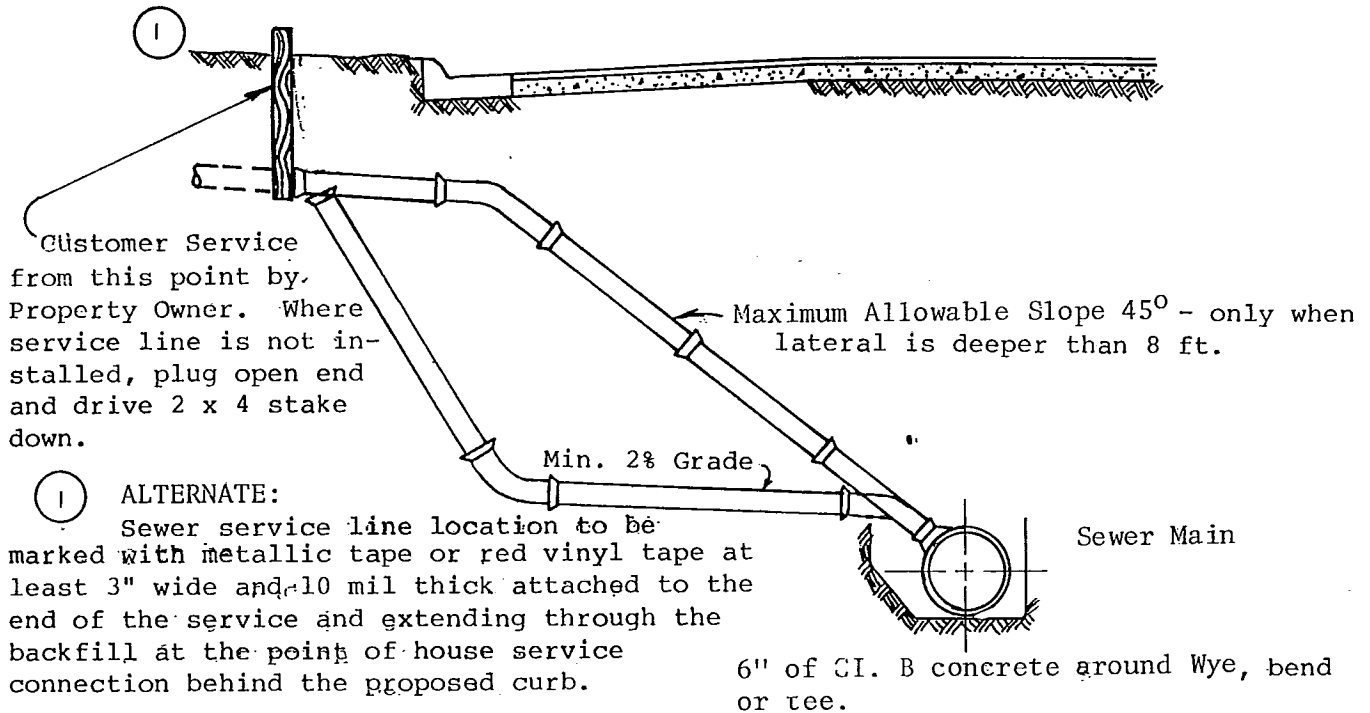


TYPICAL SEWER SERVICE STREET SECTION

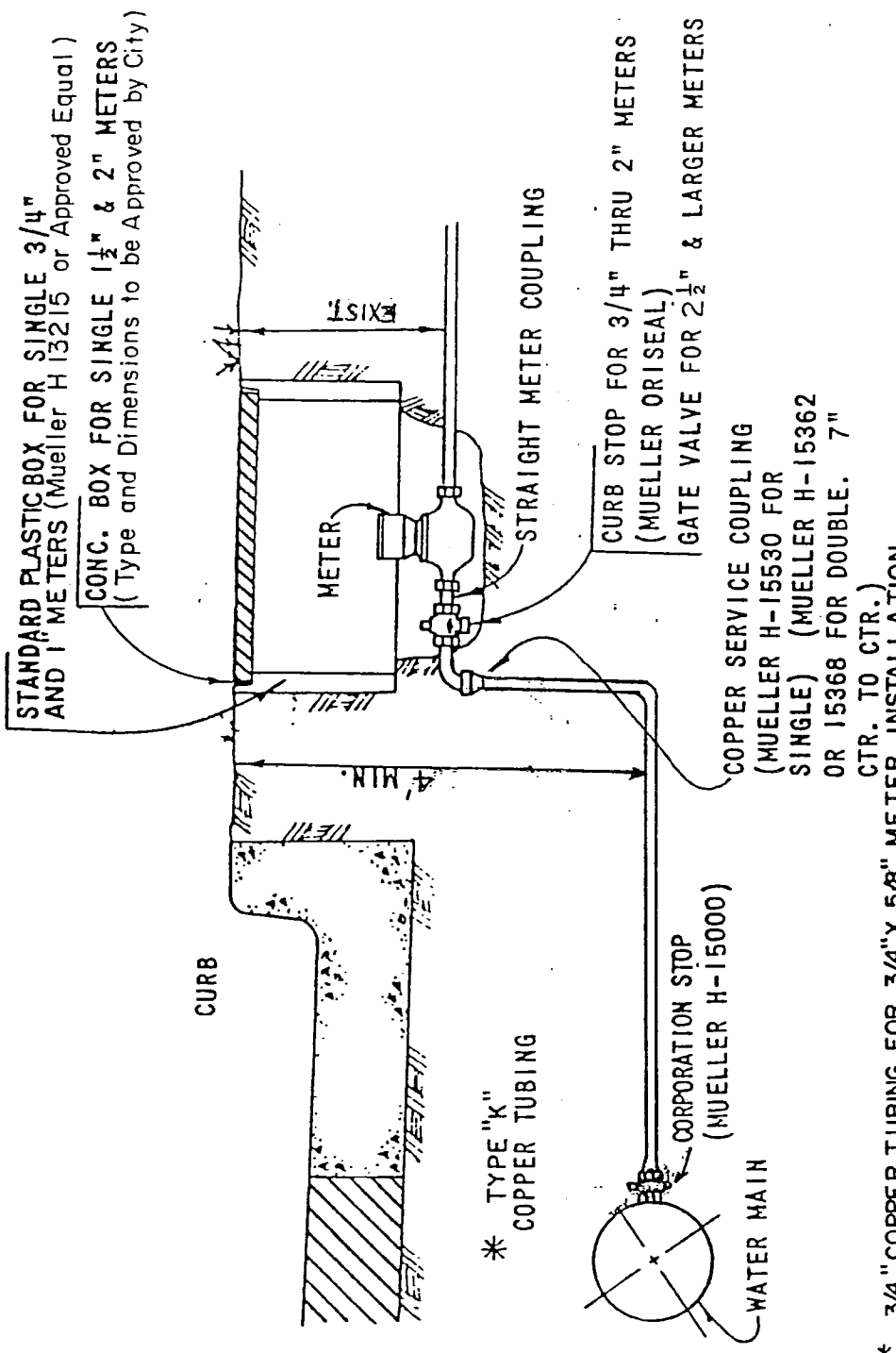
NOTE: Either Wye or Tee may be used for connection. Connections down to 7'-0" are "STANDARD" service connections. DEEP CUT service connections apply when trench is deeper than 7'-0". Minimum cover over sewer service pipe is 24" below subgrade or as required to service customer.



DEEP SERVICE CONNECTION

The City of Huntsville will make all Standard Residential sewer Service connections unless written approval to do otherwise has been granted by the City.

