

ARTICLE 6

ACCESS AND RIGHT-OF-WAY REQUIREMENTS;  
AND STREET IMPROVEMENT AND CONSTRUCTION  
REQUIREMENTS

6.1 ACCESS

6.1.1 When land is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged and designed so as to allow for the opening of future streets and to provide access to those areas not presently served by streets.

6.1.2 No subdivision shall be designed so as to completely eliminate street access to adjoining parcels of land. Every development shall be designed to facilitate access to adjoining properties which are developed or anticipated to be developed in a manner substantially similar to the subject property. Locations of interparcel access shall be as required by and subject to the approval of the Department.

6.1.3 Any lot required to provide minimum frontage by the zoning district in which the lot is located shall provide vehicular access directly from a public street along the frontage or along any other property line which abuts a public street, except as provided in Section 6.1.5.

6.1.4 Private streets as may be approved under the provisions of the Zoning Ordinance shall be constructed to the roadway construction standards of the City of Duluth, as contained herein.

6.1.5 Vehicular access easements may be provided from a public street indirectly via easement in any one or more of the following circumstances:

- a. The property is not required to provide a minimum frontage by the applicable zoning district, provided that the easement shall be in a location and the access driveway shall have a width and alignment acceptable to the Fire Services Division and the Department.
- b. The property is a buildable lot of record, as defined herein, but does not meet the minimum frontage requirement of the applicable zoning district. The property must be served by an exclusive access easement which shall be limited to the provision of access to only one principal use or structure.
- c. The access easement serves a single-family residence on a lot which is otherwise a buildable lot of record, and which is sharing a common driveway with no more than one other single-family residence.
- d. The access easement was lawfully established as such under the code, ordinances, or regulations of the City of Duluth prior to the adoption of these Development

Regulations.

- e. The access easement coincides with a private roadway approved under the codes, ordinances, or regulations of the City of Duluth. All new private roadways must be constructed to the roadway standards of these Regulations, and their ownership and maintenance responsibility by private party(ies) must be clearly established on the Final Plat of the development.
- f. The access easement serves a buildable lot of record which meets the minimum frontage requirements of the Zoning Ordinance, but at which point the access is not achieved.

6.2 STREETS

6.2.1 Dedication of Street Right-of-Way

Right-of-Way for all Public Project streets, existing and proposed, shall be dedicated in accordance with the street classifications as shown in the Comprehensive Plan or as otherwise required by the City Council.

6.2.2 Street Improvements

Streets, whether existing or new, shall be constructed or improved under those circumstances and to the standards as established in these Regulations. Roadway improvements shall be in accordance with the street classifications as shown in Comprehensive Plan, Zoning Ordinance, as applicable, or as otherwise required by the City Council.

6.3 MINIMUM RIGHT-OF-WAY AND STREET IMPROVEMENTS

6.3.1 Right-of-Way and Pavement Widths

Minimum widths for new construction (new streets or widening sections) shall be as shown on the following Table 6-A (unless a modification is granted by the Planning Director).

Exception No. 1: new local streets in subdivisions developed in the Conservation Subdivision Overlay District shall be as follows:

- a. Entrance Streets: at least 46 feet.  
Other Interior Streets: at least 44 feet.  
Right-of-way Radii: at least 45 feet for cul-de-sac or “eyebrow” turnarounds.  
Alleys: no minimum if not to be dedicated to the City; at least 15 feet if to be dedicated to the City.
- b. Pavement Width of New Interior Local Streets

Entrance Streets: at least 24 feet (measured to back of curb).

Other Interior Streets: at least 22 feet (measured to back of curb).

Curb and Gutter: at least 1 ½ feet

Right-of-way Radii: at least 40 feet for cul-de-sac or “eyebrow” turnarounds (measured to back of curb).

Alleys: at least 10 feet (concrete or asphalt), with or without curb, if not to be dedicated to the City; at least 12 feet if surfaced with asphalt (which includes 1 foot of concrete curbs) and at least 10 feet if surfaced with concrete (with or without curb).

Exception No. 2: New Local Residential Streets in the Planned Unit Development (PUD) District

New Local Residential Streets developed in a PUD district shall meet the following:

a. Right-of-Way Width

Interior Streets: at least 44 feet

Right-of-Way Radii: at least 50 feet for cul-de-sac or “eyebrow” turnarounds.

Alleys: at least 15 foot easement if not to be dedicated to the City; at least 15 feet of right-of-way if to be dedicated to the City.

b. Pavement Width:

Interior Streets: at least 22 feet (measured to back of curb).

Right-of-Way Radii: at least 40 feet for cul-de-sac or “eyebrow” turnarounds (measured to back of curb).

Alleys: at least 10 foot (concrete or asphalt), with or without curb, if not to be dedicated to the City; at least 12 feet if surfaced with asphalt (which includes 1 foot concrete curbs) and at least 10 feet if surfaced with concrete (with or without curb).

c. Additional Pavement and Right-of-Way Width

Additional Travel Lanes: at least 10 feet of pavement width.

