Sec. 54-120. Definitions.

Thoroughfare. The word "thoroughfare" shall mean the entire width between platted property boundary lines of every way-when any part thereof is open for purposes of vehicular travel and pedestrian travel. Thoroughfares shall be taken to include any accessway, road, highway, street, avenue, boulevard, parkway, alley, lane, drive, viaduct, bridge and approaches thereto within the city. Thoroughfares shall provide access to lots, open spaces and other thoroughfares. Thoroughfares may be dedicated public right-of-way which affords the principal means of access to abutting property and which has been accepted for maintenance by the City, County or the S.C. Department of Transportation. Thoroughfares may also be privately owned and maintained and dedicated for private or public use.

Sec. 54-821. Thoroughfare Design Standards

a. **General Requirements:** Thoroughfares shall be designed to balance safety, mobility, community goals and the environment. Thoroughfares shall provide appropriate pedestrian and vehicle mobility options, shall provide appropriate locations for utilities and shall be designed to support adjacent future development. Thoroughfares addressed in this section are to have low to moderate vehicular speed (25mph or less), varying traffic volumes and shall serve a range of land uses. The layout of Thoroughfares as to arrangement, character, width, grade, and location may be required to conform to the general plan of the entire tract where completed, to adjoining Thoroughfare systems of adjoining properties, to the major thoroughfare plans of the city, and to the topography, natural features, and drainage systems to be provided.

b. **Contextual Design:** Thoroughfares shall be designed in context with the urban form, intended users (motorists, pedestrians, bicyclist, transit users) and desired design speed of the land use area through which the Thoroughfares pass. The land use area classifications in Table 8.1-1 shall be utilized when determining the appropriate context sensitive Thoroughfare design (see Section 54-821(m) for Thoroughfare assemblies and corresponding land use areas).

   Land use area classifications must be calibrated to correspond with existing land areas in the City of Charleston. Land use area descriptions and graphic examples are provided below in Table 8.1-1 to assist applicants and City staff in the calibration process and specifically identifying the land use area of which a proposed development is part of. Land use and project calibration shall be determined during the pre-application review process, which is required prior to making any official submittal for subdivision. Final determination regarding land use and project calibration shall be per the discretion of the Zoning Administrator. Following land use calibration, appropriate context sensitive Thoroughfares shall be determined (Section 54-821(m)).

TABLE 8.1-1 LAND USE AREA CLASSIFICATIONS

Natural	Rural	Sub-urban	Urban General	Urban Center	Urban Core

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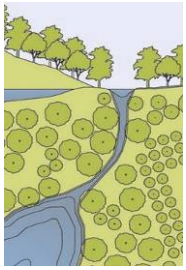
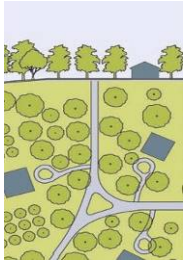
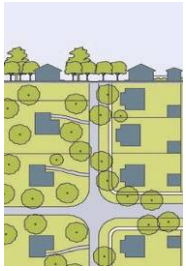
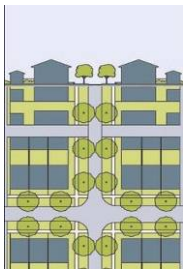
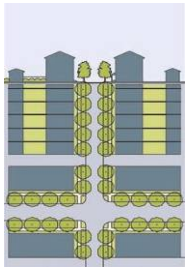
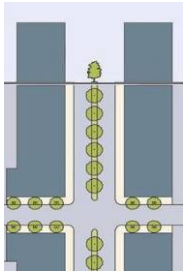
TABLE 8.1-1 LAND USE AREA CLASSIFICATIONS (continued)

Natural:	Natural land use areas consist of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.			
Rural:	Rural land use areas consist of land in an open or cultivated state or sparsely settled. These areas may include woodland, agricultural lands, grasslands and wetland areas.			
Sub-Urban:	Sub-Urban areas are predominately low density residential areas that may be adjacent to higher density or mixed use areas.			
Urban General:	Urban General land use areas consists of mixed use but primarily resident. urban fabric. Urban General may have a wide range of bldg types including single-family, sideyard & rowhouses.			
Urban Center:	Urban Center land use areas include predominately higher density mixed use building types that accommodate retail, offices, rowhouses and apartments.			
Urban Core:	Urban Core – Urban Core land use areas consist of the highest density and height with the greatest variety of uses and civic buildings of regional importance.			

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c. **Emergency/Service Vehicle Access and Building Code and Fire Code Compliance:** Emergency and service vehicle access shall be considered in the design of thoroughfares and thoroughfare systems and minimum requirements shall be met for the proposed subdivision to be approved. Failure to satisfy all emergency vehicle access requirements of ratified Building Codes and Fire Codes in the design of thoroughfares and thoroughfare systems will result in additional requirements when constructing buildings to include, but not be limited to, a requirement for installation of a building fire sprinkler system.

d. **Public Transit:** Thoroughfares shall be designed to accommodate public transit. Design accommodations may include provisions for transit pull off areas and modified curb radii. Curb radii may be tested with turn simulation software for feasibility.

e. **Bicycle Provisions:** Thoroughfares and community design should provide an opportunity for bicycle travel via a network of bicycle routes, lanes and trails. Bicycle travel networks shall be connected to existing or proposed regional networks wherever possible. A bicycle route shall be provided within the vehicular thoroughfare where suitable for shared use of bicycles and vehicles traveling at low speeds and may be indicated with the use of "sharrows" (see Figures 821.1). A dedicated and marked bicycle lane shall be provided within a moderate-speed vehicular thoroughfare. A bicycle trail may be provided separately from the vehicular thoroughfare.

Figure 821.1 Sharrow examples.

f. **Accessibility:** Thoroughfares shall be designed to accommodate ADA requirements.

g. **Utilities:** Thoroughfares shall be designed to accommodate utilities within the right-of-way including, but not limited to, stormwater drainage, lighting, water, sewer, electric, gas, etc.

h. **Public vs. Private Thoroughfares:** Thoroughfares may be public or private. However, justification for creating private streets shall be provided in writing and private covenants and restrictions shall be provided guaranteeing the long-term private ownership and maintenance of such streets.

i. **Thoroughfare Access Restrictions:** Reserve strips or parcels controlling access to public or private Thoroughfares shall be prohibited. Gates shall not be permitted within public or private Thoroughfares.

j. **Thoroughfare Narrowing Devices:** Thoroughfare Narrowing Devices including, but not limited to, curb extensions, bulbouts, neckdowns and corner bulges shall not be permitted unless approved by the Design Review Committee.

k. **Thoroughfare Construction Requirements:** All Thoroughfares, whether public or private, shall be paved in accordance with minimum requirements on file in the office of the city engineer. Final approval, however, may be granted prior to paving, provided adequate bond or escrow of funds conditioned on said paving being completed within one year of the final approval is filed with the city treasurer.

l. **Existing Thoroughfares:** Thoroughfares of an existing subdivision shall not be used as the sole means of ingress and egress in developing a new subdivision or extending an existing one, when other access can be made available and when in the opinion of the city engineer such use would create a safety hazard.

m. **Jurisdictional Wetlands and Critical Area:** No Thoroughfare shall be located within a critical area or freshwater or saltwater wetland unless the applicant shall supply to the City the written

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approval of OCRM or the U.S. Army Corps of Engineers, or both, as appropriate.

n. **Connectivity:** Thoroughfares shall be designed as an interconnected Thoroughfare system. An interconnected Thoroughfare system is necessary in order to provide for access between developments without returning to major roadways, in order to provide access for emergency and service vehicles, in order to enhance and encourage non-vehicular travel, in order to plan for future development and transportation needs and in order to create neighborhoods. The following Thoroughfare connectivity requirements shall apply:

1. All subdivisions and developments shall include improved Thoroughfare connections to other Thoroughfares within the development and to adjoining Thoroughfares, neighborhoods, existing developments, developed tracts and undeveloped tracts. However, subdivisions and developments which are physically isolated by water, marsh, or wetlands from other Thoroughfares, subdivisions, neighborhoods, existing developments or undeveloped tracts, shall not be required to include (thoroughfare)connections.