REVISION	HUNTSVILLE STANDARD DETAILS SEWER SERVICE LINE CONNECTION	S-2
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* 3/4" COPPER TUBING FOR 3/4" X 5/8" METER INSTALLATION.
 1" COPPER TUBING FOR 1" METER INSTALLATION

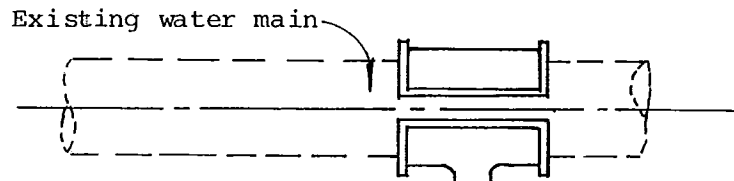
The City of Huntsville will make all Standard Residential Water Service connections, unless written approval to do otherwise has been granted by the City.

REVISIONS

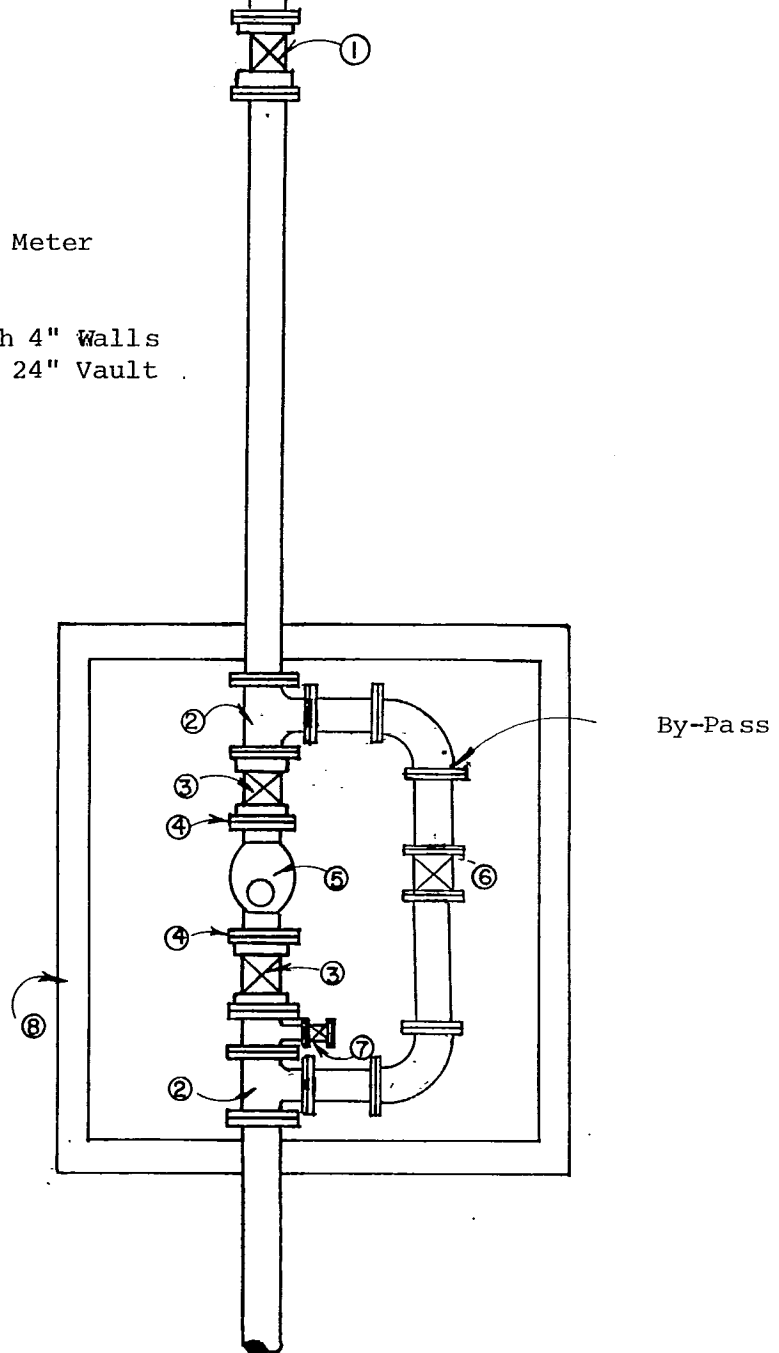
HUNTSVILLE
 STANDARD DETAILS

WATER SERVICE CONNECTION

W-12 ✓



- ① Tapping Tee & Gate Valve
- ② Two Tee
- ③ Two Gate Valves
- ④ Two Flg. Coup. Adapt's
- ⑤ 2" to 10" Turbine Compound Meter
- ⑥ One 2" Gate Valve
- ⑦ 2" Test Tee (corp. stop)
- ⑧ Reinforced Conc. Vault with 4" Walls and 4" Top Slab with 24" x 24" Vault Frame and Cover.



Typical water meter service. 2" or larger meter installation will require concrete vault and a by-pass assembly.

REVISIONS

HUNTSVILLE
STANDARD DETAILS

2" & LARGER WATER
SERVICE CONNECTION

W-13 ✓

CHAPTER 6.

STREET SYSTEM STANDARDS

601. GENERAL PRINCIPLES OF STREET SYSTEM LAYOUT

- (1) The developer shall provide public street access to every lot the developer creates.
- (2) The developer shall locate and align streets to conform to the Comprehensive Plan of the City. Streets shall be designated, designed and constructed according to their expected traffic capacity and function (see Figure 6-1).

601.1 Classification of street system

The roadways within the City are classified according to their expected traffic capacity and function (type of service). Each roadway classification has its own general design criteria and primary function. Section 601.2 uses functional classifications to describe the Official Street Map and standards for construction, design and right-of-way dedication (refer to Section 601.4). Table 6-1: Functional Design Capacity of Streets provides a summary of street volume operating ranges by street classification.

TABLE 6-1
FUNCTIONAL DESIGN CAPACITY OF STREETS

Street Description	Street Classification	Operating Volume Range (Volume/day)
Expressway	E	30,000-
Arterial	A-1; A-2	10,000-30,000
Collector	C-1	5,000-10,000
Local Commercial	LC-1	2,000-5,000
High Volume Residential	LR-1	1,000-2,000
Medium Volume	LR-2	500-1,000
Low Volume	LR-3	500

601.2 Official street map

City Council makes the Official Street Map, and any amendments thereto, of the Comprehensive Plan, a part of this Code. The Street Map is the basis for all decisions regarding classification, reservation, or dedication of rights-of-way by this Code.

601.3 Construction and design standards

All roads, sidewalks, parking lots or other required paving shall conform to the construction and design standards of the City.

See also Sections 614 and 615 of this Code.

601.4 Dedication of street rights-of-way

- (1) The developers of properties shall dedicate and/or reserve for acquisition of pedestrian and/or vehicular rights-of-way. This is necessary and desirable to lessen or control the impact upon the transportation system created by development.
- (2) Street right-of-way widths shall meet the requirements established in Table 6-2. Minimum required right-of-way shall be determined by the functional classification of the road as shown on the Official Street Map and the adopted Transportation Plan.
- (3) Required road right-of-way shall be either dedicated by plat or deed to the City or the anticipated right-of-way area shall be reserved for future acquisition. If reserved for future acquisition, no physical improvements such as buildings, parking lots, landscaping, or storm water retention facilities shall be allowed within the area so reserved. All setbacks shall be calculated from the anticipated right-of-way line.

602. STREET ACCESS

602.1 Direct public access

All public streets shall have direct access to another public street.

602.2 Primary access

A developer shall provide primary access to large subdivisions, commercial tracts and industrial tracts from public streets designed to carry high traffic loads such as arterials and collectors. A developer shall protect residential lots from the adverse effects of through traffic by locating those lots facing local streets.

602.3 Points of access

The developer shall provide a street system within the development with at least one point of access to a public street adjacent to the development; provided, however, that developments containing one hundred and fifty (150) dwelling units or more shall provide at least two points of access to adjacent public streets.

