presented in the study, the proposed development was expected to generate approximately 10,096 daily trips, 381 AM peak hour trips, and 935 PM peak hour trips. To accommodate the projected traffic volumes in the area, the study identified several roadway improvements that would help to alleviate traffic congestion and provide acceptable levels of service on the area's roadways. However, the study did indicate that traffic congestion would continue to be a problem for the area.

After completion of the study, the City of Brentwood adopted zoning regulations for the Brentwood Towne Center District. These regulations allow a maximum standard FAR of 0.40 and outlined options for increasing the maximum FAR to 0.60. These regulations also limit

developments from reducing parking by more than 20% for off-site public parking lots/structures and from reducing parking by more than 20% for on-street parking.

Recently, the City and its project consultants have considered expanding the limits of Brentwood Towne Center to include some of the properties that are located within the Brentwood House shopping center and along Harpeth Drive. They have also asked us to evaluate the potential impacts of increasing the maximum allowable FAR to 0.75 and allowing residential development within Brentwood Towne Center. We analyzed this scenario for the original study area as follows:

- 1. Developments within the study area were assumed to include a mix of 34% retail uses, 33% office uses, and 33% residential uses.
- 2. A 30% reduction factor was applied to the trip generation values to account for existing, internal, non-motorized, and transit trips. This higher trip reduction value was used because of the positive impact residential development will have on shared trips.
- 3. One public parking structure will be provided.
- 4. Restaurants were not considered to be part of the proposed development. Any restaurants that are constructed will increase trip generation values and parking needs.

Based on these assumptions and an FAR of 0.75, Brentwood Towne Center is expected to generate approximately 10,916 daily trips, 549 AM peak hour trips, and 1,048 PM peak hour trips. These daily and PM peak hour trip values are slightly higher than the trip generation values that were presented in the original Traffic Impact Study. The AM peak hour trip generation value is approximately 44 percent higher than the value that was presented in the study. These values indicate that traffic operations during the AM peak hour will be worse that what was projected in the study.

We conducted additional analyses for this scenario to determine if adequate parking could be provided for an FAR of 0.75. Based on Brentwood's current parking rates, approximately 2,419 parking spaces will be required. Because the proposed development includes a mix of uses, it is reasonable to assume that many of the uses can share parking spaces. Therefore, we also analyzed the parking needs for the proposed development based on the methodologies presented in *Shared Parking*, which is a publication that was conducted under the direction of the Urban Land Institute by Barton-Aschman Associates, Inc. According to the shared parking analysis, approximately 1,861 parking spaces will be needed to serve the proposed development. In order to meet this demand, the City of Brentwood would need to increase the amount of public parking for planned developments within Brentwood Towne Center. At least two public parking structures that provide a total of approximately 1,200 parking spaces should be constructed. Individual developments should provide on-site surface parking, and some developments may need to provide on-site structured parking. The City should also allow on-street parking. The total amount of on-site and on-street parking should be equal to the parking demand (1,861), minus the public structured parking (1,200), which is equal to 661 parking spaces.

Due to the amount of parking that is needed, an FAR of 0.75 may not be realistic for Brentwood Towne Center. Therefore, we also evaluated the proposed development using an FAR of 0.65 (also using the same study area, mix of uses, and trip reduction factor as the previous scenario). Based on an FAR of 0.65, Brentwood Towne Center is expected to generate approximately 9,444 daily trips, 474 AM peak hour trips, and 905 PM peak hour trips. The daily and PM peak

hour trip generation values are similar to those presented in the study and are expected to result in traffic operations that are also similar to what was presented in the study. The AM peak hour trip generation value is approximately 24 percent higher than what was presented in the study. Therefore, traffic operations during the AM peak hour are expected to be more congested than what was presented in the study.

We also evaluated the parking needs for the area based on an FAR of 0.65. According to Brentwood's current parking rates, development at an FAR of 0.65 will require 2,086 parking spaces. Based on the methodologies presented in *Shared Parking*, at least 1,608 parking spaces should be provided for an FAR of 0.65. To meet this demand, the City of Brentwood would need to increase the amount of public parking for planned developments within Brentwood Towne Center. At least two public parking structures that provide a total of approximately 1,000 parking spaces should be constructed. Individual developments should be required to provide on-site surface parking, and some larger developments may need to provide on-site structured parking. On-street parking should also be provided. The total number of onsite and on-street parking spaces should equal approximately 608, which is the difference between the parking demand and the total number of parking spaces in the public parking structures.