On-Street Parallel Parking: at least 9 feet of pavement width.

Right-of-Way: additional right-of-way shall be provided to accommodate additional travel lanes, on-street parallel parking, sidewalks and underground utilities.

Exception No. 3: New Local Non-Residential Streets in the Planned Unit Development (PUD) District

New Local Non-Residential Streets developed in a PUD district shall meet the following:

a. Right-of-Way Width

Interior Streets: at least 48 feet

Right-of-Way Radii: at least 55 feet for cul-de-sac or “eyebrow” turnarounds.

Alleys: at least 15 foot easement if not to be dedicated to the City; at least 15 feet of right-of-way if to be dedicated to the City.

b. Pavement Width:

Interior Streets: at least 26 feet (measured to back of curb).

Right-of-Way Radii: at least 45 feet for cul-de-sac or “eyebrow” turnarounds (measured to back of curb).

Alleys: at least 10 foot (concrete or asphalt), with or without curb, if not to be dedicated to the City; at least 12 feet if surfaced with asphalt (which includes 1 foot concrete curbs) and at least 10 feet if surfaced with concrete (with or without curb).

c. Additional Pavement and Right-of-Way Width

Additional Travel Lanes: at least 11 feet of pavement width.

On-Street Parallel Parking: at least 9 feet of pavement width.

On-Street Angled Parking: at least 18 feet of pavement width.

Right-of-Way: additional right-of-way shall be provided to accommodate additional travel lanes, on-street parallel parking, on-street angled parking, sidewalks and underground utilities.

<b>TABLE 6-A MINIMUM RIGHT-OF-WAY AND ROADWAY WIDTHS FOR NEW STREETS AND WIDENINGS</b>		
<b>STREET CATEGORY</b>	<b>MINIMUM RIGHT-OF-WAY <sup>(1)</sup></b>	<b>MINIMUM ROADWAY <sup>(2)</sup></b>
<u>PRINCIPAL ARTERIAL</u>	120-150 feet	6 thru lanes with median
<u>MAJOR ARTERIAL</u>	100-120 feet	4-6 lanes with median
<u>MINOR ARTERIAL</u>	80-100 feet	52-66 feet – 4 thru lanes with median
<u>MAJOR COLLECTOR</u>	80 feet	52 feet
<u>MINOR COLLECTOR</u>	60-80 feet	28 feet
<u>LOCAL STREET</u> Non-Residential Non-Residential Cul-de-sac	60 feet <sup>(3)</sup> 60 foot radius	32 feet 50 foot radius
<u>LOCAL STREET</u> Residential Urban Residential Urban cul-de-sac	50 feet 50 foot radius	27 feet 40 foot radius
<u>LOCAL STREET</u> Residential Rural <sup>(4)</sup> Residential Rural Cul-de-sac <sup>(4)</sup>	60 feet <sup>(5)</sup> 60 foot radius <sup>(5)</sup>	24 feet 40 foot radius
(1) The greater right-of-way width shall apply under circumstances as described in Section 6.3.2 (c).		
(2) Roadway width dimensions are back-of-curb to back-of-curb except where noted.		
(3) Utility easement shall be provided in a location and size as required by the Gwinnett County Department of Public Utilities.		
(4) Subdivisions zoned RA-200.		
(5) May be reduced to 50 if curb, gutter, and pipe drainage system is provided.		
(6) Measured to edge of pavement. Curb and gutter is not required in subdivision zoned RA-200. Roadway width may be reduced to 23 feet if curb and gutter is provided (27 feet total width).		

6.3.2 Street Rights-of-Way

- a. The minimum width of rights-of-way shall be dedicated based upon the street classification as shown in the Comprehensive Plan and as contained in these Regulations.
- b. Additional street right-of-way width may be required to be dedicated at intersections or other locations fronting the property where turning lanes, storage

lanes, medians or realignments are required for traffic safety and minimum right-of-way standards would be inadequate to accommodate the improvements.

- c. If a new street or thoroughfare is proposed by the Comprehensive Plan, Gwinnett County or the State of Georgia to adjoin or traverse the property, permits shall not be issued until the Department has submitted the project to the City Council for review in order to seek a determination if the City of Duluth should acquire right-of-way or if a study of alternate routes should be undertaken. The review period by the City of Duluth shall not exceed 90 days from the date of permit application. If, after the 90 day review, the City Council is unable to reach a decision, there shall not be any further delay of a requested permit for this situation.