2. Thoroughfare connections to adjoining undeveloped tracts shall include a temporary turnaround, in the form of easements or right-of-way, until such time that the adjoining tract is developed and the temporary turnaround area can be abandoned.

3. The appropriateness, location and application of such required Thoroughfare connections are subject to the review and approval of the Zoning Administrator. Thoroughfare connections shall be made according to appropriate land planning practices for the type of development proposed and the characteristics of adjoining properties.

o. **Thoroughfare Names:** No Thoroughfare names shall be used which will duplicate or be confused with the names of existing Thoroughfares. Thoroughfare names proposed by the subdivider shall be reserved with Charleston County 911 and the City GIS Division and where duplication or confusion with names of existing Thoroughfares occurs, the City shall require the subdivider to substitute names free from duplication or confusion. The City GIS Division shall maintain an up-to-date file of all Thoroughfare names in use in the county available for the guidance of subdividers.

p. **Curb Radius Modifications:**

1. The dimensions for curb radii standards in Section 54-821(v) are provided to accommodate pedestrians as well as emergency and service vehicles. Smaller curb radii provide for a narrower street crossing, reduces vehicle travel speed. Larger curb radii allow higher turning speeds which compromise community walkability. See **Figure 821.2**, which illustrates the difference between the curb radius and effective turning radius. In the event that a curb radius needs to be modified to accommodate emergency and service vehicles, turn simulation software should be used and the radius should be increased incrementally until it is just large enough to allow safe, slow passage of the design emergency or service vehicle.

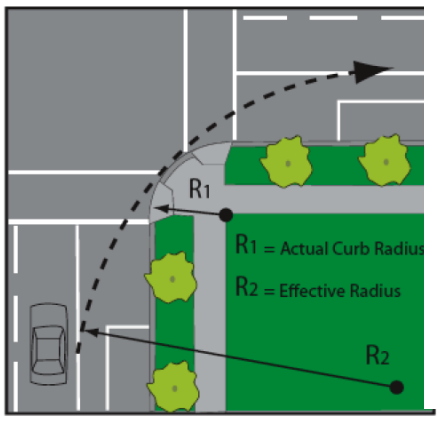

Figure 821:2 Diagram of Actual Curb Radius and Effective Radius; Based on AASHTO Policy of Geometric Design of Highways and Street, 2004.

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2. Rear alley intersection may incorporate a "driveway pan" intersection design rather than a curb radius if approved by the Department of Public Service. (See **Figure 821:3**)

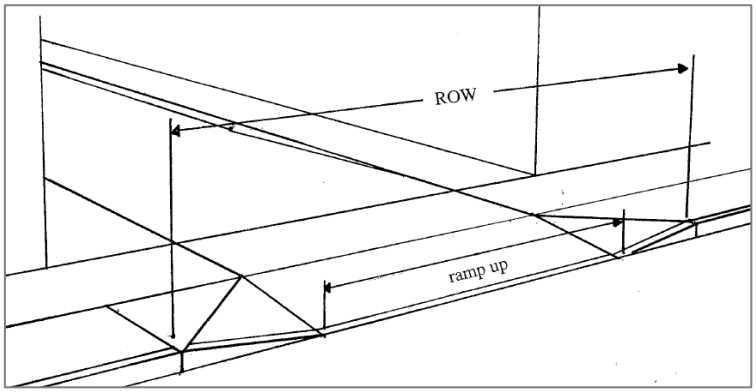

Figure 821:3 Example of a rear alley driveway intersection design.

q. **Parking Modifications:** In Sub-Urban land use areas parking lanes shown in the Thoroughfare assemblies (Section 54-821(m)) for residential Street types may be modified.....

r. **Dead-end Thoroughfares and Cul-de-sacs:** Dead-end Thoroughfares designed to be so permanently, shall not be longer than eight hundred (800) feet except where land cannot be subdivided otherwise practicably and shall be provided at the closed end with a turn-around having a (thoroughfare) property line diameter of at least eighty (80) feet.

s. **Lots Abutting Major Thoroughfares:** Subdivisions which abut or have included within the proposed area to be subdivided any limited access~~,~~ or major Thoroughfare shall provide:

1. A marginal access Thoroughfare, or
2. Reverse frontage with screen planting contained in a non-access reservation along the rear property line, or
3. Lots with rear service drives, or
4. Other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.

t. **Gathering Place and Neighborhood District :** The Thoroughfare types (54-821(l)) and assemblies (54-821(m)) shall not apply for the Gathering Place District and Neighborhood District. See Sections 54-274 through 54-285 for Gathering Place standards and Sections 54-286 through 54-295 and Section 54-821(n) for Neighborhood District standards.

u. **Thoroughfare Types:** Thoroughfares types shall be defined as follows:

Avenue (AV): a thoroughfare of high vehicular capacity and low to moderate speed, acting as a short distance connector between urban centers and usually equipped with a landscaped median.

Bicycle Lane (BL): a dedicated lane for cycling within a moderate-speed vehicular thoroughfare, demarcated by striping.

Bicycle Route (BR): a thoroughfare suitable for the shared use of bicycles and automobiles moving at slow speeds.

Bicycle Trail (BT): a bicycle way running independently of a vehicular thoroughfare.

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Boulevard (BV): a thoroughfare designed for high vehicular capacity and moderate speed, traversing an urbanized area. Boulevards are usually equipped with slip roads buffering sidewalks and buildings.

Drive (DR): a thoroughfare along the boundary between an urbanized and a natural condition, usually along a waterfront, park or promontory. One side has the urban character of a thoroughfare, with sidewalk and building, while the other side has the qualities of a road or parkway, with naturalistic planting and rural details.

Park Street (PS): a sub-urban, urban general or urban center thoroughfare with a wide center median (width may vary) that may serve as an open space feature.

Path (PT): a pedestrian way traversing a park or rural area, with landscape matching the contiguous open space, ideally connecting directly with the urban sidewalk network.

Rear Alley (RA): a vehicular way located to the rear of lots providing access to service areas, parking, and outbuildings and containing utility easements. Rear alleys should be paved from building face to building faces or lot lines.