I believe that an FAR of 0.75 is unrealistic for Brentwood Towne Center due to the amount of parking that will be required. An FAR of 0.65 may also be difficult to achieve for the same reason. However, assuming that not all properties within Brentwood Towne Center will develop to this extent, an FAR of 0.65 may be a suitable limit for the maximum allowable FAR for this area. To ensure that adequate parking is provided for this scenario, the City of Brentwood should consider changing its off-site parking restrictions for Brentwood Towne Center to allow developments to use a higher percentage of off-site parking spaces. In addition to providing public parking as described above, the City should carefully review development plans for this area to ensure that adequate on-site parking will be provided for individual developments.

We appreciate the opportunity to assist you on this project. If you have any questions or need additional information, please contact me.

Respectfully, Rebecca Brooks, P.E.

## **APPENDIX B**

PARKING DEMAND SECTION OF
TOWN CENTER PARKING DEMAND FEASIBILITY STUDY
PREPARED FOR THE CITY OF BRENTOOD, TN
Gresham Smith and Partners & CHANCE Management Advisors, Inc.
May 2006

#### Section 1 Parking Demand

The first section in this study addresses two key issues:

- Confirm that the type of development envisioned for the Town Center will warrant the construction of parking structures to serve the parking demand; and
- Confirm the projected number of structured parking spaces needed over and beyond street and onsite surface parking spaces.

Each of these questions is explored further in the discussion below.

#### Existing Parking Conditions

A review of the current development and parking conditions in the district was undertaken to better understand the base conditions. The following table provides a count of the approximate number of parking spaces that are available for use today within the district, by parcel. This count includes all spaces that are marked for parking plus an estimate of spaces available in other all-weather surface areas that are available for parking when needed.

Table 1: Cur	rent Parking	Availability ir	n the Town C	Center District
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Current Parking Availability in the Town Center District							
ID	RECOGNIZED NAME	OWNER OF RECORD	PRIMARY USE	PARKING IN USE OR AVAILABLE			
1	Am South	Am South	Bank	26			
2	Dr. Sullivan	Dr. Sullivan	Dentist	28			
3	Phillips Deli	Phillips Deli	Restaurant	48			
4	Brentwood Vet	Brentwood Vet	Veterinarian	17			
5	Little's Shell	Little's Shell	Gas Station	18			
6	Bank Of America	Bank Of America	Bank	54			
7	First Cumberland Prop.	Trent & Owen	Property Management	8			
8	Strouds	Vaughn	Restaurant	18			
9	Professional Bldgs	Callistro Prop	Professional Offices	81			
10	Brentwood House	Brentwood House	Restaurant & Retail	120			
11	Persian Gallery & Retail	Persian Gallery	Restaurant & Retail	20			
12	Retail	Brentwood Village	Insurance & Retail	79			
13	Exxon	Exxon	Gas Station	13			
14	B&C Ace Hardware	Mohammad, S	Hardware Store	19			
15	Brentwood Auto Sales	Geske, K	Auto Sales	24			
16	Campbell Glass	Arnold Realty	Glass Company	20-25			
17	Retail	Downey, John	Veterinarian & Retail	30			
18	Retail	Caroland, Lavada	Hair & Nails	' 13			
19	Brentwood Pub	Hester, Betina	Restaurant	19			
20	Brentwood Shoe Repair	Hester, Peggy	Shoe Repair	12			
21	Retail	Borger, Bruno	Retail	23			
22	Painter & Engraving Co	Hester, Betina	Painter/Engraving Co.	14			
23	China Hut	Norris, Jon	Restaurant	15			
24	Auto Detail	Hester, Betina	Auto Detail	10			
25	Retail	Carl, George	Vacant House	25			

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#### Town Center Parking Feasibility Study