603. LOCATION OF PUBLIC STREETS

- (1) The developer shall submit a design for the system of streets within a tract. A developer should plan certain streets to carry large volumes of through traffic (arterials, collectors) while laying out other streets (locals) to provide access within a development. Arterial

and collector streets, if located within a residential subdivision, should follow the continuity of city streets leading to or from the tract and should provide for extensions into adjacent tracts. The Commission shall determine the final location of all public streets.

- (2) Local streets shall be designed to service only the development in which they are contained. In locating local streets, the developer shall:
 - (a) create building lots of desirable elevation, size, shape and orientation;
 - (b) discourage through traffic;
 - (c) insure access by firefighters, police and other emergency services to all areas of the tract; and
 - (d) insure vision clearance.

604. INTERSECTION OF PUBLIC STREETS

604.1 General

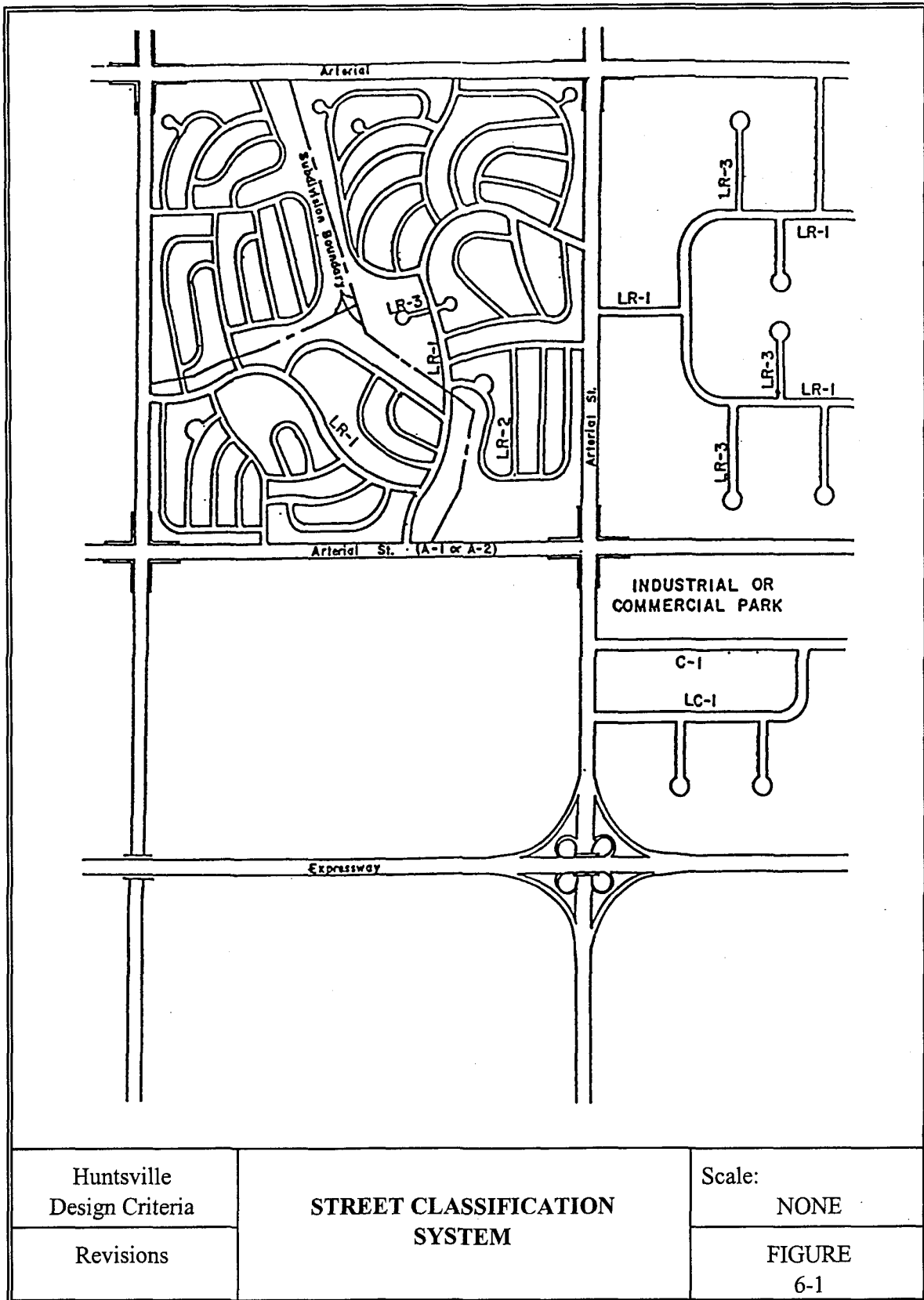
The developer shall keep the number of intersections to a minimum consistent with traffic needs. The Commission shall minimize the number of streets allowed to converge at a single intersection. A developer shall design intersecting streets so that they intersect at right angles with variations not to exceed 15 degrees. If jogs are necessary, the developer shall connect the streets by means of diagonal curve or line; that is, the street shall curve as it approaches the intersection to cause a nearly right-angle alignment to the greatest extent possible. A developer shall stagger or offset intersections only if the distance between street center lines is at least two hundred (200) feet.

604.2 Local to collector/arterial intersections

Local streets intersecting a collector or arterial street shall have a tangent section of centerline at least fifty (50) feet in length measured from the right-of-way line of the higher traffic volume street; however, no such tangent is required if the minor street curve has a centerline radius greater than four hundred (400) feet with the center located in the higher traffic volume street right-of-way line.

604.3 Sight triangle

- (1) To provide a clear view of intersecting streets to the motorist, there shall be a triangular area of clear vision formed by two (2) intersecting streets. The size of the triangular area is based on street classification.
- (2) On any portion of a lot that lies within the triangular area shown in Figure 6-2, nothing shall be erected, placed, planted, or allowed to grow in such a manner as to materially impede vision between a height of three feet and eight feet above the grade at the two street center lines.



Huntsville Design Criteria	STREET CLASSIFICATION SYSTEM	Scale: NONE
Revisions		FIGURE 6-1

- (3) The triangular area shall be formed by a point on each proposed street right of way line located 75, 110 or 150 feet from the intersection of the street right-of-way lines, as indicated in figure 6-2, and connected to the intersection point of the twenty-five (25) feet setback lines.

604.4 Location of intersections

- (1) Arterial streets

The maximum distance between streets (centerline to centerline measurement) intersecting arterial streets shall be 1,800 feet; the minimum distance, 800 feet.

- (2) Collector streets

The maximum distance between streets (centerline to centerline measurement) intersecting collector streets shall be 1,800 feet; the minimum distance, 800 feet.

- (3) Local streets

The maximum distance between streets (centerline to centerline measurement) intersecting local streets shall be 1,000 feet; the minimum distance, 200 feet.

- (4) Off-set streets

Where it is necessary to stagger or offset streets, the streets shall offset at least 200 feet (centerline to centerline measurement).

605. RESERVED

606. SIDEWALKS

The developer shall install sidewalks along all arterial streets as designated by the Official Street Map. Sidewalk improvements shall be constructed according to the adopted standards of the City. A developer of property in the management district shall provide sidewalks on one side of the street as designated by the Commission.

607. HALF-STREETS

A developer shall not create half-streets. A developer shall construct full street improvements for any development.

608. RESERVE ACCESS STRIPS

A developer shall not reserve ownership of strips of land at the end or alongside proposed or existing streets for controlling access to property unless the reserve access strip is dedicated to the public under conditions approved by the Commission.

609. ALLEYS

A developer shall not create public alleys. If a developer needs secondary access to a development, the developer shall construct private alleys that meet or exceed private street standards contained in Section 611.