Rear Lane (RL): a vehicular way located to the rear of lots providing access to service areas, parking, and outbuildings and containing utility easements. Rear lanes may be paved lightly to driveway standards. The streetscape consists of gravel or landscaped edges.
Road (RD): a local, rural and sub-urban thoroughfare of low-to-moderate vehicular speed and capacity. This type is allocated to more rural areas.

Slip Road (SR): an outer vehicular lane or lanes of a thoroughfare designed for slow speeds while inner lanes carry higher speed traffic and separated from them by a planted median. (Syn: access lane, service lane)

Street (ST): sub-urban and urban thoroughfare of low speed and capacity.

Yield (Y): characterizing a thoroughfare that has two-way traffic but only one effective travel lane because of parked cars, necessitating slow movement and driver negotiation.

v. **Thoroughfare Types and Design Assemblies:** A subdivision or development may include several Thoroughfare types depending on the land use, character of proposed buildings and intended thoroughfare user. A choice of Thoroughfare types are provided below. For additional information, including an excerpt of the SmartCode guidelines from which the following thoroughfares are based see Appendix M.

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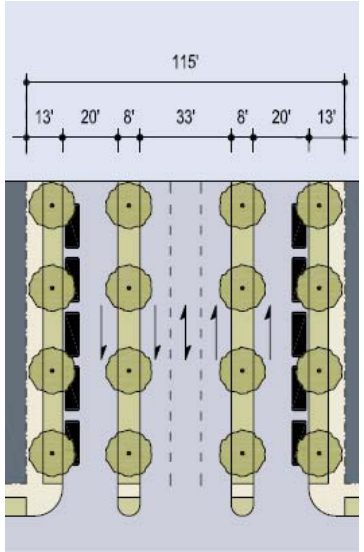
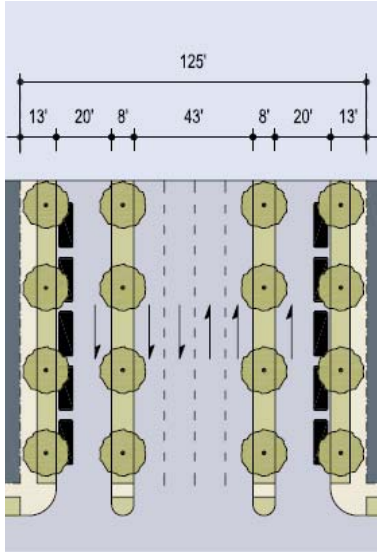
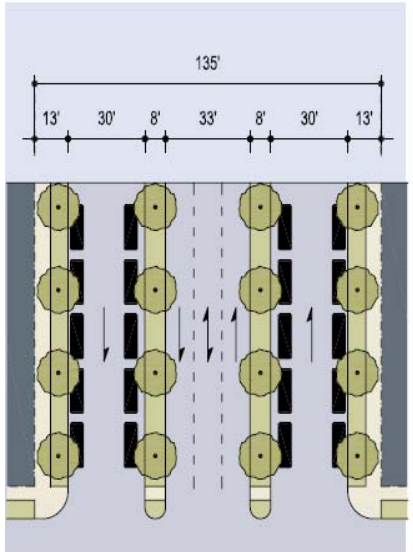
Key:
ST-57-20-BR
- Alt. Transportation
- Pavement Width
- Right of Way
- Thoroughfare Type

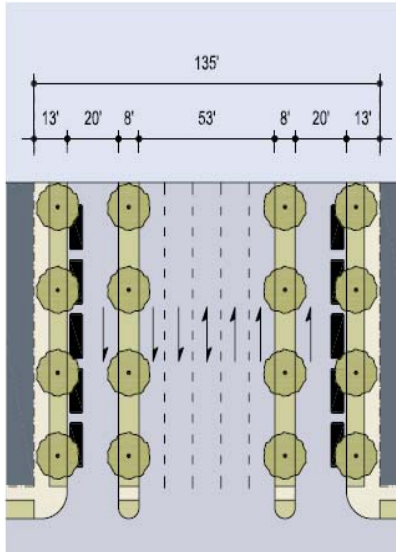
THOROUGHFARE TYPES

BV:	Boulevard
AV:	Avenue
PW:	Parkway
PS:	Park Street
CS:	Commercial Street
DR:	Drive
ST:	Street
YS:	Yield Street
RD:	Road
RA:	Rear Alley
RL:	Rear Lane
BT:	Bicycle Trail
BL:	Bicycle Lane
BR:	Bicycle Route
PT:	Path
TR:	Transit Route









BOULEVARDS (BV)	**BV-115-33**[1]	**BV-125-43**[1]	**BV-135-33**[1]	**BV-135-53**[1]
Thoroughfare Type	Boulevard	Boulevard	Boulevard	Boulevard
Use area	Urban center & urban core	Urban center & urban core	Urban center & urban core	Urban center & urban core
Movement	Free movement (inner lanes)	Free movement (inner lanes)	Free movement (inner lanes)	Free movement (inner lanes)
Vehicular Design Speed	35 MPH	35 MPH	35 MPH	35 MPH
Traffic Lanes	3 lanes, 1turning lane & 2 one-way slip roads	4 lanes & 2 one-way slip roads	3 lanes, 1 turning lane & 2 one-way slip roads	5 lanes, 1 turning lane & 2 one-way slip roads
Parking Lanes	8 ft (one side of each slip road)	8 ft (one side of each slip road)	8 ft (both sides on slip roads)	8 ft (one side of each slip road)
ROW Width	115 ft	125 ft	135 ft	135 ft
*Pavement Width	20 ft- 33 ft- 20 ft	20 ft – 43 ft – 20 ft	30 ft – 33 ft – 30 ft	20 ft- 53 ft – 20 ft
Curb Radius	10 ft (20 ft)	10 ft (20 ft)	10 ft (20 ft)	10 ft (20 ft)
Sidewalk Width	6 ft sidewalk	6 ft sidewalk	6 ft sidewalk	6 ft sidewalk
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter
Planter Width	7 ft & 8 ft continuous planter	7 ft & 8 ft continuous planter	7 ft & 8 ft continuous planter	7 ft & 8 ft continuous planter
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR	BR, TR	BR, TR

*Pavement width is measured to face of curb

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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Key:
ST-57-20-BR
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YS:	Yield Street
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RL:	Rear Lane
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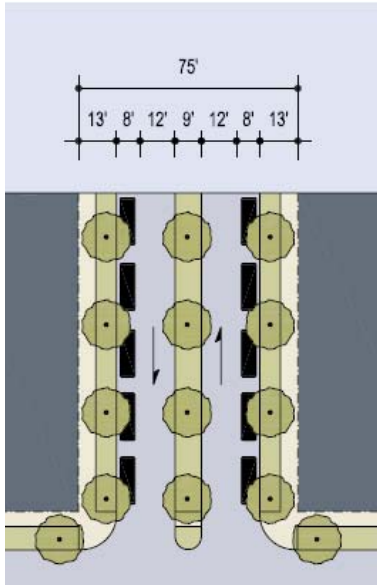