Post Office

Vacant Lot

M-10 Brentwood Lawn Mower

	Current Parl	king Availability in the	Town Center District	
ID	RECOGNIZED NAME	OWNER OF RECORD	PRIMARY USE	PARKING IN USE OR AVAILABLE
26	Retail	Hester, Betina	Retail	49
27	Valvoline Oil	Valvoline Oil	Oil Changes	4
28	Auto Rental	Chun, Alex	Rents Autos	8
29	Carriage House Cleaners	Doulville, Robert	Cleaners	18
30	Retail	Hester, Betina	Bicycles, Rug % Etc	71
31	Texaco	Cannon, Sylvia	Gas Station	15
32	Insurance Company	Arnold Realty	Insurance Sales	20
33	Retail	Sb Properties	Brentwood Jewelers	21
34	Bp Oil	Bp Oil	Gas Station	10
35	Retail & Restaurant	Durham, Paul	Retail & Restaurant	112
36	Top Hat Cleaners	Cym, Inc.	Cleaners	12
37	Fitness Center	Jordan Properties	Fitness Center	25
38	Retail	Randolph, Brian	Retail	25-30
39	Grass Lot	Miles, Joe	Grass Lot	0
40	Bellefant & Miles	Miles & Bellefant	Accountants	17
41	House & Construction	Miles, Joe	House & Construction	LARGE LOT - 0
42	Brentwood Interiors	Huff, Glenn	Interiors Designs	65
43	Vacant Lot With Bldgs	Duffield, Lavada	Vacant Lot	LARGE LOT - 0
44	Vacant Lot	Mt. Lebanon Church	Vacant Lot	SMALL LOT - 0
45	Playhouse Theatre	Mt. Lebanon Church	Theatre	TBD
46	Chemical Feed Systems	CFS Prop	Chemical Feeds	9
47	Vacant Lot	Maxey, Linda	Vacant Lot	0
48	In & Out Furniture	Huff, Glenn	Furniture Store	23-25
49	O'Charley's	Lagasse, Randolph	Restaurant	142
50	Merchants Walk LP	Merchants Walk Lp	Retail	261
	Metro Nashville	Properties (not inclu	ıded in parking analysi	s)
M-1	O'Charley's	Lagasse, Randolph	Parking Lot	IN PARCEL 49
M-2	Merchants Walk Lp	Merchants Walk Lp	Retail	IN PARCEL 50
M-3	Walgreen's	Walgreen's	Drug Store	59
M-4	Corky's	Rackley, William	Restaurant	62
		Madge L Formosa	. iootaanan	02
M-5	Shell Station	Trust	Gas Station	16
M-6	Retail	Brentwood Boardwalk	Retail	18-20
M-7	Retail & Restaurant	Durham, Paul	Retail & Restaurant	IN PARCEL 35
MAG	Deet Office	LLO Destal Carrier	Tiotali a riestadiani	III AIIOLL 00

When the above parking spaces are totaled for the east, middle and west areas of the Town Center district, the current approximate available parking is as follows:

Post Office

Vacant Lot

Mower Repair

15-20

15-20

U.S. Postal Service

Maxey, B.F.

Maxey, B.F.

Table 2: Existing Town Center Parking by Area

District Area	Number of Parcels	Acreage	Approximate Parking Spaces Available February 2006
East of CSX Railroad to I-65	14	8.14	270
Middle between CSX and Franklin Road	22	11.83	450
West of Franklin Road to Eastpark Drive	14	12.91	700
Total	50	32.88	1,420

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The above figures do not reflect approximately twenty (20) on-street spaces that are currently available along Town Center Way and Harpeth Drive.

#### Future Town Center Parking Demand

To assist in estimating future parking demand in the Town Center, the Pattern Book/Design Guidelines for the C-4 Zoning District was reviewed, and meetings were held with area property owners and their representatives to discuss future development concepts. From that process a range of potential development scenarios were developed and discussed with City staff.

Based on the information obtained through these efforts, parking for the Town Center district has been analyzed for three separate and distinct development areas (also shown in Figure 1):

- the "West" Area between Franklin Road west to Eastpark Drive,
- the "Middle" Area between Franklin Road and the CSX gulch, and
- the "East" Area between the CSX gulch east to I-65.