610. CUL-DE-SAC AND DEAD-END PUBLIC STREETS

610.1 General standards

The developer shall design cul-de-sac streets to prohibit future extensions by arranging lots around the turnaround. The developer shall construct a circular turnaround conforming to City standards for all cul-de-sac and dead-end public streets. The turnaround shall have a pavement radius of forty (40) feet and a right-of-way radius of fifty (50) feet.

The developer shall not design or construct a dead-end street unless it is intended to connect with a future street on adjacent land. The developer shall construct temporary turnarounds within the standard right-of-way at the end of any dead-end street. In a commercial/industrial development, however, the Commission may waive construction of a temporary turnaround if adequate alternatives are available for vehicles to turn around.

610.2 Length

The length of cul-de-sac and dead end streets is the distance from the right-of-way line of the intersecting street along the centerline of the cul-de-sac or dead-end street to the center of the circular turnaround. Expected traffic volume, expressed in vehicle trips per day (VTD) of the street at the time of full development, shall limit the maximum length of cul-de-sac and dead-end streets. The developer shall furnish the City data to justify the length of the proposed street. VTD for residential areas is (15) trips per day per dwelling unit. The maximum length of any cul-de-sac or dead end street shall be:

VTD	Maximum length (in feet)
100 or less	1,000
101 or greater	600

611. PRIVATE STREETS

The developer shall design and construct private streets according to this section. A developer shall designate private streets by plat; private streets are allowed only within the following types of developments: Unified Developments, (see Section 505.2) where the lot or tract is retained under one ownership or multiple ownerships through undivided interests; and Recreational Vehicle Parks (see Section 503.3).

611.1 Layout

The developer shall design private streets to:

- (1) Provide adequate vehicular access to all buildings and facilities within the boundaries of the development;
- (2) Provide adequate interior traffic circulation and access to all buildings by fire fighting personnel and equipment;
- (3) Allow for the smooth flow of vehicular traffic, avoiding such traffic hazards as closely offset intersections; and
- (4) Provide direct access to the existing public street system next to the tract boundaries.

611.2 Intersections of private streets with public streets

Private streets shall not be direct (straight line) projections of any public street. The private street shall offset a minimum distance of two hundred (200) feet center line to center line from any public street intersection. Intersections of all private streets with public streets shall be at right angles with variations not to exceed fifteen (15°) degrees. Right angle intersections of private streets shall have a twenty (20) foot radii for the pavement edge at all corners. Acute angle intersections shall have twenty-five (25) foot radii for the pavement edge at the acute corner on both public and private streets. A developer shall design and construct that portion of a private street within a public street right-of-way according to City driveway standards (see Section 1302).

611.3 Access

The developer shall provide a street system within the development with at least one point of access to a public street adjacent to the development; provided, however, that developments containing one hundred and fifty (150) dwelling units or more shall provide at least two (2) points of access to adjacent public streets. Private streets shall serve only the land within each development. A developer shall not extend private streets into adjacent tracts under a different ownership or a different property owners' association.

611.4 Maintenance

Maintenance of private streets and private street signs shall be the responsibility of property owners within the development. The property owners shall be legally bound together by deed restriction, contract, property owners' association, corporation or other organization that has as one of its purposes the continued care and maintenance of all commonly owned property within the development, including the private streets and private street signs.

611.5 Design and construction standards

- (1) Design

The developer shall design private streets according to the geometric and construction standards established for local public streets (see Sections 614 and 615).

(2) Pavement width

The minimum unobstructed width of any private street shall not be less than twenty-eight (28) feet. If parking is proposed along a private street, the developer shall widen the street to accommodate such parking.

(3) Private street easement width

The developer shall locate private streets within private access easements (see Example 2-1 for dedicatory statement) of sufficient size to accommodate the private streets and related construction and maintenance activities.

(4) Cul-de-sac and dead ends

A developer shall construct a circular turnaround with a paving radius of at least forty (40) feet at the end of any private cul-de-sac and dead end private streets that the developer creates.

(5) Construction

The developer shall construct private streets according to the standards for pavement and base for local streets as established in Section 615.2.

611.6 Street lighting

The developer shall provide adequate lighting along all private streets; the developer shall space, equip, and mount luminaries to provide the average levels of illumination described in Section 616.

612. STREET NAMES

612.1 Public street names

The developer shall name public streets within the following guidelines:

- (1) Names of new streets, not extensions of existing streets, shall not duplicate any existing street name in the City or County.
- (2) If a new street is a direct or logical extension of an existing street, the existing street name shall be used.
- (3) Street name suffixes such as place, court, circle and loop shall be designated on streets that are cul-de-sac or loop streets. Suffixes such as boulevard, parkway, expressway and drive shall be confined to designated arterial or collector streets. Suffixes such as highway or freeway shall be used only on designated highways or freeways falling under the jurisdiction of the Texas Department of Transportation.

- (4) Street name prefixes such as North, South, East and West may be used to clarify the general location of the street; however, such prefixes shall be consistent with the existing and established street naming and address numbering system of the general area in which the street is. Streets running north and south are designated as avenues while those running east and west are designated as streets.
- (5) Alphabetical and numerical street names shall not be designated on any development plan unless the street is a direct extension of an existing street with that name.
- (6) Street names shall fit in with the names of existing streets in the area, and should, if possible, provide direction to the general public (i.e., Park Street, Library Avenue, Museum Drive).
- (7) Streets should not be named as a memorial to or in honoraria of a person either living or deceased unless the person being so honored has, in the opinion of the City Council, made significant contributions to the betterment of the city, state or nation.

612.2 Private street names

- (1) Private street names shall conform to the same standards applicable to public street names and the following additional criteria:
 - (a) The developer shall provide signs for all private streets; the signs shall conform in size, height and material to City Council standards.
 - (b) Private streets shall be designated as lanes and the suffix "PRIVATE" shall be an integral part of any street sign (Example: SCENIC LANE (PRIVATE)).
 - (c) The background color for any private street sign shall be brown.
- (2) No private street name shall be changed without approval of the City Council.
- (3) No private street sign shall be installed without the approval of the City Council.
- (4) The City removes, without notice, private street signs not established in conformance with the provisions of this section and installed within the right-of-way of any public street.

613. GEOMETRIC CRITERIA

The developer shall design public streets according to the minimum geometric criteria established in Table 6-2 and Figures 6-3 through 6-8.

614. CONSTRUCTION STANDARDS AND SPECIFICATIONS

The developer shall construct all public streets according to this Code's standards and specifications.

614.1 Non-curb and gutter alternative for local residential streets

The developer may provide non-curbed and guttered paved streets in residential subdivisions with a density of two (2) dwelling units per acre or less.

614.2 Pavement width alternatives for local commercial streets

With Commission or Council approval, the developer may construct local commercial streets (LC-1) with reduced pavement width if the developer furnishes and installs "No Parking" signs. A developer may reduce the pavement width of a street to a minimum of 28 feet, back of curb to back of curb; provided, however, that a developer shall increase driveway and intersection radii required for truck turning movements.

614.3 Pavement alternative for low density, rural subdivisions

A developer of a residential subdivision located in the extraterritorial jurisdiction (ETJ) of the City may construct streets according to the low density residential street standards contained in Figure 6-7 if the minimum lot size is restricted by the plat and individual deeds to a minimum lot size of five (5) acres per dwelling unit.