6.3.3 Project Access Improvements - Single Family Detached, Single Family Attached, and Duplex Residential Subdivisions

- a. When property fronting on an existing or proposed City road is to be developed or redeveloped as a single family detached or duplex subdivision and the City street will provides access to the property, Project Access Improvements to the City street (deceleration lanes, turn lanes, etc.) shall be provided by the developer as required herein.
- b. A deceleration lane shall be required to be provided at each subdivision street entrance that is provided street access to a Minor Collector Street or Major Thoroughfare. In the event a street has an existing or proposed median, and the developer desires to construct a median break to serve the subdivision, a left turn lane leading to the median break shall be required to be provided by the developer and shall meet the standards contained herein.
- c. Deceleration lanes shall have a length of 200 feet, with an additional 50 foot taper length, a pavement width of 12 feet (exclusive of curb and gutter) and shall be provided with curb and gutter. Additional right-of-way to accommodate the deceleration lane and an 11 foot shoulder shall be dedicated by the developer to the City of Duluth and/or Gwinnett County at no cost. Associated drainage improvements as deemed necessary by the construction of the deceleration land shall also be required.
- d. Other Project Access Improvements may be required by the Department upon the recommendation of the Gwinnett County Department of Transportation in order to ensure adequate site access, pedestrian access, convenience and safety to the motoring public.
- e. The developer shall be responsible for the relocation of public or private utilities and drainage structures as may be occasioned by the required roadway improvements.

6.3.4 Project Access Improvements Street Widening - Multi-Family and Nonresidential Developments

- a. When property fronting on an existing or proposed City, County or State roadway is to be developed or redeveloped for, multi-family or nonresidential uses and the City, County or State road will provide access to the property, access improvements to the City road (deceleration lanes, turn lanes, etc.) shall be provided by the developer.
- b. A deceleration lane shall be required to be provided at each subdivision street entrance that is provided street access to a Minor Collector Street or Major Thoroughfare. In the event a street has an existing or proposed median, and the developer desires to construct a median break to serve the subdivision, a left turn lane leading to the median break shall be required to be provided by the developer and shall meet the standards contained herein.
- c. Deceleration lanes shall have a length of 200 feet, with an additional 50 foot taper length, a pavement width of 12 feet (exclusive of curb and gutter) and shall be provided with curb and gutter. Additional right-of-way to accommodate the deceleration lane and an 11 foot shoulder shall be dedicated by the developer to the City of Duluth and/or Gwinnett County at no cost. Associated drainage improvements as deemed necessary by the construction of the deceleration land shall also be required.
- d. Other Project Access Improvements may be required by the Department upon the recommendation of the Gwinnett County Department of Transportation in order to ensure adequate site access, pedestrian access, convenience and safety to the motoring public.
- e. The Developer shall be responsible for the relocation of public or private utilities and drainage structures as may be occasioned by the required roadway improvements.

6.3.5 New Streets

- a. All new streets proposed to be constructed in a subdivision or other development, whether to be public or private, shall be designed and constructed at least to the standards contained in these Regulations in accordance with the category of said streets.
- b. In residential subdivisions, a dead end ("stub") street required under Section 6.4.4 to provide access to an abutting property may be exempted from construction of roadway improvements and public utilities under the following circumstances:

- (1) No lot within the proposed subdivision will gain access from the "stub" street.
- (2) A Concept Plan has not been submitted or approved on the neighboring tract.
- (3) The "stub" street shall be fully designed as part of the Development Plan. However, the right-of-way shall be only cleared, rough graded in accordance with the approved plans, and all disturbed areas grassed.
- (4) Connections for future extension of all public utilities shall be constructed as part of the subdivision. Curb returns shall be constructed as part of the subdivision. Curb returns shall be provided to the future "stub" street roadway location, and curb and gutter shall be installed across the roadway stub at the right-of-way line (extended).
- (5) The right-of-way for the "stub" street shall be dedicated as part of the Final Plat. Slope easements or construction easements, if required, shall be shown on the Final Plat.

#### 6.3.6 Substandard Streets

- a. In the event that a development has access to a substandard street (i.e., a dirt or gravel road or any street that does not meet the minimum current construction and improvement standards), the following Project Access Improvements shall be required: (amended 7/12/04)
  - (1) If the abutting substandard street provides the primary means of access to the development and is dirt or gravel or any street that does not meet the minimum current construction and improvement standards, the street shall be upgraded to a standard paved roadway from the project entrance, to the nearest standard paved road along the route of primary access. (amended 7/12/04)
- b. Off-site Improvements required under "a" (1), above, shall at a minimum, result in a full-section roadway meeting the requirements of a Local Residential Rural roadway (24 feet pavement edge to pavement edge, with drainage swale ditches as needed). Responsibilities shall be as follows:
  - (1) The Developer shall design the road and provide the labor, equipment, and materials required for the necessary roadway improvements and necessary drainage improvements.
  - (2) If the City or County desires the roadway to be improved to a greater standard than that for a Local Residential Rural roadway, the governmental entity requiring such shall provide or pay the cost of the additional materials and labor.
  - (3) All right-of-way required for these off-site improvements shall be acquired by the developer at no expense to the City or County. If the developer is

unable to acquire the right-of-way, the Department of Planning & Development will initiate acquisition proceedings, at the expense of the developer, after authorization by the City Council.