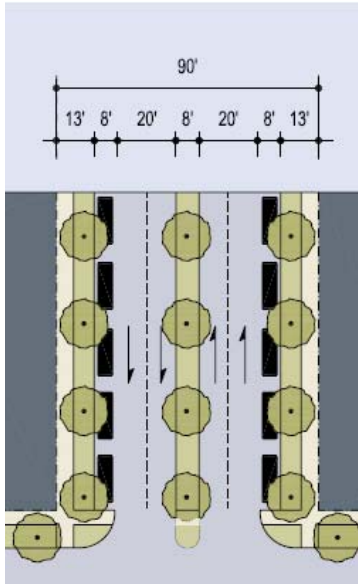

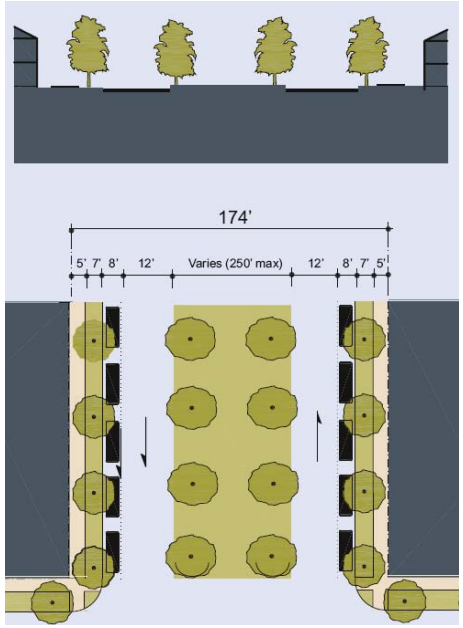

AVENUES (AV)	AV-75-40[1]	AV-90-56[1]
Thoroughfare Type	Avenue	Avenue
Use area	Sub-urban, general urban & urban center	Sub-urban, general urban & urban center
Movement	Slow movement	Slow movement
Vehicular Design Speed	25 MPH	25 MPH
Traffic Lanes	2 lanes	4 lanes
Parking Lanes	Both sides @ 8 ft marked	Both sides @ 8 ft marked
ROW Width	75 ft	90 ft
*Pavement Width	40 ft	56 ft
Curb Radius	10 ft (20 ft)	10 ft (20 ft)
Sidewalk Width	6 ft sidewalk	6 ft sidewalk
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter
Planter Width	7 ft continuous planter	7 ft continuous planter
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR

PARK STREET (PS)	PS-174-40[2]
Thoroughfare Type	Park Street
Use area	Sub-urban, general urban & urban center
Movement	Free movement
Vehicular Design Speed	25 MPH
Traffic Lanes	2 lanes
Parking Lanes	Both sides @ 8 ft marked
ROW Width	174 ft
*Pavement Width	40 ft
Curb Radius	15 ft
Sidewalk Width	5 ft
Road Edge Treatment	Curb/curb and gutter
Planter Width	7 ft continuous planter
Planting	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR

*Pavement width is measured to face of curb

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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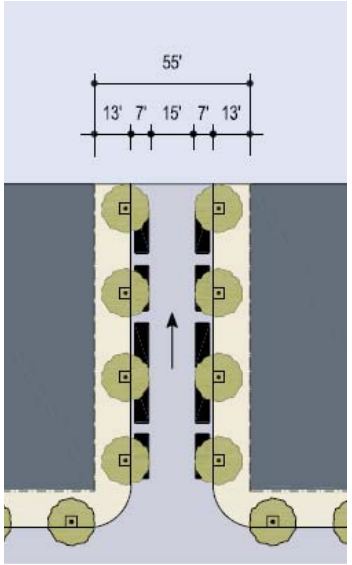

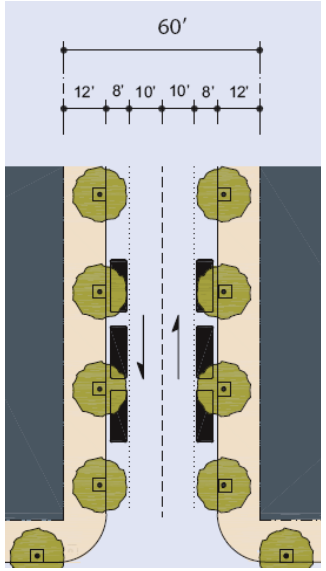

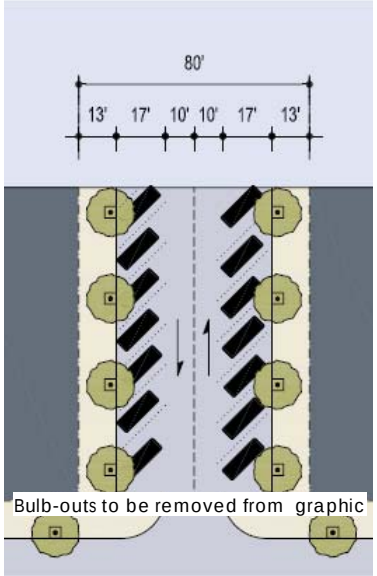

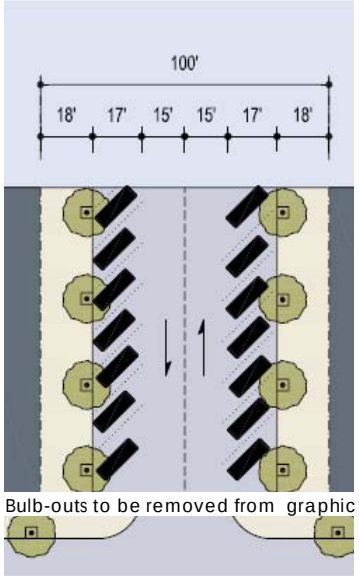

COMMERCIAL STREETS (CS)	CS-55-29[1]	CS-60-36[2]	CS-80-54[1]	CS-100-64[1] eliminate bulb-outs on graphic
Thoroughfare Type	Commercial Street	Commercial Street	Commercial Street	Commercial Street
Use area	Urban center & urban core	Urban center	Urban center & urban core	Urban center & urban core
Movement	Slow movement	Free movement	Slow movement	Slow movement
Vehicular Design Speed	20 MPH	20 MPH	25 MPH (15 MPH)	25 MPH (15 MPH)
Traffic Lanes	1 lane	2 lanes	2 lanes	2 lanes
Parking Lanes	Both sides @ 7 ft marked	Both sides @ 8 ft marked	Both sides angled @ 17 (18) ft marked	Both sides angled @ 17 (18) ft marked
ROW Width	55 ft	60 ft	80 ft	100 ft
*Pavement Width	29 ft	36 ft	54 ft	64 ft
Curb Radius	15 ft	15 ft (20 ft)	10 ft (15 ft)	10 ft (15 ft)
Sidewalk Width	13 ft sidewalk	12 ft	13 ft sidewalk	18 ft sidewalk
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter
Planter Width	Tree well - See Section 54-831(e.) street tree standards	Tree well - See Section 54-831(e.) street tree standards	Tree well - See Section 54-831(e.) street tree standards	Tree well - See Section 54-831(e.) street tree standards
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR	BR, TR	BR, TR