615. STREET STRUCTURAL THICKNESS DESIGN

615.1 Engineered design of street structural section

- (1) Except as provided by Section 615.2, the developer shall have an engineer design the street structural sections (structural thickness) according to any one of the following:
 - (a) American Association of State Highway & Transportation Officials (AASHTO), Flexible-Pavement Design Method;
 - (b) Asphalt Institute Design Method;
 - (c) Portland Cement Association, Rigid Pavement Design Method; or
 - (d) A developer may use any other design methods not specifically mentioned in this Code with prior written approval of the City Engineer
- (2) The street structural section design shall be based on the total number and weight (plus configuration) of the axles expected to go over the street section during a design life of twenty years. The concept of "Equivalent Axle Loadings" shall be used to express the total number and mixture of loadings that will occur during the street section's expected life. If a roadway is proposed, it will be designated as an arterial, collector, or local, and the street structural section design shall be based on the loadings shown in Table 6-4: Street Design By Equivalent Axle Loads.

**TABLE 6-2
STREET RIGHTS-OF-WAY**

STREET CLASSIFICATION	TRAVEL LANES	PARKING LANES	MINIMUM ROW WIDTH (IN FEET)	MINIMUM PAVEMENT WIDTH (IN FEET)*
ARTERIAL				
Standard with Parking, A-1	5	2	110	85
Standard without Parking, A-2	5	0	80	61
COLLECTOR				
Standard, C-1	2	2	70	41
LOCAL				
Local Commercial, LC-1 ⁽¹⁾	2	2	60	41
High Volume Residential, LR-1	2	2	60	41
Medium Volume Residential, LR-2	2	1	50	32
Low Volume Residential, LR-3 ⁽²⁾	1	2	50	28
Alternative Local Residential 1 ⁽³⁾	2	0	60	28'
ALR-1				
Alternative Local Residential 2 ⁽³⁾	2	0	60	28'
ALR-2				
PRIVATE				
Private Streets/Emergency Access				
Easements	2	0	28'	28'

(1) With Council or Commission approval, a developer may reduce pavement width if the developer furnishes and installs "No Parking" signs. Never, shall pavement width be less than 28 feet, b-b; and increased driveway and intersection radii may be required for truck turning movements if developer reduces pavement width.

(2) Low Volume provides access to 20 or less dwelling units (d.u.) or equivalent or short connecting streets.

(3) All local residential streets shall be designated as LR-1, LR-2 or LR-3. Alternative construction standards, as established in Section 614.2 and Figures 6-6 and 6-7 may be used where the conditions shown in Section 614 exist.

* Back of curb to back of curb or edge to edge.

TABLE 6-3
GEOMETRIC DESIGN CRITERIA FOR PUBLIC STREETS

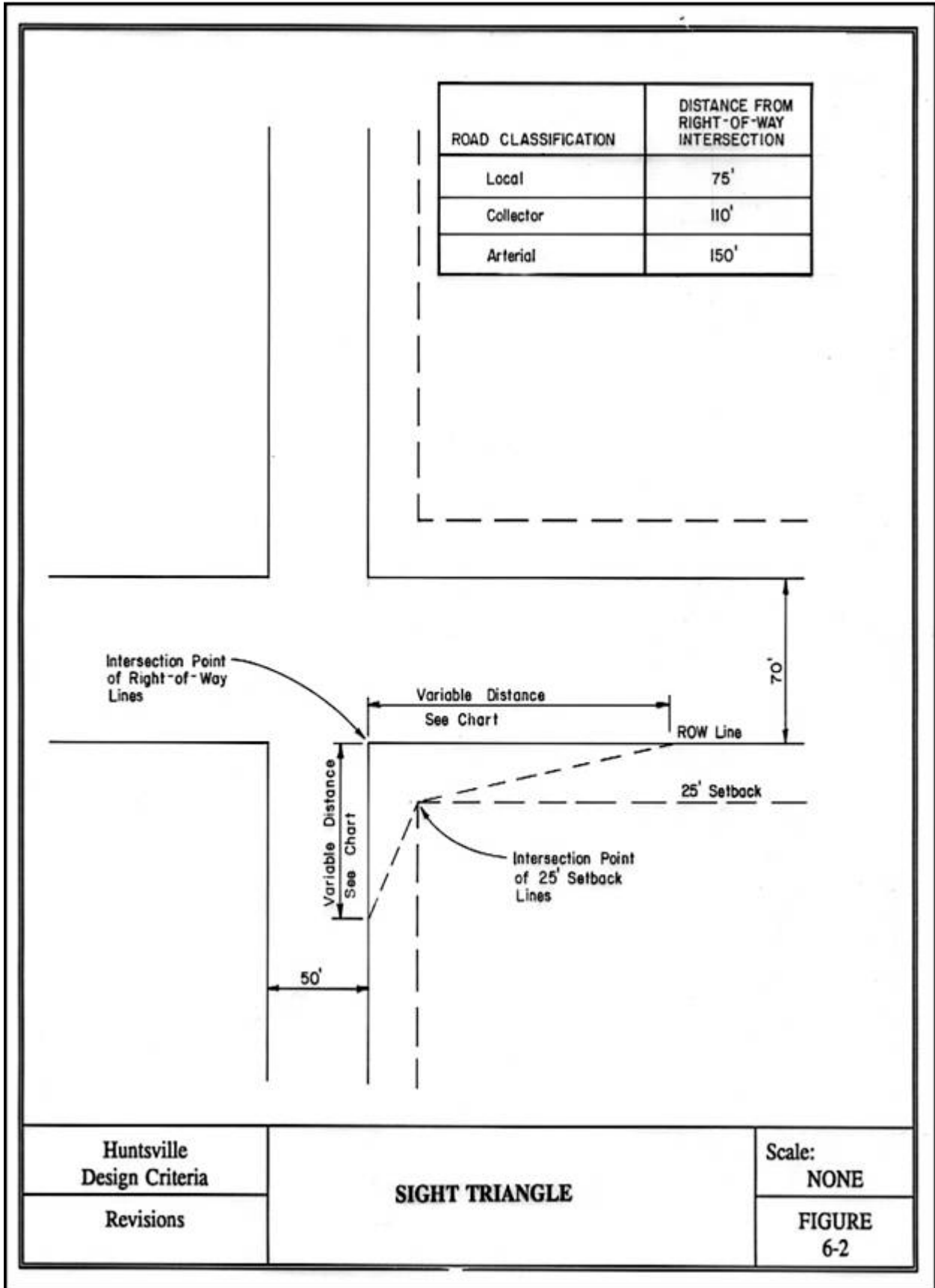
STANDARD CATEGORY	STREET CLASSIFICATION		
	ARTERIAL	COLLECTOR	LOCAL
MAXIMUM GRADE (IN %)	6 ⁽¹⁾	8 ⁽¹⁾	10
MINIMUM GRADE (IN %)	0.5	0.5	0.5
MINIMUM CENTER LINE CURVE RADIUS (IN FEET)	800	500	200
MINIMUM LENGTH OF VERTICAL CURVES (IN FEET) ⁽²⁾	300	100	100
MINIMUM SIGHT DISTANCE (IN FEET)	400	250	250
MINIMUM TANGENT LENGTH BETWEEN CURVES (IN FEET)	300	200	100
CURB RETURN RADII (IN FEET) ⁽³⁾	30	25	20

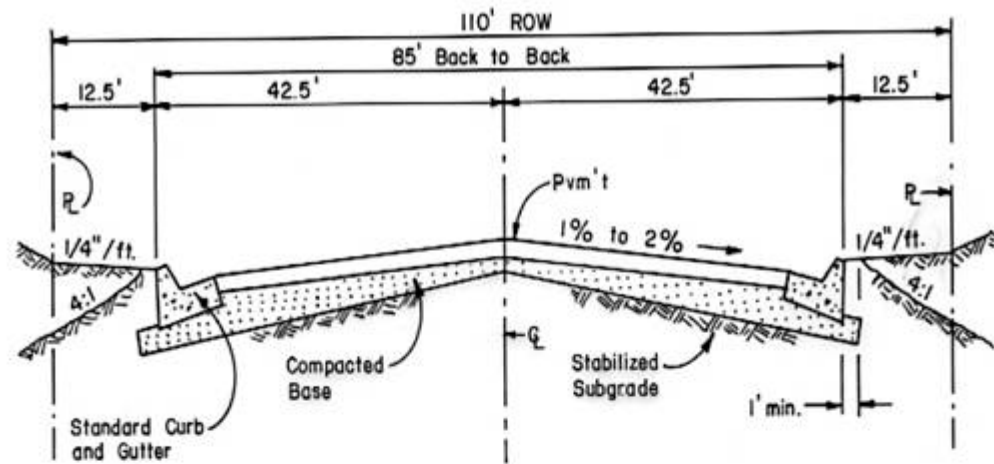
(1) Where existing topography makes conformance to these grades impractical, consideration may be given to allowing an additional two (2) percent increase in grade for a distance of five hundred (500) feet or less.