6.3.7 Improvements Along State Highways

For any development which abuts a state highway or other right-of-way controlled by the State of Georgia, improvements to the roadway and the location and design of any street or driveway providing access from the state highway shall comply with the standards and requirements of the Georgia Department of Transportation only when more restrictive than the requirements of these Regulations. A permit for the proposed access or improvements shall be required to have been approved by the Georgia D.O.T. and incorporated into the construction drawings for the project prior to issuance of a development permit by the Department.

6.4 GENERAL LAYOUT REQUIREMENTS

6.4.1 Conformance

The arrangement, character, extent, width, grade, and location of all streets shall conform at a minimum to the Comprehensive Plan and these Regulations.

6.4.2 Local Streets and Minor Collectors

Local streets shall be so laid out that their use by through traffic will be discouraged. Minor collectors shall be provided to channel through traffic movements within a development, where appropriate to the design and a major thoroughfare is not proposed by the Comprehensive Plan. Minor collectors also may be provided as central routes within large residential subdivisions, where appropriate to the design, based on project traffic demands exceeding 2000 trips per day (ADT).

6.4.3 Cul-de-sac Streets

- a. Dead end streets designed to have one end permanently closed shall provide a cul-de-sac turnaround and may be no more than 2000' in length. Additional length necessitated by topography or property configuration may be approved by the Director.
- b. The length of a cul-de-sac street shall be measured from the center of the cul-de-sac to the center of the intersection with another street, whether a through street or another cul-de-sac or dead-end street.
- c. Eyebrow cul-de-sac (half cul-de-sacs) will be allowed only at "right-angled" intersections having an interior angle between 80 and 100 degrees.

- d. Cul-de-sacs shall conform to the layout and dimensional requirements as shown in these Standard Drawings.

#### 6.4.4 Other Dead End Streets

- a. A dead end street shall be provided to the boundary of a subdivision where necessary to provide access to a land-locked abutting property, for planned continuity of future circulation, for improved access for public safety vehicles, or for the extension of public water or other utilities to neighboring lands. Such dead end streets shall be designed so as to allow their reasonable extension, and shall be located so as to be reasonably incorporated into a street design for the neighboring property. The stub street requirement may be waived by the Director, provided such waiver has received the approval of the Gwinnett County Departments of Public Safety and Public Utilities.
- b. Dead end streets on abutting property shall be extended into a proposed subdivision and incorporated into the street design of the development. This requirement may be modified by the Director in cases of serious topographical hardship or dissimilar zoning which would create unacceptable land use conflicts between the two developments. This modification may be conditioned on the provision of easements necessary for the extension of public utilities, the provision of cul-de-sac or other permanent turnaround on the dead end street, or the removal of the dead end street back to its nearest intersection.
- c. Where a dead end street (other than a cul-de-sac) serves more than three lots, the developer shall be required to provide a temporary vehicular turnaround within the right-of-way. This requirement may be waived if extension of the dead end street is approved and under construction prior to its inclusion in a Final Plat.
- d. Where a street dead ends at the property boundary and the street exceeds 1000' in length, a permanent cul-de-sac shall be required. In this situation, right-of-way to the property boundary shall be required, but the pavement shall not be extended to the property boundary beyond the edge of the paved cul-de-sac turnaround. In no case shall a dead end street exceed 2000' in length unless approved by the Department due to unusual topographic conditions or property configuration.

#### 6.4.5 Service Roads

Where a development borders on or contains a railroad right-of-way, or limited access highway right-of-way or major thoroughfare, a public street may be required to be constructed and dedicated within the development approximately parallel to and on each side of such right-of-way.

6.4.6 Half-Streets

Half-streets (new boundary streets having one-half of the minimum required right-of-way or pavement width) shall not be allowed nor access to same be permitted should it exist.

6.4.7 Reserve Strips

Land in private ownership adjacent to public rights-of-way which could control or are intended to control access to streets, alleys, or public lands shall not be permitted unless their control is given to the City under ownership, dedication, or easement conditions approved by the City Attorney or acceptable to the Director. No development shall be designed so as to deny access to abutting properties.

6.4.8 Alleys

Alleys shall not be provided except where the subdivider produces evidence satisfactory to the Director of the need for same or within a Planned Development that has been approved by City Council to include alleys. In the event the Director approves a design which proposes alleys, the alley shall be constructed as though it were a local street pursuant to the standards contained in these Regulations.

6.4.9 Street Jogs (amended 9-22-97)

- a. Street jogs shall either directly align or have off-sets of a minimum of 125 feet for residential subdivision streets and a minimum of 200 feet for non-residential subdivision streets, as measured between centerlines of said streets.
- b. All major thoroughfares shall provide off-sets as required by the Department, where alignment is not desirable or feasible, but in no case be space less than 600 feet apart as measured between centerlines of said streets.

6.5 TRAFFIC CONTROL DEVICES

6.5.1 Traffic Control Signs

Street signs, traffic control signs, and devices such as striping and signalization, shall be provided by the developer. The developer must apply with Gwinnett County Traffic Engineering for the installation and fabrication of traffic control devices.