*Pavement width is measured to face of curb

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

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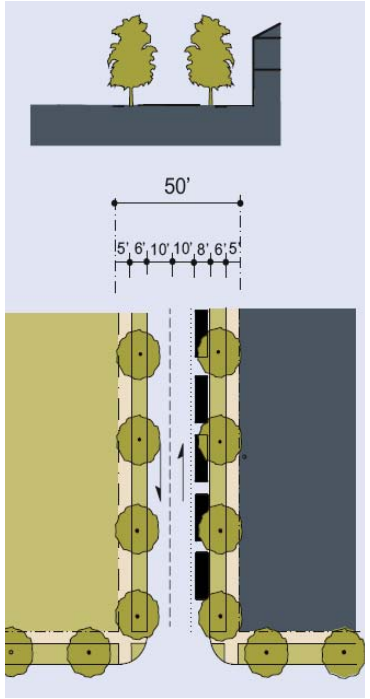
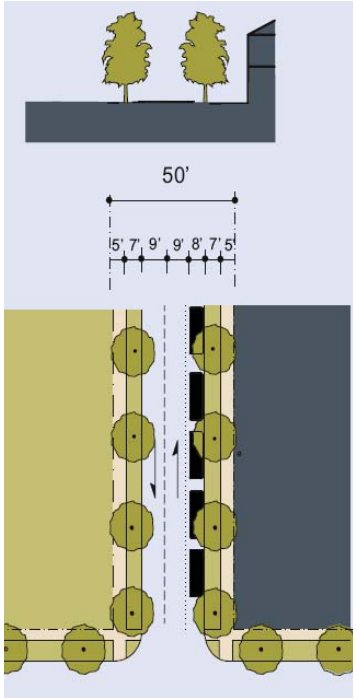
ST-57-20-BR
- Alt. Transportation
- Pavement Width
- Right of Way
- Thoroughfare Type

THOROUGHFARE TYPES

BV:	Boulevard
AV:	Avenue
PW:	Parkway
PS:	Park Street
CS:	Commercial Street
DR:	Drive
ST:	Street
YS:	Yield Street
RD:	Road
RA:	Rear Alley
RL:	Rear Lane
BT:	Bicycle Trail
BL:	Bicycle Lane
BR:	Bicycle Route
PT:	Path
TR:	Transit Route





DRIVES (DR):	DR-50-28[2]	DR-50-26[2]
Thoroughfare Type	Drive	Drive
Use area	Sub-urban, general urban & urban center	Sub-urban, general urban & urban center
Movement	Free movement	Slow movement
Vehicular Design Speed	25 MPH	20 MPH
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	1 side @ 8 ft marked	1 side @ 8 ft marked
ROW Width	50 ft	50 ft
*Pavement Width	28 ft	26 ft
Curb Radius	15 ft (20 ft)	15 ft (20 ft)
Sidewalk Width	5 ft	5 ft/12 ft
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter
Planter Width	6 ft continuous planter	7 ft or tree well See Section 54-831(e.) street tree standards
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR

*Pavement width is measured to face of curb

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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Key:
ST-57-20-BR
- Alt. Transportation
- Pavement Width
- Right of Way
- Thoroughfare Type

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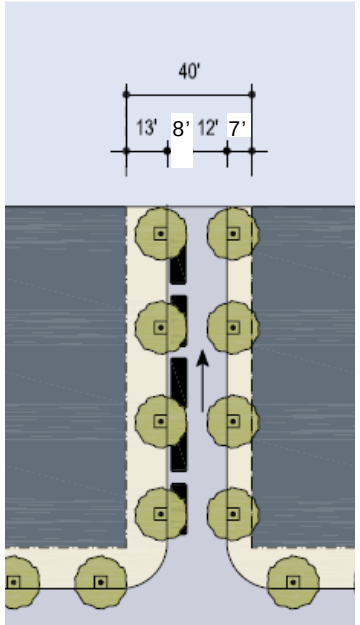

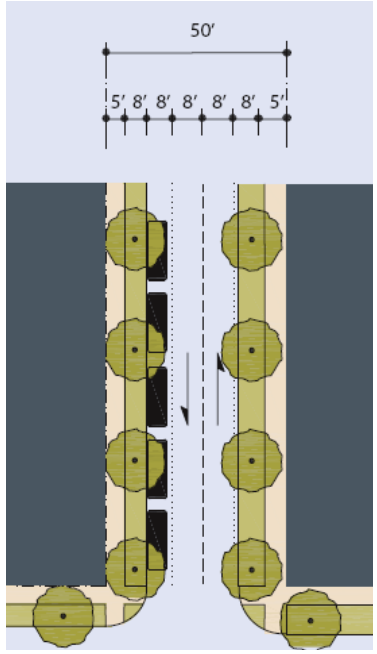

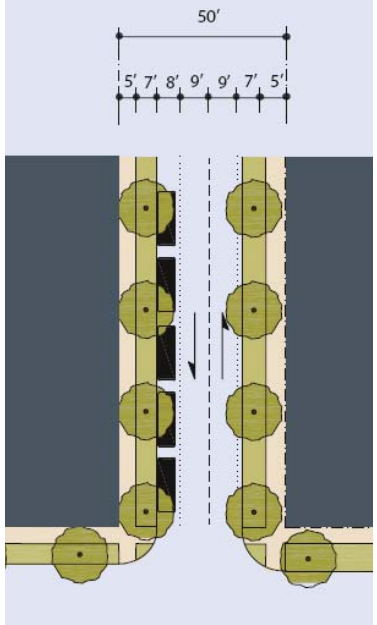

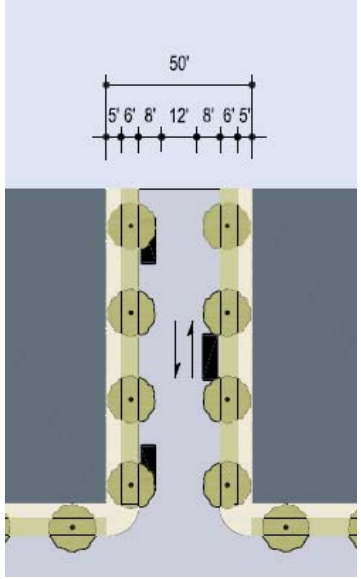

STREETS (ST):		ST-50-24[2]	ST-50-26[1, 2]	ST-50-28[1]
Thoroughfare Type	Street	Street	Street	Street
Use area	Urban center & urban core	Sub-urban, general urban & urban center	Sub-urban, general urban, urban center & urban core	Sub-Urban, Urban general
Movement	One-way	Slow movement	Free movement	Yield movement
Vehicular Design Speed	20 MPH	15 MPH	20 MPH	20 MPH
Traffic Lanes	One way - one lane	2 lanes	2 lanes	2 lanes
Parking Lanes	1 side @ 8 ft marked	1 side @ 8 ft marked	1 side @ 8 ft marked	Both sides @ 8 ft unmarked
ROW Width	40 ft	50 ft	50 ft	50 ft
*Pavement Width	20 ft	24 ft	26 ft	28 ft
Curb Radius	15 ft	15 ft	10 ft (15 ft)	10 ft (15 ft)
Sidewalk Width	13/7 ft sidewalk	5 ft	5 ft sidewalk	5 ft sidewalk
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter
Planter Width	Tree Well - See Section 54-831(e.) street tree standards	8 ft continuous planter	7 ft continuous planter	6 ft continuous planter
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR	BR, TR	BR, TR