(2) Arterial - or fifty (50) times the algebraic difference in grades, whichever is greater.
Collector or local - or twenty (20) times the algebraic difference in grades, whichever is greater.

(3) Acute angle intersections shall have twenty-five (25) foot radii.

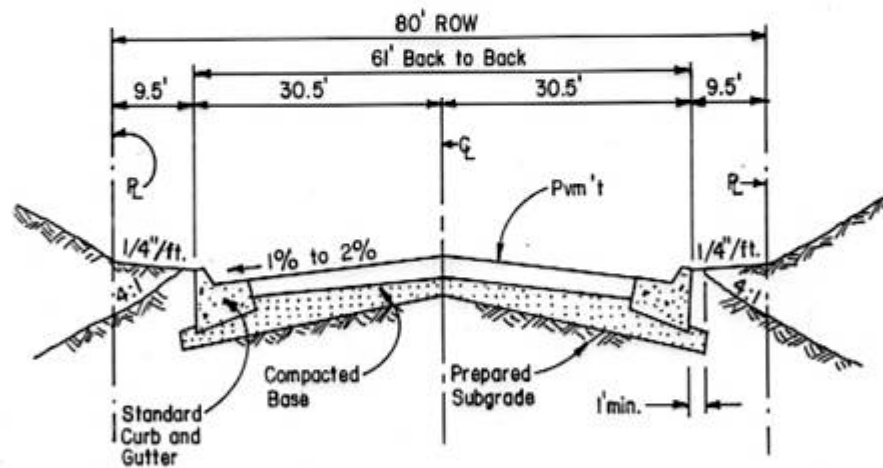
See Figures 6-3 through 6-6 for additional details.





110 Foot R.O.W.
Five 12 Ft Travel Lanes
Two 12 Ft Parking Lanes

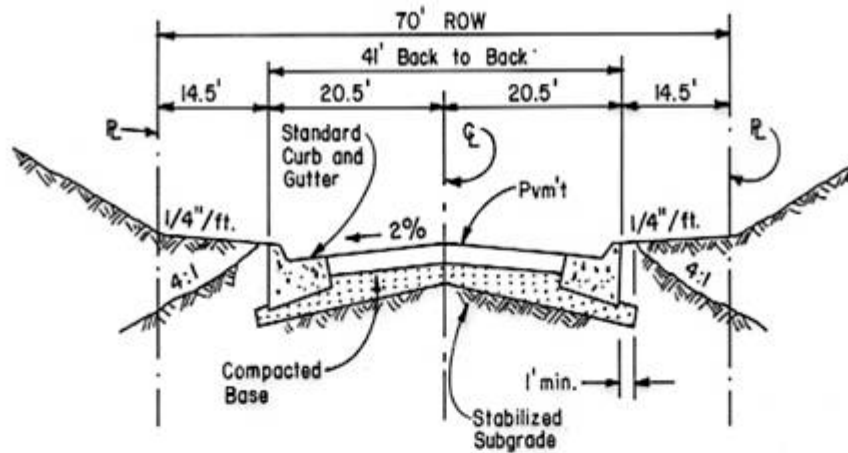
A-1 ARTERIAL STREET (MAJOR)



Eighty Foot R.O.W.
Five 12 Ft. Travel Lanes
No Parking Lanes

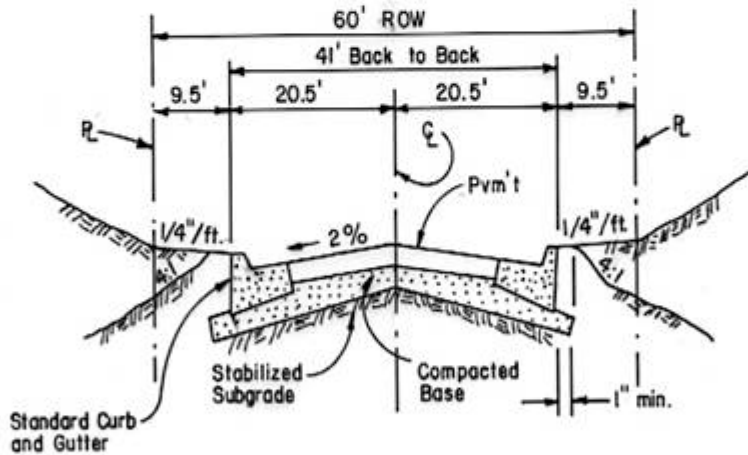
A-2 ARTERIAL STREET (MINOR)

Huntsville Design Criteria	ARTERIAL STREETS (Major and Minor)	Scale: NONE
Revisions		FIGURE 6-3



Seventy Foot R.O.W.
Two 12 Ft. Travel Lanes (with provision for future
turning lane if one parking lane is deleted)
Two 8 Ft. Parking Lanes