6.5.2 Street Name Signs

Street name signs shall have a green background with white legends mounted on channelized posts. Alternate post material shall be subject to the review and approval of the Gwinnett County Traffic Engineer. The posts and signs will be furnished and installed by the developer at all street intersections. The developer (or homeowner's association in the event an alternate signpost is chosen at a later date) shall pay the County's and/or City's costs.

6.5.3 Traffic Signals and Signs

All traffic signals and signs shall conform to the Manual on Uniform Traffic Control Devices (no decorative traffic control devices will be allowed).

6.5.4 Striping Requirements

All newly constructed streets having 4 or more lanes (including auxiliary lanes) and existing streets being widened with one or more additional lanes shall be striped or the payment of said striping costs shall be required from the Developer by the Planning Department prior to the approval of the Development Conformance Certificate for the project. Striping shall be accomplished with paint meeting Georgia DOT standards conforming to the Manual on Uniform Traffic Control Devices. The developer shall apply the final striping after application of the final topping with approval of the Department.

6.5.5 Payment of Fees

The developer shall pay Gwinnett County Traffic Engineering for the installation and fabrication of traffic control devices and street name signs prior to approval of the final plat.

6.5.6 Street Lights

Street lights shall be provided by the developer in new subdivisions which propose the construction of a new street to be dedicated to the City or which propose lot access to existing City streets. All fees, materials, labor, poles, fixtures and any other associated

items shall be furnished, paid for and installed by the developer. Street lighting shall be installed and operating prior to approval of the final plat.

- a. This ordinance shall apply for all developments or phases of development which have not received a development permit as of the date of adoption of this ordinance.
- b. In all cases, guidelines related to materials, distances between poles, height, and any other relevant specifications shall be adhered to as set forth in The American National Standard Practice for Roadway Lighting and the power provider for the project.
- c. A street lighting plan shall accompany the preliminary plat and shall be reviewed and approved by the City for compliance with the requirements of the national standard. Prior to approval of the Final Plat, all fees associated with materials, labor, and installation shall be paid to the appropriate power provider for the project and proof of payment shall be provided to the City.
- d. Street lights shall be provided by the owner/developer in any new development where the streets are proposed to be dedicated to the City or which propose lot access to existing City streets. Location and spacing shall be coordinated with the electric company with jurisdiction over the property and shall be installed at the time the streets are constructed. The City shall take over payment of the monthly energy charges from the owner/developer once the development is nine-five percent (95%) complete based on issued C.O.'s and after a written request is received from the developer/builder to take over monthly costs. In a residential development, street lights shall be installed prior to approval of the Final Plat. Electrification of the lights shall occur once the development or phase has achieved 50% completion via issuance of a Certificate of Occupancy (C.O.) ~~C.O.'s~~. In a non-residential development, street lights are to be installed prior to issuance of a C.O. for the building(s). (amended 9-22-97, 1-11-99)
- e. All fixtures and poles shall meet the requirements of the City and all maintenance shall be the responsibility of the developer and/or homeowner's association. Fixtures shall be mounted a minimum of 16 feet above the ground and each fixture shall have appropriate arm length to illuminate the street. The City, in addition to other requirements, may require a light to be located at street intersections within the development.

## 6.6 SPECIFICATIONS

Unless otherwise specifically set forth herein, all of the materials, methods of construction, and workmanship for the work covered in reference to street construction shall conform to the latest specifications of the Georgia Department of Transportation

(Georgia DOT).

6.7 SUB-GRADE PREPARATION FOR ALL STREETS

6.7.1 Sub-grade preparation shall be in accordance with Georgia DOT specifications and these Regulations.

6.7.2 If any sections of the sub-grade are composed of topsoil, organic, or other unsuitable or unstable material, such material shall be removed and replaced with suitable material and then thoroughly compacted as specified for fill or stabilized with stone or a geo-textile or geo-grid.

6.7.3 Fill shall be placed in uniform, horizontal layers not more than 8" thick (loose measurement). Moisture content shall be adjusted as necessary to compact material to 95% of maximum dry density except for the top 12" which shall be compacted to 100% of maximum dry density.

6.7.4 After the earthwork has been completed, all storm drainage, water, and sanitary sewer utilities have been installed within the right-of-way as appropriate, and the backfill in all such ditches thoroughly compacted, the sub-grade shall be brought to the lines, grades, and typical roadway section shown on the plans.

6.7.5 Utility trenches cut in the sub-grade shall be backfilled as specified herein. Compaction tests at the rate of one per 150 feet of trench shall be provided to verify compaction.

6.7.6 The sub-grade must pass roll testing prior to placement of the base material. With the approval of the Department, a geo-textile or grid may be used to stabilize a sub-grade that does not pass proofrolling.

6.7.7 When the street is to be used for construction traffic before the paving work is completed, a layer of stone (except crusher run) shall be laid as a traffic surface. This material shall not be used as a part of the base material. It may be worked into the subgrade, or it shall be removed before the base course is set up for paving.