*Pavement width is measured to face of curb

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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Key:
ST-57-20-BL
- Alt. Transportation
- Pavement Width
- Right of Way
- Thoroughfare Type

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BV:	Boulevard
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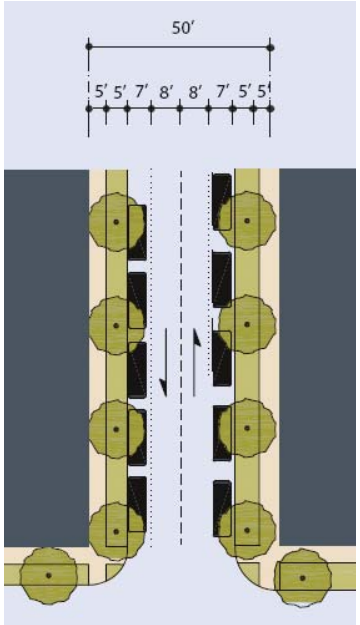

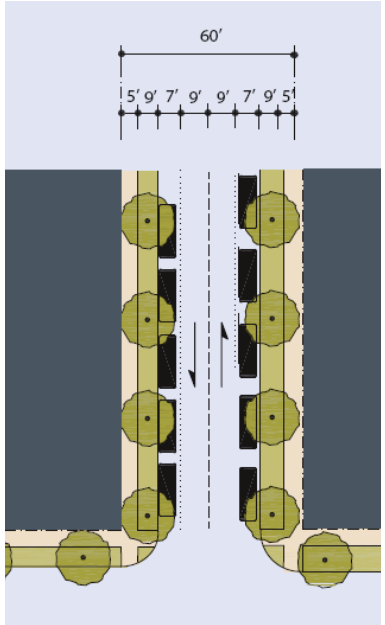

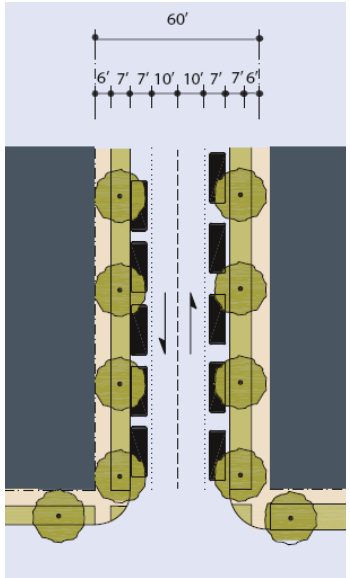

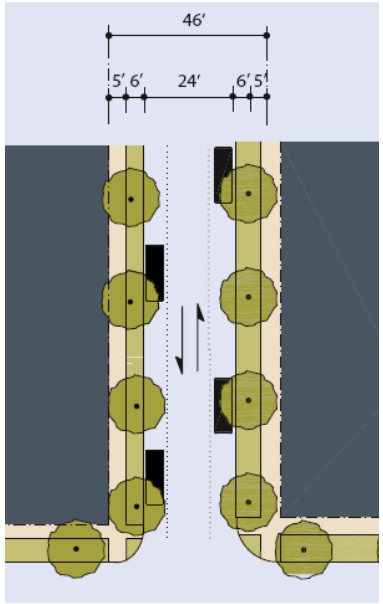

STREETS (ST):	ST-50-30[2]	ST-60-32[2]	ST-60-34[2]	ST-46-24[2]
Thoroughfare Type	Street	Street	Street	Yield Street
Use area	Sub-urban, general urban & urban center	Sub-urban, general urban & urban center	Sub-urban, general urban & urban center	Sub-urban, general urban & urban center
Movement	Slow movement	Slow movement	Slow movement	Yield movement
Vehicular Design Speed	15 MPH	25 MPH	20 MPH	15 MPH
Traffic Lanes	2 lanes	2 lanes	2 lanes	2 yield lanes
Parking Lanes	Both sides @ 7 ft marked	Both sides @ 7 ft marked	Both sides @ 7 ft marked	Alternate sides as marked**
ROW Width	50 ft	60 ft	60 ft	46 ft
*Pavement Width	30 ft (9 ft travel lanes)	32 ft (need 10ft travel or lower mph)	34 ft	24 ft
Curb Radius	15 ft	15 ft (20 ft)	15 ft (20 ft)	15 ft
Sidewalk Width	5 ft	5 ft	6 ft	5 ft
Road Edge Treatment	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter	Curb/curb and gutter
Planter Width	5 ft continuous planter	9 ft continuous planter	7 ft continuous planter	6 ft continuous planter
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BR, TR	BR, TR	BR, TR	BR, TR

*Pavement width is measured to face of curb
**Use "boxed" parking, where parking spaces are outlined on the pavement to create a "chicane" effect.
1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2
2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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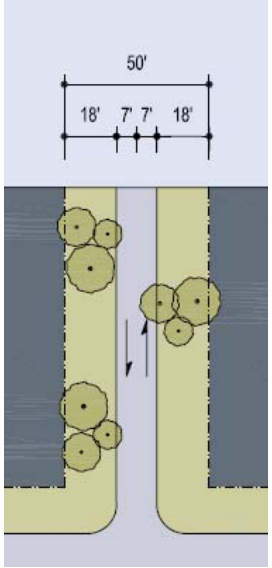