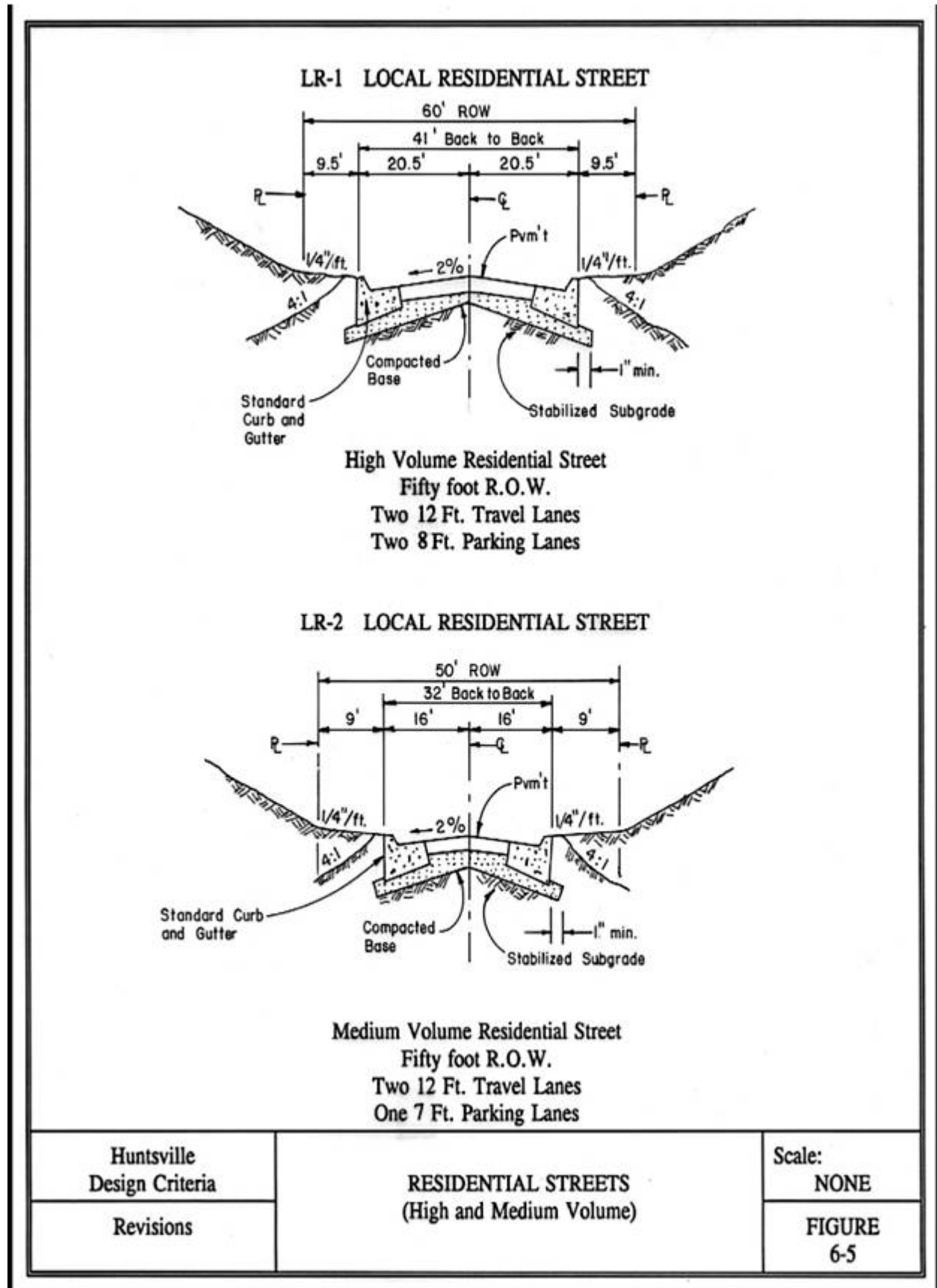
C-1 COLLECTOR STREET



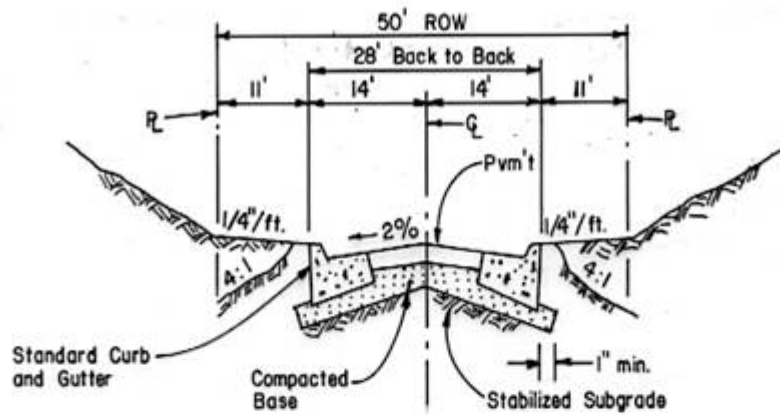
Sixty Foot R.O.W.
Two 12 ft. Travel Lanes
Two 8 Ft. Parking Lanes

LC-1 LOCAL COMMERCIAL STREET

Huntsville Design Criteria	COLLECTOR STREET LOCAL COMMERCIAL STREET	Scale: NONE
Revisions		FIGURE 6-4

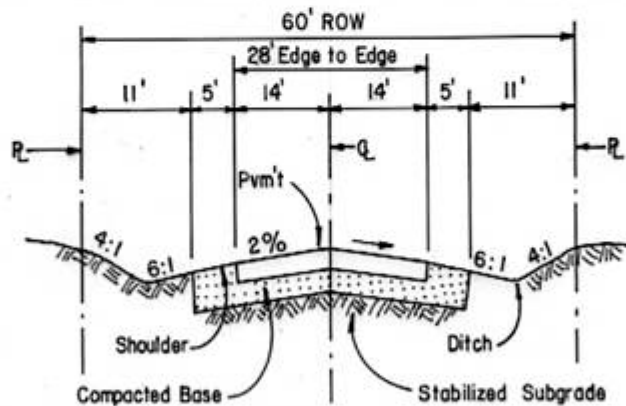


LR-3 LOCAL RESIDENTIAL STREET



Low Volume Residential Street
Two twelve foot travel lanes

**ALTERNATIVE CONSTRUCTION STANDARD NO. 1 FOR STREETS IN
LOW-DENSITY RURAL RESIDENTIAL DEVELOPMENTS**

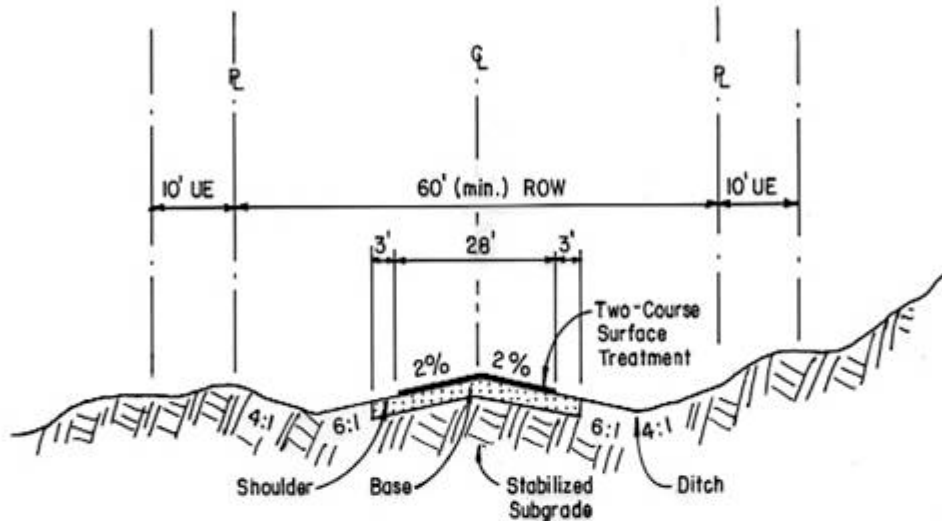


Sixty (60) foot: R.O.W.
Rural - no curb and gutter
Two twelve foot travel lanes
No parking on roadway

See Section 614.1

Huntsville Design Criteria	LOCAL RESIDENTIAL STREET LOW-DENSITY RURAL RESIDENTIAL	Scale: NONE
Revisions		FIGURE 6-6

**ALTERNATIVE CONSTRUCTION STANDARD NO. 2 FOR STREETS
IN LOW DENSITY RURAL RESIDENTIAL DEVELOPMENTS IN THE E.T.J.**



Surface material shall consist of two-course surface treatment comprising of P-3 and P-4 aggregate as (SDHPT) specifications item 304 at 35#/sy and 15#/sy, respectively and asphalt binder. Surface course shall be laid on prepared and primed flexible base. (SDHPT standard specifications for gravel, crushed rock; iron ore) placed on stabilized subgrade, both compacted to 95% Modified Proctor. Thickness of base depends on subgrade, material specifications and traffic characteristics.

See Section 614.3

Huntsville Design Criteria	STANDARD NO.2 LOW DENSITY RURAL RESIDENTIAL STREETS	Scale: NONE
Revisions		FIGURE 6-7

TABLE 6-4
STREET DESIGN BY EQUIVALENT AXLE LOADS
(20 YEAR DESIGN LIFE)

STREET CLASSIFICATION	DESCRIPTION	AXLE LOADS EQUIVALENT TO 18,000 LBS
A-1	Arterial	5,000,000
A-2	Arterial	5,000,000
C-1	Collector	5,000,000
LC-1	Local Commercial	400,000
LR-1	Residential	9,000
LR-2	Residential	9,000
LR-3	Residential	9,000

615.2 Standard structural section design for paved local streets

Instead of a designed street structural section, the developer may design and construct local street pavement sections (see also Section 615.1 and 615.3) as follows:

- (1) 2" hot mix asphaltic concrete (H.M.A.C.), 6" flexible base, 6" stabilized subgrade;
- (2) 6" H.M.A.C., 6" stabilized subgrade, where necessary; (see Section 615.3);
- (3) 6" reinforced Portland Cement concrete (with 2" sand cushion allowed), 6" stabilized subgrade, where necessary (see Section 615.3).