The assumption has been made that the Franklin Road and CSX corridors will establish probable boundaries for consolidated development projects due to challenges associated with driving or walking between each area. It is recognized, however, that the potential does exist for the East and Middle Areas to be connected by additional roadway and/or pedestrian crossings of the CSX gulch. It is also possible that a parking structure could be built or connected across the gulch, thereby linking the two areas through garage circulation. Under these conditions the two district areas could possibly develop in a cohesive and coordinated fashion, should adequate properties be assembled and development economics justify these connections.

Table 3 provides specific information on each of these three development areas including an assumed development scenario for each, for the purpose of the Town Center structured parking analysis. Several development density scenarios were considered based on criteria such as public input, existing land ownership patterns, known development concepts, existing land use, and the age and general condition of existing buildings. Based on this information, the following table was developed to represent the assumed future development type and size. These elements are defined for each area:

- the approximate gross square footage of all developable parcels in each area (taken from the Town Center parcel map),
- an assumed future overall FAR for the area,
- · the resultant total square footage that would be developed for the area with this FAR, and
- the percentage/development square footage of each land use category by area.

As the table indicates, with the suggested FARs the Town Center will achieve approximately 790,000 square feet of mixed use development. This assumes that approximately 23,000 square feet (10% of the development area) will be used for arts or cultural purposes in the East area. These figures do not include development for any parcels outside the designated Brentwood Town Center district, including those in Davidson County immediately to the north.

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#### Table 3: Selected Future Development Scenario

	West Area	Middle Area	East Area	Total
Gross Area SF	562,000	515,000	355,000	1,432,000
Floor-Area Ratio	0.40	0.65	0.65	varies
Development SF	224,800	334,800	230,900	790,500
Land Use Type	% / SF	% / SF	% / SF	SF
Retail	45% / 101,200	40% / 133,900	15% / 34,600	269,700
Retail-Restaurant	20% / 45,000	25% / 83,700	10% / 23,100	151,800
Office	15% / 33,700	10% / 33,500	15% / 34,600	101,800
Residential	20% / 45,000	25% / 83,700	50% / 115,400	244,100
Arts	0%/0	0%/0	10% / 23,100	23,100
TOTAL	100% / 224,900	100% / 334,800	100% / 230,800	790,500

Note: Some numbers rounded

#### Structured Parking Space Demand

Based on the assumed type, location and amount of development in each area as indicated in the previous table, the total number of parking spaces necessary to adequately serve individual land uses in each development area was calculated. The following table identifies this total parking demand, by district area, for the selected land use scenario described above. The parking demand rates for the individual land uses have been estimated based on the ITE Parking Generation Manual, current City parking requirements, and the rates used in the December, 2004 RPM parking analysis.

Table 4: Parking Demand by Land Use by Area

Parking Demand by Land Use by Area									
Land Use Spaces/ Type 1000 SF	Spaces/	West Area		Middle Area		East Area		Total	
	1000 SF	SF	Spaces	SF	Spaces	SF	Spaces	SF	Spaces
Retail	3.0	101,200	304	133,900	402	34,600	104	300,100	810
Retail- Restaurant	6.6	45,000	297	83,700	552	23,100	152	266,600	1,001
Office	3.0	33,700	101	33,500	101	34,600	104	164,800	306
Residential	1.5	45,000	68	83,700	126	115,400	173	117,700	367
Arts	20.0	0	0	0	0	23,100	462	10,700	462
TOTAL		224,900	770	334,800	1,181	230,800	995	790,500	2,946

Based on the above analysis, approximately 3,000 parking spaces are potentially needed in the Town Center district to accommodate the needs of the assumed land use types and densities assumed. However, due to the higher assumed land use densities in the Middle and East Areas, shared parking between land uses is anticipated to occur. Generally speaking, higher land use density yields higher amounts of shared parking reductions.

For this analysis, shared parking reductions were assumed to be 20% for retail and restaurant uses, 25% for office and residential uses, and 5% for arts. With these reductions, total parking demand is reduced to approximately 2,400 spaces. After consideration of the land available for on-street and off-

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#### Town Center Parking Feasibility Study

street surface parking given the assumed land use densities, approximately 1,140 structured parking spaces are estimated to be needed in the Middle and East Areas. It should be noted that no structured parking is assumed to be necessary in the West Area with the relatively low (0.40) land use density that has been assumed.

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