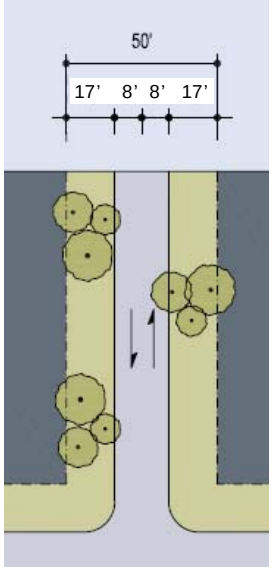

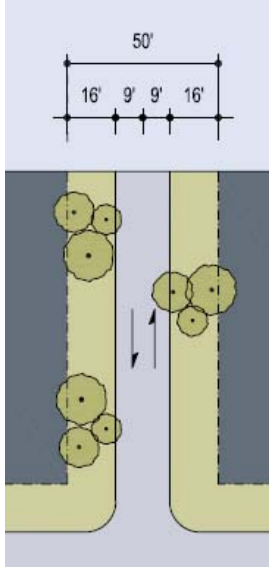

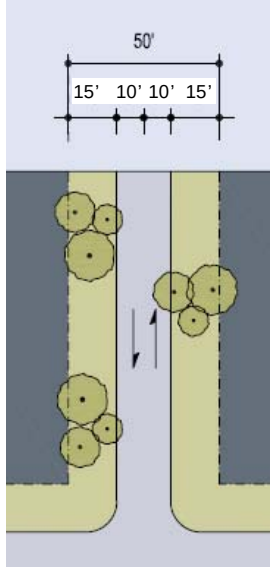

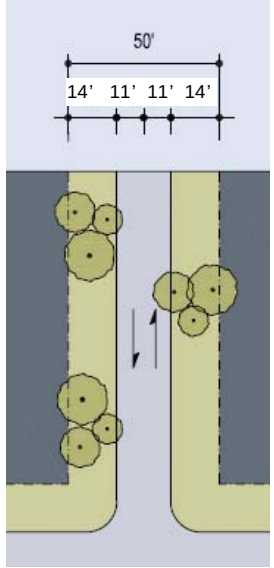

ROADS (RD):	RD-50-14[1]	RD-50-16	RD-50-18[1]	RD-50-20	RD-50-22
Thoroughfare Type	Road	Road	Road	Road	Road
Use area	Natural, rural & sub-urban	Natural, rural & sub-urban	Natural, rural & sub-urban	Natural, rural & sub-urban	Natural, rural & sub-urban
Movement	Yield movement	Slow movement	Slow movement	Slow movement	Slow movement
Vehicular Design Speed	15 MPH	15 MPH	15 MPH	15 MPH	15 MPH
Traffic Lanes	2 lanes	2 lanes	2 lanes	2 lanes	2 lanes
Parking Lanes	n/a	n/a	n/a	n/a	n/a
ROW Width	50 ft	50 ft	50 ft	50 ft	50 ft
Pavement Width	14 ft	16 ft	18 ft	20 ft	22 ft
Curb Radius	25 ft (15 ft)	25 ft (15 ft)	25 ft (15 ft)	25 ft (15 ft)	25 ft (15 ft)
Sidewalk Width*	Path optional	Path optional	Path optional	Path optional	Path optional
Road Edge Treatment	Swale**	Swale**	Swale**	Swale**	Swale**
Planter Width	Swale	Swale	Swale	Swale	Swale
Planting	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards	See Section 54-831(e.) street tree standards
Alt. Transportation	BT on shoulder or outside of ROW	BT on shoulder or outside of ROW	BT on shoulder or outside of ROW	BT on shoulder or outside of ROW	BT on shoulder or outside of ROW

*Sidewalks or path required if used in Sub-urban?
**Use of swale requires engineering principles and geotechnical data to support its design application.

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2
2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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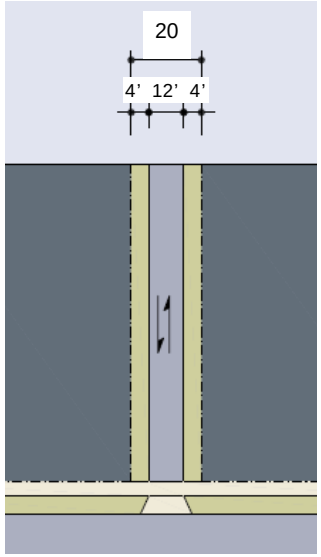

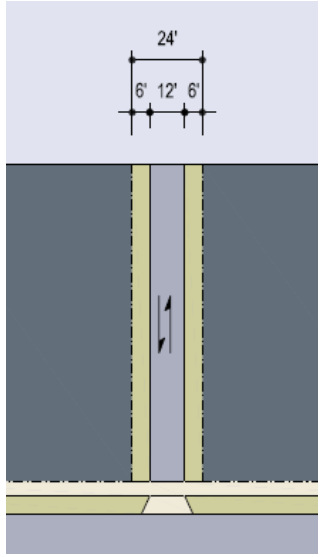

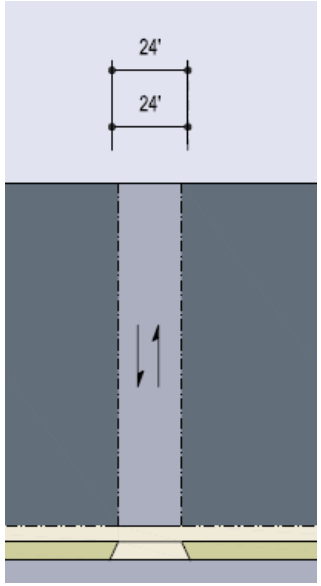

REAR LANE (RL): REAR ALLEY (RA):	RA-20-12 Existing City alley section	RL-24-12[1]	RA-24-24[1]
Thoroughfare Type	Rear Alley	Rear Lane	Rear Alley
Use area	Sub-Urban	Sub-urban	General urban, urban center, urban core
Movement	Slow movement	Yield movement	Slow movement
Vehicular Design Speed	10 MPH	10 MPH	10 MPH
Traffic Lanes	n/a	n/a	n/a
Parking Lanes	None	None	None
ROW Width	20 ft	24 ft	24 ft
Pavement Width	12 ft	12 ft	24 ft
Curb Radius	Taper **	Taper **	Taper **
Sidewalk Width	None	None	None
Road Edge Treatment	Inverted crown***	Inverted crown***	Inverted crown***
Planter Width	None	None	None
Planting	None	None	None
Alt. Transportation	N/A	N/A	N/A

*See section 54-821(q)(2) for intersection detail.
**Use of inverted crown requires engineering principles and geotechnical data to support its design application; otherwise thoroughfare section must have curb & gutter or ribbon curb.

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2
2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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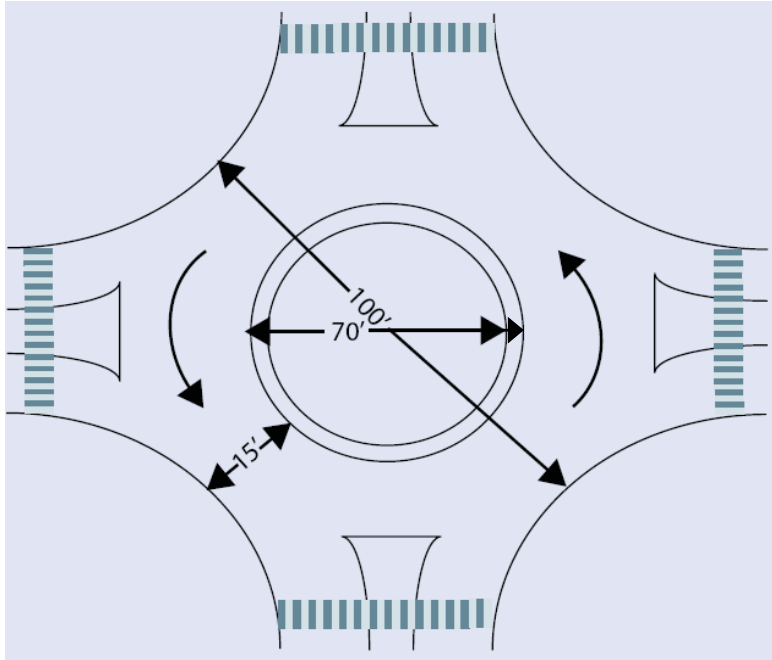

Roundabout	Roundabout[2]
Thoroughfare Type	Roundabout
Use area	Rural, sub-urban, general urban, urban center & urban core
Movement	Yield movement
Vehicular Design Speed	15 MPH
Traffic Lanes	one lane
Parking Lanes	n/a
ROW Width	100 ft
*Pavement Width	15 ft
Curb Radius	35 ft
Sidewalk Width	Same width as adjoining sidewalks
Road Edge Treatment	Curb/curb and gutter
Planter Width	See Section 54-831(e.) street tree standards
Planting	See Section 54-831(e.) street tree standards
Alt. Transportation	

*Pavement width is measured to face of curb.

1 Credit: Duany Plater-Zyberk & Co.; based on SmartCode Version 9.2

2 Credit: Dover, Kohl & Partners; based on ROW excerpt from the Long Savannah Development Standards

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Changes regarding thoroughfare terminology only; ND standards have not been changed. New section number added to better identify and ND section.