6.7.8 Provisions shall be made to drain low points in the road construction when the final paving is delayed. A break in the berm section is required when the curbing has not been constructed. After installation, drainage under the curb to side slopes is required, using minimum 4 inch diameter pipe sections.

6.8 PROJECT ACCESS IMPROVEMENT STANDARDS

6.8.1 For sections wider than 4 feet, the widening section shall comply with the construction standards for new streets, in accordance with the street's category as shown on the Comprehensive Plan. The base course must pass roll testing prior to paving. If a delay in

paving is reasonably expected by the Developer or the Department, the base shall be primed with 0.25 gallon of R.C. 70 per square yard and cured for 7 days before paving.

6.8.2 For sections less than 4 feet wide, 7 inches of Class "A" concrete base (5 inches on local and minor collector streets) and 1½ inches of "E" or "F" topping shall be required.

6.9 NEW LOCAL AND MINOR COLLECTOR STREETS

6.9.1 Local and Minor Collector Streets Within a Residential Subdivision.

a. Asphalt Streets (NOTE: Only two-pass streets described below are acceptable for public dedication with the City of Duluth):

The following types of base materials may be used:

(1) Crushed Stone Base

(a) Two-Pass Street:

The base course shall consist of at least 5 inches of graded aggregate base. After being thoroughly compacted and brought to proper section 2 inches of "B" binder shall be applied. If a delay in paving is reasonably expected by the Developer or the Department, the base shall be primed with 0.25 gallon of R.C. 70 per square yard the same day it is compacted, and cured for 7 days prior to paving. The final 1 inch of type "E" or "F" wearing course shall be applied after 90% of the houses on the street have been built, or prior to the end of the maintenance period (but after the 11th month), whichever occurs first. Prior to applying wearing course, a tack coat shall be applied to the binder course at a rate of no less than 0.05 gallons per square yard. Type of tack shall be approved by the Department prior to placement.

(b) One-Pass Street:

The base course shall consist of at least 6 inches of graded aggregate base. After being thoroughly compacted and brought to proper section the final 2 inches of type "E" or "F" wearing course shall be applied. If a delay in paving is reasonably expected by the Developer or the Department, the base shall be primed with 0.25 gallon of R.C. 70 per square yard the same day it is compacted, and cured for 7 days prior to paving.

(2) Soil Cement Base

(a) If the base material (resident soil) is unsatisfactory to the

Department then a soil cement mix design with engineering test results acceptable to the Department. The design must come from a geo-technical firm with the results certified by a Professional Engineer registered in the State of Georgia. The tests required for the design are ASTM D558 or AASHTO T134 or ASTM D559 and/or 560 or AASHTO T135 and 136.

- (b) The minimum base course shall consist of at least 6 inches of suitable soil (high mica content not suitable) stabilized with 10 percent of Portland Cement by volume (approximately 42.3 pounds per sq. yd.). Depending on whether the street is to be constructed as a on-pass or two-pass street, please refer to Section 6.9.1, a(1)(a) or Section 6.9.1, a(1)(b) for the applicable binder and/or paving standards. Where the grade of the street is 5 percent or greater, a single surface treatment course must be applied before the binder.

b. Concrete Streets:

Five (5) inches of 3500 psi concrete is to be applied on a stabilized subgrade, consisting of at least 150 pounds of stone per square yard mixed in four inches deep and compacted. The design and construction of the street shall comply with the Portland Cement Association standards.

6.9.2 Local Residential-Rural Streets

Where allowed (in subdivisions zoned RA-200 and upgrading off-site substandard streets), Local Residential-Rural Streets do not require curb and gutter. The road base shall be extended one foot beyond the edge of pavement, and the shoulders shall extend 8 feet from the edge of pavement to the standard ditch section on each side (see Standard Drawings). Otherwise, the roadway shall comply with the standards for new residential subdivision streets, above.

6.9.3 Nonresidential Subdivision or Development Streets

The following standards shall apply to new local and minor collector streets in nonresidential subdivisions and other nonresidential development projects.

- a. Asphalt Streets (NOTE: Only two-pass streets described below are acceptable for public dedication within the City of Duluth):

The following types of base materials may be used:

- (1) Two-Pass Street (Crushed Stone Base):  
The base course shall consist of at least 7 inches of graded aggregate base.

After being thoroughly compacted and brought to proper section, 2 inches of "B" binder shall be applied. If a delay in paving is reasonably expected by the Developer or the Department, the base shall be primed with 0.25 gallon of R.C. 70 per square yard the same day it is compacted, and cured for 7 days prior to paving. The final 1 inch of type "E" or "F" wearing course shall be applied after 90% of the buildings on the street have been built, or prior to the end of the maintenance period (but after the 11th month), whichever occurs first. Prior to applying wearing course, a tack coat shall be applied to the binder course at a rate of no less than 0.05 gallons per square yard. Type of tack shall be approved by the Department prior to placement.