615.3 Soils testing and subgrade stabilization

- (1) The developer shall submit to the City Engineer a soils test report for each 1,000 square yards of paved surface proposed or for each type of soil encountered in the subgrade.
- (2) The developer shall submit to the City Engineer the following data as part of the soils test report:
 - (a) soil classification;
 - (b) optimum moisture/density (Modified Proctor, ASTM D 1557);
 - (c) Atterberg Liquid Limits and Plasticity Index (P.I.);
 - (d) stabilization requirements for subgrade soil (% lime for clay or % cement for sandy soils), if an engineer designs the street structural section;
 - (e) a certified testing laboratory shall perform all tests;

- (3) The developer shall stabilize all subgrade soils with a P.I. of fifteen (15) or more:
 - (a) if the standard structural section design for paved local streets is used, five (5%) percent lime by weight may be used, otherwise,
 - (b) the developer shall have a certified testing laboratory conduct lime (or other approved material) series test to find the percent of stabilizing agent necessary to lower the P.I. below fifteen (15).
- (4) A developer may use native soils with a P.I. of less than fifteen (15) as subgrade material if they can meet this Code's compaction requirements (see Section 615.4(1)). The developer may add a stabilizing agent (lime, cement, etc.) as recommended by soils analysis to low P.I. soils to aid in compaction.
- (5) Subgrade soils evaluation shall generally apply to the top six (6) inches of soil measured down from the proposed subgrade surface.

615.4 Other basic criteria

- (1) The developer shall compact all subgrade and individual layers of base and paving materials to 95% relative density, Modified Proctor Test (ASTM-D1557).
- (2) The total design thickness of the street structural section shall be rounded up to the nearest whole inch.
- (3) The total thickness of an asphaltic concrete pavement may be divided into different grades of material. Unless otherwise approved by the City Engineer, Type "D" Hot Mix Asphaltic Concrete (H.M.A.C.) defined by Item 340 Texas State Department of Highways and Public Transportation Standard Specifications, shall be used for a surface course.
- (4) The developer shall lay asphaltic concrete pavement in lifts of no more than three nor less than one and one-half inches each, unless otherwise approved by the City Engineer.
- (5) The developer shall completely clear and grub the area within the street right-of-way before construction of any street improvements.
- (6) The design requirements set forth in this section are minimum design standards. The City Engineer may require additional precautions or treatments consistent with sound engineering practice to provide for conditions not specifically covered herein.
- (7) Any other design methods not specifically mentioned in this code may be used with prior approval of the City Engineer.

615.5 Exceptions

The provisions of this section shall not apply to reserve areas of twenty-five (25) acres or less of subdivisions previously platted and filed with the Walker County Clerk; provided, however, that

a developer shall build any streets when developing the area designated by the reserve to same standards as the other streets in the subdivision.

616. STREET LIGHTING STANDARDS

616.1 Introduction

Street lighting improves the urban environment by increasing comfort, convenience and safety of travel at night. Drivers see more distinctly and locate with greater certainty all significant details of the surroundings. At the same time, added illumination assists the nighttime pedestrian and serves as a deterrent to crime.

616.2 Responsibility

The Community Development Division of the Public Works Department is authorized to determine the necessity for placing street lights and the appropriate location for individual luminaries according to the criteria established by code. Requests for installation of street lighting in areas developed prior to adoption of this Code may be made by individual citizens on forms provided by the Community Development Division.

616.3 Location criteria

(1) Local, private and collector streets

A developer shall place street lights at all street intersections on local, private, and collector streets, at the end of cul-de-sacs or dead-end streets, and at all significant changes in direction of the roadway. Community Development Division personnel shall exercise best judgment to specify lighting at all significant changes in grade or bearing of roadway and as required to provide for light spacing of approximately 500 feet.

(2) Arterial streets

A developer shall install street lights along arterial streets at approximately 300 feet intervals. On boulevard streets, the developer shall place lights on both sides of the street or in the esplanade with lights extended on arms over each roadway.

(3) State and Federal highways

For those highways for which there is a formal maintenance agreement between City Council and other government agencies, the developer shall place lighting in accordance with agreement between the governments.

616.4 Design criteria

(1) Local, private and collector streets

As a minimum, a developer shall install street lighting on wooden poles at a height of no less than 25 feet. Mounting arms shall be oriented to overhang the pavement and shall be

no less than 12 feet long. Luminaries shall be (preferably) 100-watt high pressure sodium or (alternatively) 175-watt mercury vapor. See Table 6-5.

If the electrical system for the development is underground, the electrical service to the street lights shall also be underground. If the electrical system for the development is overhead wires with power poles located along the rear lot lines, the electrical service to the street lights shall be underground. If the power poles are located adjacent to the street, the electrical service to the street lights may be overhead and the street light mast arms may be mounted on the power poles provided that the required lighting intensity is maintained. The developer shall submit a street lighting plan including specific mounting height, type of luminaire, arm length, etc., and shall be subject to approval of the City Engineer during the final plat preparation phase. Location, type and other pertinent data shall be shown on the public improvement plans and specifications submitted by the developer with the final plat. See Table 6-5.

(2) Arterial streets

Specifications for lighting on arterial streets shall be the same as for local and collector streets except that minimum mounting height shall be increased to 30 feet and mounting arm length shall be increased to 15 feet.

(3) State and Federal highways

Street lights along state and federal highways for which there is a maintenance agreement between the city and other governmental entities shall be installed in accordance with the agreement or, if lighting specifications are not a part of the agreement, specifications shall be determined by the governmental agency and the City Engineer.

616.5 Financial responsibility

(1) Installation

In new developments, installation costs (if any) shall be the burden of the developer. In previously developed areas the cost burden shall be shared in the following manner: 50% by the City and 50% by the requester (for standard wooden poles). The City will not participate in the cost of installation or operation of street lighting that does not meet the criteria set forth in Section 616.4 and 616.5 of this policy or on private streets.

Installation costs for lighting of roadways for which there is a maintenance agreement between the city and another governmental body shall be shared in accordance with the terms of the maintenance agreement.

The City shall not, however, be obligated to participate in excess of the funds the City Council budgets for street light installation.

(2) Operating and maintenance costs

The City of Huntsville shall bear the burden of all operating and maintenance costs for all street lighting meeting the design and location criteria set forth in Section 616.3 and Section 616.4 of this document except on private streets.

616.6 Engineered plans and approvals

The developer shall show street light locations and intensities on the Utility Layout Master Plan (see Section 207.4) for approval by the City and the applicable electrical utility service. The City will accept street lighting installations upon receipt of a written recommendation by the applicable electrical utility service.

616.7 Construction

Street lighting shall be installed only by the electrical utility company franchised to serve the area of the City of Huntsville in which the light is placed, or by a contractor approved by the utility company and the City Engineer.

616.8 Ownership and maintenance

All street lighting installed according to this policy shall be and shall remain property of the electric utility franchised to serve that area of the City of Huntsville and shall be serviced by the utility company.

TABLE 6-5
STREET LIGHTING INTENSITY

Street Classification	Lighting Intensity in foot candles (fc)
Arterial	2.0
Collector	1.2
Local Commercial	1.2
Local Residential	0.3
Private Street	0.3