Sec. 54-821.1 Neighborhood District Thoroughfares

a. Within the Neighborhood District, ~~subsections b, c, e, f, g j, k, l and s of this section shall not apply.~~ all requirements in Section 54-821 shall apply except for subsections q, r, s, t, u and v. ~~Streets~~ Thoroughfares in the Neighborhood Districts shall connect to other ~~Streets~~ Thoroughfares within the neighborhood and to adjoining ~~Streets~~ Thoroughfares, neighborhoods, existing developments and undeveloped tracts. Cul-de-sacs, T-turnarounds, and gated or dead-end ~~Streets~~ Thoroughfares are not permitted, unless unavoidable due to physical constraints of the site or an adjoining site.

In the event of unavoidable physical constraints, a modified cul-de-sac may be used if it does not exceed six hundred (600) feet in length and meets one of the following criteria:

1. It incorporates a design feature at the center of the turn-around such as a natural area with existing trees, a landscaped space, or an outdoor space with amenities that is a size at least equal to the square footage of the pavement within the turn-around area.

2. It provides a pedestrian access area to the marsh front, waterfront, or other physical feature that necessitates the cul-de-sac that is of a size at least equal to the square footage of the turn-around.

Gated ~~Streets~~ Thoroughfares are not permitted.

b. Neighborhood District Thorough Fare Types:
Within the Neighborhood District, each building must front a ~~Street~~ Thoroughfare or outdoor space as defined in Section 54-295, excluding conservation areas. ~~Streets~~ Thoroughfares shall be classified according to the following hierarchy and follow the design and tree planting requirements of Table 8-2.1 and Table 8-2.2:

Type 1	This is a ~~Street~~ Thoroughfare with high vehicular and pedestrian traffic volumes. Pedestrian-oriented amenities, as sidewalks or walking paths, are required on these ~~Streets~~ Thoroughfares to accommodate safety, convenience and enjoyable walking.
Type 2	This is a ~~Street~~ Thoroughfare with a significant volume of both vehicular and pedestrian traffic. Pedestrian-oriented amenities, as sidewalks or walking paths, are required on these ~~Streets~~ Thoroughfares to accommodate safety, convenience and enjoyable walking.
Type 3	This is a ~~Street~~ Thoroughfare that only carries vehicle traffic one-way. Pedestrian-oriented amenities, as sidewalks or walking paths, are required on these ~~Streets~~ Thoroughfares to accommodate safety, convenience and enjoyable walking.
Type 4	This is a ~~Street~~ Thoroughfare that does not include curb/gutter. Sidewalks are not required as this ~~Street~~ Thoroughfare is intended for use where off-~~Street~~ Thoroughfare paths exist or the ~~Streets~~ Thoroughfares themselves are used for pedestrian travel. Type 4 ~~Streets~~ Thoroughfares must incorporate swales to accommodate stormwater drainage. Type 4 ~~Streets~~ Thoroughfares will only be allowed in areas of greater environmental or rural sensitivity and may not constitute more than forty (40) percent of the total linear feet of roadways in the neighborhood.
Type 5	These ~~Streets~~ Thoroughfares provide rear access to building lots for service access and parking access. These ~~Streets~~ Thoroughfares are alleys and carry vehicular traffic one-way.

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Type 6	These ~~Streets~~ Thoroughfares are designed to accommodate primarily vehicular traffic.

TABLE 8-2.1: ~~STREET~~ NEIGHBHORHOOD DISTRICT THOROUGHFARE DESIGN REQUIREMENTS

~~Street~~ Thoroughfare Type	R-O-W[f]	Pavement Width[a]	On-Street Parking	Curb	Curb/ Intersection Radii	Sidewalks[e]	Bikepath
1	60' min.	24' min.	8' (2 sides)[e]	Vert.	25'	8' min. (2 sides)	n/a(2 sides)
2	55' min.	20' min.	8' (1 side)[d]	Vert.	15'[g]	5' min. (2 sides)	n/a
3	40' min. one/way	12' min. one/way	8' (1 side)[d]	Vert.	15'	5' min. (2 sides)	n/a
4	40' min	24'min.[c]	n/a	n/a	15'[g]	n/a	n/a
5	20' min. One/way	12' max. One/way	n/a	n/a	10'	n/a	n/a
6	45'min.	24' min.	n/a	n/a	35'	n/a	5' min. (2 sides)

a. Exclusive of outside curb and gutter.
b. Inclusive of the gutter and up to the face of the curb.
c. The carriageway width may be reduced to 20' minimum when providing an off-Street pedestrian path.
d. On-Street parking may exist on both sides of Type 2 and 3 ~~Streets~~ Thoroughfares. On-Street parking shall not be required on Street sections less than 150 linear feet.
e. On-Street parking may be provided only on one side of a Type 1 ~~Street~~ Thoroughfare where the ~~Street~~ Thoroughfare is serving as single-loaded residential ~~Street~~ thoroughfare. On-Street Thoroughfare parking shall be provided on the same side of the ~~Street~~ Thoroughfare as the abutting single-family detached, single-family attached, duplex, triplex, quadroplex, or multifamily residential lots. Likewise, a sidewalk may be provided only on one side of a single-loaded residential Type 1, 2 or 3 ~~Street~~ Thoroughfare.
f. Right-of-way narrowing devices including, but not limited to, curb extensions, bulbouts, neckdowns and corner bulges shall not be permitted unless approved by the Technical Review Committee.
g. Curb radii at alley to alley intersections shall be a minimum of 30 feet and alley to ~~Street~~ Thoroughfare Type 2 intersections shall be a minimum of 25 feet.

TABLE 8-2.2: NEIGHBHORHOOD DISTRICT STREET TREE REQUIREMENTS

~~Street~~ Thoroughfare Type	Planting	Installation	Max.Spacing
1	2 sides	Tree Well or Planting Strip (24 sq. ft. min. or 4 ft. min. width)	20--40'
2	2 sides	Tree Well or Planting Strip (24 sq. ft. min. or 3 ft. min. width)	30--50'
3	2 sides	Tree Well or Planting Strip (24 sq. ft. min. or 3 ft. min. width)	30--50'
4	n/a		
5	n/a		
6	2 sides	Planting Strip	50'

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Need to determine if including the following appendix as part of the ZO creates any interpretation/ illegal issues

APPENDIX M

For information and credit purposes only:
Excerpts from the SmartCode Version 9.2 by Duany, Plater-Zyberk & Co.
pertaining to Thoroughfare Design and Assemblies

Insert:

SmartCode Version 9.2 Page SC30 – Table 1. Transect Zone Descriptions
SmartCode Version 9.2 Page SC 32 – Table 3A. Vehicular Lane Dimensions
SmartCode Version 9.2 Page SC 33 – Table 3B. Vehicular Lane & Parking Assemblies
SmartCode Version 9.2 Page SC 34 – Table 4A. Public Frontages – General
SmartCode Version 9.2 Page SC 35 - Table 4B. Public Frontages – Specific
SmartCode Module Version 9.2 Pages 33-43 – Table 4C. Thoroughfare Assemblies