(2) One-Pass Street (Crushed Stone Base):

The base course shall consist of at least 8 inches of graded aggregate base. After being thoroughly compacted and brought to proper section the final 2 inches of type "E" or "F" wearing course shall be applied. If a delay in paving is reasonably expected by the Developer or the Department, the base shall be primed with 0.25 gallon of R.C. 70 per square yard the same day it is compacted, and cured of 7 days prior to paving.

b. Concrete Streets.

Seven (7) inches of Class "A" 3,500 psi concrete is to be applied to a stabilized subgrade, consisting of at least 150 pounds of stone per square yard mixed in four inches deep and compacted. The design and construction of the street shall comply with the Portland Cement Association standards.

6.10 NEW MAJOR THOROUGHFARES

6.10.1 Major thoroughfares abutting residential or non-residential development projects shall be constructed in accordance with designs prepared by Gwinnett County or Georgia D.O.T., or, if no design has been prepared, to the following standards as indicated by Table 6-B:

**TABLE 6-B  
CONSTRUCTION STANDARDS FOR MAJOR THOROUGHFARES**

<b>STREET CATEGORY</b>	<b>BASE</b>	<b>BINDER</b>	<b>TOPPING</b>
Principal Arterial	10" GAB	5"*	1 ½" E or F
Major Arterial	10" GAB	4" B	1 ½" E or F
Minor Arterial	10" GAB	3" B	1 ½" E or F
Major Collector	10" GAB	3" B	1 ½" E or F
Minor Collector	8" GAB	2"B	1 ½ " E or F
*2 ½ " type "B" binder and 2 ½ " asphaltic concrete base.			

6.11 CURB AND GUTTER

6.11.1 All new streets and Project Access Improvements shall be provided with curb and gutter except in subdivisions zoned R-100, and subdivisions zoned RA-200, where swale ditches may be provided in lieu of curb and gutter. All gutters shall drain smoothly with no areas of ponding.

6.11.2 Residential Curbing

Residential curbing shall meet the following requirements:

- a. Concrete shall be Class "A" (as defined by Georgia D.O.T.) and have a minimum strength of 3,000 PSI at 28 days.
- b. Typical minimum section shall be 6" x 24" x 12".
- c. Only vertical curbing is permitted.

6.11.3 Industrial or Commercial Curbing

Industrial or commercial curbing shall meet the following requirements:

- a. Concrete shall be Class "A" (as defined by Georgia D.O.T.) and have a minimum strength of 3,000 PSI at 28 days.
- b. Typical minimum section shall be 8" X 24" X 14".
- c. Only vertical curbing is permitted.

6.11.4 Principal and Major Arterials Curbing

- a. Concrete shall be Class "A" (as defined by Georgia D.O.T.) and have a minimum strength of 3,000 PSI at 28 days.

- b. Typical minimum section shall be 8" X 30" X 14".
- c. Only vertical curbing is permitted.

6.11.5 Construction Methods

- a. Curb and gutter shall be set true to line and grade, horizontal be field staked, and finished to the section shown on the plans. Along the Project Access Improvements of a road for which the Department of Transportation of the Department of Public Works resurfacing has been scheduled within 1 year of the new construction, the grade of the new gutter shall be placed 1" above the Project Access Improvement pavement grade in areas where drainage will not be adversely affected.
- b. Line and grade shall be set by developer's engineer or surveyor on grade less than 2% and greater than 12%, and within 100 feet in both directions from all low points.
- c. One-half inch expansion joints or pre-molded bituminous expansion joint material shall be provided at all structures and radius points and at intervals not to exceed 250 feet in the remaining sections of the curb and gutter.
- d. Inferior workmanship or unprofessional construction methods resulting in unacceptable curb and gutter will be cause for rejection of the finished work.
- e. Disturbed areas along all curbing shall be backfilled, stabilized, and grassed.

6.12 UNDERGROUND UTILITIES

- 6.12.1 All water and sanitary sewer utilities and storm drain facilities within the curbs shall be installed and the ditches backfilled and thoroughly compacted before any pavement or base is installed.
- 6.12.2 Once the base has been placed, all further installation of utilities under the roadway shall be bored or other wise comply with Section 7.5, Street Cuts.
- 6.12.3 All utility manholes and valve boxes shall be brought flush to the finished grade within the roadway section.
- 6.12.4 All utility locations shall adhere to the details found in the Standard Drawings.

6.13 SIDEWALKS

6.13.1 Where Required

- a. Sidewalks shall be required along all minor collector streets and major thoroughfares within a one-mile radius of all existing and proposed public school sites, except within (internal to) non-residential subdivisions. Any development located along such route or within the one-mile radius shall provide sidewalks along its frontage in accordance with this Section.
- b. Sidewalks shall be required on both sides of any new street, any road classified as a Minor Collector or Major Thoroughfare, where the Duluth Sidewalk Master Plan identifies that sidewalks are planned for construction or on streets that the City Council has allotted funds for the installation of sidewalks. If sidewalks are established along portions of the roadway or on the same side of the street as the new development, the owner/developer must install sidewalks in accordance with Section 6.13.3 on any new development(s) site in order to connect with existing sidewalks. The owner/developer may deposit funds into an account held by the City of Duluth designated for sidewalk construction at the discretion of the Director, if sidewalks are under construction or planned for construction to begin within one year. Said funds shall be in the amount of 110% of the cost for construction of the sidewalk on the property proposed for development as calculated by the Department. (amended 9-22-97)
- c. Sidewalks may also be required as a condition of zoning, Special Use Permit or by the Zoning Ordinance. Said sidewalks shall meet the location and construction requirements contained herein, unless otherwise specified in the conditions of approval. (amended 9-22-97)
- d. Sidewalks provided voluntarily by a builder or developer shall meet the location and construction standards contained herein. Decorative sidewalks may be permitted at the discretion of the Director, however location and size requirements shall be followed as contained herein. (amended 9-22-97)

6.13.2 Location Requirements

Sidewalks shall be located 24 inches from the back of curb except in conservation subdivisions, Planned Developments, or subdivisions in which street trees are provided (bridges excepted). Where no curbing exists or future road improvements are anticipated, the sidewalks shall be placed in a location acceptable to the Department. All new sidewalks shall match and provide smooth transition to any existing sidewalks.

Sidewalks in conservation subdivisions, Planned Development or in subdivisions in which street trees are provided shall be located at least six feet from the back of curb

(bridges excepted). The area between the curb and the sidewalk shall consist of grassing or landscaping. Where no curb exists, or if road improvements are proposed for installation by the City, County or State, sidewalks, including appropriate drainage facilities, shall be constructed in a location acceptable to the Department of Planning and Development and/or Department of Transportation.

- a. Sidewalks shall be required adjacent to the perimeter of eyebrow turnarounds.
- b. Sidewalks shall be required adjacent to perimeter of cul-de-sac turnarounds.
- c. Where possible, sidewalks shall be woven through existing vegetation, trees, etc. to create a “meandering sidewalk”. (amended 9-22-97)

6.13.3 Construction Standards (amended 9-22-97)

Sidewalks shall be concrete and a minimum of four feet wide and four inches thick on local street and a minimum of five feet wide and four inches thick on minor collector or major thoroughfares. Concrete shall be Class “B” (as defined by Georgia DOT) and have a minimum strength of 2,2500 psi at 28 days. Disturbed areas along sidewalks shall be backfilled, stabilized and grassed. (amended 3-26-01)

- a. Sidewalks located in the public right-of-way under the jurisdiction of the Georgia Department of Transportation (DOT) shall be constructed in compliance with Georgia DOT design standard 9031W.
- b. Curb ramps shall be provided at all curb termini and shall be a minimum of three feet in width exclusive of flared sides.
- c. Expansion joints shall be provided at all property lines (extended) and driveway crossings. Control joints shall be provided every 10 feet.
- d. Disturbed areas resulting from sidewalk construction shall be backfilled, stabilized and grassed.
- e. Cross Slope.

Sidewalks shall be constructed with a cross slope of 0.25 inch per foot. Sidewalks shall maintain this cross slope at driveway crossings or transition the sidewalk to a driveway with ramps and detectable warnings.

- f. Final Stabilization

Disturbed areas resulting from sidewalk construction shall be backfilled, stabilized and grassed or landscaped.

g. Georgia DOT Controlled Roads.

Sidewalks located in the right-of-way of roads under the jurisdiction of the Georgia DOT shall be constructed in accordance with Georgia DOT design and construction standards.

6.13.4 Installation Deadlines (amended 9-22-97)

Sidewalks shall be installed prior to approval of a Final Plat or issuance of a Certificate of Occupancy (C.O.) in accordance with this Section unless a Performance Bond is posted. The cost of a sidewalk installation may be set aside in escrow only when proposed road improvements may impact the location of the sidewalk.

- a. Sidewalks required on residential building lots shall be installed prior to issuance of a C.O. for each individual dwelling.
- b. Sidewalks required on common or recreation areas shall be installed prior to issuance of a C.O. or Certificate of Completion, as appropriate.
- c. Sidewalks required on other projects shall be installed prior to issuance of a C.O. or Certificate of Completion, as appropriate.

6.13.5 Sidewalk Curb and Ramp Design and Construction Standards

Intersection radius curb ramps shall be provided at street intersections. L-shaped mid-block curb ramps shall be provided to end sidewalks at the radius of the cul-de-sac turnarounds in residential subdivisions. Straight ramps may be provided at intersections of curbed driveways and at streets without sidewalks. Curb ramps shall meet the requirements of the City's Standard Drawings.

6.13.6 Damage Repair

Damage to sidewalks and ramps caused by construction or development activity shall be repaired at no cost to the City within 30 days or prior to issuance of a Certificate of Occupancy, whichever is earlier.